

## Technical Information

### SUMMARY OF TC-GRADES FOR COLD ROLLING

Grade	ISO	%	%	%	%	Structure	Density g/cm <sup>3</sup>	Hardness HV30
	(DIN)	WC	Co	Ni	Other carbides			
<b>TC-Structure - very fine</b>								
H05	K05 - K10	94,0	6,0	-	-	very fine	14,90	1775
HF7	K05 - K10	92,7	7,0	-	0,3	very fine	14,79	1675
HF10	K20 - K30	89,5	10,0	-	0,5	very fine	14,46	1555
HF13	K30 - K40	86,4	13,0	-	0,6	very fine	14,16	1455
<b>TC-Structure - fine and medium</b>								
H10	G10/K10 - K20	93,8	6,0	-	0,2	fine	14,96	1575
GJ6	G10/K20	94,0	6,0	-	-	medium	14,96	1405
GJ9	G15/K30	91,0	9,0	-	-	medium	14,61	1275
GJ11	G20/K40	88,8	11,2	-	-	medium	14,43	1200
GJ15	G30	85,0	15,0	-	-	medium	14,03	1095
<b>TC-Structure - medium/coarse and coarse</b>								
GH13	B40	87,0	13,0	-	-	coarse	14,23	1100
GH20	G40	80,0	20,0	-	-	medium/coarse	13,55	940
GH25	G50	75,0	25,0	-	-	medium/coarse	13,10	825
<b>TC with increased chemical resistance - structure - fine and medium</b>								
N8	-	90,9	-	8,0	1,1	fine	14,65	1370
MJ11	-	88,9	6,2	3,8	1,1	medium	14,40	1200

# Tools for cold rolling



Standard dimensions  
Special products according to customer request  
TC-grade variants

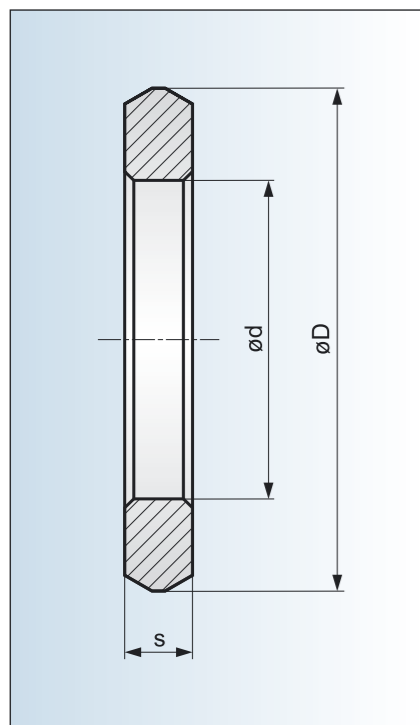
**TOOLS FOR WIRE  
AND TUBE COLD ROLLING**



Pramet Tools, s.r.o., Unicovska 2, CZ - 787 53 Sumperk, Czech Republic  
Phone: +420 / 583 381 111, 583 381 541-6, Fax: +420 / 583 381 549, E-mail: pramet.info@pramet.com

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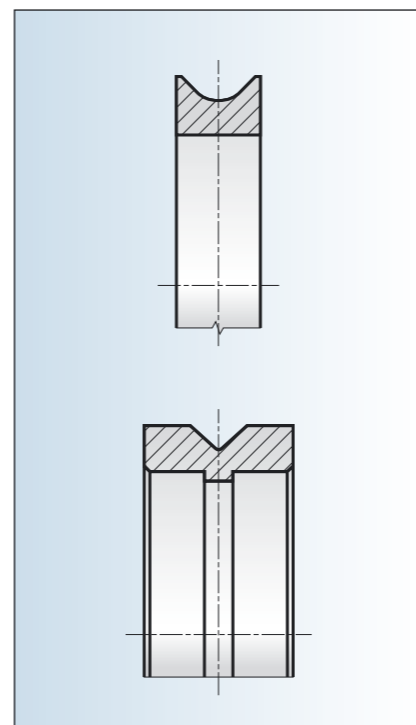


STANDARD DIMENSIONS OF ROLLING RINGS:

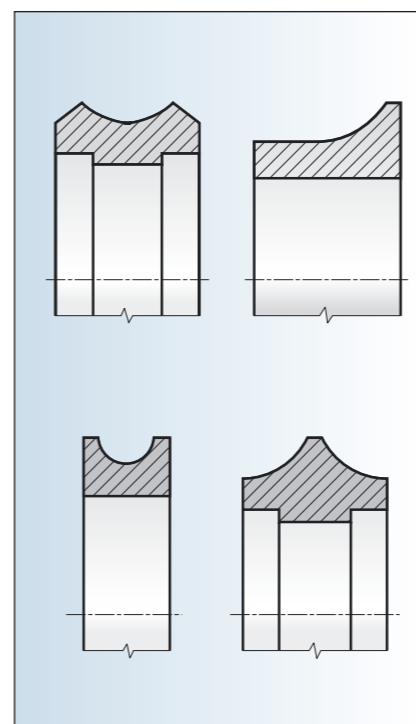
ØD	Variants Ød		Variants s	
	[mm]	[mm]	[mm]	[mm]
75	55	-	15	-
90	65	-	15	-
100	65	-	15	20
110	82	-	15	20
125	82	-	15	20
140	82	90	15	20
150	90	110	15	20
190	90	110	15	20

Technical Information

- + Rolling rings are usually delivered with ground dimensions Ød and s.
- + Periphery shape of rings according to customer specification.
- + Possible to supply completely ground rings, with smooth round slot only, design of slot according to customer specification.
- + Standard TC-grades are GJ15 or GH13, alternative TC-grade according to agreement (see summary of TC-grades).
- + Other dimensions of rings according to customer request.
- + Maximum external diameter (ØD) 250 mm.



Rings and Rolls for Tube Rolling and Special Rings for Wire Rolling



Technical Information

- + This assortment of products are delivered according to customer request only, made as:
  - ground dimensions, usually internal diameter and faces
  - sintered with allowance for grinding
- + Possible to supply some types of these products completely ground, according to customer specification.
- + Maximum external diameter (ØD) 250 mm.
- + Standard TC-grades are GJ11 and GJ15, alternative TC-grade according to agreement. Possibility of using TC-grade with increased chemical resistance (see summary of TC-grades).