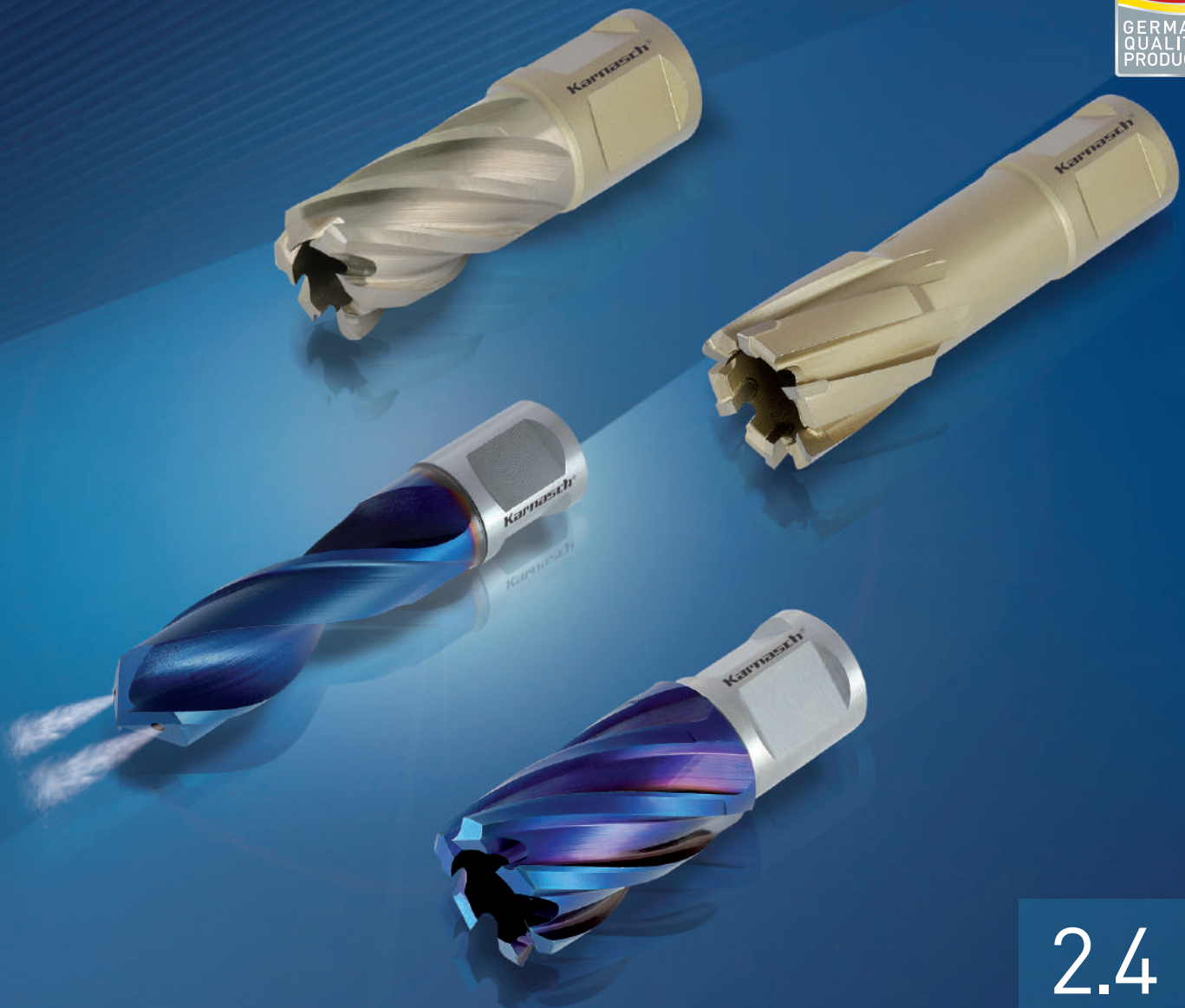


ANNULAR CUTTERS · RAIL CUTTERS



- 1
- 2
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- 4
- 5
- 6
- 7
- 8
- 9
- 10

2.4

CONTACT

ATA Garryson Ltd.
Spring Road
Ibstock
LE67 6LR
United Kingdom
sales@atagarryson.com

+44 (0) 1530 261 145

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www.karnasch.co.uk

ONLINE



OVERVIEW

- 1
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- 9
- 10

Annular cutters + twist drills

372-443

HARD-LINE /	HARDOX-LINE /	BLUE-DRILL LINE / PRO	BLUE-DRILL LINE /	GOLD-DRILL LINE /	SILVER-DRILL LINE /	MINI-LINE /	DRILL-LINE / PRO
Weldon 374-383	Weldon 392-397	Weldon 398-403	Weldon 404-413	Weldon 414-423	Weldon 430-435	Weldon 436-437	Weldon 438-441
Nitto 446-461			Nitto 462-477	Nitto 478-497			
Fein 500-503			Fein 504-506	Fein 508-510			

Rail cutters

516-530

RAIL-LINE / PRO	RAIL-LINE /	BLUE-DRILL LINE / PRO	SILVER-DRILL LINE / RAIL	DRILL-LINE / PRO	DRILL-LINE / RAIL
T.C.T.	T.C.T.				
512-515	516-519	520-523	524-527	528-529	530

Magnetic hole cutting machine

1125-1147



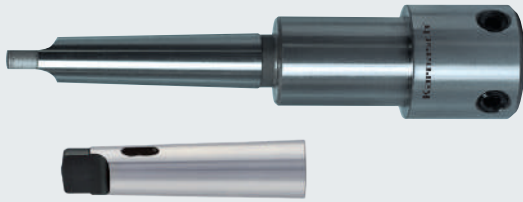
OVERVIEW

Accessories · Sets · Displays · Spare parts

531-542

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves

531-533



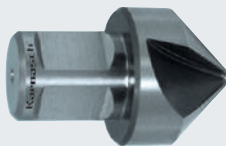
Coolant pressure bottles

538



Countersinks with Weldon shank

534/535



Magnetic stick for chip removal

539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm

636



Sets · Displays

544-571

Tapping adapter Weldon + taps M 3 - M 30

637-638



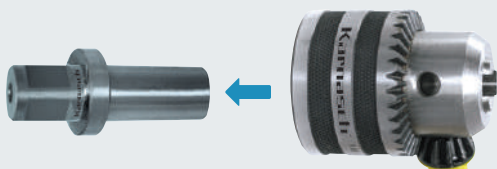
Solid carbide drills to remove jammed taps

640



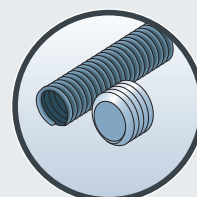
Adapters + suitable drill chucks

538



Spare parts

540-542



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Which annular cutter / Twist drill fits which annular cutter machine

- 1
- 2
- 3
- 4
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- 6
- 7
- 8
- 9
- 10

ANNULAR CUTTER / TWIST DRILL WELDON-SHANK 19/32 MM (3/4"+1.1/4")

372-441

WELDON



Matching machines made by:

KARNASCH · ALFRA-ROTABEST + ALFRA
 ROTAQUICK · BDS · BDS KEYLESS ·
 BEKTOP · BUX · CEMBRE · DUBUIS ·
 ERICO · EUROBOOR · EVOLUTION · HALL
 (POWERBOR) · HOUGEN · JANCY ·
 MAGBROACH · MAGTRON · MAGNETOR ·
 METALLKRAFT · PROMAG · ROTABROACH
 · RUKO+RUKO EASY LOCK · UNIVERSAL
 ...



ANNULAR CUTTER WITH NITTO / UNIVERSAL SHANK 19 MM (3/4")

446-497

NITTO / UNIVERSAL



Matching machines made by Nitto:

NITTO KOHKI "ONE TOUCH" TYPE:
 WOJ 3200 · AO 5575 · WA 3500 · WA 5000 · QA 4000 · QA 6500

Also matching all machines with Weldon shank 19 mm (3/4") [see above].
 Observe that there is only **one** clamping face.

ANNULAR CUTTER WITH FEIN QUICK-IN SHANK 18 MM / FEIN QUICK-IN MAX-SHANK 32 MM (1.1/4")

500-510

FEIN QUICK-IN



Matching machines made by Fein:

FEIN TYPE: KBM 32 Q · KBM 50 Q · KBM 50 U · KBM 50 AUTO · KBM 65 U · KBM 80 QUICK-IN MAX

ANNULAR CUTTERS · TWIST DRILLS WITH WELDON SHANK



Matching machines made by:

KARNASCH · ALFRA-ROTABEST + ALFRA ROTAQUICK · BDS · BDS
 KEYLESS · BEKTOP · BUX · CEMBRE · DUBUIS · ERICO · EUROBOOR ·
 EVOLUTION · HALL (POWERBOR) · HOUGEN · JANCY ·
 MAGBROACH · MAGTRON · MAGNETOR · METALLKRAFT · PROMAG ·
 ROTABROACH · RUKO+RUKO EASY LOCK · UNIVERSAL ...

WELDON

1



2



3



4



5



6



7



8




















9



















10







Overview annular cutters Weldon shank

TYPE	Ø	Specification	Application	
HARD-LINE	Ø 12-200 mm Ø 15/32-7.7/8"	Annular cutters carbide-tipped The most powerful annular cutters in our range. Excellent for all steels up to a strength of 1400 N and for all stainless steels.	 Steel  Stainless  Grey cast iron  Alu  Copper, brass, tin	374-391
HARD-LINE INCH	Ø 1/2-2.1/16"		<p>< 1400 N ✓</p> <p>> 900 N ✓</p> <p>✓</p> <p>> 10% Si ✓</p> <p>✓</p>	
HARDOX-LINE	Ø 14-60 mm Ø 35/64-2.23/64"	The best annular cutter for drilling in: • Hardox 400, 450, 500 • Hard steels from 30 HRC up to 50 HRC Specially developed carbide as well as optimized geometry results in excellent performance for drilling in HARDOX / HARD STEEL (absolutely observe cutting parameters).	 Hardox 400, 450, 500  Hard steel from 30 HRC up to 50 HRC	392-397
BLUE-DRILL LINE PRO	Ø 12-36 mm Ø 15/32-1.27/64"	Annular cutters made of powder steel + DURA-BLUE-coating. For the most difficult chipping problems. Good for all steels up to a strength of 1400 N and for all stainless steels.	 Steel  Stainless  Grey cast iron  Alu  Copper, brass, tin	398-403
	30, 55 mm 1", 2"		<p>< 1400 N ✓</p> <p>> 900 N ✓</p> <p>✓</p> <p>> 10% Si ✓</p> <p>✓</p> <p>Hardox 400 ✓</p> <p>Hardox 450 ✓</p>	
BLUE-DRILL LINE	Ø 12-60 mm Ø 15/32-2.23/64"	Annular cutters made of HSS-XE special steel + DURABLUE-coating. The most-often used coated annular cutter for all steels up to a strength of 1100 N and for all stainless steels.	 Steel  Stainless  Grey cast iron  Alu  Copper, brass, tin	404-413
	30, 55, 80, 110 mm 1", 2", 3", 4"		<p>< 1100 N ✓</p> <p>< 900 N ✓</p> <p>✓</p> <p>> 10% Si ✓</p> <p>✓</p> <p>Hardox 400 ✓</p> <p>Hardox 450 ✓</p>	

Overview annular cutters Weldon shank

TYPE	Ø	Specification	Application	
GOLD-DRILL LINE	Ø 12-60 mm Ø 15/32-2.23/64"	Annular cutters made of HSS-XE special steel + GOLD-TECH treatment. The most-often used uncoated annular cutter for all steels up to a strength of 900 N. Still suitable for stainless steels.	 Steel  Stainless  Alu  Copper, brass, tin	414-429
	 Drill depths: 30, 55, 80, 110 mm 1", 2", 3", 4"			
GOLD-DRILL LINE INCH	Ø 7/16-2.1/16"		 Hardox 400  Hardox 450	
SILVER-DRILL LINE	Ø 12-60 mm Ø 15/32-2.23/64"	Annular cutters of HSS-XE special steel + 7 different cutting geometries. For all steels up to a strength of 750 N.	 Steel  Alu  Copper, brass, tin	430-435
	 Drill depths: 25, 50 mm 1", 2"			
MINI-LINE	Ø 8-25 mm Ø 5/16-63/64"	Annular cutters / hole saw combination. For all steels up to a strength of 900 N.	 Steel  Stainless  Alu  Copper, brass, tin	436-437
	 Drill depths: 8 mm 5/16"			

Overview twist drill Weldon shank

TYPE	Ø	Specification	Application	
DRILL-LINE	Ø 4-32 mm Ø 5/32-1.17/64"	Twist drills made of powder steel / HSS-XE-steel / HSS-Cobalt steel. With or without inner cooling for steels up to a strength of 1400 N and for all stainless steels.	 Steel  Stainless  Grey cast iron  Alu  Copper, brass, tin	438-443
	 Drill depths: 30, 40, 50 mm 1", 1.1/2", 2"		 Hardox 400	



CARBIDE-TIPPED ANNULAR CUTTERS



HARD-LINE

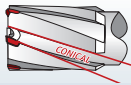
The fact is: The best annular cutters are carbide tipped.

Only these drills offer the best value for money for almost all materials. Only carbide tipped annular cutters provide maximum cutting capacity in all kinds of steel.

- Drilling in hardened steel up to 40 Rockwell (HRC)
- Drilling in all sorts of stainless steel
- Drilling in most difficult alloys (Hardox/Inconel/Titanium)
- Drilling also excellent in all non-ferrous metals such as alu, copper, brass

Available in diameter 12-150 mm. Available in drill depths 40 mm, 55 mm, 80 mm and 110 mm. Simply the world's largest stock range of carbide tipped annular cutter.

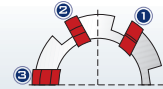
PROPERTIES



Karnasch carbide tipped annular cutters (HARD-LINE) are made with a conical helix for: clean chip flow and highest cutting ability even with difficult materials.



Karnasch carbide tipped annular cutters (HARD-LINE) are exclusively equipped with Sandvik carbide teeth. Our opinion is: Only the best carbide is good enough for Karnasch annular cutters.



Karnasch carbide tipped annular cutters (HARD-LINE) are made in an elaborate pre-/intermediate-/after-cutting geometry. This results in: clatter-free, silent and easy cutting with highest lifetimes.

APPLICATION

Steel	Stainless	Alu	Copper, brass, tin	Plastics GRP/CRP	Grey cast iron	Graphite	Hastelloy, Inconel, Nimonic, exotic materials	Rails
< 1400 N	> 900 N	> 10% Si						
✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ OPTIMAL ✓ GOOD ✓ POSSIBLE












CARBIDE-TIPPED ANNULAR CUTTERS

HARD-LINE

Drill depths	Ø mm	Ø Inch	Art. / Type	
 <p>Weldon 40 mm 1.1/2"</p> <p>BEST SELLER</p>	12-120	15/32-4.23/32"	20 1315 HARD-LINE / 40	376
 <p>Weldon 55 mm 2"</p> <p>BEST SELLER</p>	12-200	15/32-7.7/8"	20 1316 HARD-LINE / 55	378
 <p>Weldon 80 mm 3"</p>	14-120	35/64-4.23/32"	20 1650 HARD-LINE / 80	380
 <p>Weldon 110 mm 4"</p>	14-120	35/64-4.23/32"	20 1660 HARD-LINE / 110	382
 <p>Weldon 150 mm 5.29/32"</p>	18-60	45/64-2.23/64"	20 1665 HARD-LINE / 150	384
 <p>Weldon 40 mm 1.1/2"</p>	-	1/2-2.1/16"	20 1930 HARD-LINE INCH / 40	386
 <p>Weldon 55 mm 2"</p>	-	1/2-2.1/16"	20 1940 HARD-LINE INCH / 55	388
 <p>Weldon 80 mm 3"</p>	-	11/16-2.1/16"	20 1970 HARD-LINE INCH / 80	390

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

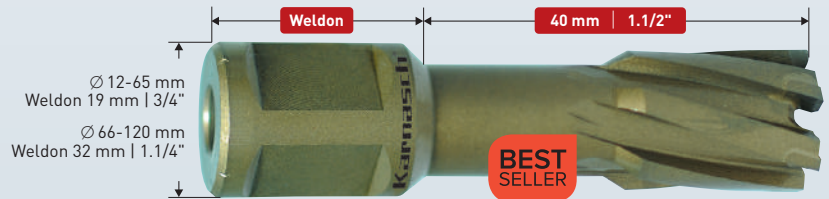
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 	531-533	Coolant pressure bottles 	538
Countersinks with Weldon shank 	534/535	Magnetic stick for chip removal 	539
Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 	636	Sets · Displays 	544-571
Tapping adapter Weldon + taps M 3 - M 30 	637-638		
Adapters + suitable drill chucks 	538	Spare parts 	540-542



20 1315 HARD-LINE 40 Carbide-tipped annular cutter, Weldon shank, drill depth 40 mm | 1.1/2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



Bestseller – price reduced

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1315 012	12	15/32"	20 1315 032	32	1.17/64"	20 1315 052	52	2.3/64"	20 1315 072	72	2.53/64"
20 1315 013	13	33/64"	20 1315 033	33	1.19/64"	20 1315 053	53	2.3/32"	20 1315 073	73	2.7/8"
20 1315 014	14	35/64"	20 1315 034	34	1.11/32"	20 1315 054	54	2.1/8"	20 1315 074	74	2.29/32"
20 1315 015	15	19/32"	20 1315 035	35	1.3/8"	20 1315 055	55	2.11/64"	20 1315 075	75	2.61/64"
20 1315 016	16	5/8"	20 1315 036	36	1.27/64"	20 1315 056	56	2.13/64"	20 1315 076	76	2.63/64"
20 1315 017	17	43/64"	20 1315 037	37	1.29/64"	20 1315 057	57	2.1/4"	20 1315 077	77	3.1/32"
20 1315 018	18	45/64"	20 1315 038	38	1.1/2"	20 1315 058	58	2.9/32"	20 1315 078	78	3.5/64"
20 1315 019	19	3/4"	20 1315 039	39	1.17/32"	20 1315 059	59	2.21/64"	20 1315 079	79	3.7/64"
20 1315 020	20	25/32"	20 1315 040	40	1.37/64"	20 1315 060	60	2.23/64"	20 1315 080	80	3.5/32"
20 1315 021	21	53/64"	20 1315 041	41	1.39/64"	20 1315 061	61	2.13/32"	20 1315 085	85	3.11/32"
20 1315 022	22	55/64"	20 1315 042	42	1.21/32"	20 1315 062	62	2.7/16"	20 1315 090	90	3.35/64"
20 1315 023	23	29/32"	20 1315 043	43	1.11/16"	20 1315 063	63	2.31/64"	20 1315 095	95	3.47/64"
20 1315 024	24	15/16"	20 1315 044	44	1.47/64"	20 1315 064	64	2.33/64"	20 1315 100	100	3.15/16"
20 1315 025	25	63/64"	20 1315 045	45	1.49/64"	20 1315 065	65	2.9/16"	20 1315 105	105	4.9/64"
20 1315 026	26	1.1/32"	20 1315 046	46	1.13/16"	20 1315 066	66	2.19/32"	20 1315 110	110	4.21/64"
20 1315 027	27	1.1/16"	20 1315 047	47	1.27/32"	20 1315 067	67	2.41/64"	20 1315 115	115	4.17/32"
20 1315 028	28	1.7/64"	20 1315 048	48	1.57/64"	20 1315 068	68	2.43/64"	20 1315 120	120	4.23/32"
20 1315 029	29	1.9/64"	20 1315 049	49	1.59/64"	20 1315 069	69	2.23/32"			
20 1315 030	30	1.3/16"	20 1315 050	50	1.31/32"	20 1315 070	70	2.3/4"			
20 1315 031	31	1.7/32"	20 1315 051	51	2.1/64"	20 1315 071	71	2.51/64"			

Larger Ø and in between Ø see Art. 20 1316 page 378, Art. 20 1130A page 585, Art. 20 1141A page 589.

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1315 HARD-LINE 40 ACCESSORIES

EJECTOR PINS

<p>Ø 12-17 mm • 20 1149</p> <p>Packaging unit 2 pcs.</p>	<p>Ø 18-65 mm • 20 1151</p> <p>Packaging unit 2 pcs.</p>	<p>Ø 66-120 mm • 20 1273</p> <p>Packaging unit 2 pcs.</p>
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20 1315 HARD-LINE 40 SETS / DISPLAYS Page 544

We offer a large selection of sets / displays – recommended content 20 1315 HARD-LINE40 – see page 544. Other content possible by individually equipped sets / displays.



Cutting data

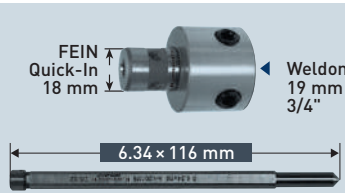
Movie

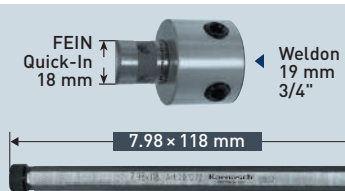


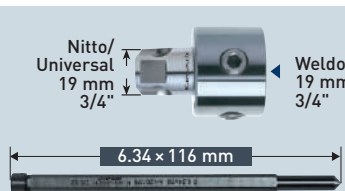
1307

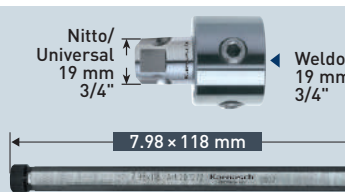


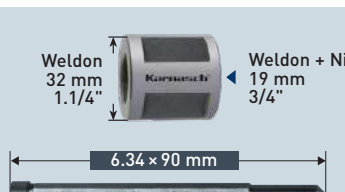
ADAPTER + SUITABLE EJECTOR PINS

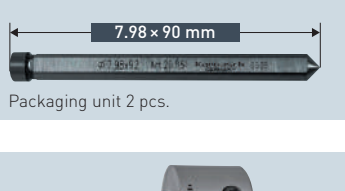

 FEIN Quick-In 18 mm
 Weldon + Nitto/Universal 19 mm 3/4"
 6.34 x 116 mm
 • 20 1263
 • 20 1318
 Packaging unit 2 pcs.

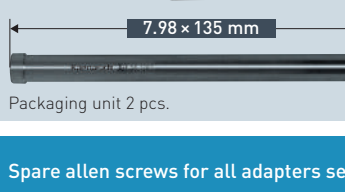

 FEIN Quick-In 18 mm
 Weldon + Nitto/Universal 19 mm 3/4"
 7.98 x 118 mm
 • 20 1161
 • 20 1272
 Packaging unit 2 pcs.


 Nitto/Universal 19 mm 3/4"
 Weldon 19 mm 3/4"
 6.34 x 116 mm
 • 20 1311
 • 20 1318
 Packaging unit 2 pcs.


 Nitto/Universal 19 mm 3/4"
 Weldon 19 mm 3/4"
 7.98 x 118 mm
 • 20 1314
 • 20 1272
 Packaging unit 2 pcs.


 Weldon 32 mm 1.1/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 6.34 x 90 mm
 • 21 0048
 • 20 1149
 Packaging unit 2 pcs.

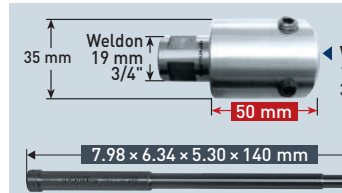

 Weldon 32 mm 1.1/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 7.98 x 90 mm
 • 20 1151
 Packaging unit 2 pcs.

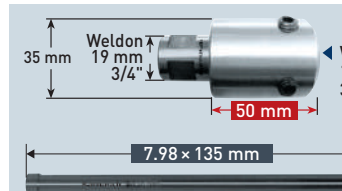

 Weldon 19 mm 3/4"
 Weldon 32 mm 1.1/4"
 7.98 x 135 mm
 • 20 1386
 • 20 1393
 Packaging unit 2 pcs.

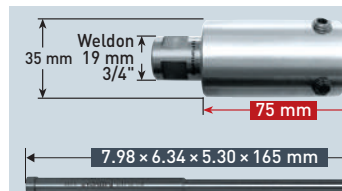
Spare allen screws for all adapters see page 540

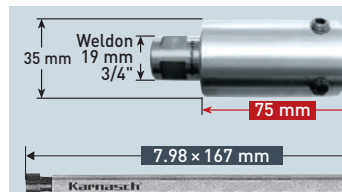
Further accessories see overview page 375

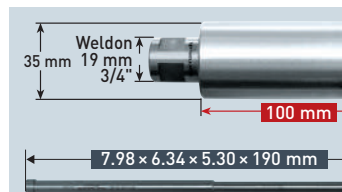
EXTENSIONS + SUITABLE EJECTOR PINS

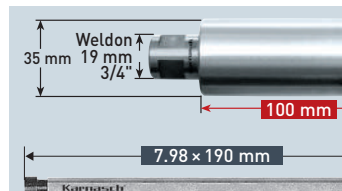

 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 50 mm
 7.98 x 6.34 x 5.30 x 140 mm
 • 20 1387
 • 20 1390
 Packaging unit 2 pcs.


 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 50 mm
 7.98 x 135 mm
 • 20 1387
 • 20 1393
 Packaging unit 2 pcs.


 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 75 mm
 7.98 x 6.34 x 5.30 x 165 mm
 • 20 1402
 • 20 1405
 Packaging unit 2 pcs.


 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 75 mm
 7.98 x 167 mm
 • 20 1402
 • 20 1408
 Packaging unit 2 pcs.


 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 100 mm
 7.98 x 6.34 x 5.30 x 190 mm
 • 20 1417
 • 20 1420
 Packaging unit 2 pcs.


 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 100 mm
 7.98 x 190 mm
 • 20 1417
 • 20 1423
 Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

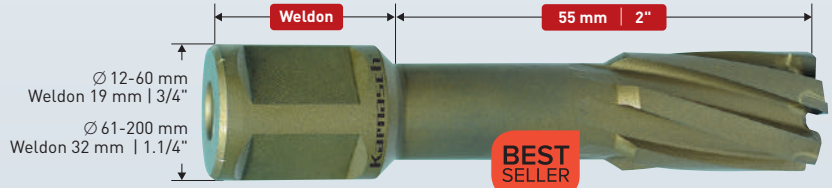
Further accessories see overview page 375



20 1316 **HARD-LINE 55** Carbide-tipped annular cutter, Weldon shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	H I N H
< 1400 N	> 900 N		> 10% Si			



Bestseller – price reduced

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1316 012	12	15/32"	20 1316 035	35	1.3/8"	20 1316 062	62	2.7/16"	20 1316 100	100	3.15/16"
20 1316 013	13	33/64"	20 1316 036	36	1.27/64"	20 1316 063	63	2.31/64"	20 1316 103	103	4.1/16"
20 1316 014	14	35/64"	20 1316 037	37	1.29/64"	20 1316 064	64	2.33/64"	20 1316 104	104	4.3/32"
20 1316 015	15	19/32"	20 1316 038	38	1.1/2"	20 1316 065	65	2.9/16"	20 1316 105	105	4.9/64"
20 1316 016	16	5/8"	20 1316 039	39	1.17/32"	20 1316 066	66	2.19/32"	20 1316 106	106	4.11/64"
20 1316 017	17	43/64"	20 1316 040	40	1.37/64"	20 1316 067	67	2.41/64"	20 1316 108	108	4.1/4"
20 1316 0175	17.5	11/16"	20 1316 041	41	1.39/64"	20 1316 068	68	2.43/64"	20 1316 110	110	4.21/64"
20 1316 018	18	45/64"	20 1316 042	42	1.21/32"	20 1316 069	69	2.23/32"	20 1316 115	115	4.17/32"
20 1316 019	19	3/4"	20 1316 043	43	1.11/16"	20 1316 070	70	2.3/4"	20 1316 120	120	4.23/32"
20 1316 020	20	25/32"	20 1316 044	44	1.47/64"	20 1316 071	71	2.51/64"	20 1316 125	125	4.59/64"
20 1316 021	21	53/64"	20 1316 045	45	1.49/64"	20 1316 072	72	2.53/64"	20 1316 130	130	5.1/8"
20 1316 0215	21.5	27/32"	20 1316 046	46	1.13/16"	20 1316 073	73	2.7/8"	20 1316 135	135	5.3/16"
20 1316 022	22	55/64"	20 1316 047	47	1.27/32"	20 1316 074	74	2.29/32"	20 1316 140	140	5.33/64"
20 1316 023	23	29/32"	20 1316 048	48	1.57/64"	20 1316 075	75	2.61/64"	20 1316 145	145	5.45/64"
20 1316 0235	23.5	59/64"	20 1316 049	49	1.59/64"	20 1316 076	76	2.63/64"	20 1316 150	150	5.29/32"
20 1316 024	24	15/16"	20 1316 050	50	1.31/32"	20 1316 077	77	3.1/32"	20 1316 155	155	6.7/64"
20 1316 025	25	63/64"	20 1316 051	51	2.1/64"	20 1316 078	78	3.5/64"	20 1316 160	160	6.19/64"
20 1316 0255	25.5	1"	20 1316 052	52	2.3/64"	20 1316 079	79	3.7/64"	20 1316 165	165	6.17/2"
20 1316 026	26	1.1/32"	20 1316 053	53	2.3/32"	20 1316 080	80	3.5/32"	20 1316 170	170	6.11/16"
20 1316 027	27	1.1/16"	20 1316 054	54	2.1/8"	20 1316 082	82	3.15/64"	20 1316 175	175	6.57/64"
20 1316 028	28	1.7/64"	20 1316 055	55	2.11/64"	20 1316 083	83	3.17/64"	20 1316 180	180	7.3/32"
20 1316 029	29	1.9/64"	20 1316 056	56	2.13/64"	20 1316 084	84	3.5/16"	20 1316 185	185	7.9/32"
20 1316 030	30	1.3/16"	20 1316 057	57	2.1/4"	20 1316 085	85	3.11/32"	20 1316 190	190	7.31/64"
20 1316 031	31	1.7/32"	20 1316 058	58	2.9/32"	20 1316 088	88	3.15/32"	20 1316 195	195	7.43/64"
20 1316 032	32	1.17/64"	20 1316 059	59	2.21/64"	20 1316 090	90	3.35/64"	20 1316 200	200	7.7/8"
20 1316 033	33	1.19/64"	20 1316 060	60	2.23/64"	20 1316 092	92	3.5/8"			
20 1316 034	34	1.11/32"	20 1316 061	61	2.13/32"	20 1316 095	95	3.47/64"			

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1316 **HARD-LINE 55** ACCESSORIES

EJECTOR PINS

<p>Ø 12-17.5 mm • 20 1271</p> <p>6.34 x 102 mm</p> <p>Packaging unit 2 pcs.</p>	<p>Ø 18-60 mm • 20 1273</p> <p>7.98 x 105 mm</p> <p>Packaging unit 2 pcs.</p>	<p>Ø 61-200 mm • 20 1272</p> <p>7.98 x 118 mm</p> <p>Packaging unit 2 pcs.</p>
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20 1316 **HARD-LINE 55** SETS / DISPLAYS Page 545

We offer a large selection of sets / displays – recommended content 20 1316 HARD-LINE55 – see page 545. Other content possible by individually equipped sets / displays.



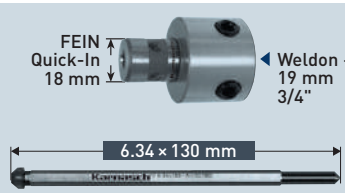
Cutting data

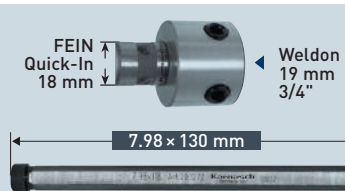
Movie

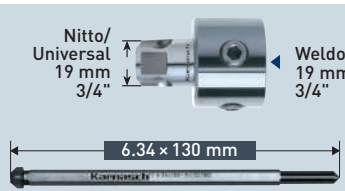


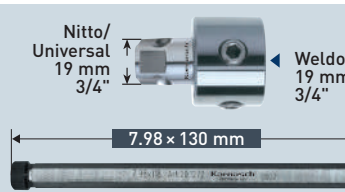
1307

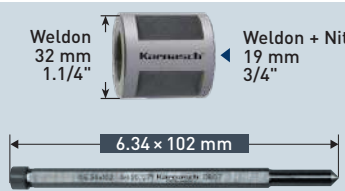
ADAPTER + SUITABLE EJECTOR PINS



 FEIN Quick-In 18 mm
 Weldon + Nitto/Universal 19 mm 3/4"
 6.34 x 130 mm
 20 1263
 20 1160
 Packaging unit 2 pcs.


 FEIN Quick-In 18 mm
 Weldon + Nitto/Universal 19 mm 3/4"
 7.98 x 130 mm
 20 1161
 20 1439
 Packaging unit 2 pcs.


 Nitto/Universal 19 mm 3/4"
 Weldon 19 mm 3/4"
 6.34 x 130 mm
 20 1311
 20 1160
 Packaging unit 2 pcs.


 Nitto/Universal 19 mm 3/4"
 Weldon 19 mm 3/4"
 7.98 x 130 mm
 20 1314
 20 1439
 Packaging unit 2 pcs.


 Weldon 32 mm 1.1/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 6.34 x 102 mm
 21 0048
 20 1271
 Packaging unit 2 pcs.

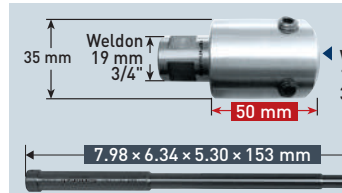

 7.98 x 105 mm
 20 1273
 Packaging unit 2 pcs.

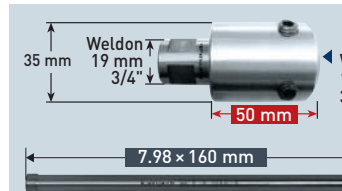

 Weldon 19 mm 3/4"
 Weldon 32 mm 1.1/4"
 7.98 x 145 mm
 20 1386
 20 1403
 Packaging unit 2 pcs.

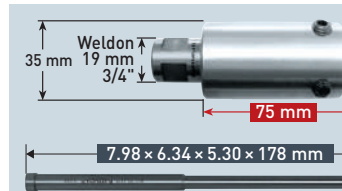
Spare allen screws for all adapters see page 540

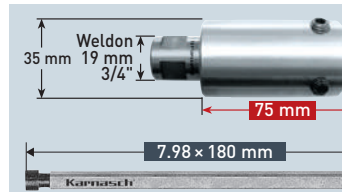
Further accessories see overview page 375

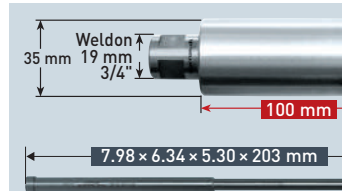
EXTENSIONS + SUITABLE EJECTOR PINS

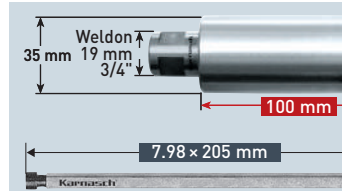

 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 50 mm
 7.98 x 6.34 x 5.30 x 153 mm
 20 1387
 20 1396
 Packaging unit 2 pcs.


 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 50 mm
 7.98 x 160 mm
 20 1387
 20 1399
 Packaging unit 2 pcs.


 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 75 mm
 7.98 x 6.34 x 5.30 x 178 mm
 20 1402
 20 1411
 Packaging unit 2 pcs.


 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 75 mm
 7.98 x 180 mm
 20 1402
 20 1414
 Packaging unit 2 pcs.


 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 100 mm
 7.98 x 6.34 x 5.30 x 203 mm
 20 1417
 20 1426
 Packaging unit 2 pcs.


 Weldon 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 35 mm
 100 mm
 7.98 x 205 mm
 20 1417
 20 1429
 Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 375



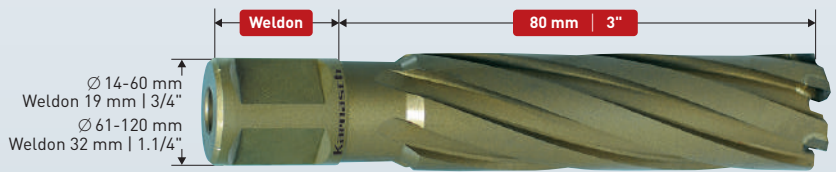
20 1650

HARD-LINE 80

Carbide-tipped annular cutter, Weldon shank, drill depth 80 mm | 3"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1650 014	14	35/64"	20 1650 034	34	1.11/32"	20 1650 054	54	2.1/8"	20 1650 075	75	2.61/64"
20 1650 015	15	19/32"	20 1650 035	35	1.3/8"	20 1650 055	55	2.11/64"	20 1650 076	76	2.63/64"
20 1650 016	16	5/8"	20 1650 036	36	1.27/64"	20 1650 056	56	2.13/64"	20 1650 078	78	3.5/64"
20 1650 017	17	43/64"	20 1650 037	37	1.29/64"	20 1650 057	57	2.1/4"	20 1650 080	80	3.5/32"
20 1650 018	18	45/64"	20 1650 038	38	1.1/2"	20 1650 058	58	2.9/32"	20 1650 082	82	3.15/64"
20 1650 019	19	3/4"	20 1650 039	39	1.17/32"	20 1650 059	59	2.21/64"	20 1650 085	85	3.11/32"
20 1650 020	20	25/32"	20 1650 040	40	1.37/64"	20 1650 060	60	2.23/64"	20 1650 090	90	3.35/64"
20 1650 021	21	53/64"	20 1650 041	41	1.39/64"	20 1650 061	61	2.13/32"	20 1650 095	95	3.47/64"
20 1650 022	22	55/64"	20 1650 042	42	1.21/32"	20 1650 062	62	2.7/16"	20 1650 100	100	3.15/16"
20 1650 023	23	29/32"	20 1650 043	43	1.11/16"	20 1650 063	63	2.31/64"	20 1650 103	103	4.1/16"
20 1650 024	24	15/16"	20 1650 044	44	1.47/64"	20 1650 064	64	2.33/64"	20 1650 104	104	4.3/32"
20 1650 025	25	63/64"	20 1650 045	45	1.49/64"	20 1650 065	65	2.9/16"	20 1650 105	105	4.9/64"
20 1650 026	26	1.1/32"	20 1650 046	46	1.13/16"	20 1650 066	66	2.19/32"	20 1650 106	106	4.11/64"
20 1650 027	27	1.1/16"	20 1650 047	47	1.27/32"	20 1650 067	67	2.41/64"	20 1650 108	108	4.1/4"
20 1650 028	28	1.7/64"	20 1650 048	48	1.57/64"	20 1650 068	68	2.43/64"	20 1650 110	110	4.21/64"
20 1650 029	29	1.9/64"	20 1650 049	49	1.59/64"	20 1650 069	69	2.23/32"	20 1650 115	115	4.17/32"
20 1650 030	30	1.3/16"	20 1650 050	50	1.31/32"	20 1650 070	70	2.3/4"	20 1650 120	120	4.23/32"
20 1650 031	31	1.7/32"	20 1650 051	51	2.1/64"	20 1650 072	72	2.53/64"			
20 1650 032	32	1.17/64"	20 1650 052	52	2.3/64"	20 1650 073	73	2.7/8"			
20 1650 033	33	1.19/64"	20 1650 053	53	2.3/32"	20 1650 074	74	2.29/32"			

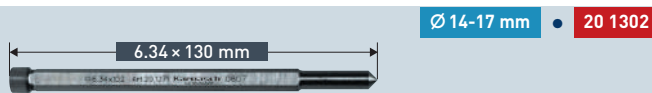
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1650

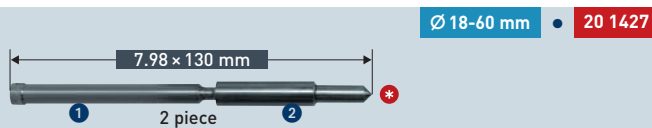
HARD-LINE 80

ACCESSORIES

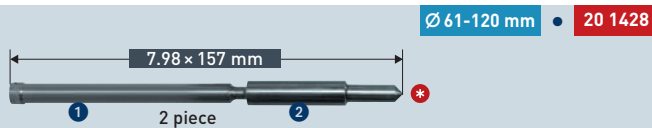
EJECTOR PINS 1 + 2-PIECE



1 piece
Packaging unit 2 pcs.



2 piece
Packaging unit 2 pcs.



2 piece
Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:
Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

* **Why use 2-part ejector pins?** Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If **no extra-long** holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

One-piece ejector pins see next page

Cutting data

Movie



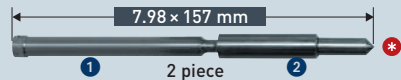
1307



ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm Weldon + Nitto/Universal 19 mm 3/4"

Ø 18-60 mm • 20 1161



7.98 x 157 mm

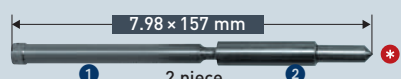
1 2 piece 2 *

• 20 1436

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4" Weldon 19 mm 3/4"

Ø 18-60 mm • 20 1314



7.98 x 157 mm

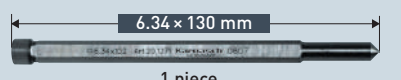
1 2 piece 2 *

• 20 1436

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4" Weldon + Nitto/Universal 19 mm 3/4"

Ø 14-17 mm • 21 0048

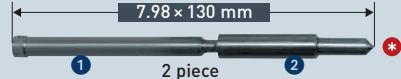


6.34 x 130 mm

1 piece

Packaging unit 2 pcs.

Ø 18-60 mm • 20 1427

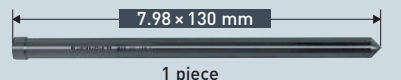


7.98 x 130 mm

1 2 piece 2 *

Packaging unit 2 pcs.

Ø 18-60 mm • 20 1439




7.98 x 130 mm

1 piece

Packaging unit 2 pcs.

Weldon 19 mm 3/4" Weldon 32 mm 1.1/4"

Ø 61-120 mm • 20 1386



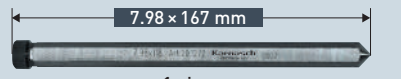
7.98 x 168 mm

1 2 piece 2 *

• 20 1486

Packaging unit 2 pcs.

Ø 61-120 mm • 20 1408



7.98 x 167 mm

1 piece

Packaging unit 2 pcs.

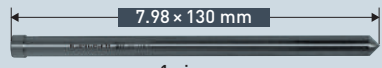
* Please note explanation 1-part / 2-part pins

Spare allen screws for all adapters see page 540

Further accessories see overview page 375

EJECTOR PINS 1-PIECE

Ø 18-60 mm • 20 1439




7.98 x 130 mm

1 piece

Packaging unit 2 pcs.

Ø 61-120 mm • 20 1403



7.98 x 145 mm

1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.



20 1660

HARD-LINE / 110

Carbide-tipped annular cutter, Weldon shank, drill depth 110 mm | 4"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



⚠ Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1660 014	14	35/64"	20 1660 034	34	1.11/32"	20 1660 054	54	2.1/8"	20 1660 075	75	2.61/64"
20 1660 015	15	19/32"	20 1660 035	35	1.3/8"	20 1660 055	55	2.11/64"	20 1660 076	76	2.63/64"
20 1660 016	16	5/8"	20 1660 036	36	1.27/64"	20 1660 056	56	2.13/64"	20 1660 078	78	3.5/64"
20 1660 017	17	43/64"	20 1660 037	37	1.29/64"	20 1660 057	57	2.1/4"	20 1660 080	80	3.5/32"
20 1660 018	18	45/64"	20 1660 038	38	1.1/2"	20 1660 058	58	2.9/32"	20 1660 082	82	3.15/64"
20 1660 019	19	3/4"	20 1660 039	39	1.17/32"	20 1660 059	59	2.21/64"	20 1660 085	85	3.11/32"
20 1660 020	20	25/32"	20 1660 040	40	1.37/64"	20 1660 060	60	2.23/64"	20 1660 090	90	3.35/64"
20 1660 021	21	53/64"	20 1660 041	41	1.39/64"	20 1660 061	61	2.13/32"	20 1660 095	95	3.47/64"
20 1660 022	22	55/64"	20 1660 042	42	1.21/32"	20 1660 062	62	2.7/16"	20 1660 100	100	3.15/16"
20 1660 023	23	29/32"	20 1660 043	43	1.11/16"	20 1660 063	63	2.31/64"	20 1660 103	103	4.1/16"
20 1660 024	24	15/16"	20 1660 044	44	1.47/64"	20 1660 064	64	2.33/64"	20 1660 104	104	4.3/32"
20 1660 025	25	63/64"	20 1660 045	45	1.49/64"	20 1660 065	65	2.9/16"	20 1660 105	105	4.9/64"
20 1660 026	26	1.1/32"	20 1660 046	46	1.13/16"	20 1660 066	66	2.19/32"	20 1660 106	106	4.11/64"
20 1660 027	27	1.1/16"	20 1660 047	47	1.27/32"	20 1660 067	67	2.41/64"	20 1660 108	108	4.1/4"
20 1660 028	28	1.7/64"	20 1660 048	48	1.57/64"	20 1660 068	68	2.43/64"	20 1660 110	110	4.21/64"
20 1660 029	29	1.9/64"	20 1660 049	49	1.59/64"	20 1660 069	69	2.23/32"	20 1660 115	115	4.17/32"
20 1660 030	30	1.3/16"	20 1660 050	50	1.31/32"	20 1660 070	70	2.3/4"	20 1660 120	120	4.23/32"
20 1660 031	31	1.7/32"	20 1660 051	51	2.1/64"	20 1660 072	72	2.53/64"			
20 1660 032	32	1.17/64"	20 1660 052	52	2.3/64"	20 1660 073	73	2.7/8"			
20 1660 033	33	1.19/64"	20 1660 053	53	2.3/32"	20 1660 074	74	2.29/32"			

* With Weldon 32 mm special price as long as available

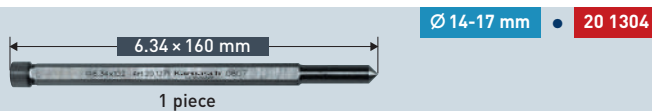
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1660

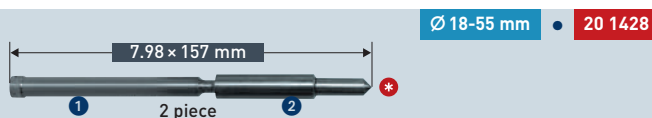
HARD-LINE / 110

ACCESSORIES

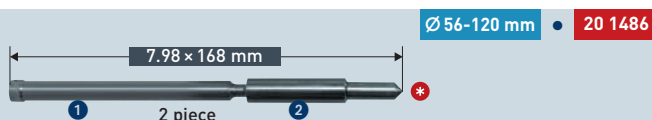
EJECTOR PINS 1 + 2-PIECE



Packaging unit 2 pcs.



Packaging unit 2 pcs.



Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

* Why use 2-part ejector pins? Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If no extra-long holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

One-piece ejector pins see next page

Cutting data

Movie



1307



ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm | Weldon + Nitto/Universal 19 mm 3/4"

Ø 18-55 mm • 20 1161

7.98 x 184 mm

1 2 piece 2

• 20 1438

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4" | Weldon 19 mm 3/4"

Ø 18-55 mm • 20 1314

7.98 x 184 mm

1 2 piece 2

• 20 1438

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4" | Weldon + Nitto/Universal 19 mm 3/4"

• 21 0048

6.34 x 160 mm

1 piece

Packaging unit 2 pcs.

7.98 x 160 mm

Ø 18-55 mm • 20 1399

1 piece

Packaging unit 2 pcs.

7.98 x 157 mm

Ø 18-55 mm • 20 1428

1 2 piece 2

Packaging unit 2 pcs.

Weldon 19 mm 3/4" | Weldon 32 mm 1.1/4"

Ø 56-120 mm • 20 1386

7.98 x 205 mm

1 2 piece 2

• 20 1152

Packaging unit 2 pcs.

7.98 x 205 mm

• 20 1429

1 piece

Packaging unit 2 pcs.

* Please note explanation 1-part / 2-part pins

Spare allen screws for all adapters see page 540

Further accessories see overview page 375

EJECTOR PINS 1-PIECE

Ø 18-55 mm • 20 1399

7.98 x 160 mm

1 piece

Packaging unit 2 pcs.

Ø 56-120 mm • 20 1408

7.98 x 167 mm

1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.



20 1665 HARD-LINE/150 Carbide-tipped annular cutter, Weldon shank, drill depth 150 mm | 5.29/32"

APPLICATION

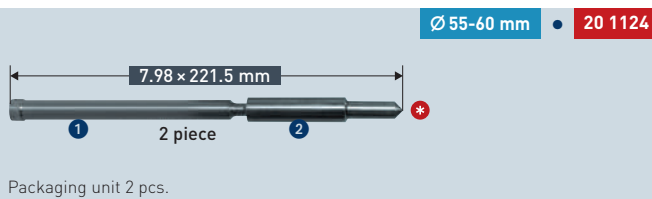
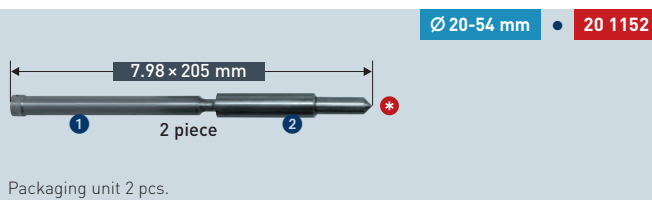
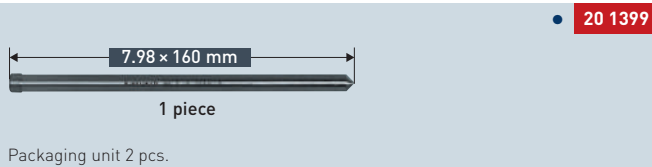
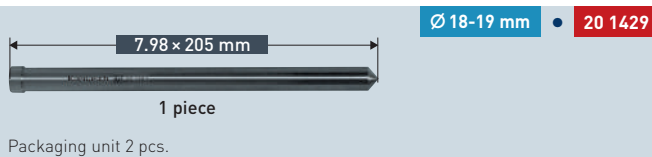
Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	H I N H
< 1400 N	> 900 N		> 10% Si			



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1665 018	18	45/64"	20 1665 030	30	1.3/16"	20 1665 042	42	1.21/32"	20 1665 054	54	2.1/8"
20 1665 019	19	3/4"	20 1665 031	31	1.7/32"	20 1665 043	43	1.11/16"	20 1665 055	55	2.11/64"
20 1665 020	20	25/32"	20 1665 032	32	1.17/64"	20 1665 044	44	1.47/64"	20 1665 056	56	2.13/64"
20 1665 021	21	53/64"	20 1665 033	33	1.19/64"	20 1665 045	45	1.49/64"	20 1665 057	57	2.1/4"
20 1665 022	22	55/64"	20 1665 034	34	1.11/32"	20 1665 046	46	1.13/16"	20 1665 058	58	2.9/32"
20 1665 023	23	29/32"	20 1665 035	35	1.3/8"	20 1665 047	47	1.27/32"	20 1665 059	59	2.21/64"
20 1665 024	24	15/16"	20 1665 036	36	1.27/64"	20 1665 048	48	1.57/64"	20 1665 060	60	2.23/64"
20 1665 025	25	63/64"	20 1665 037	37	1.29/64"	20 1665 049	49	1.59/64"			
20 1665 026	26	1.1/32"	20 1665 038	38	1.1/2"	20 1665 050	50	1.31/32"			
20 1665 027	27	1.1/16"	20 1665 039	39	1.17/32"	20 1665 051	51	2.1/64"			
20 1665 028	28	1.7/64"	20 1665 040	40	1.37/64"	20 1665 052	52	2.3/64"			
20 1665 029	29	1.9/64"	20 1665 041	41	1.39/64"	20 1665 053	53	2.3/32"			

20 1665 HARD-LINE/150 ACCESSORIES

EJECTOR PINS 1 + 2-PIECE



APPLICATION EJECTOR PINS 1-PIECE Ø 18-19 mm

Mount pin Art. 20 1429 into the cutter and drill up to 80 mm cutting depth



Take off the cutter and use pin Art. 20 1399 and continue drilling up to 150 mm cutting depth.

APPLICATION EJECTOR PINS 2-PIECE



Application:
Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 80 mm cutting depth. Then remove piece 2 and continue drilling up to cutting depth 150 mm.

ATTENTION: The use of these 1+2-part ejector pins works only with extra long morse taper holders see Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 page 532/533

Cutting data

Movie



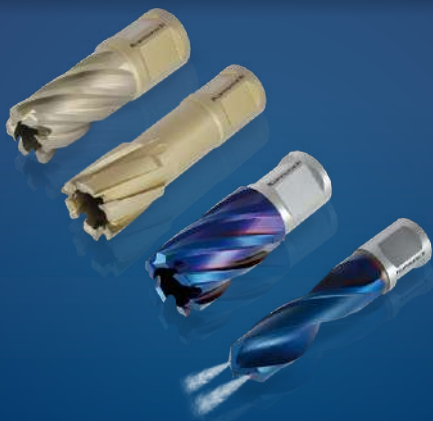
1307



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1



2



3



4



5



6



7



8



9



10

Index

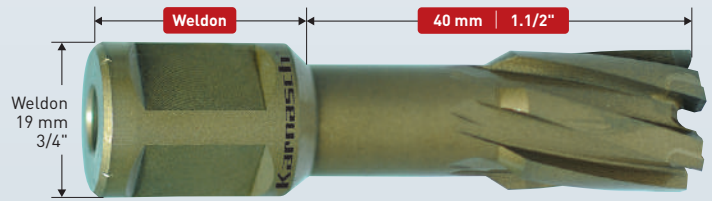
20 1930

HARD-LINE
INCH 40

Carbide-tipped annular cutter, Weldon shank, drill depth 40 mm | 1.1/2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
• 1/2"	12.70	20 1930 010	• 1"	25.40	20 1930 050	• 1.1/2"	38.10	20 1930 090	• 2"	50.80	20 1930 130
• 9/16"	14.28	20 1930 015	• 1.1/16"	26.98	20 1930 055	• 1.9/16"	39.68	20 1930 095	• 2.1/16"	52.38	20 1930 135
• 5/8"	15.87	20 1930 020	• 1.1/8"	28.57	20 1930 060	• 1.5/8"	41.27	20 1930 100			
• 11/16"	17.46	20 1930 025	• 1.3/16"	30.13	20 1930 065	• 1.11/16"	42.86	20 1930 105			
• 3/4"	19.04	20 1930 030	• 1.1/4"	31.75	20 1930 070	• 1.3/4"	44.45	20 1930 110			
• 13/16"	20.63	20 1930 035	• 1.5/16"	33.33	20 1930 075	• 1.13/16"	46.03	20 1930 115			
• 7/8"	22.22	20 1930 040	• 1.3/8"	34.92	20 1930 080	• 1.7/8"	47.62	20 1930 120			
• 15/16"	23.81	20 1930 045	• 1.7/16"	36.51	20 1930 085	• 1.15/16"	49.21	20 1930 125			

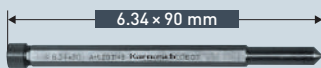
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1930

HARD-LINE
INCH 40

ACCESSORIES

EJECTOR PINS



1/2"-11/16" • 20 1149

Packaging unit 2 pcs.



3/4"-2.1/16" • 20 1151

Packaging unit 2 pcs.

20 1930

HARD-LINE
INCH 40

SETS / DISPLAYS Page 546

We offer a large selection of sets / displays – recommended content 20 1930 HARD-LINE40 – see page 546. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1307

ADAPTER + SUITABLE EJECTOR PINS

1/2"-11/16" • **20 1263**

Weldon + Nitto/Universal
19 mm
3/4"

6.34 x 116 mm

• **20 1318**

Packaging unit 2 pcs.

3/4"-2.1/16" • **20 1161**

Weldon + Nitto/Universal
19 mm
3/4"

7.98 x 118 mm

• **20 1272**

Packaging unit 2 pcs.

1/2"-11/16" • **20 1311**

Nitto/
Universal
19 mm
3/4"

Weldon
19 mm
3/4"

6.34 x 116 mm

• **20 1318**

Packaging unit 2 pcs.

3/4"-2.1/16" • **20 1314**

Nitto/
Universal
19 mm
3/4"

Weldon
19 mm
3/4"

7.98 x 118 mm

• **20 1272**

Packaging unit 2 pcs.

• **21 0048**

Weldon
32 mm
1.1/4"

Weldon + Nitto/Universal
19 mm
3/4"

6.34 x 90 mm

1/2"-11/16" • **20 1149**

Packaging unit 2 pcs.

• **20 1151**

Weldon + Nitto/Universal
19 mm
3/4"

7.98 x 90 mm

3/4"-2.1/16" • **20 1151**

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

Further accessories see overview page 375

EXTENSIONS + SUITABLE EJECTOR PINS

1/2"-11/16" • **20 1387**

Weldon
19 mm
3/4"

Weldon + Nitto/Universal
19 mm
3/4"

50 mm

7.98 x 6.34 x 5.30 x 140 mm

• **20 1390**

Packaging unit 2 pcs.

3/4"-2.1/16" • **20 1387**

Weldon
19 mm
3/4"

Weldon + Nitto/Universal
19 mm
3/4"

50 mm

7.98 x 135 mm

• **20 1393**

Packaging unit 2 pcs.

1/2"-11/16" • **20 1402**

Weldon
19 mm
3/4"

Weldon + Nitto/
Universal
19 mm
3/4"

75 mm

7.98 x 6.34 x 5.30 x 165 mm

• **20 1405**

Packaging unit 2 pcs.

3/4"-2.1/16" • **20 1402**

Weldon
19 mm
3/4"

Weldon + Nitto/
Universal
19 mm
3/4"

75 mm

7.98 x 167 mm

• **20 1408**

Packaging unit 2 pcs.

1/2"-11/16" • **20 1417**

Weldon
19 mm
3/4"

Weldon + Nitto/
Universal
19 mm
3/4"

100 mm

7.98 x 6.34 x 5.30 x 190 mm

• **20 1420**

Packaging unit 2 pcs.

3/4"-2.1/16" • **20 1417**

Weldon
19 mm
3/4"

Weldon + Nitto/
Universal
19 mm
3/4"

100 mm

7.98 x 190 mm

• **20 1423**

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 375



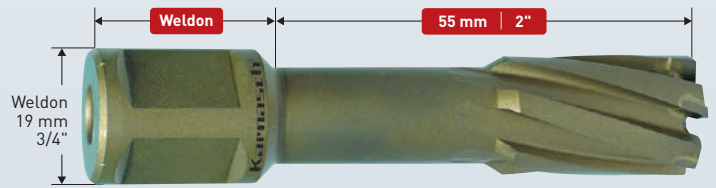
20 1940

HARD-LINE
INCH **55**

Carbide-tipped annular cutter, Weldon shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
• 1/2"	12.70	20 1940 010	• 1"	25.40	20 1940 050	• 1.1/2"	38.10	20 1940 090	• 2"	50.80	20 1940 130
• 9/16"	14.28	20 1940 015	• 1.1/16"	26.98	20 1940 055	• 1.9/16"	39.68	20 1940 095	• 2.1/16"	52.38	20 1940 135
• 5/8"	15.87	20 1940 020	• 1.1/8"	28.57	20 1940 060	• 1.5/8"	41.27	20 1940 100			
• 11/16"	17.46	20 1940 025	• 1.3/16"	30.13	20 1940 065	• 1.11/16"	42.86	20 1940 105			
• 3/4"	19.04	20 1940 030	• 1.1/4"	31.75	20 1940 070	• 1.3/4"	44.45	20 1940 110			
• 13/16"	20.63	20 1940 035	• 1.5/16"	33.33	20 1940 075	• 1.13/16"	46.03	20 1940 115			
• 7/8"	22.22	20 1940 040	• 1.3/8"	34.92	20 1940 080	• 1.7/8"	47.62	20 1940 120			
• 15/16"	23.81	20 1940 045	• 1.7/16"	36.51	20 1940 085	• 1.15/16"	49.21	20 1940 125			

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1940

HARD-LINE
INCH **55**

ACCESSORIES

EJECTOR PINS



1/2"-11/16" • 20 1271

Packaging unit 2 pcs.



3/4"-2.1/16" • 20 1273

Packaging unit 2 pcs.

20 1940

HARD-LINE
INCH **55**

SETS / DISPLAYS Page 547

We offer a large selection of sets / displays – recommended content 20 1940 HARD-LINE55 – see page 547. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1307

ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm
Weldon + Nitto/Universal 19 mm 3/4"

1/2"-11/16" • 20 1263

6.34 x 130 mm • 20 1160

Packaging unit 2 pcs.

FEIN Quick-In 18 mm
Weldon + Nitto/Universal 19 mm 3/4"

3/4"-2.1/16" • 20 1161

7.98 x 130 mm • 20 1439

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4"
Weldon 19 mm 3/4"

1/2"-11/16" • 20 1311

6.34 x 130 mm • 20 1160

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4"
Weldon 19 mm 3/4"

3/4"-2.1/16" • 20 1314

7.98 x 130 mm • 20 1439

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4"
Weldon + Nitto/Universal 19 mm 3/4"

1/2"-11/16" • 21 0048

6.34 x 102 mm • 20 1271

Packaging unit 2 pcs.

7.98 x 105 mm • 20 1273

3/4"-2.1/16" • 20 1273

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

Further accessories see overview page 375

EXTENSIONS + SUITABLE EJECTOR PINS

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

1/2"-11/16" • 20 1387

35 mm
50 mm
7.98 x 6.34 x 5.30 x 153 mm • 20 1396

Packaging unit 2 pcs.

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

3/4"-2.1/16" • 20 1387

35 mm
50 mm
7.98 x 160 mm • 20 1399

Packaging unit 2 pcs.

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

1/2"-11/16" • 20 1402

35 mm
75 mm
7.98 x 6.34 x 5.30 x 178 mm • 20 1411

Packaging unit 2 pcs.

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

3/4"-2.1/16" • 20 1402

35 mm
75 mm
7.98 x 180 mm • 20 1414

Packaging unit 2 pcs.

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

1/2"-11/16" • 20 1417

35 mm
100 mm
7.98 x 6.34 x 5.30 x 203 mm • 20 1426

Packaging unit 2 pcs.

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

3/4"-2.1/16" • 20 1417

35 mm
100 mm
7.98 x 205 mm • 20 1429

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 375



20 1970

HARD-LINE
INCH **80**

Carbide-tipped annular cutter, Weldon shank, drill depth 80 mm | 3"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
• 11/16"	17.46	20 1970 025	• 1.1/16"	26.98	20 1970 055	• 1.7/16"	36.51	20 1970 085	• 1.13/16"	46.03	20 1970 115
• 3/4"	19.04	20 1970 030	• 1.1/8"	28.57	20 1970 060	• 1.1/2"	38.10	20 1970 090	• 1.7/8"	47.62	20 1970 120
• 13/16"	20.63	20 1970 035	• 1.3/16"	30.13	20 1970 065	• 1.9/16"	39.68	20 1970 095	• 1.15/16"	49.21	20 1970 125
• 7/8"	22.22	20 1970 040	• 1.1/4"	31.75	20 1970 070	• 1.5/8"	41.27	20 1970 100	• 2"	50.80	20 1970 130
• 15/16"	23.81	20 1970 045	• 1.5/16"	33.33	20 1970 075	• 1.11/16"	42.86	20 1970 105	• 2.1/16"	52.38	20 1970 135
• 1"	25.40	20 1970 050	• 1.3/8"	34.92	20 1970 080	• 1.3/4"	44.45	20 1970 110			

Attention: The inch sizes do not correspond exactly to the mm diameters.

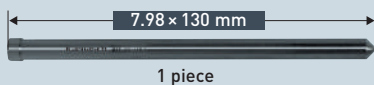
20 1970

HARD-LINE
INCH **80**

ACCESSORIES

EJECTOR PINS 1-PIECE

• 20 1439



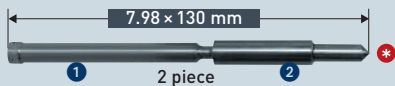
1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• 20 1427



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

• Why use 2-part ejector pins? Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If no extra-long holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



1307



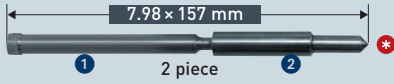
Accessories for carbide-tipped annular cutter, Weldon shank, drill depth 80 mm | 3"

HARD-LINE 80 INCH 20 1970

ADAPTER + SUITABLE EJECTOR PINS



• 20 1161

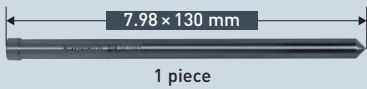


• 20 1436

Packaging unit 2 pcs.

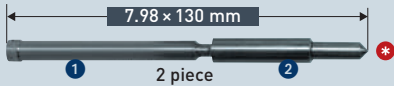


• 21 0048



• 20 1439

Packaging unit 2 pcs.



• 20 1427

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



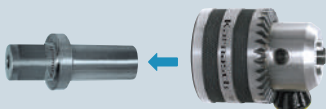
Sets · Displays 544-571



Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

HARDOX / HARD STEEL ANNULAR CUTTER



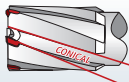
HARDOX-LINE

The best annular cutter for drilling in:

- Hardox 400, 450, 500
- Hard steels from 30 HRC up to 50 HRC

Specially developed carbide as well as optimized geometry results in excellent performance for drilling in HARDOX / HARD STEEL (absolutely observe cutting parameters).

PROPERTIES



Karnasch HARDOX-LINE annular cutters are made with a conical helix for clean chip flow and highest cutting ability.



Karnasch HARDOX-LINE annular cutters come with optimized carbide tipped teeth material for excellent results drilling in HARDOX and HARD STEEL.



Karnasch HARDOX-LINE annular cutters are made in an elaborate pre-/intermediate-/after-cutting geometry. This results in: clatter-free, silent and easy cutting with highest lifetimes.

APPLICATION



Hardox
400, 450, 500



Hard steel
from 30 HRC
up to 50 HRC



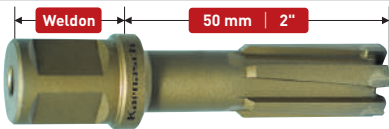
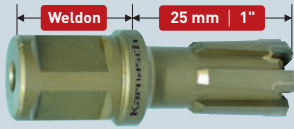
ATTENTION:

Maximum recommended cutting depth for Hardox:
Art. 20 1680 = 20 mm
Art. 20 1690 = 35 mm
Be sure to observe cutting parameters, see page 1310-1311

✓ OPTIMAL ✓ GOOD ✓ POSSIBLE

HARDOX-LINE

Drill depths



Ø mm

Ø Inch

Art. / Type



14-40

35/64-
1.37/64"

20 1680

HARDOX-LINE /25

394

14-60

35/64-
2.23/64"

20 1690

HARDOX-LINE /50

396

Larger Ø and drill depths on request

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

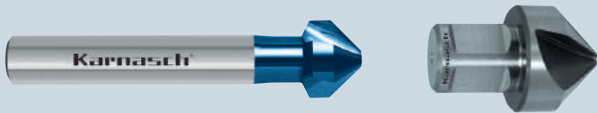
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks 675



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



Sets · Displays 544-571



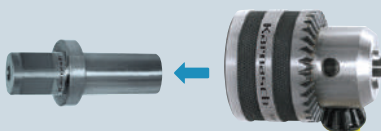
Tapping adapter Weldon + taps M 3 - M 30 637-638



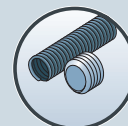
Solid carbide drills to remove jammed taps 640



Adapters + suitable drill chucks 538



Spare parts 540-542



1



2



3



4



5



6



7



8



9

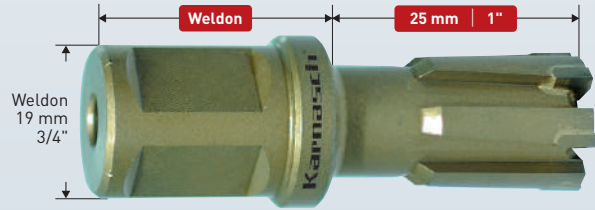
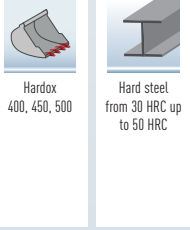


10

Index

20 1680 HARDOX-LINE 25 Carbide-tipped annular cutter, Weldon shank, drill depth 25 mm | 1"

APPLICATION



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1680 014	• 14	35/64"	20 1680 022	• 22	55/64"	20 1680 030	• 30	1.3/16"	20 1680 038	• 38	1.1/2"
20 1680 015	• 15	19/32"	20 1680 023	• 23	29/32"	20 1680 031	• 31	1.7/32"	20 1680 039	• 39	1.17/32"
20 1680 016	• 16	5/8"	20 1680 024	• 24	15/16"	20 1680 032	• 32	1.17/64"	20 1680 040	• 40	1.37/64"
20 1680 017	• 17	43/64"	20 1680 025	• 25	63/64"	20 1680 033	• 33	1.19/64"			
20 1680 018	• 18	45/64"	20 1680 026	• 26	1.1/32"	20 1680 034	• 34	1.11/32"			
20 1680 019	• 19	3/4"	20 1680 027	• 27	1.1/16"	20 1680 035	• 35	1.3/8"			
20 1680 020	• 20	25/32"	20 1680 028	• 28	1.7/64"	20 1680 036	• 36	1.27/64"			
20 1680 021	• 21	53/64"	20 1680 029	• 29	1.9/64"	20 1680 037	• 37	1.29/64"			

Larger Ø see Art. 20 1690 page 396 · Maximum recommended cutting depth for Hardox = 20 mm ·
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1680 HARDOX-LINE 25 ACCESSORIES

EJECTOR PINS



Packaging unit 2 pcs.

SETS / DISPLAYS

• 20 1344

max. 44 Pieces

• 20 1138

max. 6 Pieces

• 20 1132

max. 12 Pieces

• 20 1139

max. 50 Pieces

You would like to select your own contents?
No Problem. Contact us and we create your individual set or display.

Cutting data

Movie

ADAPTER + SUITABLE EJECTOR PINS



• **20 1263**



• **20 1271**

Packaging unit 2 pcs.



• **20 1311**



• **20 1271**

Packaging unit 2 pcs.



• **21 0048**



• **20 1261**

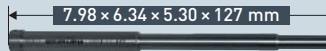
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

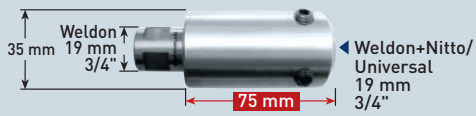


• **20 1387**



• **20 1433**

Packaging unit 2 pcs.



• **20 1402**



• **20 1396**

Packaging unit 2 pcs.



• **20 1417**



• **20 1411**

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 501



20 1690

HARDOX-LINE 50

Carbide-tipped annular cutter, Weldon shank, drill depth 50 mm | 2"

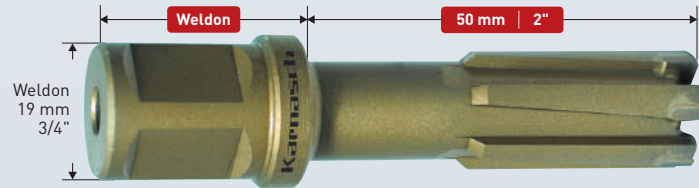
APPLICATION



Hardox
400, 450, 500



Hard steel
from 30 HRC up
to 50 HRC



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1690 014	• 14	35/64"	20 1690 026	• 26	1.1/32"	20 1690 038	• 38	1.1/2"	20 1690 050	• 50	1.31/32"
20 1690 015	• 15	19/32"	20 1690 027	• 27	1.1/16"	20 1690 039	• 39	1.17/32"	20 1690 051	• 51	2.1/64"
20 1690 016	• 16	5/8"	20 1690 028	• 28	1.7/64"	20 1690 040	• 40	1.37/64"	20 1690 052	• 52	2.3/64"
20 1690 017	• 17	43/64"	20 1690 029	• 29	1.9/64"	20 1690 041	• 41	1.39/64"	20 1690 053	• 53	2.3/32"
20 1690 018	• 18	45/64"	20 1690 030	• 30	1.3/16"	20 1690 042	• 42	1.21/32"	20 1690 054	• 54	2.1/8"
20 1690 019	• 19	3/4"	20 1690 031	• 31	1.7/32"	20 1690 043	• 43	1.11/16"	20 1690 055	• 55	2.11/64"
20 1690 020	• 20	25/32"	20 1690 032	• 32	1.17/64"	20 1690 044	• 44	1.47/64"	20 1690 056	• 56	2.13/64"
20 1690 021	• 21	53/64"	20 1690 033	• 33	1.19/64"	20 1690 045	• 45	1.49/64"	20 1690 057	• 57	2.1/4"
20 1690 022	• 22	55/64"	20 1690 034	• 34	1.11/32"	20 1690 046	• 46	1.13/16"	20 1690 058	• 58	2.9/32"
20 1690 023	• 23	29/32"	20 1690 035	• 35	1.3/8"	20 1690 047	• 47	1.27/32"	20 1690 059	• 59	2.21/64"
20 1690 024	• 24	15/16"	20 1690 036	• 36	1.27/64"	20 1690 048	• 48	1.57/64"	20 1690 060	• 60	2.23/64"
20 1690 025	• 25	63/64"	20 1690 037	• 37	1.29/64"	20 1690 049	• 49	1.59/64"			

Maximum recommended cutting depth for Hardox = 35 mm - **Attention:** The inch sizes do not correspond exactly to the mm diameters.

20 1690

HARDOX-LINE 50

ACCESSORIES

EJECTOR PINS

Ø 14-60 mm • 20 1271



Packaging unit 2 pcs.

SETS / DISPLAYS

• 20 1344

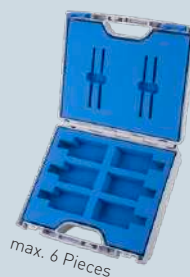
• 20 1138

• 20 1132

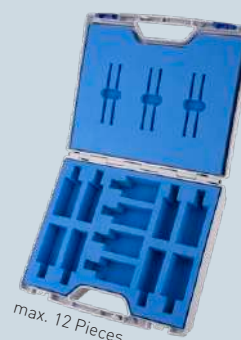
• 20 1139



max. 44 Pieces



max. 6 Pieces



max. 12 Pieces



max. 50 Pieces

You would like to select your own contents?
No Problem. Contact us and we create your individual set
or display.

Cutting data

Movie



1310-1311



Accessories for carbide-tipped annular cutter, Weldon shank, drill depth 50 mm | 2"

HARDOX-LINE 50

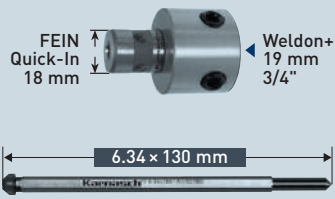
20 1690

ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm

Weldon+Nitto/Universal 19 mm 3/4"

• 20 1263



6.34 x 130 mm

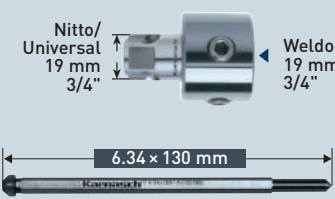
• 20 1160

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4"

Weldon 19 mm 3/4"

• 20 1311



6.34 x 130 mm


• 20 1160

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4"

Weldon + Nitto/Universal 19 mm 3/4"

• 21 0048



6.34 x 102 mm

• 20 1271

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

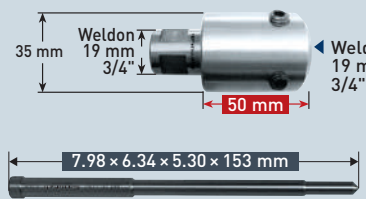
35 mm

Weldon 19 mm 3/4"

Weldon+Nitto/Universal 19 mm 3/4"

50 mm

• 20 1387



7.98 x 6.34 x 5.30 x 153 mm

• 20 1396

Packaging unit 2 pcs.

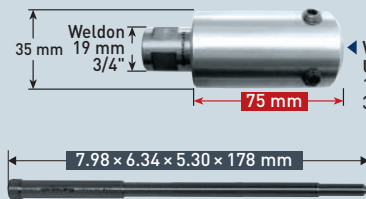
35 mm

Weldon 19 mm 3/4"

Weldon+Nitto/Universal 19 mm 3/4"

75 mm

• 20 1402



7.98 x 6.34 x 5.30 x 178 mm

• 20 1411

Packaging unit 2 pcs.

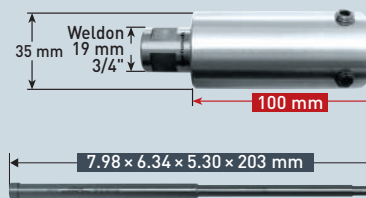
35 mm

Weldon 19 mm 3/4"

Weldon+Nitto/Universal 19 mm 3/4"

100 mm

• 20 1417



7.98 x 6.34 x 5.30 x 203 mm

• 20 1426

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 501



POWDER STEEL + DURABLU- COATED ANNULAR CUTTERS



BLUE-DRILL LINE PRO

Carbide tipped annular cutters and coated powder steel cutters provide an excellent price-performance ratio.

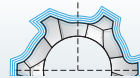
The Karnasch DURABLU-coating makes the annular cutter decisively more resistant. This results in a considerable increase of product life.

BLUE-DRILL LINE PRO annular cutters are the right choice for most difficult materials. Drilling in steel up to 45 Rockwell (HRC). (For standard coated annular cutters we recommend our BLUE-DRILL LINE range see page 405)

PROPERTIES



Made of ASP powder steel for drilling of difficult materials like railway tracks, stainless steels, exotic alloys. Applicable wherever a high wear resistance and lifetime are required.



Our first-class annular cutters are equipped with the unique and patented DURABLU-coating. Extreme surface hardness and sleekness yield extreme lifetimes even under non-optimum conditions like "overhead work", dry drilling, etc.



Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.

APPLICATION

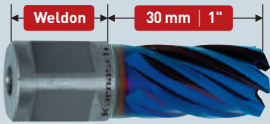
Steel	Steel	Stainless	Alu	Copper, brass, tin	Plastics GRP/CRP	Grey cast iron	Hastelloy, Inconel, Nimonic, exotic materials	Rails	Hardox 400	Hardox 450
< 1100 N	< 1400 N	> 900 N	> 10% Si							
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ OPTIMAL ✓ GOOD ✓ POSSIBLE



BLUE-DRILL LINE PRO

Drill depths



Ø mm

Ø Inch

Art. / Type



12-36

15/32-
1.27/64"

20 1284

BLUE-DRILL LINE 30 PRO

400

12-36


15/32-
1.27/64"

20 1317

BLUE-DRILL LINE 55 PRO

402


ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves  531-533




Coolant pressure bottles  538




Countersinks with Weldon shank  534/535




Magnetic stick for chip removal  539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm  636




Sets · Displays  544-571




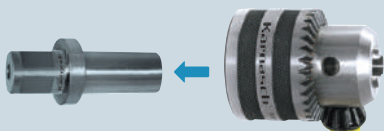
Tapping adapter Weldon + taps M 3 - M 30  637-638




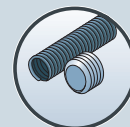
Solid carbide drills to remove jammed taps  640



Adapters + suitable drill chucks  538



Spare parts  540-542



1



2



3



4



5



6



7



8



9



10



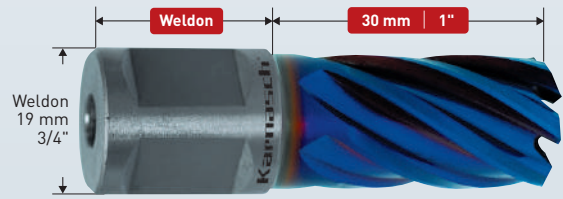
20 1284

BLUE-DRILL LINE **30**
PRO

Powder steel + DURABLE-coated annular cutter, Weldon shank, drill depth 30 mm | 1"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials	Hardox 400, 450
< 1400 N	> 900 N		> 10% Si				



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1284 012	12	15/32"	20 1284 020	20	25/32"	20 1284 028	28	1.7/64"	20 1284 036	36	1.27/64"
20 1284 013	13	33/64"	20 1284 021	21	53/64"	20 1284 029	29	1.9/64"			
20 1284 014	14	35/64"	20 1284 022	22	55/64"	20 1284 030	30	1.3/16"			
20 1284 015	15	19/32"	20 1284 023	23	29/32"	20 1284 031	31	1.7/32"			
20 1284 016	16	5/8"	20 1284 024	24	15/16"	20 1284 032	32	1.17/64"			
20 1284 017	17	43/64"	20 1284 025	25	63/64"	20 1284 033	33	1.19/64"			
20 1284 018	18	45/64"	20 1284 026	26	1.1/32"	20 1284 034	34	1.11/32"			
20 1284 019	19	3/4"	20 1284 027	27	1.1/16"	20 1284 035	35	1.3/8"			

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1284

BLUE-DRILL LINE **30**
PRO

ACCESSORIES

EJECTOR PINS



• 20 1261

Packaging unit 2 pcs.

20 1284

BLUE-DRILL LINE **30**
PRO

SETS / DISPLAYS Page 548

We offer a large selection of sets / displays – recommended content 20 1284 BLUE-DRILL LINE 30 PRO – see page 548. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308

Accessories for powder steel + DURABLU- coated annular cutter, Weldon shank, drill depth 30 mm | 1"

BLUE-DRILL LINE 30 PRO

20 1284

ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm

Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 102 mm

20 1263

20 1271

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4"

Weldon 19 mm 3/4"

6.34 x 102 mm

20 1311

20 1271

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4"

Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 77 mm

21 0048

20 1261

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

Weldon 19 mm 3/4"

Weldon + Nitto/Universal 19 mm 3/4"

35 mm

50 mm

7.98 x 6.34 x 5.30 x 127 mm

20 1387

20 1433

Packaging unit 2 pcs.

Weldon 19 mm 3/4"

Weldon + Nitto/Universal 19 mm 3/4"

35 mm

75 mm

7.98 x 6.34 x 5.30 x 153 mm

20 1402

20 1396

Packaging unit 2 pcs.

Weldon 19 mm 3/4"

Weldon + Nitto/Universal 19 mm 3/4"

35 mm

100 mm

7.98 x 6.34 x 5.30 x 178 mm

20 1417

20 1411

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538




Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636




Sets · Displays 544-571




Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542




20 1317

BLUE-DRILL LINE **55** PRO

Powder steel + DURABLUЕ-coated annular cutter, Weldon shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials	Hardox 400, 450
< 1400 N	> 900 N		> 10% Si				



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1317 012	12	15/32"	20 1317 020	20	25/32"	20 1317 028	28	1.7/64"	20 1317 036	36	1.27/64"
20 1317 013	13	33/64"	20 1317 021	21	53/64"	20 1317 029	29	1.9/64"	* Sale item. While stocks last.		
20 1317 014	14	35/64"	20 1317 022	22	55/64"	20 1317 030	30	1.3/16"			
20 1317 015	15	19/32"	20 1317 023	23	29/32"	20 1317 031	31	1.7/32"			
20 1317 016	16	5/8"	20 1317 024	24	15/16"	20 1317 032	32	1.17/64"			
20 1317 017	17	43/64"	20 1317 025	25	63/64"	20 1317 033	33	1.19/64"			
20 1317 018	18	45/64"	20 1317 026	26	1.1/32"	20 1317 034	34	1.11/32"			
20 1317 019	19	3/4"	20 1317 027	27	1.1/16"	20 1317 035	35	1.3/8"			

Replacement article see Art. 20 1316 page 378 -

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1317

BLUE-DRILL LINE **55** PRO

ACCESSORIES

EJECTOR PINS



Packaging unit 2 pcs.

20 1317

BLUE-DRILL LINE **55** PRO

SETS / DISPLAYS Page 549

We offer a large selection of sets / displays – recommended content 20 1317 BLUE-DRILL LINE55 PRO – see page 549. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308

Accessories for powder steel + DURABLU- coated annular cutter, Weldon shank, drill depth 55 mm | 2"

BLUE-DRILL LINE 55 PRO

20 1317

ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm

Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 130 mm

20 1263

20 1160

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4"

Weldon 19 mm 3/4"

6.34 x 130 mm

20 1311

20 1160

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4"

Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 102 mm

21 0048

20 1271

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

35 mm

Weldon 19 mm 3/4"

50 mm

Weldon + Nitto/Universal 19 mm 3/4"

7.98 x 6.34 x 5.30 x 153 mm

20 1387

20 1396

Packaging unit 2 pcs.

35 mm

Weldon 19 mm 3/4"

75 mm

Weldon + Nitto/Universal 19 mm 3/4"

7.98 x 6.34 x 5.30 x 178 mm

20 1402

20 1411

Packaging unit 2 pcs.

35 mm

Weldon 19 mm 3/4"

100 mm

Weldon + Nitto/Universal 19 mm 3/4"

7.98 x 6.34 x 5.30 x 203 mm

20 1417

20 1426

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

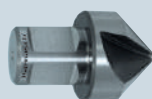
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



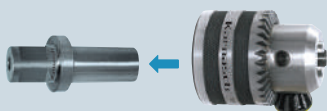
Sets · Displays 544-571



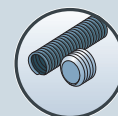
Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



HSS-XE + DURABLU- COATED ANNULAR CUTTERS



BLUE-DRILL LINE

Carbide tipped annular cutters and coated HSS-XE cutters provide the optimal price-performance ratio.

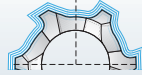
The Karnasch DURABLU-coating makes the annular cutter decisively more resistant. This results in a considerable increase of product life.

BLUE-DRILL LINE annular cutters are the most commonly used Karnasch cutters. These HSS-XE cutters offers the best price-performance ratio for all steels up to a strength of 40 Rockwell (HRC) and stainless steels.

PROPERTIES



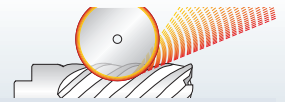
Made of high-alloyed HSS-XE special steel. For extreme hardness at the tip of the tooth (up to 68 HRC). A high wear resistance and lifetime.



Our first-class annular cutters are equipped with the unique and patented DURABLU-coating. Extreme surface hardness and sleekness yield extreme lifetimes even under non-optimum conditions like "overhead work", dry drilling, etc.



Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.



Completely made "FULLY GROUND". This refining increases the cutting ability while reducing friction at the same time. For an extended lifetime.

APPLICATION

Steel	Steel	Steel	Stainless	Stainless	Alu	Alu	Copper, brass, tin	Plastics GRP/CRP	Grey cast iron	Hastelloy, Inconel, Nimonic, exotic materials	Hardox 400	Hardox 450
< 900 N	< 1100 N	< 1400 N	< 900 N	> 900 N	< 10% Si	> 10% Si						
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ OPTIMAL ✓ GOOD ✓ POSSIBLE




HSS-XE + DURABLU-COATED ANNULAR CUTTERS


BLUE-DRILL LINE

Drill depths	Ø mm	Ø Inch	Art. / Type	
 <p>Weldon 30 mm 1"</p> <p>BEST SELLER</p>	12-60	15/32-2.23/64"	20 1312 BLUE-DRILL LINE/30	406
 <p>Weldon 55 mm 2"</p> <p>BEST SELLER</p>	12-60	15/32-2.23/64"	20 1313 BLUE-DRILL LINE/55	408
 <p>Weldon 80 mm 3"</p>	18-50	45/64-1.31/32"	20 1285 BLUE-DRILL LINE/80	410
 <p>Weldon 110 mm 4"</p>	18-50	45/64-1.31/32"	20 1280 BLUE-DRILL LINE/110	412


ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

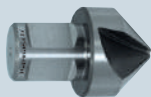
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves  531-533




Coolant pressure bottles  538




Countersinks with Weldon shank  534/535




Magnetic stick for chip removal  539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm  636




Sets · Displays  544-571




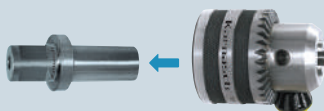
Tapping adapter Weldon + taps M 3 - M 30  637-638




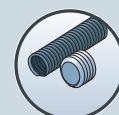
Solid carbide drills to remove jammed taps  640



Adapters + suitable drill chucks  538



Spare parts  540-542

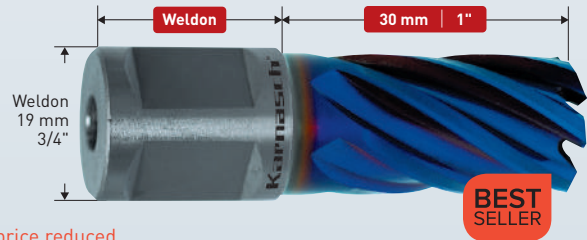


- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

20 1312 BLUE-DRILL LINE/30 HSS-XE + DURABLUe-coated annular cutter, Weldon shank, drill depth 30 mm | 1"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



Bestseller – price reduced

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1312 012	12	15/32"	20 1312 026	26	1.1/32"	20 1312 040	40	1.37/64"	20 1312 054	54	2.1/8"
20 1312 013	13	33/64"	20 1312 027	27	1.1/16"	20 1312 041	41	1.39/64"	20 1312 055	55	2.11/64"
20 1312 014	14	35/64"	20 1312 028	28	1.7/64"	20 1312 042	42	1.21/32"	20 1312 056	56	2.13/64"
20 1312 015	15	19/32"	20 1312 029	29	1.9/64"	20 1312 043	43	1.11/16"	20 1312 057	57	2.1/4"
20 1312 016	16	5/8"	20 1312 030	30	1.3/16"	20 1312 044	44	1.47/64"	20 1312 058	58	2.9/32"
20 1312 017	17	43/64"	20 1312 031	31	1.7/32"	20 1312 045	45	1.49/64"	20 1312 059	59	2.21/64"
20 1312 018	18	45/64"	20 1312 032	32	1.17/64"	20 1312 046	46	1.13/16"	20 1312 060	60	2.23/64"
20 1312 019	19	3/4"	20 1312 033	33	1.19/64"	20 1312 047	47	1.27/32"	20 1312 063	% *63	2.31/64"
20 1312 020	20	25/32"	20 1312 034	34	1.11/32"	20 1312 048	48	1.57/64"			
20 1312 021	21	53/64"	20 1312 035	35	1.3/8"	20 1312 049	49	1.59/64"			
20 1312 022	22	55/64"	20 1312 036	36	1.27/64"	20 1312 050	50	1.31/32"			
20 1312 023	23	29/32"	20 1312 037	37	1.29/64"	20 1312 051	51	2.1/64"			
20 1312 024	24	15/16"	20 1312 038	38	1.1/2"	20 1312 052	52	2.3/64"			
20 1312 025	25	63/64"	20 1312 039	39	1.17/32"	20 1312 053	53	2.3/32"			

* With Weldon 32 mm special price as long as available

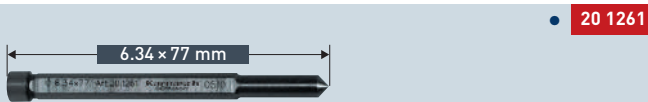
Larger Ø see Art. 20 1315 page 376 and Art. 20 1316 page 378

Attention: The inch sizes do not correspond exactly to the mm diameters.

% Sale item. While stocks last.

20 1312 BLUE-DRILL LINE/30 ACCESSORIES

EJECTOR PINS



Packaging unit 2 pcs.

20 1312 BLUE-DRILL LINE/30 SETS / DISPLAYS Page 550

We offer a large selection of sets / displays – recommended content 20 1312 BLUE-DRILL LINE30 – see page 550. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308

Accessories for HSS-XE + DURABLUЕ-coated annular cutter, Weldon shank, drill depth 30 mm | 1"

BLUE-DRILL LINE/30

20 1312

ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm

Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 102 mm

20 1263

20 1271

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4"

Weldon 19 mm 3/4"

6.34 x 102 mm

20 1311

20 1271

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4"

Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 77 mm

21 0048

20 1261

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

35 mm

Weldon 19 mm 3/4"

50 mm

Weldon + Nitto/Universal 19 mm 3/4"

7.98 x 6.34 x 5.30 x 127 mm

20 1387

20 1433

Packaging unit 2 pcs.

35 mm

Weldon 19 mm 3/4"

75 mm

Weldon + Nitto/Universal 19 mm 3/4"

7.98 x 6.34 x 5.30 x 153 mm

20 1402

20 1396

Packaging unit 2 pcs.

35 mm

Weldon 19 mm 3/4"

100 mm

Weldon + Nitto/Universal 19 mm 3/4"

7.98 x 6.34 x 5.30 x 178 mm

20 1417

20 1411

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538




Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



Sets · Displays 544-571




Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538



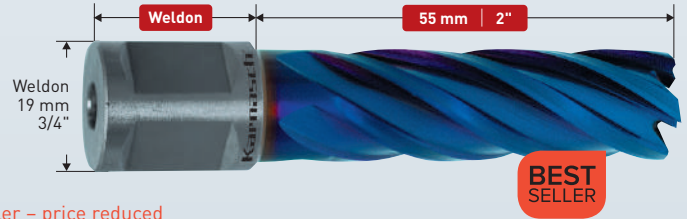
Spare parts 540-542




20 1313 BLUE-DRILL LINE/55 HSS-XE + DURABLUe-coated annular cutter, Weldon shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



BEST SELLER

Bestseller – price reduced

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1313 012	12	15/32"	20 1313 026	26	1.1/32"	20 1313 040	40	1.37/64"	20 1313 054	54	2.1/8"
20 1313 013	13	33/64"	20 1313 027	27	1.1/16"	20 1313 041	41	1.39/64"	20 1313 055	55	2.11/64"
20 1313 014	14	35/64"	20 1313 028	28	1.7/64"	20 1313 042	42	1.21/32"	20 1313 056	56	2.13/64"
20 1313 015	15	19/32"	20 1313 029	29	1.9/64"	20 1313 043	43	1.11/16"	20 1313 057	57	2.1/4"
20 1313 016	16	5/8"	20 1313 030	30	1.3/16"	20 1313 044	44	1.47/64"	20 1313 058	58	2.9/32"
20 1313 017	17	43/64"	20 1313 031	31	1.7/32"	20 1313 045	45	1.49/64"	20 1313 059	59	2.21/64"
20 1313 018	18	45/64"	20 1313 032	32	1.17/64"	20 1313 046	46	1.13/16"	20 1313 060	60	2.23/64"
20 1313 019	19	3/4"	20 1313 033	33	1.19/64"	20 1313 047	47	1.27/32"			
20 1313 020	20	25/32"	20 1313 034	34	1.11/32"	20 1313 048	48	1.57/64"			
20 1313 021	21	53/64"	20 1313 035	35	1.3/8"	20 1313 049	49	1.59/64"			
20 1313 022	22	55/64"	20 1313 036	36	1.27/64"	20 1313 050	50	1.31/32"			
20 1313 023	23	29/32"	20 1313 037	37	1.29/64"	20 1313 051	51	2.1/64"			
20 1313 024	24	15/16"	20 1313 038	38	1.1/2"	20 1313 052	52	2.3/64"			
20 1313 025	25	63/64"	20 1313 039	39	1.17/32"	20 1313 053	53	2.3/32"			

* With Weldon 32 mm special price as long as available

Larger Ø see Art. 20 1316 page 378 -

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1313 BLUE-DRILL LINE/55 ACCESSORIES

EJECTOR PINS



• 20 1271

Packaging unit 2 pcs.

20 1313 BLUE-DRILL LINE/55 SETS / DISPLAYS Page 551

We offer a large selection of sets / displays – recommended content 20 1313 BLUE-DRILL LINE55 – see page 551. Other content possible by individually equipped sets / displays.



Cutting data

Movie

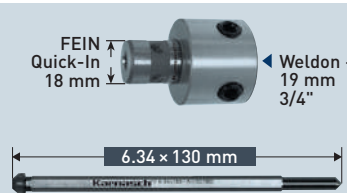


1308



ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm



Weldon + Nitto/Universal 19 mm 3/4"

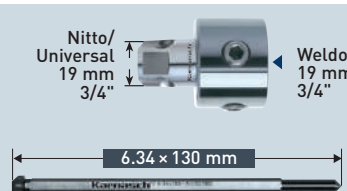
6.34 x 130 mm

20 1263

20 1160

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4"



Weldon 19 mm 3/4"

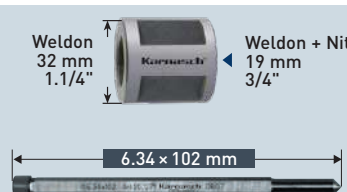
6.34 x 130 mm

20 1311

20 1160

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4"



Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 102 mm

21 0048

20 1271

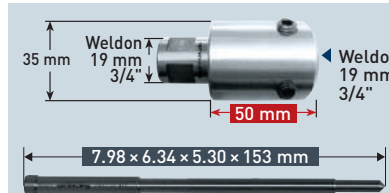
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

35 mm

Weldon 19 mm 3/4"



Weldon + Nitto/Universal 19 mm 3/4"

50 mm

7.98 x 6.34 x 5.30 x 153 mm

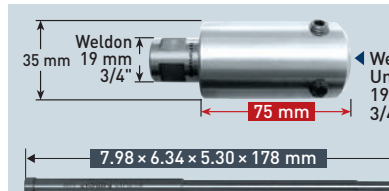
20 1387

20 1396

Packaging unit 2 pcs.

35 mm

Weldon 19 mm 3/4"



Weldon + Nitto/Universal 19 mm 3/4"

75 mm

7.98 x 6.34 x 5.30 x 178 mm

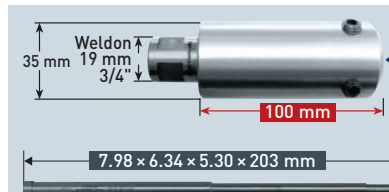
20 1402

20 1411

Packaging unit 2 pcs.

35 mm

Weldon 19 mm 3/4"



Weldon + Nitto/Universal 19 mm 3/4"

100 mm

7.98 x 6.34 x 5.30 x 203 mm

20 1417

20 1426

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

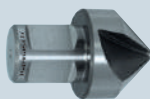
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



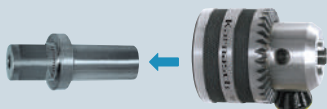
Sets · Displays 544-571



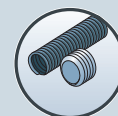
Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



20 1285

BLUE-DRILL LINE / 80

HSS-XE + DURABLUe-coated annular cutter, Weldon shank, drill depth 80 mm | 3"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



⚠ Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1285 018	• 18	45/64"	20 1285 024	• 24	15/16"	20 1285 030	• 30	1.3/16"	20 1285 040	• 40	1.37/64"
20 1285 019	• 19	3/4"	20 1285 025	• 25	63/64"	20 1285 032	• 32	1.17/64"	20 1285 045	• 45	1.49/64"
20 1285 020	• 20	25/32"	20 1285 026	• 26	1.1/32"	20 1285 033	• 33	1.19/64"	20 1285 046	⚠ 46	1.13/16"
20 1285 021	• 21	53/64"	20 1285 027	• 27	1.1/16"	20 1285 035	• 35	1.3/8"	20 1285 050	• 50	1.31/32"
20 1285 022	• 22	55/64"	20 1285 028	• 28	1.7/64"	20 1285 036	• 36	1.27/64"			
20 1285 023	• 23	29/32"	20 1285 029	• 29	1.9/64"	20 1285 038	• 38	1.1/2"			

Further Ø see Art. 20 1650 page 380 .

Attention: The inch sizes do not correspond exactly to the mm diameters.

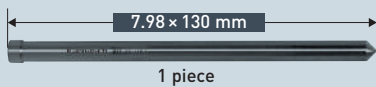
20 1285

BLUE-DRILL LINE / 80

ACCESSORIES

EJECTOR PINS 1-PIECE

• 20 1439



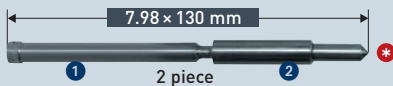
1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• 20 1427



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

⚠ Why use 2-part ejector pins? Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If **no extra-long** holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



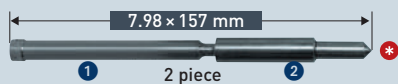
1308



ADAPTER + SUITABLE EJECTOR PINS



• 20 1161

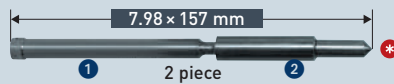


Packaging unit 2 pcs.

• 20 1436



• 20 1314



Packaging unit 2 pcs.

• 20 1436

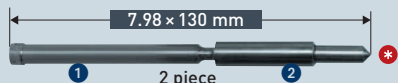


• 21 0048



Packaging unit 2 pcs.

• 20 1439



Packaging unit 2 pcs.

• 20 1427

Spare allen screws for all adapters see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

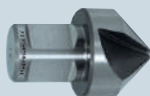
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills \varnothing 2.5-12 mm 636



Sets · Displays 544-571



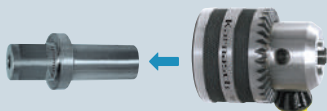
Tapping adapter Weldon + taps M 3 - M 30 637-638



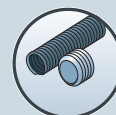
Solid carbide drills to remove jammed taps 640



Adapters + suitable drill chucks 538



Spare parts 540-542



20 1280

BLUE-DRILL LINE / 110

HSS-XE + DURABLUÉ-coated annular cutter, Weldon shank, drill depth 110 mm | 4"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1280 018	• 18	45/64"	20 1280 024	• 24	15/16"	20 1280 030	• 30	1.3/16"	20 1280 040	• 40	1.37/64"
20 1280 019	• 19	3/4"	20 1280 025	• 25	63/64"	20 1280 032	• 32	1.17/64"	20 1280 045	• 45	1.49/64"
20 1280 020	• 20	25/32"	20 1280 026	• 26	1.1/32"	20 1280 033	• 33	1.19/64"	20 1280 050	• 50	1.31/32"
20 1280 021	• 21	53/64"	20 1280 027	• 27	1.1/16"	20 1280 035	• 35	1.3/8"			
20 1280 022	• 22	55/64"	20 1280 028	• 28	1.7/64"	20 1280 036	• 36	1.27/64"			
20 1280 023	• 23	29/32"	20 1280 029	• 29	1.9/64"	20 1280 038	• 38	1.1/2"			

Further Ø see Art. 20 1660 page 382.

Attention: The inch sizes do not correspond exactly to the mm diameters.

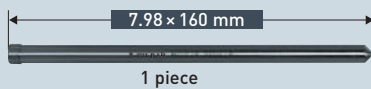
20 1280

BLUE-DRILL LINE / 110

ACCESSORIES

EJECTOR PINS 1-PIECE

• 20 1399



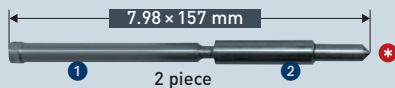
1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• 20 1428



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

• Why use 2-part ejector pins? Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If no extra-long holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



1308



ADAPTER + PASSENDE AUSWERFERSTIFTE · ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm

Weldon + Nitto/Universal 19 mm 3/4"

7.98 x 184 mm

2 piece

20 1161

20 1438

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4"

Weldon 19 mm 3/4"

7.98 x 184 mm

2 piece

20 1314

20 1438

Packaging unit 2 pcs.

Weldon 32 mm 1.1 1/4"

Weldon + Nitto/Universal 19 mm 3/4"

7.98 x 160 mm

1 piece

21 0048

20 1399

Packaging unit 2 pcs.

7.98 x 157 mm

2 piece

20 1428

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538




Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636




Sets · Displays 544-571



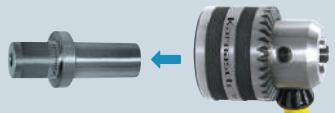
Tapping adapter Weldon + taps M 3 - M 30 637-638




Solid carbide drills to remove jammed taps 640



Adapters + suitable drill chucks 538



Spare parts 540-542




HSS-XE ANNULAR CUTTERS



GOLD-DRILL LINE

Karnasch GOLD-DRILL LINE annular cutters are the most commonly used non-coated HSS-XE annular cutter.

With special surface treatment **GOLD-TECH + FULLY GROUND + special steel HSS-XE** ideal for drilling in steel up to a strength of 40 Rockwell (HRC) and even suitable for stainless steels.

PROPERTIES



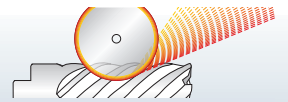
Made of high-alloyed HSS-XE special steel. For extreme hardness at the tip of the tooth (up to 68 HRC). A high wear resistance and lifetime.



Gold-Tech surface treatment. The special treatment for longer lifetimes.



Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.



Completely made "FULLY GROUND". This refining increases the cutting ability while reducing friction at the same time. For an extended lifetime.

APPLICATION

Steel	Steel	Steel	Stainless	Alu	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400	Hardox 450
< 750 N	< 900 N	< 1100 N	< 900 N	< 10% Si	> 10% Si				
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ OPTIMAL ✓ GOOD ✓ POSSIBLE












HSS-XE ANNULAR CUTTERS

GOLD-DRILL LINE

Drill depths	Ø mm	Ø Inch	Art. / Type	
	12-60	15/32-2.23/64"	20 1260U GOLD-DRILL LINE / 30	416
	12-60	15/32-2.23/64"	20 1270U GOLD-DRILL LINE / 55	418
	18-50	45/64-1.31/32"	20 1285U GOLD-DRILL LINE / 80	420
	18-50	45/64-1.31/32"	20 1280U GOLD-DRILL LINE / 110	422
	-	7/16-2.1/16"	20 1910 GOLD-DRILL LINE INCH / 30	424
	-	7/16-2.1/16"	20 1920 GOLD-DRILL LINE INCH / 55	426
	-	11/16-2.1/16"	20 1925 GOLD-DRILL LINE INCH / 80	428

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 	531-533	Coolant pressure bottles 	538
Countersinks with Weldon shank 	534/535	Magnetic stick for chip removal 	539
Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 	636	Sets · Displays 	544-571
Tapping adapter Weldon + taps M 3 - M 30 	637-638		
Adapters + suitable drill chucks 	538	Spare parts 	540-542

1



2



3



4



5



6



7



8



9



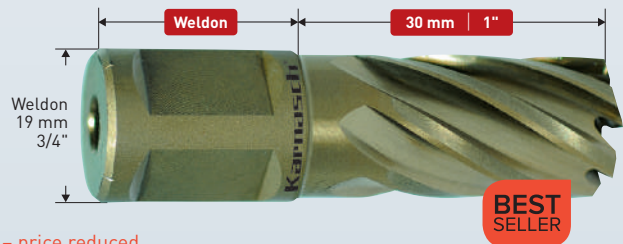
10



20 1260U GOLD-DRILL LINE / 30 HSS-XE annular cutter, Weldon shank, drill depth 30 mm | 1"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



Bestseller – price reduced

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1260u 012	12	15/32"	20 1260u 022	22	55/64"	20 1260u 035	35	1.3/8"	20 1260u 049	49	1.59/64"
20 1260u 013	13	33/64"	20 1260u 023	23	29/32"	20 1260u 036	36	1.27/64"	20 1260u 050	50	1.31/32"
20 1260u 0135	13.5	17/32"	20 1260u 024	24	15/16"	20 1260u 037	37	1.29/64"	20 1260u 051	51	2.1/64"
20 1260u 014	14	35/64"	20 1260u 025	25	63/64"	20 1260u 038	38	1.1/2"	20 1260u 052	52	2.3/64"
20 1260u 015	15	19/32"	20 1260u 026	26	1.1/32"	20 1260u 039	39	1.17/32"	20 1260u 053	53	2.3/32"
20 1260u 0155	15.5	39/64"	20 1260u 0265	26.5	1.3/64"	20 1260u 040	40	1.37/64"	20 1260u 054	54	2.1/8"
20 1260u 016	16	5/8"	20 1260u 027	27	1.1/16"	20 1260u 041	41	1.39/64"	20 1260u 055	55	2.11/64"
20 1260u 017	17	43/64"	20 1260u 028	28	1.7/64"	20 1260u 042	42	1.21/32"	20 1260u 056	56	2.13/64"
20 1260u 0175	17.5	11/16"	20 1260u 029	29	1.9/64"	20 1260u 043	43	1.11/16"	20 1260u 057	57	2.1/4"
20 1260u 018	18	45/64"	20 1260u 030	30	1.3/16"	20 1260u 044	44	1.47/64"	20 1260u 058	58	2.9/32"
20 1260u 019	19	3/4"	20 1260u 031	31	1.7/32"	20 1260u 045	45	1.49/64"	20 1260u 059	59	2.21/64"
20 1260u 0195	19.5	49/64"	20 1260u 032	32	1.17/64"	20 1260u 046	46	1.13/16"	20 1260u 060	60	2.23/64"
20 1260u 020	20	25/32"	20 1260u 033	33	1.19/64"	20 1260u 047	47	1.27/32"			
20 1260u 021	21	53/64"	20 1260u 034	34	1.11/32"	20 1260u 048	48	1.57/64"			

Larger Ø see Art. 20 1315 page 376 and Art. 20 1316 page 378 – Smaller Ø see Art. 20 1230 page 436 - Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1260U GOLD-DRILL LINE / 30 ACCESSORIES

EJECTOR PINS



Packaging unit 2 pcs.

20 1260U GOLD-DRILL LINE / 30 SETS / DISPLAYS Page 552

We offer a large selection of sets / displays – recommended content 20 1260U GOLD-DRILL LINE30 – see page 552. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308

Accessories for HSS-XE annular cutter, Weldon shank, drill depth 30 mm | 1"

GOLD-DRILL LINE / 30

20 1260U

ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm
Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 102 mm

20 1263

20 1271

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4"
Weldon 19 mm 3/4"

6.34 x 102 mm

20 1311

20 1271

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4"
Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 77 mm

21 0048

20 1261

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

35 mm
50 mm

7.98 x 6.34 x 5.30 x 127 mm

20 1387

20 1433

Packaging unit 2 pcs.

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

35 mm
75 mm

7.98 x 6.34 x 5.30 x 153 mm

20 1402

20 1396

Packaging unit 2 pcs.

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

35 mm
100 mm

7.98 x 6.34 x 5.30 x 178 mm

20 1417

20 1411

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538




Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



Sets · Displays 544-571




Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538



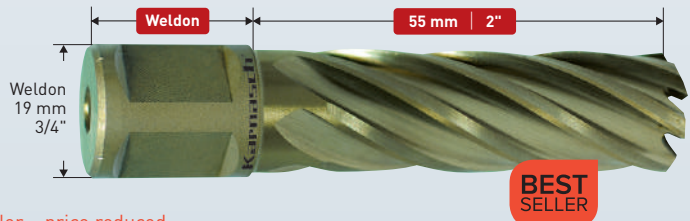
Spare parts 540-542




20 1270U GOLD-DRILL LINE / 55 HSS-XE annular cutter, Weldon shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



Bestseller – price reduced

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1270u 012	12	15/32"	20 1270u 022	22	55/64"	20 1270u 035	35	1.3/8"	20 1270u 049	49	1.59/64"
20 1270u 013	13	33/64"	20 1270u 023	23	29/32"	20 1270u 036	36	1.27/64"	20 1270u 050	50	1.31/32"
20 1270u 0135	13.5	17/32"	20 1270u 024	24	15/16"	20 1270u 037	37	1.29/64"	20 1270u 051	51	2.1/64"
20 1270u 014	14	35/64"	20 1270u 025	25	63/64"	20 1270u 038	38	1.1/2"	20 1270u 052	52	2.3/64"
20 1270u 015	15	19/32"	20 1270u 026	26	1.1/32"	20 1270u 039	39	1.17/32"	20 1270u 053	53	2.3/32"
20 1270u 0155	15.5	39/64"	20 1270u 0265	26.5	1.3/64"	20 1270u 040	40	1.37/64"	20 1270u 054	54	2.1/8"
20 1270u 016	16	5/8"	20 1270u 027	27	1.1/16"	20 1270u 041	41	1.39/64"	20 1270u 055	55	2.11/64"
20 1270u 017	17	43/64"	20 1270u 028	28	1.7/64"	20 1270u 042	42	1.21/32"	20 1270u 056	56	2.13/64"
20 1270u 0175	17.5	11/16"	20 1270u 029	29	1.9/64"	20 1270u 043	43	1.11/16"	20 1270u 057	57	2.1/4"
20 1270u 018	18	45/64"	20 1270u 030	30	1.3/16"	20 1270u 044	44	1.47/64"	20 1270u 058	58	2.9/32"
20 1270u 019	19	3/4"	20 1270u 031	31	1.7/32"	20 1270u 045	45	1.49/64"	20 1270u 059	59	2.21/64"
20 1270u 0195	19.5	49/64"	20 1270u 032	32	1.17/64"	20 1270u 046	46	1.13/16"	20 1270u 060	60	2.23/64"
20 1270u 020	20	25/32"	20 1270u 033	33	1.19/64"	20 1270u 047	47	1.27/32"			
20 1270u 021	21	53/64"	20 1270u 034	34	1.11/32"	20 1270u 048	48	1.57/64"			

Larger Ø see Art. 20 1316 page 378

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1270U GOLD-DRILL LINE / 55 ACCESSORIES

EJECTOR PINS



Packaging unit 2 pcs.

20 1270U GOLD-DRILL LINE / 55 SETS / DISPLAYS Page 553

We offer a large selection of sets / displays – recommended content 20 1270U GOLD-DRILL LINE55 – see page 553. Other content possible by individually equipped sets / displays.



Cutting data

Movie



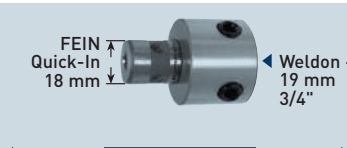
1308



ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm ← **Weldon + Nitto/Universal 19 mm 3/4"**

• **20 1263**



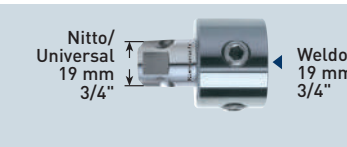
• **20 1160**

6.34 × 130 mm

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4" ← **Weldon 19 mm 3/4"**

• **20 1311**




• **20 1160**

6.34 × 130 mm

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4" ← **Weldon + Nitto/Universal 19 mm 3/4"**

• **21 0048**



• **20 1271**

6.34 × 102 mm

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

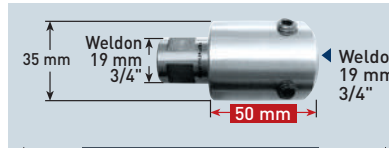
EXTENSIONS + SUITABLE EJECTOR PINS

Weldon 19 mm 3/4" ← **Weldon + Nitto/Universal 19 mm 3/4"**

35 mm

50 mm

• **20 1387**



• **20 1396**

7.98 × 6.34 × 5.30 × 153 mm

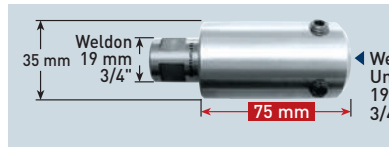
Packaging unit 2 pcs.

Weldon 19 mm 3/4" ← **Weldon + Nitto/Universal 19 mm 3/4"**

35 mm

75 mm

• **20 1402**



• **20 1411**

7.98 × 6.34 × 5.30 × 178 mm

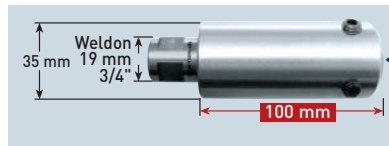
Packaging unit 2 pcs.

Weldon 19 mm 3/4" ← **Weldon + Nitto/Universal 19 mm 3/4"**

35 mm

100 mm

• **20 1417**




• **20 1426**

7.98 × 6.34 × 5.30 × 203 mm


Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540


ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

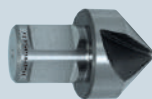
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves  531-533




Coolant pressure bottles  538



Countersinks with Weldon shank  534/535




Magnetic stick for chip removal  539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm  636




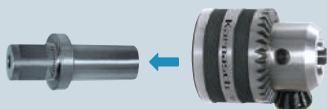
Sets · Displays  544-571




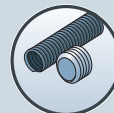
Tapping adapter Weldon + taps M 3 - M 30  637-638



Adapters + suitable drill chucks  538



Spare parts  540-542



20 1285U GOLD-DRILL LINE / 80 HSS-XE annular cutter, Weldon shank, drill depth 80 mm | 3"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



⚠ Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1285u 018	• 18	45/64"	20 1285u 024	• 24	15/16"	20 1285u 030	• 30	1.3/16"	20 1285u 038	• 38	1.1/2"
20 1285u 019	• 19	3/4"	20 1285u 025	• 25	63/64"	20 1285u 032	• 32	1.17/64"	20 1285u 040	• 40	1.37/64"
20 1285u 020	• 20	25/32"	20 1285u 026	• 26	1.1/32"	20 1285u 033	• 33	1.19/64"	20 1285u 045	• 45	1.49/64"
20 1285u 021	• 21	53/64"	20 1285u 027	• 27	1.1/16"	20 1285u 034	• 34	1.11/32"	20 1285u 046	⚠ 46	1.13/16"
20 1285u 022	• 22	55/64"	20 1285u 028	• 28	1.7/64"	20 1285u 035	• 35	1.3/8"	20 1285u 050	• 50	1.31/32"
20 1285u 023	• 23	29/32"	20 1285u 029	• 29	1.9/64"	20 1285u 036	• 36	1.27/64"			

Further Ø see Art. 20 1650 page 380 and Art. 20 1660 page 382.

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1285U GOLD-DRILL LINE / 80 ACCESSORIES

EJECTOR PINS 1-PIECE

• 20 1439



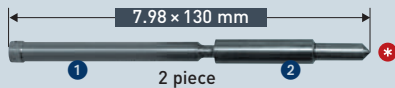
1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• 20 1427



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

⚠ Why use 2-part ejector pins? Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If no extra-long holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



1308



ADAPTER + SUITABLE EJECTOR PINS



• **20 1161**

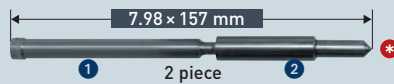


• **20 1436**

Packaging unit 2 pcs.



• **20 1314**

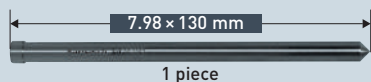


• **20 1436**

Packaging unit 2 pcs.

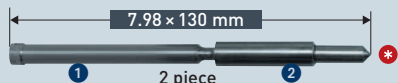


• **21 0048**



• **20 1439**

Packaging unit 2 pcs.



• **20 1427**

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

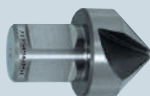
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills \varnothing 2.5-12 mm 636



Sets · Displays 544-571



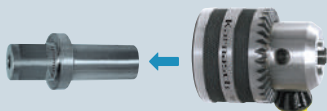
Tapping adapter Weldon + taps M 3 - M 30 637-638



Solid carbide drills to remove jammed taps 640



Adapters + suitable drill chucks 538



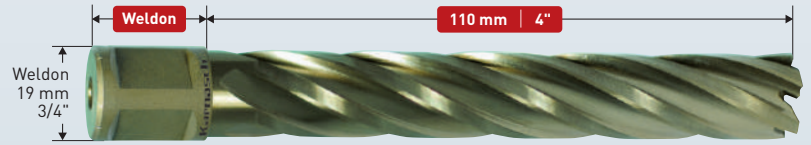
Spare parts 540-542



20 1280U GOLD-DRILL LINE 110 HSS-XE annular cutter, Weldon shank, drill depth 110 mm | 4"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1280u 018	● 18	45/64"	20 1280u 024	● 24	15/16"	20 1280u 030	● 30	1.3/16"	20 1280u 040	● 40	1.37/64"
20 1280u 019	● 19	3/4"	20 1280u 025	● 25	63/64"	20 1280u 032	● 32	1.17/64"	20 1280u 045	● 45	1.49/64"
20 1280u 020	● 20	25/32"	20 1280u 026	● 26	1.1/32"	20 1280u 033	● 33	1.19/64"	20 1280u 050	● 50	1.31/32"
20 1280u 021	● 21	53/64"	20 1280u 027	● 27	1.1/16"	20 1280u 035	● 35	1.3/8"			
20 1280u 022	● 22	55/64"	20 1280u 028	● 28	1.7/64"	20 1280u 036	● 36	1.27/64"			
20 1280u 023	● 23	29/32"	20 1280u 029	● 29	1.9/64"	20 1280u 038	● 38	1.1/2"			

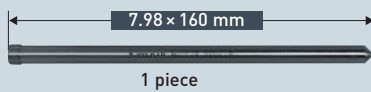
Further Ø see Art. 20 1660 page 382.

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1280U GOLD-DRILL LINE 110 ACCESSORIES

EJECTOR PINS 1-PIECE

● 20 1399



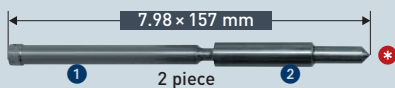
1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

● 20 1428



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

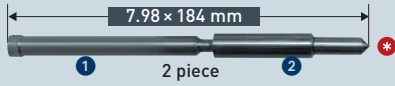
* Why use 2-part ejector pins? Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If no extra-long holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.



ADAPTER + SUITABLE EJECTOR PINS



• 20 1161

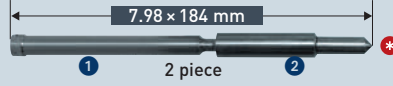


• 20 1438

Packaging unit 2 pcs.



• 20 1314



• 20 1438

Packaging unit 2 pcs.

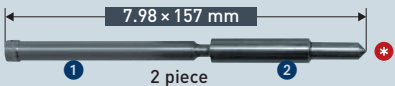


• 21 0048



• 20 1399

Packaging unit 2 pcs.



• 20 1428

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

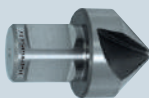
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills \varnothing 2.5-12 mm 636



Sets · Displays 544-571



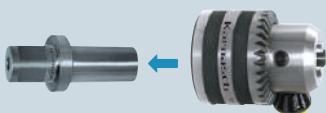
Tapping adapter Weldon + taps M 3 - M 30 637-638



Solid carbide drills to remove jammed taps 640



Adapters + suitable drill chucks 538



Spare parts 540-542



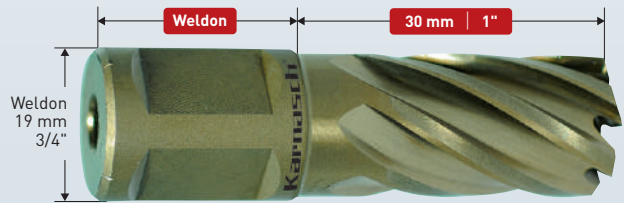
20 1910

GOLD-DRILL LINE 30

HSS-XE annular cutter, Weldon shank, drill depth 30 mm | 1"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
• 7/16"	11.10	20 1910 005	• 15/16"	23.81	20 1910 045	• 1.7/16"	36.51	20 1910 085	• 1.15/16"	49.21	20 1910 125
• 1/2"	12.70	20 1910 010	• 1"	25.40	20 1910 050	• 1.1/2"	38.10	20 1910 090	• 2"	50.80	20 1910 130
• 9/16"	14.28	20 1910 015	• 1.1/16"	26.98	20 1910 055	• 1.9/16"	39.68	20 1910 095	• 2.1/16"	52.38	20 1910 135
• 5/8"	15.87	20 1910 020	• 1.1/8"	28.57	20 1910 060	• 1.5/8"	41.27	20 1910 100			
• 11/16"	17.46	20 1910 025	• 1.3/16"	30.13	20 1910 065	• 1.11/16"	42.86	20 1910 105			
• 3/4"	19.04	20 1910 030	• 1.1/4"	31.75	20 1910 070	• 1.3/4"	44.45	20 1910 110			
• 13/16"	20.63	20 1910 035	• 1.5/16"	33.33	20 1910 075	• 1.13/16"	46.03	20 1910 115			
• 7/8"	22.22	20 1910 040	• 1.3/8"	34.92	20 1910 080	• 1.7/8"	47.62	20 1910 120			

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1910

GOLD-DRILL LINE 30

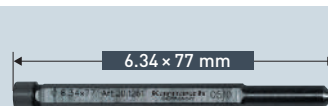
ACCESSORIES

EJECTOR PINS



Ø 7/16" • 20 1482

Packaging unit 2 pcs.



Ø 1/2" - 2.1/16" • 20 1261

Packaging unit 2 pcs.

20 1910

GOLD-DRILL LINE 30

SETS / DISPLAYS Page 554

We offer a large selection of sets / displays – recommended content 20 1910 GOLD-DRILL LINE30 – see page 554. Other content possible by individually equipped sets / displays.



Cutting data

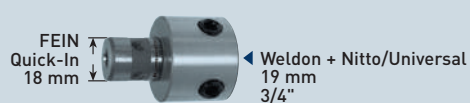
Movie



1308



ADAPTER + SUITABLE EJECTOR PINS



• 20 1263



• 20 1271

Packaging unit 2 pcs.



• 21 0048



• 20 1482

Packaging unit 2 pcs.



• 20 1261

Packaging unit 2 pcs.



• 20 1311

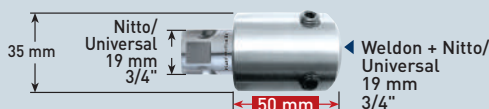


• 20 1271

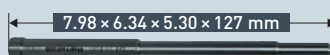
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

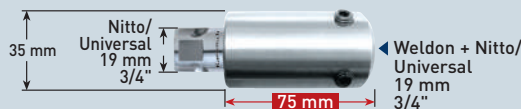


• 20 1406



• 20 1433

Packaging unit 2 pcs.

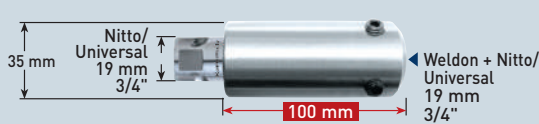


• 20 1407

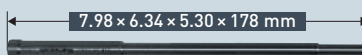


• 20 1396

Packaging unit 2 pcs.



• 20 1409



• 20 1411

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 4-12 mm 636



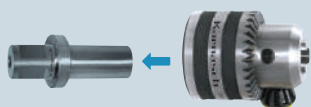
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



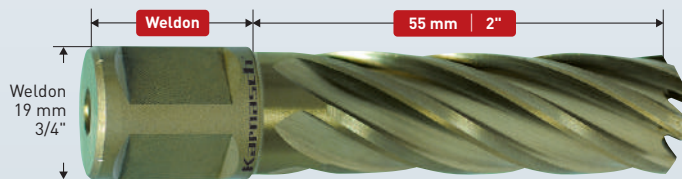
20 1920

GOLD-DRILL LINE 55

HSS-XE annular cutter, Weldon shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
• 7/16"	11.10	20 1920 005	• 15/16"	23.81	20 1920 045	• 1.7/16"	36.51	20 1920 085	• 1.15/16"	49.21	20 1920 125
• 1/2"	12.70	20 1920 010	• 1"	25.40	20 1920 050	• 1.1/2"	38.10	20 1920 090	• 2"	50.80	20 1920 130
• 9/16"	14.28	20 1920 015	• 1.1/16"	26.98	20 1920 055	• 1.9/16"	39.68	20 1920 095	• 2.1/16"	52.38	20 1920 135
• 5/8"	15.87	20 1920 020	• 1.1/8"	28.57	20 1920 060	• 1.5/8"	41.27	20 1920 100			
• 11/16"	17.46	20 1920 025	• 1.3/16"	30.13	20 1920 065	• 1.11/16"	42.86	20 1920 105			
• 3/4"	19.04	20 1920 030	• 1.1/4"	31.75	20 1920 070	• 1.3/4"	44.45	20 1920 110			
• 13/16"	20.63	20 1920 035	• 1.5/16"	33.33	20 1920 075	• 1.13/16"	46.03	20 1920 115			
• 7/8"	22.22	20 1920 040	• 1.3/8"	34.92	20 1920 080	• 1.7/8"	47.62	20 1920 120			

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1920

GOLD-DRILL LINE 55

ACCESSORIES

EJECTOR PINS



Ø 7/16" • 20 1485

Packaging unit 2 pcs.



Ø 1/2" - 2.1/16" • 20 1271

Packaging unit 2 pcs.

20 1920

GOLD-DRILL LINE 55

SETS / DISPLAYS Page 555

We offer a large selection of sets / displays – recommended content 20 1920 GOLD-DRILL LINE 55 – see page 555. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308

ADAPTER + SUITABLE EJECTOR PINS



• 20 1263



• 20 1160

Packaging unit 2 pcs.



• 21 0048



• 20 1485 $\varnothing 7/16"$

Packaging unit 2 pcs.



• 20 1271 $\varnothing 1/2" - 2.1/16"$

Packaging unit 2 pcs.



• 20 1311

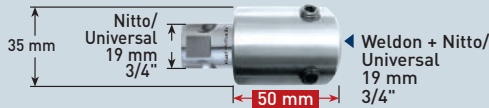


• 20 1160

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

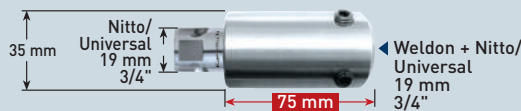


• 20 1406



• 20 1396

Packaging unit 2 pcs.



• 20 1407

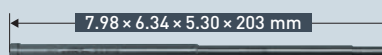


• 20 1411

Packaging unit 2 pcs.



• 20 1409



• 20 1426

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

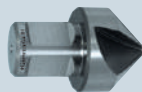
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills $\varnothing 4-12$ mm 636



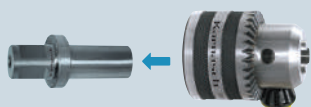
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



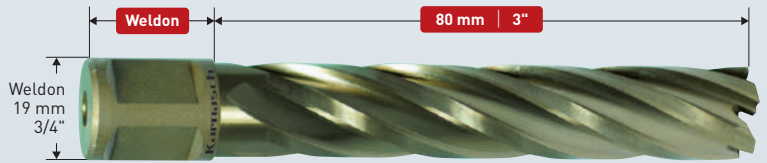
20 1925

GOLD-DRILL LINE 80

HSS-XE annular cutter, Weldon shank, drill depth 80 mm | 3"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
• 11/16"	17.46	20 1925 025	• 1.1/16"	26.98	20 1925 055	• 1.7/16"	36.51	20 1925 085	• 1.13/16"	46.03	20 1925 115
• 3/4"	19.04	20 1925 030	• 1.1/8"	28.57	20 1925 060	• 1.1/2"	38.10	20 1925 090	• 1.7/8"	47.62	20 1925 120
• 13/16"	20.63	20 1925 035	• 1.3/16"	30.13	20 1925 065	• 1.9/16"	39.68	20 1925 095	• 1.15/16"	49.21	20 1925 125
• 7/8"	22.22	20 1925 040	• 1.1/4"	31.75	20 1925 070	• 1.5/8"	41.27	20 1925 100	• 2"	50.80	20 1925 130
• 15/16"	23.81	20 1925 045	• 1.5/16"	33.33	20 1925 075	• 1.11/16"	42.86	20 1925 105	• 2.1/16"	52.38	20 1925 135
• 1"	25.40	20 1925 050	• 1.3/8"	34.92	20 1925 080	• 1.3/4"	44.45	20 1925 110			

Attention: The inch sizes do not correspond exactly to the mm diameters.

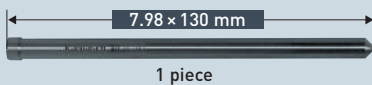
20 1925

GOLD-DRILL LINE 80

ACCESSORIES

EJECTOR PINS 1-PIECE

• 20 1439



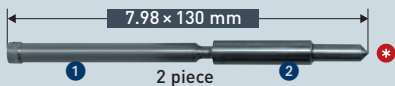
1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• 20 1427



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

* Why use 2-part ejector pins? Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If no extra-long holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



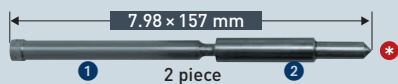
1308



ADAPTER + SUITABLE EJECTOR PINS



• 20 1161

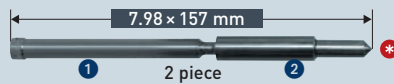


Packaging unit 2 pcs.

• 20 1436



• 20 1314

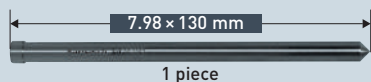


Packaging unit 2 pcs.

• 20 1436

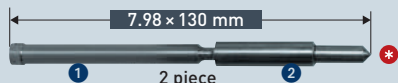


• 21 0048



Packaging unit 2 pcs.

• 20 1439




Packaging unit 2 pcs.


• 20 1427

Spare allen screws for all adapters see page 540


ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

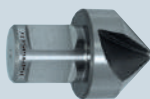
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves  531-533




Coolant pressure bottles  538



Countersinks with Weldon shank  534/535




Magnetic stick for chip removal  539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm  636




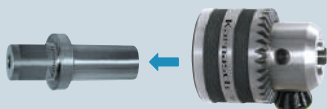
Sets · Displays  544-571




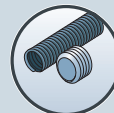
Tapping adapter Weldon + taps M 3 - M 30  637-638



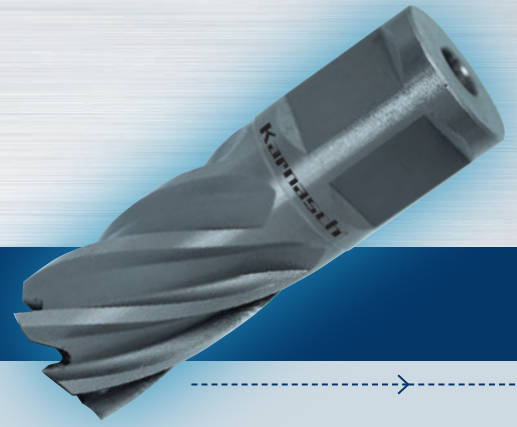
Adapters + suitable drill chucks  538



Spare parts  540-542



HSS-XE ANNULAR CUTTERS



SILVER-DRILL LINE

Karnasch SILVER-DRILL LINE annular cutter is an excellent UNIVERSAL DRILL.

HSS-XE special steel + Step hardened + up to 7 different cutting geometries suitable for drilling of all mild steels up to a strength of 35 Rockwell (HRC).

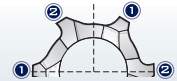
PROPERTIES



Made of high-alloyed HSS-XE special steel. For extreme hardness at the tip of the tooth (up to 68 HRC). A high wear resistance and lifetime.



Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.



Seven different cutting geometries optimally adapted to the different diameter and drill depths leads to high performance cutting results.

APPLICATION

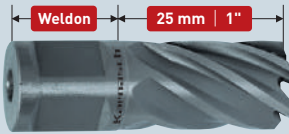
Steel	Steel	Alu	Copper, brass, tin	Plastics GRP/CRP
< 750 N	< 900 N	< 10% Si		
✓	✓	✓	✓	✓

✓ OPTIMAL ✓ GOOD ✓ POSSIBLE

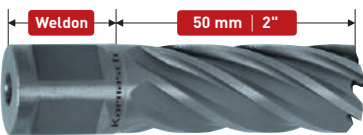


SILVER-DRILL LINE

Drill depths



BEST SELLER



BEST SELLER

Drill depths	Ø mm	Ø Inch	Art. / Type	
25 mm 1"	12-60	15/32-2.23/64"	20 1255 SILVER-DRILL LINE / 25	432
50 mm 2"	12-60	15/32-2.23/64"	20 1265 SILVER-DRILL LINE / 50	434

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks 675



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



Sets · Displays 544-571



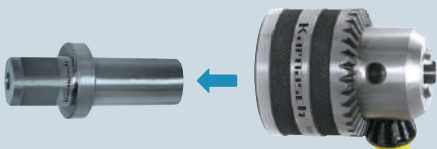
Tapping adapter Weldon + taps M 3 - M 30 637-638



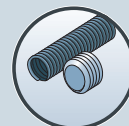
Solid carbide drills to remove jammed taps 640



Adapters + suitable drill chucks 538







Spare parts 540-542

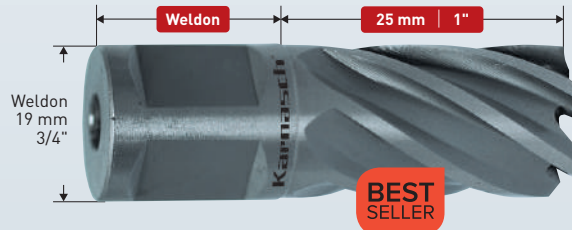


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20 1255 SILVER-DRILL LINE / 25 HSS-XE annular cutter, Weldon shank, drill depth 25 mm | 1"

APPLICATION

			
Steel	Alu	Copper, brass, tin	Plastics GRP/CRP
< 750 N	< 10% Si		



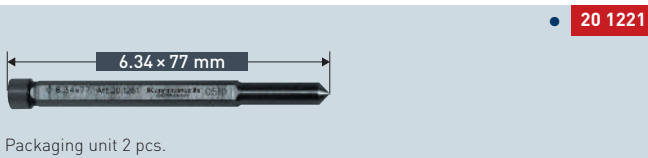
Bestseller – price reduced

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1255 012	12	15/32"	20 1255 026	26	1.1/32"	20 1255 040	40	1.37/64"	20 1255 054	54	2.1/8"
20 1255 013	13	33/64"	20 1255 027	27	1.1/16"	20 1255 041	41	1.39/64"	20 1255 055	55	2.11/64"
20 1255 014	14	35/64"	20 1255 028	28	1.7/64"	20 1255 042	42	1.21/32"	20 1255 056	56	2.13/64"
20 1255 015	15	19/32"	20 1255 029	29	1.9/64"	20 1255 043	43	1.11/16"	20 1255 057	57	2.1/4"
20 1255 016	16	5/8"	20 1255 030	30	1.3/16"	20 1255 044	44	1.47/64"	20 1255 058	58	2.9/32"
20 1255 017	17	43/64"	20 1255 031	31	1.7/32"	20 1255 045	45	1.49/64"	20 1255 059	59	2.21/64"
20 1255 018	18	45/64"	20 1255 032	32	1.17/64"	20 1255 046	46	1.13/16"	20 1255 060	60	2.23/64"
20 1255 019	19	3/4"	20 1255 033	33	1.19/64"	20 1255 047	47	1.27/32"			
20 1255 020	20	25/32"	20 1255 034	34	1.11/32"	20 1255 048	48	1.57/64"			
20 1255 021	21	53/64"	20 1255 035	35	1.3/8"	20 1255 049	49	1.59/64"			
20 1255 022	22	55/64"	20 1255 036	36	1.27/64"	20 1255 050	50	1.31/32"			
20 1255 023	23	29/32"	20 1255 037	37	1.29/64"	20 1255 051	51	2.1/64"			
20 1255 024	24	15/16"	20 1255 038	38	1.1/2"	20 1255 052	52	2.3/64"			
20 1255 025	25	63/64"	20 1255 039	39	1.17/32"	20 1255 053	53	2.3/32"			

Larger Ø see Art. 20 1315 page 376 and Art. 20 1316 page 378 -
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1255 SILVER-DRILL LINE / 25 ACCESSORIES

EJECTOR PINS







20 1255 SILVER-DRILL LINE / 25 SETS / DISPLAYS Page 556

We offer a large selection of sets / displays – recommended content 20 1255 SILVER-DRILL LINE 25 – see page 556. Other content possible by individually equipped sets / displays.



Cutting data | Movie

 1308 

Accessories for HSS-XE annular cutter, Weldon shank, drill depth 25 mm | 1"

SILVER-DRILL LINE 25

20 1255

ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm
Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 102 mm

20 1263

20 1271

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4"
Weldon 19 mm 3/4"

6.34 x 102 mm

20 1311

20 1271

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4"
Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 77 mm

21 0048

20 1221

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

35 mm

50 mm

7.98 x 6.34 x 5.30 x 127 mm

20 1387

20 1433

Packaging unit 2 pcs.

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

35 mm

75 mm

7.98 x 6.34 x 5.30 x 153 mm

20 1402

20 1396

Packaging unit 2 pcs.

Weldon 19 mm 3/4"
Weldon + Nitto/Universal 19 mm 3/4"

35 mm

100 mm

7.98 x 6.34 x 5.30 x 178 mm

20 1417

20 1411

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538




Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



Sets · Displays 544-571




Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



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Index

20 1265

SILVER-DRILL LINE / 50

HSS-XE annular cutter, Weldon shank, drill depth 50 mm | 2"

APPLICATION

Steel	Alu	Copper, brass, tin	Plastics GRP/CRP
< 750 N		< 10% Si	



Bestseller – price reduced

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1265 012	12	15/32"	20 1265 026	26	1.1/32"	20 1265 040	40	1.37/64"	20 1265 054	54	2.1/8"
20 1265 013	13	33/64"	20 1265 027	27	1.1/16"	20 1265 041	41	1.39/64"	20 1265 055	55	2.11/64"
20 1265 014	14	35/64"	20 1265 028	28	1.7/64"	20 1265 042	42	1.21/32"	20 1265 056	56	2.13/64"
20 1265 015	15	19/32"	20 1265 029	29	1.9/64"	20 1265 043	43	1.11/16"	20 1265 057	57	2.1/4"
20 1265 016	16	5/8"	20 1265 030	30	1.3/16"	20 1265 044	44	1.47/64"	20 1265 058	58	2.9/32"
20 1265 017	17	43/64"	20 1265 031	31	1.7/32"	20 1265 045	45	1.49/64"	20 1265 059	59	2.21/64"
20 1265 018	18	45/64"	20 1265 032	32	1.17/64"	20 1265 046	46	1.13/16"	20 1265 060	60	2.23/64"
20 1265 019	19	3/4"	20 1265 033	33	1.19/64"	20 1265 047	47	1.27/32"			
20 1265 020	20	25/32"	20 1265 034	34	1.11/32"	20 1265 048	48	1.57/64"			
20 1265 021	21	53/64"	20 1265 035	35	1.3/8"	20 1265 049	49	1.59/64"			
20 1265 022	22	55/64"	20 1265 036	36	1.27/64"	20 1265 050	50	1.31/32"			
20 1265 023	23	29/32"	20 1265 037	37	1.29/64"	20 1265 051	51	2.1/64"			
20 1265 024	24	15/16"	20 1265 038	38	1.1/2"	20 1265 052	52	2.3/64"			
20 1265 025	25	63/64"	20 1265 039	39	1.17/32"	20 1265 053	53	2.3/32"			

Larger Ø see Art. 20 1316 page 378

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1265

SILVER-DRILL LINE / 50

ACCESSORIES

EJECTOR PINS



• 20 1226

Packaging unit 2 pcs.

20 1265

SILVER-DRILL LINE / 50

SETS / DISPLAYS Page 557

We offer a large selection of sets / displays – recommended content 20 1265 SILVER-DRILL LINE50 – see page 557. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308

ADAPTER + SUITABLE EJECTOR PINS

FEIN Quick-In 18 mm

Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 130 mm

20 1263

20 1160

Packaging unit 2 pcs.

Nitto/Universal 19 mm 3/4"

Weldon 19 mm 3/4"

6.34 x 130 mm

20 1311

20 1160

Packaging unit 2 pcs.

Weldon 32 mm 1.1/4"

Weldon + Nitto/Universal 19 mm 3/4"

6.34 x 102 mm

21 0048

20 1226

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

35 mm

Weldon 19 mm 3/4"

50 mm

Weldon + Nitto/Universal 19 mm 3/4"

7.98 x 6.34 x 5.30 x 153 mm

20 1387

20 1396

Packaging unit 2 pcs.

35 mm

Weldon 19 mm 3/4"

75 mm

Weldon + Nitto/Universal 19 mm 3/4"

7.98 x 6.34 x 5.30 x 178 mm

20 1402

20 1411

Packaging unit 2 pcs.

35 mm

Weldon 19 mm 3/4"

100 mm

Weldon + Nitto/Universal 19 mm 3/4"

7.98 x 6.34 x 5.30 x 203 mm

20 1417

20 1426

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538




Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



Sets · Displays 544-571




Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538








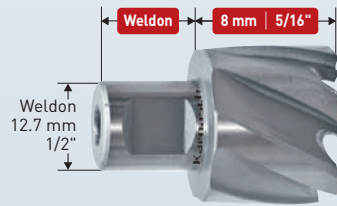
Spare parts 540-542




20 1230 MINI-LINE / 8 Annular cutter / hole saw combination, Weldon shank, drill depth 8 mm | 5/16"

APPLICATION

				
Steel	Stainless	Alu	Copper, brass, tin	Plastics GFR/CRP
< 900 N	> 900 N	< 10% Si		



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1230 008	• 8	5/16"	20 1230 014	• 14	35/64"	20 1230 022	• 22	55/64"
20 1230 010	• 10	25/64"	20 1230 016	• 16	5/8"	20 1230 024	• 24	15/16"
20 1230 012	• 12	15/32"	20 1230 018	• 18	45/64"	20 1230 025	• 25	63/64"
20 1230 013	• 13	33/64"	20 1230 020	• 20	25/32"			

Attention: The inch sizes do not correspond exactly to the mm diameters.

PROPERTIES

HSS-XE steel annular cutter / hole saw combination for handeld machines, core drilling machines, stationary machines.

The ideal drilling tool for:

- Electrical
- Piping
- Conduit work
- Sheet metal fabrication
- Maintenance installation
- HVAC & PHCC
- Automotive service and many other industries.

Because of thin cutting width of only 2.8 mm:

- Very little cutting pressure for long battery life if using cordless drilling machines.
- Fast and smooth running drilling of all diameters.
- Excellent guidance and control during drilling.

Drill depths:

Up to 8 mm possible in steel/stainless steel. Up to 8 mm possible in non ferrous metal (Alu), plastics, sandwich material.

Application note:

Use only good cutting oil. For metal (see from page 1151)

Cutting data

Movie



1308



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HANDHELD MACHINES

STATIONARY MACHINES

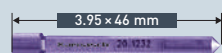


MAGNETIC HOLE CUTTING MACHINES

SHANK + SUITABLE EJECTOR PIN



• **20 1235**



• **20 1232**

SETS



• **20 1251**

Content

11 Pcs. → Ø 8, 10, 12, 13, 14, 16, 18, 20, 22, 24, 25 mm +

- Shank **20 1235**
- Ejector pin **20 1232**
- Adapter **20 1234**
- Ejector pin **20 1233**
- Punch **20 1238**
- Allen key **20 1239**

Other content possible!

Empty set • **20 1377**

ADAPTER + SUITABLE EJECTOR PINS

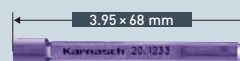
WELDON 19 mm (3/4")

Suitable for machines

Karnasch · Alfra-Rotabest + Alfra Rotaquick · BDS + BDS Keyless · Bektop · Bux · Cembre · Dubuis · Erico · Euroboor · Evolution · Hall (Powerbor) · Hougen · Jancy · Magbroach · Magtron · Magnetor · Metallkraft · Promag · Ruko · Rotabroach · Ruko + Ruko Easylock · Universal ...

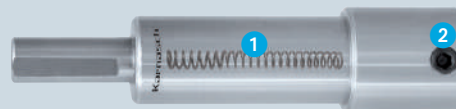


• **20 1234**



• **20 1233**

SPARE PARTS



1 Ejector spring



12x55 mm • **20 1237**

2 Screw



Ø 3 mm / M 6x6 • **20 1330**

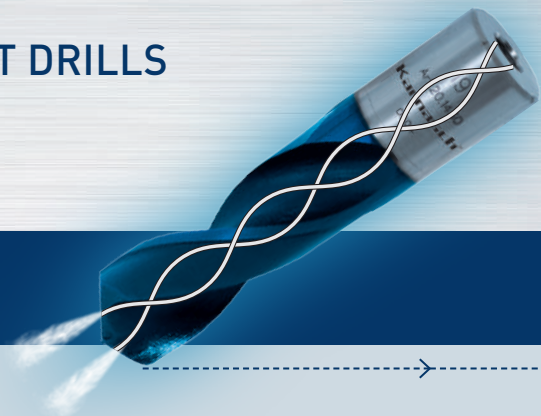
OPERATING MODE



- a. Center punch the work piece. It is important to set a strong center mark (especially if using handheld machines).
- b. Place the ejector pin **1** exactly in the middle of the strong center mark. Use little pressure (feed-rate) until you reach approximately 0.5 mm cutting depth. The drill is self-centered now. You can increase feed rate.
- c. An ejection spring **2** which is installed in the shank puts pressure on the ejector pin **1**.
- d. The ejector pin ejects the core **3** after drilling process.



POWDER STEEL + DURABLUE-COATED TWIST DRILLS



DRILL-LINE PRO

The Karnasch DURABLUE-coating makes the annular cutter decisively more resistant. This results in a considerable increase in product life.

DRILL-LINE PRO twist drill are the right choice for most difficult materials. Drilling in steel up to 45 Rockwell (HRC). For less difficult materials see Art. 20 1710 page 442, Art. 20 1840 page 443

PROPERTIES



Made of ASP powder steel for drilling of difficult materials like railway tracks, stainless steels, exotic alloys. Applicable wherever a high wear resistance and lifetime are required.



Karnasch twist drills are produced in a heavy-duty geometry for immediate self-centering, easy cutting, highest lifetimes.



Our first-class twist drills are equipped with the unique and patented DURABLUE-coating. Extreme surface hardness and sleekness yield extreme lifetimes even under non-optimum conditions like "overhead work", dry drilling, etc.

APPLICATION

										
Steel	Steel	Stainless	Alu	Copper, brass, tin	Plastics GRP/CRP	Grey cast iron	Graphite	Hastelloy, Inconel, Nimonic, exotic materials	Rails	Hardox 400
< 1100 N	< 1400 N	> 900 N	> 10% Si							
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

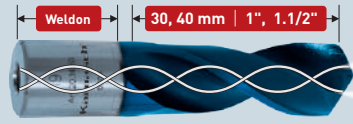
✓ OPTIMAL ✓ GOOD ✓ POSSIBLE



POWDER STEEL + DURABLUE-COATED TWIST DRILLS

DRILL-LINE PRO

Drill depths



Ø mm

Ø Inch

Art. / Type



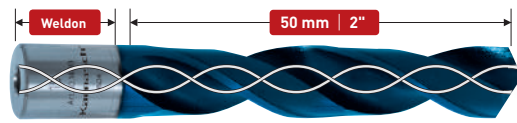
6-27.5

15/64-
1.5/64"

20 1430

DRILL-LINE 30/40 PRO

440



14-32

35/64-
1.17/64"

20 1465

DRILL-LINE 50 PRO

441

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks 675



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



Sets · Displays 544-571



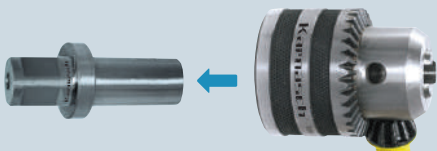
Tapping adapter Weldon + taps M 3 - M 30 637-638



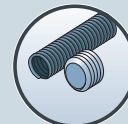
Solid carbide drills to remove jammed taps 640



Adapters + suitable drill chucks 538



Spare parts 540-542



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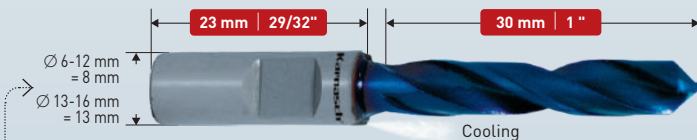
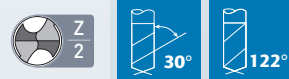
20 1430

DRILL-LINE **30**
PRO

Powder steel + DURABLUÉ-coated twist drill, drill depth 30 mm | 1", Weldon shank or Fein Quick-In shank

APPLICATION

< 1400 N	> 900 N		> 10% Si				



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1430 006	6	15/64"	20 1430 013	13	33/64"
20 1430 008	8	5/16"	20 1430 0135	13.5	17/32"
20 1430 0098	9.8	25/64"	20 1430 014	14	35/64"
20 1430 010	10	25/64"	20 1430 015	15	19/32"
20 1430 011	11	7/16"	20 1430 016	16	5/8"
20 1430 012	12	15/32"			

For Ø 6-16 mm you need adapter (see accessories).
Attention: The inch sizes do not correspond exactly to the mm diameters.

ACCESSORY

Adapter with pin for opening the coolant supply

WELDON 19 mm (3/4")

Weldon 19 mm 3/4" Ø 6-12 mm • 20 1431

Weldon 19 mm 3/4" Ø 13-16 mm • 20 1434

FEIN QUICK-IN

Fein Quick-In 18 mm Ø 6-12 mm • 20 1421

Fein Quick-In 18 mm Ø 13-16 mm • 20 1422

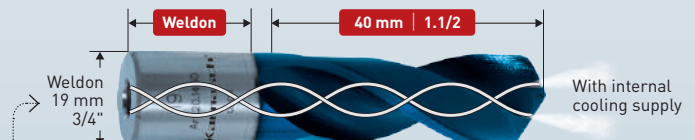
20 1430

DRILL-LINE **40**
PRO

Powder steel + DURABLUÉ-coated twist drill with internal cooling supply, drill depth 40 mm | 1.1/2", Weldon shank

APPLICATION

< 1400 N	> 900 N		> 10% Si				



Ø 17-27.5 mm will be delivered without pin for opening the cooling supply (see accessories if required).

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1430 017	17	43/64"	20 1430 023	23	29/32"
20 1430 018	18	45/64"	20 1430 024	24	15/16"
20 1430 019	19	3/4"	20 1430 0275	27.5	1.5/64"
20 1430 020	20	25/32"			
20 1430 021	21	53/64"			
20 1430 022	22	55/64"			

More dimensions and cutting depth 50 mm see next page Art. 20 1465.
Attention: The inch sizes do not correspond exactly to the mm diameters.

ACCESSORY

The pin is only necessary if you use tool holders with internal cooling supply (see page 531-533).

Pin for opening the cooling supply

Ø 17-27.5 mm • 20 1435

Cutting data

Movie



1313



Powder steel + DURABLUe-coated twist drill with internal cooling supply, drill depth 50 mm | 2", Weldon shank

DRILL-LINE 750 PRO 20 1465

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	H L N H	Hardox 400
< 1400 N	> 900 N		> 10% Si				



Will be delivered without pin for opening the cooling supply (see accessories if required).

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1465 014	• 14	35/64"	20 1465 020	• 20	25/32"	20 1465 026	• 26	1.1/32"
20 1465 015	• 15	19/32"	20 1465 021	• 21	53/64"	20 1465 027	• 27	1.1/16"
20 1465 016	• 16	5/8"	20 1465 022	• 22	55/64"	20 1465 028	• 28	1.7/64"
20 1465 017	• 17	43/64"	20 1465 023	• 23	29/32"	20 1465 030	• 30	1.3/16"
20 1465 018	• 18	45/64"	20 1465 024	• 24	15/16"	20 1465 032	• 32	1.17/64"
20 1465 019	• 19	3/4"	20 1465 025	• 25	63/64"			

Attention: The inch sizes do not correspond exactly to the mm diameters.

ACCESSORY

The pin is only necessary if you use tool holders with internal cooling supply (see page 531-533).

Pin for opening the cooling supply

Ø 14-32 mm • 20 1435

PROPERTIES

For Art. 20 1430 page 440 and for Art. 20 1465



Made of ASP powder steel for drilling of difficult materials like railway tracks, stainless steels, exotic alloys. Applicable wherever a high wear resistance and lifetime are required.

Karnasch twist drills are produced in a heavy-duty geometry for immediate self-centering, easy cutting, highest lifetimes.

Our first-class twist drills are equipped with the unique and patented DURABLUe-coating. Extreme surface hardness and sleekness yield extreme lifetimes even under non-optimum conditions like "overhead work", dry drilling, etc.

Cutting data | Movie

1313 | 441





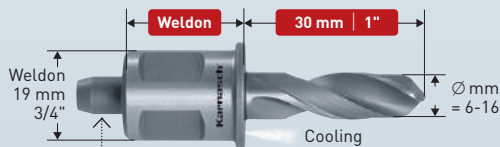
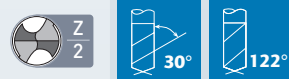
20 1710

DRILL-LINE 30

HSS-XE twist drill, drill depth 30 mm | 1", Weldon shank

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP
< 900 N	< 900 N		< 10% Si		



Ø 6-16 mm will be delivered with pin for opening the cooling supply.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1710 006	6	15/64"	20 1710 012	12	15/32"
20 1710 008	8	5/16"	20 1710 013	13	33/64"
20 1710 0095	9.5	25/64"	20 1710 0135	13.5	17/32"
20 1710 0098	9.8	25/64"	20 1710 014	14	35/64"
20 1710 010	10	25/64"	20 1710 015	15	19/32"
20 1710 011	11	7/16"	20 1710 016	16	5/8"

Attention: The inch sizes do not correspond exactly to the mm diameters.

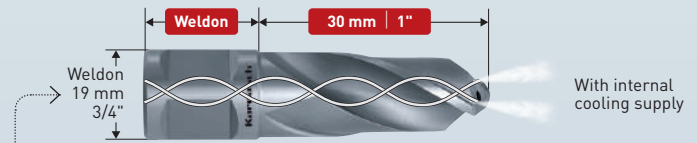
20 1710

DRILL-LINE 30

HSS-XE Spiralbohrer twist drill with internal cooling supply, drill depth 30 mm | 1", Weldon shank

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP
< 900 N	< 900 N		< 10% Si		



Ø 17-27.5 mm will be delivered without pin for opening the cooling supply (see accessories if required).

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1710 017	17	43/64"	20 1710 023	23	29/32"
20 1710 018	18	45/64"	20 1710 024	24	15/16"
20 1710 019	19	3/4"	20 1710 0275	27.5	1.5/64"
20 1710 020	20	25/32"			
20 1710 021	21	53/64"			
20 1710 022	22	55/64"			

Replacement article see Art. 20 1430 page 440

Attention: The inch sizes do not correspond exactly to the mm diameters.

ACCESSORY

The pin is only necessary if you use tool holders with internal cooling supply (see page 531-533).

Pin for opening the cooling supply



• 20 1435

PROPERTIES



Made of high-alloyed HSS-XE special steel. For extreme hardness at the tip of the tooth (up to 68 HRC). Thus guaranteeing a high wear resistance and lifetime.

Karnasch twist drills are produced in a heavy-duty geometry for immediate self-centering, easy cutting, highest lifetimes.

Cutting data

Movie



1308



20 1830

20 1840

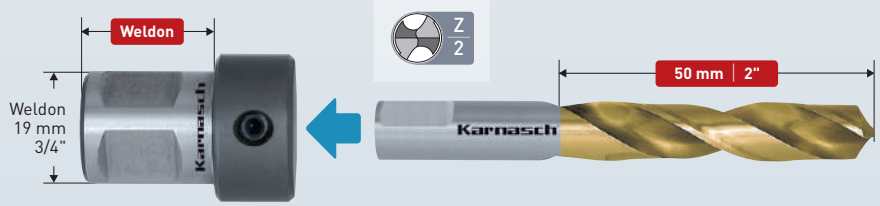
DRILL-LINE GOLD 750

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP
< 1400 N	> 900 N		> 10% Si		

Adapter Weldon shank

HSS-CO Cobalt + TiN coated twist drill, drill depth 50 mm | 2"



Adapter	Shank	Twist drill	Drill	For thread Size
• 20 1830 002	2.5 mm		Ø 2.5 mm Ø 3/32"	• 20 1840 002 M 3
• 20 1830 004	3 mm		Ø 3.4 mm Ø 9/64"	• 20 1840 004 M 4
• 20 1830 010	4 mm		Ø 4.3 mm Ø 11/64"	• 20 1840 006 M 5
			Ø 4 mm Ø 5/32"	• 20 1840 010 -
• 20 1830 020	5 mm		Ø 5 mm Ø 13/64"	• 20 1840 020 M 6
• 20 1830 030	6 mm		Ø 6 mm Ø 15/64"	• 20 1840 030 -
			Ø 6.8 mm Ø 17/64"	• 20 1840 035 M 8
• 20 1830 040	7 mm		Ø 7 mm Ø 9/32"	• 20 1840 040 -
• 20 1830 050	8 mm		Ø 8 mm Ø 5/16"	• 20 1840 050 -
			Ø 8.5 mm Ø 21/64"	• 20 1840 055 M 10
• 20 1830 060	9 mm		Ø 9 mm Ø 23/64"	• 20 1840 060 -
• 20 1830 070	10 mm		Ø 10 mm Ø 25/64"	• 20 1840 070 -
			Ø 10.3 mm Ø 13/32"	• 20 1840 075 M 12
• 20 1830 080	11 mm		Ø 11 mm Ø 7/16"	• 20 1840 080 -
• 20 1830 090	12 mm		Ø 12 mm Ø 15/32"	• 20 1840 090 M 14

Taps see Art. 20 1820 page 637 · **Attention:** The inch sizes do not correspond exactly to the mm diameters.

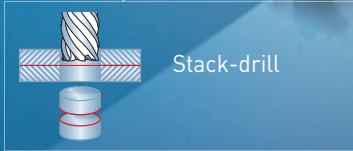
PROPERTIES

Cobalt steel + TiN-coating for a further substantial increase in service life also when machining dry (no/little cooling)

Fast, inexpensive and accurate holes with Karnasch high-performance twist drills + twist drill adaptor Weldon



ANNULAR CUTTERS WITH NITTO / UNIVERSAL SHANK



Matching machines made by Nitto:

NITTO KOHKI "ONE TOUCH" TYPE:
WOJ 3200 · AO 5575 · WA 3500 · WA 5000 · QA 4000 · QA 6500

Also matching all machines with Weldon shank 19 mm (3/4") (see page 370).
Observe that there is only **one** clamping face.






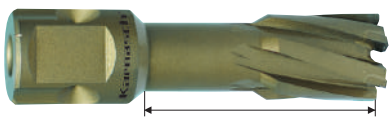













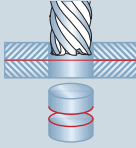

NITTO / UNIVERSAL SHANK

PROFESSIONAL TOOLS

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Index

Overview annular cutters Nitto / Universal shank

TYPE	Ø	Application	Specification	
HARD-LINE	Ø 12-65 mm Ø 1/2-2.1/16"	Annular cutters carbide-tipped The most powerful annular cutters in our range. Excellent for all steels up to a strength of 1400 N and for all stainless steels.	 Steel  Stainless  Grey cast iron  Alu  Copper, brass, tin	446-461
	 40, 55, 80, 110 mm 1.1/2", 2", 3", 4" Drill depths		< 1400 N ✓ > 900 N ✓ ✓ > 10% Si ✓ ✓	
BLUE-DRILL LINE	Ø 12-60 mm Ø 7/16-2.1/16"	Annular cutters made of HSS-XE special steel + DURABLUE-coating. The most-often used coated annular cutter for all steels up to a strength of 1100 N and for all stainless steels.	 Steel  Stainless  Grey cast iron  Alu  Copper, brass, tin	462-477
	 30, 55, 80, 110 mm 1", 2", 3", 4" Drill depths		< 1400 N ✓ > 900 N ✓ ✓ > 10% Si ✓ ✓  Hardox 400 ✓  Hardox 450 ✓	
GOLD-DRILL LINE	Ø 12-60 mm Ø 7/16-2.1/16"	Annular cutters made of HSS-XE special steel + GOLD-TECH treatment. The most-often used uncoated annular cutter for all steels up to a strength of 900 N. Still suitable for stainless steels.	 Steel  Stainless  Alu  Copper, brass, tin	478-493
	 30, 55, 80, 110 mm 1", 2", 3", 4" Drill depths		< 1400 N ✓ > 900 N ✓ > 10% Si ✓ ✓	
GOLD-DRILL LINE SANDWICH	Ø 14-32 mm Ø 9/16-1.1/16"	Annular cutters made of HSS-XE special steel + GOLD-TECH treatment. The most-often used uncoated annular cutter for all steels up to a strength of 900 N. Still suitable for stainless steels.	 <p>Multi layer drill. For stack drilling (sandwich) in steel up to 1100 N</p>	494-497
	 30, 55 mm 1", 2" Drill depths			



CARBIDE-TIPPED ANNULAR CUTTERS



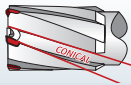
HARD-LINE

The fact is: The best annular cutters are carbide tipped.

- Only these drills offer the best value for money for almost all materials.
 Only carbide tipped annular cutters provide maximum cutting capacity in all kinds of steels.
- Drilling in hardened steel up to 40 Rockwell (HRC)
 - Drilling in all sorts of stainless steel
 - Drilling in most difficult alloys (Hardox/Inconel/Titanium)
 - Drilling also excellent in all non-ferrous metals such as alu, copper, brass

Available in diameter 12-150 mm. Available in drill depths 40 mm, 55 mm, 80 mm and 110 mm. Simply the world's largest stock range of carbide tipped annular cutter.

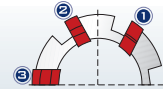
PROPERTIES



Karnasch carbide tipped annular cutters (HARD-LINE) are made with a conical helix for: clean chip flow and highest cutting ability even with difficult materials.



Karnasch carbide tipped annular cutters (HARD-LINE) are exclusively equipped with Sandvik carbide teeth. Our opinion is: Only the best carbide is good enough for Karnasch annular cutters.



Karnasch carbide tipped annular cutters (HARD-LINE) are made in an elaborate pre-/intermediate-/after-cutting geometry. This results in: chatter-free, silent and easy cutting with highest lifetimes.

APPLICATION

Steel	Stainless	Alu	Copper, brass, tin	Plastics GRP/CRP	Grey cast iron	Graphite	Hastelloy, Inconel, Nimonic, exotic materials	Rails
< 1400 N	> 900 N	> 10% Si						
✓	✓	✓	✓	✓	✓	✓	✓	✓


✓ OPTIMAL ✓ GOOD ✓ POSSIBLE




CARBIDE-TIPPED ANNULAR CUTTERS

Drill depths	Ø mm	Ø Inch	Art. / Type	
 Nitto / Universal 40 mm 1.1/2"	12-65	15/32-2.9/16"	20 1315N HARD-LINE / 40	448
 Nitto / Universal 55 mm 2"	12-60	15/32-2.23/64"	20 1316N HARD-LINE / 55	450
 Nitto / Universal 80 mm 3"	14-50	35/64-1.31/32"	20 1650N HARD-LINE / 80	452
 Nitto / Universal 110 mm 4"	14-50	35/64-1.31/32"	20 1660N HARD-LINE / 110	454
 Nitto / Universal 40 mm 1.1/2"	-	1/2-2.1/16"	20 1630 HARD-LINE INCH / 40	456
 Nitto / Universal 55 mm 2"	-	1/2-2.1/16"	20 1640 HARD-LINE INCH / 55	458
 Nitto / Universal 80 mm 3"	-	11/16-2.1/16"	20 1670 HARD-LINE INCH / 80	460


ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

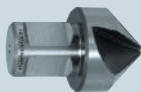
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves  531-533




Coolant pressure bottles  538




Countersinks with Weldon shank  534/535



Magnetic stick for chip removal  539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm  636




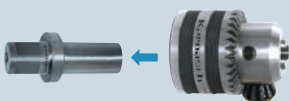
Sets · Displays  544-571




Tapping adapter Weldon + taps M 3 - M 30  637-638



Adapters + suitable drill chucks  538



Spare parts  540-542



1



2



3



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7



8



9



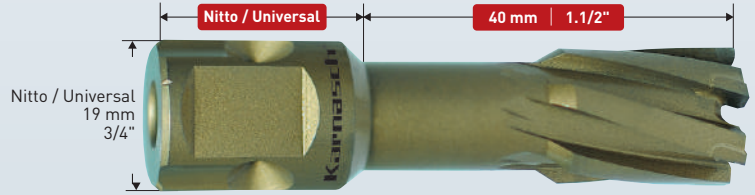
10

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20 1315N **HARD-LINE/40** Carbide-tipped annular cutter, Nitto/Universal shank, drill depth 40 mm | 1.1/2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	H I N H
< 1400 N	> 900 N		> 10% Si			



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1315N 012	● 12	15/32"	20 1315N 026	● 26	1.1/32"	20 1315N 040	● 40	1.37/64"	20 1315N 054	● 54	2.1/8"
20 1315N 013	● 13	33/64"	20 1315N 027	● 27	1.1/16"	20 1315N 041	● 41	1.39/64"	20 1315N 055	● 55	2.11/64"
20 1315N 014	● 14	35/64"	20 1315N 028	● 28	1.7/64"	20 1315N 042	● 42	1.21/32"	20 1315N 056	● 56	2.13/64"
20 1315N 015	● 15	19/32"	20 1315N 029	● 29	1.9/64"	20 1315N 043	● 43	1.11/16"	20 1315N 057	● 57	2.1/4"
20 1315N 016	● 16	5/8"	20 1315N 030	● 30	1.3/16"	20 1315N 044	● 44	1.47/64"	20 1315N 058	● 58	2.9/32"
20 1315N 017	● 17	43/64"	20 1315N 031	● 31	1.7/32"	20 1315N 045	● 45	1.49/64"	20 1315N 059	● 59	2.21/64"
20 1315N 018	● 18	45/64"	20 1315N 032	● 32	1.17/64"	20 1315N 046	● 46	1.13/16"	20 1315N 060	● 60	2.23/64"
20 1315N 019	● 19	3/4"	20 1315N 033	● 33	1.19/64"	20 1315N 047	● 47	1.27/32"	20 1315N 061	● 61	2.13/32"
20 1315N 020	● 20	25/32"	20 1315N 034	● 34	1.11/32"	20 1315N 048	● 48	1.57/64"	20 1315N 062	● 62	2.7/16"
20 1315N 021	● 21	53/64"	20 1315N 035	● 35	1.3/8"	20 1315N 049	● 49	1.59/64"	20 1315N 063	● 63	2.31/64"
20 1315N 022	● 22	55/64"	20 1315N 036	● 36	1.27/64"	20 1315N 050	● 50	1.31/32"	20 1315N 064	● 64	2.33/64"
20 1315N 023	● 23	29/32"	20 1315N 037	● 37	1.29/64"	20 1315N 051	● 51	2.1/64"	20 1315N 065	● 65	2.9/16"
20 1315N 024	● 24	15/16"	20 1315N 038	● 38	1.1/2"	20 1315N 052	● 52	2.3/64"			
20 1315N 025	● 25	63/64"	20 1315N 039	● 39	1.17/32"	20 1315N 053	● 53	2.3/32"			

Larger Ø up to 100 mm see Art. 20 1130A + adapter page 585/587.
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1315N **HARD-LINE/40** ACCESSORIES

EJECTOR PINS

Ø 12-17 mm • 20 1149

6.34 x 90 mm

Packaging unit 2 pcs.

Ø 18-65 mm • 20 1151

7.98 x 90 mm

Packaging unit 2 pcs.

20 1315N **HARD-LINE/40** SETS / DISPLAYS Page 558

We offer a large selection of sets / displays – recommended content 20 1315N HARD-LINE40 – see page 558. Other content possible by individually equipped sets / displays.



Cutting data Movie

1307

ADAPTER + SUITABLE EJECTOR PINS

Spare allen screws for all adapters see page 540

Further accessories see overview page 447

EXTENSIONS + SUITABLE EJECTOR PINS

Spare allen screws for all extensions see page 540

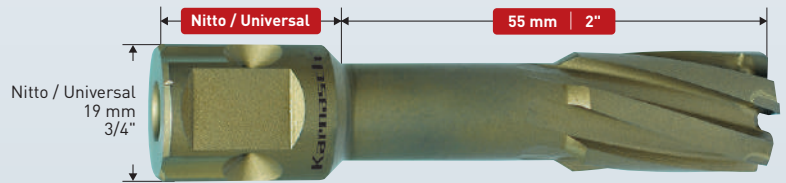
Further accessories see overview page 447



20 1316N **HARD-LINE/55** Carbide-tipped annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1316N 012	12	15/32"	20 1316N 023	23	29/32"	20 1316N 034	34	1.11/32"	20 1316N 048	48	1.57/64"
20 1316N 013	13	33/64"	20 1316N 0235	23.5	59/64"	20 1316N 035	35	1.3/8"	20 1316N 049	49	1.59/64"
20 1316N 014	14	35/64"	20 1316N 024	24	15/16"	20 1316N 036	36	1.27/64"	20 1316N 050	50	1.31/32"
20 1316N 015	15	19/32"	20 1316N 0245	24.5	31/32"	20 1316N 037	37	1.29/64"	20 1316N 051	51	2.1/64"
20 1316N 016	16	5/8"	20 1316N 025	25	63/64"	20 1316N 038	38	1.1/2"	20 1316N 052	52	2.3/64"
20 1316N 017	17	43/64"	20 1316N 026	26	1.1/32"	20 1316N 039	39	1.17/32"	20 1316N 053	53	2.3/32"
20 1316N 0175	17.5	11/16"	20 1316N 0265	26.5	1.3/64"	20 1316N 040	40	1.37/64"	20 1316N 054	54	2.1/8"
20 1316N 018	18	45/64"	20 1316N 027	27	1.1/16"	20 1316N 041	41	1.39/64"	20 1316N 055	55	2.11/64"
20 1316N 019	19	3/4"	20 1316N 028	28	1.7/64"	20 1316N 042	42	1.21/32"	20 1316N 056	56	2.13/64"
20 1316N 020	20	25/32"	20 1316N 029	29	1.9/64"	20 1316N 043	43	1.11/16"	20 1316N 057	57	2.1/4"
20 1316N 021	21	53/64"	20 1316N 030	30	1.3/16"	20 1316N 044	44	1.47/64"	20 1316N 058	58	2.9/32"
20 1316N 0215	21.5	27/32"	20 1316N 031	31	1.7/32"	20 1316N 045	45	1.49/64"	20 1316N 059	59	2.21/64"
20 1316N 022	22	55/64"	20 1316N 032	32	1.17/64"	20 1316N 046	46	1.13/16"	20 1316N 060	60	2.23/64"
20 1316N 0225	22.5	57/64"	20 1316N 033	33	1.19/64"	20 1316N 047	47	1.27/32"			

Larger Ø up to 100 mm see Art. 20 1141A + adapter page 589 / 591 .

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1316N **HARD-LINE/55** ACCESSORIES

EJECTOR PINS

Ø 12-17.5 mm • 20 1271



Packaging unit 2 pcs.

Ø 18-60 mm • 20 1273



Packaging unit 2 pcs.

20 1316N **HARD-LINE/55** SETS / DISPLAYS Page 559

We offer a large selection of sets / displays – recommended content 20 1316N HARD-LINE55 – see page 559. Other content possible by individually equipped sets / displays.



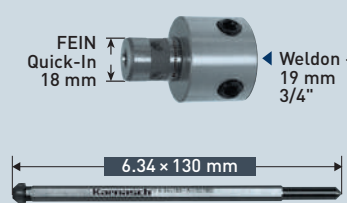
Cutting data

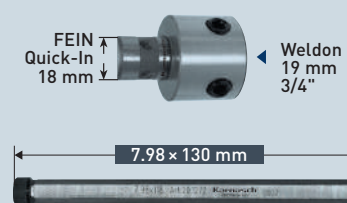
Movie

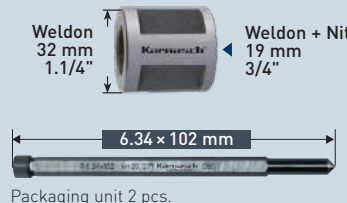



1307

ADAPTER + SUITABLE EJECTOR PINS


 FEIN Quick-In 18 mm
 Weldon + Nitto/Universal 19 mm 3/4"
 Ø 12-17.5 mm • 20 1263
 6.34 × 130 mm
 • 20 1160
 Packaging unit 2 pcs.


 FEIN Quick-In 18 mm
 Weldon + Nitto/Universal 19 mm 3/4"
 Ø 18-60 mm • 20 1161
 7.98 × 130 mm
 • 20 1439
 Packaging unit 2 pcs.

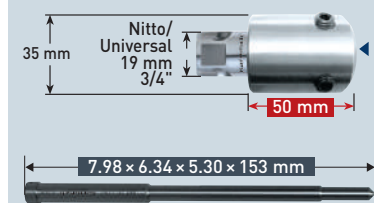

 Weldon 32 mm 1.1/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 Ø 12-17.5 mm • 21 0048
 6.34 × 102 mm
 • 20 1271
 Packaging unit 2 pcs.

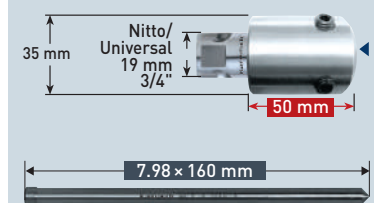

 7.98 × 105 mm
 Ø 18-60 mm • 20 1273
 Packaging unit 2 pcs.

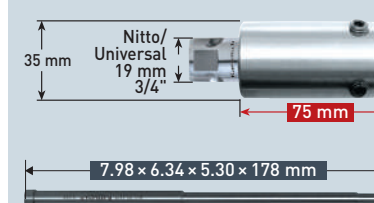
Spare allen screws for all adapters see page 540

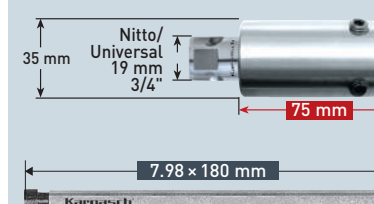
Further accessories see overview page 447

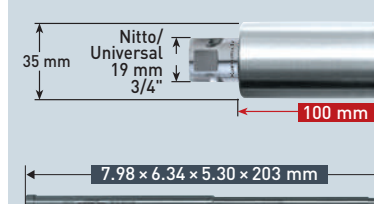
EXTENSIONS + SUITABLE EJECTOR PINS

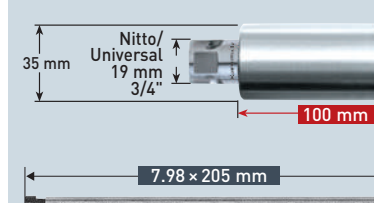

 Nitto/Universal 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 Ø 12-17.5 mm • 20 1406
 35 mm
 50 mm
 7.98 × 6.34 × 5.30 × 153 mm
 • 20 1396
 Packaging unit 2 pcs.


 Nitto/Universal 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 Ø 18-65 mm • 20 1406
 35 mm
 50 mm
 7.98 × 160 mm
 • 20 1399
 Packaging unit 2 pcs.


 Nitto/Universal 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 Ø 12-17.5 mm • 20 1407
 35 mm
 75 mm
 7.98 × 6.34 × 5.30 × 178 mm
 • 20 1411
 Packaging unit 2 pcs.


 Nitto/Universal 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 Ø 18-65 mm • 20 1407
 35 mm
 75 mm
 7.98 × 180 mm
 • 20 1414
 Packaging unit 2 pcs.


 Nitto/Universal 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 Ø 12-17.5 mm • 20 1409
 35 mm
 100 mm
 7.98 × 6.34 × 5.30 × 203 mm
 • 20 1426
 Packaging unit 2 pcs.


 Nitto/Universal 19 mm 3/4"
 Weldon + Nitto/Universal 19 mm 3/4"
 Ø 18-65 mm • 20 1409
 35 mm
 100 mm
 7.98 × 205 mm
 • 20 1429
 Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 447



20 1650 HARD-LINE/80 Carbide-tipped annular cutter, Nitto/Universal shank, drill depth 80 mm | 3"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			

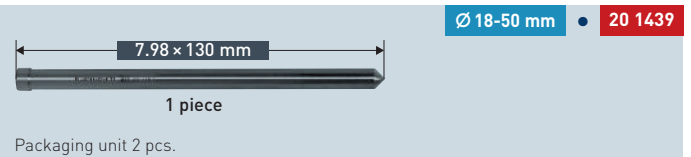
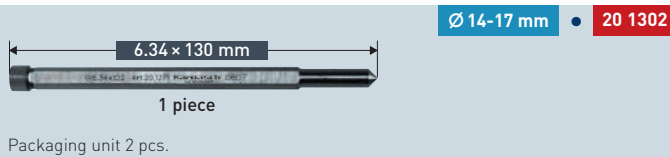


Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1650N 014	14	35/64"	20 1650N 024	24	15/16"	20 1650N 034	34	1.11/32"	20 1650N 044	44	1.47/64"
20 1650N 015	15	19/32"	20 1650N 025	25	63/64"	20 1650N 035	35	1.3/8"	20 1650N 045	45	1.49/64"
20 1650N 016	16	5/8"	20 1650N 026	26	1.1/32"	20 1650N 036	36	1.27/64"	20 1650N 046	46	1.13/16"
20 1650N 017	17	43/64"	20 1650N 027	27	1.1/16"	20 1650N 037	37	1.29/64"	20 1650N 047	47	1.27/32"
20 1650N 018	18	45/64"	20 1650N 028	28	1.7/64"	20 1650N 038	38	1.1/2"	20 1650N 048	48	1.57/64"
20 1650N 019	19	3/4"	20 1650N 029	29	1.9/64"	20 1650N 039	39	1.17/32"	20 1650N 049	49	1.59/64"
20 1650N 020	20	25/32"	20 1650N 030	30	1.3/16"	20 1650N 040	40	1.37/64"	20 1650N 050	50	1.31/32"
20 1650N 021	21	53/64"	20 1650N 031	31	1.7/32"	20 1650N 041	41	1.39/64"			
20 1650N 022	22	55/64"	20 1650N 032	32	1.17/64"	20 1650N 042	42	1.21/32"			
20 1650N 023	23	29/32"	20 1650N 033	33	1.19/64"	20 1650N 043	43	1.11/16"			

Larger Ø up to 60 mm with adapter see Art. 20 1650 page 380.
Attention: The inch sizes do not correspond exactly to the mm diameters.

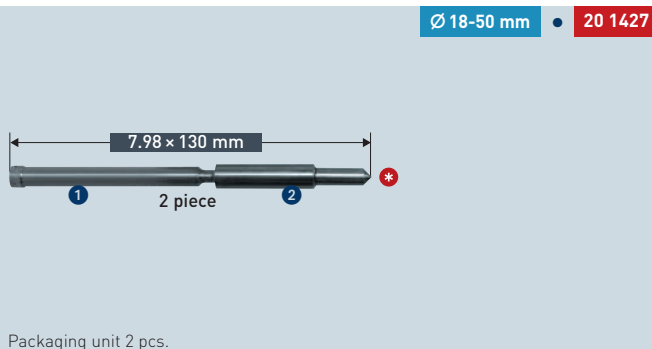
20 1650 HARD-LINE/80 ACCESSORIES

EJECTOR PINS



It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE



APPLICATION EJECTOR PINS 2-PIECE



Application:
 Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

* **Why use 2-part ejector pins?** Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If **no extra-long** holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



1307



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Accessories for carbide-tipped annular cutter, Nitto/Universal shank, drill depth 80 mm | 3"

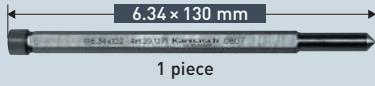
HARD-LINE 80

20 1650N

ADAPTER + SUITABLE EJECTOR PINS

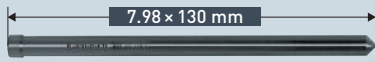


• 21 0048



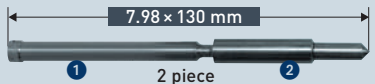
Ø 14-17 mm • 20 1302

1 piece
Packaging unit 2 pcs.



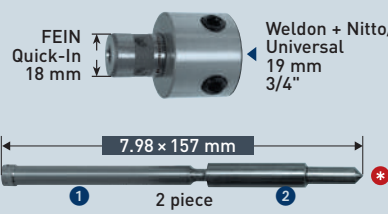
Ø 18-50 mm • 20 1439

1 piece
Packaging unit 2 pcs.



Ø 18-50 mm • 20 1427

2 piece
Packaging unit 2 pcs.



Ø 18-50 mm • 20 1161

• 20 1436

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

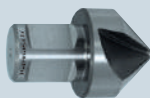
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



Sets · Displays 544-571



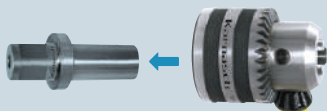
Tapping adapter Weldon + taps M 3 - M 30 637-638



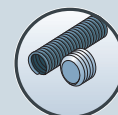
Solid carbide drills to remove jammed taps 640



Adapters + suitable drill chucks 538



Spare parts 540-542

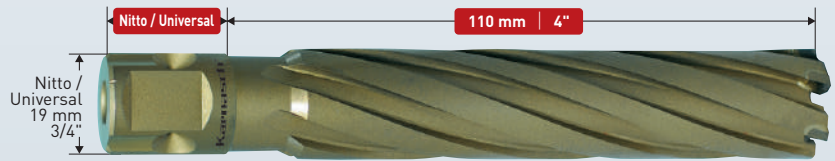


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20 1660N HARD-LINE/110 Carbide-tipped annular cutter, Nitto/Universal shank, drill depth 110 mm | 4"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1660N 014	14	35/64"	20 1660N 024	24	15/16"	20 1660N 034	34	1.11/32"	20 1660N 044	44	1.47/64"
20 1660N 015	15	19/32"	20 1660N 025	25	63/64"	20 1660N 035	35	1.3/8"	20 1660N 045	45	1.49/64"
20 1660N 016	16	5/8"	20 1660N 026	26	1.1/32"	20 1660N 036	36	1.27/64"	20 1660N 046	46	1.13/16"
20 1660N 017	17	43/64"	20 1660N 027	27	1.1/16"	20 1660N 037	37	1.29/64"	20 1660N 047	47	1.27/32"
20 1660N 018	18	45/64"	20 1660N 028	28	1.7/64"	20 1660N 038	38	1.1/2"	20 1660N 048	48	1.57/64"
20 1660N 019	19	3/4"	20 1660N 029	29	1.9/64"	20 1660N 039	39	1.17/32"	20 1660N 049	49	1.59/64"
20 1660N 020	20	25/32"	20 1660N 030	30	1.3/16"	20 1660N 040	40	1.37/64"	20 1660N 050	50	1.31/32"
20 1660N 021	21	53/64"	20 1660N 031	31	1.7/32"	20 1660N 041	41	1.39/64"			
20 1660N 022	22	55/64"	20 1660N 032	32	1.17/64"	20 1660N 042	42	1.21/32"			
20 1660N 023	23	29/32"	20 1660N 033	33	1.19/64"	20 1660N 043	43	1.11/16"			

Larger Ø up to 55 mm with adapter possible. See Art. 20 1660 page 382.
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1660N HARD-LINE/110 ACCESSORIES

EJECTOR PINS

Ø 14-17 mm • 20 1304

6.34 × 160 mm

1 piece

Packaging unit 2 pcs.

Ø 18-50 mm • 20 1399

7.98 × 160 mm

1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

Ø 18-50 mm • 20 1428

7.98 × 157 mm

2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:
 Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

* **Why use 2-part ejector pins?** Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If **no extra-long** holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data



Movie



1307



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- 2
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ADAPTER + SUITABLE EJECTOR PINS



• 21 0048



Ø 14-17 mm • 20 1304

1 piece

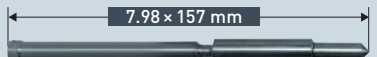
Packaging unit 2 pcs.



Ø 18-50 mm • 20 1399

1 piece

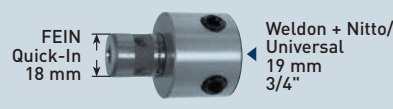
Packaging unit 2 pcs.



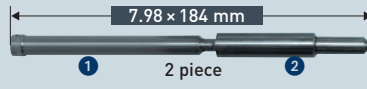
Ø 18-50 mm • 20 1428

2 piece

Packaging unit 2 pcs.



Ø 18-50 mm • 20 1161



• 20 1438

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

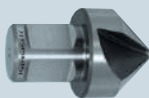
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves ☞ 531-533



Coolant pressure bottles ☞ 538



Countersinks with Weldon shank ☞ 534/535



Magnetic stick for chip removal ☞ 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm ☞ 636



Sets · Displays ☞ 544-571



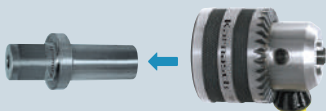
Tapping adapter Weldon + taps M 3 - M 30 ☞ 637-638



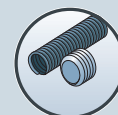
Solid carbide drills to remove jammed taps ☞ 640



Adapters + suitable drill chucks ☞ 538



Spare parts ☞ 540-542



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- 10 **Index**

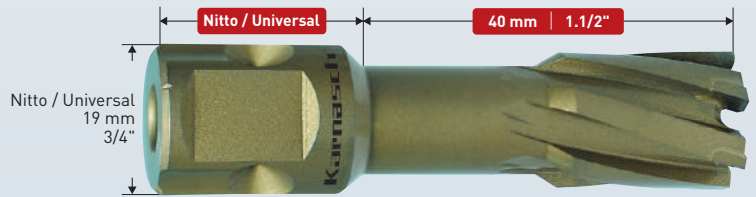
20 1630

HARD-LINE
INCH 40

Carbide-tipped annular cutter, Nitto/Universal shank, drill depth 40 mm | 1.1/2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
• 1/2"	12.70	20 1630 010	• 1"	25.40	20 1630 050	• 1.1/2"	38.10	20 1630 090	• 2"	50.80	20 1630 130
• 9/16"	14.28	20 1630 015	• 1.1/16"	26.98	20 1630 055	• 1.9/16"	39.68	20 1630 095	• 2.1/16"	52.38	20 1630 135
• 5/8"	15.87	20 1630 020	• 1.1/8"	28.57	20 1630 060	• 1.5/8"	41.27	20 1630 100			
• 11/16"	17.46	20 1630 025	• 1.3/16"	30.13	20 1630 065	• 1.11/16"	42.86	20 1630 105			
• 3/4"	19.04	20 1630 030	• 1.1/4"	31.75	20 1630 070	• 1.3/4"	44.45	20 1630 110			
• 13/16"	20.63	20 1630 035	• 1.5/16"	33.33	20 1630 075	• 1.13/16"	46.03	20 1630 115			
• 7/8"	22.22	20 1630 040	• 1.3/8"	34.92	20 1630 080	• 1.7/8"	47.62	20 1630 120			
• 15/16"	23.81	20 1630 045	• 1.7/16"	36.51	20 1630 085	• 1.15/16"	49.21	20 1630 125			

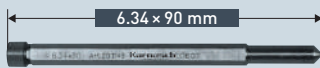
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1630

HARD-LINE
INCH 40

ACCESSORIES

EJECTOR PINS



• 20 1149

Packaging unit 2 pcs.

20 1630

HARD-LINE
INCH 40

SETS / DISPLAYS Page 560

We offer a large selection of sets / displays – recommended content 20 1630 HARD-LINE40 – see page 560. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1307



Accessories for carbide-tipped annular cutter, Nitto/Universal shank, drill depth 40 mm | 1.1/2"

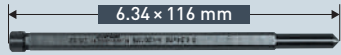
HARD-LINE
INCH **40**

20 1630

ADAPTER + SUITABLE EJECTOR PINS



• **20 1263**



• **20 1318**

Packaging unit 2 pcs.



• **21 0048**

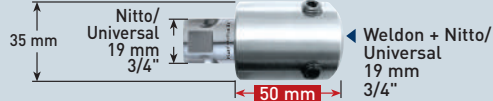


• **20 1149**

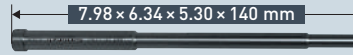
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

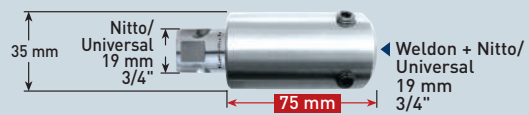


• **20 1406**

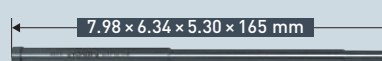


• **20 1390**

Packaging unit 2 pcs.

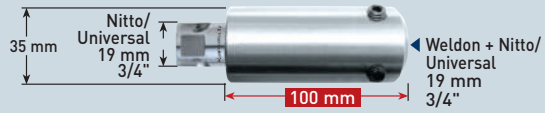


• **20 1407**

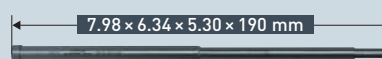


• **20 1405**

Packaging unit 2 pcs.



• **20 1409**



• **20 1420**

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

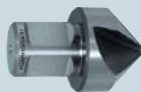
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 4-12 mm 636



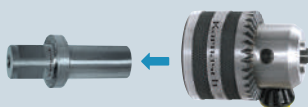
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



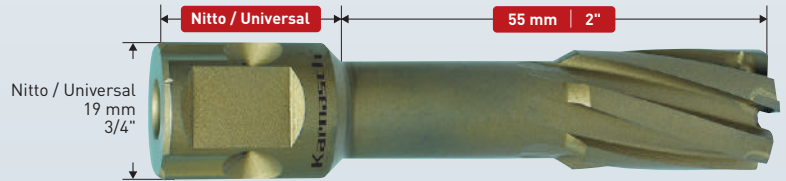
20 1640

HARD-LINE
INCH 55

Carbide-tipped annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
• 1/2"	12.70	20 1640 010	• 1"	25.40	20 1640 050	• 1.1/2"	38.10	20 1640 090	• 2"	50.80	20 1640 130
• 9/16"	14.28	20 1640 015	• 1.1/16"	26.98	20 1640 055	• 1.9/16"	39.68	20 1640 095	• 2.1/16"	52.38	20 1640 135
• 5/8"	15.87	20 1640 020	• 1.1/8"	28.57	20 1640 060	• 1.5/8"	41.27	20 1640 100			
• 11/16"	17.46	20 1640 025	• 1.3/16"	30.13	20 1640 065	• 1.11/16"	42.86	20 1640 105			
• 3/4"	19.04	20 1640 030	• 1.1/4"	31.75	20 1640 070	• 1.3/4"	44.45	20 1640 110			
• 13/16"	20.63	20 1640 035	• 1.5/16"	33.33	20 1640 075	• 1.13/16"	46.03	20 1640 115			
• 7/8"	22.22	20 1640 040	• 1.3/8"	34.92	20 1640 080	• 1.7/8"	47.62	20 1640 120			
• 15/16"	23.81	20 1640 045	• 1.7/16"	36.51	20 1640 085	• 1.15/16"	49.21	20 1640 125			

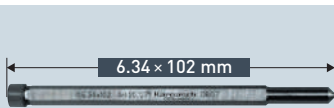
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1640

HARD-LINE
INCH 55

ACCESSORIES

EJECTOR PINS



• 20 1271

Packaging unit 2 pcs.

20 1640

HARD-LINE
INCH 55

SETS / DISPLAYS Page 561

We offer a large selection of sets / displays – recommended content 20 1640 HARD-LINE55 – see page 561. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1307

Accessories for carbide-tipped annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

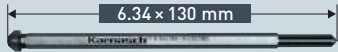
HARD-LINE
INCH **55**

20 1640

ADAPTER + SUITABLE EJECTOR PINS



• **20 1263**



• **20 1160**

Packaging unit 2 pcs.



• **21 0048**

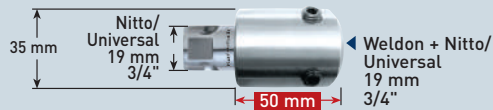


• **20 1271**

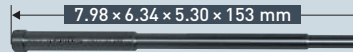
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS



• **20 1406**

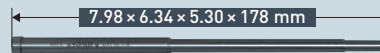


• **20 1396**

Packaging unit 2 pcs.

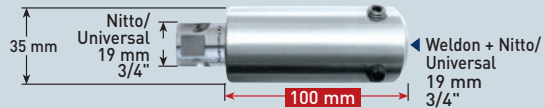


• **20 1407**

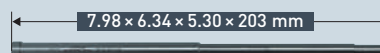


• **20 1411**

Packaging unit 2 pcs.



• **20 1409**



• **20 1426**

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

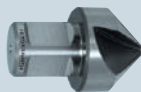
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 4-12 mm 636



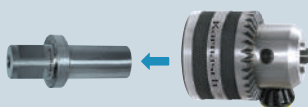
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

20 1670

HARD-LINE
INCH **80**

Carbide-tipped annular cutter, Nitto/Universal shank, drill depth 80 mm | 3"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
• 11/16"	17.46	20 1670 025	• 1.1/16"	26.98	20 1670 055	• 1.7/16"	36.51	20 1670 085	• 1.13/16"	46.03	20 1670 115
• 3/4"	19.04	20 1670 030	• 1.1/8"	28.57	20 1670 060	• 1.1/2"	38.10	20 1670 090	• 1.7/8"	47.62	20 1670 120
• 13/16"	20.63	20 1670 035	• 1.3/16"	30.13	20 1670 065	• 1.9/16"	39.68	20 1670 095	• 1.15/16"	49.21	20 1670 125
• 7/8"	22.22	20 1670 040	• 1.1/4"	31.75	20 1670 070	• 1.5/8"	41.27	20 1670 100	• 2"	50.80	20 1670 130
• 15/16"	23.81	20 1670 045	• 1.5/16"	33.33	20 1670 075	• 1.11/16"	42.86	20 1670 105	• 2.1/16"	52.38	20 1670 135
• 1"	25.40	20 1670 050	• 1.3/8"	34.92	20 1670 080	• 1.3/4"	44.45	20 1670 110			

Attention: The inch sizes do not correspond exactly to the mm diameters.

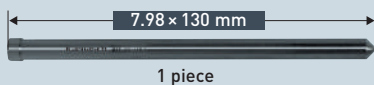
20 1670

HARD-LINE
INCH **80**

ACCESSORIES

EJECTOR PINS 1-PIECE

• 20 1439



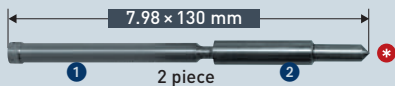
1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• 20 1427



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

• Why use 2-part ejector pins? Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If no extra-long holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



1307



Accessories for carbide-tipped annular cutter, Nitto/Universal shank, drill depth 80 mm | 3"

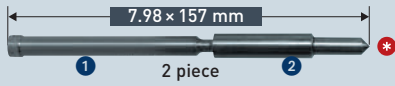
HARD-LINE
INCH **80**

20 1670

ADAPTER + SUITABLE EJECTOR PINS



• **20 1161**



• **20 1436**

Packaging unit 2 pcs.

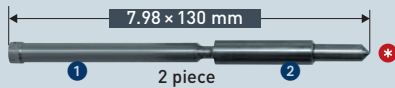


• **21 0048**



• **20 1439**

Packaging unit 2 pcs.




• **20 1427**


Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540


ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves  531-533




Coolant pressure bottles  538




Countersinks with Weldon shank  534/535




Magnetic stick for chip removal  539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm  636




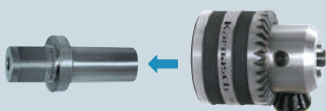
Sets · Displays  544-571




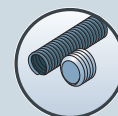
Tapping adapter Weldon + taps M 3 - M 30  637-638



Adapters + suitable drill chucks  538



Spare parts  540-542



- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

HSS-XE + DURABLU- COATED ANNULAR CUTTERS



BLUE-DRILL LINE

Carbide tipped annular cutters and coated HSS-XE cutters provide the optimal price-performance ratio.

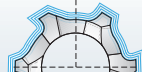
The Karnasch DURABLU-coating makes the annular cutter decisively more resistant. This results in a considerable increase in product life.

BLUE-DRILL LINE annular cutters are the most commonly used Karnasch cutters. These HSS-XE cutters offers the best price-performance ratio for all steels up to a strength of 40 Rockwell (HRC) and stainless steel.

PROPERTIES



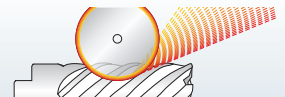
Made of high-alloyed HSS-XE special steel. For extreme hardness at the tip of the tooth (up to 68 HRC). A high wear resistance and lifetime.



Our first-class annular cutters are equipped with the unique and patented DURABLU-coating. Extreme surface hardness and sleekness yield extreme lifetimes even under non-optimum conditions like "overhead work", dry drilling, etc.



Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.



Completely made "FULLY GROUND". This refining increases the cutting ability while reducing friction at the same time. For an extended lifetime.

APPLICATION

Steel	Steel	Steel	Stainless	Stainless	Alu	Alu	Copper, brass, tin	Plastics GRP/CRP	Grey cast iron	Hastelloy, Inconel, Nimonic, exotic materials	Hardox 400	Hardox 450
< 900 N	< 1100 N	< 1400 N	< 900 N	> 900 N	< 10% Si	> 10% Si						
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ OPTIMAL ✓ GOOD ✓ POSSIBLE



HSS-XE + DURABLU- COATED ANNULAR CUTTERS

Drill depths	Ø mm	Ø Inch	Art. / Type	
 Nitto / Universal 30 mm 1"	12-60	15/32-2.23/64"	20 1312N BLUE-DRILL LINE / 30	464
 Nitto / Universal 55 mm 2"	12-60	15/32-2.23/64"	20 1313N BLUE-DRILL LINE / 55	466
 Nitto / Universal 80 mm 3"	18-50	45/64-1.31/32"	20 1185N BLUE-DRILL LINE / 80	468
 Nitto / Universal 110 mm 4"	18-50	45/64-1.31/32"	20 1180N BLUE-DRILL LINE / 110	470
 Nitto / Universal 30 mm 1"	-	7/16-1.7/8"	20 1611 BLUE-DRILL LINE INCH / 30	472
 Nitto / Universal 55 mm 2"	-	7/16-1.7/8"	20 1621 BLUE-DRILL LINE INCH / 55	474
 Nitto / Universal 80 mm 3"	-	11/16-2.1/16"	20 1125 BLUE-DRILL LINE INCH / 80	476

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

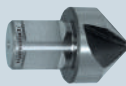
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



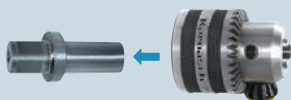
Sets · Displays 544-571



Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



1



2



3



4



5



6



7



8



9



10

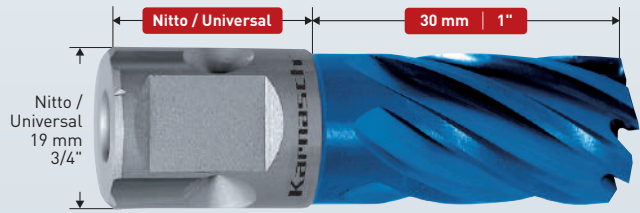


Index

20 1312N BLUE-DRILL LINE/30 HSS-XE + DURABLUe-coated annular cutter, Nitto/Universal shank, drill depth 30 mm | 1"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



☒ Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1312N 012	12	15/32"	20 1312N 026	26	1.1/32"	20 1312N 040	40	1.37/64"	20 1312N 054	54	2.1/8"
20 1312N 013	13	33/64"	20 1312N 027	27	1.1/16"	20 1312N 041	41	1.39/64"	20 1312N 055	55	2.11/64"
20 1312N 014	14	35/64"	20 1312N 028	28	1.7/64"	20 1312N 042	42	1.21/32"	20 1312N 056	56	2.13/64"
20 1312N 015	15	19/32"	20 1312N 029	29	1.9/64"	20 1312N 043	43	1.11/16"	20 1312N 057	57	2.1/4"
20 1312N 016	16	5/8"	20 1312N 030	30	1.3/16"	20 1312N 044	44	1.47/64"	20 1312N 058	58	2.9/32"
20 1312N 017	17	43/64"	20 1312N 031	31	1.7/32"	20 1312N 045	45	1.49/64"	20 1312N 059	59	2.21/64"
20 1312N 018	18	45/64"	20 1312N 032	32	1.17/64"	20 1312N 046	46	1.13/16"			
20 1312N 019	19	3/4"	20 1312N 033	33	1.19/64"	20 1312N 047	47	1.27/32"			
20 1312N 020	20	25/32"	20 1312N 034	34	1.11/32"	20 1312N 048	48	1.57/64"			
20 1312N 021	21	53/64"	20 1312N 035	35	1.3/8"	20 1312N 049	49	1.59/64"			
20 1312N 022	22	55/64"	20 1312N 036	36	1.27/64"	20 1312N 050	50	1.31/32"			
20 1312N 023	23	29/32"	20 1312N 037	37	1.29/64"	20 1312N 051	51	2.1/64"			
20 1312N 024	24	15/16"	20 1312N 038	38	1.1/2"	20 1312N 052	52	2.3/64"			
20 1312N 025	25	63/64"	20 1312N 039	39	1.17/32"	20 1312N 053	53	2.3/32"			

Replacement article see Art. 20 1260N page 480, Art. 20 1315N page 448

Larger Ø see Art. 20 1315 page 376 and Art. 20 1316 page 378 – Larger Ø up to 100 mm see Art. 20 1130A + adapter page 585/587 · Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1312N BLUE-DRILL LINE/30 ACCESSORIES

EJECTOR PINS



• 20 1261

Packaging unit 2 pcs.

20 1312N BLUE-DRILL LINE/30 SETS / DISPLAYS Page 562

We offer a large selection of sets / displays – recommended content 20 1312N BLUE-DRILL LINE30 – see page 562. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308

Accessories for HSS-XE + DURABLUe-coated annular cutter, Nitto/Universal shank, drill depth 30 mm | 1"

BLUE-DRILL LINE 30

20 1312N

ADAPTER + SUITABLE EJECTOR PINS

• **20 1263**



• **20 1271**

Packaging unit 2 pcs.

• **21 0048**



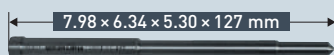
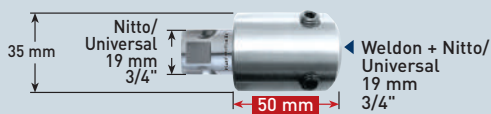
• **20 1261**

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

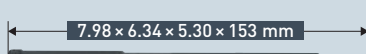
• **20 1406**



• **20 1433**

Packaging unit 2 pcs.

• **20 1407**



• **20 1396**

Packaging unit 2 pcs.

• **20 1409**



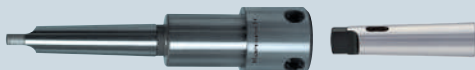
• **20 1411**

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

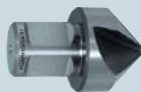
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 4-12 mm 636



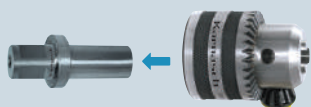
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



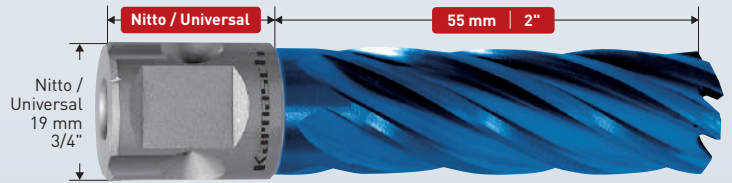
Spare parts 540-542



20 1313N BLUE-DRILL LINE/55 HSS-XE + DURABLUe-coated annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



☒ Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1313N 012	12	15/32"	20 1313N 026	26	1.1/32"	20 1313N 040	40	1.37/64"	20 1313N 054	54	2.1/8"
20 1313N 013	13	33/64"	20 1313N 027	27	1.1/16"	20 1313N 041	41	1.39/64"	20 1313N 055	55	2.11/64"
20 1313N 014	14	35/64"	20 1313N 028	28	1.7/64"	20 1313N 042	42	1.21/32"	20 1313N 056	56	2.13/64"
20 1313N 015	15	19/32"	20 1313N 029	29	1.9/64"	20 1313N 043	43	1.11/16"	20 1313N 057	57	2.1/4"
20 1313N 016	16	5/8"	20 1313N 030	30	1.3/16"	20 1313N 044	44	1.47/64"	20 1313N 058	58	2.9/32"
20 1313N 017	17	43/64"	20 1313N 031	31	1.7/32"	20 1313N 045	45	1.49/64"	20 1313N 059	59	2.21/64"
20 1313N 018	18	45/64"	20 1313N 032	32	1.17/64"	20 1313N 046	46	1.13/16"			
20 1313N 019	19	3/4"	20 1313N 033	33	1.19/64"	20 1313N 047	47	1.27/32"			
20 1313N 020	20	25/32"	20 1313N 034	34	1.11/32"	20 1313N 048	48	1.57/64"			
20 1313N 021	21	53/64"	20 1313N 035	35	1.3/8"	20 1313N 049	49	1.59/64"			
20 1313N 022	22	55/64"	20 1313N 036	36	1.27/64"	20 1313N 050	50	1.31/32"			
20 1313N 023	23	29/32"	20 1313N 037	37	1.29/64"	20 1313N 051	51	2.1/64"			
20 1313N 024	24	15/16"	20 1313N 038	38	1.1/2"	20 1313N 052	52	2.3/64"			
20 1313N 025	25	63/64"	20 1313N 039	39	1.17/32"	20 1313N 053	53	2.3/32"			

Larger Ø see Art. 20 1316 page 378 – Larger Ø up to 100 mm see Art. 20 1141A + adapter page 589 / 591 .

Attention: The inch sizes do not correspond exactly to the mm diameters.

Replacement article see Art. 20 1270N page 482, Art. 20 1316N page 450

20 1313N BLUE-DRILL LINE/55 ACCESSORIES

EJECTOR PINS



• 20 1271

Packaging unit 2 pcs.

20 1313N BLUE-DRILL LINE/55 SETS / DISPLAYS Page 563

We offer a large selection of sets / displays – recommended content 20 1313N BLUE-DRILL LINE55 – see page 563. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308

Accessories for HSS-XE + DURABLUÉ-coated annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

BLUE-DRILL LINE 55

20 1313N

ADAPTER + SUITABLE EJECTOR PINS

• **20 1263**



Packaging unit 2 pcs.

• **20 1160**



Packaging unit 2 pcs.

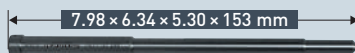
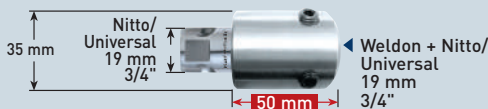
• **21 0048**

• **20 1271**

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

• **20 1406**



Packaging unit 2 pcs.

• **20 1396**

• **20 1407**



Packaging unit 2 pcs.

• **20 1411**

• **20 1409**



Packaging unit 2 pcs.

• **20 1426**

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

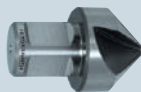
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 4-12 mm 636



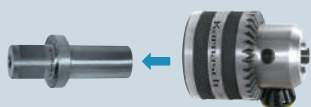
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



20 1185N BLUE-DRILL LINE/80 HSS-XE + DURABLUÉ-coated annular cutter, Nitto/Universal shank, drill depth 80 mm | 3"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



⚠ Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1185N 018	18	45/64"	20 1185N 024	24	15/16"	20 1185N 030	30	1.3/16"	20 1185N 040	40	1.37/64"
20 1185N 019	19	3/4"	20 1185N 025	25	63/64"	20 1185N 032	32	1.17/64"	20 1185N 045	45	1.49/64"
20 1185N 020	20	25/32"	20 1185N 026	26	1.1/32"	20 1185N 033	33	1.19/64"	20 1185N 050	50	1.31/32"
20 1185N 021	21	53/64"	20 1185N 027	27	1.1/16"	20 1185N 035	35	1.3/8"			
20 1185N 022	22	55/64"	20 1185N 028	28	1.7/64"	20 1185N 036	36	1.27/64"			
20 1185N 023	23	29/32"	20 1185N 029	29	1.9/64"	20 1185N 038	38	1.1/2"			

Larger Ø see Art. 20 1650 page 380 and Art. 20 1660 page 382 – Replacement article see Art. 20 1285N page 484, Art. 20 1650N page 452.
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1185N BLUE-DRILL LINE/80 ACCESSORIES

EJECTOR PINS 1-PIECE

• **20 1439**

1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532–533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• **20 1427**

2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE

Application:
 Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

⚠ **Why use 2-part ejector pins?** Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If **no extra-long** holders are used (e.g. as on page 532–533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data	Movie
1308	

Accessories for HSS-XE + DURABLUÉ-coated annular cutter, Nitto/Universal shank, drill depth 80 mm | 3"

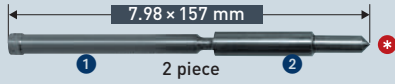
BLUE-DRILL LINE 80

20 1185N

ADAPTER + SUITABLE EJECTOR PINS



• 20 1161

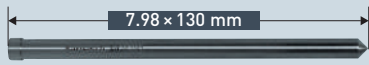


• 20 1436

Packaging unit 2 pcs.



• 21 0048



• 20 1439

Packaging unit 2 pcs.




• 20 1427


Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540


ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

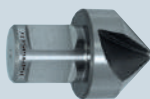
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves  531-533




Coolant pressure bottles  538




Countersinks with Weldon shank  534/535




Magnetic stick for chip removal  539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm  636




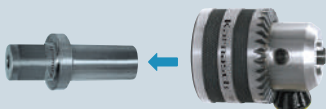
Sets · Displays  544-571




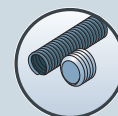
Tapping adapter Weldon + taps M 3 - M 30  637-638



Adapters + suitable drill chucks  538



Spare parts  540-542



- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

20 1180N BLUE-DRILL LINE / 110 HSS-XE + DURABLUe-coated annular cutter, Nitto/Universal shank, drill depth 110 mm | 4"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



⚠ Sale item. While stocks last.

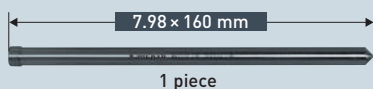
Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1180N 018	18	45/64"	20 1180N 024	24	15/16"	20 1180N 030	30	1.3/16"	20 1180N 040	40	1.37/64"
20 1180N 019	19	3/4"	20 1180N 025	25	63/64"	20 1180N 032	32	1.17/64"	20 1180N 045	45	1.49/64"
20 1180N 020	20	25/32"	20 1180N 026	26	1.1/32"	20 1180N 033	33	1.19/64"	20 1180N 050	50	1.31/32"
20 1180N 021	21	53/64"	20 1180N 027	27	1.1/16"	20 1180N 035	35	1.3/8"			
20 1180N 022	22	55/64"	20 1180N 028	28	1.7/64"	20 1180N 036	36	1.27/64"			
20 1180N 023	23	29/32"	20 1180N 029	29	1.9/64"	20 1180N 038	38	1.1/2"			

Replacement article see Art. 20 1280N page 486, Art. 20 1660N page 454 · **Attention:** The inch sizes do not correspond exactly to the mm diameters.

20 1180N BLUE-DRILL LINE / 110 ACCESSORIES

EJECTOR PINS 1-PIECE

• 20 1399



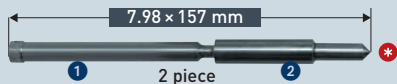
1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• 20 1428



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

⚠ **Why use 2-part ejector pins?** Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If **no extra-long** holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



Accessories for HSS-XE + DURABLUÉ-coated annular cutter, Nitto/Universal shank, drill depth 110 mm | 4"

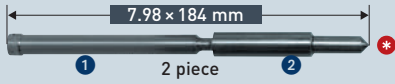
BLUE-DRILL LINE 110

20 1180N

ADAPTER + SUITABLE EJECTOR PINS



• 20 1161



• 20 1438

Packaging unit 2 pcs.

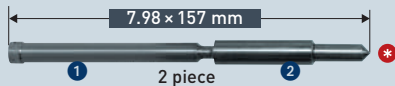


• 21 0048



• 20 1399

Packaging unit 2 pcs.



• 20 1428

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

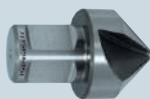
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



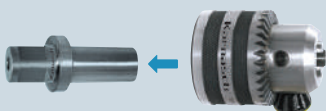
Sets · Displays 544-571



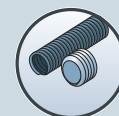
Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



20 1611

BLUE-DRILL LINE
INCH

30

HSS-XE + DURABLUÉ-coated annular cutter, Nitto/Universal shank, drill depth 30 mm | 1"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



⚠ Sale item. While stocks last.

Inch	Ø mm	Art.
7/16"	11.10	20 1611 005
1/2"	12.70	20 1611 010
9/16"	14.28	20 1611 015
5/8"	15.87	20 1611 020
11/16"	17.46	20 1611 025
3/4"	19.04	20 1611 030
13/16"	20.63	20 1611 035
7/8"	22.22	20 1611 040
15/16"	23.81	20 1611 045
1"	25.40	20 1611 050

Inch	Ø mm	Art.
1.1/16"	26.98	20 1611 055
1.1/8"	28.57	20 1611 060
1.3/16"	30.13	20 1611 065
1.1/4"	31.75	20 1611 070
1.5/16"	33.33	20 1611 075
1.3/8"	34.92	20 1611 080
1.7/16"	36.51	20 1611 085
1.1/2"	38.10	20 1611 090
1.9/16"	39.68	20 1611 095
1.5/8"	41.27	20 1611 100

Inch	Ø mm	Art.
1.11/16"	42.86	20 1611 105
1.3/4"	44.45	20 1611 110
1.13/16"	46.03	20 1611 115
1.7/8"	47.62	20 1611 120
1.15/16"	49.21	20 1611 125
2"	50.80	20 1611 130
2.1/16"	52.38	20 1611 135

Inch	Ø mm	Art.
9/16"	14.28	20 1611w 015
5/8"	15.87	20 1611w 020
11/16"	17.46	20 1611w 025
3/4"	19.04	20 1611w 030
13/16"	20.63	20 1611w 035
1.1/2"	38.10	20 1611w 090
2"	50.80	20 1611w 130

Replacement article see Art. 20 1610 page 488, Art. 20 1630 page 456

Attention: The inch sizes do not correspond exactly to the mm diameters.



* Special prices as long as supplies are available in Weldon shank

20 1611

BLUE-DRILL LINE
INCH

30

ACCESSORIES

EJECTOR PINS

Ø 7/16" • 20 1482



Packaging unit 2 pcs.

Ø 1/2" - 2.1/16" • 20 1261



Packaging unit 2 pcs.



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Accessories for HSS-XE + DURABLUÉ-coated annular cutter, Nitto/Universal shank, drill depth 30 mm | 1"

BLUE-DRILL LINE 30 INCH

20 1611

ADAPTER + SUITABLE EJECTOR PINS

• 20 1263



• 20 1271

Packaging unit 2 pcs.

• 21 0048



• 20 1482 $\varnothing 7/16"$

Packaging unit 2 pcs.



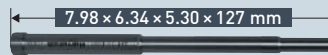
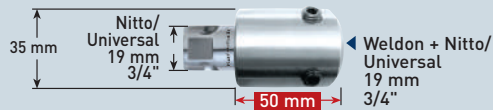
• 20 1261 $\varnothing 1/2" - 2.1/16"$

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

• 20 1406



• 20 1433

Packaging unit 2 pcs.

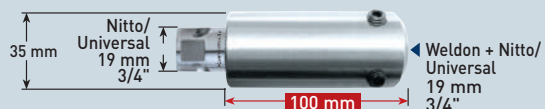
• 20 1407



• 20 1396

Packaging unit 2 pcs.

• 20 1409



• 20 1411

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

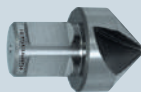
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills $\varnothing 4-12$ mm 636



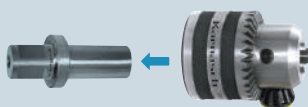
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



20 1621

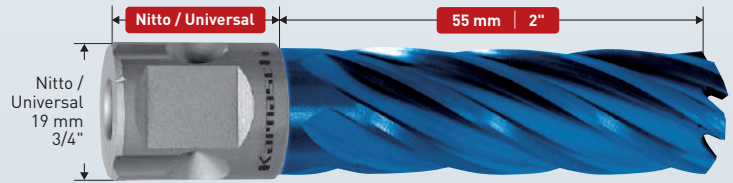
BLUE-DRILL LINE
INCH

55

HSS-XE + DURABLUÉ-coated annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



% Sale item. While stocks last.

Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
% 7/16"	11.10	20 1621 005	% 1.1/16"	26.98	20 1621 055	% 1.11/16"	42.86	20 1621 105	% 1"	25.40	20 1621w 050
% 1/2"	12.70	20 1621 010	% 1.1/8"	28.57	20 1621 060	% 1.3/4"	44.45	20 1621 110	% 1.7/8"	47.62	20 1621w 120
% 9/16"	14.28	20 1621 015	% 1.3/16"	30.13	20 1621 065	% 1.13/16"	46.03	20 1621 115			
% 5/8"	15.87	20 1621 020	% 1.1/4"	31.75	20 1621 070	% 1.7/8"	47.62	20 1621 120			
% 11/16"	17.46	20 1621 025	% 1.5/16"	33.33	20 1621 075	% 1.15/16"	49.21	20 1621 125			
% 3/4"	19.04	20 1621 030	% 1.3/8"	34.92	20 1621 080	% 2"	50.80	20 1621 130			
% 13/16"	20.63	20 1621 035	% 1.7/16"	36.51	20 1621 085	% 2.1/16"	52.38	20 1621 135			
% 7/8"	22.22	20 1621 040	% 1.1/2"	38.10	20 1621 090						
% 15/16"	23.81	20 1621 045	% 1.9/16"	39.68	20 1621 095						
% 1"	25.40	20 1621 050	% 1.5/8"	41.27	20 1621 100						

Replacement article see Art. 20 1620 page 490, Art. 20 1640 page 458 -
Attention: The inch sizes do not correspond exactly to the mm diameters.



* Special prices as long as supplies are available in Weldon shank

20 1621

BLUE-DRILL LINE
INCH

55

ACCESSORIES

EJECTOR PINS

Ø 7/16" • 20 1485



Packaging unit 2 pcs.

Ø 1/2" - 2.1/16" • 20 1271



Packaging unit 2 pcs.

Cutting data

Movie



1308



Accessories for HSS-XE + DURABLUÉ-coated annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

BLUE-DRILL LINE 55 INCH

20 1621

ADAPTER + SUITABLE EJECTOR PINS

• 20 1263



Packaging unit 2 pcs.

• 20 1160



Packaging unit 2 pcs.

• 21 0048

Ø 7/16"

• 20 1485



Packaging unit 2 pcs.

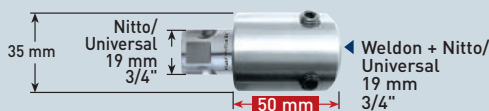
Ø 1/2" - 2.1/16"

• 20 1271

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

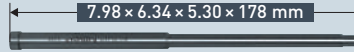
• 20 1406



Packaging unit 2 pcs.

• 20 1396

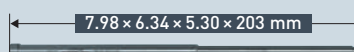
• 20 1407



Packaging unit 2 pcs.

• 20 1411

• 20 1409



Packaging unit 2 pcs.

• 20 1426

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

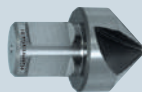
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 4-12 mm 636



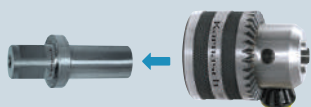
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



20 1125

BLUE-DRILL LINE
INCH 80

HSS-XE + DURABLUÉ-coated annular cutter, Nitto/Universal shank, drill depth 80 mm | 3"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



⚠ Sale item. While stocks last.

Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
11/16"	17.46	20 1125 025	1.1/16"	26.98	20 1125 055	1.7/16"	36.51	20 1125 085	1.13/16"	46.03	20 1125 115
3/4"	19.04	20 1125 030	1.1/8"	28.57	20 1125 060	1.1/2"	38.10	20 1125 090	1.7/8"	47.62	20 1125 120
13/16"	20.63	20 1125 035	1.3/16"	30.13	20 1125 065	1.9/16"	39.68	20 1125 095	1.15/16"	49.21	20 1125 125
7/8"	22.22	20 1125 040	1.1/4"	31.75	20 1125 070	1.5/8"	41.27	20 1125 100	2"	50.80	20 1125 130
15/16"	23.81	20 1125 045	1.5/16"	33.33	20 1125 075	1.11/16"	42.86	20 1125 105	2.1/16"	52.38	20 1125 135
1"	25.40	20 1125 050	1.3/8"	34.92	20 1125 080	1.3/4"	44.45	20 1125 110			

Replacement article see Art. 20 1670 page 460, Art. 20 1285N page 484 ·
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1125

BLUE-DRILL LINE
INCH 80

ACCESSORIES

EJECTOR PINS 1-PIECE

• 20 1439



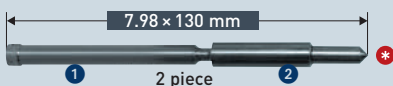
1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• 20 1427



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

⚠ **Why use 2-part ejector pins?** Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If **no extra-long** holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



1308



Accessories for HSS-XE + DURABLUÉ-coated annular cutter, Nitto/Universal shank, drill depth 80 mm | 3"

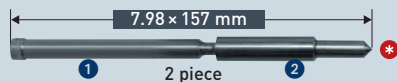
BLUE-DRILL LINE 80 INCH

20 1125

ADAPTER + SUITABLE EJECTOR PINS



• 20 1161



• 20 1436

Packaging unit 2 pcs.

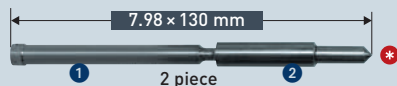


• 21 0048



• 20 1439

Packaging unit 2 pcs.



• 20 1427

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

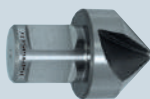
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



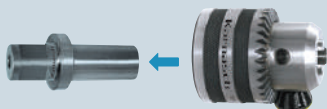
Sets · Displays 544-571



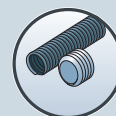
Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



HSS-XE ANNULAR CUTTERS



GOLD-DRILL LINE

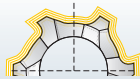
Karnasch GOLD-DRILL LINE annular cutters are the most commonly used non-coated HSS-XE annular cutter.

With special surface treatment **GOLD-TECH + FULLY GROUND + special steel HSS-XE** are ideal for drilling in steel up to a strength of 40 Rockwell (HRC) and even suitable for stainless steels.

PROPERTIES



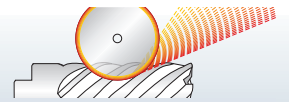
Made of high-alloyed HSS-XE special steel. For extreme hardness at the tip of the tooth (up to 68 HRC). A high wear resistance and lifetime.



Gold-Tech surface treatment. The special treatment for extended lifetimes.



Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.



Completely made "FULLY GROUND". This refining increases the cutting ability while reducing friction at the same time. For an extended lifetime.

APPLICATION

Steel	Steel	Steel	Stainless	Alu	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400	Hardox 450
< 750 N	< 900 N	< 1100 N	< 900 N	< 10% Si	> 10% Si				
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ OPTIMAL ✓ GOOD ✓ POSSIBLE




HSS-XE ANNULAR CUTTERS

Drill depths	Ø mm	Ø Inch	Art. / Type	
 Nitto / Universal 30 mm 1"	12-60	15/32-2.23/64"	20 1260N GOLD-DRILL LINE / 30	480
 Nitto / Universal 55 mm 2"	12-60	15/32-2.23/64"	20 1270N GOLD-DRILL LINE / 55	482
 Nitto / Universal 80 mm 3"	18-50	45/64-1.31/32"	20 1285N GOLD-DRILL LINE / 80	484
 Nitto / Universal 110 mm 4"	18-50	45/64-1.31/32"	20 1280N GOLD-DRILL LINE / 110	486
 Nitto / Universal 30 mm 1"	-	7/16-2.1/16"	20 1610 GOLD-DRILL LINE INCH / 30	488
 Nitto / Universal 55 mm 2"	-	7/16-2.1/16"	20 1620 GOLD-DRILL LINE INCH / 55	490
 Nitto / Universal 80 mm 3"	-	11/16-2.1/16"	20 1625 GOLD-DRILL LINE INCH / 80	492
 Nitto / Universal 30 mm 1"	14-32	9/16-1.1/16"	20 1240 GOLD-DRILL LINE SANDWICH / 30	494
 Nitto / Universal 55 mm 2"			20 1241 GOLD-DRILL LINE SANDWICH / 30	
	14-32	9/16-1.1/16"	20 1242 GOLD-DRILL LINE SANDWICH / 55	496
			20 1243 GOLD-DRILL LINE SANDWICH / 55	


Multi layer drill. For stack drilling (sandwich) in steel up to 1100 N




ACCESSORIES · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves  531-533




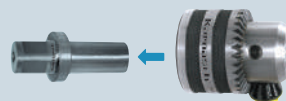
Tapping adapter Weldon + taps M 3 - M 30  637-638




Countersinks with Weldon shank  534/535



Adapters + suitable drill chucks  538



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm  636



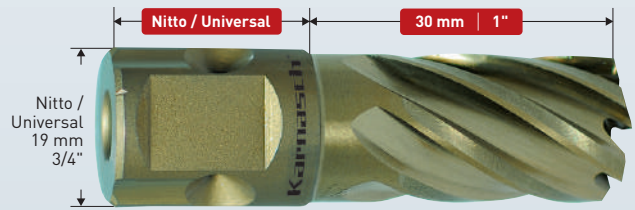
Spare parts  540-542



20 1260N GOLD-DRILL LINE / 30 HSS-XE annular cutter, Nitto/Universal shank, drill depth 30 mm | 1"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



% Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1260N 012	• 12	15/32"	20 1260N 024	• 24	15/16"	20 1260N 038	• 38	1.1/2"	20 1260N 052	% 52	2.3/64"
20 1260N 013	• 13	33/64"	20 1260N 025	• 25	63/64"	20 1260N 039	• 39	1.17/32"	20 1260N 053	% 53	2.3/32"
20 1260N 0135	% 13.5	17/32"	20 1260N 026	• 26	1.1/32"	20 1260N 040	• 40	1.37/64"	20 1260N 054	% 54	2.1/8"
20 1260N 014	• 14	35/64"	20 1260N 027	• 27	1.1/16"	20 1260N 041	• 41	1.39/64"	20 1260N 055	• 55	2.11/64"
20 1260N 015	• 15	19/32"	20 1260N 028	• 28	1.7/64"	20 1260N 042	• 42	1.21/32"	20 1260N 056	% 56	2.13/64"
20 1260N 016	• 16	5/8"	20 1260N 029	• 29	1.9/64"	20 1260N 043	• 43	1.11/16"	20 1260N 057	% 57	2.1/4"
20 1260N 017	• 17	43/64"	20 1260N 030	• 30	1.3/16"	20 1260N 044	• 44	1.47/64"	20 1260N 058	% 58	2.9/32"
20 1260N 018	• 18	45/64"	20 1260N 031	• 31	1.7/32"	20 1260N 045	• 45	1.49/64"	20 1260N 059	% 59	2.21/64"
20 1260N 019	• 19	3/4"	20 1260N 032	• 32	1.17/64"	20 1260N 046	• 46	1.13/16"	20 1260N 060	• 60	2.23/64"
20 1260N 0195	% 19.5	49/64"	20 1260N 033	• 33	1.19/64"	20 1260N 047	• 47	1.27/32"			
20 1260N 020	• 20	25/32"	20 1260N 034	• 34	1.11/32"	20 1260N 048	• 48	1.57/64"			
20 1260N 021	• 21	53/64"	20 1260N 035	• 35	1.3/8"	20 1260N 049	• 49	1.59/64"			
20 1260N 022	• 22	55/64"	20 1260N 036	• 36	1.27/64"	20 1260N 050	• 50	1.31/32"			
20 1260N 023	• 23	29/32"	20 1260N 037	• 37	1.29/64"	20 1260N 051	% 51	2.1/64"			

Larger Ø up to 100 mm see Art. 20 1130A + adapter page 585/587.
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1260N GOLD-DRILL LINE / 30 ACCESSORIES

EJECTOR PINS



• 20 1261

Packaging unit 2 pcs.

20 1260N GOLD-DRILL LINE / 30 SETS / DISPLAYS Page 564

We offer a large selection of sets / displays – recommended content 20 1260N GOLD-DRILL LINE30 – see page 564. Other content possible by individually equipped sets / displays.



Cutting data | Movie

1308

Accessories for HSS-XE annular cutter, Nitto/Universal shank, drill depth 30 mm | 1"

GOLD-DRILL LINE / 30

20 1260N

ADAPTER + SUITABLE EJECTOR PINS



• 20 1263



• 20 1271

Packaging unit 2 pcs.



• 21 0048

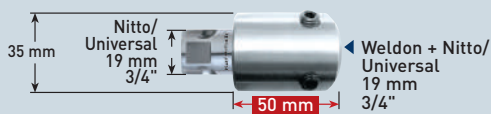


• 20 1261

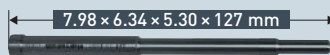
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS



• 20 1406



• 20 1433

Packaging unit 2 pcs.



• 20 1407

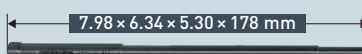


• 20 1396

Packaging unit 2 pcs.



• 20 1409



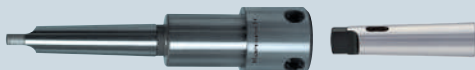
• 20 1411

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

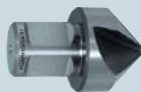
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 4-12 mm 636



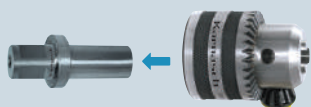
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



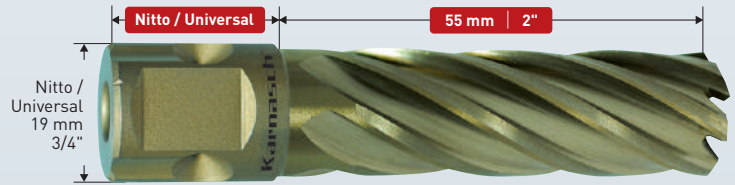
Spare parts 540-542



20 1270N GOLD-DRILL LINE / 55 HSS-XE annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



% Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1270N 012	12	15/32"	20 1270N 024	24	15/16"	20 1270N 038	38	1.1/2"	20 1270N 052	52	2.3/64"
20 1270N 013	13	33/64"	20 1270N 025	25	63/64"	20 1270N 039	39	1.17/32"	20 1270N 053	53	2.3/32"
20 1270N 014	14	35/64"	20 1270N 026	26	1.1/32"	20 1270N 040	40	1.37/64"	20 1270N 054	54	2.1/8"
20 1270N 015	15	19/32"	20 1270N 027	27	1.1/16"	20 1270N 041	41	1.39/64"	20 1270N 055	55	2.11/64"
20 1270N 0155	% 15.5	39/64"	20 1270N 028	28	1.7/64"	20 1270N 042	42	1.21/32"	20 1270N 056	56	2.13/64"
20 1270N 016	16	5/8"	20 1270N 029	29	1.9/64"	20 1270N 043	43	1.11/16"	20 1270N 057	57	2.1/4"
20 1270N 017	17	43/64"	20 1270N 030	30	1.3/16"	20 1270N 044	44	1.47/64"	20 1270N 058	58	2.9/32"
20 1270N 0175	% 17.5	11/16"	20 1270N 031	31	1.7/32"	20 1270N 045	45	1.49/64"	20 1270N 059	59	2.21/64"
20 1270N 018	18	45/64"	20 1270N 032	32	1.17/64"	20 1270N 046	46	1.13/16"	20 1270N 060	60	2.23/64"
20 1270N 019	19	3/4"	20 1270N 033	33	1.19/64"	20 1270N 047	47	1.27/32"			
20 1270N 020	20	25/32"	20 1270N 034	34	1.11/32"	20 1270N 048	48	1.57/64"			
20 1270N 021	21	53/64"	20 1270N 035	35	1.3/8"	20 1270N 049	49	1.59/64"			
20 1270N 022	22	55/64"	20 1270N 036	36	1.27/64"	20 1270N 050	50	1.31/32"			
20 1270N 023	23	29/32"	20 1270N 037	37	1.29/64"	20 1270N 051	51	2.1/64"			

Larger Ø up to 100 mm see Art. 20 1141A + adapter page 589 / 591 .

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1270N GOLD-DRILL LINE / 55 ACCESSORIES

EJECTOR PINS



• 20 1271

Packaging unit 2 pcs.

20 1270N GOLD-DRILL LINE / 55 SETS / DISPLAYS Page 565

We offer a large selection of sets / displays – recommended content 20 1270N GOLD-DRILL LINE55 – see page 565. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308

Accessories for HSS-XE annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

GOLD-DRILL LINE / 55

20 1270N

ADAPTER + SUITABLE EJECTOR PINS

• 20 1263



Packaging unit 2 pcs.

• 20 1160



Packaging unit 2 pcs.

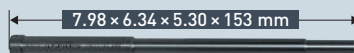
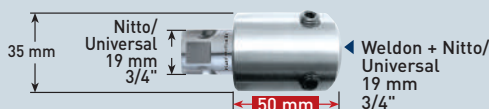
• 21 0048

• 20 1271

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

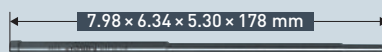
• 20 1406



Packaging unit 2 pcs.

• 20 1396

• 20 1407



Packaging unit 2 pcs.

• 20 1411

• 20 1409



Packaging unit 2 pcs.

• 20 1426

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

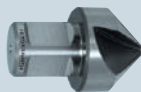
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 4-12 mm 636



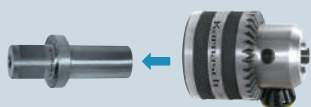
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



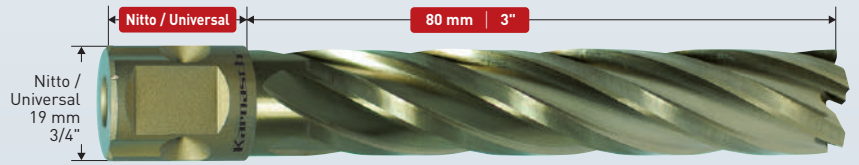
Spare parts 540-542



20 1285N GOLD-DRILL LINE / 80 HSS-XE annular cutter, Nitto/Universal shank, drill depth 80 mm | 3"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



⚠ Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1285N 018	• 18	45/64"	20 1285N 024	• 24	15/16"	20 1285N 030	• 30	1.3/16"	20 1285N 040	• 40	1.37/64"
20 1285N 019	• 19	3/4"	20 1285N 025	• 25	63/64"	20 1285N 032	• 32	1.17/64"	20 1285N 045	⚠ 45	1.49/64"
20 1285N 020	• 20	25/32"	20 1285N 026	• 26	1.1/32"	20 1285N 033	⚠ 33	1.19/64"	20 1285N 050	• 50	1.31/32"
20 1285N 021	• 21	53/64"	20 1285N 027	• 27	1.1/16"	20 1285N 035	• 35	1.3/8"			
20 1285N 022	• 22	55/64"	20 1285N 028	• 28	1.7/64"	20 1285N 036	⚠ 36	1.27/64"			
20 1285N 023	⚠ 23	29/32"	20 1285N 029	• 29	1.9/64"	20 1285N 038	⚠ 38	1.1/2"			

Smaller Ø from 14 mm see Art. 20 1650N page 454.

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1285N GOLD-DRILL LINE / 80 ACCESSORIES

EJECTOR PINS 1-PIECE

• 20 1439



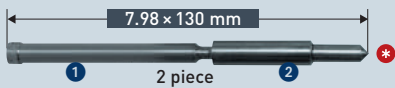
1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• 20 1427



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

⚠ **Why use 2-part ejector pins?** Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If **no extra-long** holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



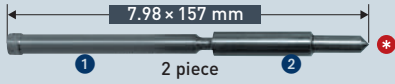
1308



ADAPTER + SUITABLE EJECTOR PINS



• 20 1161



• 20 1436

Packaging unit 2 pcs.

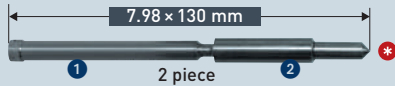


• 21 0048



• 20 1439

Packaging unit 2 pcs.




• 20 1427


Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540


ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

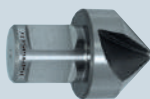
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves  531-533




Coolant pressure bottles  538




Countersinks with Weldon shank  534/535




Magnetic stick for chip removal  539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm  636




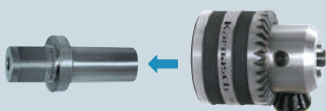
Sets · Displays  544-571




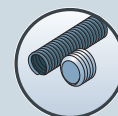
Tapping adapter Weldon + taps M 3 - M 30  637-638



Adapters + suitable drill chucks  538



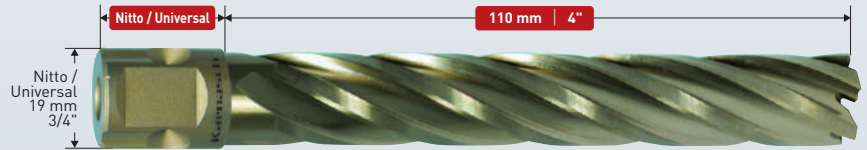
Spare parts  540-542



20 1280N GOLD-DRILL LINE / 110 HSS-XE annular cutter, Nitto/Universal shank, drill depth 110 mm | 4"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1280N 018	• 18	45/64"	20 1280N 024	• 24	15/16"	20 1280N 030	• 30	1.3/16"	20 1280N 040	• 40	1.37/64"
20 1280N 019	• 19	3/4"	20 1280N 025	• 25	63/64"	20 1280N 032	• 32	1.17/64"	20 1280N 045	• 45	1.49/64"
20 1280N 020	• 20	25/32"	20 1280N 026	• 26	1.1/32"	20 1280N 033	• 33	1.19/64"	20 1280N 050	• 50	1.31/32"
20 1280N 021	• 21	53/64"	20 1280N 027	• 27	1.1/16"	20 1280N 035	• 35	1.3/8"			
20 1280N 022	• 22	55/64"	20 1280N 028	• 28	1.7/64"	20 1280N 036	• 36	1.27/64"			
20 1280N 023	• 23	29/32"	20 1280N 029	• 29	1.9/64"	20 1280N 038	• 38	1.1/2"			

Smaller Ø from 14 mm see Art. 20 1660N page 454 · **Attention:** The inch sizes do not correspond exactly to the mm diameters.

20 1280N GOLD-DRILL LINE / 110 ACCESSORIES

EJECTOR PINS 1-PIECE

• 20 1399



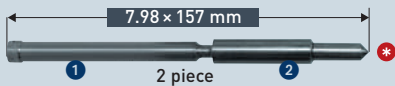
1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532–533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• 20 1428



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:

Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

• **Why use 2-part ejector pins?** Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If **no extra-long** holders are used (e.g. as on page 532–533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



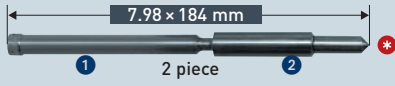
1308



ADAPTER + SUITABLE EJECTOR PINS



• 20 1161



• 20 1438

Packaging unit 2 pcs.

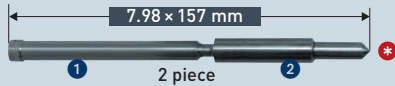


• 21 0048



• 20 1399

Packaging unit 2 pcs.




• 20 1428


Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540


ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves  531-533




Coolant pressure bottles  538



Countersinks with Weldon shank  534/535




Magnetic stick for chip removal  539




Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm  636




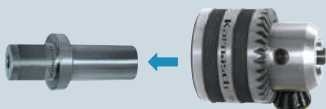
Sets · Displays  544-571




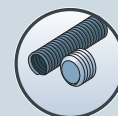
Tapping adapter Weldon + taps M 3 - M 30  637-638



Adapters + suitable drill chucks  538



Spare parts  540-542



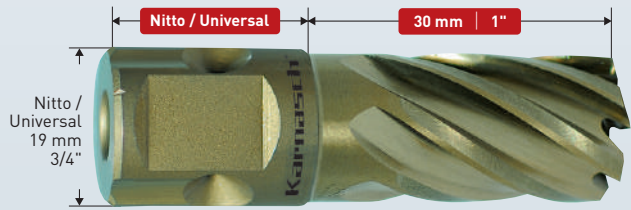
20 1610

GOLD-DRILL LINE 30

HSS-XE annular cutter, Nitto/Universal shank, drill depth 30 mm | 1"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
• 7/16"	11.10	20 1610 005	• 15/16"	23.81	20 1610 045	• 1.7/16"	36.51	20 1610 085	• 1.15/16"	49.21	20 1610 125
• 1/2"	12.70	20 1610 010	• 1"	25.40	20 1610 050	• 1.1/2"	38.10	20 1610 090	• 2"	50.80	20 1610 130
• 9/16"	14.28	20 1610 015	• 1.1/16"	26.98	20 1610 055	• 1.9/16"	39.68	20 1610 095	• 2.1/16"	52.38	20 1610 135
• 5/8"	15.87	20 1610 020	• 1.1/8"	28.57	20 1610 060	• 1.5/8"	41.27	20 1610 100			
• 11/16"	17.46	20 1610 025	• 1.3/16"	30.13	20 1610 065	• 1.11/16"	42.86	20 1610 105			
• 3/4"	19.04	20 1610 030	• 1.1/4"	31.75	20 1610 070	• 1.3/4"	44.45	20 1610 110			
• 13/16"	20.63	20 1610 035	• 1.5/16"	33.33	20 1610 075	• 1.13/16"	46.03	20 1610 115			
• 7/8"	22.22	20 1610 040	• 1.3/8"	34.92	20 1610 080	• 1.7/8"	47.62	20 1610 120			

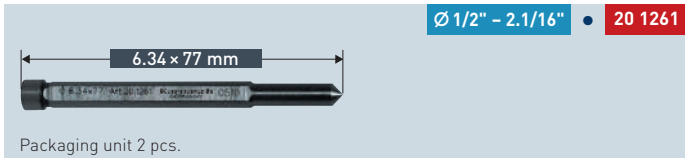
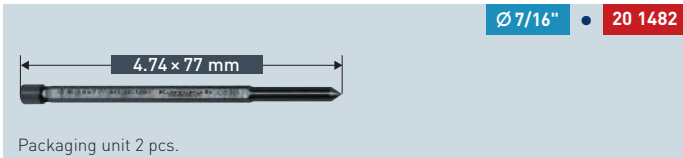
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1610

GOLD-DRILL LINE 30

ACCESSORIES

EJECTOR PINS



20 1610

GOLD-DRILL LINE 30

SETS / DISPLAYS Page 566

We offer a large selection of sets / displays – recommended content 20 1610 GOLD-DRILL LINE30 – see page 566. Other content possible by individually equipped sets / displays.



Cutting data



Movie



1308



Accessories for HSS-XE annular cutter, Nitto/Universal shank, drill depth 30 mm | 1"

GOLD-DRILL LINE 30 INCH

20 1610

ADAPTER + SUITABLE EJECTOR PINS



• 20 1263



• 20 1271

Packaging unit 2 pcs.



• 21 0048



• $\text{Ø} 7/16''$ • 20 1482

Packaging unit 2 pcs.

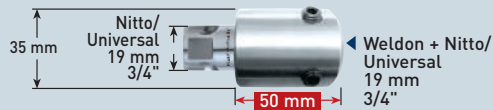


• $\text{Ø} 1/2'' - 2.1/16''$ • 20 1261

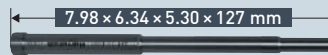
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS



• 20 1406



• 20 1433

Packaging unit 2 pcs.



• 20 1407



• 20 1396

Packaging unit 2 pcs.



• 20 1409



• 20 1411

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

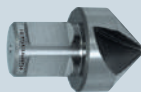
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills $\text{Ø} 4-12$ mm 636



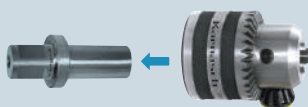
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



20 1620

GOLD-DRILL LINE 55

HSS-XE annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
• 7/16"	11.10	20 1620 005	• 15/16"	23.81	20 1620 045	• 1.7/16"	36.51	20 1620 085	• 1.15/16"	49.21	20 1620 125
• 1/2"	12.70	20 1620 010	• 1"	25.40	20 1620 050	• 1.1/2"	38.10	20 1620 090	• 2"	50.80	20 1620 130
• 9/16"	14.28	20 1620 015	• 1.1/16"	26.98	20 1620 055	• 1.9/16"	39.68	20 1620 095	• 2.1/16"	52.38	20 1620 135
• 5/8"	15.87	20 1620 020	• 1.1/8"	28.57	20 1620 060	• 1.5/8"	41.27	20 1620 100			
• 11/16"	17.46	20 1620 025	• 1.3/16"	30.13	20 1620 065	• 1.11/16"	42.86	20 1620 105			
• 3/4"	19.04	20 1620 030	• 1.1/4"	31.75	20 1620 070	• 1.3/4"	44.45	20 1620 110			
• 13/16"	20.63	20 1620 035	• 1.5/16"	33.33	20 1620 075	• 1.13/16"	46.03	20 1620 115			
• 7/8"	22.22	20 1620 040	• 1.3/8"	34.92	20 1620 080	• 1.7/8"	47.62	20 1620 120			

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1620

GOLD-DRILL LINE 55

ACCESSORIES

EJECTOR PINS



Ø 7/16" • 20 1485

Packaging unit 2 pcs.



Ø 1/2" - 2.1/16" • 20 1271

Packaging unit 2 pcs.

20 1620

GOLD-DRILL LINE 55

SETS / DISPLAYS Page 567

We offer a large selection of sets / displays – recommended content 20 1620 GOLD-DRILL LINE 55 – see page 567. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308



ADAPTER + SUITABLE EJECTOR PINS



• 20 1263



• 20 1160

Packaging unit 2 pcs.



• 21 0048



• 20 1485 **Ø 7/16"**

Packaging unit 2 pcs.

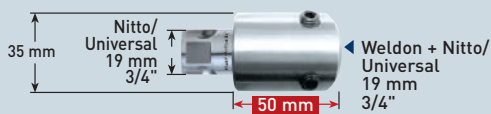


• 20 1271 **Ø 1/2" - 2.1/16"**

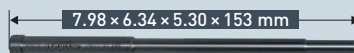
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS



• 20 1406

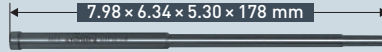


• 20 1396

Packaging unit 2 pcs.

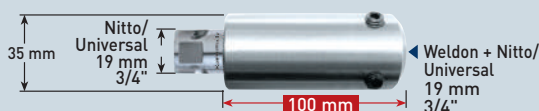


• 20 1407

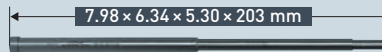


• 20 1411

Packaging unit 2 pcs.



• 20 1409



• 20 1426

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

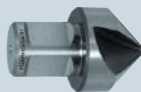
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 4-12 mm 636



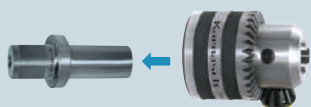
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



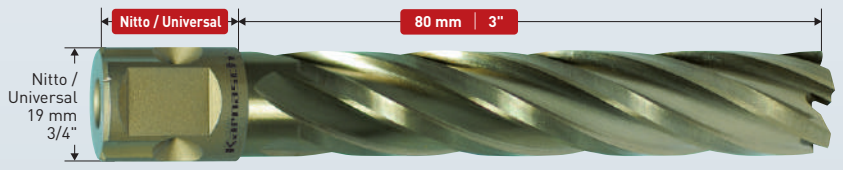
20 1625

GOLD-DRILL LINE 80

HSS-XE annular cutter, Nitto/Universal shank, drill depth 80 mm | 3"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



☞ Sale item. While stocks last.

Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.	Inch	Ø mm	Art.
11/16"	17.46	20 1625 025	1.1/8"	28.57	20 1625 060	1.1/2"	38.10	20 1625 090	1.15/16"	49.21	20 1625 125
3/4"	19.04	20 1625 030	1.3/16"	30.13	20 1625 065	1.5/8"	41.27	20 1625 100	2"	50.80	20 1625 130
13/16"	20.63	20 1625 035	1.1/4"	31.75	20 1625 070	1.11/16"	42.86	20 1625 105	2.1/16"	52.38	20 1625 135
7/8"	22.22	20 1625 040	1.5/16"	33.33	20 1625 075	1.3/4"	44.45	20 1625 110			
15/16"	23.81	20 1625 045	1.3/8"	34.92	20 1625 080	1.13/16"	46.03	20 1625 115			
1.1/16"	26.98	20 1625 055	1.7/16"	36.51	20 1625 085	1.7/8"	47.62	20 1625 120			

Replacement article Art. 20 1925 page 428 with suitable adapter Art. 20 1314 + ejector pin Art. 20 1436, page 429 -
Attention: The inch sizes do not correspond exactly to the mm diameters.

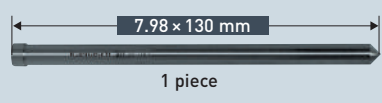
20 1625

GOLD-DRILL LINE 80

ACCESSORIES

EJECTOR PINS 1-PIECE

• 20 1439



1 piece

Packaging unit 2 pcs.

It is possible to use this one-piece ejector pin in combination with tool holder article 20 1842, 20 1291, 20 1843, 20 1845, 20 1846 (see page 532-533). You can drill as deep as 110 mm in one working process without changing. Robust and easy.

EJECTOR PINS 2-PIECE

• 20 1427



2 piece

Packaging unit 2 pcs.

APPLICATION EJECTOR PINS 2-PIECE



Application:
 Insert piece 1 into the annular cutter shank. Push piece 2 onto part 1. Drill as deep as 50 mm cutting depth. Then remove piece 2 and continue drilling.

☞ **Why use 2-part ejector pins?** Usually, standard morse taper holders have a cutting depth capacity of 50 mm. If **no extra-long** holders are used (e.g. as on page 532-533 Art. 20 1842, 20 1291, 20 1843, 20 1845, 20 1846), you need for drill depths above 50 mm 2-part ejector pins.

Cutting data

Movie



1308

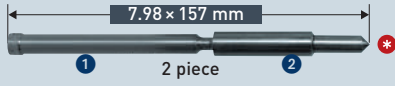


- 1
- 2
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- 7
- 8
- 9
- 10

ADAPTER + SUITABLE EJECTOR PINS



• 20 1161



• 20 1436

Packaging unit 2 pcs.

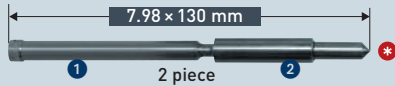


• 21 0048



• 20 1439

Packaging unit 2 pcs.



• 20 1427

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

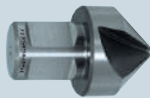
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 2.5-12 mm 636



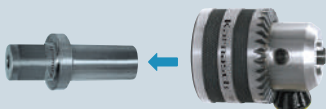
Sets · Displays 544-571



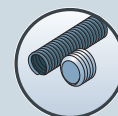
Tapping adapter Weldon + taps M 3 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



20 1240

GOLD-DRILL LINE SANDWICH 30

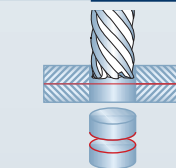
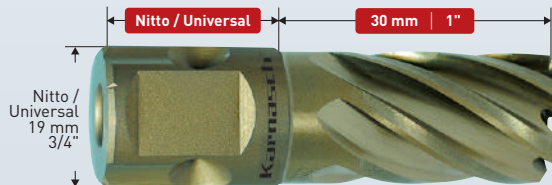
HSS-XE annular cutter, Nitto/Universal shank, drill depth 30 mm | 1"

20 1241

GOLD-DRILL LINE SANDWICH INCH 30

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



Multi layer drill. For stack drilling (sandwich) in steel up to 1100 N

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1240 016	16	5/8"	20 1240 026	26	1.1/32"
20 1240 019	19	3/4"	20 1240 030	30	1.3/16"
20 1240 020	20	25/32"	20 1240 032	32	1.17/64"
20 1240 022	22	55/64"			
20 1240 024	24	15/16"			
20 1240 025	25	63/64"			

Inch	Ø mm	Art.
5/8"	15.87	20 1241 010
3/4"	19.04	20 1241 020
13/16"	20.63	20 1241 025
7/8"	22.22	20 1241 030

Inch	Ø mm	Art.
15/16"	23.81	20 1241 035
1.1/16"	26.98	20 1241 045

% Sale item. While stocks last.

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1240

GOLD-DRILL LINE SANDWICH 30

20 1241

GOLD-DRILL LINE SANDWICH INCH 30

ACCESSORIES

EJECTOR PINS



• 20 1261

Packaging unit 2 pcs.

Cutting data

Movie



1308



Accessories for HSS-XE annular cutter, Nitto/Universal shank, drill depth 30 mm | 1"

20 1240
GOLD-DRILL LINE SANDWICH 30

20 1241
GOLD-DRILL LINE SANDWICH INCH 30

ADAPTER + SUITABLE EJECTOR PINS

• **20 1263**



• **20 1271**

Packaging unit 2 pcs.

• **21 0048**



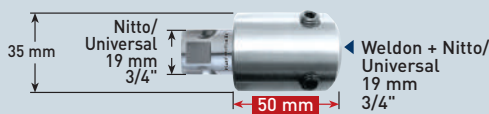
• **20 1261**

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

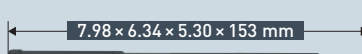
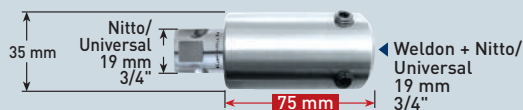
• **20 1406**



• **20 1433**

Packaging unit 2 pcs.

• **20 1407**



• **20 1396**

Packaging unit 2 pcs.

• **20 1409**



• **20 1411**

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

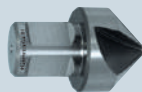
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 4-12 mm 636



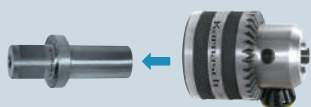
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



20 1242

GOLD-DRILL LINE SANDWICH 55

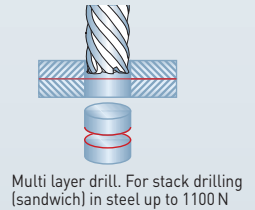
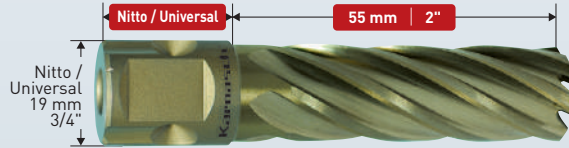
HSS-XE annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

20 1243

GOLD-DRILL LINE SANDWICH INCH 55

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1242 016	16	5/8"	20 1242 025	25	63/64"
20 1242 019	19	3/4"	20 1242 026	26	1.1/32"
20 1242 022	22	55/64"	20 1242 030	30	1.3/16"
20 1242 024	24	15/16"	20 1242 032	32	1.17/64"

Inch	Ø mm	Art.	Inch	Ø mm	Art.
9/16"	14.28	20 1243 005	7/8"	22.22	20 1243 030
5/8"	15.87	20 1243 010	15/16"	23.81	20 1243 035
3/4"	19.04	20 1243 020	1"	25.40	20 1243 040
13/16"	20.63	20 1243 025	1.1/16"	26.98	20 1243 045

Attention: The inch sizes do not correspond exactly to the mm diameters.

⊗ Sale item. While stocks last.

20 1242

GOLD-DRILL LINE SANDWICH 55

20 1243

GOLD-DRILL LINE SANDWICH INCH 55

ACCESSORIES

EJECTOR PINS

• 20 1271



Packaging unit 2 pcs.

Cutting data

Movie



1308



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Accessories for HSS-XE annular cutter, Nitto/Universal shank, drill depth 55 mm | 2"

20 1242
GOLD-DRILL LINE SANDWICH **55**

20 1243
GOLD-DRILL LINE SANDWICH INCH **55**

ADAPTER + SUITABLE EJECTOR PINS

• **20 1263**



Packaging unit 2 pcs.

• **20 1160**



Packaging unit 2 pcs.

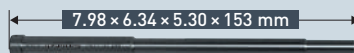
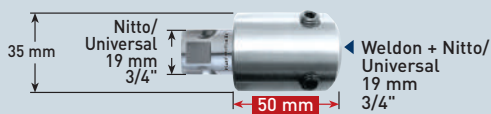
• **21 0048**

• **20 1271**

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

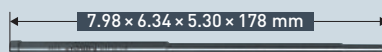
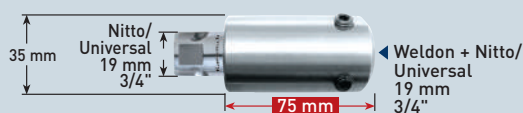
• **20 1406**



Packaging unit 2 pcs.

• **20 1396**

• **20 1407**



Packaging unit 2 pcs.

• **20 1411**

• **20 1409**



Packaging unit 2 pcs.

• **20 1426**

Spare allen screws for all extensions see page 540

ACCESSORIES · SETS · DISPLAYS · SPARE PARTS

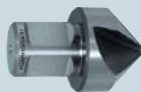
Tool holders with morse taper 2 / 3 / 4 / 5 and reduction sleeves 531-533



Coolant pressure bottles 538



Countersinks with Weldon shank 534/535



Magnetic stick for chip removal 539



Twist drill adaptors Weldon + twist drills Ø 4-12 mm 636



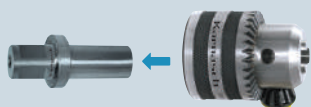
Sets · Displays 544-571



Tapping adapter Weldon + taps M 6 - M 30 637-638



Adapters + suitable drill chucks 538



Spare parts 540-542



**ANNULAR CUTTERS FEIN QUICK-IN SHANK 18 MM /
FEIN QUICK-IN MAX-SHANK 32 MM (1.1/4")**



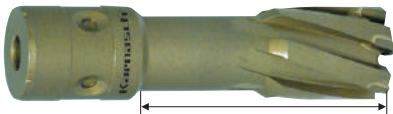


Matching machines made by Fein:

FEIN TYPE: KBM 32 Q · KBM 50 Q · KBM 50 U · KBM 50 AUTO ·
KBM 65 U · KBM 80 QUICK-IN MAX

FEIN QUICK-IN

- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

Overview annular cutters Fein Quick-In shank

TYPE	Ø	Specification	Application																										
HARD-LINE  40, 55 mm 1.1/2", 2" Drill depths	Ø 12-65 mm Ø 15/32-2.9/16"	Annular cutters carbide-tipped The most powerful annular cutters in our range. Excellent for all steels up to a strength of 1400 N and for all stainless steels.	<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Steel</td> <td>Stainless</td> <td>Grey cast iron</td> <td>Alu</td> <td>Copper, brass, tin</td> </tr> <tr> <td>< 1400 N ✓</td> <td>> 900 N ✓</td> <td>✓</td> <td>> 10% Si ✓</td> <td>✓</td> </tr> </table>						Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	< 1400 N ✓	> 900 N ✓	✓	> 10% Si ✓	✓	500-503										
Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin																									
< 1400 N ✓	> 900 N ✓	✓	> 10% Si ✓	✓																									
BLUE-DRILL LINE  40 mm 1.1/2" Drill depths	Ø 12-60 mm Ø 15/32-2.23/64"	Annular cutters made of HSS-XE special steel + DURABLUÉ-coating. The most-often used coated annular cutter for all steels up to a strength of 1100 N and for all stainless steels.	<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Steel</td> <td>Stainless</td> <td>Grey cast iron</td> <td>Alu</td> <td>Copper, brass, tin</td> </tr> <tr> <td>< 1100 N ✓</td> <td>< 900 N ✓</td> <td>✓</td> <td>> 10% Si ✓</td> <td>✓</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Hardox 400 ✓</td> <td>Hardox 450 ✓</td> <td></td> <td></td> <td></td> </tr> </table>						Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	< 1100 N ✓	< 900 N ✓	✓	> 10% Si ✓	✓						Hardox 400 ✓	Hardox 450 ✓				504-506
Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin																									
< 1100 N ✓	< 900 N ✓	✓	> 10% Si ✓	✓																									
Hardox 400 ✓	Hardox 450 ✓																												
GOLD-DRILL LINE  40 mm 1.1/2" Drill depths	Ø 12-60 mm Ø 15/32-2.23/64"	Annular cutters made of HSS-XE special steel + GOLD-TECH treatment. The most-often used uncoated annular cutter for all steels up to a strength of 900 N. Still suitable for stainless steels.	<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Steel</td> <td>Stainless</td> <td>Alu</td> <td>Copper, brass, tin</td> </tr> <tr> <td>< 900 N ✓</td> <td>< 900 N ✓</td> <td>< 10% Si ✓</td> <td>✓</td> </tr> </table>					Steel	Stainless	Alu	Copper, brass, tin	< 900 N ✓	< 900 N ✓	< 10% Si ✓	✓	508-510													
Steel	Stainless	Alu	Copper, brass, tin																										
< 900 N ✓	< 900 N ✓	< 10% Si ✓	✓																										



CARBIDE-TIPPED ANNULAR CUTTERS



HARD-LINE

The fact is: The best annular cutters are carbide tipped.

Only these drills offer the best value for money for almost all materials.

Only carbide tipped annular cutters provide maximum cutting capacity in all kinds of steels.

- Drilling in hardened steel up to 40 Rockwell (HRC)
- Drilling in all sorts of stainless steel
- Drilling in most difficult alloys (Hardox/Inconel/Titanium)
- Drilling also excellent in all non-ferrous metals such as alu, copper, brass

Available in diameter 12-150 mm. Available in drill depths 40 mm, 55 mm, 80 mm and 110 mm. Simply the world's largest stock range of carbide tipped annular cutter.

PROPERTIES



Karnasch carbide tipped annular cutters (HARD-LINE) are made with a conical helix for: clean chip flow and highest cutting ability even with difficult materials.



Karnasch carbide tipped annular cutters (HARD-LINE) are exclusively equipped with Sandvik carbide teeth. Our opinion is: Only the best carbide is good enough for Karnasch annular cutters.



Karnasch carbide tipped annular cutters (HARD-LINE) are made in an elaborate pre-/intermediate-/after-cutting geometry. This results in: clatter-free, silent and easy cutting with highest lifetimes.

APPLICATION

Steel	Stainless	Alu	Copper, brass, tin	Plastics GRP/CRP	Grey cast iron	Graphite	Hastelloy, Inconel, Nimonic, exotic materials	Rails
< 1400 N	> 900 N	> 10% Si						
✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ OPTIMAL

✓ GOOD

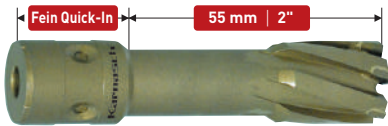
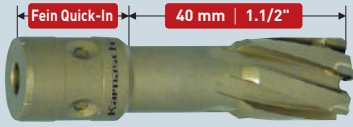
✓ POSSIBLE



CARBIDE-TIPPED ANNULAR CUTTERS

HARD-LINE

Drill depths



Ø mm

Ø Inch

Art. / Type



12-65

15/32-
2.9/16"

20 1147

HARD-LINE 40

502

12-60

15/32-
2.23/64"

20 1148

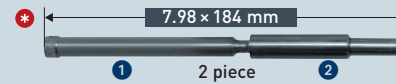
HARD-LINE 55

503

NOTES

You need larger drill depths such as 80 mm or 110 mm?

Work with adapter Fein + Weldon annular cutters.
See Art. 20 1650 [cutting depth 80 mm] page 380
See Art. 20 1660 [cutting depth 110 mm] page 382



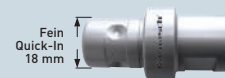
Packaging unit 2 pcs.

You need larger diameter up to 100 mm?

Work with adapter Fein Quick-In or Fein Quick-In Max + our **Power-Max** hole saws see page 574

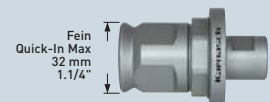
FEIN QUICK-IN 18 mm

Suitable for machines
FEIN KBM 32 Q · KBM 50 Q · KBM
50 U · KBM 50 Auto · KBM 65 U



FEIN QUICK-IN MAX 32 mm 1.¼"

For Fein machine
FEIN KBM 80 Quick-In Max



You need smaller diameter such as:

6 mm, 8 mm, 9.8 mm, 10 mm, 11 mm?
See article 20 1430 page 440

DRILL-LINE 30 PRO



Cooling

Fein
Quick-In
18 mm

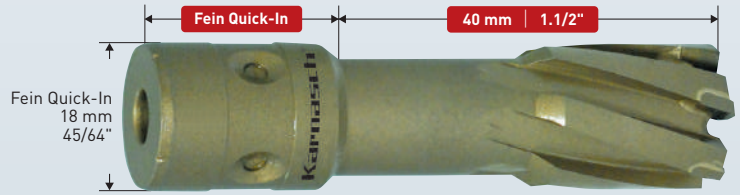
Adapter



20 1147 HARD-LINE/40 Carbide-tipped annular cutter, Fein Quick-In shank, drill depth 40 mm | 1.1/2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			

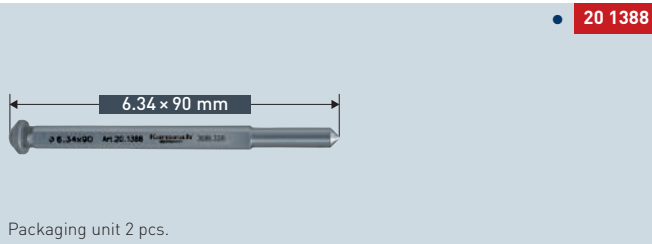


Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1147 012	12	15/32"	20 1147 026	26	1.1/32"	20 1147 040	40	1.37/64"	20 1147 054	54	2.1/8"
20 1147 013	13	33/64"	20 1147 027	27	1.1/16"	20 1147 041	41	1.39/64"	20 1147 055	55	2.11/64"
20 1147 014	14	35/64"	20 1147 028	28	1.7/64"	20 1147 042	42	1.21/32"	20 1147 056	56	2.13/64"
20 1147 015	15	19/32"	20 1147 029	29	1.9/64"	20 1147 043	43	1.11/16"	20 1147 057	57	2.1/4"
20 1147 016	16	5/8"	20 1147 030	30	1.3/16"	20 1147 044	44	1.47/64"	20 1147 058	58	2.9/32"
20 1147 017	17	43/64"	20 1147 031	31	1.7/32"	20 1147 045	45	1.49/64"	20 1147 059	59	2.21/64"
20 1147 018	18	45/64"	20 1147 032	32	1.17/64"	20 1147 046	46	1.13/16"	20 1147 060	60	2.23/64"
20 1147 019	19	3/4"	20 1147 033	33	1.19/64"	20 1147 047	47	1.27/32"	20 1147 061	61	2.13/32"
20 1147 020	20	25/32"	20 1147 034	34	1.11/32"	20 1147 048	48	1.57/64"	20 1147 062	62	2.7/16"
20 1147 021	21	53/64"	20 1147 035	35	1.3/8"	20 1147 049	49	1.59/64"	20 1147 063	63	2.31/64"
20 1147 022	22	55/64"	20 1147 036	36	1.27/64"	20 1147 050	50	1.31/32"	20 1147 064	64	2.33/64"
20 1147 023	23	29/32"	20 1147 037	37	1.29/64"	20 1147 051	51	2.1/64"	20 1147 065	65	2.9/16"
20 1147 024	24	15/16"	20 1147 038	38	1.1/2"	20 1147 052	52	2.3/64"			
20 1147 025	25	63/64"	20 1147 039	39	1.17/32"	20 1147 053	53	2.3/32"			

Larger Ø in cutting depth 30 mm see Art. 20 1130A + adapter Fein page 584-587 · Larger Ø in cutting depth 55 mm see Art. 20 1141 + adapter Fein page 588-591 · Attention: The inch sizes do not correspond exactly to the mm diameters.

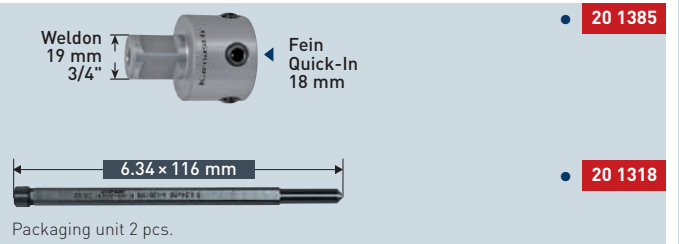
20 1147 HARD-LINE/40 ACCESSORIES

EJECTOR PINS



Further accessories see overview page 501

ADAPTER + SUITABLE EJECTOR PINS



Spare allen screws for all adapters see page 540

20 1147 HARD-LINE/40 SETS / DISPLAYS Page 568

We offer a large selection of sets / displays – recommended content 20 1147 HARD-LINE40 – see page 568. Other content possible by individually equipped sets / displays.



Cutting data | Movie

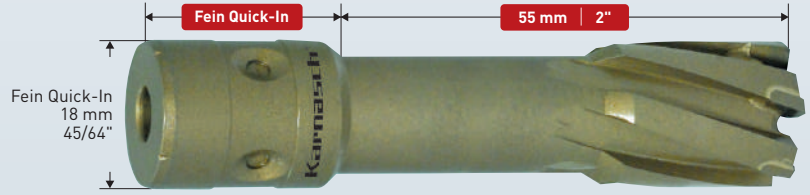


Carbide-tipped annular cutter, Fein Quick-In shank, drill depth 55 mm | 2"

HARD-LINE 55 20 1148

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials
< 1400 N	> 900 N		> 10% Si			



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1148 012	12	15/32"	20 1148 026	26	1.1/32"	20 1148 040	40	1.37/64"	20 1148 055	55	2.11/64"
20 1148 013	13	33/64"	20 1148 027	27	1.1/16"	20 1148 041	41	1.39/64"	20 1148 056	56	2.13/64"
20 1148 014	14	35/64"	20 1148 028	28	1.7/64"	20 1148 043	43	1.11/16"	20 1148 057	57	2.1/4"
20 1148 015	15	19/32"	20 1148 029	29	1.9/64"	20 1148 044	44	1.47/64"	20 1148 058	58	2.9/32"
20 1148 016	16	5/8"	20 1148 030	30	1.3/16"	20 1148 045	45	1.49/64"	20 1148 059	59	2.21/64"
20 1148 017	17	43/64"	20 1148 031	31	1.7/32"	20 1148 046	46	1.13/16"	20 1148 060	60	2.23/64"
20 1148 018	18	45/64"	20 1148 032	32	1.17/64"	20 1148 047	47	1.27/32"			
20 1148 019	19	3/4"	20 1148 033	33	1.19/64"	20 1148 048	48	1.57/64"			
20 1148 020	20	25/32"	20 1148 034	34	1.11/32"	20 1148 049	49	1.59/64"			
20 1148 021	21	53/64"	20 1148 035	35	1.3/8"	20 1148 050	50	1.31/32"			
20 1148 022	22	55/64"	20 1148 036	36	1.27/64"	20 1148 051	51	2.1/64"			
20 1148 023	23	29/32"	20 1148 037	37	1.29/64"	20 1148 052	52	2.3/64"			
20 1148 024	24	15/16"	20 1148 038	38	1.1/2"	20 1148 053	53	2.3/32"			
20 1148 025	25	63/64"	20 1148 039	39	1.17/32"	20 1148 054	54	2.1/8"			

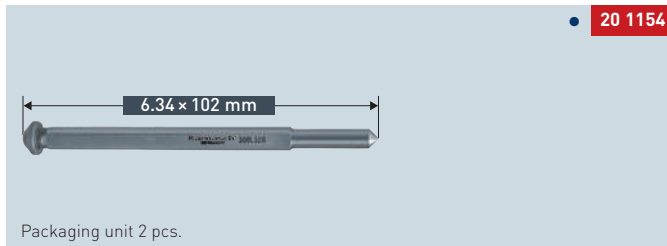
% Sale item. While stocks last.

Alternative article up to Ø 100 mm see page 588-591 Art. 20 1141A + adapter Fein Art. 20 1443

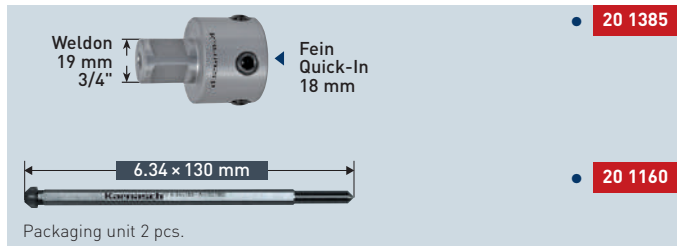
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1148 HARD-LINE 55 ACCESSORIES

EJECTOR PINS



ADAPTER + SUITABLE EJECTOR PINS



Further accessories see overview page 501

Spare allen screws for all adapters see page 540

20 1148 HARD-LINE 55 SETS / DISPLAYS Page 569

We offer a large selection of sets / displays – recommended content 20 1148 HARD-LINE55 – see page 569. Other content possible by individually equipped sets / displays.



Cutting data	Movie
1307	503

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

HSS-XE + DURABLU- COATED ANNULAR CUTTERS



BLUE-DRILL LINE

Carbide tipped annular cutters and coated HSS-XE cutters provide the optimal price-performance ratio.

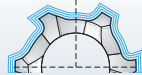
The Karnasch DURABLU-coating makes the annular cutter "error-resistant"

BLUE-DRILL LINE annular cutters are the most commonly used Karnasch cutters. This HSS-XE cutter is offering the best price-performance ratio for all steels up to a strength of 40 Rockwell (HRC) and stainless steel.

PROPERTIES



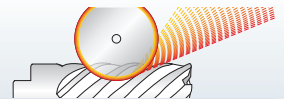
Made of high-alloyed HSS-XE special steel. For extreme hardness at the tip of the tooth (up to 68 HRC). A high wear resistance and lifetime.



Our first-class annular cutters are equipped with the unique and patented DURABLU-coating. Extreme surface hardness and sleekness yield extreme lifetimes even under non-optimum conditions like "overhead work", dry drilling, etc.



Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.



Completely made "FULLY GROUND". This refining increases the cutting ability while reducing friction at the same time. For an extended lifetime.

APPLICATION

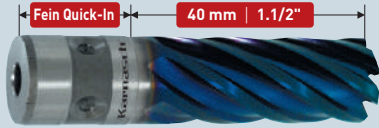
Steel	Steel	Steel	Stainless	Stainless	Alu	Alu	Copper, brass, tin	Plastics GRP/CRP	Grey cast iron	Hastelloy, Inconel, Nimonic, exotic materials	Hardox 400	Hardox 450
< 900 N	< 1100 N	< 1400 N	< 900 N	> 900 N	< 10% Si	> 10% Si						
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ OPTIMAL ✓ GOOD ✓ POSSIBLE



BLUE-DRILL LINE

Drill depths



Ø mm

Ø Inch

Art. / Type



12-60

15/32-
2.23/64"

20 1146

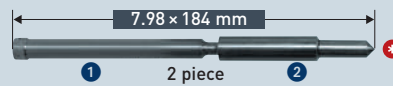
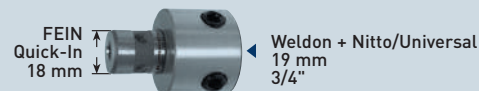
BLUE-DRILL LINE 40

506

NOTES

You need larger drill depths such as 80 mm or 110 mm?

Work with adapter Fein + Weldon annular cutters.
See Art. 20 1650 [cutting depth 80 mm] page 380
See Art. 20 1660 [cutting depth 110 mm] page 382



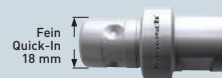
Packaging unit 2 pcs.

You need larger diameter up to 100 mm?

Work with adapter Fein Quick-In or Fein Quick-In Max + our **Power-Max** hole saws see page 574

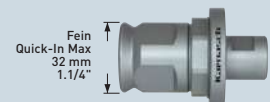
FEIN QUICK-IN 18 mm

Suitable for machines
FEIN KBM 32 Q · KBM 50 Q · KBM
50 U · KBM 50 Auto · KBM 65 U

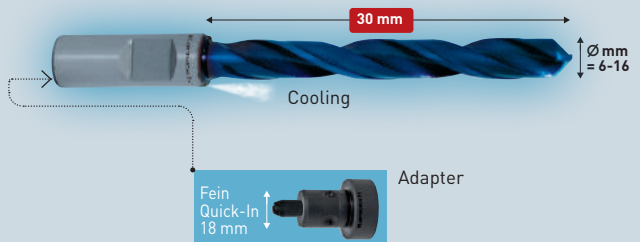


FEIN QUICK-IN MAX 32 mm 1.1/4"

For Fein machine
FEIN KBM 80 Quick-In Max



DRILL-LINE 30 PRO



You need smaller diameter such as:

6 mm, 8 mm, 9.8 mm, 10 mm, 11 mm?
See article 20 1430 page 440

1



2



3



4



5



6



7



8



9



10

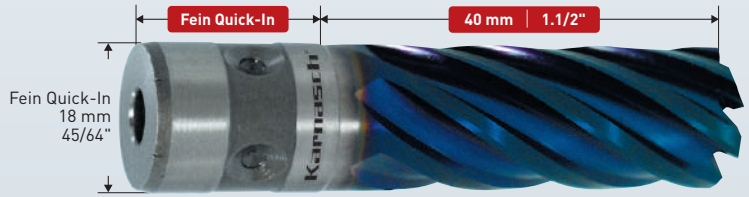


Index

20 1146 BLUE-DRILL LINE/40 HSS-XE + DURABLUe-coated annular cutter, Fein Quick-In shank, drill depth 40 mm | 1.1/2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 1100 N	< 900 N		> 10% Si			



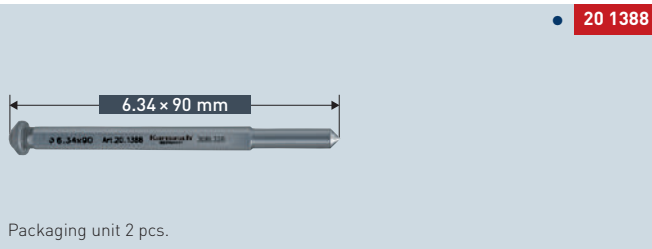
☞ Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1146 012	• 12	15/32"	20 1146 025	• 25	63/64"	20 1146 038	• 38	1.1/2"	20 1146 052	☞ 52	2.3/64"
20 1146 013	• 13	33/64"	20 1146 026	• 26	1.1/32"	20 1146 039	• 39	1.17/32"	20 1146 053	☞ 53	2.3/32"
20 1146 014	• 14	35/64"	20 1146 027	• 27	1.1/16"	20 1146 040	• 40	1.37/64"	20 1146 054	☞ 54	2.1/8"
20 1146 015	• 15	19/32"	20 1146 028	• 28	1.7/64"	20 1146 041	☞ 41	1.39/64"	20 1146 055	• 55	2.11/64"
20 1146 016	• 16	5/8"	20 1146 029	• 29	1.9/64"	20 1146 042	☞ 42	1.21/32"	20 1146 056	☞ 56	2.13/64"
20 1146 017	• 17	43/64"	20 1146 030	• 30	1.3/16"	20 1146 043	☞ 43	1.11/16"	20 1146 057	☞ 57	2.1/4"
20 1146 018	• 18	45/64"	20 1146 031	• 31	1.7/32"	20 1146 045	• 45	1.49/64"	20 1146 058	☞ 58	2.9/32"
20 1146 019	• 19	3/4"	20 1146 032	• 32	1.17/64"	20 1146 046	• 46	1.13/16"	20 1146 059	☞ 59	2.21/64"
20 1146 020	• 20	25/32"	20 1146 033	• 33	1.19/64"	20 1146 047	☞ 47	1.27/32"	20 1146 060	• 60	2.23/64"
20 1146 021	• 21	53/64"	20 1146 034	• 34	1.11/32"	20 1146 048	☞ 48	1.57/64"			
20 1146 022	• 22	55/64"	20 1146 035	• 35	1.3/8"	20 1146 049	☞ 49	1.59/64"			
20 1146 023	• 23	29/32"	20 1146 036	• 36	1.27/64"	20 1146 050	• 50	1.31/32"			
20 1146 024	• 24	15/16"	20 1146 037	• 37	1.29/64"	20 1146 051	☞ 51	2.1/64"			

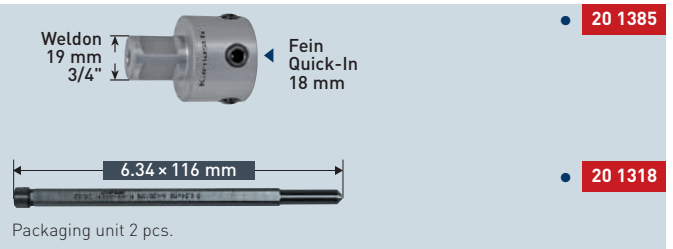
Alternative article see Art. 20 1147 page 502 - Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1146 BLUE-DRILL LINE/40 ACCESSORIES

EJECTOR PINS



ADAPTER + SUITABLE EJECTOR PINS



Further accessories see overview page 501

Spare allen screws for all adapters see page 540

20 1146 BLUE-DRILL LINE/40 SETS / DISPLAYS Page 570

We offer a large selection of sets / displays – recommended content 20 1146 BLUE-DRILL LINE40 – see page 570. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308



Quality products for metalworking.

PREMIUM-QUALITY IN ALL COMPONENTS, FROM TOOLS TO MACHINERY



To find out more, speak to a customer service representative by contacting sales@atagarryson.com or visit www.karnasch.co.uk

1



2



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9



10

Index

HSS-XE ANNULAR CUTTERS



GOLD-DRILL LINE

Karnasch GOLD-DRILL LINE annular cutters are the most commonly used non-coated HSS-XE annular cutter.

With special surface treatment **GOLD-TECH + FULLY GROUND + special steel HSS-XE** are ideal for drilling in steel up to a strength of 40 Rockwell (HRC) and even suitable for stainless steels.

PROPERTIES



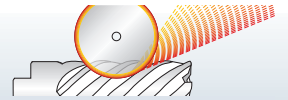
Made of high-alloyed HSS-XE special steel. For extreme hardness at the tip of the tooth (up to 68 HRC). A high wear resistance and lifetime.



Gold-Tech surface treatment. The special treatment for longer lifetimes.



Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.



Completely made "FULLY GROUND". This refining increases the cutting ability while reducing friction at the same time. For an extended lifetime.

APPLICATION

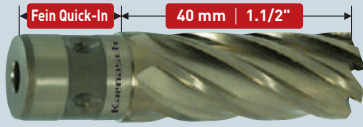
Steel	Steel	Steel	Stainless	Alu	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400	Hardox 450
< 750 N	< 900 N	< 1100 N	< 900 N	< 10% Si	> 10% Si				
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ OPTIMAL ✓ GOOD ✓ POSSIBLE



GOLD-DRILL LINE

Drill depths

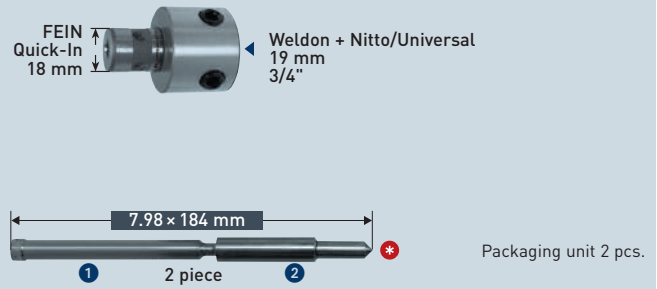


Ø mm	Ø Inch	Art. / Type	
12-60	15/32-2.23/64"	20 1146U GOLD-DRILL LINE / 40	510

NOTES

You need larger drill depths such as 80 mm or 110 mm?

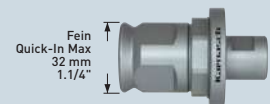
Work with adapter Fein + Weldon annular cutters.
See Art. 20 1650 [cutting depth 80 mm] page 380
See Art. 20 1660 [cutting depth 110 mm] page 382



You need larger diameter up to 100 mm?

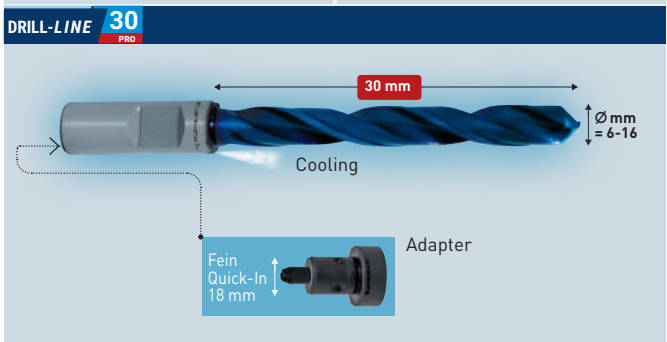
Work with adapter Fein Quick-In or Fein Quick-In Max + our **Power-Max** hole saws see page 574

FEIN QUICK-IN 18 mm	FEIN QUICK-IN MAX 32 mm 1.1/4"
Suitable for machines FEIN KBM 32 Q · KBM 50 Q · KBM 50 U · KBM 50 Auto · KBM 65 U	For Fein machine FEIN KBM 80 Quick-In Max



You need smaller diameter such as:

6 mm, 8 mm, 9.8 mm, 10 mm, 11 mm?
See article 20 1430 page 440

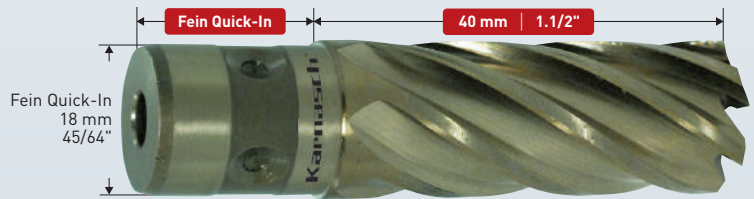


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- 10

20 1146U GOLD-DRILL LINE / 40 HSS-XE annular cutter, Fein Quick-In shank, drill depth 40 mm | 1.1/2"

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400, 450
< 900 N	< 900 N		< 10% Si			



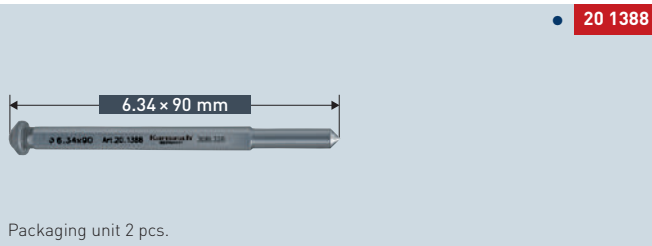
☞ Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1146u 012	• 12	15/32"	20 1146u 025	• 25	63/64"	20 1146u 038	• 38	1.1/2"	20 1146u 052	☞ 52	2.3/64"
20 1146u 013	• 13	33/64"	20 1146u 026	• 26	1.1/32"	20 1146u 039	• 39	1.17/32"	20 1146u 053	☞ 53	2.3/32"
20 1146u 014	• 14	35/64"	20 1146u 027	• 27	1.1/16"	20 1146u 040	• 40	1.37/64"	20 1146u 054	☞ 54	2.1/8"
20 1146u 015	• 15	19/32"	20 1146u 028	• 28	1.7/64"	20 1146u 042	☞ 42	1.21/32"	20 1146u 055	• 55	2.11/64"
20 1146u 016	• 16	5/8"	20 1146u 029	• 29	1.9/64"	20 1146u 043	☞ 43	1.11/16"	20 1146u 056	☞ 56	2.13/64"
20 1146u 017	• 17	43/64"	20 1146u 030	• 30	1.3/16"	20 1146u 044	☞ 44	1.47/64"	20 1146u 057	☞ 57	2.1/4"
20 1146u 018	• 18	45/64"	20 1146u 031	• 31	1.7/32"	20 1146u 045	• 45	1.49/64"	20 1146u 058	☞ 58	2.9/32"
20 1146u 019	• 19	3/4"	20 1146u 032	• 32	1.17/64"	20 1146u 046	• 46	1.13/16"	20 1146u 059	☞ 59	2.21/64"
20 1146u 020	• 20	25/32"	20 1146u 033	• 33	1.19/64"	20 1146u 047	☞ 47	1.27/32"	20 1146u 060	• 60	2.23/64"
20 1146u 021	• 21	53/64"	20 1146u 034	• 34	1.11/32"	20 1146u 048	☞ 48	1.57/64"			
20 1146u 022	• 22	55/64"	20 1146u 035	• 35	1.3/8"	20 1146u 049	☞ 49	1.59/64"			
20 1146u 023	• 23	29/32"	20 1146u 036	• 36	1.27/64"	20 1146u 050	• 50	1.31/32"			
20 1146u 024	• 24	15/16"	20 1146u 037	• 37	1.29/64"	20 1146u 051	☞ 51	2.1/64"			

Alternative article see Art. 20 1147 page 502 - **Attention:** The inch sizes do not correspond exactly to the mm diameters.

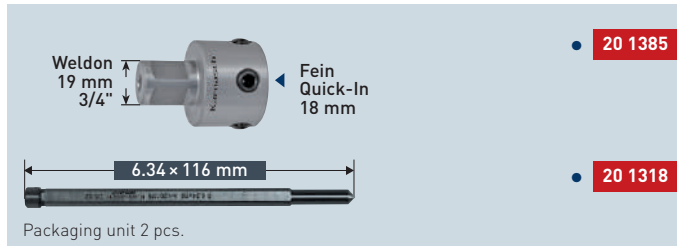
20 1146U GOLD-DRILL LINE / 40 ACCESSORIES

EJECTOR PINS



Further accessories see overview page 501

ADAPTER + SUITABLE EJECTOR PINS



Spare allen screws for all adapters see page 540

20 1146U GOLD-DRILL LINE / 40 SETS / DISPLAYS Page 571

We offer a large selection of sets / displays – recommended content 20 1146U GOLD-DRILL LINE40 – see page 571. Other content possible by individually equipped sets / displays.



Cutting data

Movie



1308



RAILWAY CUTTERS



RAIL-LINE

A complete range of $\varnothing 6-60$ mm for drilling in rails.



RAIL-LINE PRO

Annular cutter tungsten carbide tipped. More than 200 holes possible



20 1680
20 1690

📄 512-515

RAIL-LINE

Annular cutter tungsten carbide tipped. More than 100 holes possible



20 1306
20 1309

📄 516-519

BLUE-DRILL LINE RAIL PRO

Annular cutter powder steel + DURABLUÉ-coated. More than 100 holes possible



20 1284
20 1317

📄 520-523

SILVER-DRILL LINE RAIL

Annular cutter made of HSS-XE special steel. More than 60 holes possible



20 1460
20 1480

📄 524-527

DRILL-LINE RAIL PRO

Twist drills made of powder steel + DURABLUÉ-coated. More than 100 holes possible



20 1430
20 1465

📄 528-529

DRILL-LINE RAIL

Twist drills made of HSS-XE special steel. More than 60 holes possible



20 1710

📄 530

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20 1680

RAIL-LINE 25 PRO

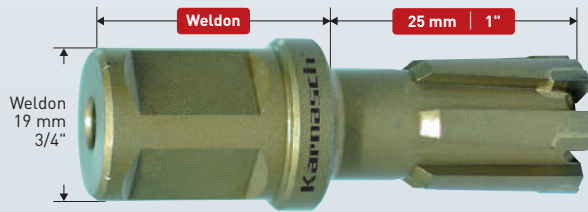
Carbide-tipped annular cutter, Weldon shank, drill depth 25 mm | 1"

APPLICATION



For all rail types up to 1100 N (UIC 60).
More than 200 holes in UIC 60 rails possible.

Rails



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1680 014	• 14	35/64"	20 1680 022	• 22	55/64"	20 1680 030	• 30	1.3/16"	20 1680 038	• 38	1.1/2"
20 1680 015	• 15	19/32"	20 1680 023	• 23	29/32"	20 1680 031	• 31	1.7/32"	20 1680 039	• 39	1.17/32"
20 1680 016	• 16	5/8"	20 1680 024	• 24	15/16"	20 1680 032	• 32	1.17/64"	20 1680 040	• 40	1.37/64"
20 1680 017	• 17	43/64"	20 1680 025	• 25	63/64"	20 1680 033	• 33	1.19/64"			
20 1680 018	• 18	45/64"	20 1680 026	• 26	1.1/32"	20 1680 034	• 34	1.11/32"			
20 1680 019	• 19	3/4"	20 1680 027	• 27	1.1/16"	20 1680 035	• 35	1.3/8"			
20 1680 020	• 20	25/32"	20 1680 028	• 28	1.7/64"	20 1680 036	• 36	1.27/64"			
20 1680 021	• 21	53/64"	20 1680 029	• 29	1.9/64"	20 1680 037	• 37	1.29/64"			

Larger Ø see Art. 20 1690 page 514 · **Attention:** The inch sizes do not correspond exactly to the mm diameters.

20 1680

RAIL-LINE 25 PRO

ACCESSORIES

EJECTOR PINS



Ø 12-40 mm • 20 1261

Packaging unit 2 pcs.

PROPERTIES



Karnasch RAIL-LINE-PRO carbide tipped annular cutters are made with a conical helix for clean chip flow and highest cutting ability.



Karnasch RAIL-LINE-PRO annular cutters comes with optimized carbide teeth for excellent results drilling in most difficult rail steel (e.g. UIC 60)



Karnasch RAIL-LINE-PRO annular cutters are made in an elaborate pre-/ intermediate-/ after-cutting geometry. This results in: clutter-free, silent and easy cutting with highest lifetimes. **The cutting angles are optimized for drilling in rails.**

TOOLTIPP

Our best model for drilling in the most difficult types of rail steel.



Cutting data

Movie



1312



Accessories for carbide-tipped annular cutter, Weldon shank, drill depth 25 mm | 1"

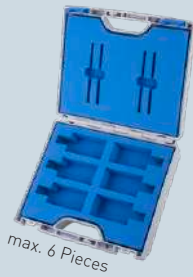
RAIL-LINE 25 PRO 20 1680

SETS / DISPLAYS

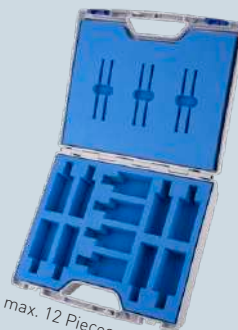
- 20 1344
- 20 1138
- 20 1132
- 20 1139



max. 44 Pieces



max. 6 Pieces

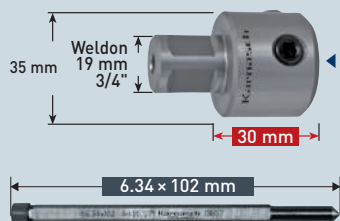


max. 12 Pieces



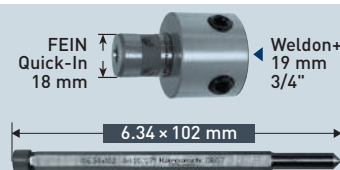
max. 50 Pieces

You would like to select your own contents? No Problem. Contact us and we create your individual set or display.

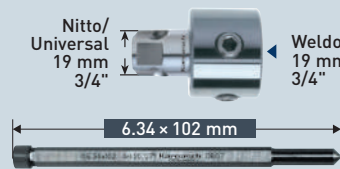


Packaging unit 2 pcs.

ADAPTER + SUITABLE EJECTOR PINS



Packaging unit 2 pcs.



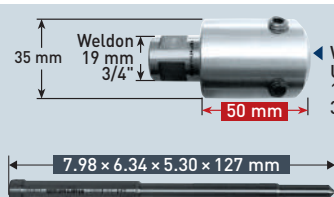
Packaging unit 2 pcs.



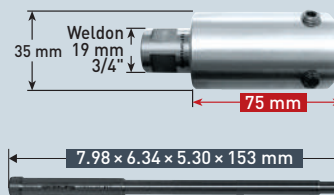
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

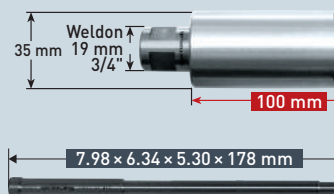
EXTENSIONS + SUITABLE EJECTOR PINS



Packaging unit 2 pcs.



Packaging unit 2 pcs.



Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 501

Special extension + suitable ejector pin from 25 mm to 50 mm. This allows to renounce the longer annular cutter RAIL-LINE 50 PRO.



20 1690

RAIL-LINE 50 PRO

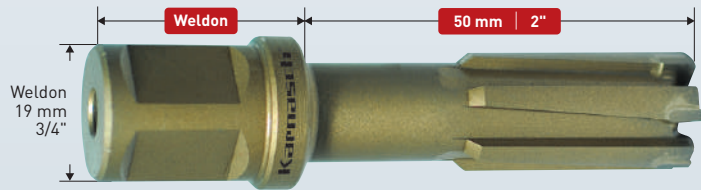
Carbide-tipped annular cutter, Weldon shank, drill depth 50 mm | 2"

APPLICATION



For all rail types up to 1100 N (UIC 60).
More than 200 holes in UIC 60 rails possible.

Rails



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1690 014	• 14	35/64"	20 1690 026	• 26	1.1/32"	20 1690 038	• 38	1.1/2"	20 1690 050	• 50	1.31/32"
20 1690 015	• 15	19/32"	20 1690 027	• 27	1.1/16"	20 1690 039	• 39	1.17/32"	20 1690 051	• 51	2.1/64"
20 1690 016	• 16	5/8"	20 1690 028	• 28	1.7/64"	20 1690 040	• 40	1.37/64"	20 1690 052	• 52	2.3/64"
20 1690 017	• 17	43/64"	20 1690 029	• 29	1.9/64"	20 1690 041	• 41	1.39/64"	20 1690 053	• 53	2.3/32"
20 1690 018	• 18	45/64"	20 1690 030	• 30	1.3/16"	20 1690 042	• 42	1.21/32"	20 1690 054	• 54	2.1/8"
20 1690 019	• 19	3/4"	20 1690 031	• 31	1.7/32"	20 1690 043	• 43	1.11/16"	20 1690 055	• 55	2.11/64"
20 1690 020	• 20	25/32"	20 1690 032	• 32	1.17/64"	20 1690 044	• 44	1.47/64"	20 1690 056	• 56	2.13/64"
20 1690 021	• 21	53/64"	20 1690 033	• 33	1.19/64"	20 1690 045	• 45	1.49/64"	20 1690 057	• 57	2.1/4"
20 1690 022	• 22	55/64"	20 1690 034	• 34	1.11/32"	20 1690 046	• 46	1.13/16"	20 1690 058	• 58	2.9/32"
20 1690 023	• 23	29/32"	20 1690 035	• 35	1.3/8"	20 1690 047	• 47	1.27/32"	20 1690 059	• 59	2.21/64"
20 1690 024	• 24	15/16"	20 1690 036	• 36	1.27/64"	20 1690 048	• 48	1.57/64"	20 1690 060	• 60	2.23/64"
20 1690 025	• 25	63/64"	20 1690 037	• 37	1.29/64"	20 1690 049	• 49	1.59/64"			

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1690

RAIL-LINE 50 PRO

ACCESSORIES

EJECTOR PINS

Ø 14-60 mm • 20 1271



Packaging unit 2 pcs.

PROPERTIES



Karnasch RAIL-LINE-PRO carbide tipped annular cutters are made with a conical helix for clean chip flow and highest cutting ability.



Karnasch RAIL-LINE-PRO annular cutters come with optimized carbide teeth for excellent results drilling in most difficult rail steel (e.g. UIC 60)



Karnasch RAIL-LINE-PRO annular cutters are made in an elaborate pre-/ intermediate-/ after-cutting geometry. This results in: clutter-free, silent and easy cutting with highest lifetimes. **The cutting angles are optimized for drilling in rails.**

TOOLTIPP

Our best model for drilling in the most difficult types of rail steel.



Cutting data

Movie



1312



Accessories for carbide-tipped annular cutter, Weldon shank, drill depth 50 mm | 2"

RAIL-LINE **50**
PRO **20 1690**

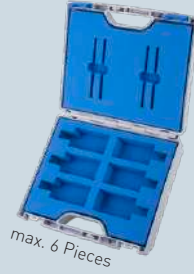
SETS / DISPLAYS

• 20 1344



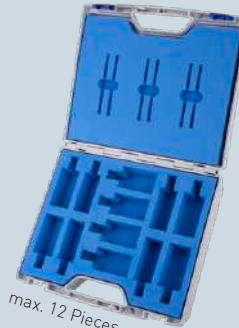
max. 44 Pieces

• 20 1138



max. 6 Pieces

• 20 1132



max. 12 Pieces

• 20 1139



max. 50 Pieces

You would like to select your own contents? No Problem. Contact us and we create your individual set or display.

ADAPTER + SUITABLE EJECTOR PINS



• 20 1263



• 20 1160

Packaging unit 2 pcs.



• 20 1311



• 20 1160

Packaging unit 2 pcs.



• 21 0048



• 20 1271

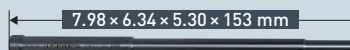
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS



• 20 1387

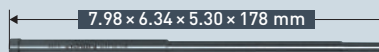


• 20 1396

Packaging unit 2 pcs.



• 20 1402

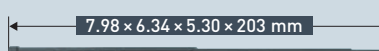


• 20 1411

Packaging unit 2 pcs.



• 20 1417



• 20 1426

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 501

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20 1306

RAIL-LINE 730

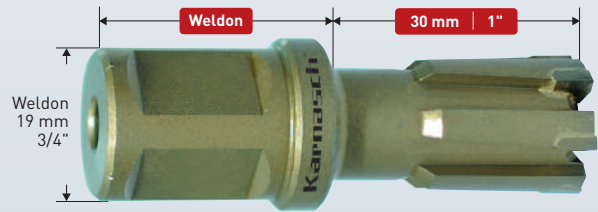
Carbide-tipped annular cutter, Weldon shank, drill depth 30 mm | 1"

APPLICATION



For all rail types up to 1100 N (UIC 60).
More than 100 holes in UIC 60 rails possible.

Rails



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1306 018	• 18	45/64"	20 1306 024	• 24	15/16"	20 1306 030	• 30	1.3/16"	20 1306 036	• 36	1.27/64"
20 1306 019	• 19	3/4"	20 1306 025	• 25	63/64"	20 1306 031	• 31	1.7/32"	20 1306 038	• 38	1.1/2"
20 1306 020	• 20	25/32"	20 1306 026	• 26	1.1/32"	20 1306 032	• 32	1.17/64"			
20 1306 021	• 21	53/64"	20 1306 027	• 27	1.1/16"	20 1306 033	• 33	1.19/64"			
20 1306 022	• 22	55/64"	20 1306 028	• 28	1.7/64"	20 1306 034	• 34	1.11/32"			
20 1306 023	• 23	29/32"	20 1306 029	• 29	1.9/64"	20 1306 035	• 35	1.3/8"			

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1306

RAIL-LINE 730

ACCESSORIES

EJECTOR PINS



• 20 1261

Packaging unit 2 pcs.

PROPERTIES



Karnasch carbide tipped annular cutters (HARD-LINE) are made with a conical helix for: clean chip flow and highest cutting ability even with difficult materials.



Karnasch carbide tipped annular cutters (HARD-LINE) are exclusively equipped with Sandvik carbide teeth. Our opinion is: Only the best carbide is good enough for Karnasch annular cutters.



Karnasch carbide tipped annular cutters (HARD-LINE) are made in an elaborate pre-/intermediate-/after-cutting geometry. This results in: clatter-free, silent and easy cutting with highest lifetimes. **The cutting angles are optimized for drilling in rails.**

Cutting data

Movie



1307



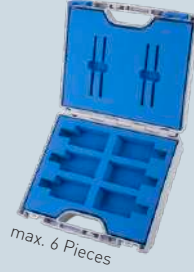
SETS / DISPLAYS

• 20 1344



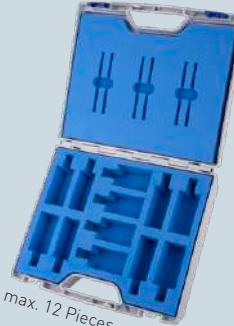
max. 44 Pieces

• 20 1138



max. 6 Pieces

• 20 1132



max. 12 Pieces

• 20 1139



max. 50 Pieces

You would like to select your own contents? No Problem. Contact us and we create your individual set or display.

• 20 1432

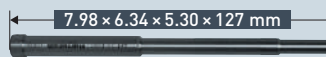


Packaging unit 2 pcs.

• 20 1271

EXTENSIONS + SUITABLE EJECTOR PINS

• 20 1387



Packaging unit 2 pcs.

• 20 1433

• 20 1402



Packaging unit 2 pcs.

• 20 1396

• 20 1417

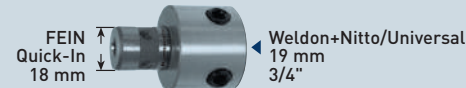


Packaging unit 2 pcs.

• 20 1411

ADAPTER + SUITABLE EJECTOR PINS

• 20 1263



Packaging unit 2 pcs.

• 20 1271

• 20 1311



Packaging unit 2 pcs.

• 20 1271

• 21 0048



Packaging unit 2 pcs.

• 20 1261

Spare allen screws for all extensions see page 540

Further accessories see overview page 501

Special extension + suitable ejector pin from 30 mm to 55 mm. This allows to renounce the longer annular cutter RAIL-LINE 55.

Spare allen screws for all adapters see page 540



20 1309

RAIL-LINE 755

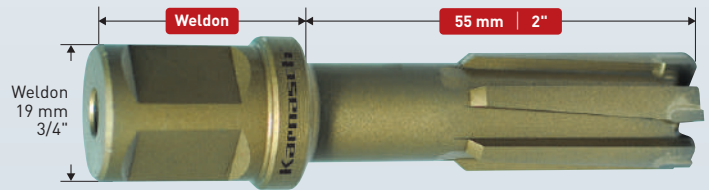
Carbide-tipped annular cutter, Weldon shank, drill depth 55 mm | 2"

APPLICATION



For all rail types up to 1100 N (UIC 60).
More than 100 holes in UIC 60 rails possible.

Rails



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1309 018	• 18	45/64"	20 1309 024	• 24	15/16"	20 1309 030	• 30	1.3/16"	20 1309 036	• 36	1.27/64"
20 1309 019	• 19	3/4"	20 1309 025	• 25	63/64"	20 1309 031	• 31	1.7/32"			
20 1309 020	• 20	25/32"	20 1309 026	• 26	1.1/32"	20 1309 032	• 32	1.17/64"			
20 1309 021	• 21	53/64"	20 1309 027	• 27	1.1/16"	20 1309 033	• 33	1.19/64"			
20 1309 022	• 22	55/64"	20 1309 028	• 28	1.7/64"	20 1309 034	• 34	1.11/32"			
20 1309 023	• 23	29/32"	20 1309 029	• 29	1.9/64"	20 1309 035	• 35	1.3/8"			

Further Ø see Art. 20 1690 page 514 · **Attention:** The inch sizes do not correspond exactly to the mm diameters.

20 1309

RAIL-LINE 755

ACCESSORIES

EJECTOR PINS

• 20 1271



Packaging unit 2 pcs.

PROPERTIES



Karnasch carbide tipped annular cutters (HARD-LINE) are made with a conical helix for: clean chip flow and highest cutting ability even with difficult materials.



Karnasch carbide tipped annular cutters (HARD-LINE) are exclusively equipped with Sandvik carbide teeth. Our opinion is: Only the best carbide is good enough for Karnasch annular cutters.



Karnasch carbide tipped annular cutters (HARD-LINE) are made in an elaborate pre-/intermediate-/after-cutting geometry. This results in: clatter-free, silent and easy cutting with highest lifetimes. **The cutting angles are optimized for drilling in rails.**

Cutting data

Movie



1307



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Accessories for carbide-tipped annular cutter, Weldon shank, drill depth 55 mm | 2"

RAIL-LINE 755 20 1309

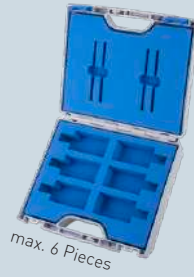
SETS / DISPLAYS

• 20 1344



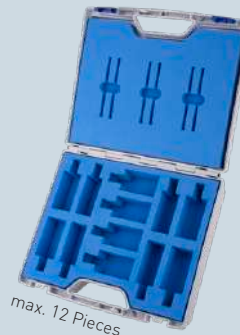
max. 44 Pieces

• 20 1138



max. 6 Pieces

• 20 1132



max. 12 Pieces

• 20 1139



max. 50 Pieces

You would like to select your own contents? No Problem. Contact us and we create your individual set or display.

ADAPTER + SUITABLE EJECTOR PINS



• 20 1263



• 20 1160

Packaging unit 2 pcs.



• 20 1311



• 20 1160

Packaging unit 2 pcs.



• 21 0048



• 20 1271

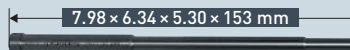
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS



• 20 1387

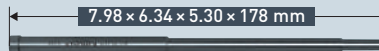


• 20 1396

Packaging unit 2 pcs.



• 20 1402

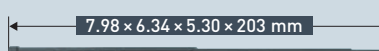


• 20 1411

Packaging unit 2 pcs.



• 20 1417



• 20 1426

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 501



20 1284

BLUE-DRILL LINE 30
RAIL PRO

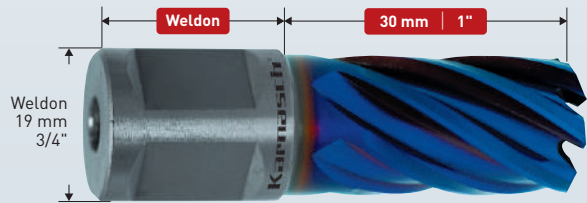
Powder steel + DURABLUE-coated annular cutter, Weldon shank, drill depth 30 mm | 1"

APPLICATION



For all rail types up to 1100 N (UIC 60).
More than 100 holes in UIC 60 rails possible.

Rails



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1284 012	• 12	15/32"	20 1284 020	• 20	25/32"	20 1284 028	• 28	1.7/64"	20 1284 036	• 36	1.27/64"
20 1284 013	• 13	33/64"	20 1284 021	• 21	53/64"	20 1284 029	• 29	1.9/64"			
20 1284 014	• 14	35/64"	20 1284 022	• 22	55/64"	20 1284 030	• 30	1.3/16"			
20 1284 015	• 15	19/32"	20 1284 023	• 23	29/32"	20 1284 031	• 31	1.7/32"			
20 1284 016	• 16	5/8"	20 1284 024	• 24	15/16"	20 1284 032	• 32	1.17/64"			
20 1284 017	• 17	43/64"	20 1284 025	• 25	63/64"	20 1284 033	• 33	1.19/64"			
20 1284 018	• 18	45/64"	20 1284 026	• 26	1.1/32"	20 1284 034	• 34	1.11/32"			
20 1284 019	• 19	3/4"	20 1284 027	• 27	1.1/16"	20 1284 035	• 35	1.3/8"			

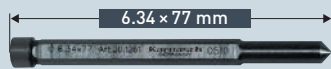
Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1284

BLUE-DRILL LINE 30
RAIL PRO

ACCESSORIES

EJECTOR PINS



• 20 1261

Packaging unit 2 pcs.

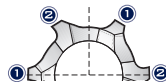
PROPERTIES



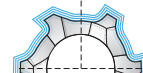
Made of ASP powder steel for drilling of difficult materials like railway tracks, stainless steels, exotic alloys. Applicable wherever a high wear resistance and lifetime are required.



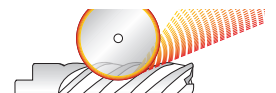
Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.



Seven different cutting geometries optimally adapted to the different diameter and drill depths leads to high performance cutting results.



Our first-class annular cutters are equipped with the unique and patented DURABLUE-coating. Extreme surface hardness and sleekness yield extreme lifetimes even under non-optimum circumstances like "overhead work", dry drilling, etc.



Completely made "FULLY GROUND". This refining increases the cutting ability while reducing friction at the same time. For an extended lifetime.

Cutting data

Movie



1308



Accessories for Powder steel + DURABLUe-coated annular cutter, Weldon shank, drill depth 30 mm | 1"

BLUE-DRILL LINE 30
RAIL PRO **20 1284**

BLUE-DRILL LINE 30 RAIL PRO **SETS / DISPLAYS Page 548**

We offer a large selection of sets / displays – recommended content 20 1284 BLUE-DRILL LINE30 RAIL PRO – see page 548. Other content possible by individually equipped sets / displays.



20 1432

Weldon 19 mm 3/4" ← Weldon+Nitto/Universal 19 mm 3/4"

35 mm

30 mm

6.34 × 102 mm

20 1271

Packaging unit 2 pcs.

ADAPTER + SUITABLE EJECTOR PINS

20 1263

FEIN Quick-In 18 mm ← Weldon+Nitto/Universal 19 mm 3/4"

6.34 × 102 mm

20 1271

Packaging unit 2 pcs.

20 1311

Nitto/Universal 19 mm 3/4" ← Weldon 19 mm 3/4"

6.34 × 102 mm

20 1271

Packaging unit 2 pcs.

21 0048

Weldon 32 mm 1.1/4" ← Weldon + Nitto/Universal 19 mm 3/4"

6.34 × 77 mm

20 1261

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

20 1387

Weldon 19 mm 3/4" ← Weldon+Nitto/Universal 19 mm 3/4"

35 mm

50 mm

7.98 × 6.34 × 5.30 × 127 mm

20 1433

Packaging unit 2 pcs.

20 1402

Weldon 19 mm 3/4" ← Weldon+Nitto/Universal 19 mm 3/4"

35 mm

75 mm

7.98 × 6.34 × 5.30 × 153 mm

20 1396

Packaging unit 2 pcs.

20 1417

Weldon 19 mm 3/4" ← Weldon+Nitto/Universal 19 mm 3/4"

35 mm

100 mm

7.98 × 6.34 × 5.30 × 178 mm

20 1411

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 501

Special extension + suitable ejector pin from 30 mm to 50 mm. This allows to renounce the longer annular cutter RAIL-LINE 50.



20 1317

BLUE-DRILL LINE 55
RAIL PRO

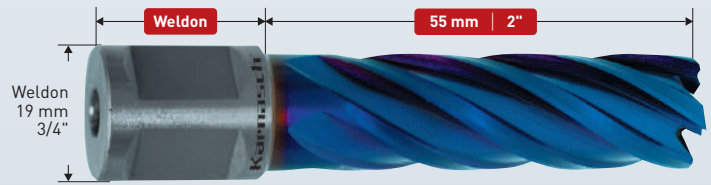
Powder steel + DURABLUE-coated annular cutter, Weldon shank, drill depth 55 mm | 2"

APPLICATION



For all rail types up to 1100 N (UIC 60).
More than 100 holes in UIC 60 rails possible.

Rails



% Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1317 012	● 12	15/32"	20 1317 020	● 20	25/32"	20 1317 028	● 28	1.7/64"	20 1317 036	● 36	1.27/64"
20 1317 013	● 13	33/64"	20 1317 021	● 21	53/64"	20 1317 029	● 29	1.9/64"			
20 1317 014	● 14	35/64"	20 1317 022	● 22	55/64"	20 1317 030	● 30	1.3/16"			
20 1317 015	● 15	19/32"	20 1317 023	● 23	29/32"	20 1317 031	● 31	1.7/32"			
20 1317 016	● 16	5/8"	20 1317 024	● 24	15/16"	20 1317 032	● 32	1.17/64"			
20 1317 017	● 17	43/64"	20 1317 025	● 25	63/64"	20 1317 033	● 33	1.19/64"			
20 1317 018	● 18	45/64"	20 1317 026	● 26	1.1/32"	20 1317 034	● 34	1.11/32"			
20 1317 019	● 19	3/4"	20 1317 027	● 27	1.1/16"	20 1317 035	● 35	1.3/8"			

Replacement article see Art. 20 1284 page 520 + adapter 20 1432, Art. 20 1309 page 518.

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1317

BLUE-DRILL LINE 55
RAIL PRO

ACCESSORIES

EJECTOR PINS



● 20 1271

Packaging unit 2 pcs.

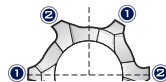
PROPERTIES



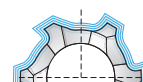
Made of ASP powder steel for drilling of difficult materials like railway tracks, stainless steels, exotic alloys. Applicable wherever a high wear resistance and lifetime are required.



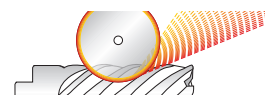
Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.



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Completely made "FULLY GROUND". This refining increases the cutting ability while reducing friction at the same time. For an extended lifetime.

Cutting data

Movie



1308



- 1
- 2
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- 10

Accessories for Powder steel + DURABLUÉ-coated annular cutter, Weldon shank, drill depth 55 mm | 2"

BLUE-DRILL LINE 55
RAIL PRO

20 1317

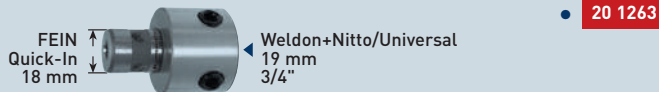
BLUE-DRILL LINE 55
RAIL PRO

SETS / DISPLAYS Page 549

We offer a large selection of sets / displays – recommended content 20 1317 BLUE-DRILL LINE55 RAIL PRO – see page 549. Other content possible by individually equipped sets / displays.



ADAPTER + SUITABLE EJECTOR PINS



• 20 1263



• 20 1160

Packaging unit 2 pcs.



• 20 1311



• 20 1160

Packaging unit 2 pcs.



• 21 0048



• 20 1271

Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS



• 20 1387



• 20 1396

Packaging unit 2 pcs.

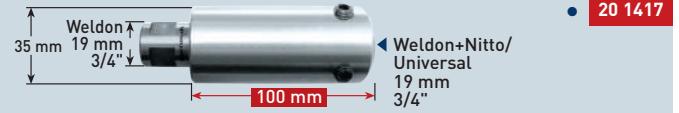


• 20 1402



• 20 1411

Packaging unit 2 pcs.



• 20 1417



• 20 1426

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 501



20 1460

SILVER-DRILL LINE
RAIL

30

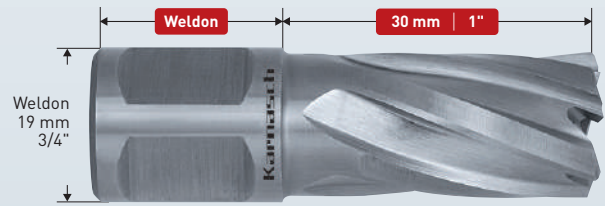
HSS-XE annular cutter, Weldon shank, drill depth 30 mm | 1"

APPLICATION



For all rail types up to 1100 N (UIC 60).
More than 60 holes in UIC 60 rails possible.

Rails



% Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1460 016	16	5/8"	20 1460 022	22	55/64"	20 1460 029	29	1.9/64"	20 1460 035	35	1.3/8"
20 1460 017	17	43/64"	20 1460 023	23	29/32"	20 1460 030	30	1.3/16"	20 1460 036	36	1.27/64"
20 1460 018	18	45/64"	20 1460 024	24	15/16"	20 1460 031	31	1.7/32"			
20 1460 019	19	3/4"	20 1460 026	26	1.1/32"	20 1460 032	32	1.17/64"			
20 1460 020	20	25/32"	20 1460 027	27	1.1/16"	20 1460 033	33	1.19/64"			
20 1460 021	21	53/64"	20 1460 028	28	1.7/64"	20 1460 034	34	1.11/32"			

Alternative article Ø 13.5 mm see Art. 20 1430 p. 528 + adapter, Art. 20 1284 p. 520, Art. 20 1306 p. 516 .

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1460

SILVER-DRILL LINE
RAIL

30

ACCESSORIES

EJECTOR PINS



20 1261

Packaging unit 2 pcs.

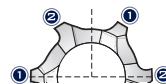
PROPERTIES



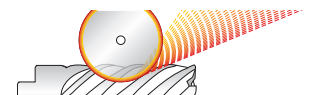
Made of high-alloyed HSS-XE special steel. For extreme hardness at the tip of the tooth (up to 68 HRC). Thus guaranteeing a high wear resistance and lifetime.



Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.



Seven different cutting geometries optimally adapted to the different diameter and drill depths leads to high performance cutting results.



Completely made "FULLY GROUND". This refining increases the cutting ability while reducing friction at the same time. For an extended lifetime.



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- 10

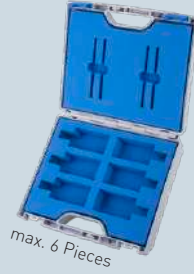
SETS / DISPLAYS

• 20 1344



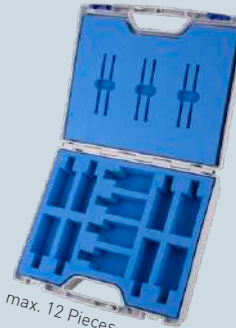
max. 44 Pieces

• 20 1138



max. 6 Pieces

• 20 1132



max. 12 Pieces

• 20 1139



max. 50 Pieces

You would like to select your own contents? No Problem. Contact us and we create your individual set or display.

• 20 1432

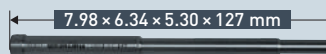


Packaging unit 2 pcs.

• 20 1271

EXTENSIONS + SUITABLE EJECTOR PINS

• 20 1387



Packaging unit 2 pcs.

• 20 1433

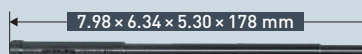
• 20 1402



Packaging unit 2 pcs.

• 20 1396

• 20 1417



Packaging unit 2 pcs.

• 20 1411

ADAPTER + SUITABLE EJECTOR PINS

• 20 1263



Packaging unit 2 pcs.

• 20 1271

• 20 1311



Packaging unit 2 pcs.

• 20 1271

• 21 0048



Packaging unit 2 pcs.

• 20 1261

Spare allen screws for all extensions see page 540

Further accessories see overview page 501

Spare allen screws for all adapters see page 540



20 1480

SILVER-DRILL LINE RAIL 55

HSS-XE annular cutter, Weldon shank, drill depth 55 mm | 2"

APPLICATION



For all rail types up to 1100 N (UIC 60).
More than 60 holes in UIC 60 rails possible.

Rails



% Sale item. While stocks last.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1480 018	18	45/64"	20 1480 023	23	29/32"	20 1480 029	29	1.9/64"	20 1480 034	34	1.11/32"
20 1480 019	19	3/4"	20 1480 024	24	15/16"	20 1480 030	30	1.3/16"	20 1480 035	35	1.3/8"
20 1480 020	20	25/32"	20 1480 025	25	63/64"	20 1480 031	31	1.7/32"	20 1480 036	36	1.27/64"
20 1480 021	21	53/64"	20 1480 027	27	1.1/16"	20 1480 032	32	1.17/64"			
20 1480 022	22	55/64"	20 1480 028	28	1.7/64"	20 1480 033	33	1.19/64"			

Alternative article: Art. 20 1317 page 522, Art. 20 1309 page 518 ·

Attention: The inch sizes do not correspond exactly to the mm diameters.

20 1480

SILVER-DRILL LINE RAIL 55

ACCESSORIES

EJECTOR PINS

20 1271



Packaging unit 2 pcs.

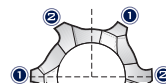
PROPERTIES



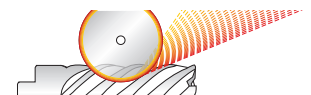
Made of high-alloyed HSS-XE special steel. For extreme hardness at the tip of the tooth (up to 68 HRC). Thus guaranteeing a high wear resistance and lifetime.



Only few manufacturers are capable of producing step-hardened annular cutters. For Karnasch this is "standard". Only this makes us produce extremely hard tooth tips (68 HRC) and yet a flexible annular cutter.



Seven different cutting geometries optimally adapted to the different diameter and drill depths leads to high performance cutting results.



Completely made "FULLY GROUND". This refining increases the cutting ability while reducing friction at the same time. For an extended lifetime.



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Accessories for HSS-XE annular cutter, Weldon shank, drill depth 55 mm | 2"

SILVER-DRILL LINE RAIL 55

20 1480

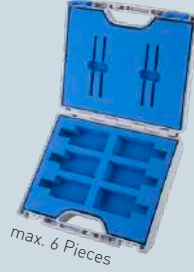
SETS / DISPLAYS

• 20 1344



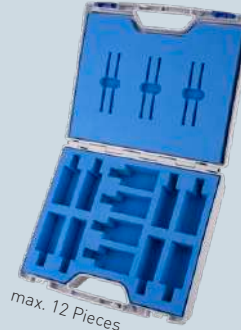
max. 44 Pieces

• 20 1138



max. 6 Pieces

• 20 1132



max. 12 Pieces

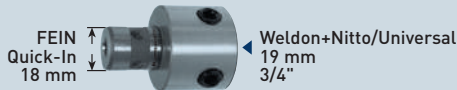
• 20 1139



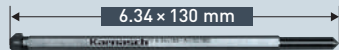
max. 50 Pieces

You would like to select your own contents? No Problem. Contact us and we create your individual set or display.

ADAPTER + SUITABLE EJECTOR PINS



• 20 1263



• 20 1160

Packaging unit 2 pcs.



• 20 1311



• 20 1160

Packaging unit 2 pcs.



• 21 0048

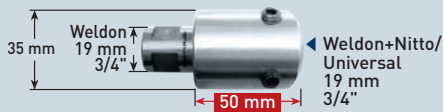


• 20 1271

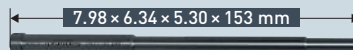
Packaging unit 2 pcs.

Spare allen screws for all adapters see page 540

EXTENSIONS + SUITABLE EJECTOR PINS

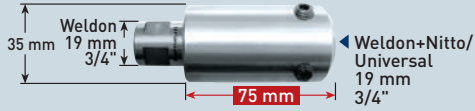


• 20 1387

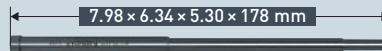


• 20 1396

Packaging unit 2 pcs.



• 20 1402

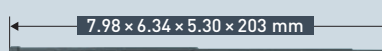


• 20 1411

Packaging unit 2 pcs.



• 20 1417



• 20 1426

Packaging unit 2 pcs.

Spare allen screws for all extensions see page 540

Further accessories see overview page 501





20 1430

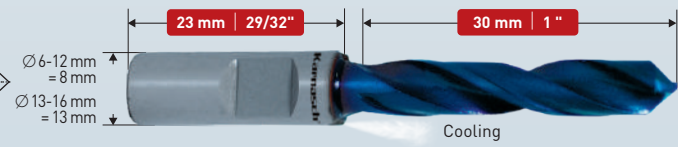
DRILL-LINE 30
RAIL PRO

Powder steel + DURABLUE-coated twist drill, drill depth 30 mm | 1", Weldon shank or Fein Quick-In shank

APPLICATION

For all rail types up to 1100 N (UIC 60). More than 100 holes in UIC 60 rails possible.

Rails



Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1430 006	• 6	15/64"	20 1430 013	• 13	33/64"
20 1430 008	• 8	5/16"	20 1430 0135	• 13.5	17/32"
20 1430 0098	• 9.8	25/64"	20 1430 014	• 14	35/64"
20 1430 010	• 10	25/64"	20 1430 015	• 15	19/32"
20 1430 011	• 11	7/16"	20 1430 016	• 16	5/8"
20 1430 012	• 12	15/32"			

For Ø 6 - 16 mm you need adapter (see accessories).
Attention: The inch sizes do not correspond exactly to the mm diameters.

ACCESSORY

Adapter with pin for opening the coolant supply

WELDON 19 mm (3/4")

Weldon 19 mm 3/4" Ø 6-12 mm • 20 1431

Weldon 19 mm 3/4" Ø 13-16 mm • 20 1434

FEIN QUICK-IN

Fein Quick-In 18 mm Ø 6-12 mm • 20 1421

Fein Quick-In 18 mm Ø 13-16 mm • 20 1422

20 1430

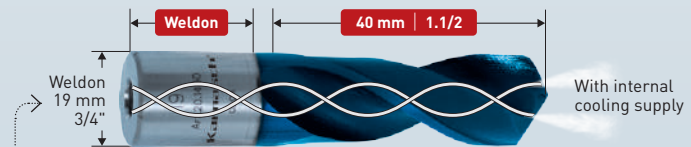
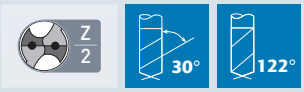
DRILL-LINE 40
RAIL PRO

Powder steel + DURABLUE-coated twist drill with internal cooling supply, drill depth 40 mm | 1.1/2", Weldon shank

APPLICATION

For all rail types up to 1100 N (UIC 60). More than 100 holes in UIC 60 rails possible.

Rails



Ø 17-27.5 mm will be delivered without pin for opening the cooling supply (see accessories if required).

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1430 017	• 17	43/64"	20 1430 023	• 23	29/32"
20 1430 018	• 18	45/64"	20 1430 024	• 24	15/16"
20 1430 019	• 19	3/4"	20 1430 0275	• 27.5	1.5/64"
20 1430 020	• 20	25/32"			
20 1430 021	• 21	53/64"			
20 1430 022	• 22	55/64"			

More dimensions and cutting depth 50 mm see next page art. 20 1465.
Attention: The inch sizes do not correspond exactly to the mm diameters.

ACCESSORY

The pin is only necessary if you use tool holders with internal cooling supply (see page 531-533).

Pin for opening the cooling supply

• 20 1435


Cutting data | Movie

1308

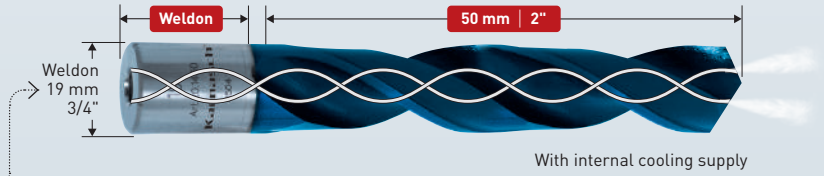
Powder steel + DURABLUE-coated twist drill with internal cooling supply, drill depth 50 mm | 2", Weldon shank


DRILL-LINE 50 RAIL PRO 20 1465

APPLICATION

 For all rail types up to 1100 N (UIC 60). More than 100 holes in UIC 60 rails possible.

Rails



 Will be delivered without pin for opening the cooling supply (see accessories if required).

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1465 014	• 14	35/64"	20 1465 020	• 20	25/32"	20 1465 026	• 26	1.1/32"
20 1465 015	• 15	19/32"	20 1465 021	• 21	53/64"	20 1465 027	• 27	1.1/16"
20 1465 016	• 16	5/8"	20 1465 022	• 22	55/64"	20 1465 028	• 28	1.7/64"
20 1465 017	• 17	43/64"	20 1465 023	• 23	29/32"	20 1465 030	• 30	1.3/16"
20 1465 018	• 18	45/64"	20 1465 024	• 24	15/16"	20 1465 032	• 32	1.17/64"
20 1465 019	• 19	3/4"	20 1465 025	• 25	63/64"			

Attention: The inch sizes do not correspond exactly to the mm diameters.

ACCESSORY

The pin is only necessary if you use tool holders with internal cooling supply (see page 531-533).

Pin for opening the cooling supply



• 20 1435

PROPERTIES


For Art. 20 1430 page 528 and for Art. 20 1465




Made of ASP powder steel for drilling of difficult materials like railway tracks, stainless steels, exotic alloys. Applicable wherever a high wear resistance and lifetime are required.

Karnasch twist drills are produced in a heavy-duty geometry for immediate self-centering, easy cutting, highest lifetimes.

Our first-class twist drills are equipped with the unique and patented DURABLUE-coating. Extreme surface hardness and sleekness yield extreme lifetimes even under non-optimum conditions like "overhead work", dry drilling, etc.

Cutting data  1308

Movie  529





20 1710

DRILL-LINE
RAIL 30

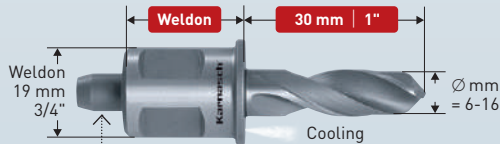
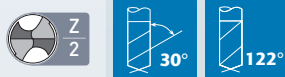
HSS-XE twist drill, drill depth 30 mm | 1", Weldon shank

APPLICATION



For all rail types up to 1100 N (UIC 60).
More than 60 holes in UIC 60 rails possible.

Rails



Ø 6-16 mm will be delivered with pin for opening the cooling supply.

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1710 006	6	15/64"	20 1710 012	12	15/32"
20 1710 008	8	5/16"	20 1710 013	13	33/64"
20 1710 0095	9.5	25/64"	20 1710 0135	13.5	17/32"
20 1710 0098	9.8	25/64"	20 1710 014	14	35/64"
20 1710 010	10	25/64"	20 1710 015	15	19/32"
20 1710 011	11	7/16"	20 1710 016	16	5/8"

Attention: The inch sizes do not correspond exactly to the mm diameters.

ACCESSORY

The pin is only necessary if you use tool holders with internal cooling supply (see page 531-533).

20 1710

DRILL-LINE
RAIL 40

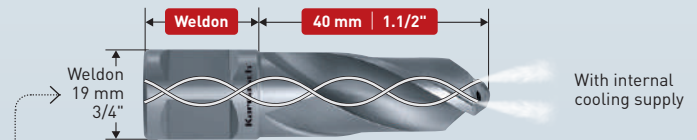
HSS-XE twist drill with internal cooling supply, drill depth 40 mm | 1", Weldon shank

APPLICATION



For all rail types up to 1100 N (UIC 60).
More than 60 holes in UIC 60 rails possible.

Rails



Ø 17-27.5 mm will be delivered without pin for opening the cooling supply (see accessories if required).

Art.	Ø mm	Ø Inch	Art.	Ø mm	Ø Inch
20 1710 017	17	43/64"	20 1710 023	23	29/32"
20 1710 018	18	45/64"	20 1710 024	24	15/16"
20 1710 019	19	3/4"	20 1710 0275	27.5	1.5/64"
20 1710 020	20	25/32"	% Sale item. While stocks last.		
20 1710 021	21	53/64"			
20 1710 022	22	55/64"			

Replacement article see Art. 20 1430 page 528

Attention: The inch sizes do not correspond exactly to the mm diameters.

Pin for opening the cooling supply



20 1435

PROPERTIES



Made of high-alloyed HSS-XE special steel. For extreme hardness at the tip of the tooth (up to 68 HRC). Thus guaranteeing a high wear resistance and lifetime.

Karnasch twist drills are produced in a heavy-duty geometry for immediate self-centering, easy cutting, highest lifetimes.

Cutting data



530 1308

Cutting data



1308

Movie



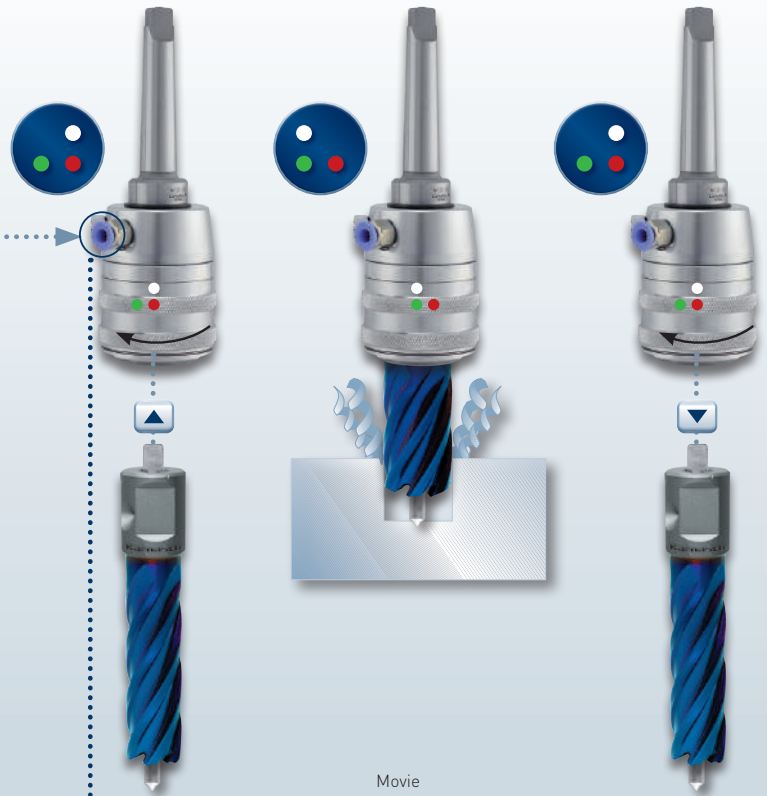
Changing annular cutters in a matter of seconds without tools. Suitable for all annular cutters with Weldon shank / Universal + Weldon shank 19 mm (3/4").

- All HSS-XE annular cutters up to a diameter of 60 mm. Cutting depth 55 mm.
- All carbide tipped annular cutters up to a diameter of 50 mm. Cutting depth 55 mm.

All Quick-Change holders are fully chromed and thus dirt and rust resistant. All Quick-Change holders with internal cooling, comes with the proven

Quickchange coolant hose system.

Use Karnasch **QUICK-CHANGE** holders only with original Karnasch annular cutters. We cannot guarantee a faultless operation of the Karnasch **QUICK-CHANGE** holder in combination with other products.



Movie



Spare part: Quick-change coolant hose holder for all Morse taper holders with internal cooling

Tool holder QUICK-CHANGE WITH INTERNAL COOLING for annular cutter with shank Weldon + Nitto / Universal 19 mm (3/4")			
Morse taper (MT)	Tool holder	Art.	Notes
2		• 20 1303	For drill depths more than 55 mm 2-part ejector pins must be used.
3		• 20 1307	

Tool holder QUICK-CHANGE WITHOUT INTERNAL COOLING for annular cutter with shank Weldon + Nitto / Universal 19 mm (3/4")			
Morse taper (MT)	Tool holder	Art.	Notes
2		• 20 1301	For drill depths more than 55 mm 2-part ejector pins must be used.
3		• 20 1437	





Tool holder WITH INTERNAL COOLING for annular cutter with shank Weldon + Nitto / Universal 19 mm (3/4")

Morse taper (MT)	Tool holder	Art.	Notes
2		• 20 1287	For drill depths more than 55 mm 2-part ejector pins must be used. * All Quick-Change holders with internal cooling, comes with the proven Quick-change coolant hose system.
3		• 20 1289	
4		• 20 1310	

Tool holder WITHOUT INTERNAL COOLING for annular cutter with shank Weldon + Nitto / Universal 19 mm (3/4")

Morse taper (MT)	Tool holder	Art.	Notes
2		• 20 1283	For drill depths more than 55 mm 2-part ejector pins must be used.
3		• 20 1293	
4		• 20 1841	

Tool holder extra long WITH INTERNAL COOLING for annular cutter with shank Weldon + Nitto / Universal 19 mm (3/4")

Morse taper (MT)	Tool holder	Art.	Notes
2		• 20 1842	With these tool holders replugging of the 2-piece ejector pins is not necessary. You can drill as deep as 110 mm in one working process with a 1-part ejector pin. * All Quick-Change holders with internal cooling, comes with the proven Quick-change coolant hose system.
3		• 20 1291	
4		• 20 1843	

• **21 0047** ←

Spare part: Quick-change coolant hose holder for all MT holders with internal cooling

Tool holder	WITH INTERNAL COOLING	for annular cutter with shank	Weldon 32 mm (1.1/4")
Morse taper (MT)	Tool holder	Art.	Notes
3		• 20 1290	For drill depths more than 55 mm 2 part ejector pins must be used. For diameters more than 100 mm we recommend MT 4 or MT 5 morse taper. * All Quick-Change holders with internal cooling, comes with the proven Quick-change coolant hose system.
4		• 20 1292	
5		• 20 1395	

Tool holder	WITHOUT INTERNAL COOLING	for annular cutter with shank	Weldon 32 mm (1.1/4")
Morse taper (MT)	Tool holder	Art.	Notes
3		• 20 1286	For drill depths more than 55 mm 2 part ejector pins must be used. For diameters more than 100 mm we recommend MT 4 morse taper.
4		• 20 1844	

Tool holder extra long	WITH INTERNAL COOLING	for annular cutter with shank	Weldon 32 mm (1.1/4")
Morse taper (MT)	Tool holder	Art.	Notes
3		• 20 1845	With this tool holders replugging of the 2-pieces ejector pins is not necessary. You can drill as deep as 110 mm in one working process with a 1-part ejector pin. For diameter more than 100 mm we recommend MT 4 morse taper. * All Quick-Change holders with internal cooling, comes with the proven Quick-change coolant hose system.
4		• 20 1846	

Accessories Tool holder	Reduction sleeves	Specification	Length	Art.
		Reduction from MT 3 (outside) to MT 2 (inside)	112 mm	• 21 0052
		Reduction from MT 4 (outside) to MT 3 (inside)	140 mm	• 21 0053



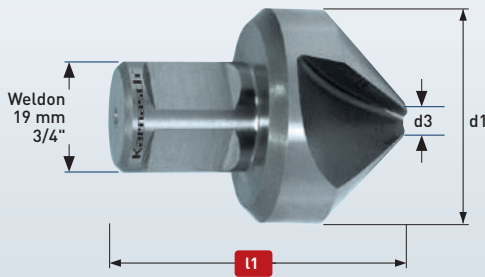


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APPLICATION

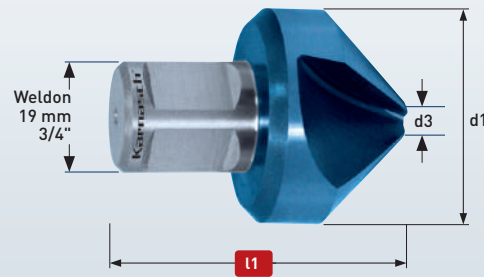
Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400	Hardox 450
< 900 N	< 900 N		> 10% Si				



Suitable morse taper see page 531-533

APPLICATION

Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hardox 400	Hardox 450
< 1100 N	< 900 N		> 10% Si				



PROPERTIES

HSS-XE steel

20 1295

Made of high-alloyed special steel „XE“ for considerably longer service life than HSS-steel.

Excellent for countersinking in:

- Steel
- Cast iron
- Non ferrous metals

HSS-XE steel + BLUE-TEC coated

20 1195

Made of high-alloyed special steel „XE“ for considerably longer service life than HSS-steel. BLUE-TEC coating for a further substantial increase in service life also when machining dry (no/little cooling).

Excellent for countersinking in:

- High-alloyed chromium steel such as stainless (V2A / V4A)
- Acid resistant steel
- Steel
- Cast iron
- Non ferrous metals

d1 Ø mm	d3 Ø mm	Total length L1 mm	20 1295
• 25	4	45	20 1295 025
• 30	4	47	20 1295 030
• 40	7	52	20 1295 040
• 55	9	60	20 1295 055

d1 Ø mm	d3 Ø mm	Total length L1 mm	20 1195
• 25	4	45	20 1195 025
• 30	4	47	20 1195 030
• 40	7	52	20 1195 040
• 55	9	60	20 1195 055

Cutting data

Movie



1327

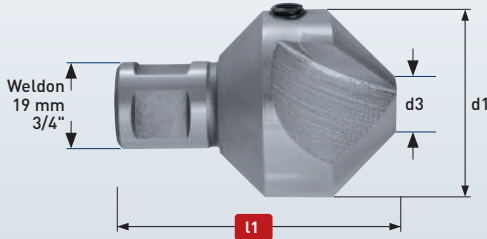




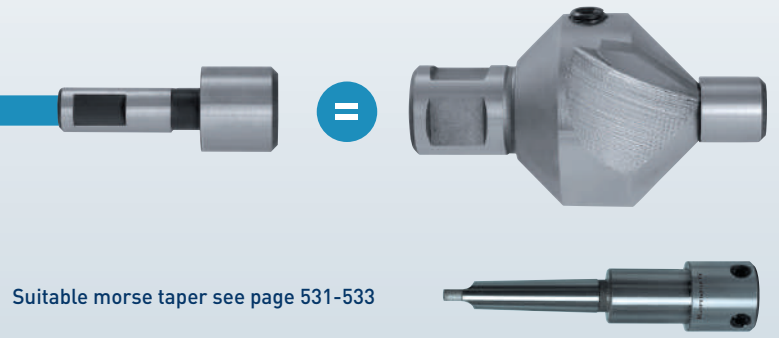
20 1796 040

APPLICATION

< 1400 N	< 900 N	> 10% Si					



d1 Ø mm	d3 Ø mm	Total length L1 mm
40	10	60



Suitable morse taper see page 531-533

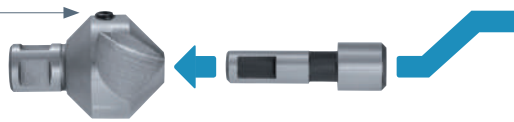
PROPERTIES

Tungsten Carbide tipped for maximum tool life, even in most difficult materials.

For countersinking in:

- Abrasive and hard steel with a strength of over 1000 N/mm²
- Grey cast iron over 240 HB
- High-alloyed chromium steel such as stainless (V2A / V4A)
- Acid resistant steel
- Titanium and titanium alloys
- All further steel sorts, cast iron, non ferrous metals where maximum tool life are desired.

The pilots gives great stability and accuracy. If drilling without pilots, please take care, that the countersink is adjusted absolutely centrally to the drilled hole.



Spare part
Spare screw for fixing the pilots



20 1455

PILOTS

	20 1797		21 1784
	21 1780		21 1785
	21 1781		20 1799
	21 1782		21 1786
	20 1798		21 1787
	21 1783		21 1788

Cutting data



1226





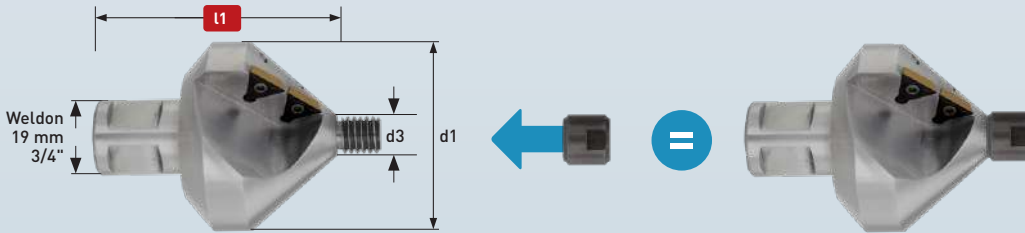
20 1786 045

APPLICATION

< 1400 N	< 900 N		> 10% Si					

These countersinks comes inclusive:

- 4 pieces carbide inserts coated incl. 4 TORX mounting screws and 1 TORX wrench. Fully assembled.
- The triangular inserts are rotatable.
- This means that all 3 cutting surfaces can be used for 3 times more lifetime.
- Suitable pilots pins see below.



Cutting data



d1 Ø mm	d3 Ø mm	Total length L1 mm
45	10	72

Suitable morse taper see page 531-533



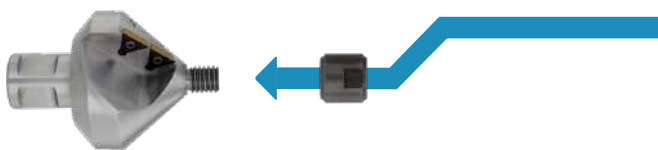
PROPERTIES

Tungsten carbide tipped for maximum tool life, even in the most difficult materials.

For countersinking in:

- Abrasive and hard steel with a strength of over 1000 N/mm²
- Grey cast iron over 240 HB
- High-alloyed chromium steel such as stainless (V2A / V4A)
- Acid resistant steel
- Titanium and titanium alloys
- All further steel sorts, cast iron, non ferrous metals where maximum tool life are desired.

The pilots gives great stability and accuracy. If drilling without pilots, please take care, that the countersink is adjusted absolutely centrally to the drilled hole.



PILOTS

	• 20 1787 010		• 20 1787 060
	• 20 1787 020		• 20 1787 070
	• 20 1787 030		• 20 1787 075
	• 20 1787 040		• 20 1787 080
	• 20 1787 045		• 20 1787 090
	• 20 1787 050		• 20 1787 100









SPARE PARTS

	• 20 1787 110
Cabide inserts Packing unit 4 pcs.	
	• 20 1787 120
4x TORX mounting screw Packing unit 4 pcs.	
	• 22 9011 0175
1x TORX wrench	



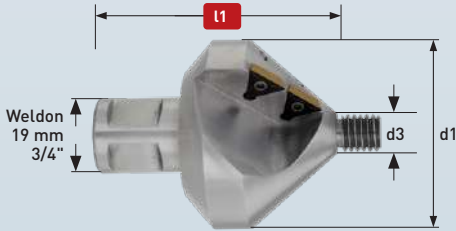
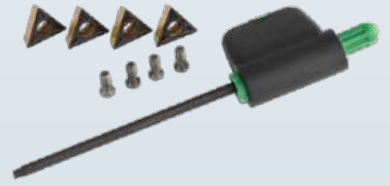
20 1776 045

APPLICATION

							
Steel	Stainless	Grey cast iron	Alu	Copper, brass, tin	Plastics GRP/CRP	Hastelloy, Inconel, exotic materials	Hardox 400
< 1400 N	< 900 N	> 10% Si					

These countersinks comes inclusive:


- 4 pieces carbide inserts coated incl. 4 TORX mounting screws and 1 TORX wrench. Fully assembled.
- The triangular inserts are rotatable.
- This means that all 3 cutting surfaces can be used for 3 times more lifetime.
- Suitable pilots pins see below.



d1 Ø Inch	d1 Ø mm	d3 Ø Inch	d3 Ø mm	Total length L1	
				Inch	mm
1.49/64"	45	3/8"	10	2.53/64"	72

Suitable morse taper see page 531-533

Cutting data



1226

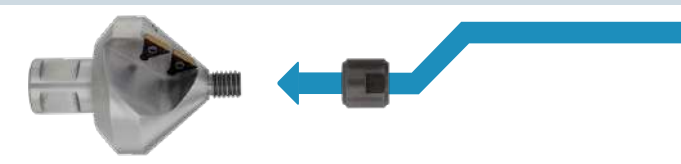
PROPERTIES

Tungsten carbide tipped for maximum tool life, even in the most difficult materials.

For countersinking in:

- Abrasive and hard steel with a strength of over 1000 N/mm²
- Grey cast iron over 240 HB
- High-alloyed chromium steel such as stainless (V2A / V4A)
- Acid resistant steel
- Titanium and titanium alloys
- All further steel sorts, cast iron, non ferrous metals where maximum tool life are desired.



The pilots gives great stability and accuracy. If drilling without pilots, please take care, that the countersink is adjusted absolutely centrally to the drilled hole.



PILOTS

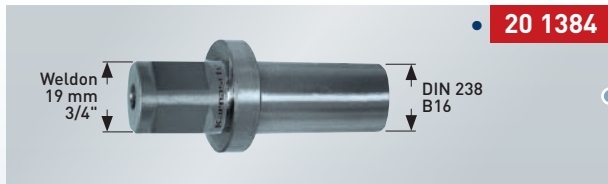
	• 20 1777 010		• 20 1777 050
	• 20 1777 020		• 20 1777 060
	• 20 1777 030		• 20 1777 070
	• 20 1777 040		

SPARE PARTS

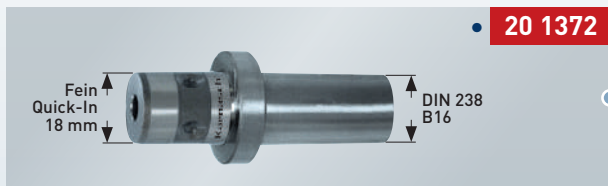
	• 20 1787 110	Carbide inserts Packing unit 4 pcs.
	• 20 1787 120	4x TORX mounting screw Packing unit 4 pcs.
	• 22 9011 0175	1x TORX wrench



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• **20 1384**



• **20 1372**



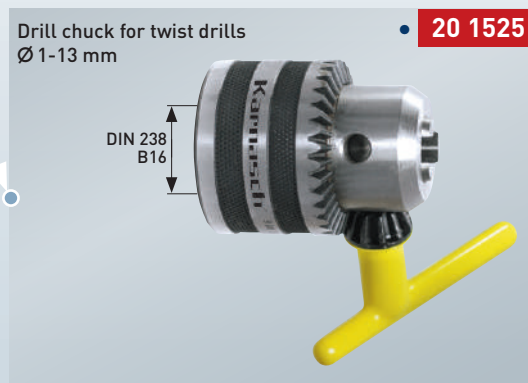
• **20 1515**



• **20 1524**



• **20 1375**



• **20 1525**

COOLING PRESSURE BOTTLES

For connection to all tool holders with automatic internal cooling (see page 531-533). In addition we offer an atomized nozzle, which is ideal for external cooling.

- You only need to use the pump a few times for obtaining an ideal pressure build-up
- Thanks to the large-volume 1.5/3.0 litre bottle the pressure will be maintained even in case of many borings.
- Best dosing economy thanks to fine adjustment ①
- Also ideal for external cooling due to the new atomized nozzle Art. 21 0025!
- We recommend Karnasch heavy-duty cutting oil Mecutoil 100 (see from page 1151).



• **21 0025**

• **20 1308**
1.5 ltr.

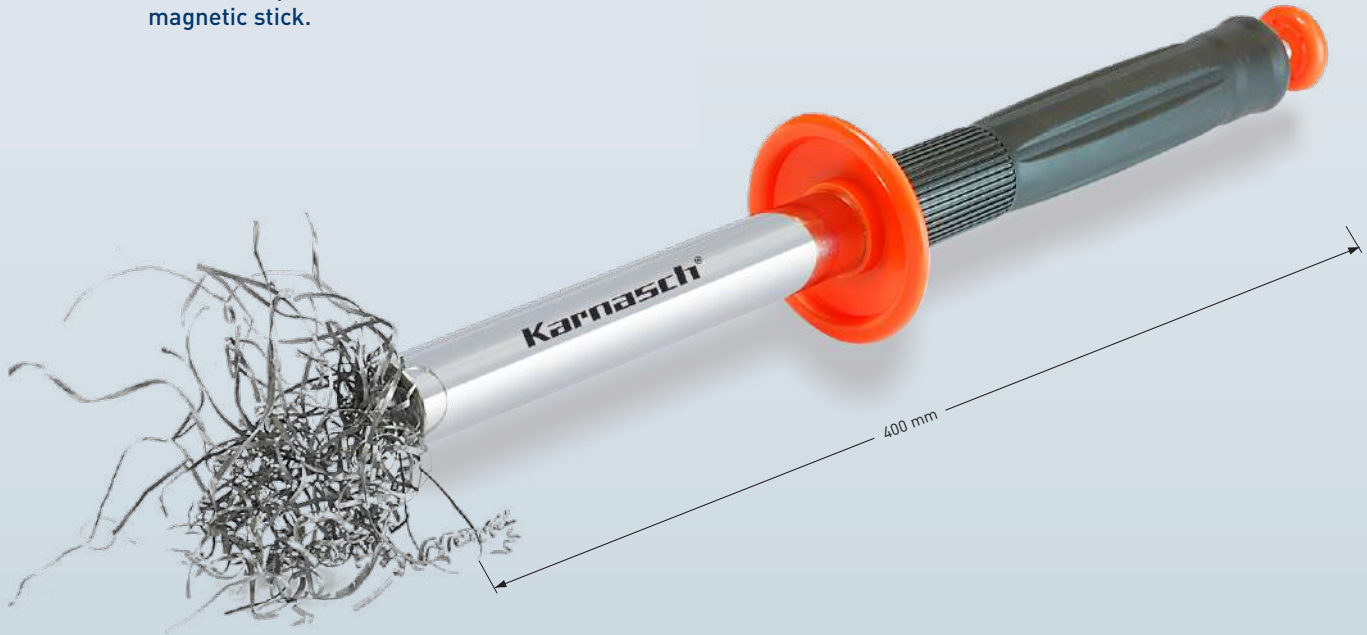
Only suitable for Art. 20 1308



• **20 1327**
3.0 ltr.

• 21 0001

1. STEP: Take the chips with the Karnasch magnetic stick.



2. STEP: Release the chips by pulling the rod.



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2



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8



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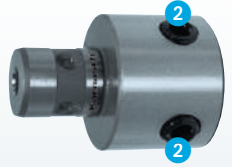
10










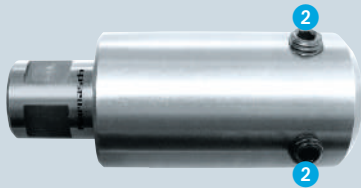
Index

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SPARE ALLEN SCREWS 2 FOR ADAPTERS



2	Ø mm	For adapter art.		ART.	
	3 mm M 6x6	20 1234	437	20 1330	•
		Tapping adapter	637		
	4 mm M 8x8	20 1421 · 20 1422 · 20 1431 · 20 1434	Various	20 1343	•
		Twist drill adapter	636		
	5 mm M 10x10	20 1161 · 20 1263 · 20 1311 · 20 1314 · 20 1386	Various	20 1353	•
	M 6x10	20 1796 040	535	20 1455	•
	Special	20 1385	Various	21 0045	•
	Special	21 0048	Various	21 0049	•

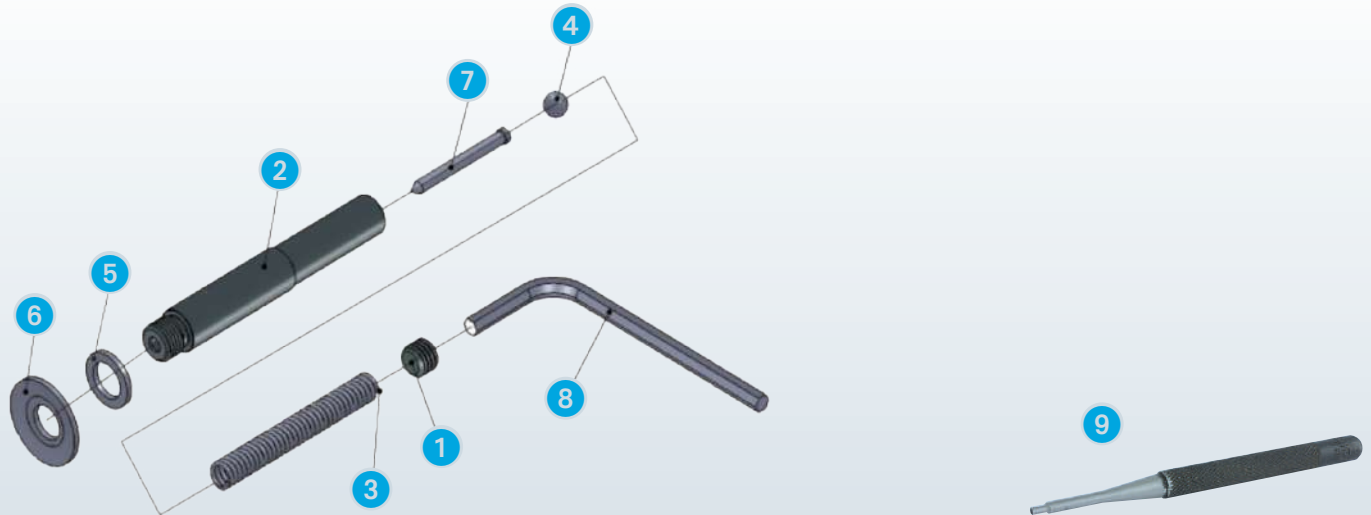


Spare allen screws 2 for extensions 50 mm, 75 mm, 100 mm.

2	Ø mm	For extensions article		Article screw	
	5 mm M 10x10	20 1387 · 20 1402 · 20 1417 20 1406 · 20 1407 · 20 1409	Various	20 1353	•

SPARE PARTS HOLDER

21 0002

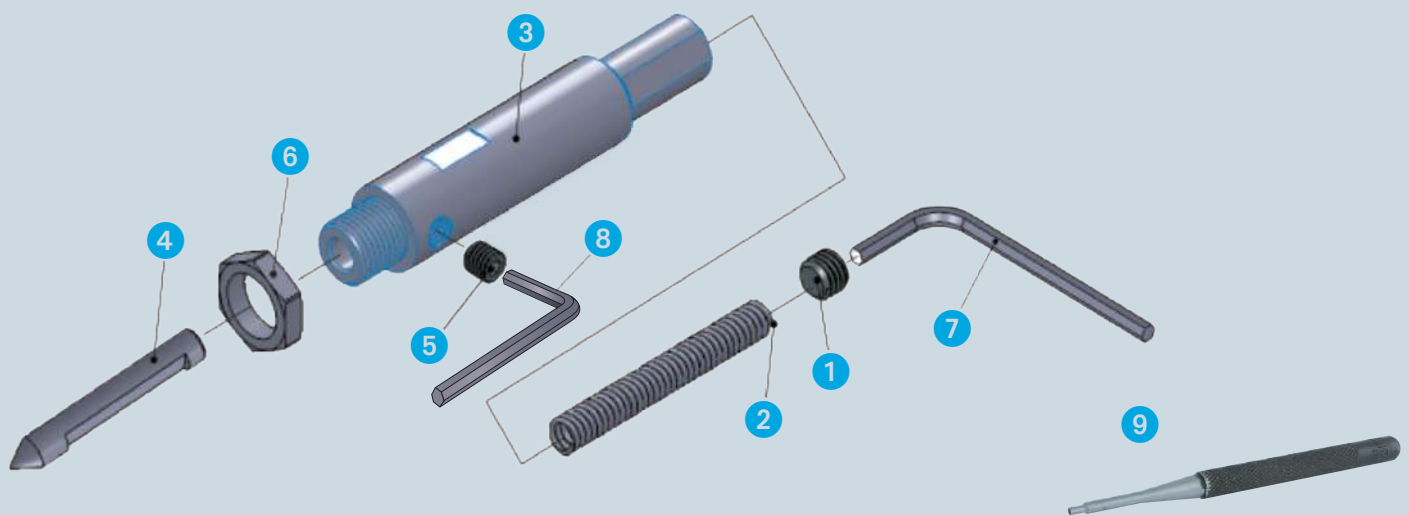


No.	Description	Art.	
1	Allen screw	21 0004	•
2	Arbor body	21 0005	•
3	Ejector spring	21 0006	•
4	Round steel bead	21 0007	•
5	Flat washer	21 0008	•
6	Concave gasket	21 0009	•
7	Ejector pin	21 0010	•
8	Allen key big	21 0011	•
9	Center punch	20 1238	•

This arbor is suitable for removing spot welds from sheet metal. Adjustable milling depth and spring force with setting screw 1.

SPARE PARTS HOLDER Ø 21-25 mm

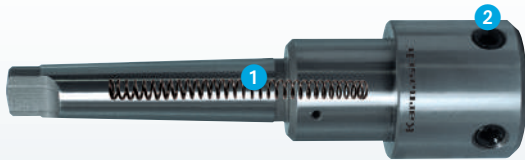
21 0003



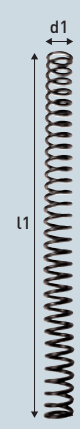


No.	Description	Art.	
1	Allen screw	21 0012	•
2	Ejector spring	21 0013	•
3	Arbor body	21 0014	•
4	Ejector pin	21 0015	•
5	Allen screw	21 0016	•
6	Flat washer	21 0017	•
7	Allen key big	21 0011	•
8	Allen key small	21 0055	•
9	Center punch	20 1238	•



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Ejector spare springs **1** + spare allen screws **2** for tool holders see catalogue page 531-533

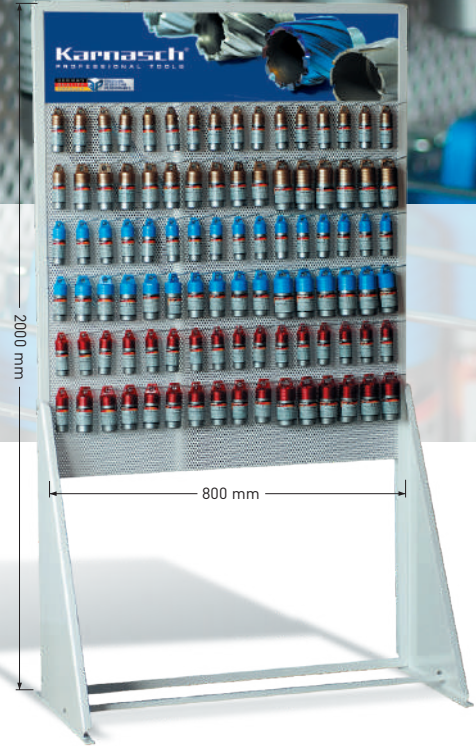
1	d1 l1	For tool holders article		Article spring	
	13 x 150 mm	20 1290 · 20 1292 · 20 1289 · 20 1307 · 20 1437	531-533	20 1296	•
	10 x 125 mm	20 1283	531-533	20 1297	•
	14 x 195 mm	20 1291 · 20 1842 · 20 1845 · 20 1846	531-533	20 1298	•
	10 x 133 mm	20 1287 · 20 1303 · 20 1301	531-533	20 1299	•
	13 x 135 mm	20 1293 · 20 1286 · 20 1289 · 20 1310 · 20 1844	531-533	20 1294	•
	13 x 135 mm	20 1400 · 20 1401	365	21 0044	•
2	Ø mm	For tool holders article		Article screw	
	6 mm M 12x10	20 1283 · 20 1293 · 20 1287 · 20 1289 · 20 1291	531-533	20 1300	•
	6 mm M 12x12	20 1286 · 20 1290 · 20 1292	531-533	20 1305	•
	-	Various	531-533	21 0047	•

20 1346



Core drilling display

Create your own individual display.
We would be pleased to help you.
Prices on request.



20 1346







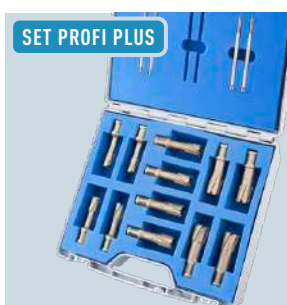

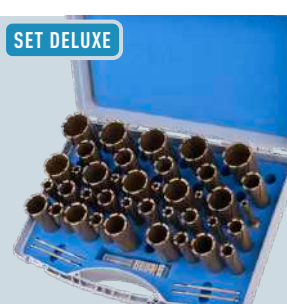
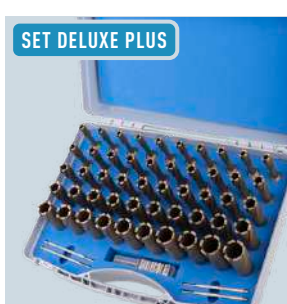
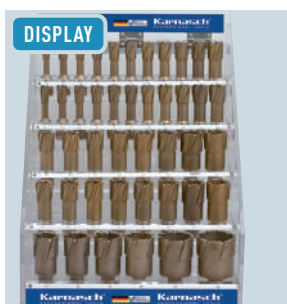
Power-Max hole saw display

Create your own individual display.
We would be pleased to help you.
Prices on request.



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<p>6 Pieces</p>	<p>SET BASIC • 20 1901</p>  <p>Ø 2×14, 2×18, 2×22 mm 4× Ejector pins The best selling three dimensions in a set</p>	<p>SET BASIC PLUS • 20 1336</p>  <p>Ø 12, 14, 16, 18, 20, 22 mm 4× Ejector pins BESTSELLER up to Ø 22 mm</p>	<p>SET INDIVIDUAL • 20 1138</p>  <p>Empty for max. 6 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.</p>	
	<p>12 Pieces</p>	<p>SET PROFI • 20 1902</p>  <p>Ø 4×14, 4×18, 4×22 mm 4× Ejector pins The best selling three dimensions in a set</p>	<p>SET PROFI PLUS • 20 1903</p>  <p>Ø 2×12, 2×14, 2×16, 2×18, 2×20, 2×22 mm 4× Ejector pins BESTSELLER up to Ø 22 mm</p>	<p>SET PROFI INDIVIDUAL • 20 1132</p>  <p>Empty for max. 12 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.</p>
		<p>39/50 Pieces</p>	<p>SET DELUXE • 20 1366</p>  <p>The hole range 12–50 mm in 1.0 mm steps (39 pieces) 6× Ejector pins</p>	<p>SET DELUXE PLUS • 20 1904</p>  <p>Ø 4×12, 2×13, 4×14, 2×15, 4×16, 2×17, 4×18, 2×19, 4×20, 4×22, 2×23, 2×24, 4×25, 2×26, 2×27, 2×28, 2×30, 2×32 mm 6× Ejector pins BESTSELLER up to Ø 32 mm</p>
<p>44 Pieces</p>			<p>Lockable acrylic display Ideal as showcase and small warehouse. All current sizes directly visible and available.</p>	<p>DISPLAY • 20 1604</p>  <p>Ø 2×12, 2×13, 2×14, 2×15, 2×16, 2×17, 2×18, 2×19, 2×20, 2×21, 2×22, 2×23, 2×24, 2×25, 2×26, 2×27, 2×28, 2×30, 2×32, 1×33, 1×35, 1×36, 1×40, 1×45, 1×50 mm 6× Ejector pins BESTSELLER up to Ø 50 mm</p>

6 Pieces

SET BASIC • 20 1905

Ø 2×14, 2×18, 2×22 mm
4× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1339

Ø 14, 16, 18, 20, 22, 26 mm
4× Ejector pins
BESTSELLER up to Ø 26 mm

SET INDIVIDUAL • 20 1138

Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1906

Ø 3×14, 3×18, 3×22, 3×26 mm
4× Ejector pins
The best selling four dimensions in a set

SET PROFI PLUS • 20 1907

Ø 2×14, 2×16, 2×18, 2×20, 2×22, 2×26 mm
4× Ejector pins
BESTSELLER up to Ø 26 mm

SET PROFI INDIVIDUAL • 20 1132

Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

SET DELUXE • 20 1369

The hole range 12–50 mm in 1.0 mm steps (39 pieces)
6× Ejector pins

SET DELUXE PLUS • 20 1908

Ø 2×12, 2×13, 4×14, 2×15, 2×16, 2×17, 4×18, 2×19, 4×20, 4×22, 4×23, 2×24, 4×25, 4×26, 2×27, 2×28, 2×30, 2×32 mm
6× Ejector pins
BESTSELLER up to Ø 32 mm

SET DELUXE INDIVIDUAL • 20 1139

Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY • 20 1624

Ø 2×12, 2×13, 2×14, 2×15, 2×16, 2×17, 2×18, 2×19, 2×20, 2×21, 2×22, 2×23, 2×24, 2×25, 2×26, 2×27, 2×28, 2×30, 2×32, 1×33, 1×35, 1×36, 1×40, 1×45, 1×50 mm
6× Ejector pins
BESTSELLER up to Ø 50 mm

DISPLAY INDIVIDUAL • 20 1344

Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

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6 Pieces

SET BASIC • 20 1909



Ø 2×5/8", 2×13/16", 2×15/16"
4× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1978



Ø 9/16", 5/8", 3/4", 13/16", 15/16", 1.1/16"
4× Ejector pins
BESTSELLER up to Ø 1.1/16"

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1911



Ø 4×5/8", 4×13/16", 4×15/16"
4× Ejector pins
The best selling three dimensions in a set

SET PROFI PLUS • 20 1914



Ø 2×9/16", 2×5/8", 2×3/4", 2×13/16", 2×15/16", 2×1.1/16"
4× Ejector pins
BESTSELLER up to Ø 1.1/16"


SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces


SET DELUXE INDIVIDUAL • 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

LOCKABLE ACRYLIC DISPLAY
Ideal as showcase and small warehouse. All current sizes directly visible and available.



DISPLAY INDIVIDUAL • 20 1344

Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

LOCKABLE ACRYLIC DISPLAY
Ideal as showcase and small warehouse. All current sizes directly visible and available.

LOCKABLE ACRYLIC DISPLAY
Ideal as showcase and small warehouse. All current sizes directly visible and available.

546 INDUSTRIAL TOOLS DIVISION

6 Pieces

SET BASIC • 20 1915



Ø 2× 13/16", 2× 15/16", 2× 1.1/16"
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1979



Ø 5/8", 11/16", 3/4", 13/16", 15/16", 1.1/16"
4× Ejector pins
BESTSELLER up to Ø 1.1/16"

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1916



Ø 4× 13/16", 4× 15/16", 4× 1.1/16"
2× Ejector pins
The best selling three dimensions in a set

SET PROFI PLUS • 20 1917



Ø 2× 5/8", 2× 11/16", 2× 3/4", 2× 13/16", 2× 15/16", 2× 1.1/16"
4× Ejector pins
BESTSELLER up to Ø 1.1/16"

SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

Empty space for 39/50 pieces.

Empty space for 39/50 pieces.

SET DELUXE INDIVIDUAL • 20 1139




Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

Empty space for 44 pieces.

DISPLAY INDIVIDUAL • 20 1344



Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.



BLUE-DRILL LINE 30 PRO
BLUE-DRILL LINE 30 PRO
RAIL

SETS / DISPLAYS: CONTENT 20 1284

Stock range + accessories see page 400-401 + 520-521

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6 Pieces

SET BASIC • 20 1944

Ø 2×12, 2×16, 2×18 mm
 2× Ejector pins
 The best selling three dimensions in a set

SET BASIC PLUS • 20 1331

Ø 12, 14, 16, 18, 20, 26 mm
 2× Ejector pins
 BESTSELLER up to Ø 26 mm

SET INDIVIDUAL • 20 1138

Empty for max. 6 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1945

Ø 3×12, 3×14, 3×16, 3×18 mm
 2× Ejector pins
 The best selling four dimensions in a set

SET PROFI PLUS • 20 1946

Ø 2×12, 2×14, 2×16, 2×18, 2×20, 2×26 mm
 2× Ejector pins
 BESTSELLER up to Ø 26 mm

SET PROFI INDIVIDUAL • 20 1132

Empty for max. 12 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

SET DELUXE INDIVIDUAL • 20 1139

Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

LOCKABLE ACRYLIC DISPLAY
 Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY INDIVIDUAL • 20 1344

Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

LOCKABLE ACRYLIC DISPLAY
 Ideal as showcase and small warehouse. All current sizes directly visible and available.

Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

BLUE-DRILL LINE **55**
PRO
BLUE-DRILL LINE **55**
RAIL PRO

SETS / DISPLAYS: CONTENT 20 1317

Stock range + accessories see page 402-403 + 522-523

6
Pieces

SET BASIC

• 20 1947



Ø 2×14, 2×18, 2×20 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS

• 20 1334



Ø 12, 14, 16, 18, 20, 26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET INDIVIDUAL

• 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12
Pieces

SET PROFI

• 20 1948



Ø 3×14, 3×18, 3×20, 3×26 mm
2× Ejector pins
The best selling four dimensions in a set

SET PROFI PLUS

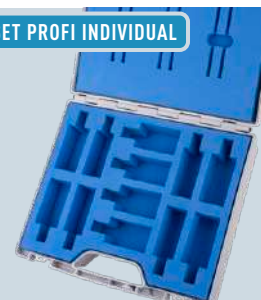
• 20 1949



Ø 2×12, 2×14, 2×16, 2×18, 2×20, 2×26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET PROFI INDIVIDUAL

• 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50
Pieces

SET DELUXE INDIVIDUAL

• 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44
Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY INDIVIDUAL

• 20 1344



Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

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6 Pieces

SET BASIC • 20 1950

Ø 2×14, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1325

Ø 12, 14, 16, 18, 20, 22 mm
2× Ejector pins
BESTSELLER up to Ø 22 mm

SET INDIVIDUAL • 20 1138

Empty for max. 6 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1951

Ø 3×12, 3×14, 3×18, 3×22 mm
2× Ejector pins
The best selling four dimensions in a set

SET PROFI PLUS • 20 1952

Ø 2×12, 2×14, 2×16, 2×18, 2×20, 2×22 mm
2× Ejector pins
BESTSELLER up to Ø 22 mm

SET PROFI INDIVIDUAL • 20 1132

Empty for max. 12 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

SET DELUXE • 20 1360

The hole range 12–50 mm in 1.0 mm steps (39 pieces)
6× Ejector pins

SET DELUXE PLUS • 20 1953

Ø 4×12, 2×13, 4×14, 2×15, 4×16, 2×17, 4×18, 2×19, 4×20, 4×22, 2×23, 2×24, 2×25, 4×26, 2×27, 2×28, 2×30, 2×32 mm
6× Ejector pins
BESTSELLER up to Ø 32 mm

SET DELUXE INDIVIDUAL • 20 1139

Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY • 20 1603

Ø 2×12, 2×13, 2×14, 2×15, 2×16, 2×17, 2×18, 2×19, 2×20, 2×21, 2×22, 2×23, 2×24, 2×25, 2×26, 2×27, 2×28, 2×30, 2×32, 1×33, 1×35, 1×36, 1×40, 1×45, 1×50 mm
6× Ejector pins
BESTSELLER up to Ø 50 mm

DISPLAY INDIVIDUAL • 20 1344

Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

6 Pieces

SET BASIC • 20 1954



Ø 2×14, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1328



Ø 14, 16, 18, 20, 22, 26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1955



Ø 4×14, 4×18, 4×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET PROFI PLUS • 20 1956



Ø 2×14, 2×16, 2×18, 2×20, 2×22, 2×26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

SET DELUXE • 20 1363




The hole range 12-50 mm in 1.0 mm steps (39 pieces)
6× Ejector pins

SET DELUXE PLUS • 20 1957



Ø 4×12, 2×13, 4×14, 2×15, 4×16, 2×17, 4×18, 2×19, 4×20, 2×21, 4×22, 2×24, 2×25, 4×26, 2×27, 2×28, 2×30, 2×32 mm
6× Ejector pins
BESTSELLER up to Ø 32 mm

SET DELUXE INDIVIDUAL • 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY • 20 1609



Ø 2×12, 2×13, 2×14, 2×15, 2×16, 2×17, 2×18, 2×19, 2×20, 2×21, 2×22, 2×23, 2×24, 2×25, 2×26, 2×27, 2×28, 2×30, 2×32, 1×33, 1×35, 1×36, 1×40, 1×45, 1×50 mm
6× Ejector pins
BESTSELLER up to Ø 50 mm

DISPLAY INDIVIDUAL • 20 1344




Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

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6 Pieces

SET BASIC • 20 1967




Ø 2×14, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1322



Ø 12, 14, 16, 18, 20, 22 mm
2× Ejector pins
BESTSELLER up to Ø 22 mm


SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.


12 Pieces

SET PROFI • 20 1968



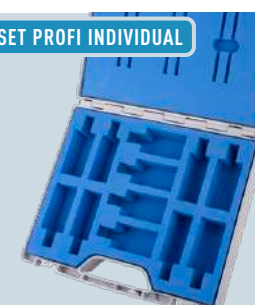
Ø 3×12, 3×14, 3×18, 3×22 mm
2× Ejector pins
The best selling four dimensions in a set

SET PROFI PLUS • 20 1969



Ø 2×12, 2×14, 2×16, 2×18, 2×20, 2×22 mm
2× Ejector pins
BESTSELLER up to Ø 22 mm

SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.


39/50 Pieces

SET DELUXE • 20 1361




The hole range 12–50 mm in 1.0 mm steps (39 pieces)
6× Ejector pins

SET DELUXE PLUS • 20 1971



Ø 4×12, 2×13, 4×14, 2×15, 4×16, 2×17, 4×18, 2×19, 4×20, 4×22, 2×23, 2×24, 2×25, 4×26, 2×27, 2×28, 2×30, 2×32 mm
6× Ejector pins
BESTSELLER up to Ø 32 mm

SET DELUXE INDIVIDUAL • 20 1139




Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

LOCKABLE ACRYLIC DISPLAY


Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY • 20 1602



Ø 2×12, 2×13, 2×14, 2×15, 2×16, 2×17, 2×18, 2×19, 2×20, 2×21, 2×22, 2×23, 2×24, 2×25, 2×26, 2×27, 2×28, 2×30, 2×32, 1×33, 1×35, 1×36, 1×40, 1×45, 1×50 mm
6× Ejector pins
BESTSELLER up to Ø 50 mm

DISPLAY INDIVIDUAL • 20 1344



Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

6 Pieces

SET BASIC • 20 1972



Ø 2×14, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1332



Ø 12, 14, 16, 18, 20, 22 mm
2× Ejector pins
BESTSELLER up to Ø 22 mm

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1973



Ø 4×14, 4×18, 4×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET PROFI PLUS • 20 1974



Ø 2×12, 2×14, 2×16, 2×18, 2×20, 2×22 mm
2× Ejector pins
BESTSELLER up to Ø 22 mm


SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

SET DELUXE • 20 1365



The hole range 12-50 mm in 1.0 mm steps (39 pieces)
6× Ejector pins

SET DELUXE PLUS • 20 1980



Ø 4×12, 2×13, 4×14, 2×15, 4×16, 2×17, 4×18, 2×19, 4×20, 4×22, 2×23, 2×24, 2×25, 4×26, 2×27, 2×28, 2×30, 2×32 mm
6× Ejector pins
BESTSELLER up to Ø 32 mm

SET DELUXE INDIVIDUAL • 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY • 20 1608



Ø 2×12, 2×13, 2×14, 2×15, 2×16, 2×17, 2×18, 2×19, 2×20, 2×21, 2×22, 2×23, 2×24, 2×25, 2×26, 2×27, 2×28, 2×30, 2×32, 1×33, 1×35, 1×36, 1×40, 1×45, 1×50 mm
6× Ejector pins
BESTSELLER up to Ø 50 mm

DISPLAY INDIVIDUAL • 20 1344





Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

<p>6 Pieces</p>	<p>SET BASIC</p>  <p>• 20 1993</p>	<p>SET BASIC PLUS</p>  <p>• 20 1976</p>	<p>SET INDIVIDUAL</p>  <p>• 20 1138</p>
	<p>Ø 2×5/8", 2×13/16", 2×9/16" 2× Ejector pins The best selling three dimensions in a set</p>	<p>Ø 9/16", 5/8", 11/16, 3/4", 13/16", 7/8" 2× Ejector pins BESTSELLER up to Ø 7/8"</p>	<p>Empty for max. 6 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.</p>

<p>12 Pieces</p>	<p>SET PROFI</p>  <p>• 20 1994</p>	<p>SET PROFI PLUS</p>  <p>• 20 1995</p>	<p>SET PROFI INDIVIDUAL</p>  <p>• 20 1132</p>
	<p>Ø 4×5/8", 4×13/16", 4×9/16" 2× Ejector pins The best selling three dimensions in a set</p>	<p>Ø 2×9/16", 2×5/8", 2×11/16, 2×3/4", 2×13/16", 2×7/8" 2× Ejector pins BESTSELLER up to Ø 7/8"</p>	<p>Empty for max. 12 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.</p>

<p>39/50 Pieces</p>	<p>SET DELUXE INDIVIDUAL</p>  <p>• 20 1139</p>
	<p>Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.</p>

<p>44 Pieces</p>	<p>Lockable acrylic display Ideal as showcase and small warehouse. All current sizes directly visible and available.</p>	<p>DISPLAY INDIVIDUAL</p>  <p>• 20 1344</p>
	<p>Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.</p>	

6 Pieces

SET BASIC • 20 1996



Ø 2× 5/8", 2× 11/16", 2× 13/16"
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1977



Ø 9/16", 5/8", 11/16", 3/4", 13/16", 7/8"
2× Ejector pins
BESTSELLER up to Ø 7/8"

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1997



Ø 3× 5/8", 3× 11/16", 3× 13/16", 3× 7/8"
2× Ejector pins
The best selling four dimensions in a set

SET PROFI PLUS • 20 1998



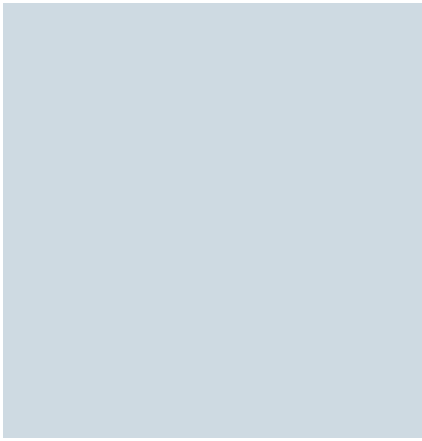
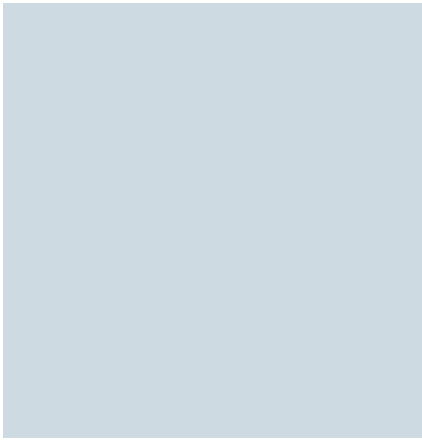
Ø 2× 9/16", 2× 5/8", 2× 11/16", 2× 3/4", 2× 13/16", 2× 7/8"
2× Ejector pins
BESTSELLER up to Ø 7/8"

SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces



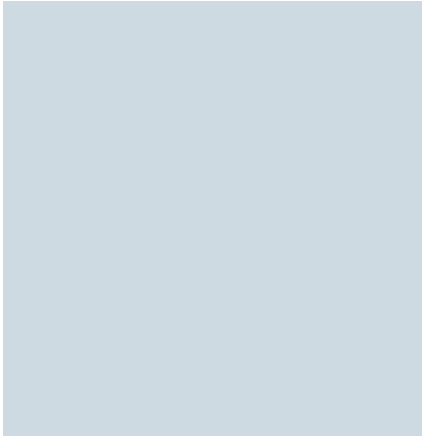
SET DELUXE INDIVIDUAL • 20 1139




Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.



DISPLAY INDIVIDUAL • 20 1344



Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.



1



2



3



4



5



6



7



8



9



10



6 Pieces



SET BASIC • 20 2003
 Ø 2×14, 2×18, 2×22 mm
 2× Ejector pins
 The best selling three dimensions in a set



SET BASIC PLUS • 20 1474
 Ø 12, 14, 16, 18, 20, 22 mm
 2× Ejector pins
 BESTSELLER up to Ø 22 mm



SET INDIVIDUAL • 20 1138
 Empty for max. 6 annular cutters + 4 ejector pins.
 Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces



SET PROFI • 20 2004
 Ø 3×12, 3×14, 3×18, 3×22 mm
 2× Ejector pins
 The best selling four dimensions in a set

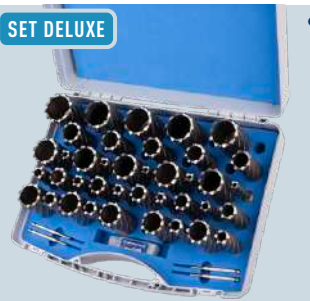


SET PROFI PLUS • 20 2005
 Ø 2×12, 2×14, 2×16, 2×18, 2×20, 2×22 mm
 2× Ejector pins
 BESTSELLER up to Ø 22 mm



SET PROFI INDIVIDUAL • 20 1132
 Empty for max. 12 annular cutters + 4 ejector pins.
 Maximum possible Ø 40 mm. We also compile your desired set on request.

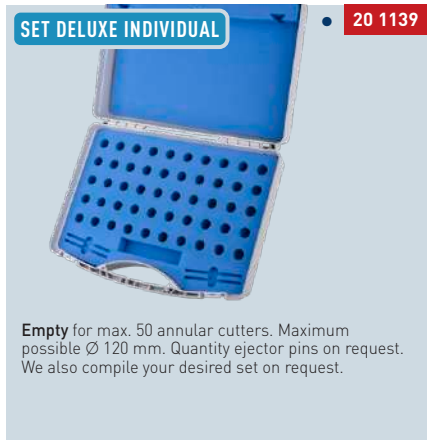
39/50 Pieces



SET DELUXE • 20 1153
 The hole range 12–50 mm in 1.0 mm steps (39 pieces)
 6× Ejector pins



SET DELUXE PLUS • 20 2006
 Ø 4×12, 2×13, 4×14, 2×15, 4×16, 2×17, 4×18, 2×19, 4×20, 4×22, 2×23, 2×24, 2×25, 4×26, 2×27, 2×28, 2×30, 2×32 mm
 6× Ejector pins
 BESTSELLER up to Ø 32 mm



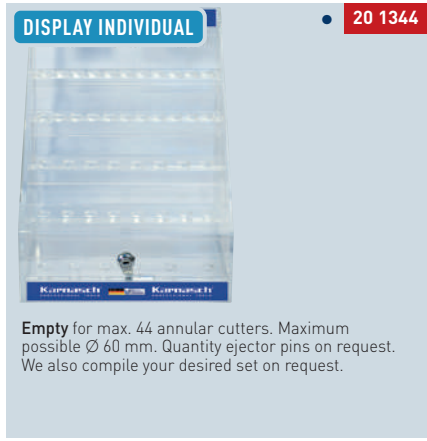
SET DELUXE INDIVIDUAL • 20 1139
 Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
 Ideal as showcase and small warehouse. All current sizes directly visible and available.



DISPLAY • 20 1158
 Ø 2×12, 2×13, 2×14, 2×15, 2×16, 2×17, 2×18, 2×19, 2×20, 2×21, 2×22, 2×23, 2×24, 2×25, 2×26, 2×27, 2×28, 2×30, 2×32, 1×33, 1×35, 1×36, 1×40, 1×45, 1×50 mm
 6× Ejector pins
 BESTSELLER up to Ø 50 mm



DISPLAY INDIVIDUAL • 20 1344
 Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

6 Pieces

SET BASIC • 20 2007



Ø 2×14, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1475



Ø 14, 16, 18, 20, 22, 26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 2008



Ø 4×14, 4×18, 4×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET PROFI PLUS • 20 2009



Ø 2×14, 2×16, 2×18, 2×20, 2×22, 2×26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm


SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

SET DELUXE • 20 1483



The hole range 12-50 mm in 1.0 mm steps (39 pieces)
6× Ejector pins

SET DELUXE PLUS • 20 2010



Ø 4×12, 2×13, 4×14, 2×15, 4×16, 2×17, 4×18, 2×19, 4×20, 2×21, 4×22, 2×24, 2×25, 4×26, 2×27, 2×28, 2×30, 2×32 mm
6× Ejector pins
BESTSELLER up to Ø 32 mm

SET DELUXE INDIVIDUAL • 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY • 20 1607



Ø 2×12, 2×13, 2×14, 2×15, 2×16, 2×17, 2×18, 2×19, 2×20, 2×21, 2×22, 2×23, 2×24, 2×25, 2×26, 2×27, 2×28, 2×30, 2×32, 1×33, 1×35, 1×36, 1×40, 1×45, 1×50 mm
6× Ejector pins
BESTSELLER up to Ø 50 mm

DISPLAY INDIVIDUAL • 20 1344



Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.



1



2



3



4



5



6



7



8



9



10



6 Pieces

SET BASIC • 20 1918

Ø 2×18, 2×22, 2×26 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1329

Ø 12, 14, 16, 18, 22, 26 mm
4× Ejector pins
BESTSELLER up to Ø 26 mm

SET INDIVIDUAL • 20 1138

Empty for max. 6 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1919

Ø 3×14, 3×18, 3×22, 3×26 mm
4× Ejector pins
The best selling four dimensions in a set

SET PROFI PLUS • 20 1921

Ø 2×12, 2×14, 2×16, 3×18, 2×22, 2×26 mm
4× Ejector pins
BESTSELLER up to Ø 26 mm

SET PROFI INDIVIDUAL • 20 1132

Empty for max. 12 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

SET DELUXE INDIVIDUAL • 20 1139

Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY INDIVIDUAL • 20 1344

Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

6 Pieces

SET BASIC • 20 1922



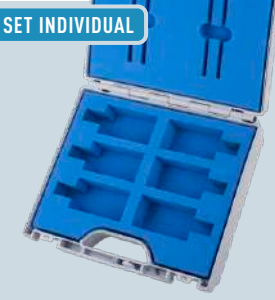
Ø 2×14, 2×18, 2×22 mm
4× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1338



Ø 12, 14, 16, 18, 22, 26 mm
4× Ejector pins
BESTSELLER up to Ø 26 mm

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1923



Ø 3×14, 3×18, 3×22, 3×26 mm
4× Ejector pins
The best selling four dimensions in a set

SET PROFI PLUS • 20 1924



Ø 2×14, 2×16, 2×18, 2×20, 2×22, 2×26 mm
4× Ejector pins
BESTSELLER up to Ø 26 mm

SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

Empty space for 39/50 pieces.

Empty space for 39/50 pieces.

SET DELUXE INDIVIDUAL • 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

Empty space for 44 pieces.

DISPLAY INDIVIDUAL • 20 1344



Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

6 Pieces

SET BASIC • 20 1926



Ø 2×5/8", 2×13/16", 2×15/16"
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1478



Ø 9/16", 5/8", 3/4", 13/16", 15/16", 1.1/16"
2× Ejector pins
BESTSELLER up to Ø 1.1/16"

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1927



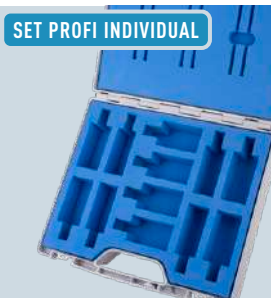
Ø 4×5/8", 4×13/16", 4×15/16"
2× Ejector pins
The best selling three dimensions in a set

SET PROFI PLUS • 20 1928



Ø 2×9/16", 2×5/8", 2×3/4", 2×13/16", 2×15/16", 2×1.1/16"
2× Ejector pins
BESTSELLER up to Ø 1.1/16"


SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

SET DELUXE INDIVIDUAL • 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

DISPLAY INDIVIDUAL • 20 1344



Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

6 Pieces

SET BASIC • 20 1929



Ø 2× 13/16", 2× 15/16", 2× 1.1/16"
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1479



Ø 5/8", 11/16", 3/4", 13/16", 15/16", 1.1/16"
2× Ejector pins
BESTSELLER up to Ø 1.1/16"

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1931



Ø 4× 13/16", 4× 15/16", 4× 1.1/16"
2× Ejector pins
The best selling three dimensions in a set

SET PROFI PLUS • 20 1932



Ø 2× 5/8", 2× 11/16", 2× 3/4", 2× 13/16", 2× 15/16", 2× 1.1/16"
2× Ejector pins
BESTSELLER up to Ø 1.1/16"

SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

Empty space for 39/50 pieces.

Empty space for 39/50 pieces.

SET DELUXE INDIVIDUAL • 20 1139




Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

Empty space for 44 pieces.

DISPLAY INDIVIDUAL • 20 1344



Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

6 Pieces

SET BASIC • 20 1958

Ø 2×16, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1348

Ø 14, 16, 18, 20, 22, 26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET INDIVIDUAL • 20 1138

Empty for max. 6 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1959

Ø 3×14, 3×18, 3×20, 3×22 mm
2× Ejector pins
The best selling four dimensions in a set

SET PROFI PLUS • 20 1960

Ø 2×14, 2×16, 2×18, 2×20, 2×22, 2×26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET PROFI INDIVIDUAL • 20 1132

Empty for max. 12 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

SET DELUXE INDIVIDUAL • 20 1139

Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

LOCKABLE ACRYLIC DISPLAY
Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY INDIVIDUAL • 20 1344

Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

6 Pieces

SET BASIC • 20 1961



Ø 2×14, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1349



Ø 14, 16, 18, 20, 22, 26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1962



Ø 3×14, 3×18, 3×20, 3×22 mm
2× Ejector pins
The best selling four dimensions in a set

SET PROFI PLUS • 20 1963



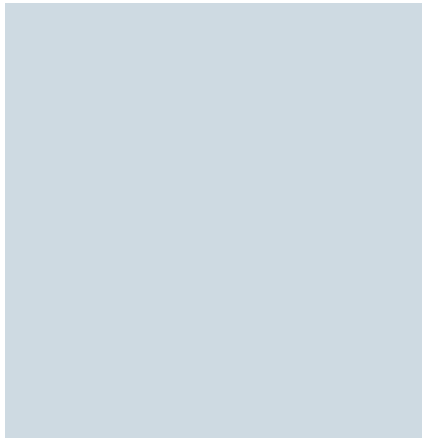
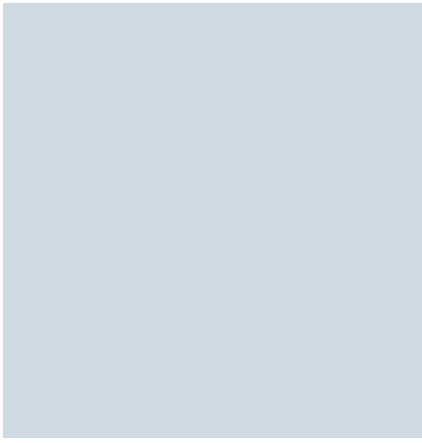
Ø 2×14, 2×16, 2×18, 2×20, 2×22, 2×26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces



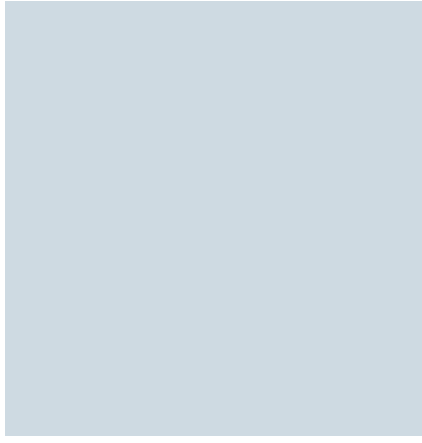
SET DELUXE INDIVIDUAL • 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.




DISPLAY INDIVIDUAL • 20 1344




Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

6 Pieces	 <p>SET BASIC • 20 1987</p>	 <p>SET BASIC PLUS • 20 1324</p>	 <p>SET INDIVIDUAL • 20 1138</p>
	<p>Ø 2×14, 2×18, 2×22 mm 2× Ejector pins The best selling three dimensions in a set</p>	<p>Ø 12, 14, 16, 18, 20, 22 mm 2× Ejector pins BESTSELLER up to Ø 22 mm</p>	<p>Empty for max. 6 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.</p>

12 Pieces	 <p>SET PROFI • 20 1988</p>	 <p>SET PROFI PLUS • 20 1989</p>	 <p>SET PROFI INDIVIDUAL • 20 1132</p>
	<p>Ø 4×14, 4×18, 4×22 mm 2× Ejector pins The best selling three dimensions in a set</p>	<p>Ø 2×12, 2×14, 2×16, 2×18, 2×20, 2×22 mm 2× Ejector pins BESTSELLER up to Ø 22 mm</p>	<p>Empty for max. 12 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.</p>

39/50 Pieces			 <p>SET DELUXE INDIVIDUAL • 20 1139</p>
			<p>Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.</p>

44 Pieces	<p>Lockable acrylic display Ideal as showcase and small warehouse. All current sizes directly visible and available.</p>		 <p>DISPLAY INDIVIDUAL • 20 1344</p>
			<p>Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.</p>

6 Pieces

SET BASIC • 20 1990



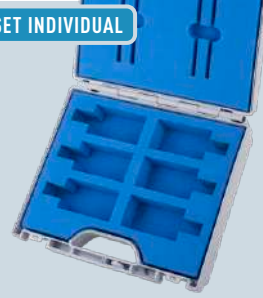
Ø 2×14, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1326



Ø 12, 14, 16, 18, 22, 26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1991



Ø 4×14, 4×18, 4×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET PROFI PLUS • 20 1992



Ø 2×12, 2×14, 2×16, 2×18, 2×22, 2×26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

Empty space for 39/50 pieces

Empty space for 39/50 pieces

SET DELUXE INDIVIDUAL • 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

Empty space for 44 pieces

DISPLAY INDIVIDUAL • 20 1344




Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.



- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

6 Pieces

SET BASIC • 20 1981



Ø 2×5/8", 2×13/16", 2×9/16"
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1476



Ø 9/16", 5/8", 11/16", 3/4", 13/16", 7/8"
2× Ejector pins
BESTSELLER up to Ø 7/8"

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1982



Ø 4×5/8", 4×13/16", 4×9/16"
2× Ejector pins
The best selling three dimensions in a set

SET PROFI PLUS • 20 1983



Ø 2×9/16", 2×5/8", 2×11/16", 2×3/4", 2×13/16", 2×7/8"
2× Ejector pins
BESTSELLER up to Ø 7/8"


SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces


SET DELUXE INDIVIDUAL • 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

DISPLAY INDIVIDUAL • 20 1344



Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

6 Pieces

SET BASIC



• 20 1984

Ø 2×5/8", 2×11/16", 2×13/16"
2× Ejector pins
The best selling three dimensions in a set

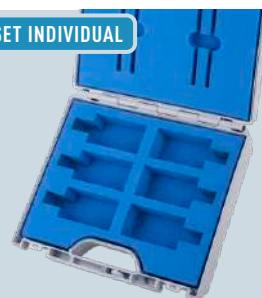
SET BASIC PLUS



• 20 1477

Ø 9/16", 5/8", 11/16", 3/4", 13/16", 7/8"
2× Ejector pins
BESTSELLER up to Ø 7/8"

SET INDIVIDUAL



• 20 1138

Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI



• 20 1985

Ø 3×5/8", 3×11/16", 3×13/16", 3×7/8"
2× Ejector pins
The best selling four dimensions in a set

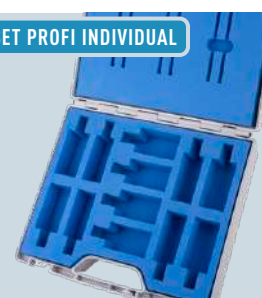
SET PROFI PLUS



• 20 1986

Ø 2×9/16", 2×5/8", 2×11/16", 2×3/4", 2×13/16", 2×7/8"
2× Ejector pins
BESTSELLER up to Ø 7/8"

SET PROFI INDIVIDUAL



• 20 1132

Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

SET DELUXE INDIVIDUAL



• 20 1139

Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY INDIVIDUAL



• 20 1344

Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

1



2



3



4



5



6



7



8



9



10

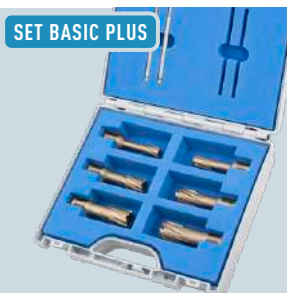


6 Pieces



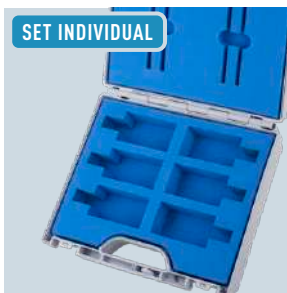
• 20 1933

Ø 2×14, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set



• 20 1337

Ø 14, 16, 18, 20, 22, 26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm



• 20 1138

Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces



• 20 1934

Ø 4×14, 4×18, 4×22 mm
2× Ejector pins
The best selling three dimensions in a set



• 20 1935

Ø 2×14, 2×16, 2×18, 2×20, 2×22, 2×26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm



• 20 1132

Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

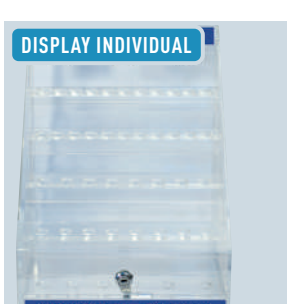


• 20 1139

Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.



• 20 1344

Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

6
Pieces

SET BASIC

• 20 1941



Ø 2×14, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS

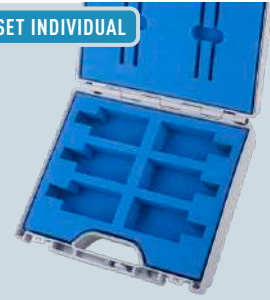
• 20 1354



Ø 12, 14, 18, 20, 22, 26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET INDIVIDUAL

• 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12
Pieces

SET PROFI

• 20 1942



Ø 4×14, 4×18, 4×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET PROFI PLUS

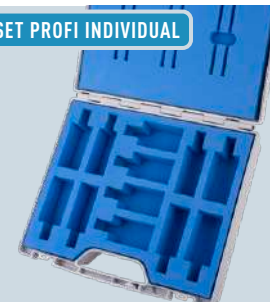
• 20 1943



Ø 2×12, 2×14, 2×18, 2×20, 2×22, 2×26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET PROFI INDIVIDUAL

• 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50
Pieces

SET DELUXE INDIVIDUAL

• 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44
Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY INDIVIDUAL

• 20 1344



Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

- 1
- 2
- 3
- 4
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- 6
- 7
- 8
- 9
- 10

- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

6 Pieces

SET BASIC • 20 1964



Ø 2×14, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1333



Ø 14, 16, 18, 20, 22, 26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

12 Pieces

SET PROFI • 20 1965



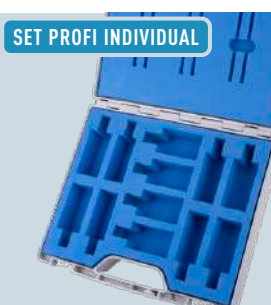
Ø 3×14, 3×18, 3×20, 3×22 mm
2× Ejector pins
The best selling four dimensions in a set

SET PROFI PLUS • 20 1966



Ø 2×14, 2×16, 2×18, 2×20, 2×22, 2×26 mm
2× Ejector pins
BESTSELLER up to Ø 26 mm

SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins. Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50 Pieces

Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

SET DELUXE INDIVIDUAL • 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44 Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.

DISPLAY INDIVIDUAL • 20 1344



Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

6
Pieces

SET BASIC • 20 1999



Ø 2×14, 2×18, 2×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET BASIC PLUS • 20 1335



Ø 12, 14, 16, 18, 20, 22 mm
2× Ejector pins
BESTSELLER up to Ø 22 mm

SET INDIVIDUAL • 20 1138



Empty for max. 6 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

12
Pieces

SET PROFI • 20 2001



Ø 4×14, 4×18, 4×22 mm
2× Ejector pins
The best selling three dimensions in a set

SET PROFI PLUS • 20 2002



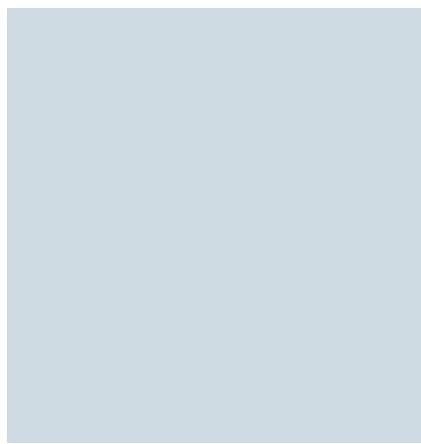
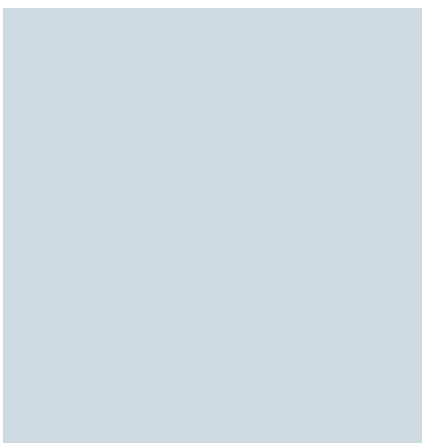
Ø 2×12, 2×14, 2×16, 2×18, 2×20, 2×22 mm
2× Ejector pins
BESTSELLER up to Ø 22 mm

SET PROFI INDIVIDUAL • 20 1132



Empty for max. 12 annular cutters + 4 ejector pins.
Maximum possible Ø 40 mm. We also compile your desired set on request.

39/50
Pieces



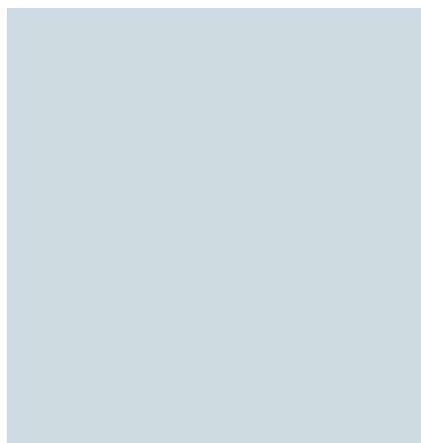
SET DELUXE INDIVIDUAL • 20 1139



Empty for max. 50 annular cutters. Maximum possible Ø 120 mm. Quantity ejector pins on request. We also compile your desired set on request.

44
Pieces

Lockable acrylic display
Ideal as showcase and small warehouse. All current sizes directly visible and available.



DISPLAY INDIVIDUAL • 20 1344



Empty for max. 44 annular cutters. Maximum possible Ø 60 mm. Quantity ejector pins on request. We also compile your desired set on request.

- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 
- 9 
- 10 

