

GÜHRING

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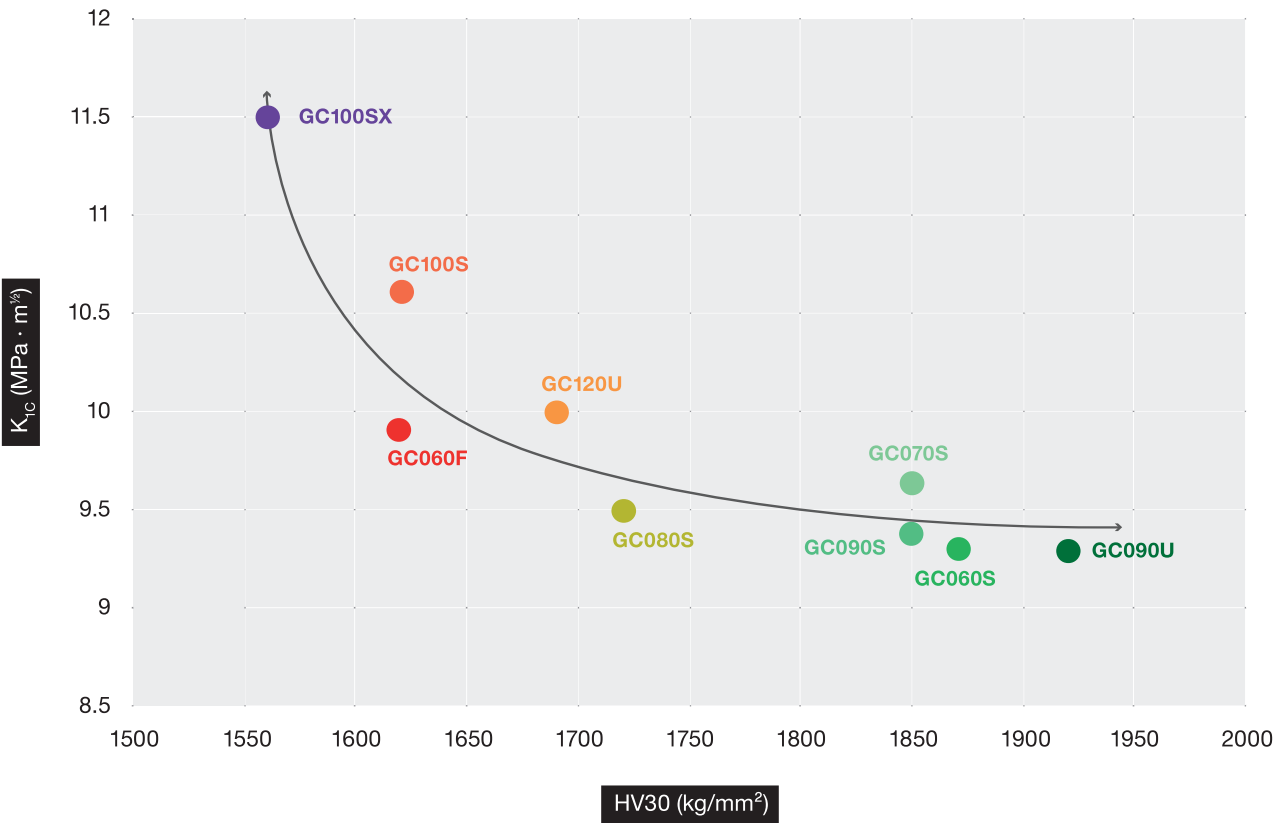
Bars and stepped blanks
Ø 1 mm – 40 mm

Technical data

										
Type		GC100SX	GC060F	GC100S	GC120U	GC080S	GC070S	GC090S	GC060S	GC090U
Classification		K20–K40	K15–K20	K20–K40	K20–K30	K20–K30	K10	K10	K05–K10	K05–K10
Co	%	10.0	6.0	10.0	12.0	8.0	7.0	9.0	6.0	9.0
WC including doping	%	90.0	94.0	90.0	88.0	92.0	93.0	91.0	94.0	91.0
Hardness HV30 (±50)	kg/mm²	1560	1620	1620	1690	1720	1850	1850	1870	1920
Fracture toughness K _{IC}	MPa·m ^{1/2}	11.5	9.9	10.6	10.0	9.5	9.6	9.4	9.3	9.3
Bending strength	N/mm²	3700	3200	4100	4000	3800	3500	3800	3900	3800
Medium grain size	μm	0.5–0.8	0.8–1.3	0.5–0.8	0.2–0.5	0.5–0.8	0.5–0.8	0.5–0.8	0.5–0.8	0.2–0.5

Due to the dependence of the values measured for the critical intensity factor K_{IC} on the sample geometry and sample preparation, the measured values are only comparable with values determined under the same conditions. Valid porosity for all grades: A <02 / B 00 / C 00.

Fracture toughness vs. hardness





Applications

Type	GC100SX		GC060F		GC100S		GC120U		GC080S		GC070S		GC090S		GC060S		GC090U	
	GC100SX		GC060F		GC100S		GC120U		GC080S		GC070S		GC090S		GC060S		GC090U	
Drilling	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Milling	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Reaming	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Thread cutting	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Titanium alloys	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Nickel alloys	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Aluminium alloys	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Heat-resistant alloys	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
High-alloyed steels	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Stainless steels – austenitic	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Stainless steels – ferritic	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Grey cast iron	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Malleable cast iron	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Copper alloys	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Super alloys (Fe/Ni/Co/Ti-based)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hardened steels	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
GFK/GRP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Composite materials	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Plastics	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Non-ferrous metals	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Wood	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Graphite	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

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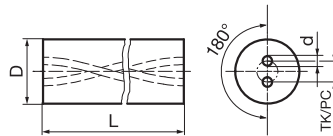
Rods, blank



Type	GC060S	GC090U	GC100S	GC100S	GC100SX	GC120U
Article no.	30000	30001	30002	30020	30003	30004
Overall length	330	330	330	415	330	330
D mm	Order no.	Order no.	Order no.	Order no.	Order no.	Order no.
1.200 0.30	30000 1.200	30001 1.200	30002 1.200			30004 1.200
1.700 0.30	30000 1.700	30001 1.700	30002 1.700			30004 1.700
2.200 0.30	30000 2.200	30001 2.200	30002 2.200			30004 2.200
2.700 0.30	30000 2.700	30001 2.700	30002 2.700			30004 2.700
3.200 0.30	30000 3.200	30001 3.200	30002 3.200		30003 3.200	30004 3.200
3.700 0.30	30000 3.700	30001 3.700	30002 3.700			30004 3.700
4.200 0.30	30000 4.200	30001 4.200	30002 4.200		30003 4.200	30004 4.200
4.700 0.30	30000 4.700	30001 4.700	30002 4.700		30003 4.700	30004 4.700
5.200 0.30	30000 5.200	30001 5.200	30002 5.200		30003 5.200	30004 5.200
5.700 0.30	30000 5.700		30002 5.700			30004 5.700
6.200 0.30	30000 6.200	30001 6.200	30002 6.200	30020 6.200	30003 6.200	30004 6.200
6.700 0.30	30000 6.700	30001 6.700	30002 6.700			30004 6.700
7.200 0.30	30000 7.200	30001 7.200	30002 7.200		30003 7.200	30004 7.200
7.700 0.30	30000 7.700		30002 7.700			30004 7.700
8.200 0.30	30000 8.200	30001 8.200	30002 8.200	30020 8.200	30003 8.200	30004 8.200
8.700 0.30	30000 8.700		30002 8.700			30004 8.700
9.200 0.30	30000 9.200	30001 9.200	30002 9.200			30004 9.200
9.700 0.30	30000 9.700	30001 9.700	30002 9.700			30004 9.700
10.200 0.40	30000 10.200	30001 10.200	30002 10.200	30020 10.200	30003 10.200	30004 10.200
10.700 0.40	30000 10.700	30001 10.700	30002 10.700			30004 10.700
11.200 0.40	30000 11.200	30001 11.200	30002 11.200			30004 11.200
11.700 0.40	30000 11.700		30002 11.700			
12.200 0.50	30000 12.200	30001 12.200	30002 12.200	30020 12.200	30003 12.200	30004 12.200
12.700 0.50	30000 12.700		30002 12.700			30004 12.700
13.200 0.50	30000 13.200	30001 13.200	30002 13.200		30003 13.200	30004 13.200
13.700 0.50	30000 13.700	30001 13.700	30002 13.700			
14.200 0.60	30000 14.200	30001 14.200	30002 14.200	30020 14.200	30003 14.200	30004 14.200
14.700 0.60			30002 14.700			
15.200 0.60	30000 15.200	30001 15.200	30002 15.200			30004 15.200
15.700 0.60			30002 15.700			
16.200 0.60	30000 16.200	30001 16.200	30002 16.200	30020 16.200	30003 16.200	30004 16.200
16.700 0.60			30002 16.700			30004 16.700
17.200 0.60	30000 17.200	30001 17.200	30002 17.200			30004 17.200
17.700 0.60			30002 17.700			
18.200 0.60	30000 18.200	30001 18.200	30002 18.200	30020 18.200		30004 18.200
18.700 0.60			30002 18.700			30004 18.700
19.200 0.60	30000 19.200	30001 19.200	30002 19.200		30003 19.200	30004 19.200
19.700 0.60			30002 19.700			
20.200 0.60	30000 20.200	30001 20.200	30002 20.200	30020 20.200	30003 20.200	30004 20.200
20.700 0.60	30000 20.700		30002 20.700			30004 20.700
21.200 0.60	30000 21.200		30002 21.200			30004 21.200
22.200 0.60	30000 22.200	30001 22.200	30002 22.200			30004 22.200
23.200 0.60	30000 23.200		30002 23.200			30004 23.200
24.200 0.70	30000 24.200		30002 24.200			30004 24.200
25.200 0.70	30000 25.200	30001 25.200	30002 25.200	30020 25.200	30003 25.200	30004 25.200
25.700 0.50						30004 25.700
26.200 0.70	30000 26.200		30002 26.200			30004 26.200
27.200 0.70	30000 27.200		30002 27.200			
28.200 0.80	30000 28.200		30002 28.200			30004 28.200
29.200 0.80	30000 29.200		30002 29.200			
30.200 0.80	30000 30.200		30002 30.200	30020 30.200		30004 30.200
31.200 0.70	30000 31.200					
32.200 0.80	30000 32.200		30002 32.200	30020 32.200		30004 32.200
34.200 0.80			30002 34.200			
35.200 0.80			30002 35.200			
36.200 0.80			30002 36.200		30003 36.200	30004 36.200
38.200 0.80			30002 38.200			
40.200 0.80			30002 40.200			30004 40.200

**Rods, blank**

with 2 coolant ducts, 15° twist

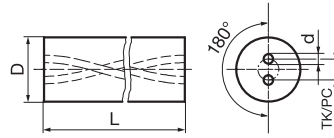


													Type
													GC100S
													Article no.
													30202
													Overall length
													330
													Order no.
D mm		Pitch circle mm			d mm		Centre offset mm			Pitch mm			
4.300	0.30	2.10	0.10	-0.10	0.60	0.10	-0.10	0.08	46.90	1.69	-1.59		30202 4.300
5.300	0.30	2.60	0.15	-0.15	0.70	0.10	-0.10	0.13	58.62	2.12	-1.98		30202 5.300
6.300	0.30	2.60		-0.40	0.70	0.10	-0.10	0.15	70.35	2.54	-2.38		30202 6.300
8.300	0.30	3.60		-0.40	1.25	0.15	-0.15	0.15	93.80	3.38	-3.17		30202 8.300
10.300	0.30	4.80		-0.60	1.40	0.15	-0.15	0.20	117.25	4.23	-3.96		30202 10.300
12.300	0.40	6.25		-0.80	1.55	0.15	-0.15	0.30	140.70	5.08	-4.76		30202 12.300
14.300	0.40	6.70		-0.80	1.90	0.20	-0.20	0.37	164.14	5.92	-5.55		30202 14.300
16.300	0.40	8.00		-0.80	2.10	0.25	-0.25	0.40	187.59	6.77	-6.34		30202 16.300
18.300	0.50	9.00		-0.80	2.30	0.25	-0.25	0.50	211.04	7.61	-7.13		30202 18.300
20.300	0.50	10.00		-1.00	2.50	0.30	-0.30	0.50	234.49	8.46	-7.93		30202 20.300
23.300	0.50	12.00		-1.00	2.50	0.30	-0.30	0.50	269.67	9.73	-9.12		30202 23.300
26.300	0.50	12.00		-1.00	2.50	0.30	-0.30	0.50	304.84	11.00	-10.31		30202 26.300



Rods, ground h6

with 2 coolant ducts, 15° twist

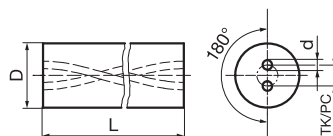


											Type
											GC100S
											Article no.
											30222
											Overall length
											330
											Order no.
D h6 mm	Pitch circle mm		d mm		Centre offset mm		Pitch mm				
6.000	2.60	-0.40	0.70	0.10	-0.10	0.15	70.35	2.54	-2.38		30222 6.000
8.000	3.60	-0.40	1.25	0.15	-0.15	0.15	93.80	3.38	-3.17		30222 8.000
10.000	4.80	-0.60	1.40	0.15	-0.15	0.20	117.25	4.23	-3.96		30222 10.000
12.000	6.25	-0.80	1.55	0.15	-0.15	0.30	140.70	5.08	-4.76		30222 12.000
14.000	6.70	-0.80	1.90	0.20	-0.20	0.37	164.14	5.92	-5.55		30222 14.000
16.000	8.00	-0.80	2.10	0.25	-0.25	0.40	187.59	6.77	-6.34		30222 16.000
18.000	9.00	-0.80	2.30	0.25	-0.25	0.50	211.04	7.61	-7.13		30222 18.000
20.000	10.00	-1.00	2.50	0.30	-0.30	0.50	234.49	8.46	-7.93		30222 20.000



Rods, blank

with 2 coolant ducts, 30° twist

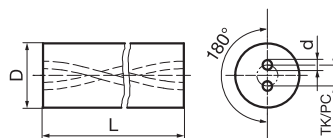


											Type	GC100S	GC100S
											Article no.	30232	30242
											Overall length	330	415
												Order no.	Order no.
D	Pitch circle				d	Centre offset	Pitch						
mm	mm				mm	mm	mm						
3.300	0.30	1.60	0.10	-0.10	0.40	0.10	-0.10	0.08	16.32	0.33	-0.32	30232 3.300	
3.800	0.30	1.80	0.10	-0.10	0.50	0.10	-0.10	0.09	19.04	0.39	-0.38	30232 3.800	
4.300	0.30	2.10	0.10	-0.10	0.60	0.10	-0.10	0.08	21.77	0.45	-0.43	30232 4.300	
4.800	0.30	2.30	0.10	-0.10	0.70	0.10	-0.10	0.08	24.49	0.50	-0.49	30232 4.800	
5.300	0.30	2.60	0.15	-0.15	0.70	0.10	-0.10	0.13	27.21	0.56	-0.54	30232 5.300	
5.800	0.30	2.60		-0.40	0.70	0.10	-0.10	0.14	29.93	0.61	-0.59	30232 5.800	
6.300	0.30	2.00		-0.20	0.80	0.10	-0.10	0.15	32.65	0.67	-0.65	30232 6.301	
6.300	0.30	2.60		-0.40	0.70	0.10	-0.10	0.15	32.65	0.67	-0.65	30232 6.300	30242 6.300
6.300	0.30	2.60		-0.40	0.90	0.10	-0.10	0.15	32.65	0.67	-0.65	30232 6.302	
6.800	0.30	3.50		-0.40	1.00	0.15	-0.15	0.15	35.37	0.72	-0.70	30232 6.800	
7.300	0.30	3.50		-0.40	1.00	0.15	-0.15	0.15	38.09	0.78	-0.76	30232 7.300	
7.800	0.30	3.50		-0.40	1.00	0.15	-0.15	0.15	40.81	0.84	-0.81	30232 7.800	
8.300	0.30	3.50		-0.40	0.90	0.10	-0.10	0.15	43.53	0.89	-0.86	30232 8.301	
8.300	0.30	3.60		-0.40	1.25	0.15	-0.15	0.15	43.53	0.89	-0.86	30232 8.300	30242 8.300
8.800	0.30	3.60		-0.40	1.25	0.15	-0.15	0.20	46.25	0.95	-0.92	30232 8.800	
9.300	0.30	4.80		-0.60	1.40	0.15	-0.15	0.20	48.97	1.00	-0.97	30232 9.300	
9.800	0.30	4.80		-0.60	1.40	0.15	-0.15	0.20	51.69	1.06	-1.03	30232 9.800	
10.300	0.30	4.80		-0.60	0.90	0.10	-0.10	0.20	54.41	1.11	-1.08	30232 10.301	
10.300	0.30	4.80		-0.60	1.40	0.15	-0.15	0.20	54.41	1.11	-1.08	30232 10.300	30242 10.300
10.800	0.30	4.80		-0.60	1.40	0.15	-0.15	0.28	57.13	1.17	-1.13	30232 10.800	
11.300	0.40	5.30		-0.80	1.40	0.15	-0.15	0.28	59.86	1.22	-1.19	30232 11.300	30242 11.300
11.800	0.30	5.80		-0.80	1.40	0.15	-0.15	0.30	62.58	1.28	-1.24	30232 11.800	
12.300	0.30	5.40		-0.80	1.50	0.15	-0.15	0.30	65.30	1.34	-1.30	30232 12.301	
12.300	0.40	6.25		-0.80	1.55	0.15	-0.15	0.30	65.30	1.34	-1.30	30232 12.300	30242 12.300
12.800	0.30	6.25		-0.80	1.55	0.15	-0.15	0.33	68.02	1.39	-1.35	30232 12.800	
13.300	0.30	6.50		-0.80	1.75	0.20	-0.20	0.34	70.74	1.45	-1.40	30232 13.300	
13.800	0.30	6.80		-0.80	1.75	0.20	-0.20	0.35	73.46	1.50	-1.46	30232 13.800	
14.300	0.40	6.70		-0.80	1.90	0.20	-0.20	0.37	76.18	1.56	-1.51	30232 14.300	30242 14.300
14.800	0.30	6.70		-0.80	1.90	0.20	-0.20	0.39	78.90	1.61	-1.57	30232 14.800	
15.300	0.30	7.40		-0.80	1.90	0.20	-0.20	0.40	81.62	1.67	-1.62	30232 15.300	
15.800	0.40	7.40		-0.80	1.90	0.20	-0.20	0.40	84.34	1.73	-1.67	30232 15.800	
16.300	0.40	8.00		-0.80	2.10	0.25	-0.25	0.40	87.06	1.78	-1.73	30232 16.300	30242 16.300
16.800	0.40	8.00		-0.80	2.10	0.25	-0.25	0.45	89.78	1.84	-1.78	30232 16.800	
17.300	0.40	8.00		-0.80	2.10	0.25	-0.25	0.47	92.50	1.89	-1.84	30232 17.300	
17.800	0.40	8.00		-0.80	2.10	0.25	-0.25	0.48	95.22	1.95	-1.89	30232 17.800	
18.300	0.50	9.00		-0.80	2.30	0.25	-0.25	0.50	97.95	2.00	-1.94	30232 18.300	30242 18.300
18.800	0.40	9.00		-0.80	2.30	0.25	-0.25	0.50	100.67	2.06	-2.00	30232 18.800	
19.300	0.40	9.00		-0.80	2.30	0.25	-0.25	0.50	103.39	2.12	-2.05	30232 19.300	
19.800	0.50	9.00		-0.80	2.30	0.25	-0.25	0.50	106.11	2.17	-2.11	30232 19.800	
20.300	0.50	10.00		-1.00	2.50	0.30	-0.30	0.50	108.83	2.23	-2.16	30232 20.300	30242 20.300
21.300	0.50	10.00		-1.00	2.50	0.30	-0.30	0.50	114.27	2.34	-2.27	30232 21.300	
22.300	0.50	10.00		-1.00	2.50	0.30	-0.30	0.50	119.71	2.45	-2.38	30232 22.300	
23.300	0.50	12.00		-1.00	2.50	0.30	-0.30	0.50	125.15	2.56	-2.48	30232 23.300	
24.300	0.50	12.00		-1.00	2.50	0.30	-0.30	0.50	130.59	2.67	-2.59	30232 24.300	
25.300	0.50	12.00		-1.00	2.50	0.30	-0.30	0.50	136.03	2.78	-2.70	30232 25.300	30242 25.300
26.300	0.50	12.00		-1.00	2.50	0.30	-0.30	0.50	141.48	2.90	-2.81	30232 26.300	
27.300	0.50	14.30		-1.20	2.50	0.30	-0.30	0.60	146.92	3.01	-2.92	30232 27.300	
28.300	0.50	14.80		-1.20	2.50	0.30	-0.30	0.60	152.36	3.12	-3.02	30232 28.300	
29.300	0.50	15.40		-1.20	2.50	0.30	-0.30	0.60	157.80	3.23	-3.13	30232 29.300	
30.300	0.50	16.00		-1.20	2.50	0.30	-0.30	0.70	163.24	3.34	-3.24	30232 30.300	
32.300	0.70	17.20		-1.20	3.00	0.30	-0.30	0.80	174.12	3.56	-3.46	30232 32.300	30242 32.300
33.300	0.70	17.80		-1.20	3.00	0.30	-0.30	0.80	179.57	3.67	-3.57	30232 33.300	



Rods, ground h6

with 2 coolant ducts, 30° twist

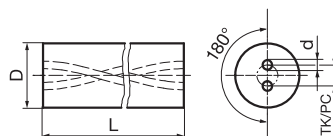


										Type
										GC100S
										Article no.
										30252
										Overall length
										330
										Order no.
D h6 mm	Pitch circle mm		d mm			Centre offset mm		Pitch mm		
6.000	2.60	-0.40	0.70	0.10	-0.10	0.15	32.65	0.67	-0.65	30252 6.000
7.000	3.50	-0.40	1.00	0.15	-0.15	0.15	38.09	0.78	-0.76	30252 7.000
8.000	3.60	-0.40	1.25	0.15	-0.15	0.15	43.53	0.89	-0.86	30252 8.000
9.000	4.80	-0.60	1.40	0.15	-0.15	0.20	48.97	1.00	-0.97	30252 9.000
10.000	4.80	-0.60	1.40	0.15	-0.15	0.20	54.41	1.11	-1.08	30252 10.000
11.000	5.30	-0.80	1.40	0.15	-0.15	0.28	59.86	1.22	-1.19	30252 11.000
12.000	6.25	-0.80	1.55	0.15	-0.15	0.30	65.30	1.34	-1.30	30252 12.000
13.000	6.50	-0.80	1.75	0.20	-0.20	0.34	70.74	1.45	-1.40	30252 13.000
14.000	6.70	-0.80	1.90	0.20	-0.20	0.37	76.18	1.56	-1.51	30252 14.000
15.000	7.40	-0.80	1.90	0.20	-0.20	0.40	81.62	1.67	-1.62	30252 15.000
16.000	8.00	-0.80	2.10	0.25	-0.25	0.40	87.06	1.78	-1.73	30252 16.000
17.000	8.00	-0.80	2.10	0.25	-0.25	0.47	92.50	1.89	-1.84	30252 17.000
18.000	9.00	-0.80	2.30	0.25	-0.25	0.50	97.95	2.00	-1.94	30252 18.000
20.000	10.00	-1.00	2.50	0.30	-0.30	0.50	108.83	2.23	-2.16	30252 20.000
21.000	10.00	-1.00	2.50	0.30	-0.30	0.50	114.27	2.34	-2.27	30252 21.000
22.000	10.00	-1.00	2.50	0.30	-0.30	0.50	119.71	2.45	-2.38	30252 22.000
24.000	12.80	-1.00	2.00	0.30	-0.30	0.50	130.59	2.67	-2.59	30252 24.000
25.000	12.00	-1.00	2.50	0.30	-0.30	0.50	136.03	2.78	-2.70	30252 25.000
26.000	12.00	-1.00	2.50	0.30	-0.30	0.50	141.48	2.90	-2.81	30252 26.000
28.000	14.80	-1.20	2.50	0.30	-0.30	0.60	152.36	3.12	-3.02	30252 28.000
30.000	16.00	-1.20	2.50	0.30	-0.30	0.70	163.24	3.34	-3.24	30252 30.000
32.000	17.20	-1.20	3.00	0.30	-0.30	0.80	174.12	3.56	-3.46	30252 32.000



Rods, blank

with 2 coolant ducts, 40° twist

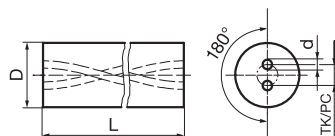


											Type	GC100S	GC100S
											Article no.	30272	30282
											Overall length	330	415
												Order no.	Order no.
D		Pitch circle			d	Centre offset		Pitch					
mm		mm			mm	mm		mm					
6.300	0.30	1.30	-0.20	0.30	0.05	-0.05	0.10	22.46	0.40	-0.39		30272 6.301	
6.300	0.30	1.40	-0.20	0.40	0.05	-0.05	0.15	22.46	0.40	-0.39		30272 6.302	
6.300	0.30	2.20	-0.40	0.50	0.15	-0.15	0.15	22.46	0.40	-0.39		30272 6.300	
6.800	0.30	2.30	-0.40	0.50	0.15	-0.15	0.15	24.34	0.44	-0.43		30272 6.800	
7.300	0.30	2.40	-0.40	0.65	0.15	-0.15	0.15	26.21	0.47	-0.46		30272 7.300	
7.800	0.30	2.50	-0.40	0.65	0.15	-0.15	0.15	28.08	0.50	-0.49		30272 7.800	
8.300	0.30	1.70	-0.20	0.40	0.05	-0.05	0.10	29.95	0.54	-0.53		30272 8.301	
8.300	0.30	2.70	-0.60	0.65	0.15	-0.15	0.15	29.95	0.54	-0.53		30272 8.300	
8.800	0.30	2.90	-0.60	0.65	0.15	-0.15	0.20	31.82	0.57	-0.56		30272 8.800	
9.300	0.30	3.20	-0.60	0.75	0.15	-0.15	0.20	33.70	0.60	-0.59		30272 9.300	
9.800	0.30	3.50	-0.60	0.75	0.15	-0.15	0.20	35.57	0.64	-0.62		30272 9.800	
10.300	0.40	2.10	-0.20	0.50	0.10	-0.10	0.20	37.44	0.67	-0.66		30272 10.301	
10.300	0.40	3.00	-0.40	1.00	0.20	-0.20	0.20	37.44	0.67	-0.66		30272 10.302	
10.300	0.40	3.50	-0.80	0.80	0.15	-0.15	0.20	37.44	0.67	-0.66		30272 10.300	30282 10.300
10.800	0.40	3.50	-0.80	0.80	0.15	-0.15	0.28	39.31	0.70	-0.69		30272 10.800	
11.300	0.40	3.70	-0.80	0.80	0.15	-0.15	0.28	41.18	0.74	-0.72		30272 11.300	
11.800	0.40	4.00	-0.80	0.85	0.15	-0.15	0.30	43.06	0.77	-0.76		30272 11.800	
12.300	0.40	2.50	-0.40	0.60	0.10	-0.10	0.20	44.93	0.80	-0.79		30272 12.301	
12.300	0.40	4.20	-0.80	0.90	0.20	-0.20	0.30	44.93	0.80	-0.79		30272 12.300	30282 12.300
12.800	0.40	4.35	-0.80	0.90	0.20	-0.20	0.33	46.80	0.84	-0.82		30272 12.800	
13.300	0.40	4.40	-0.80	0.90	0.20	-0.20	0.34	48.67	0.87	-0.85		30272 13.300	
14.300	0.40	2.90	-0.40	0.70	0.10	-0.10	0.20	52.42	0.94	-0.92		30272 14.301	
14.300	0.40	4.70	-0.80	1.00	0.20	-0.20	0.37	52.42	0.94	-0.92		30272 14.300	30282 14.300
14.800	0.40	4.90	-0.80	1.10	0.20	-0.20	0.39	54.29	0.97	-0.95		30272 14.800	
15.300	0.50	5.10	-0.80	1.10	0.20	-0.20	0.40	56.16	1.01	-0.99		30272 15.300	
16.300	0.50	3.30	-0.40	0.80	0.10	-0.10	0.20	59.90	1.07	-1.05		30272 16.301	
16.300	0.50	5.50	-0.80	1.20	0.20	-0.20	0.40	59.90	1.07	-1.05		30272 16.300	30282 16.300
16.800	0.50	5.75	-0.80	1.20	0.20	-0.20	0.45	61.78	1.11	-1.08		30272 16.800	
17.300	0.50	5.90	-0.80	1.20	0.25	-0.25	0.47	63.65	1.14	-1.12		30272 17.300	
18.300	0.50	3.70	-0.40	0.90	0.15	-0.15	0.20	67.39	1.21	-1.18		30272 18.301	
18.300	0.50	6.30	-0.80	1.40	0.25	-0.25	0.50	67.39	1.21	-1.18		30272 18.300	30282 18.300
19.300	0.50	6.70	-1.00	1.40	0.25	-0.25	0.50	71.14	1.27	-1.25		30272 19.300	
20.300	0.50	4.10	-0.40	1.00	0.15	-0.15	0.20	74.88	1.34	-1.31		30272 20.301	
20.300	0.50	7.10	-1.00	1.50	0.25	-0.25	0.50	74.88	1.34	-1.31		30272 20.300	30282 20.300
21.300	0.50	7.40	-1.00	1.50	0.25	-0.25	0.50	78.62	1.41	-1.38		30272 21.300	
22.300	0.50	7.70	-1.00	1.70	0.25	-0.25	0.50	82.37	1.48	-1.44		30272 22.300	
24.300	0.50	8.00	-1.00	1.75	0.25	-0.25	0.50	89.86	1.61	-1.58		30272 24.300	
25.300	0.50	5.10	-0.60	1.30	0.15	-0.15	0.20	93.60	1.68	-1.64		30272 25.301	
25.300	0.50	8.10	-1.00	1.75	0.25	-0.25	0.50	93.60	1.68	-1.64		30272 25.300	30282 25.300
26.300	0.50	8.20	-1.00	1.75	0.25	-0.25	0.50	97.34	1.74	-1.71		30272 26.300	
28.300	0.50	9.00	-1.20	2.00	0.30	-0.30	0.50	104.83	1.88	-1.84		30272 28.300	
30.300	0.50	10.00	-1.20	2.00	0.30	-0.30	0.50	112.32	2.01	-1.97		30272 30.300	
32.300	0.50	6.50	-0.80	1.60	0.20	-0.20	0.25	119.81	2.15	-2.10		30272 32.301	
32.300	0.50	11.00	-1.20	2.00	0.30	-0.30	0.50	119.81	2.15	-2.10		30272 32.300	30282 32.300



Rods, ground h6

with 2 coolant ducts, 40° twist

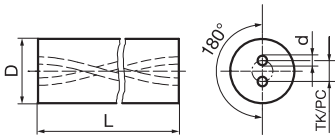


										Type
										Article no.
										Overall length
										GC100S
										30292
										330.000
										Order no.
D h6 mm	Pitch circle mm		d mm		Centre offset mm		Pitch mm			
6.000	1.30	-0.20	0.30	0.05	-0.05	0.10	22.46	0.40	-0.39	30292 6.001
6.000	1.40	-0.20	0.40	0.05	-0.05	0.15	22.46	0.40	-0.39	30292 6.002
6.000	2.20	-0.40	0.50	0.15	-0.15	0.15	22.46	0.40	-0.39	30292 6.000
7.000	2.40	-0.40	0.65	0.15	-0.15	0.15	26.21	0.47	-0.46	30292 7.000
8.000	1.70	-0.20	0.40	0.05	-0.05	0.10	29.95	0.54	-0.53	30292 8.001
8.000	2.70	-0.60	0.65	0.15	-0.15	0.15	29.95	0.54	-0.53	30292 8.000
9.000	3.20	-0.60	0.75	0.15	-0.15	0.20	33.70	0.60	-0.59	30292 9.000
10.000	2.10	-0.20	0.50	0.10	-0.10	0.20	37.44	0.67	-0.66	30292 10.001
10.000	3.50	-0.80	0.80	0.15	-0.15	0.20	37.44	0.67	-0.66	30292 10.000
11.000	3.70	-0.80	0.80	0.15	-0.15	0.28	41.18	0.74	-0.72	30292 11.000
12.000	2.50	-0.40	0.60	0.10	-0.10	0.20	44.93	0.80	-0.79	30292 12.001
12.000	4.20	-0.80	0.90	0.20	-0.20	0.30	44.93	0.80	-0.79	30292 12.000
13.000	4.40	-0.80	0.90	0.20	-0.20	0.34	48.67	0.87	-0.85	30292 13.000
14.000	2.90	-0.40	0.70	0.10	-0.10	0.20	52.42	0.94	-0.92	30292 14.001
14.000	4.70	-0.80	1.00	0.20	-0.20	0.37	52.42	0.94	-0.92	30292 14.000
15.000	5.10	-0.80	1.10	0.20	-0.20	0.40	56.16	1.01	-0.99	30292 15.000
16.000	3.30	-0.40	0.80	0.10	-0.10	0.20	59.90	1.07	-1.05	30292 16.001
16.000	5.50	-0.80	1.20	0.20	-0.20	0.47	59.90	1.07	-1.05	30292 16.000
18.000	3.70	-0.40	0.90	0.15	-0.15	0.20	67.39	1.21	-1.18	30292 18.001
18.000	6.30	-0.80	1.40	0.25	-0.25	0.50	67.39	1.21	-1.18	30292 18.000
20.000	4.10	-0.40	1.00	0.15	-0.15	0.20	74.88	1.34	-1.31	30292 20.001
20.000	7.10	-1.00	1.50	0.25	-0.25	0.50	74.88	1.34	-1.31	30292 20.000
22.000	7.70	-1.00	1.70	0.25	-0.25	0.50	82.37	1.48	-1.44	30292 22.000
25.000	5.10	-0.60	1.30	0.15	-0.15	0.20	93.60	1.68	-1.64	30292 25.001
25.000	8.10	-1.00	1.75	0.25	-0.25	0.50	93.60	1.68	-1.64	30292 25.000
26.000	8.20	-1.00	1.75	0.25	-0.25	0.50	97.34	1.74	-1.71	30292 26.000



Rods, blank

with 2 coolant ducts, micro-twist



												Type
												Article no.
												Overall length
												GC100S
												30712
												330
												Order no.
D mm		Pitch circle mm				d mm		Centre offset mm		Pitch mm		
4.300	0.30	0.50	0.10	-0.10	0.23	0.05	-0.05	0.05	10.79	0.20	-0.20	30712 4.125
4.300	0.30	0.80	0.10	-0.10	0.23	0.05	-0.05	0.05	11.12	0.20	-0.20	30712 4.165
4.300	0.30	1.00	0.20	-0.20	0.30	0.05	-0.05	0.05	10.61	0.20	-0.20	30712 4.195
6.300	0.30	1.00	0.20	-0.20	0.45	0.05	-0.05	0.05	12.79	0.30	-0.30	30712 6.225
6.300	0.30	1.20	0.20	-0.20	0.50	0.06	-0.06	0.05	15.24	0.30	-0.30	30712 6.275
6.300	0.30	1.50	0.20	-0.20	0.55	0.07	-0.07	0.05	17.68	0.30	-0.30	30712 6.325
6.300	0.30	1.70	0.20	-0.20	0.60	0.08	-0.08	0.05	20.41	0.30	-0.30	30712 6.375
6.300	0.30	2.00	0.20	-0.20	0.70	0.10	-0.10	0.05	23.13	0.30	-0.30	30712 6.425
6.300	0.30	2.30	0.20	-0.20	0.80	0.10	-0.10	0.05	25.85	0.30	-0.30	30712 6.475
6.300	0.30	2.60	0.20	-0.20	0.90	0.10	-0.10	0.05	28.57	0.30	-0.30	30712 6.525
6.300	0.30	2.80	0.20	-0.20	1.00	0.10	-0.10	0.05	31.29	0.30	-0.30	30712 6.575