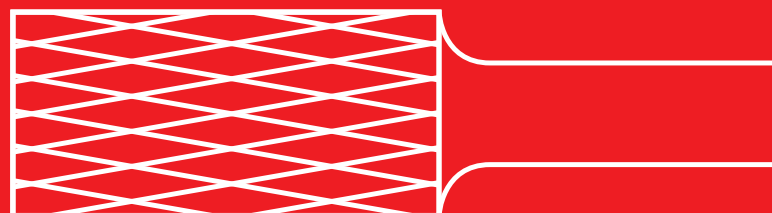


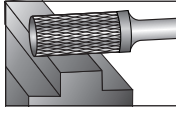


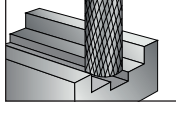

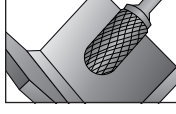

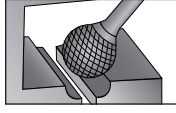
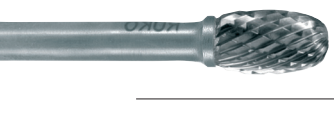
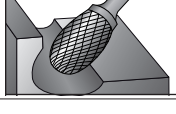

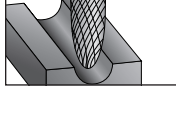

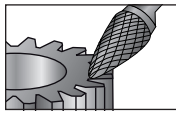
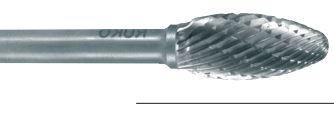
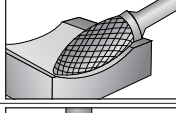

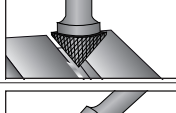

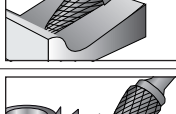
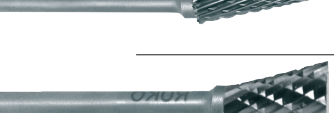
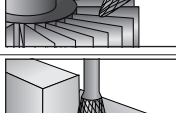

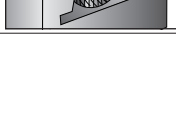


ROTARY BURRS

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Type and applications overview

	Tip	Application	Description	Ø mm	Item no.	Page/s
			Shape A cylinder (ZYA) – without end tothing	3,0 – 16,0	116 xxx TC 116 xxx	228
			Shape B cylinder (ZYAS) with end tothing	3,0 – 16,0 6,0 / 12,0	116 xxx TC 116 xxx 116 xxx A	228
			Shape C oval (WRC)	3,0 – 16,0 6,0 / 12,0	116 xxx TC 116 xxx 116 xxx A	229
			Shape D ball type (KUD)	3,0 – 16,0 6,0 / 12,0	116 xxx TC 116 xxx 116 xxx A	229
			Shape E tear drop (TRE)	3,0 – 16,0	116 xxx	230
			Shape F ball nose tree (RBF)	3,0 – 16,0 6,0 / 12,0	116 xxx TC 116 xxx 116 xxx A	230
			Shape G tree (SPG)	3,0 – 16,0 6,0 / 12,0	116 xxx TC 116 xxx 116 xxx A	231
			Shape H flame (FLH)	3,0 – 16,0	116 xxx	231
			Shape K cone 90° (KSK)	3,0 – 16,0	116 xxx	232
			Shape L round cone (KEL)	3,0 – 16,0 6,0 / 10,0 / 12,0	116 xxx 116 xxx A	232
			Shape M cone (SKM)	6,0 – 16 3,0 – 16,0	116 xxx TC 116 xxx	233
			Shape N angle (WKN)	3,0 – 16,0	116 xxx	233

Structural steel < 900 N/mm ²	Inox < 1100 N/mm ²	High strength steel < 1300 N/mm ²	Brass	Bronze	Cast iron	Aluminium	Plastics
●	●	●	●		●		
●	●	●	●		●		
●	●	●	●		●		
●	●	●	●		●		
				●		●	○
●	●	●	●		●		
●	●	●	●		●		
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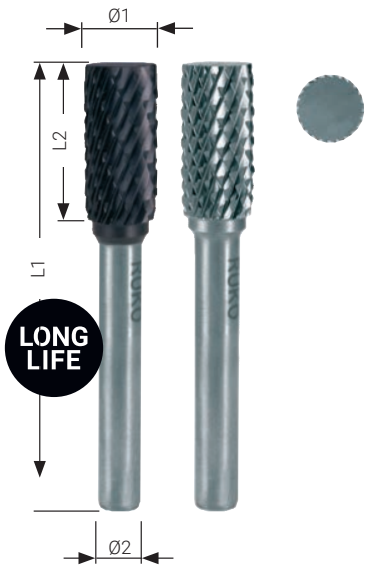
Type overview

	Description	Speed U/min	Item no.	Page/s
	Pneumatic grinder including connection adapter for deburring and polishing and for weld seam processing – <i>short</i>	25.000	116 100 L	236
	Pneumatic grinder including connection adapter for deburring and polishing and for weld seam processing – <i>90° angle head</i>	20.000	116 110 L	237
	Pneumatic grinder including connection adapter for deburring and polishing and for weld seam processing – <i>115° angle head</i>	20.000	116 120 L	238
	Pneumatic grinder including connection adapter for deburring and polishing and for weld seam processing – <i>long</i>	25.000	116 130 L	239





Tungsten carbide rotary burr shape A cylinder (ZYA) – without end tothing



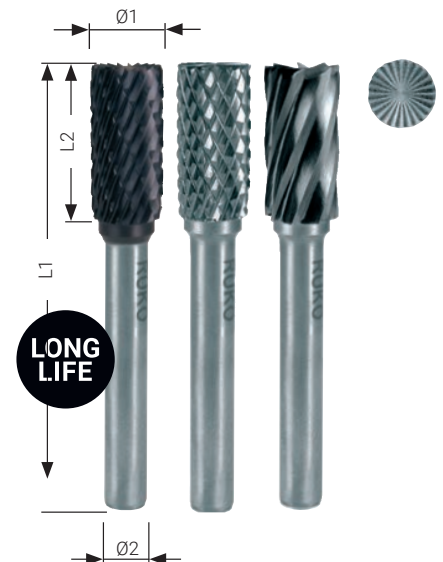
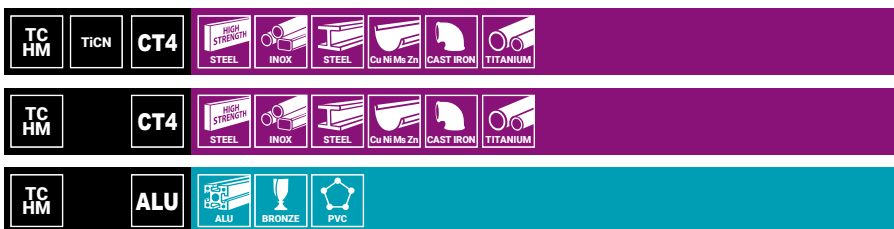
Packaging: plastic tube

Ø mm	L2 mm	L1 mm	L2 mm	TC / HM TiCN, CT 4		TC / HM CT 4	
3.0	14.0	38.0	3.0	—		116 046	1
6.0	18.0	58.0	6.0	116 010 TC	1	116 010	1
8.0	18.0	60.0	6.0	116 011 TC	1	116 011	1
10.0	20.0	60.0	6.0	116 012 TC	1	116 012	1
12.0	25.0	65.0	6.0	116 013 TC	1	116 013	1
16.0	25.0	65.0	6.0	116 014 TC	1	116 014	1

09



Tungsten carbide rotary burr shape B cylinder (ZYAS) – with end tothing

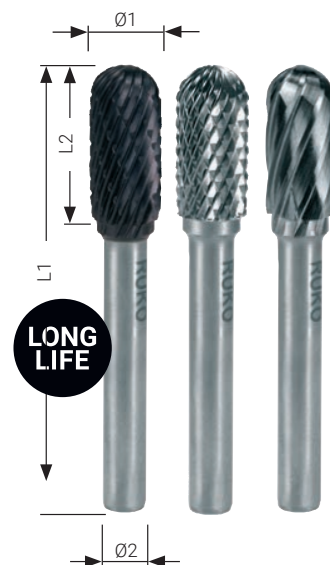
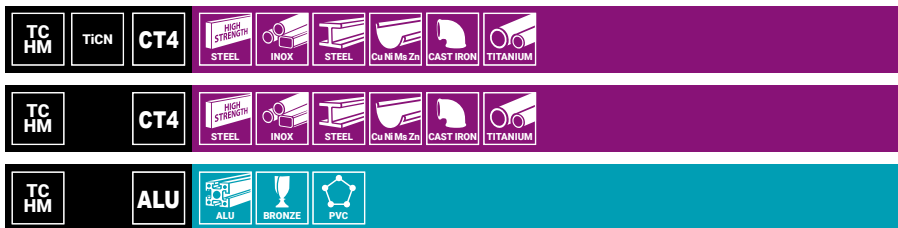


Packaging: plastic tube

Ø mm	L2 mm	L1 mm	L2 mm	TC / HM TiCN, CT 4		TC / HM CT 4		TC / HM ALU	
3.0	14.0	38.0	3.0	—		116 047	1	—	
6.0	18.0	58.0	6.0	116 015 TC	1	116 015	1	116 015 A	1
8.0	18.0	60.0	6.0	116 016 TC	1	116 016	1	—	
10.0	20.0	60.0	6.0	116 017 TC	1	116 017	1	—	
12.0	25.0	65.0	6.0	116 018 TC	1	116 018	1	116 018 A	1
16.0	25.0	65.0	6.0	116 019 TC	1	116 019	1	—	



Tungsten carbide rotary burr shape C oval (WRC)



Packaging: plastic tube

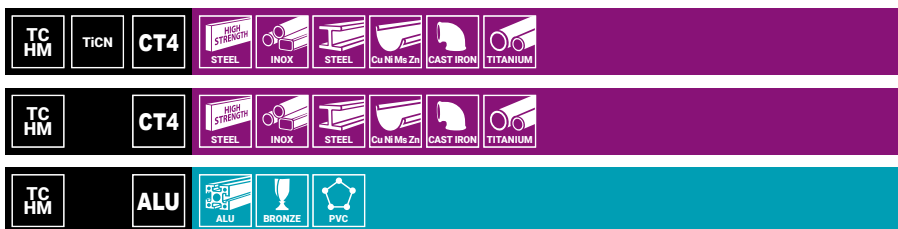
Ø mm	L2 mm	L1 mm	L2 mm	TC / HM TiCN, CT 4	
3.0	14.0	43.0	3.0	—	
6.0	16.0	56.0	6.0	116 020 TC	1
8.0	16.0	56.0	6.0	116 021 TC	1
10.0	20.0	60.0	6.0	116 022 TC	1
12.0	25.0	65.0	6.0	116 023 TC	1
16.0	25.0	65.0	6.0	116 024 TC	1

TC / HM CT 4	
116 048	1
116 020	1
116 021	1
116 022	1
116 023	1
116 024	1

TC / HM ALU	
—	
116 020 A	1
—	
—	
116 023 A	1
—	



Tungsten carbide rotary burr shape D ball type (KUD)



Packaging: plastic tube

Ø mm	L2 mm	L1 mm	L2 mm	TC / HM TiCN, CT 4	
3.0	2.7	33.0	3.0	—	
6.0	5.4	45.0	6.0	116 041 TC	1
8.0	7.2	47.0	6.0	116 042 TC	1
10.0	9.0	49.0	6.0	116 043 TC	1
12.0	11.0	51.0	6.0	116 044 TC	1
16.0	14.4	54.0	6.0	116 045 TC	1

TC / HM CT 4	
116 052	1
116 041	1
116 042	1
116 043	1
116 044	1
116 045	1

TC / HM ALU	
—	
116 041 A	1
—	
—	
116 044 A	1
—	

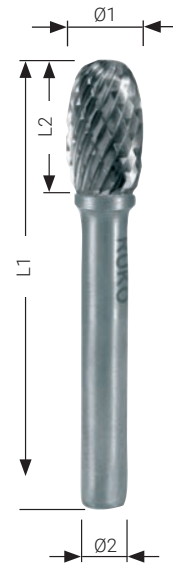


Tungsten carbide rotary burr shape E tear drop (TRE)



Packaging: plastic tube

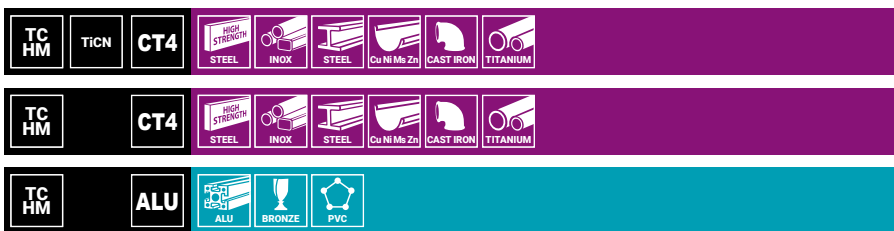
Ø mm	L2 mm	L1 mm	L2 mm	TC / HM CT 4	
3.0	7.0	37.0	3.0	116 210	1
6.0	10.0	50.0	6.0	116 211	1
8.0	13.0	53.0	6.0	116 212	1
10.0	16.0	56.0	6.0	116 213	1
12.0	20.0	60.0	6.0	116 214	1
16.0	25.0	65.0	6.0	116 215	1



09



Tungsten carbide rotary burr shape F ball nose tree (RBF)



Packaging: plastic tube

Ø mm	L2 mm	L1 mm	L2 mm	TC / HM TiCN, CT 4	
3.0	7.0	37.0	3.0	—	
6.0	18.0	58.0	6.0	116 030 TC	1
8.0	18.0	60.0	6.0	116 031 TC	1
10.0	20.0	60.0	6.0	116 032 TC	1
12.0	25.0	65.0	6.0	116 033 TC	1
16.0	30.0	70.0	6.0	116 034 TC	1

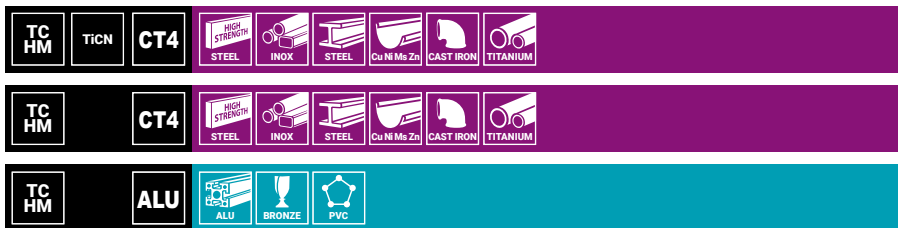


TC / HM CT 4	
116 050	1
116 030	1
116 031	1
116 032	1
116 033	1
116 034	1

TC / HM ALU	
—	
116 030 A	1
—	
—	
116 033 A	1
—	



Tungsten carbide rotary burr shape G tree (SPG)



Packaging: plastic tube

Ø mm	L2 mm	L1 mm	L2 mm	TC / HM TiCN, CT 4		TC / HM CT 4		TC / HM ALU	
3.0	13.0	38.0	3.0	—	1	116 049	1	—	1
6.0	18.0	58.0	6.0	116 025 TC	1	116 025	1	116 025 A	1
8.0	18.0	60.0	6.0	116 026 TC	1	116 026	1	—	1
10.0	20.0	60.0	6.0	116 027 TC	1	116 027	1	—	1
12.0	25.0	65.0	6.0	116 028 TC	1	116 028	1	116 028 A	1
16.0	25.0	70.0	6.0	116 029 TC	1	116 029	1	—	1

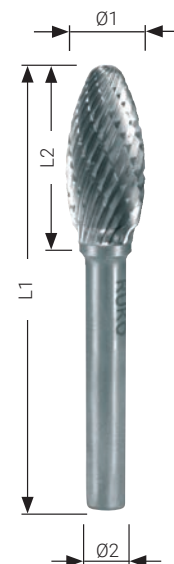


Tungsten carbide rotary burr shape H flame (FLH)



Packaging: plastic tube

Ø mm	L2 mm	L1 mm	L2 mm	TC / HM CT 4	
3.0	14.0	38.0	3.0	116 216	1
6.0	13.0	50.0	6.0	116 217	1
8.0	20.0	65.0	6.0	116 218	1
10.0	20.0	65.0	6.0	116 219	1
12.0	30.0	75.0	6.0	116 220	1
16.0	35.0	80.0	6.0	116 221	1



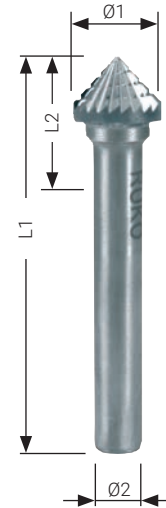


Tungsten carbide rotary burr shape K cone 90° (KSK)



Packaging: plastic tube

Ø mm	L2 mm	L1 mm	L2 mm	TC / HM CT 4	
3.0	3.0	38.0	3.0	116 227	1
6.0	5.0	50.0	6.0	116 228	1
10.0	5.0	50.0	6.0	116 229	1
12.0	8.0	53.0	6.0	116 230	1
16.0	8.0	53.0	6.0	116 231	1



09

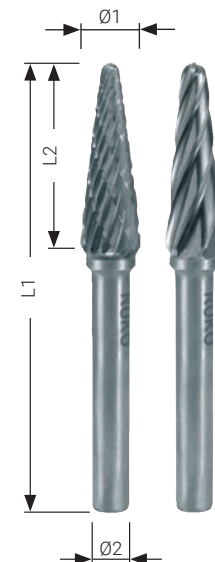


Tungsten carbide rotary burr shape L round cone (KEL)



Packaging: plastic tube

Ø mm	L2 mm	L1 mm	L2 mm	TC / HM CT 4		TC / HM ALU	
3.0	12.0	38.0	3.0	116 232	1	—	
6.0	18.0	52.0	6.0	116 233	1	116 233 A	1
8.0	20.0	60.0	6.0	116 234	1	—	
10.0	20.0	60.0	6.0	116 235	1	116 235 A	1
12.0	30.0	70.0	6.0	116 236	1	116 236 A	1
16.0	30.0	70.0	6.0	116 237	1	—	





Tungsten carbide rotary burr shape M cone (SKM)



Packaging: plastic tube

Ø mm	L2 mm	L1 mm	L2 mm	TC / HM TiCN, CT 4		TC / HM CT 4	
3.0	11.0	41.0	3.0	—		116 051	1
6.0	18.0	58.0	6.0	116 035 TC	1	116 035	1
8.0	20.0	60.0	6.0	116 036 TC	1	116 036	1
10.0	20.0	60.0	6.0	116 037 TC	1	116 037	1
12.0	25.0	65.0	6.0	116 038 TC	1	116 038	1
16.0	25.0	65.0	6.0	116 039 TC	1	116 039	1

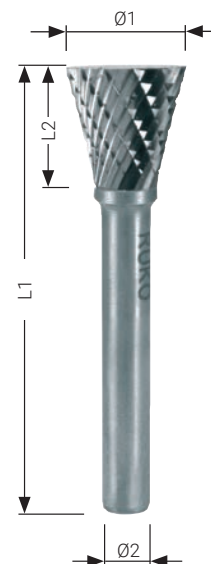


Tungsten carbide rotary burr shape N angle (WKN)



Packaging: plastic tube

Ø mm	L2 mm	L1 mm	L2 mm	TC / HM CT 4	
3.0	7,0	37,0	3,0	116 238	1
6.0	7,0	47,0	6,0	116 239	1
10.0	13,0	53,0	6,0	116 240	1
12.0	13,0	53,0	6,0	116 241	1
16.0	13,0	53,0	6,0	116 242	1





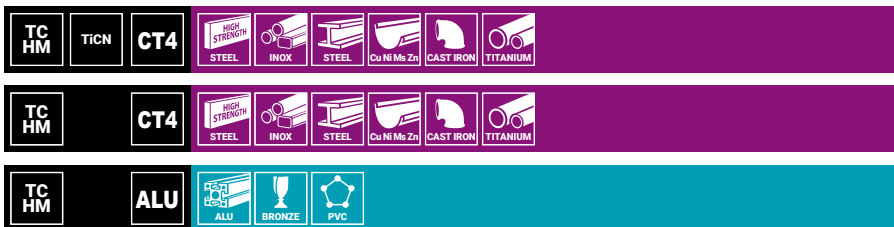
Set of tungsten carbide rotary burrs in a lockable counter display



		TC / HM TiCN, CT 4	TC / HM CT 4
35 tfg./pcs.	<p>Tungsten carbide burr module 1x each Ø D1 6.0 mm 8.0 mm 10.0 mm 12.0 mm 16.0 mm</p> <p>5 burrs form A cylinder (ZYA) without face serration 5 burrs form B cylinder (ZYAS) with face tothing 5 burrs shape C cylindrical (WRC) 5 burrs shape G pointed arc (SPG) 5 burrs shape F round arch (RBF) 5 shape M pointed cone (SKM) burrs 5 shape D ball burrs (KUD)</p>	116 008 TC	116 008

Set of tungsten carbide rotary burrs

09




		TC / HM TiCN, CT 4	TC / HM CT 4	TC / HM ALU
10 tfg./pcs.	<p>Tungsten carbide burr sets</p> <p>2 x form A cylinder (ZYA) without face gear Ø D1 10.0 / 12.0 mm 2 x form C cylindrical round (WRC) Ø D1 10.0 / 12.0 mm 2 x Form G pointed bend (SPG) Ø D1 10.0 / 12.0 mm 2 x shape F round bend (RBF) Ø D1 10.0 / 12.0 mm 1 x shape M pointed cone (SKM) Ø D1 12.0 mm 1 x shape D ball (KUD) Ø D1 12.0 mm</p>	116 003 TCRO	116 003 RO	
10 tfg./pcs.	<p>Tungsten carbide burr set for aluminium applications</p> <p>2 x form B cylinder (ZYAS) with face tothing Ø D1 6.0 / 12.0 mm 2 x form C cylindrical round (WRC) Ø D1 6.0 / 12.0 mm 2 x Form G pointed bend (SPG) Ø D1 6.0 / 12.0 mm 2 x Form F round bend (RBF) Ø D1 6.0 / 12.0 mm 2 x shape D ball (KUD) Ø D1 6.0 / 12.0 mm</p>			116 103 ARO

116 008 TC

116 003 RO

Set of tungsten carbide rotary burrs



		TC / HM
3 tfg./pcs.	Set of tungsten carbide rotary burrs TC each 1x Ø 10.0 mm 1x shape B, cylinder (ZYAS) with end tothing 1x shape G, pionted arch (SPG) 1x shape D, cone (KUD)	116 001
10 tfg./pcs.	Set of tungsten carbide rotary burrs TC each 1x Ø 6.0 + Ø 12.0 mm 2x shape B, cylinder (ZYAS) with end tothing 2x shape C, oval (WRC) 2x shape G, pionted arch (SPG) 2x shape F, ball nose tree (RBF) 2x shape D, cone (KUD)	116 002
5 tfg./pcs.	Set of tungsten carbide rotary burrs TC each 1x Ø 10.0 mm 1x shape B, cylinder (ZYAS) with end tothing 1x shape C, oval (WRC) 1x shape G, pionted arch (SPG) 1x shape F, ball nose tree (RBF) 1x shape D, cone (KUD)	116 004
5 tfg./pcs.	Set of tungsten carbide rotary burrs TC each 1x Ø 12.0 mm 1x shape B, cylinder (ZYAS) with end tothing 1x shape C, oval (WRC) 1x shape G, pionted arch (SPG) 1x shape F, ball nose tree (RBF) 1x shape D, cone (KUD)	116 005



Speed guide values for carbide burrs – by diameter

Cutting speed V _c = m/min	250	300	350	400	450	500	600	900
Ø mm	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.	r.p.m.
3.0	27.000	32.000	37.000	44.000	48.000	54.000	64.000	95.000
4.0	20.000	24.000	28.000	32.000	36.000	40.000	48.000	72.000
6.0	13.000	16.000	19.000	21.000	24.000	27.000	32.000	48.000
8.0	10.000	12.000	14.000	16.000	18.000	20.000	24.000	36.000
10.0	8.000	10.000	11.000	13.000	14.000	16.000	19.000	29.000
12.0	7.000	8.000	9.000	11.000	12.000	13.000	16.000	24.000
16.0	5.000	6.000	7.000	8.000	9.000	10.000	12.000	18.000

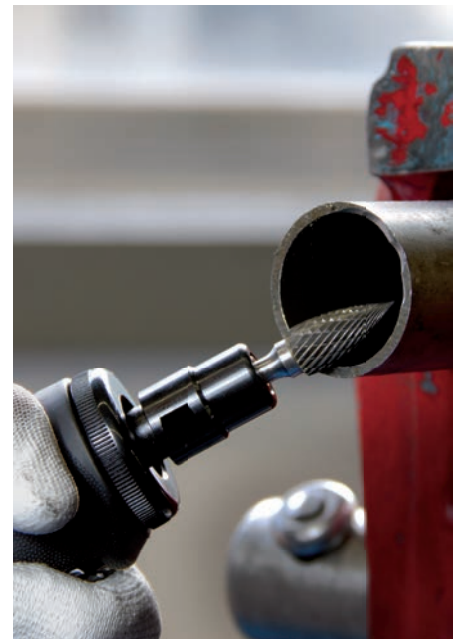
Pneumatic grinder including connection adapter for deburring, polishing and machining welding seams – short

The RUKO pneumatic grinder has a rubberised, non-slip handle, which absorbs vibration and protects the user from slipping off whilst working. The speed can be adjusted by a governor on top of the handle. It has a tool adapter made of hardened steel. The exhaust air is directed backwards through the handle by means of a 360° rotational principle.

The RUKO pneumatic grinder features an integrated air filter, which protects the motor from dirt that could get into the inside with the compressed air.

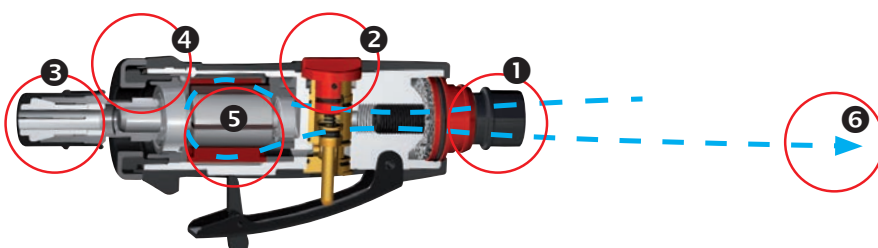


2 11g./pcs.	Pneumatic grinder (short)	116 100 L



09

	Speed: 25.000 r.p.m		Hose size: 3/8"
	Tool adapter: Ø 6.0 mm		Noise level: 77 dB(A)
	Ø - Average air consumption: 113 L/Min		Total length: 157.0 mm
	Compressed air adapter: G 1/4"		Weight: 0.57 kg
	Air pressure: 6.2 bar		



- ❶ Air filter
- ❷ Speed control
- ❸ Adapter made of hardened steel
- ❹ Rubberised, non-slip handle
- ❺ Heavy-duty vane motor
- ❻ Exhaust air directed through the handle by means of 360° rotational principle

Pneumatic grinder including connection adapter for deburring, polishing and machining welding seams – 90° angle head

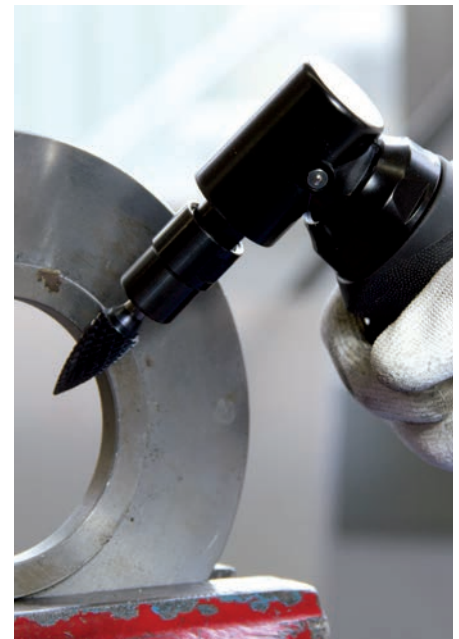
The RUKO pneumatic grinder has a rubberised, non-slip handle, which absorbs vibration and protects the user from slipping off whilst working. The speed can be adjusted by a governor on top of the handle. It has a tool adapter made of hardened steel. The exhaust air is directed backwards through the handle by means of a 360° rotational principle.

The RUKO pneumatic grinder features an integrated air filter, which protects the motor from dirt that could get into the inside with the compressed air. The 90° angle head makes it easier to work in tight and difficult to reach places.

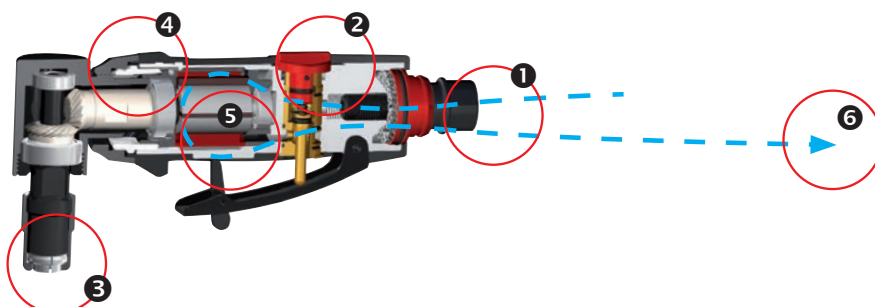


2 tkg./pcs.	Pneumatic grinder (90°)	116 110 L

	Speed: 20.000 U/min		Hose size: 3/8"
	Tool adapter: Ø 6.0 mm		Noise level: 77 dB(A)
	Ø - Average air consumption: 113 L/Min		Total length: 162.0 mm
	Compressed air adapter: G 1/4"		Weight: 0.60 kg
	Air pressure: 6.2 bar		



09



- 1 Air filter
- 2 Speed control
- 3 Adapter made of hardened steel
- 4 Rubberised, non-slip handle
- 5 Heavy-duty vane motor
- 6 Exhaust air directed through the handle by means of 360° rotational principle

Pneumatic grinder including connection adapter for deburring, polishing and machining welding seams – 115° angle head

The RUKO pneumatic grinder has a rubberised, non-slip handle, which absorbs vibration and protects the user from slipping off whilst working. The speed can be adjusted by a governor on top of the handle. It has a tool adapter made of hardened steel. The exhaust air is directed backwards through the handle by means of a 360° rotational principle.

The RUKO pneumatic grinder features an integrated air filter, which protects the motor from dirt that could get into the inside with the compressed air. The 115° angle head makes it easier to work in tight and difficult to reach places.

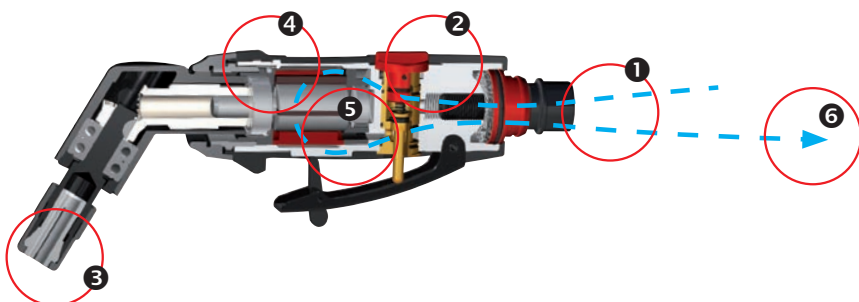


2 1kg./pcs.	Pneumatic grinder (115°)	116 120 L



09

20.000 rpm	Speed: 20.000 U/min	3/8"	Hose size: 3/8"
Ø 6 mm	Tool adapter: Ø 6.0 mm	77 dB(A)	Noise level: 77 dB(A)
113 l/min	Ø - Average air consumption: 113 L/Min	201 mm	Total length: 201.0 mm
G 1/4"	Compressed air adapter: G 1/4"	0.70 kg	Weight: 0.70 kg
6.2 bar	Air pressure: 6.2 bar		



- 1 Air filter
- 2 Speed control
- 3 Adapter made of hardened steel
- 4 Rubberised, non-slip handle
- 5 Heavy-duty vane motor
- 6 Exhaust air directed through the handle by means of 360° rotational principle

Pneumatic grinder including connection adapter for deburring, polishing and machining welding seams – long

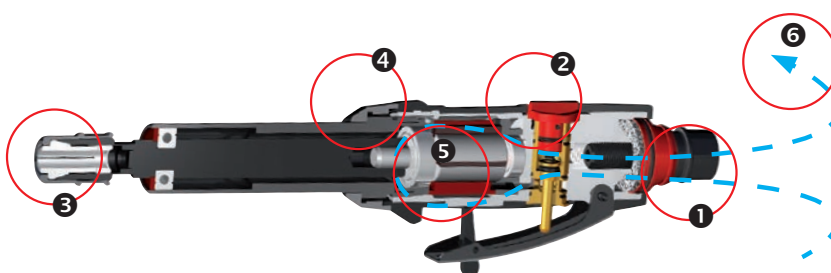
The RUKO pneumatic grinder has a rubberised, non-slip handle, which absorbs vibration and protects the user from slipping off whilst working. The speed can be adjusted by a governor on top of the handle. It has a tool adapter made of hardened steel. The exhaust air is directed backwards through the handle by means of a 360° rotational principle.

The RUKO pneumatic grinder features an integrated air filter, which protects the motor from dirt that could get into the inside with the compressed air. The tool extension makes it possible to work in tight, difficult to reach and deep places.



2 tkg./pcs.	Pneumatic grinder (long)	116 130 L

	Speed: 25.000 U/min		Hose size: 3/8"
	Tool adapter: Ø 6.0 mm		Noise level: 77 dB(A)
	Ø - Average air consumption: 113 L/Min		Total length: 257.0 mm
	Compressed air adapter: G 1/4"		Weight: 0.90 kg
	Air pressure: 6.2 bar		



- ❶ Air filter
- ❷ Speed control
- ❸ Adapter made of hardened steel
- ❹ Rubberised, non-slip handle
- ❺ Heavy-duty vane motor
- ❻ Exhaust air directed through the handle by means of 360° rotational principle



Pneumatic grinder set with coupling plug incl. set of rotary burrs



		TC / HM CT 4
12 tfg./pcs.	1x Compressed air grinder short 1x Coupling plug for compressed air grinder 1x Set of tungsten carbide rotary burrs in mini-box Item no.116 002	116 100
5 tfg./pcs.	1x Compressed air grinder short 1x Coupling plug for compressed air grinder 1x Set of tungsten carbide rotary burrs in mini-box Item no.116 001	116 113



116 100

Accessories for pneumatic grinder








Packaging: plastic tube

 09	Rotor replacement for compressed air grinder	116 100-1	1
	Coupling plug, nominal size 7.2 mm external thread G 1/4"	116 101 L	1
	Collet 3.0 mm for compressed air grinder	116 121	1
	Collet 1/4" for compressed air grinder	116 119	1



116 101 L

Speed guide values for carbide burrs – by material groups

Material groups		Machining application	Cutting speed
Steel, Cast steel 	Unhardened, untempered steels up to 1200 N/mm ² (< 38 HRC)	Structural steels, carbon steels, tool steels, unalloyed steels, case hardening steels, cast steel	Coarse machining = High material removal 250 - 350 m/min
	Hardened, tempered steels up to 1200 N/mm ² (> 38 HRC)	Tool steels, heat-treatable steels, alloyed steels, cast steel	
Stainless steel (INOX) 	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse machining = High material removal 250 - 350 m/min
Nonferrous metals   	Soft nonferrous metals Nonferrous heavy metals	Aluminium alloys, brass, Copper, zinc	Coarse machining = High material removal 600 - 900 m/min 250 - 350 m/min 300 - 450 m/min
	Hard nonferrous metals	Bronze, titanium/titanium alloys, hard aluminium alloys (high silicon content)	
	Highly heat-resistant Materials	Nickel-based and cobalt-based alloys (engine and turbine construction)	
Cast iron 	Grey cast iron, white cast iron	Cast iron with lamellar graphite, with nodular/spheroidal graphite white malleable (cast) iron black malleable (cast) iron	Coarse machining = High material removal 600 - 900 m/min
Plastics, other materials 	Fibre-reinforced plastics, thermoplastics, hard rubber		Coarse machining = High material removal 500 - 1.100 m/min
			Fine machining = Low material removal