

Air tools



certified according to
→ DIN EN ISO 9001:2000
→ ATEX

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Metal processing Professional and reliable



MANNESMANN DEMAG compressed air tools have been meeting industry's requirements for many years. They offer excellent reliability and power. Our products guarantee:

- Precise working under load conditions
- The appropriate compressed air tool for every application, whether it be a
 - grinding or milling machine
 - vertical grinder, belt grinder
 - filing machine, engraving pen, jig saw
 - angle grinding machine
- Safety lever valve (H) according to EN 792
- Alternative model: rotary valve (D)
- Insulating handle
- Exhaust air to rear via hose unit with integrated silencer
- Modular system enables parts to be exchanged if several models are being used
- Absolutely easy to service
- Low air consumption
- Low noise level
- Accessories program for long life, precision and product quality

MANNESMANN DEMAG compressed air tools are ideal partners for grinding, milling, roughing, filing, engraving and cutting-off operations.



→ Robust and high performance – quality products for metal processing by MANNESMANN DEMAG



For more flexibility with Variacor® *see page 138*

Oil-free turbine grinding machines

For excellent finishing

65 000 – 100 000 rpm

- High speed for excellent finishing quality
- Easy to service
- High true running accuracy for long term endurance
- Ball bearings with floating support to reduce wear of the rotary burrs
- Non-lubricated use



Technical data

Type		GTV 1000	GT 652 D	GTK 652 D
Order No.		29907-55-5	29940-37-5	29944-57-5
Illustration		2	3	1
Valve		rotary valve	rotary valve	rotary valve
Free speed	rpm	100 000	65 000	65 000
Power	Watt	100	70	70
Exhaust air		to the front	to the rear	to the rear
Discharge brake		—	yes	yes
Spindle front support		flexible	flexible	flexible
Collet included	mm	3	3	3
Carbide rotary burrs max.	mm	3	4	4
Mounted points max.	mm	5	6	6
Noise level	dB(A)	70	65 – 67	65 – 67
Air consumption	l / sec	5.3	3.5	3.5
Weight without hose	kg	0.21	0.27	0.27
Ø machine	mm	30	17	22
Machine length	mm	120	173	135
Hose unit		included	included	included
Supply air hose	m	1.5	1.5	1.5
Exhaust air hose	m	—	1	1
Connection		hose insert nozzle	hose insert nozzle	hose insert nozzle
Accessories supplied		wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oil-free.

Collets



Clamp. range Ø (mm ")	1.0	1.5	2.0	2.5	3.0	1/8"	3/32"
All types	9 369 912	9 369 913	9 369 914	9 369 915	9 369 825	9 369 917	9 369 916

- Ergonomic design
- Especially for fine milling, grinding, engraving and polishing tasks
- Exhaust air to rear via hose unit with integrated silencer
- Classics among the small grinders

High-speed grinding machines

For light deburring work

55 000 – 80 000 rpm



Technical data

		NEW		NEW	
Type		G 803 D	G 803 H	G 551 D	GK 551 D
Order No.		60018-23-5	60018-24-5	29939-85-5	29939-86-5
Illustration		1	2	1	3
Valve		Drehventil	Hebelventil	Drehventil	Drehventil
Free speed	rpm	80 000	80 000	55 000	55 000
Power	Watt	100	100	100	100
Exhaust air		to the rear	to the rear	to the rear	to the rear
Collet included	mm	3	3	3	3
Carbide rotary burrs max.	mm	4	4	6	6
Mounted points max.	mm	6	6	8	8
Noise level	dB(A)	76	76	74	74
Air consumption	l / sec	2	2	2	2
Weight without hose	kg	0.15	0.18	0.15	0.12
Ømaschine	mm	14	14	14	14
Machine length	mm	120	120	120	100
Hose unit		inclusive	inclusive	inclusive	inclusive
Supply air hose	m	1.5	1.5	1.5	1.5
Exhaust air hose	m	1	1	1	1
Connection		plug-in socket	plug-in socket	plug-in socket	plug-in socket
Accessories supplied		wrench	wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Collets



Clamp. range Ø (mm ")	1.0	1.5	2.0	2.5	3.0	1/8"	3/32"
All types	9 369 912	9 369 913	9 369 914	9 369 915	9 369 825	9 369 917	9 369 916

Grinding machines

For light deburring work

45 000 rpm

- Ergonomic design
- Exhaust air to rear via hose unit with integrated silencer
- Safety lever valve according to EN 792
- Easy to service
- Powerful vane motor
- G 456 D/H: floating support for excellent and smooth surface finishing



G 456 D



G 452 D

Technical data



Type		G 456 D	G 456 H	G 452 D	G 452 H
Order No.		29946-71-5	29946-72-5	60002-04-5	60002-05-5
Valve		rotary valve	lever valve	rotary valve	lever valve
Free speed	rpm	45 000	45 000	45 000	45 000
Power	Watt	240	240	180	180
Exhaust air		to the rear	to the rear	to the rear	to the rear
Collet included	mm	6	6	6	6
Carbide rotary burrs max.	mm	8	8	8	8
Mounted points max.	mm	10	10	10	10
Noise level	dB(A)	76	76	76	76
Air consumption	l/sec	8.5	8.5	7.5	7.5
Weight without hose	kg	0.50	0.50	0.35	0.35
Ø machine	mm	36	36	30	30
Machine length	mm	167	167	171	171
Hose unit		inclusive	inclusive	inclusive	inclusive
Supply air hose	m	2.5	2.5	2.5	2.5
Exhaust air hose	m	1	1	1	1
Connection thread		G 1/4"	G 1/4"	G 1/4"	G 1/4"
Accessories supplied		wrench	wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Collets



Clamp. range Ø (mm)	3.0	4.0	5.0	6.0	8.0
G 456 D G 456 H	9 369 983	—	—	9 369 918	—
All other types	9 369 841	9 369 846	9 369 847	9 369 826	9 369 843



G 452 H

Grinding machines

For light deburring work

35 000 rpm

- Ergonomic design
- Exhaust air to rear via hose unit with integrated silencer
- Safety lever valve according to EN 792
- Easy to service
- Powerful vane motor
- G 356 D/H: floating support for excellent and smooth surface finishing



Technical data

Type		G 356 D	G 356 H	G 352 D	G 352 H
Order No.		60010-05-5	60010-04-5	29946-06-5	29946-07-5
Valve		rotary valve	lever valve	rotary valve	lever valve
Free speed	rpm	35 000	35 000	35 000	35 000
Power	Watt	290	290	290	290
Exhaust air		to the rear	to the rear	to the rear	to the rear
Collet included	mm	6	6	6	6
Carbide rotary burrs max.	mm	10	10	10	10
Mounted points max.	mm	16	16	16	16
Noise level	dB(A)	73	73	73	73
Air consumption	l/sec	7.5	7.5	7.5	7.5
Weight without hose	kg	0.50	0.50	0.36	0.36
Ø machine	mm	36	36	30	30
Machine length	mm	170	170	171	171
Hose unit		inclusive	inclusive	inclusive	inclusive
Supply air hose	m	2.5	2.5	2.5	2.5
Exhaust air hose	m	1	1	1	1
Connection thread		G 1/4"	G 1/4"	G 1/4"	G 1/4"
Accessories supplied		wrench	wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Collets

Clamp. range Ø (mm)	3.0	4.0	5.0	6.0	8.0
All types	9 369 841	9 369 846	9 369 847	9 369 826	9 369 843



G 352 H

Grinding machines

For light deburring work

28 000 – 30 000 rpm

- Ergonomic design
- Exhaust air to rear via hose unit with integrated silencer
- Safety lever valve according to EN 792
- Easy to service
- Powerful vane motor



G 300 D



G 300 H



GK 282 D



GK 282 H

Technical data

Type		G 300 D	G 300 H	GK 282 D	GK 282 H
Order No.		29923-37-5	29923-38-5	29938-01-5	29938-02-5
Valve		rotary valve	lever valve	rotary valve	lever valve
Free speed	rpm	30 000	30 000	28 000	28 000
Power	Watt	220	220	240	240
Exhaust air		to the rear	to the rear	to the rear	to the rear
Collet included	mm	6	6	6	6
Carbide rotary burrs max.	mm	10	10	10	10
Mounted points max.	mm	16	16	16	16
Noise level	dB(A)	70	70	67	67
Air consumption	l/sec	6.9	6.9	6.6	6.6
Weight without hose	kg	0.45	0.45	0.33	0.33
Ø machine	mm	30	30	30	30
Machine length	mm	207	207	141	141
Hose unit		included	included	included	included
Supply air hose	m	2.5	2.5	2.5	2.5
Exhaust air hose	m	1	1	1	1
Connection thread		G 1/4"	G 1/4"	G 1/4"	G 1/4"
Accessories supplied		wrench	wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.



Collets

Clamp. range Ø (mm)	3.0	6.0
G 300 D/H	9 369 983	9 369 918
GK 282 D/H	9 369 983	9 369 918

Grinding machines

For heavy roughing work

12 000 – 28 000 rpm

Ideal for rough usage

- Highly precise milling, grinding, roughing und deburring
- Exhaust air to rear via hose unit with integrated silencer
- Safety lever valve according to EN 792
- Suitable for two handed use (G 201 H)



Technical data

Type		G 283 H	G 232 H	G 201 H	G 120 H
Order No.		29945-68-5	29935-25-5	60000-29-5	60000-96-5
Illustration		1	1	2	1
Valve		lever valve	lever valve	lever valve	lever valve
Free speed	min ⁻¹	28 000	23 000	20 000	12 000
Power	Watt	400	440	440	400
Exhaust air		to the rear	to the rear	to the rear	to the rear
Collet included	mm	6	6	6	6
Carbide rotary burrs max.	mm	10	12	12	12
Mounted points max.	mm	16	24	32	32
Noise level	dB(A)	76	76	74	74
Air consumption	l / sec	7.5	12.0	12.0	12.0
Weight without hose	kg	0.88	0.74	1.10	0.88
Ø machine	mm	39	39	39	39
Machine length	mm	180	180	280	205
Hose unit		inclusive	inclusive	inclusive	inclusive
Supply air hose	m	2.5	2.5	2.5	2.5
Exhaust air hose	m	1.5	1.5	1.5	1.5
Connection thread		G 1/4"	G 1/4"	G 1/4"	G 1/4"
Accessories supplied		wrench	wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Collets



Clamp. range Ø (mm ")	3.0	6.0	8.0	10.0	1/4"
All types	9 369 985	9 369 837	9 369 818	9 369 817	9 369 987

Grinding machines

For heavy roughing work

12 000 – 20 000 rpm

– Types G 16 000 H and G 12 000 H:
Powerful machines with centrifugal governor



Technical data

					NEW	NEW
Type		GL 200 H	GL 200 HV	G 17000 HV	G 16000 H	G 12000 H
Order No.		60000-27-5	60000-28-5	29931-58-5	60018-43-5	60018-46-5
Valve		lever valve	lever valve	lever valve	lever valve	lever valve
Free speed	min ⁻¹	20 000	20 000	17 000	16 000	12 000
Power	Watt	400	400	750	1 000	900
Exhaust air		to the rear	to the front	to the front	to the rear	to the rear
Collet included	mm	6	6	8	6	6
Carbide rotary burrs max.	mm	12	12	15	16	16
Mounted points max.	mm	20	20	30	35	50
Noise level	dB(A)	84	84	88	79	79
Air consumption Leer Last	l/sec	12,0	12,0	15,5	13 20	13 20
Weight without hose	kg	1.20	1.20	1.55	1.14	1.14
Ø machine	mm	39	39	46	46	46
Machine length	mm	382	382	327	236	236
Hose unit		inclusive	—	—	inclusive	inclusive
Supply air hose	m	2.5			2.5	2.5
Exhaust air hose	m	1.5			1.0	1.0
Schlauch l. W.	mm	—	8	10	—	—
Connection thread		G 1/4"	G 1/4" i	G 3/8" i	G 3/8"	G 3/8"
Accessories supplied		wrench	wrench	wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Collets



Clamp. range Ø (mm ")	3.0	6.0	8.0	10.0	1/4"
GL 200 H HV	9 369 983	9 369 891	—	—	—
G 17000 H HV	9 369 985	9 369 837	9 369 818	9 369 817	9 369 987
G 16000 H, G 12000 H	9 369 855	9 369 839	9 369 842	9 369 852	—

Multifunctional tools

- Inclusive adapter DIN M10×30 to connect to flexible shafts (see page 14: types GLA)
- Inclusive rebuild set to G 16 000 H and G 12 000 H
- Powerful machines with centrifugal governor
- Extensions up to 1000 mm

Grinding machines Multifunctional 12 000 – 16 000 rpm



GL 16000 H | GL 12000 H



Technical data

		NEW	NEW
Type		GL 16000 H	GL 12000 H
Order No.		60018-44-5	60018-47-5
Valve		lever valve	lever valve
Free speed	min ⁻¹	16 000	12 000
Power	Watt	1 000	900
Exhaust air		to the rear	to the rear
Collet included	mm	6	6
Carbide rotary burrs max.	mm	16	16
Mounted points max.	mm	35	50
Noise level	dB(A)	79	79
Air consumption Leer Last	l / sec	13 20	13 20
Weight without hose	kg	1.94	1.94
Ø machine	mm	46	46
Machine length	mm	475	475
Hose unit		inclusive	inclusive
Supply air hose	m	2.5	2.5
Exhaust air hose	m	1.0	1.0
Connection thread		G 3/8"	G 3/8"
Accessories supplied		wrench	wrench

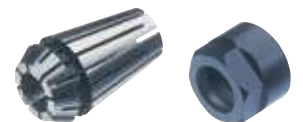
Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Extensions

Extension (mm)	100	200
Ø shaft 24.5 mm	600 098 15	600 098 45

Further extensions available on request!

Collets



Clamp range Ø (mm)	6.0	8.0
GL GLA 16000 H	9 369 839	9 369 842
GL GLA 12000 H		
Nut	29701-56-3	29701-56-3

Grinding machines

Variable extension

12 000 – 16 000 rpm



GLA 16000 H | GLA 12000 H

Extension

New Product Line!

- Variable extensions in straight or angle version with DIN Adapter M10 × 30 to connect flexible shafts
- Powerful machines with centrifugal governor
- **Free combination of extensions and handpieces**

Technical data

		NEU	NEU
Type		GLA 16000 H	GLA 12000 H
Order No.		60018-45-5	60018-48-5
Valve		lever valve	lever valve
Free speed	rpm	16 000	12 000
Power	Watt	1 000	900
Exhaust air		to the rear	to the rear
Collet included	mm	6	6
Carbide rotary burrs max.	mm	16	16
Mounted points max.	mm	35	50
Noise level	dB(A)	79	79
Air consumption Leer Last	l / sec	13 20	13 20
Weight without hose	kg	1.25	1.25
Ø machine	mm	46	46
Machine length	mm	256	256
Hose unit		inclusive	inclusive
Supply air hose	m	2.5	2.5
Exhaust air hose	m	1.0	1.0
Connection thread		G 3/8"	G 3/8"
Accessories supplied		wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.



Handpiece straight, 90°, 45°

Extensions for connection DIN M10 × 30

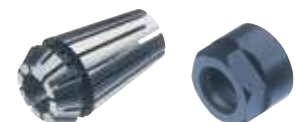
Extension (mm)	250	500
Ø Shaft 33 mm	60018-93-6	60018-94-6

Handpieces for extensions, Connection G 28

Form		Straiht	Angle 90°	Angle 45°
Order No.		60018-92-6	60018-95-6	60018-96-6
Ø × Length	mm	33 × 162	55 × 156	57 × 184
Collet	mm	8	6	6
Weight	kg	0,51	0,81	0,85

Collets

Clamp. range Ø (mm)	6.0	8.0	10.0
Handpiece straight	9 369 935	9 369 936	9 369 937
Handpiece 90°, 45°	9 369 918	—	—



Grinding machines

With extension

10 000 rpm

- Comfortable use by a safety valve embedded into the hand grip
- Ideally for internal grinding, deburring of hollow spaces (e.g. motor blocks, tubes, turbine blades) and for finishing welding lines
- Robust extensions with easy changing
- Max. neck extension length up to 1000 mm ensure working in difficult to access areas
- Spindle with threaded connection M12 for mounted points and carbide burrs
- Built in speed governor keeps the revolutions on load nearly constant



G 100 H

Technical data

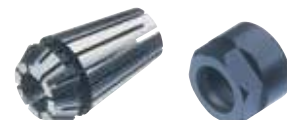
Type with collet Ø 6 mm		G 100 H	G 100 H-100	G 100 H-200	G 100 H-400	G 100 H-500
Order No.		60009-35-5	60009-36-5	60009-37-5	60009-38-5	60009-39-5
Type with thread M12		G 101 H	G 101 H-100	G 101 H-200	G 101 H-400	G 101 H-500
Order No.		60009-40-5	60009-41-5	60009-42-5	60009-43-5	60009-44-5
With Extension	mm	—	100	200	400	500
Free speed	rpm	10 000	10 000	10 000	10 000	10 000
Power	Watt	1 300	1 300	1 300	1 300	1 300
Exhaust air		to the side	to the side	to the side	to the side	to the side
Carbide rotary burrs max.	mm	16	16	16	16	16
Mounted points max.	mm	50	50	50	50	50
Flap wheels max.	mm	60	60	60	60	60
Noise level	dB(A)	89	89	89	89	89
Air consumption Leer Last	l / sec	11.7 27.7	11.7 27.7	11.7 27.7	11.7 27.7	11.7 27.7
Weight without hose	kg	3.2	3.5	3.8	4.4	4.7
Ø machine	mm	65	65	65	65	65
Machine length G 100 H G 101 H	mm	523 508	623 608	723 708	923 808	1 023 1 008
Air supply hose	m	2.5	2.5	2.5	2.5	2.5
Hose I.D.	mm	13	13	13	13	13
Connection thread		G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"
Accessories supplied		wrench	wrench	wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Extensions

Extension (mm)	100	200
Ø Shaft 24.5 mm	600 098 15	600 098 45
Further extensions available on request!		

Collets

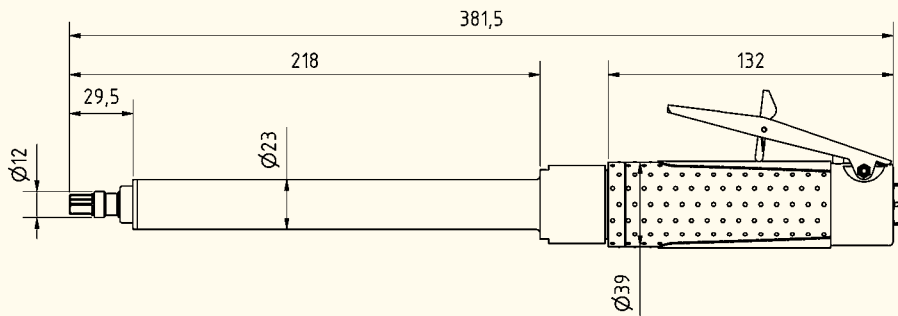


Clamp. range Ø (mm)	6.0	8.0
G 100 H	9 369 839	9 369 842
Nut	29701-56-3	29701-56-3

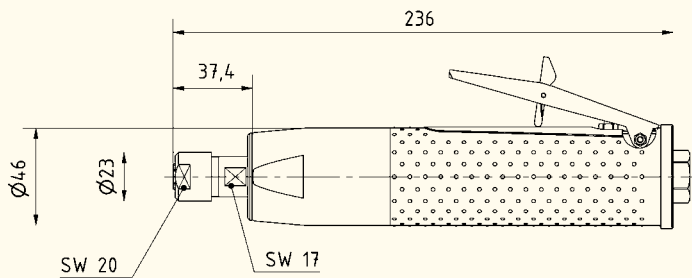
Grinding machines

Dimensions (mm)

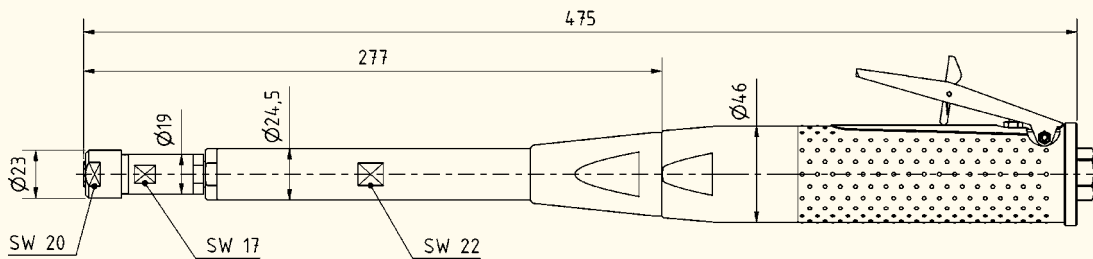
GL 200 H and GL 200 HV



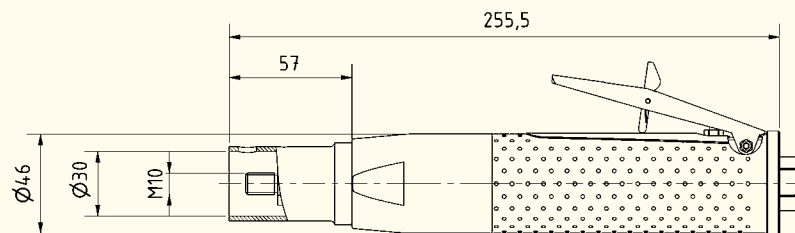
G 16000 H and G 12000 H



GL 16000 H and GL 12000 H



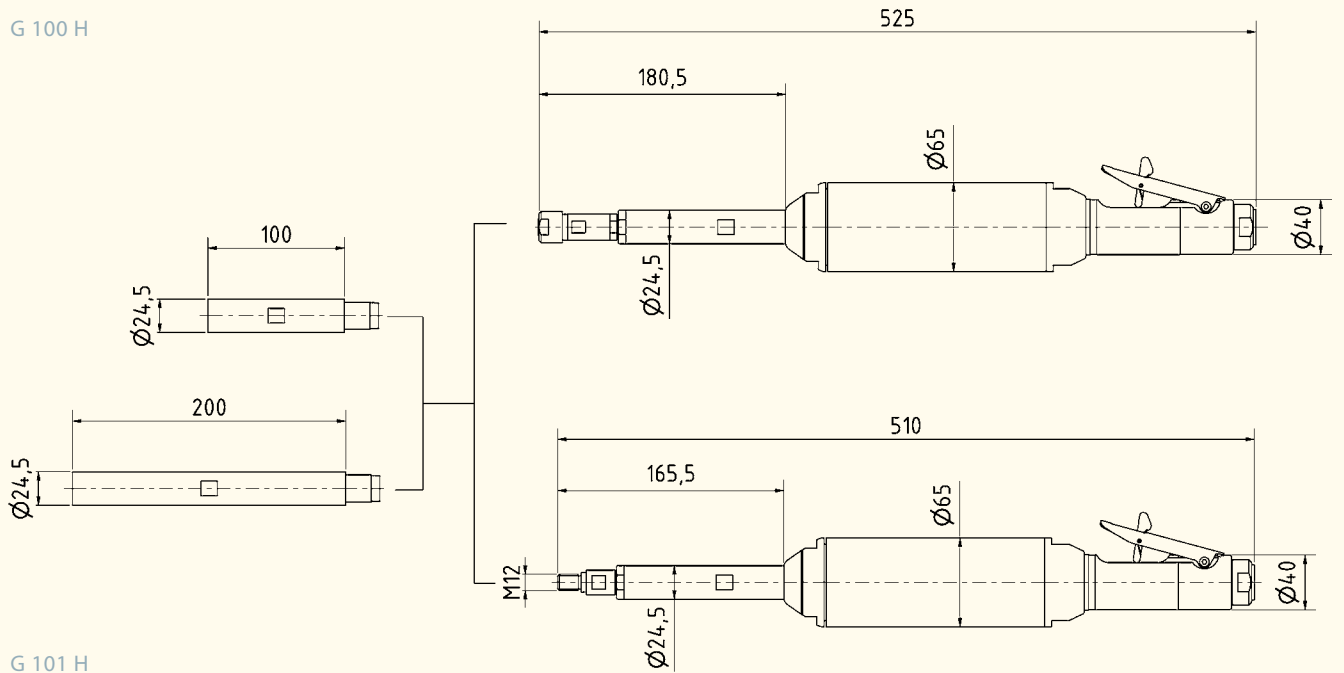
GLA 16000 H and GLA 12000 H



Grinding machines

Dimensions (mm)

G 100 H



G 101 H



Grinding machines

Exhaust air to the front

28 000 rpm

- Highly precise milling, grinding, roughing and deburring
- High performance and robust
- Safety lever valve according to EN 792
- For light deburring work



GK 282 DV



GK 282 HV



G 281 DV

Technical data

Type		GK 282 DV	GK 282 HV	G 281 DV
Order No.		29938-11-5	29938-12-5	29908-32-5
Valve		rotary valve	lever valve	rotary valve
Free speed	rpm	28 000	28 000	28 000
Power	Watt	240	240	220
Exhaust air		to the front	to the front	to the front
Collet included	mm	6	6	6
Carbide rotary burrs max.	mm	10	10	10
Mounted points max.	mm	16	16	16
Noise level	dB(A)	78	78	79
Air consumption	l/sec	7.5	7.5	5.6
Weight without hose	kg	0.30	0.30	0.41
Ø machine	mm	31	31	30
Machine length	mm	143	143	196
Hose I. D.	mm	8	8	8
Connection		G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Collets

Clamp. range Ø (mm)	3.0	6.0
GK 282 DV/HV	9 369 983	9 369 918
G 281 DV	9 369 983	9 369 918



Swivel joint

Variacor 60001-60-6

Further Information see p. 138

- Highly precise milling, grinding, roughing und deburring
- High performance and robust
- Safety lever valve according to EN 792
- G 281 HV for light deburring work
- G 201 HV for two-handed use

Grinding machines

Exhaust air to the front

20 000 – 28 000 rpm



G 281 HV

GK 201 HV

G 201 HV

Technical data

Type		G 281 HV	GK 201 HV	G 201 HV
Order No.		29908-33-5	60001-45-5	60000-30-5
Valve		lever valve	lever valve	lever valve
Free speed	rpm	28 000	20 000	20 000
Power	Watt	220	440	440
Exhaust air		to the front	to the front	to the front
Collet included	mm	6	6	6
Carbide rotary burrs max.	mm	10	12	12
Mounted points max.	mm	16	32	32
Noise level	dB(A)	79	85	84
Air consumption	l/ sec	5.6	12.0	12.0
Weight without hose	kg	0.41	0.95	1.05
Ø machine	mm	30	39	39
Machine length	mm	197	180	280
Hose I. D.	mm	8	8	8
Connection		G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Collets

Clamp. range Ø (mm ")	3.0	6.0	8.0	10.0	1/4"
G 281 HV	9 369 983	9 369 918	—	—	—
GK 201 HV and G 201 HV	9 369 985	9 369 837	9 369 818	9 369 817	9 369 987



Swivel joint

Variacor 60001-60-6

Further Information see p. 138

Angle grinding machines

With collet

- For Deburring, grinding, milling, polishing and cast cleaning
- GW 218 H/HV with angle head of steel
- Robust finishings, ER-collet
- GW 216 H with angle head of aluminium
- Safety lever valve according to EN 792
- Robust model
- Optimized gear support for a high torque



GW 216 H, GW 126 H



GW 218 H



GW 218 HV

Technical data

Type		GW 216 H	GW 218 H	GW 218 HV	GW 126 H
Order No.		29935-62-5	29934-69-5	29934-82-5	60001-19-5
Valve		lever valve	lever valve	lever valve	lever valve
Free speed	rpm	20 000	20 000	20 000	12 000
Power	Watt	350	350	350	350
Exhaust air		to the rear	to the rear	to the front	to the rear
Collet included	mm	6	6	6	6
Carbide rotary burrs max.	mm	12	12	12	12
Mounted points max.	mm	24	24	24	24
Grinding wheel max.	mm	75	75	75	75
Noise level	dB(A)	74	74	88	88
Air consumption	l/sec	10.0	10.0	13.3	13.3
Weight without hose	kg	1,00	1.15	1.15	1.00
Machine height	mm	67.3	76.0	76.0	68.0
Machine length	mm	150	150	167	174
Hose I. D.	mm	—	—	8	—
Hose unit		inclusive	inclusive		inclusive
Supply air hose	m	2.5	2.5	—	2.5
Exhaust air hose	m	1.5	1.5	—	1.5
Connection		external thread R 1/4"	external thread R 1/4"	R 1/4" i	external thread R 1/4"
Accessories supplied		wrench	wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.



Collets

Clamp. range Ø (mm)		3.0	6.0	8.0
GW 216 H	ER 11	9 369 853	9 369 832	—
GW 218 H and HV	ER 16	9 369 855	9 369 839	9 369 842

Angle grinding machines

With collet

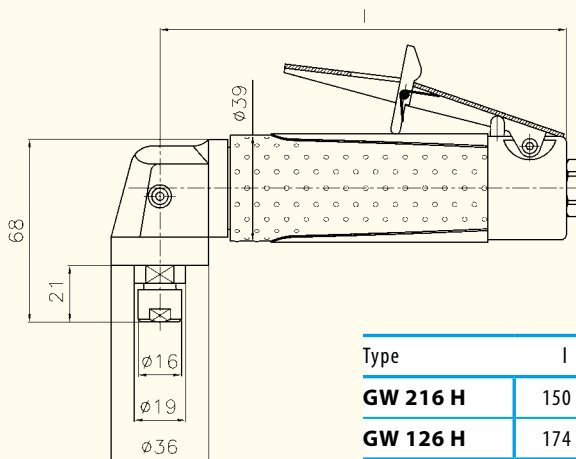
Combidisc for GW 216 H, GW 218 H, GW 218 HV and GW 126 H

For the professional treatment of surfaces, radii or outlines

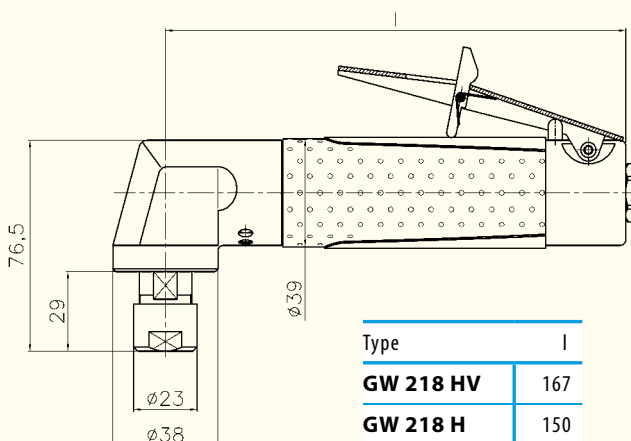
A 01	1 holder, \varnothing 50 mm	Order No. 9368 610
A 02	10 grinding discs, \varnothing 50 mm, grain 36	Order No. 9368 614
A 03	10 grinding discs, \varnothing 50 mm, grain 60	Order No. 9368 615
A 04	10 grinding discs, \varnothing 50 mm, grain 120	Order No. 9368 616
B 01	1 holder, \varnothing 50 mm	Order No. 9368 611
B 02	10 grinding discs, \varnothing 50 mm, grain 60	Order No. 9368 612
B 03	10 grinding discs, \varnothing 50 mm, grain 120	Order No. 9368 613



GW 216 H | GW 126 H dimensions (mm)



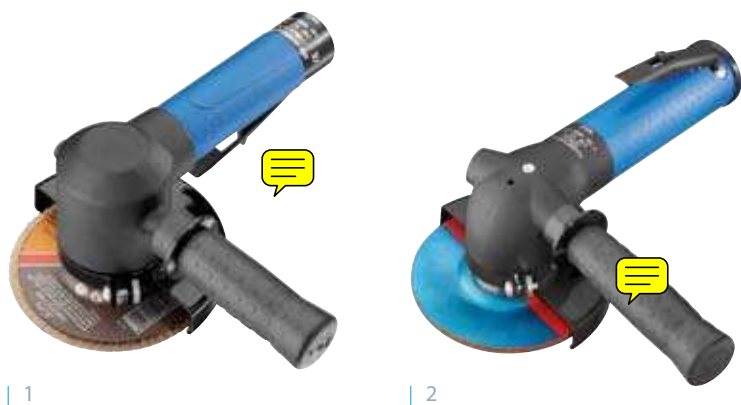
GW 218 HV | GW 218 H dimensions (mm)



Angle grinding machines

Roughing, grinding and polishing

For fibre-reinforced grinding discs or for use with elastic rubber discs



- Type GW 122 H:
 - direct drive without angular gearing
- Easy to service
- Additional handle may be fitted on either side
- Safety lever valve according to EN 792
- Type GW 121 H:
 - with centrifugal governor, automatic out-of-balance compensation
- Low angle head height
- Dust extraction system upon request

Technical data

Type		GW 122 H	GW 121 H
Order No.		60016-98-5	60012-07-5
Illustration		1	2
Valve		lever valve	lever valve
Free speed	rpm	12 000	12 000
Power	Watt	750	1 100
Exhaust air		to the rear	to the rear
Spindle thread		M 14	M 14
Grinding wheel max.	mm	125	125
Noise level	dB(A)	82	83
Air consumption	l/ sec	14.0	15.0
Weight without hose	kg	1.80	2.10
Machine height	mm	108	98
Machine length	mm	203	240
Hose I. D.	mm	9	—
Hose unit			inklusive
Supply air hose	m	—	2.5
Exhaust air hose	m	—	1.0
Connection		G 3/8" i	G 3/8"
Accessories supplied		wrench, side handle	wrench, side handle

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories



For Type		GW 122 H	GW 121 H
Hose unit		60017-38-5	60012-09-5
Rubber plate		9 368 202	9 368 202
Fibre	Grain 36	9 368 009	9 368 009
	Grain 60	9 368 224	9 368 224
	Grain 80	9 368 010	9 368 010
Fettling wheel		9 368 603	9 368 603

Hose unit: incl. supply / exhaust air hose.

Vertical grinding machines

For heavy-duty applications

- Suitable for steel erection, machine-building, reinforced concrete construction, foundries etc.
- For the cutting-off of steel, castings, wire ropes, artificial flags etc.
- For roughing, grinding and burnishing of all types of metal
- For removing rust and paint with cup brushes
- GV 84-1 vibration damped
- Safety lever valve
- GV 66-1 with automatic imbalance compensation, which reduces vibration to a minimum



GV 84-1



GV 66-1

Technical data

Type		GV 84-1	GV 66-1
Order No.		03250-03-5	29900-36-6
Valve		lever valve	lever valve
Free speed	rpm	8 500	6 600
Power	Watt	1 800	2 350
Exhaust air		to the side	to the side
Spindle thread		5/8"	M 14
Grinding wheel max.	mm	178	230
Noise level	dB(A)	78	84
Air consumption	l / sec	25.0	33.5
Weight without hose	kg	3.60	5.60
Machine height	mm	189	200
Machine length	mm	400	335
Hose I. D.	mm	16	16
Connection		G 1/2" i	G 1/2" i
Accessories supplied		wrench for tool change, flange for scrubbing wheels	

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Zubehör



For Type	GV 84-1
Flange set Rubber plate, flanges and wrench	60009-23-6
Rubber plate Ø 178 mm	9 368 201

Swivel joint



Variacor	60001-62-6
Further Information see p. 138	

Belt grinders

For belt length 330 and 610 mm



GB 815 H



GB 613 D

GB 815 H

- Sanding arm included
- Powerful motor
- Easy change of belts
- Air to the rear via hose unit included
- Compact design, small weight
- Telescopic belt tension
- Suitable for sanding belts 8 and 15 mm

GB 613 H | D

- To grind on the free belt or grinding arm
- With cooling of belts
- For band width 6 mm and 13 mm
- exchange grinding arms are available

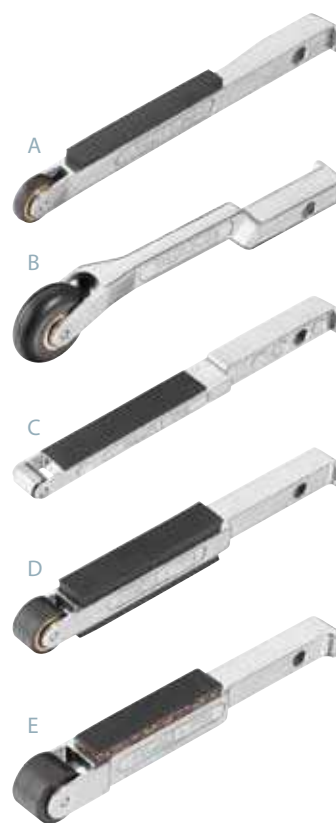
Technical data

Type		GB 815 H	GB 613 H	GB 613 D
Order No.		60010-68-5	60011-75-5	60011-74-5
Free speed	rpm	20 000	20 000	20 000
Power	Watt	350	400	300
Exhaust air		to the rear	to the rear	to the rear
Belt measures	mm	330×8 / 330×15	610×6 / 610×13	610×6 / 610×13
Belt run speed	m / s	20	20	20
Noise level	dB(A)	76	73	73
Air consumption	l / sec	10.0	14.1	14.1
Weight without hose	kg	0.95	1.40	1.40
Machine height	mm	38	116	116
Machine length	mm	295	371	371
Hose I. D.	mm	—	8	8
Hose unit		inclusive	inclusive	inclusive
Supply air hose	m	2.5	2.5	2.5
Exhaust air hose	m	1.5	1.5	1.5
Connection		G 1/4"	G 1/4"	G 1/4"
Accessories supplied		sanding arm	contact arm 11218	contact arm 11218

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Contact arms for GB 613 H | D (mm)

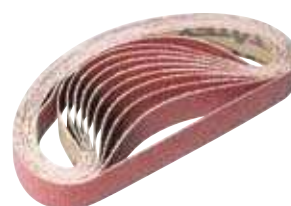
A	11216	Rubber wheel	∅ 16 × 3	L 610 × B 6	Order No. 60011-26-6
B	11219	Rubber wheel	∅ 25 × 9.5	L 610 × B 6	Order No. 60011-27-6
C	11213	Steel wheel	∅ 8 × 9.5	L 610 × B 13	Order No. 60011-28-6
D	11218	Rubber wheel	∅ 16 × 9.5	L 610 × B 13	Order No. 60011-29-6
E	11231	Rubber wheel	∅ 19 × 13	L 610 × B 13	Order No. 60011-30-6



Contact arms

Abrasive belts (10 pieces)

Grain	60	120	180	240
330 × 8 mm	9368 701	9368 702	9368 703	9368 704
330 × 15 mm	9368 711	9368 712	9368 713	9368 714
610 × 6 mm	9368 725	9368 726	9368 727	9368 728
610 × 13 mm	9368 729	9368 730	9368 731	9368 732



Abrasive belts

Carbide rotary burrs

Precision for maximum performance

Optimum chip flow

Toothing 6 Cross cut

- For hardened steels and materials
- High firmness
- Small splinters



Toothing 6

Toothing 5 Fine cut

- For hardened steels up to 65 HRC to the achievement of fine surfaces



Toothing 5

Toothing 1 Alu cut

- For aluminium alloys, yield non-ferrous metals and plastics
- Large swarf spaces

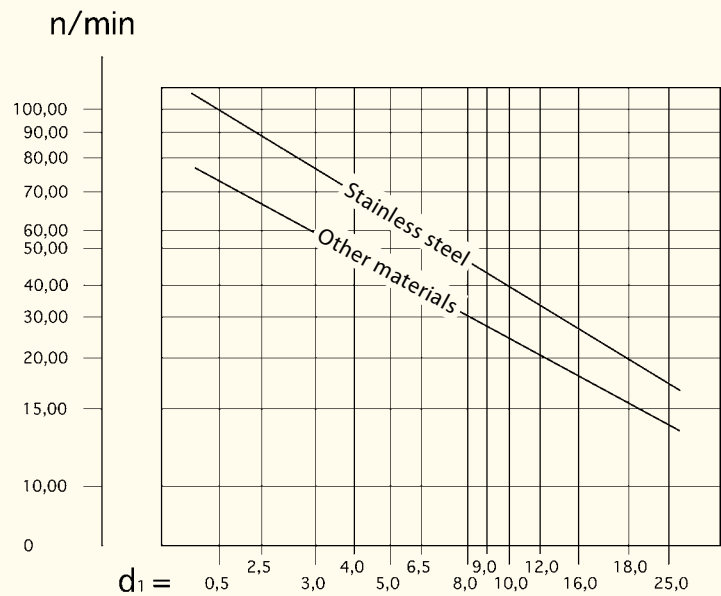


Toothing 1

Material employment refer.

Toothing	1	5	6
Aluminium	×		
Brass, copper, bronze			×
Glass fiber			×
Cast iron			×
Plastic	×		
Steel > 55 HRC		×	×
Steel > 60 HRC		×	×
Steel			×
Stainless steel		×	×
Nickel alloys			×
Welded parts			×
Titanium		×	×
Zinc	×		

Speed recommendation

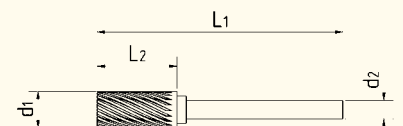


Set of carbide rotary burrs (6 parts)

- 6 different forms
- ZYA, WRC, KUD, RBF, SPG and SKM



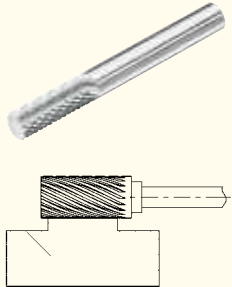
∅ shank 3 mm	∅ head 3 mm	toothing 6	Order No. 9 376 861
∅ shank 3 mm	∅ head 3 mm	toothing 5	Order No. 9 376 885
∅ shank 6 mm	∅ head 6/8 mm	toothing 6	Order No. 9 376 862



Carbide rotary burrs

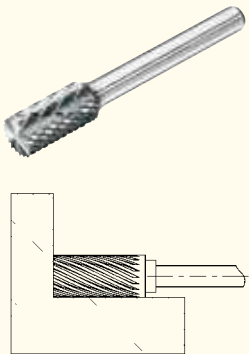
ZYA, WRC

Cylinder (ZYA)



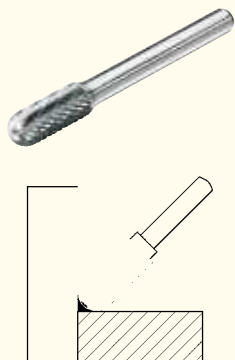
Head Ø mm d1	Head length mm L2	Shank Ø mm d2	Length total mm	Order No. toothing 6	Order No. toothing 5	Order No. toothing 1
Shank 3 mm						
2	10	3	40	9 376 800	—	—
3	13	3	40	9 376 801	9 376 703	—
6	13	3	40	9 376 802	9 376 705	—
Shank 6 mm						
6	16	6	50	9 376 831	9 376 707	—
8	20	6	60	9 376 832	9 376 709	—
10	20	6	60	9 376 833	9 376 711	9 376 712
12	25	6	65	9 376 834	9 376 713	9 376 890

Cylinder (ZYA) with front tothing



Head Ø mm d1	Head length mm L2	Shank Ø mm d2	Length total mm	Order No. toothing 6	Order No. toothing 5	Order No. toothing 1
Shank 3 mm						
3	13	3	40	9 376 820	9 376 721	—
6	13	3	40	9 376 821	9 376 723	—
Shank 6 mm						
10	19	6	63	9 376 725	9 376 726	9 376 727
13	25	6	69	9 376 728	9 376 729	9 376 730

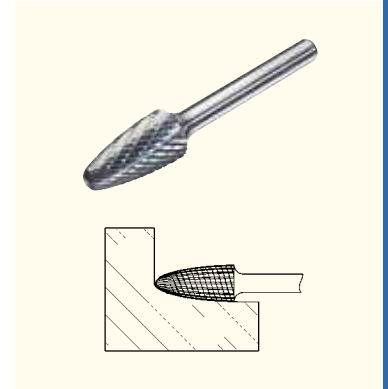
Round nose (WRC)



Head Ø mm d1	Head length mm L2	Shank Ø mm d2	Length total mm	Order No. toothing 6	Order No. toothing 5	Order No. toothing 1
Shank 3 mm						
3	13	3	40	9 376 803	9 376 741	—
6	13	3	43	9 376 804	9 376 743	—
Shank 6 mm						
6	16	6	50	9 376 835	9 376 745	—
8	20	6	60	9 376 836	9 376 747	—
10	20	6	60	9 376 837	9 376 749	9 376 750
12	25	6	65	9 376 838	9 376 751	9 376 752

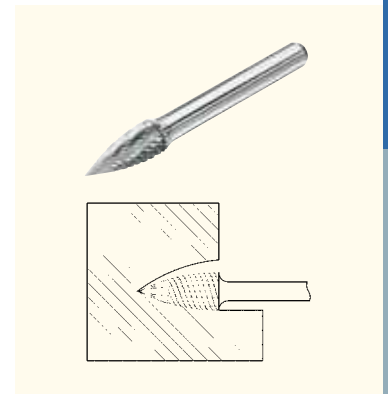
Arch round nose (RBF)

Head ∅ mm d1	Head length mm L2	Shank ∅ mm d2	Length total mm	Order No. toothing 6	Order No. toothing 5	Order No. toothing 1
Shank 3 mm						
3	12	3	40	9 376 812	9 376 755	—
6	13	3	43	9 376 813	9 376 757	—
Shank 6 mm						
6	18	6	50	9 376 850	9 376 759	—
10	20	6	60	9 376 851	9 376 761	9 376 762
12	25	6	65	9 376 852	9 376 763	9 376 894



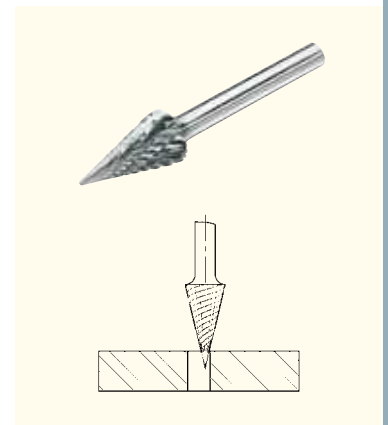
Arch pointed nose (SPG)

Head ∅ mm d1	Head length mm L2	Shank ∅ mm d2	Length total mm	Order No. toothing 6	Order No. toothing 5	Order No. toothing 1
Shank 3 mm						
3	13	3	40	9 376 814	9 376 764	—
6	13	3	43	9 376 819	9 376 815	—
Shank 6 mm						
6	18	6	50	9 376 853	9 376 767	—
8	18	6	58	9 376 854	9 376 897	—
10	20	6	60	9 376 855	9 376 769	—
12	25	6	65	9 376 856	9 376 771	9 376 895



Conical pointed nose (SKM)

Head ∅ mm d1	Head length mm L2	Shank ∅ mm d2	Length total mm	Order No. toothing 6	Order No. toothing 5	Order No. toothing 1
Shank 3 mm						
3	12	3	40	9 376 816	9 376 772	—
6	13	3	43	9 376 817	9 376 774	—
Shank 6 mm						
6	18	6	50	9 376 857	9 376 776	—
10	20	6	60	9 376 858	9 376 778	—
12	25	6	65	9 376 859	9 376 780	9 376 896



Mounted points

Tool manufacture and mould making

- Grain type: EK blue
- Especially suitable for the working of hardened or alloy steels
- Universal application in finish-grinding operations
- Shank diameter 3 mm

Cylinder

Head Ø mm	Head length mm	Shank Ø mm	Shank length mm	Order No.
2	5	3	30	9 376 950
3	6	3	30	9 376 951
4	8	3	30	9 376 952
5	10	3	30	9 376 953
6	10	3	30	9 376 954
8	10	3	30	9 376 958
10	10	3	30	9 376 959

Spherical

Head Ø mm	Head length mm	Shank Ø mm	Shank length mm	Order No.
3	—	3	30	9 376 955
5	—	3	30	9 376 956
8	—	3	30	9 376 957

Round nose

Head Ø mm	Head length mm	Shank Ø mm	Shank length mm	Order No.
3	6	3	30	9 376 968
5	10	3	30	9 376 962



POLICAP

Sharpening caps are predominantly used in the tool manufacture for finishing work on difficult to access areas. They are suitable for the treatment of steel and stainless steel.

Mounted points Tool manufacture and mould making

Arch pointed nose

Head Ø mm	Head length mm	Shank Ø mm	Shank length mm	Order No.
3	6	3	30	9 376 967
5	10	3	30	9 376 960



Conical nose

Head Ø mm	Head length mm	Shank Ø mm	Shank length mm	Order No.
5	10	3	30	9 376 961
10	13	3	30	9 376 966



Sharpening cap carrier (5 pieces)

Head Ø mm	Height length mm	Schaft Ø mm	Drehzahl min ⁻¹	Weight kg 5 pieces	Order No.
5	15	6	empf. 40 000	0,050	9 376 971
11	25	6	empf. 20 000	0,060	9 376 972



Sharpening caps (50 pieces)

Grain	60	150	280
Ø 5 mm height 15 mm	—	9 376 974	9 376 975
Ø 11 mm height 25 mm	9 376 976	9 376 977	9 376 978



Set of mounted points (6 parts)

- 3 × 6 cylinder
- 5 × 10 cylinder
- 5 spherical
- 5 × 10 round nose
- 5 × 10 arch pointed nose
- 5 × 10 conical nose



Free speed up to 100 000 rpm Order No. 9 376 965

Hose units



Exemplary representation

Order numbers

For type	Hose unit complete	Supply air hose per running meter	Exhaust air hose per running meter	Thread socket
GT 652 D GTK 652 D	29911-55-5	9 361 532	9 361 214	47092-05-6
GTV 1000	29939-02-5	9 361 213	—	29300-63-6
G 803 D/H	29939-94-5	9 361 213	9 361 212	29939-93-3
G 551 D GK 551 D	29939-94-5	9 361 213	9 361 212	29939-93-3
G 456 D/H G 452 D/H	29923-49-5	9 361 532	9 361 214	47092-05-6
G 356 D/H G 352 D/H	29923-49-5	9 361 532	9 361 214	47092-05-6
G 300 D/H	29923-49-5	9 361 532	9 361 214	47092-05-6
GK 282 D/H	29923-49-5	9 361 532	9 361 214	47092-05-6
G 283 H	29923-33-5	9 361 158	9 361 208	9 361 330
G 232 H G 120 H	29923-33-5	9 361 158	9 361 208	9 361 330
G 201 H	29923-33-5	9 361 158	9 361 208	9 361 330
GL 200 H	29923-33-5	9 361 158	9 361 208	9 361 330
GW 216 GW 218 H GW 126 H	29923-33-5	9 361 158	9 361 208	9 361 330
GB 815 H GB 613 D/H	29923-33-5	9 361 158	9 361 208	9 361 330
GW 122 H	60017-38-5	9 361 158	9 361 192	9 361 330
G 16000 H G 12000 H GL 16000 H GL 12000 H GLA 16000 H GLA 12000 H GW 121 H	60012-09-5	9 361 115	9 361 193	9 361 477

Engraving pen

Writing, engraving and chiselling

- For writing and engraving on hardened steel, metal, glass, plastic, ceramic and stone
- Simple needle change
- Extremely low vibrations level below 2.5 m/s^2
- Noise level below 65 dB(A)
- GST 540 M for chiselling, fossils work



GST 540

Needle

Technical data

Type		GST 540	GST 540 M
Order No.		29903-91-6	29943-71-6
Valve		rotary valve	rotary valve
Frequency	Hz	540	540
Vibration	m/s^2	< 2.5	< 2.5
Noise level	dB(A)	65	65
Air consumption	l/sec	0.85	0.85
Weight without hose	kg	0.15	0.15
Ø machine	mm	17	17
Machine length	mm	162	162
Hose unit		inclusive	inclusive
Hose	m	2.5	2.5
Connection		plug-in socket	plug-in socket
Accessories supplied		needle, medium	chisel insert

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories for GST 540

Needle (tungsten carbide)

fine	29904-13-6
medium	29904-05-6
coarse	29904-14-6

Accessories for GST 540 M

Complete chisel head with chisel	29937-94-6
Complete chisel head with needle	29937-93-6
Chisel with spring	29937-92-6



GST 540 M

Filing machines

Deburring, filing works

- Deburring of cast or machined parts
- Filing applications in tool and mould making
- Extremely low vibration:
FRV 110: 2.0 m/s²
FRV 60 B: 1.8 m/s²
- FRV 110 for heavy-duty filing works
- High precision
- Calm run
- For files with round shank



FRV 60 B



FRV 110



Technical data

Type		FRV 60 B	FRV 110
Order No.		29900-07-6	29701-14-6
Order No.		push button	lever valve
Number of blows	rpm	8 400	9 000
Frequency	Hz	140	150
Stroke max.	mm	4	8
Exhaust air		to the front	to the front
Ø tool holder max.	mm	3 – 4	4 6
Tool holder		clamping bolt	clamping bolt
Noise level	dB(A)	71	77
Air consumption	l/sec	0.5	1.3
Weight without hose	kg	0.30	1.05
Ø machine	mm	30	41
Machine length	mm	200	180
Hose I. D.	mm	—	6
Connection		—	G 1/4" i
Accessories supplied		wrench, Hose 1.5 m	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories for FRV 110

Reduction collet 6/4 (for shanks 4 mm)	29931-44-6
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Swivel joint for FRV 110

Variacor	60001-60-6
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Further Information see p. 138



Diamond file (detail)

Feilen for FRV 60 B

Ø shank 3.0 mm

Profile						
Cut 1 Order No.		9 376 906	9 376 907	9 376 908	9 376 909	9 376 910
Width × depth	mm	7.0 × 2.0	3.0 × 3.0	4.0 × 4.0	6.5 × 2.0	Ø 3.6
Useable length	mm	60	60	60	60	60
Ø shank	mm	3.0	3.0	3.0	3.0	3.0

Files for FRV 60 B

Ø shank 3.8 mm

Profile						
Cut 1 Order No.		9 376 921	9 376 922	9 376 924	9 376 926	9 376 928
Cut 0 Order No.		9 376 911	9 376 923	9 376 925	9 376 927	9 376 929
Width × depth	mm	7.0 × 2.0	3.0 × 3.0	4.0 × 4.0	6.5 × 2.0	Ø 3.6
Useable length	mm	60	60	60	60	60
Ø shank	mm	3.8	3.8	3.8	3.8	3.8

Diamond files for FRV 60 B

Ø shank 3.0 mm

Profile						
Grain D 107 Order No.		9 376 931	9 376 932	9 376 933	9 376 934	9 376 935
Width × depth	mm	5.2 × 1.4	2.5 × 2.5	3.6 × 3.6	5.0 × 2.0	Ø 3.0
Total length	mm	85	85	85	85	85
Useable length	mm	45	45	45	45	45
Ø shank	mm	3.0	3.0	3.0	3.0	3.0

Files for FRV 110

Ø shank 6.0 mm

Profile						
Cut 1 Order No.		9 376 900	9 376 901	9 376 902	9 376 903	9 376 904
Cut 0 (for alu) Order No.		9 376 912	—	—	—	—
Hieb 1 Width × depth	mm	12.3 × 6.3	8.0 × 8.0	9.0 × 9.0	12.0 × 6.0	Ø 6.0
Hieb 0 Width × depth	mm	12.0 × 7.0	—	—	—	—
Useable length	mm	80	80	80	80	80
Ø shank	mm	6.0	6.0	6.0	6.0	6.0

Air motors

0,11 to 4,4 kW



→ Individual and powerful with alternatives – request our special folder »Air motors« !



Pneumatic spindles Pneumatic built-in motors



MANNESMANN DEMAG

Always one step ahead



Intelligent solutions to save time and costs

As an insider you know that being at the cutting edge of automation is crucial in special machine construction. When installing MANNESMANN DEMAG pneumatic spindles and built-in motors you can be sure that state-of-the-art technology, maximum reliability and serious top-rate quality will bring the key advantages to your automation process.

Precision is trumps. This is why our spindles work with an extremely high true-running accuracy of less than 0.02 mm.

Durability pays off. Housings and spindles are made of extra-robust stainless steel. So you can look forward to particularly long tool life: thanks to floating bearing support for turbine spindles by MANNESMANN DEMAG, and thanks to paired bearings for all other built-in spindles.

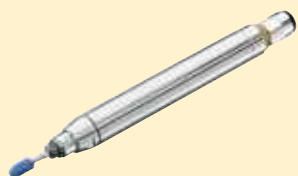
Deburring, drilling, brushing, sanding, milling. Optimum surface quality is guaranteed when processing your workpieces.

Metals and other materials. The high-speed spindles from our product range allow for a high cutting speed. The corresponding tools are capable of processing both metallic and also non-metallic materials.



The MANNESMANN DEMAG full service offer:

- Professional know-how and reliable quality
- Increased long-time tool life
- Maintenance: no need for stocks of spares
- Mature innovative solutions for milling, sanding, drilling, brushing and polishing
- Reduced repair costs: low costs for spare parts
- Total transparency: we register and document all maintenance and repairs for you



Reduce your costs now!

Just contact us, we'll optimise your previous solution, whether individual product or all-in system.

You can approach us without obligation, our service adviser will contact you immediately:

+49 711 887 18-0 or
info@mannesmann-demag.com

Pneumatic spindles

Non-lubricated turbines



EST 1000 ZG

EST 1000 K | EST 650 K

Technical data

Type		EST 1000 ZG	EST 1000 K	EST 650 K	EST 450 K
Order-No.		Blade wheel turbine 29924-61-7	Jet turbine 29939-57-7	Jet turbine 29939-58-7	Jet turbine 60016-67-5
Free speed	rpm	100 000	100 000	65 000	45 000
Motor power	Watt	100	100	100	160
Direction of rotation		clockwise	clockwise	clockwise	clockwise
Exhaust air		to the front	to the rear	to the rear	to the rear
Collet included	mm	3	3	3	6
Collets available	mm	1.0 1.5 2.0 2.5 3/32" 1/8"	1.0 1.5 2.0 2.5 3/32" 1/8"	1.0 1.5 2.0 2.5 3/32" 1/8"	3.0 4.0 5.0
Carbide burrs	max. mm	3	3	3	8
Mounted points and wheels	max. mm	5	5	5	10
Noise level	dB(A)	74	69	69	74
Air consumption	l / sec	5.3	3.5	3.5	7 15
Weight	kg	0.25	0.26	0.26	1.6
Connection air supply (hose)	Ø mm, inside /outside	2.7 4	6 8	6 8	8 -

Power and free speed at 6 bar operating pressure. Compressed air quality: absolutely non-lubricated.

- For installation in transfer lines, machine tools and robot stations
- Stainless steel housings
- Stainless steel spindles
- Floating bearings
- High speeds for excellent processing quality
- Maintenance-friendly
- High true-running accuracy for long tool lives
- EST 650 and 450: centrifugal governor



ES 852 ZG

ES 550 ZG

Technical data

Type		ES 852 ZG	ES 550 ZG
Order-No.		29944-30-7	29924-59-7
Free speed	rpm	80 000	55 000
Motor power	Watt	100	100
Direction of rotation		clockwise	clockwise
Exhaust air		to the rear	to the rear
Collet included	mm	3	3
Collets available	mm	1.0 1.5 2.0 2.5 3/32" 1/8"	1.0 1.5 2.0 2.5 3/32" 1/8"
Carbide burrs	max. mm	4	4
Mounted points and wheels	max. mm	6	6
Noise level	dB(A)	84	75
Air consumption	l / sec	2.3	2.3
Weight	kg	0.11	0.08
Connection air supply (hose)	∅ mm, inside/outside	4 6	4 6

Power and free speed at 6 bar operating pressure. Compressed air quality: lubricated (2–3 drops per minute).

- For installation in transfer lines, machine tools and robot stations
- Stainless steel housings
- Stainless steel spindle
- Small dimensions
- High true-running accuracy
- Overload capacity 100 %
- ES 852 ZG: Paired bearings for increased tool life and better running properties
- ES 852 ZG: with splashguard

Pneumatic spindles



ES 450 ER

ES 350 ER

Technical data

Type (with ZG collet)		• ES 450 ZG	• ES 350 ZG	• ES 300 ZG
Order-No.		60012-12-7	60012-16-7	29924-54-7
Type (with ER collet)		• ES 450 ER	• ES 350 ER	—
Order-No.		60012-13-7	60012-15-7	—
Free speed	rpm	45 000	35 000	30 000
Motor power	Watt	230	300	270
Direction of rotation *		clockwise	clockwise	clockwise
Exhaust air **		to the rear	to the rear	to the rear
• ZG collet included	mm	6	6	6
• ZG collets available	mm "	3 4 5 1/4"	3 4 5 8 1/4"	3 4 5 1/4"
• ER collet included	mm	6	6	—
• ER collets available	mm	3 4 5	3 4 5	—
Carbide burrs	max. mm	8	10	10
Mounted points and wheels	max. mm	10	16	16
Noise level	dB(A)	78	79	70
Air consumption	l / sec	7.5	8.3	7.7
Weight	kg	0.39	0.42	0.38
Connection air supply (hose)	∅ mm, inside /outside	6 8	6 8	6 8

Power and free speed at 6 bar operating pressure. Compressed air quality: lubricated (2–3 drops per minute).

* Direction of rotation: *counterclockwise* on request | ** Exhaust air: with *guided exhaust air* upon request

- For installation in transfer lines, machine tools and robot stations
- Stainless steel housings
- Stainless steel spindles
- With collet chuck or precision collet chuck
- High true-running accuracy
- Paired bearings for longer tool life time and better running properties
- With splashguard to prevent penetration of dust, water or metal chips



Technical data



Type (with ZG collet)		• ES 280 ZG	• ES 200 ZG	• ES 170 ZG
Order-No.		29924-53-7	60008-31-7	29924-45-7
Type (with ER collet)		• ES 280 ER	• ES 200 ER	• ES 170 ER
Order-No.		29924-52-7	60008-32-7	29924-44-7
Free speed	rpm	28 000	20 000	15 000
Motor power	Watt	380	400	800
Direction of rotation *		clockwise	clockwise	clockwise
Exhaust air **		to the rear	to the rear	to the rear
• ZG collet included	mm	6	6	8
• ZG collets available	mm "	3 5 8 1/4"	3 5 8 1/4"	3 5 6 1/4" 10
• ER collet included	mm	6	6	8
• ER collets available	mm	3 5 8 10	3 5 8 10	3 5 6 10
Carbide burrs	max. mm	10	12	15
Mounted points and wheels	max. mm	16	25	32
Noise level	dB(A)	80	72	86
Air consumption	l / sec	11.5	8.5	15.8
Weight	kg	0.75	1.10	1.65
Connection air supply (hose)	∅ mm, inside / outside	10 12	10 12	10 12

Power and free speed at 6 bar operating pressure. Compressed air quality: lubricated (2–3 drops per minute).

* Direction of rotation: *counterclockwise* on request | ** Exhaust air: with *guided exhaust air* upon request

- For installation in transfer lines, machine tools and robot stations
- Stainless steel housings
- Stainless steel spindles
- With collet chuck or precision collet chuck
- High true-running accuracy
- Paired bearings for longer tool life time and better running characteristics
- With splashguard to prevent penetration of dust, water or metal chips

Pneumatic built-in motors



EBM 5000 B

EBMU 23-4 000 B

Technical data



Type		EBM 5000 B	EBM 3500 B	EBMU 23-4000 B	EBMU 23-2000 B	EBMU 23-1000 B
Order-No.		29937-41-7	60009-24-7	60009-28-7	60009-31-7	60009-34-7
Free speed	rpm	5 000	3 500	4 000	2 000	1 000
Motor power	Watt	160	160	230	230	230
Drill chuck clamping range	mm	1–6	1–6	1–10	1–10	1–10
DIN cone or thread		B 10	B 10	3/8" × 24 UNF	3/8" × 24 UNF	3/8" × 24 UNF
Direction of rotation		clockwise	clockwise	reversible	reversible	reversible
Exhaust air		to the rear	to the rear	to the rear	to the rear	to the rear
Noise level	dB(A)	71	71	72	72	72
Air consumption	l/sec	5.0	5.0	7.8	7.8	7.8
Weight	kg	0.62	0.62	1.25	1.25	1.55
Connection air supply (hose)	Ø mm, inside/outside	6 8	6 8	10 12	10 12	10 12

Power and free speed at 6 bar operating pressure. Compressed air quality: lubricated (2–3 drops per minute).

- For installation in transfer lines, machine tools and robot stations
- Stainless steel housings
- Stainless steel spindle for all collet models

- Ideal for **drilling or brushing**
- Without valve for central remote control
- Small housing diameter for minimum centre-to-centre spacing

- Types EBM 19 000 S to 1 200 S: splashguard to prevent penetration of dust, water or metal chips

The suitable accessories: page 61.

Types of exhaust air for machines on page 40, 41 and 43

A The machines are standardly supplied with a sintered plate.

B The machines can also be supplied as a guided exhaust air model.

C Exemplary drawing of guided air exhaust.

D The speed of the machine can be adjusted precisely by using a silencer with an integrated throttle (Order-No. 9361705).

E The exhaust air can be cleaned and filtered up to 99% by connecting the machine to an oil trap unit (Order-No. 29914016).





EBM with collet

EBM with drill chuck

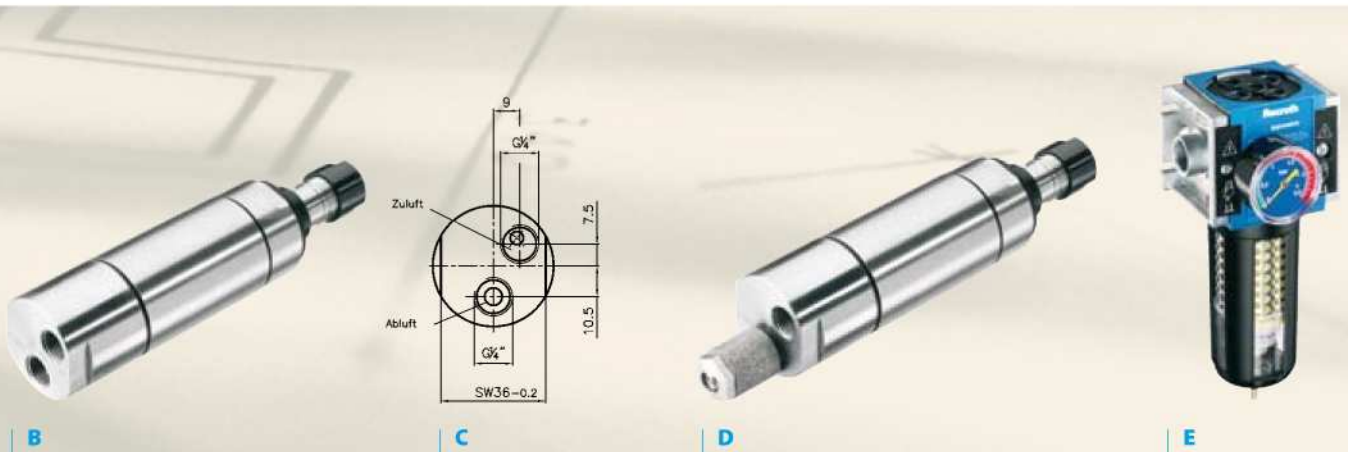
Technical data



Type with collet (clockwise)		EBM 19000 S	EBM 5200 S	EBM 2900 S	EBM 2400 S	EBM 1200 S
Order-No.		60001-04-7	29937-63-7	29937-61-7	29937-62-7	60003-85-7
Type with collet (counterclockwise)		EBM 19000 S-L	EBM 5200 S-L	EBM 2900 S-L	—	—
Order-No.		29946-52-7	29948-37-7	29948-32-7		
Type with drill chuck (clockwise)		—	EBM 38-5200 B	EBM 38-2900 B	EBM 38-2400 B	EBM 38-1200 B
Order-No.			29937-64-7	60009-26-7	60009-25-7	60008-71-7
Free speed	rpm	19 000	5 200	2 900	2 400	1 200
Motor power	Watt	380	380	380	380	380
Drill chuck clamping range	mm	—	1–10	1–10	1–10	1–10
ER collet included	mm	6	6	6	6	6
ER collets available	mm "	3 5 8 10	3 5 8 10	3 5 8 10	3 5 8 10	3 5 8 10
Exhaust air *		to the rear	to the rear	to the rear	to the rear	to the rear
Noise level	dB(A)	72	72	72	72	72
Air consumption	l/sec	8.5	8.5	8.5	8.5	8.5
Weight with collet drill chuck	kg	1.12 1.20	1.12 1.20	1.12 1.20	1.12 1.20	1.42 1.50
Connection air supply (hose)	Ø mm, inside /outside	10 12	10 12	10 12	10 12	10 12

Power and free speed at 6 bar operating pressure. Compressed air quality: lubricated (2–3 drops per minute).

* Exhaust air: with *guided exhaust air* upon request



Pneumatic built-in motors



EBS 504 ZG

EBS 520 ER

EWBS 38-520

Technical data



Type		• EBS 504 ZG	• EBS 520 ER	• EBS 480 ER	EWBS 38-520
Order-No.		29937-30-7	29938-81-7	29938-71-5	60001-29-5
Free speed	rpm	500	520	480	520
Motor power	Watt	160	380	230	380
Start up		push start	external	external	external
Direction of rotation		clockwise	clockwise	reversible	clockwise
Exhaust air		to the rear	to the rear	to the rear	to the rear
• ZG collet included	mm	8	—	—	1/4" hex.
• ZG collets available	mm "	5 1/4"	—	—	—
• ER collet included	mm	—	8	8	—
• ER collets available	mm	—	3 5 6 10	3 5 6 10	—
Noise level	dB(A)	65	73	77	76 *
Air consumption	l/ sec	5.3	8.5	8.5	8.5
Weight	kg	0.75	1.40	1.20	2.30
Connection air supply (hose)	∅ mm, inside /outside	6 8	10 12	10 12	10 12

Power and free speed at 6 bar operating pressure. Compressed air quality: lubricated (2–3 drops per minute).

* Exhaust air throttle
Order-No. 9 361 705

- For installation in transfer lines, machine tools and robot stations
- Stainless steel housings
- Stainless steel spindles
- Ideal for **countersinking and brushing**
- Collets up to 10 mm
- Rotating splashguard to prevent penetration of dust, water or chips (Types EBS 520 / 480)
- Push start for EBS 504 reduces air consumption



Accessories

HSS counterbore

EWBS 38-520

3 blades, 1/4" hexagon / 90°

Sinking range 2,5 – 10 mm	48109-21-6
Sinking range 3,2 – 16,5 mm	48109-22-6
Sinking range 5 – 25 mm	48109-24-6

RoboCut | High speed spindles For finishing and high precision deburring



ESR 1000 FW



ESR 855 FW



ESR 551 FW

Technical data

RoboCut		ESR 1 000	ESR 855	ESR 551
Order-No.		60007-42-5	60007-38-5	60007-39-5
RoboCut		ESR 1 000 FW	ESR 855 FW	ESR 551 FW
Order-No.		29948-71-5	29948-67-5	29948-66-5
Compressed air		non-lubricated	lubricated	lubricated
Free speed	rpm	100 000	80 000	55 000
Motor power	Watt	100	100	100
Radial compliance		± 4°	± 4°	± 4°
Exhaust air		to the front	to the front	to the front
ZG collet included	mm	3	3	3
ZG collets available	mm	1.0 1.5 2.0 2.5 3/32" 1/8"	1.0 1.5 2.0 2.5 3/32" 1/8"	1.0 1.5 2.0 2.5 3/32" 1/8"
Pre-adjusted compliance force		5–7 N	5–7 N	5–7 N
Compliance force range *		4–12 N	3–12 N	3–12 N
Direction of rotation		clockwise	clockwise	clockwise
Noise level	dB(A)	70	86	78
Air consumption	l / sec	5.3	2.3	2.3
Weight	kg	0.82	0.66	0.57
Connection air supply (hose)	∅ mm, inside /outside	2.7 4	2.7 4	2.7 4
Accessories supplied		wrench, spring sets	wrench, spring sets	wrench, spring sets

Power and free speed at 6 bar operating pressure. Compressed air quality: lubricated (2–3 drops per minute). Subject to technical alterations.

* ESR 1 000, ESR 855, ESR 551: Compliance force is set by precision pressure regulator.

All types

- High true-running accuracy for long endurance running
- High revolution speed for excellent surface finishing

ESR 1 000 FW, ESR 855 FW, ESR 551 FW

- Different compliance forces by simply changing the springs being supplied with the tool (special compliance forces upon request)

ESR 1 000 FW

- For **non-lubricated use**, practically wearless, with floating spindle support
- Easy to service turbine motor
- Ideal for plastics and other materials which require non-lubricated and clean air

ESR 1 000, ESR 855, ESR 551

- The force of compliance can be set and adjusted precisely by using a **precision pressure regulator** (see page 31).

RoboCut | Robust spindles

Precise deburring and milling



ESR 350



ESR 350 with cone



ESR 170

Technical data

RoboCut		ESR 350	ESR 280	ESR 200	ESR 170
<i>Mounting</i>					
Order-No.		29942-16-5	29944-53-5	60011-88-5	29940-07-5
Compressed air		lubricated	lubricated	lubricated	lubricated
Free speed	rpm	35 000	28 000	20 000	15 000
Motor power	Watt	300	380	380	800
Radial compliance		± 4°	± 4°	± 4°	± 4°
Exhaust air		to the front	to the front	to the front	to the front
ER collet included	mm	6	6	6	8
ER collets available	mm	3 4 5	3 5 8 10	3 5 8 10	3 5 6 10
Compliance force range		10–55 N	10–55 N	12–55 N	25–110 N
Compliance force max.*		200 N	200 N	200 N	200 N
Direction of rotation		clockwise	clockwise	clockwise	clockwise
Noise level	dB(A)	79	80	78	82
Air consumption	l/sec	8.3	11.5	12.5	15.0
Weight	kg	1.80	1.90	1.90	5.15
Connection air supply (hose)	∅ mm, inside/outside	6 8	6 8	6 8	6 8
Accessories supplied		wrench	wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: lubricated (2–3 drops per minute). Subject to technical alterations.

- Broad revolution speed and power ranges for different deburring tasks
- Easy to mount horizontally or vertically onto a tool stand due to cuboid housing
- Easy to mount to a robot arm by thread connection
- Highest true running accuracy, load capability and best deburring results due to paired ball bearings
- Type ESR 170 for the most powerful milling and deburring tasks
- Compliance forces are controlled by air pressure or via optional spring package

Use in CNC machines

The ESR models can be integrated into CNC machines using SK-, MK-, HSK-cones. The compliance force is preset via spring packages according to customers' needs.



ESR 50

ESR 50 AX25, with various exemplary brushes

Technical data

RoboCut		ESR 50	ESR 30	ESR 50 AX25	ESR 30 AX25
Order-No.		29940-05-5	29940-03-5	60001-34-5	60001-35-5
Ideal use		brushing	brushing	brushing	brushing
Compressed air		lubricated	lubricated	lubricated	lubricated
Free speed	rpm	5 000	3 000	5 000	3 000
Motor power	Watt	380	380	380	380
Radial compliance		± 4°	± 4°	—	—
Axial compliance	mm	—	—	25	25
Exhaust air		to the front	to the front	to the front	to the front
ER collet included	mm	6	6	6	6
ER collets available	mm	3 5 8 10	3 5 8 10	3 5 8 10	3 5 8 10
Compliance force range		30–150 N	30–150 N	25–1 000 N	25–1 000 N
Compliance force max.*		200 N	200 N	—	—
Direction of rotation		clockwise	clockwise	clockwise	clockwise
Noise level	dB(A)	80	80	80	80
Air consumption	l/sec	8.3	8.3	8.3	8.3
Weight	kg	4.75	4.75	6.42	6.42
Connection air supply (hose)	∅ mm, inside /outside	10 12	10 12	10 12	10 12
Accessories supplied		wrench	wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: lubricated (2–3 drops per minute). Subject to technical alterations.
* Various pre-adjusted pressing forces on request.

- Maximum axial compliance of 25 mm
- Use of non-lubricated air motors for low wear and long life time
- Compliance forces are controlled by air pressure or via optional spring package

Please see page 30 for recommended precision pressure regulators and manometers for the machines with axial compliance.

Further revolution speeds and power classes upon request.

RoboCut | Flexible trouble shooters

Countersinking, drilling



ESR 38-520

RBS 38-520 AX25

RWBS 38-520

Technical data

RoboCut		ESR 38-520	RBS 38-520 AX25	RWBS 38-520
Order-No.		29948-43-5	60001-33-5	60000-69-5
Ideal use		drilling reaming	countersinking	countersinking
Compressed air		lubricated	lubricated	lubricated
Free speed	rpm	520	520	520
Motor power	Watt	380	380	380
Radial compliance		± 4°	—	± 4°
Axial compliance	mm	—	25	—
Exhaust air		to the front	to the front	to the front
ER collet included / connection	mm	6	6	1/4" – 6 kt.
Radial compliance of coupling		—	± 7°	—
Radial off-set of coupling	mm	—	± 0,5	—
ER collets available	mm	3 5 8 10	—	—
Compliance force range		18–75 N	25–1 000 N	10–70 N
Compliance force max.*		200 N	—	200 N
Direction of rotation		clockwise	clockwise	clockwise
Noise level	dB(A)	80	80	77
Air consumption	l / sec	8.3	8.3	8.3
Weight	kg	4.90	6.67	5.50
Connection air supply (hose)	∅ mm, inside / outside	10 12	10 12	10 12
Accessories supplied		wrench	wrench	wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: lubricated (2–3 drops per minute). Subject to technical alterations.

- ESR 38-520 for reaming and deburring of drill holes and intersections
- RBS 38-520 AX25 with axial and radial compliance
- Slim tool design: Ideal for difficult to access areas (e. g. pipes or complex casts with small space)
- Compliance forces are controlled by air pressure or via optional spring package

Please see page 30 for recommended precision pressure regulators and manometers for the machines with axial compliance.

Further revolution speeds and power classes upon request.



RF 110



Technical data

RoboCut		RF 110
Order-No.		60001-30-5
Ideal use		filing
Compressed air		lubricated
Frequency	Hz	150
Number of blows	rpm	9 000
Stroke max.	mm	8
Radial compliance		± 4°
Exhaust air		to the front
Tool holder round Ø	mm	6
Compliance force range		18–75 N
Compliance force max.		200 N
Noise level	dB(A)	77
Air consumption	l/sec	1.05
Weight	kg	4.7
Connection air supply (hose)	Ø mm, inside / outside	10 12
Accessories supplied		wrench

Power and free speed at 6 bar operating pressure. Compressed air quality: lubricated (2–3 drops per min.). Subject to technical alterations.

- RoboFile: robust filing machine RF 110 to deburr casts and machined parts
- Very low vibration level of 2.0 m/s²: high precision due to smooth running
- Compliance forces are controlled by air pressure or via optional spring package

Files for RF 110

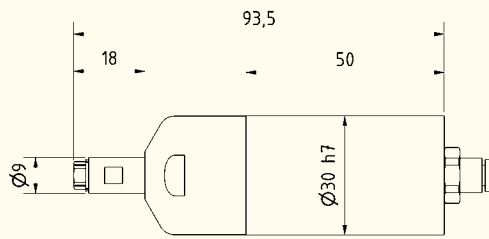
Ø shaft 6.0 mm

Form		■	■	▲	■	●
Cut 1 Order-No.		9 376 900	9 376 901	9 376 902	9 376 903	9 376 904
Cut 0 Order-No.		9 376 912	—	—	—	—
Cut 1 Width × depth	mm	12.3 × 6.3	8.0 × 8.0	9.0 × 9.0	12,0 × 6.0	Ø 6.0
Cut 0 Width × depth	mm	12.0 × 7.0	—	—	—	—
Useable length	mm	80	80	80	80	80
Ø shaft	mm	6.0	6.0	6.0	6.0	6.0

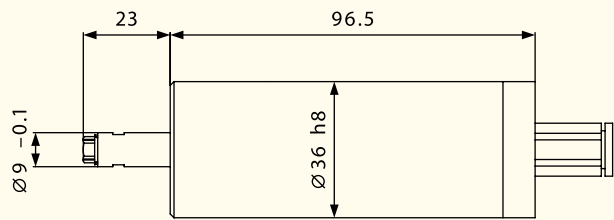
Dimensions

Pneumatic spindles

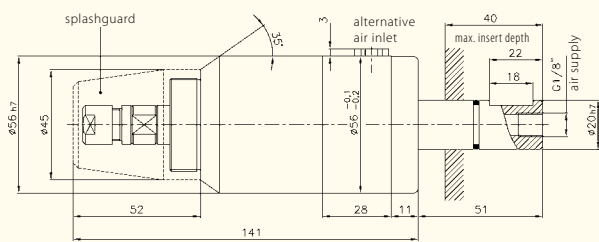
Page 38 | EST 1000 ZG



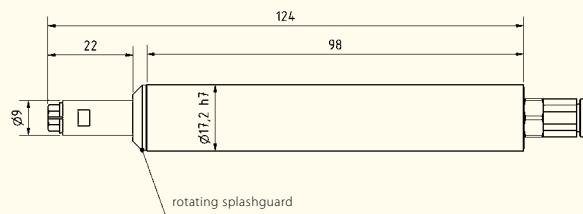
Page 38 | EST 1000 K and EST 650 K



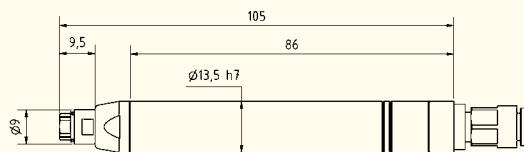
Page 38 | EST 450 K



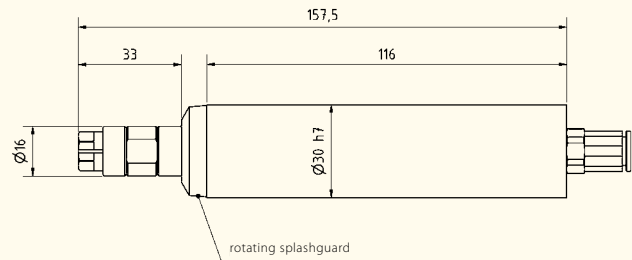
Page 39 | ES 852 ZG



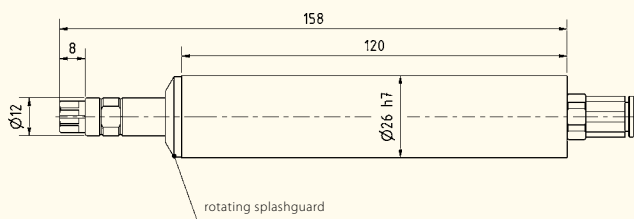
Page 39 | ES 550 ZG



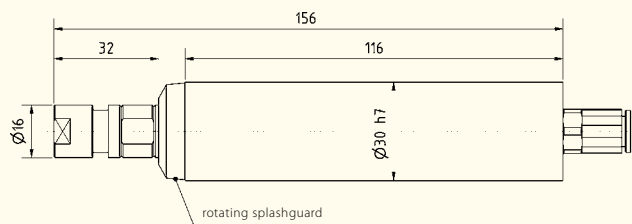
Page 40 | ES 450 ZG and ES 350 ZG



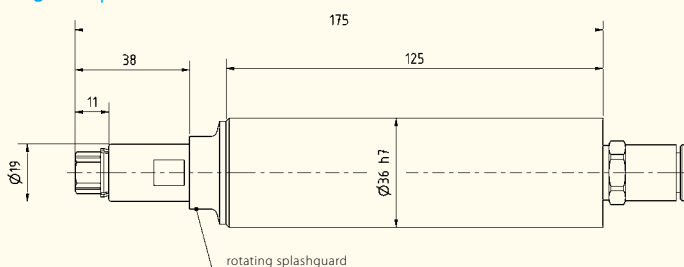
Page 40 | ES 300 ZG



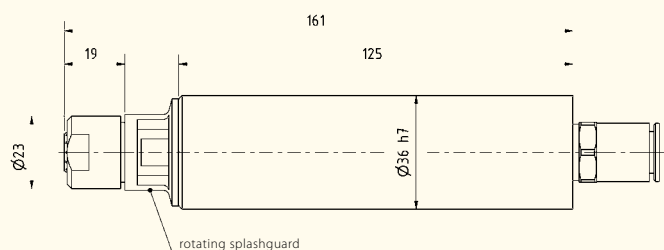
Page 40 | ES 350 ER and ES 450 ER



Page 41 | ES 280 ZG

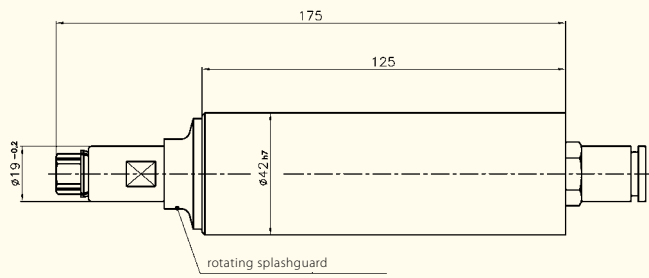


Page 41 | ES 280 ER

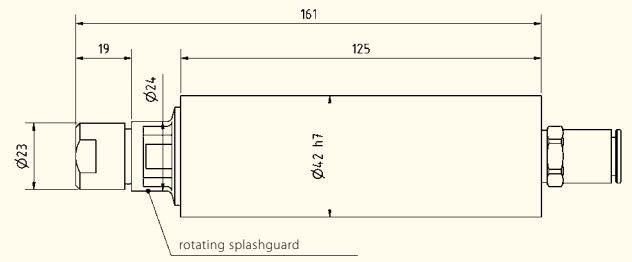


Dimensions Pneumatic built-in motors

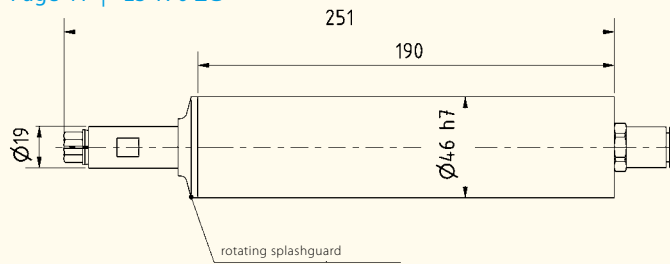
Page 41 | ES 200 ZG



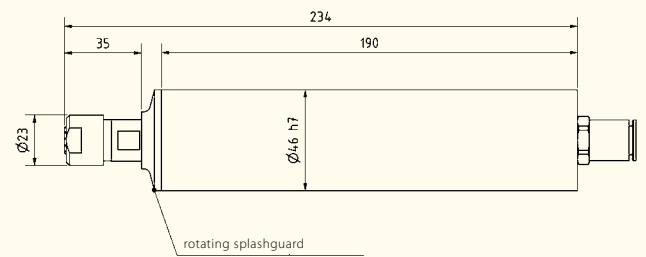
Page 41 | ES 200 ER



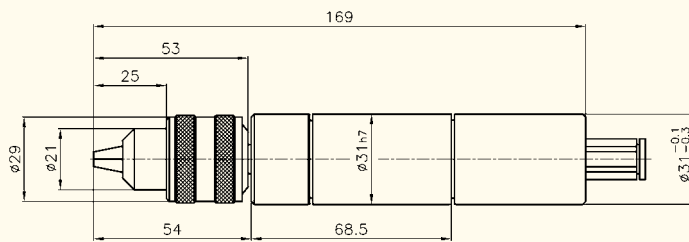
Page 41 | ES 170 ZG



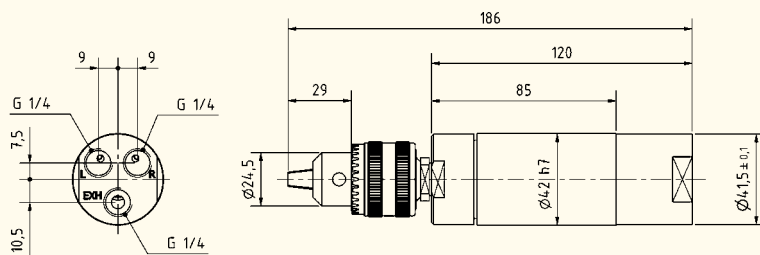
Page 41 | ES 170 ER



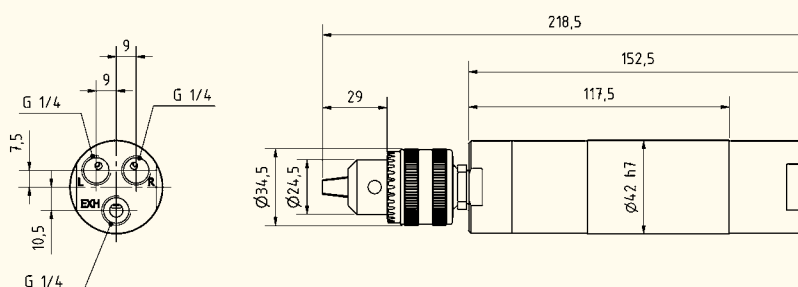
Page 42 | EBM 5000 B and EBM 3500 B



Page 42 | EBMU 23-4000 B and EBMU 23-2000 B



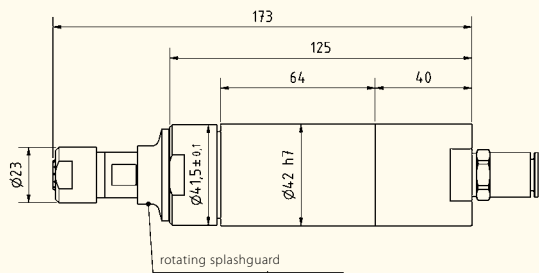
Page 42 | EBMU 23-1000 B



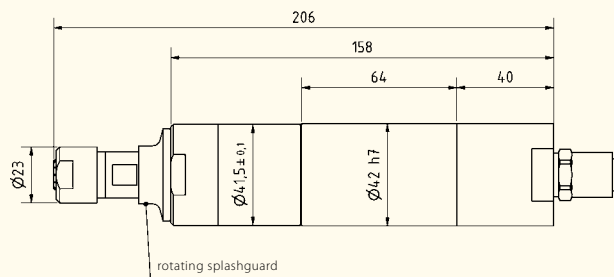
Dimensions

Pneumatic built-in motors

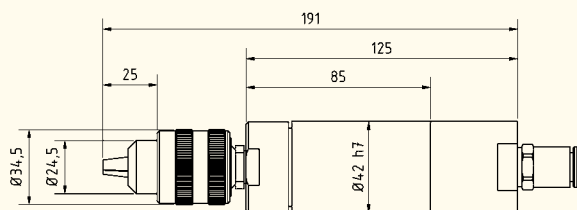
Page 43 | EBM 19000 S to 2400 S, EBM 19000 S-L bis 2900 S-L



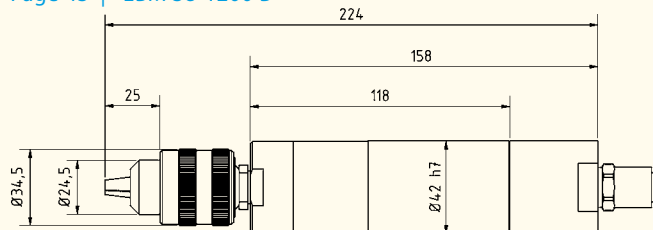
Page 43 | EBM 1200 S



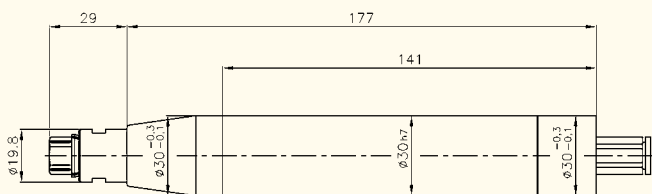
Page 43 | EBM 38-5200 B, 38-2900 B, 38-2400 B



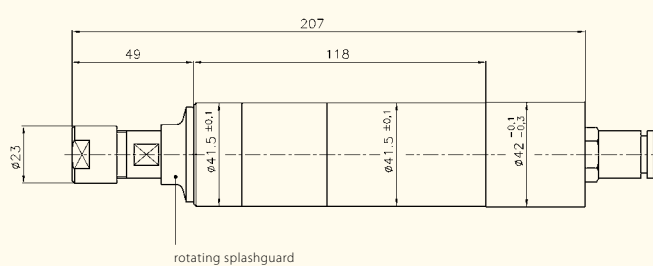
Page 43 | EBM 38-1200 B



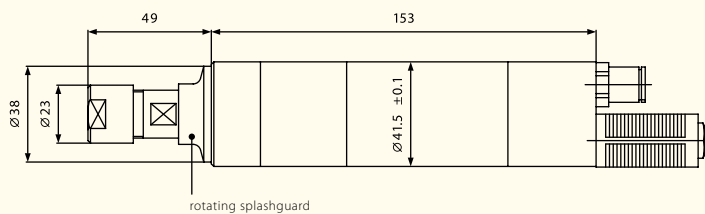
Page 44 | EBS 504 ZG



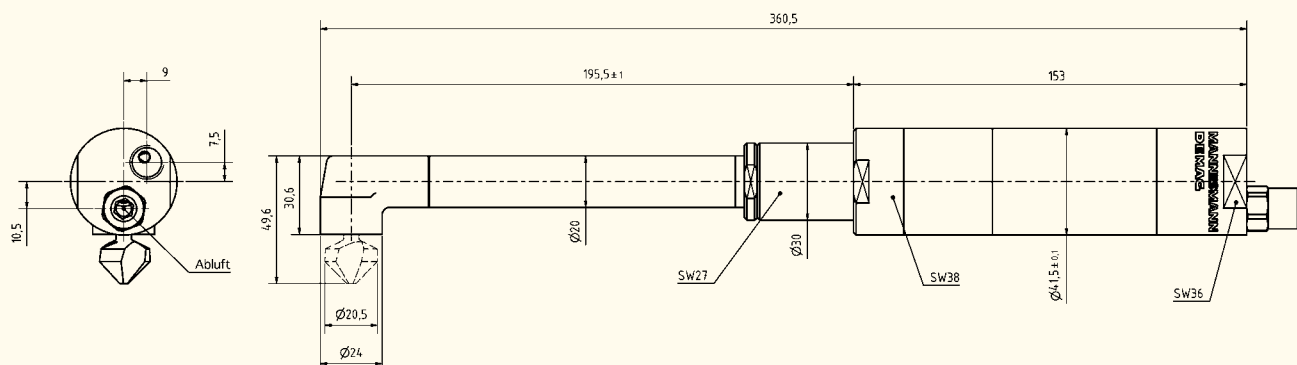
Page 44 | EBS 520 ER



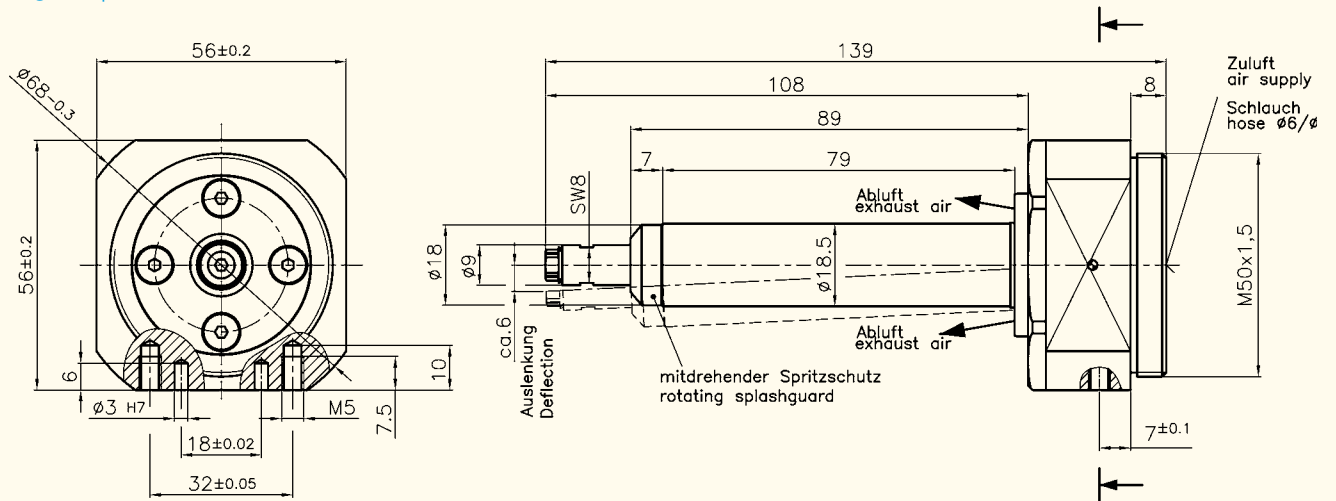
Page 44 | EBS 480 ER



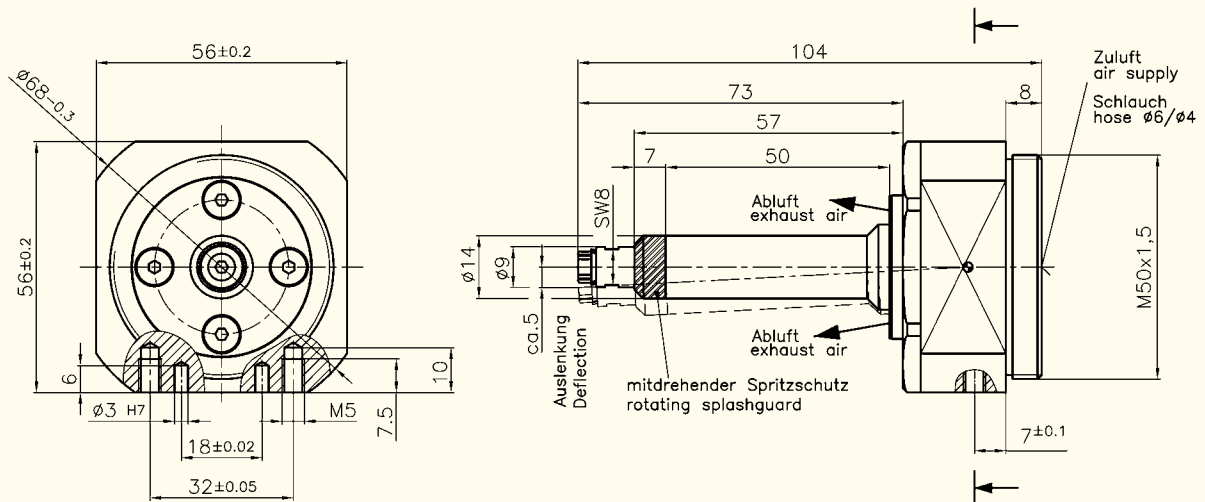
Page 44 | EWBS 38-520



Page 45 | ESR 855 FW

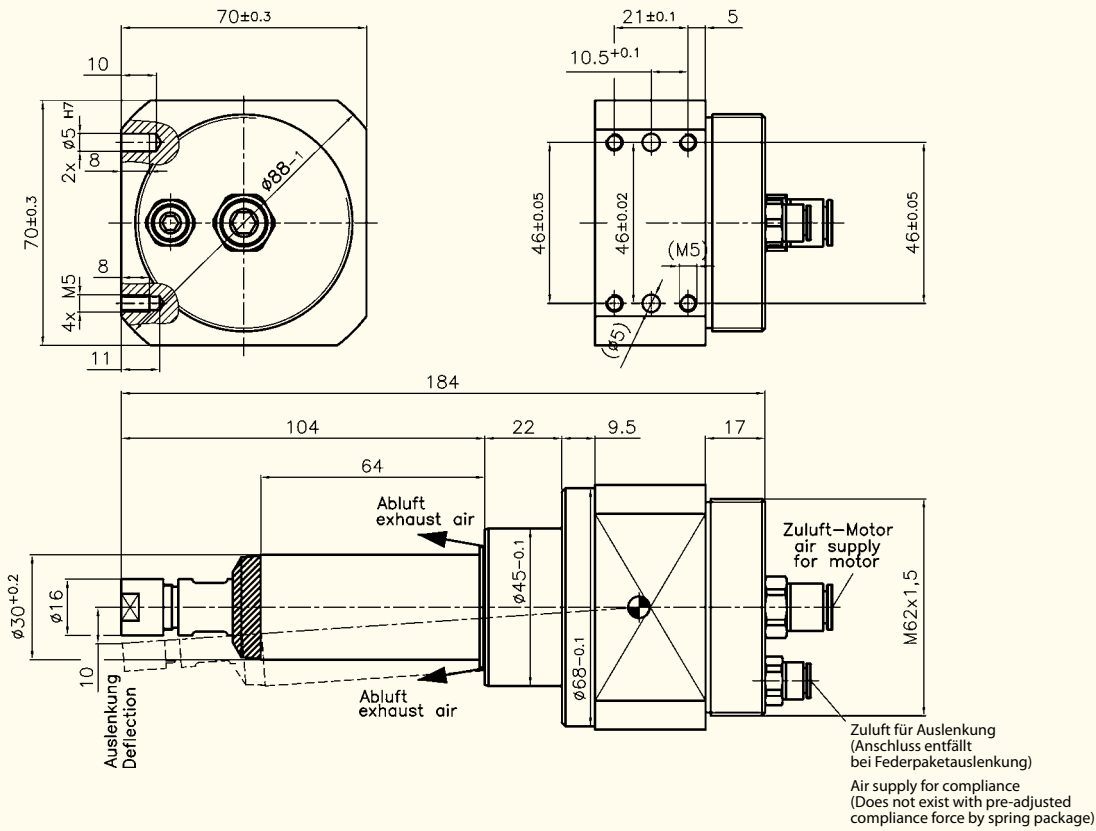


Page 45 | ESR 551 FW

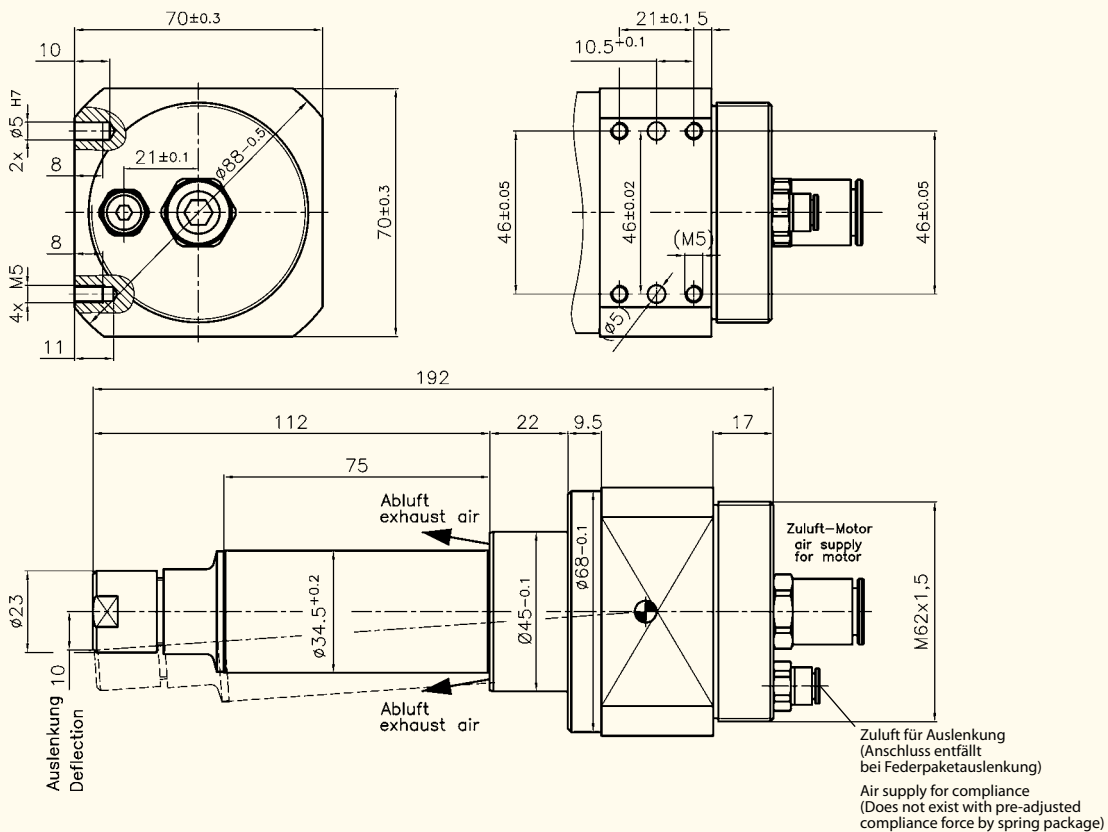


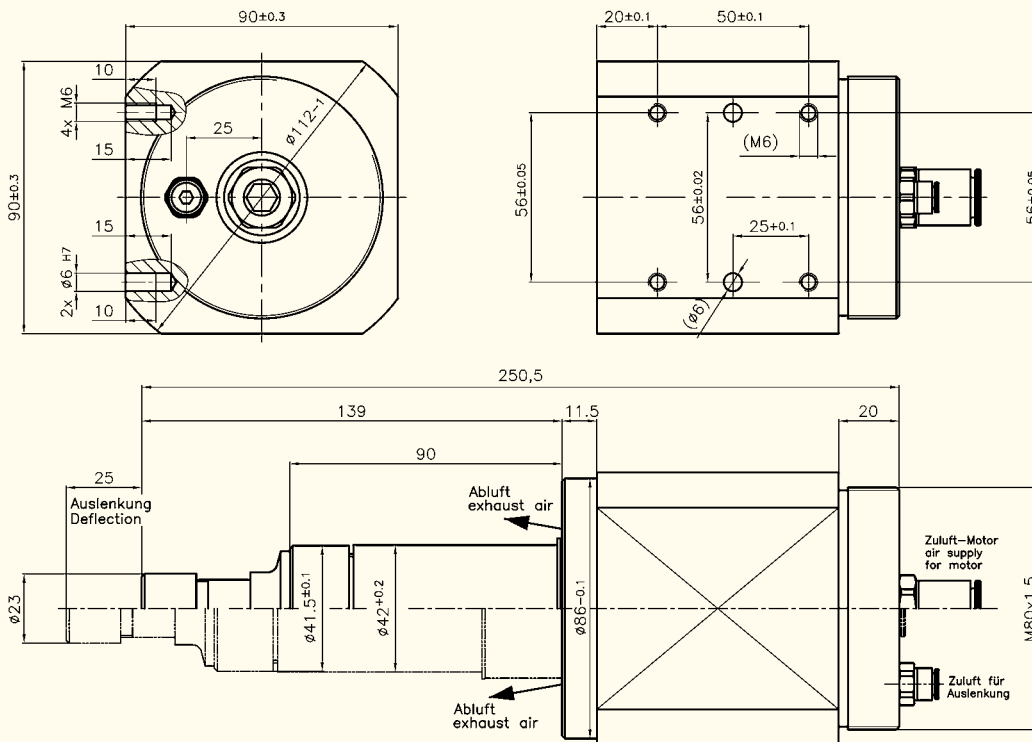
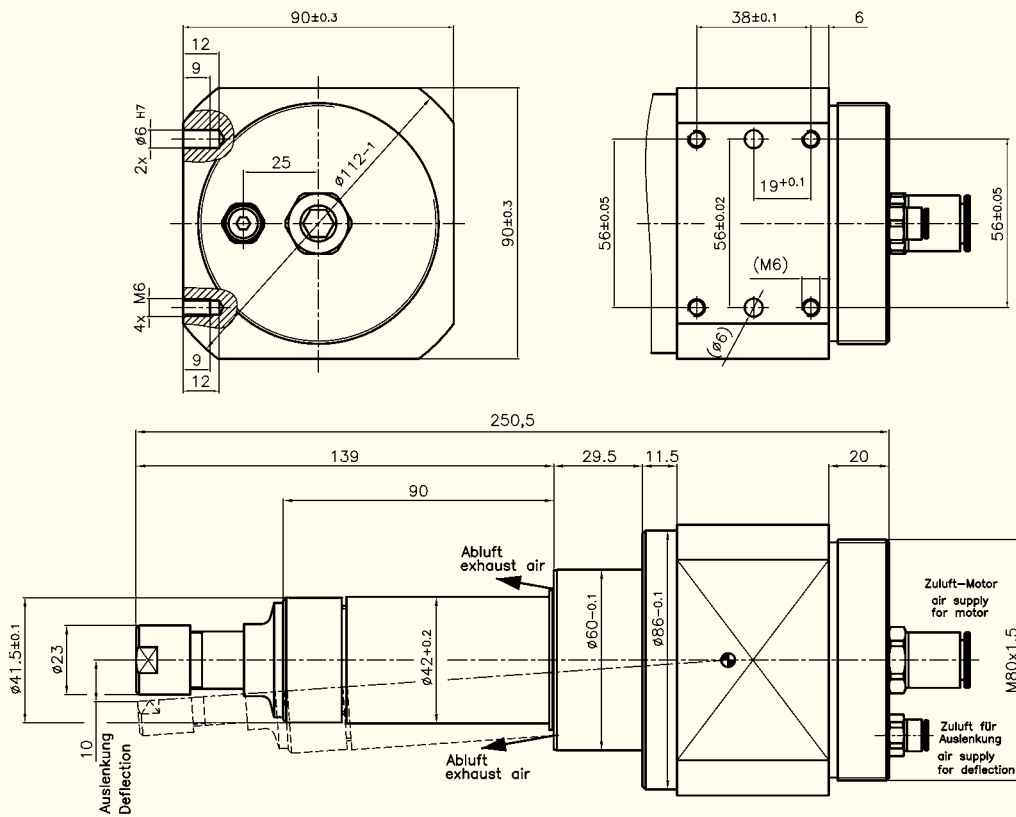
Dimensions RoboCut

Page 46 | ESR 350

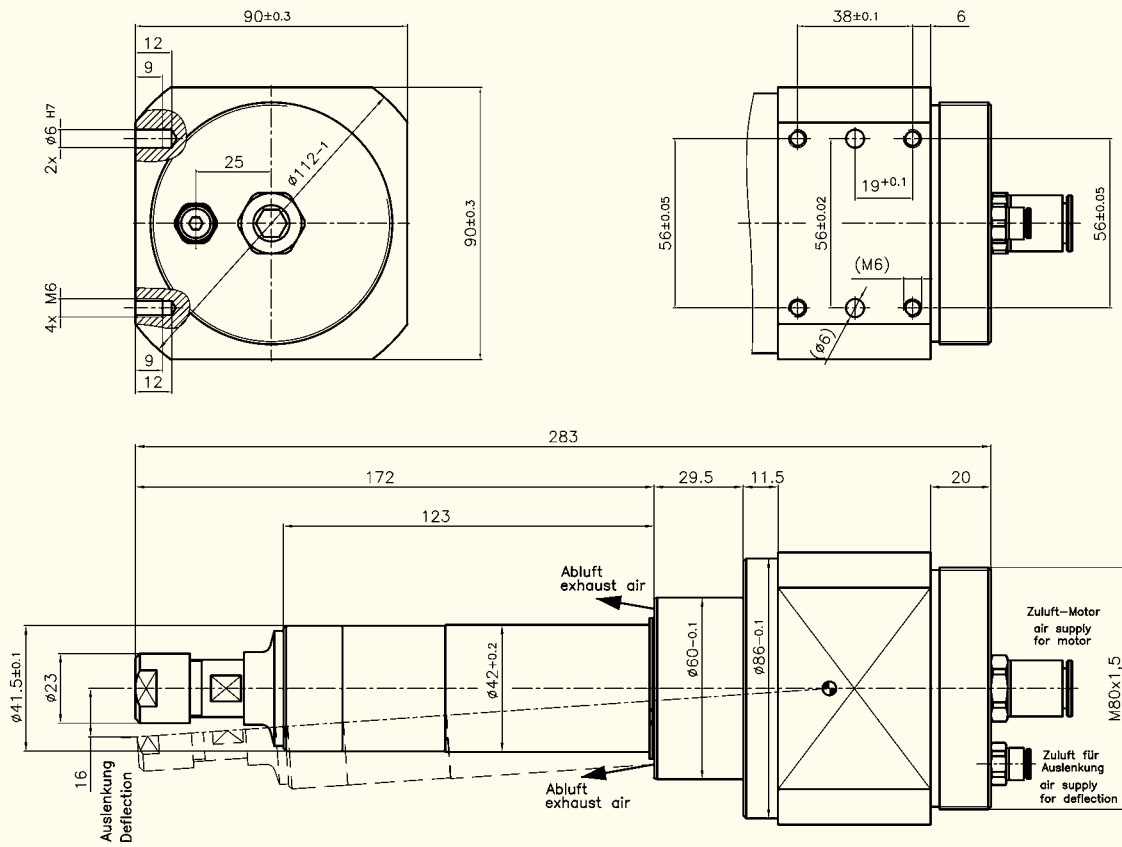


Page 46 | ESR 280

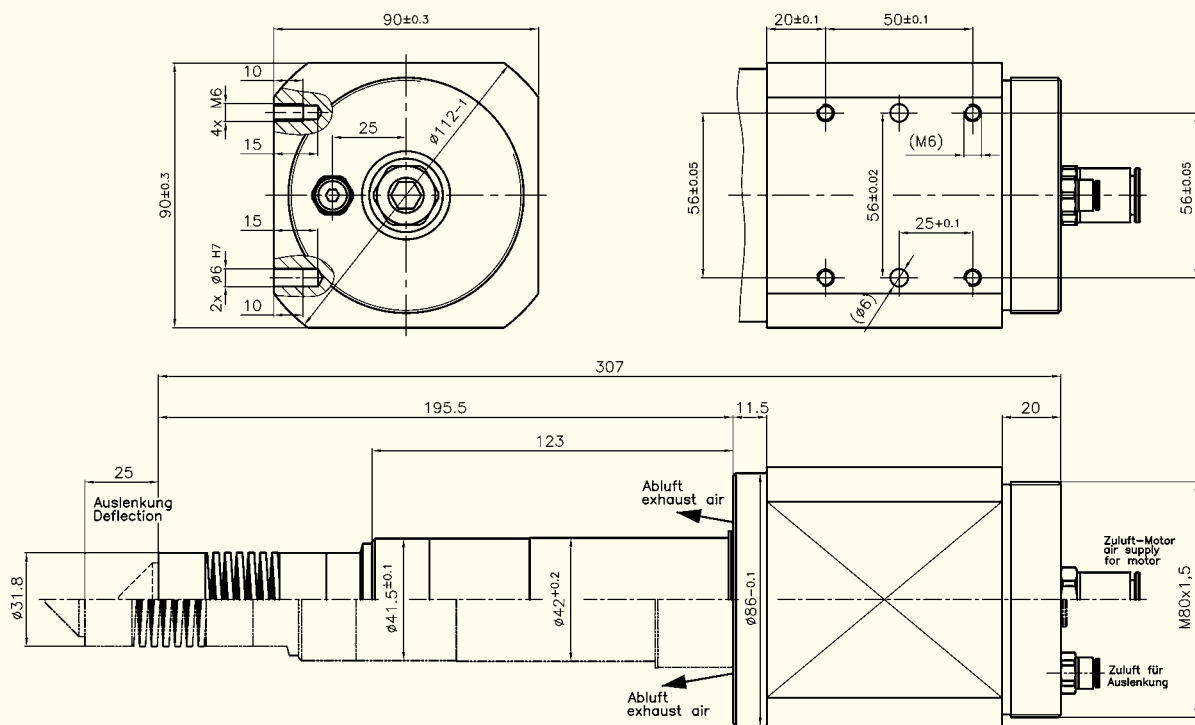


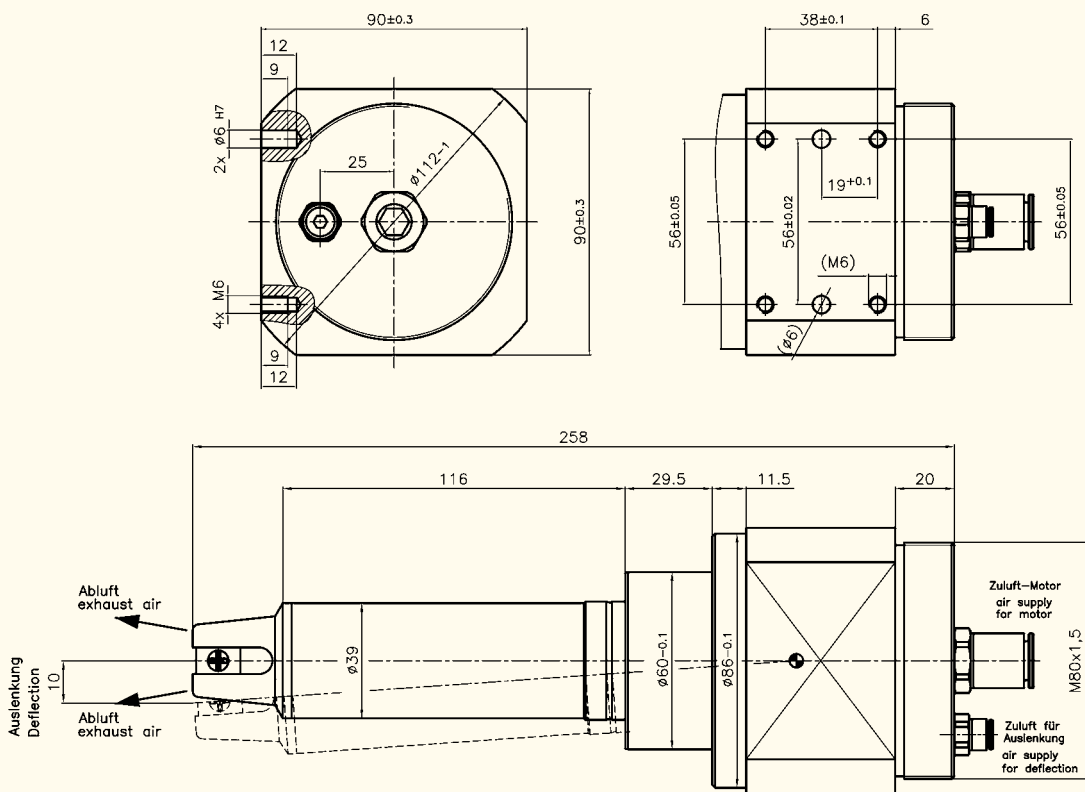
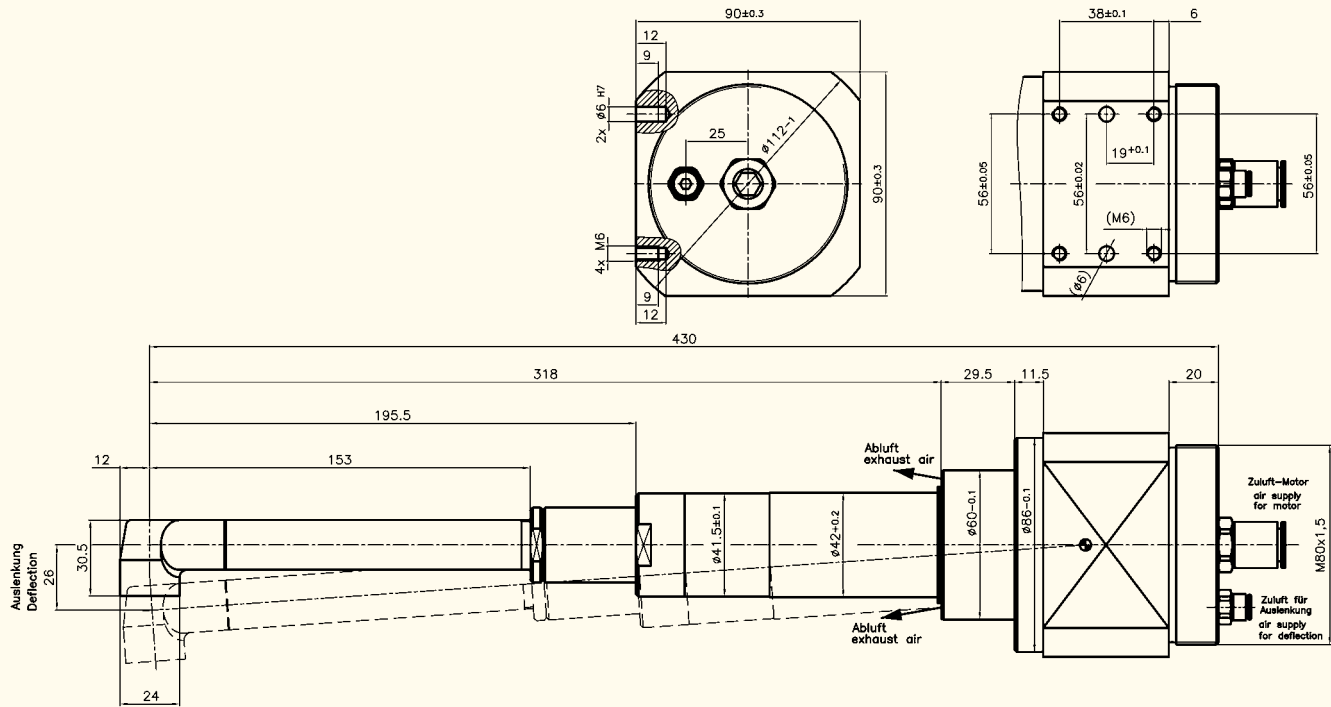


Page 48 | ESR 38-520



Page 48 | RBS 38-520 AX25





Examples



Spindles | ZG collets

Clamping range Ø (mm|")

Types	page	1.0	1.5	2.0	2.5	3/32"	3.0	1/8"
EST 1000 ZG	38	9 369 912	9 369 913	9 369 914	9 369 915	9 369 916	9 369 825	9 369 917
EST 1000 K	38	9 369 912	9 369 913	9 369 914	9 369 915	9 369 916	9 369 825	9 369 917
EST 650 K	38	9 369 912	9 369 913	9 369 914	9 369 915	9 369 916	9 369 825	9 369 917
ES 852/550 ZG	39	9 369 912	9 369 913	9 369 914	9 369 915	9 369 916	9 369 825	9 369 917

Types	page	3.0	4.0	5.0	6.0	8.0	1/4"	10.0
ES 450/350 ZG	40	9 369 841	9 369 846	9 369 847	9 369 826	9 369 843	9 369 872	—
ES 300 ZG	40	9 369 983	—	—	9 369 918	—	9 369 921	—
ES 280-170 ZG	41	—	—	9 369 816	9 369 837	9 369 818	9 369 987	9 369 817

Spindles | ER collets

Types	page	3.0	4.0	5.0	6.0	8.0	10.0
EST 450 K	38	9 369 853	9 369 853	9 369 838	9 369 832	—	—
ES 450/350 ER	40	9 369 853	9 369 853	9 369 838	9 369 832	—	—
ES 280-170 ER	41	9 369 855	—	9 369 850	9 369 839	9 369 842	9 369 852

Motors | ZG collets

Types	page	3.0	4.0	5.0	6.0	8.0	1/4"	10.0
EBS 504 ZG	44	—	—	9 369 816	—	9 369 818	9 369 987	—

Motors | ER collets

Types	page	3.0	4.0	5.0	6.0	8.0	10.0
every EBM	43	9 369 855	—	9 369 850	9 369 839	9 369 842	9 369 852
EBS 520 ER	44	9 369 855	—	9 369 850	9 369 839	9 369 842	9 369 852
EBS 480 ER	44	9 369 855	—	9 369 850	9 369 839	9 369 842	9 369 852

Motors | Drill chucks, drill chuck keys

Types	page	drill chuck	drill chuck key	quick change drill chuck
EBM 5000 B, EBM 3500 B	42	9 376 019	9 369 811	9 369 990
every EBM 38-...	43	9 376 022	9 369 811	9 369 988
every EBMU 23-...	42	9 369 785	9 369 811	9 376 040

Accessories

Examples



RoboCut | ZG collets

Clamping range Ø (mm|")

Types	page	1.0	1.5	2.0	2.5	3/32"	3.0	1/8"
ESR 1 000/1 000 FW	45	9 369 912	9 369 913	9 369 914	9 369 915	9 369 916	9 369 825	9 369 917
ESR 855/855 FW	45	9 369 912	9 369 913	9 369 914	9 369 915	9 369 916	9 369 825	9 369 917
ESR 551/551 FW	45	9 369 912	9 369 913	9 369 914	9 369 915	9 369 916	9 369 825	9 369 917

RoboCut | ER collets

Types	page	3.0	4.0	5.0	6.0	8.0	10.0
ESR 350	46	9 369 853	9 369 849	9 369 838	9 369 832	—	—
ESR 280	46	9 369 855	—	9 369 850	9 369 839	9 369 842	9 369 852
ESR 230	46	9 369 855	—	9 369 850	9 369 839	9 369 842	9 369 852
ESR 170	46	9 369 855	—	9 369 850	9 369 839	9 369 842	9 369 852
ESR 50/30	47	9 369 855	—	9 369 850	9 369 839	9 369 842	9 369 852
ESR 50 AX 25	47	9 369 855	—	9 369 850	9 369 839	9 369 842	9 369 852
ESR 30 AX 25	47	9 369 855	—	9 369 850	9 369 839	9 369 842	9 369 852
ESR 38-520	48	9 369 855	—	9 369 850	9 369 839	9 369 842	9 369 852
RBS 38-520 AX 25	48	—	—	—	9 369 839	—	—

Precision pressure regulator

Types	page	connection thread	working pressure bar adjustable	Order-No.
ESR 50 AX 25	47	G 1/4"	0.05–2 bar	60001-37-3
ESR 30 AX 25	47	G 1/4"	0.05–2 bar	60001-37-3
RBS 38-520 AX 25	48	G 1/4"	0.05–2 bar	60001-37-3

Manometer

Types	page	connection thread	working pressure bar adjustable	Order-No.
ESR 1 000	45	G 1/8"	0–2.5 bar	60001-38-3
ESR 855	45	G 1/8"	0–2.5 bar	60001-38-3
ESR 551	45	G 1/8"	0–2.5 bar	60001-38-3
ESR 50 AX 25	47	G 1/8"	0–2.5 bar	60001-38-3
ESR 30 AX 25	47	G 1/8"	0–2.5 bar	60001-38-3
RBS 38-520 AX 25	48	G 1/8"	0–2.5 bar	60001-38-3



Regulator with Manometer





MANNESMANN DEMAG drilling and cutting tools are distinguished by:

- Ergonomic design
- Low air consumption
- Very low noise levels
- Absolutely easy to service and uncomplicated to maintain
- Modular systems: various assemblies are interchangeable
- Conception for precise as well as for rugged industrial applications



Drills

Our wide range – drilling from 1 to 50 mm, with straight, angled or pistol grip designs – guarantees suitable drilling in all applications. The choice of the right drill is determined firstly by the drilling diameter, the material and the cutting speed which is required.

Countersinks

Our countersinks offer a perfect program for all deburring works, which must be accomplished by hand. The countersinks are ideal tools to deburr, spot face or chamfer steel, cast iron, non-ferrous or light metals. The low and variable cutting speed ensures best working results.

Tapping machines

MANNESMANN DEMAG tapping machines are in the best way suitable for cutting and cleaning threads. Grace to the optimized power-weight ratio and the handy design the tools offer opportunities for all kind of manufacturing applications. Our tapping tools are equipped with a two jaw pendular chuck with a round wedge.

→ Simply work more rational – with MANNESMANN DEMAG drills, countersinks and tapping machines.

Drills (pistol grip)

With gear rim drill chuck

- Exhaust silencer is built into the pistol grip so that there is no disruptive exhaust air
- Compact design
- Ergonomical aluminium handle
- Low maintenance
- Air supply through handle
- D 6-55 P also suitable for sinking



1 | 2

Technical data

Type		D 6-501 P	D 6-351 P	D 6-55 P	D 8-6000 P	D 8-2800 P
Order No.		03138-77-4	03138-97-4	03255-00-5	29919-70-5	46910-46-5
Illustration		1	1	1	2	2
Free speed	min ⁻¹	5 000	3 500	550	6 000	2 800
Power	Watt	150	150	150	320	320
DIN taper		B 10	B 10	B 10	B 12	B 12
Drill chuck clamp. range	mm	1 – 6	1 – 6	1 – 6	1 – 8	1 – 8
Drilling capacity steel	mm	4	4	4	6	6
Drilling capacity alumin.	mm	6	6	6	10	10
Noise level	dB(A)	69	69	69	75	75
Air consumption	l/sec	5.3	5.3	5.3	7.0	7.0
Weight without hose	kg	0.60	0.60	0.65	1.00	1.00
∅ machine	mm	31	31	31	38	38
Machine length	mm	162	162	188	195	198
Hose I.D.	mm	6	6	6	6	6
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		drill chuck key	drill chuck key	drill chuck key	drill chuck key	drill chuck key

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories



For type	D 6-501 P	D 6-351 P	D 6-55 P	D 8-6000 P	D 8-2800 P
Gear rim drill chuck	9 376 019	9 376 019	9 376 019	9 376 014	9 376 014
Drill chuck key	9 369 811	9 369 811	9 369 811	9 369 811	9 369 811
Quick change drill chuck	9 369 990	9 369 990	9 369 990	9 369 988	9 369 988

Drills (pistol grip) With gear rim drill chuck

- Exhaust silencer is built into the pistol grip so that there is no disruptive exhaust air
- Compact design
- Ergonomical aluminium handle
- Low maintenance
- Air supply through handle
- D 13-45 P with quick change drill chuck



1



2



3

Technical data

Type		D 10-1800 P	D 13-900 P	D 13-380 P	D 13-45 P	D 15-600 P	D 15-1800 P
Order No.		46920-36-5	46920-37-5	46920-39-5	29900-01-6	47470-53-5	47420-53-5
Illustration		1	1	1	2	3	3
Free speed	min ⁻¹	1 500	900	380	450	600	1 800
Power	Watt	320	320	300	400	520	520
DIN taper		B 12	B 12	B 12	1/2" × 20 UNF	3/8" × 24 UNF	3/8" × 24 UNF
Drill chuck clamp. range	mm	1 – 10	1 – 13	1 – 13	1,5 – 13	3 – 13	3 – 13
Drilling capacity steel	mm	8	8	8	13	13	8
Drilling capacity alumin.	mm	12	12	12	20	20	12
Noise level	dB(A)	75	75	75	79	77	77
Air consumption	l/sec	7.0	7.0	7.0	9.0	11.3	11.3
Weight without hose	kg	1.10	1.25	1.30	1.90	2.40	1.25
∅ machine	mm	38	38	38	45	54	54
Machine length	mm	232	234	240	260	247	226
Hose l. D.	mm	8	8	10	10	10	10
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		drill chuck key	drill chuck key	drill chuck key	drill chuck key, side handles	drill chuck key, side handles	drill chuck key, side handles

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories



For type	D 10-1800 P	D 13-900 P	D 13-380 P	D 13-45 P	D 15-600 P	D 15-1800 P
Gear rim drill chuck	9 376 014	9 376 017	9 376 017	—	9 369 821	9 369 821
Drill chuck key	9 369 811	9 376 018	9 376 018	—	9 376 018	9 376 018
Quick change drill chuck	9 369 989	9 369 991	9 369 991	9 369 992	—	—
Side handles	—	—	47409-00-5	29943-42-6	47409-00-5	47409-00-5

Drills (straight)

With gear rim drill chuck

- Suitable for vertical drilling work
- Exhaust air to the rear
- Very low-noise
- DS-model with collet suitable for brushing
- Handy and light-weight



1

Technical data

Type		D 6-5000 H	D 6-3500 H	D 8-6002 H	D 8-3702 H	D 8-2802 H
Order No.		48100-30-5	48100-31-5	29945-33-5	29945-34-5	29945-35-5
Illustration		1	1	1	1	1
Valve		lever valve	lever valve	lever valve	lever valve	lever valve
Free speed	min ⁻¹	6 000	3 500	6 000	3 700	2 800
Power	Watt	150	150	320	320	320
DIN taper		B 10	B 10	B 12	B 12	B 12
Drill chuck clamp. range	mm	1 – 6	1 – 6	1 – 8	1 – 8	1 – 8
Drilling capacity steel	mm	4	5	6	6	6
Drilling capacity alumin.	mm	6	8	10	10	10
Noise level	dB(A)	67	67	70	70	70
Air consumption	l/sec	4.2	4.2	5.3	5.3	5.3
Weight without hose	kg	0.70	0.70	1.20	1.20	1.20
Ø machine	mm	31	31	38	38	38
Machine length	mm	195	195	222	222	226
Hose l. D.	mm	6	6	6	6	6
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		drill chuck key	drill chuck key	drill chuck key, hose unit	drill chuck key, hose unit	drill chuck key, hose unit

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories



For type	D 6-5000 H	D 6-3500 H	D 8-6002 H	D 8-3702 H	D 8-2802 H
Gear rim drill chuck	9 376 019	9 376 019	9 376 014	9 376 014	9 376 014
Drill chuck key	9 369 811	9 369 811	9 369 811	9 369 811	9 369 811
Quick change drill chuck	9 369 990	9 369 990	9 369 988	9 369 988	9 369 988
Hose unit	29200-31-5	29200-31-5	29923-33-5	29923-33-5	29923-33-5

Hose unit incl. supply air and exhaust air hose.

- Suitable for vertical drilling work
- Exhaust air to the rear
- Very low-noise
- DS-model with collet suitable for brushing
- Handy and light-weight

Drills (straight) With collet



Technical data

Type		DS 6002 H	DS 6-5000 H	DS 8-2802 H
Order No.		29945-99-5	48100-20-5	29945-36-5
Illustration		2	1	2
Valve		lever valve	lever valve	lever valve
Free speed	min ⁻¹	6 000	5 000	2 800
Power	Watt	320	150	320
Collet included	mm	6	6	8
Noise level	dB(A)	70	67	70
Air consumption	l/sec	5.3	4.2	5.3
Weight without hose	kg	1.00	0.70	1.10
Ø machine	mm	38	31	38
Machine length	mm	197	180	197
Hose I. D.	mm	6	6	6
Connection		G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		Collet, wrench, hose unit	Collet, wrench	Collet, wrench, hose unit

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories



For type	DS 6002 H	DS 6-5000 H	DS 8-2802 H
Collet 6 mm	9 369 826	9 369 918	9 369 826
Collet 8 mm	9 369 843	—	9 369 843
Hose unit	29923-33-5	29200-31-5	29923-33-5

Hose unit incl. supply air and exhaust air hose.

Drills

With Morse taper

- For rugged industrial applications
- Drill bits are changed by means of a feeding spindle (on models D 1801 by means of a wedge drive out which is stored in the retaining tube)
- Long handles mean that only a small supporting force is required



D 1601



D 2500

Reversible | Technical data

Type		D 1601	D 2500
Order No.		41600-01-6	42500-00-6
Direction of rotation		clockwise	reversible
Drilling in steel up to	mm	19	32
Reaming up to	mm	—	26
Tapping up to	mm	—	26
Rolling on of pipes up to	mm	—	25
Morse taper		2	3
Free speed	rpm	650	300
Air consumption	m ³ /min	1.3	1.9
Power	kW	1.1	1.8
Spindle feeding range max.	mm	70	80
Distance between spindle centre and housing outside edge	mm	30	34
Length	mm	255	313
Weight	kg	7.0	15.0
Hose I. D.	mm	12	15
Connection		G 3/8" i	G 3/4" i

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.



Accessories supplied

For type	D 1601	D 2500
External thread coupling	9 361 337	9 361 339

- The speed regulator fitted as standard ensures that a constant speed can be maintained, even under the smallest load
- This means that there is very little wear on the vanes
- Drill bits are changed by means of a feed screw
- The very small centre-to-centre distance allows the drills to be used close to walls



D 3350



D 3400

Clockwise | Technical data

Type		D 3300	D 3350	D 3400	D 3450
Order No.		43300-00-6	43350-00-6	43400-00-6	43450-00-6
Direction of rotation		clockwise	clockwise	clockwise	clockwise
Drilling in steel up to	mm	15	23	32	50
Reaming up to	mm	12	18	27	36
Morse taper		1	2	3	4
Free speed	min ⁻¹	500	280	280	220
Air consumption, under load	m ³ /min	0,6	1,6	2,1	2,2
Air consumption, at free speed	m ³ /min	0,6	0,7	0,8	1,0
Power	kW	0,48	1,50	2,10	2,20
Length	mm	318	446	480	507
Height	mm	141	193	215	239
Feed via feed screw	mm	45	60	75	75
Distance from centre of spindle to outer edge	mm	25	30	35	40
Weight	kg	2,9	8,3	11,7	13,9
Hose I. D.	mm	10	15	15	19
Connection		G 3/8" i	G 1/2" i	G 1/2" i	G 1/2" i

Power and free speed at 6 bar operating pressure.



Accessories supplied

For type	D 3300	D 3350	D 3400	D 3450
External thread coupling	9 361 337	9 361 338	9 361 337	9 361 338

Angle drills

With gear rim drill chuck, collet

- Angle drills with collet for difficult to access areas
- Quick-action drill chuck on request
- Lever start
- Exhaust air to the rear



DW 2200



DWS 2200



DW 700

Technical data

Type		DW 2200	DWS 2200	DW 700
Order No.		29945-65-6	29945-67-6	29945-66-6
Valve		lever valve	lever valve	lever valve
Free speed	min ⁻¹	2 200	2 200	700
Power	Watt	300	300	300
Collet	mm	—	6	—
Drill chuck clamping range	mm	1 – 8	—	1 – 10
Taper DIN		3/8" × 24 UNF	—	3/8" × 24 UNF
Noise level	dB(A)	76	76	76
Air consumption	l/sec	9	9	9
Length	mm	255	255	285
Head height	mm	83	54	90
Ø machine	mm	40	40	40
Weight	kg	1.10	1.00	1.30
Connection	G	1/4" i	1/4" i	1/4" i
Hose I.D.	mm	8	8	8
Accessories supplied		drill chuck key	wrench, collet	drill chuck key

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories



Gear rim drill chuck	DW 2200	DWS 2200	DW 700
Order No.	9 376 023	—	9 376 022
Collets			
3 mm	—	9 369 855	—
5 mm 3/16"	—	9 369 850	—
6 mm	—	9 369 839	—

Collets
1 | 1,5 | 3,5 | 4,5 | 5,5 mm
available on request.

Countersinks

Deburring of drillings

- Extremely quiet and robust
- Automatic start as soon as pressure is applied (Type BS 502)
- Low air consumption, as drive is only active during actual operation
- Thus leading to longer service life
- Suitable for additional activities during the main production time on CNC machine tools
- Cold-insulating handle
- The ergonomic design of the handle means that work is non-tiring
- BS 502, BSW 903 and BSW 506 with speed regulator
- The ease of operation is supported by a starter button on the type BS 500 P
- BSW 903 und BSW 506 (angle version) for deburring of places only accessible with difficulty, e.g. holes with cross sections



BS 502

BS 500 P

Technical data



Type		BS 502	BS 500 P	BSW 903	BSW 506
Order No.		29602-46-5	29500-32-5	60012-08-5	29945-64-5
Valve		thrust start	starter button	lever valve	lever valve
Free speed	rpm	500	500	900	500
Speed regulator		ja	nein	ja	ja
Power	Watt	160	160	35	65
Sinking range	mm	5 – 30	5 – 30	2 – 10	5 – 25
Collet included	mm	8	8	3 skt	1/4" skt
Collet available	mm	6.10	6.10	—	—
Noise level	dB(A)	65	63	68	71
Air consumption	l/sec	5,0	5,0	2,8	5,0
Weight without hose	kg	0.65	0.78	0.40	0.85
Ø machine	mm	31	31	25	30
Machine length	mm	230	190	258	295
Head height without counterbore	mm	—	—	18	30.5
Hose unit					
Supply air hose	m	1.5	—	1.5	1.5
Exhaust air hose	m	1	—	1	1
Connection		G 1/4"	G 1/4" i	G 1/4"	G 1/4"
Accessories supplied		drill chuck key	drill chuck key	—	—

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.



BSW 903

BSW 506

Countersinks

Deburring of drillings



HSS counterbore BS



HSS counterbore BSW 506



HSS counterbore BSW 903

HSS counterbores

For types BS 502 and BS 500 P

3 teeth, shaft 8 Ø / 90°

Sinking range 3.5 – 14 mm	48109-11-6
Sinking range 5 – 25 mm	48109-10-6
Sinking range 5 – 30 mm	48109-09-6

For type BSW 506

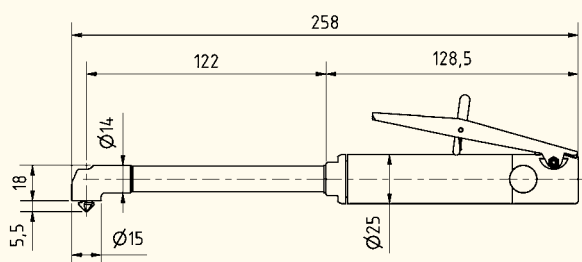
3 teeth, 1/4" hexagon / 90°

Sinking range 2.5 – 10 mm	48109-21-6
Sinking range 3.2 – 16,5 mm	48109-22-6
Sinking range 3.5 – 20.5 mm	48109-23-6
Sinking range 5 – 25 mm	48109-24-6

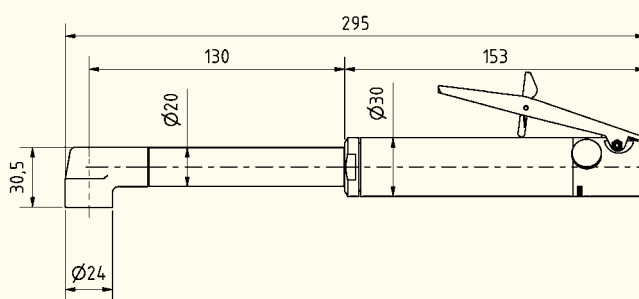
For type BSW 903

3 teeth, 3 mm hexagon / 90°

Sinking range 2 – 6 mm	48109-26-6
Sinking range 2 – 10 mm	48109-25-6



BSW 903



BSW 506

Accessories

Hose unit	BS 502	BS 500 P	BSW 903	BSW 506
Order No.	29603-25-5	—	60012-24-5	29603-25-5
Collets				
6 mm	9 369 837	9 369 837	—	—
8 mm	9 369 818	9 369 818	—	—
10 mm	9 369 817	9 369 817	—	—

- Handy-ergonomic aluminium handle
- Quiet, high power
- Reversible forward and return speed with rocker
- Efficient operation: pendular chuck makes it easy to start the cut
- Optimum cutting power
- Backward speed twice that of forward motion on model G 14-6 P
- Model G 14-6 P: reversing gear



GE 8-500 P



G 14-6 P

Technical data

Type		GE 8-500 P	GE 8-900 P	G 14-6 P
Order No.		47060-06-5	47060-08-5	47650-53-5
Free speed	rpm	500	900	600
Power	Watt	200	200	550
Pendular chuck		yes	yes	yes
Square clamping range	mm	3 – 9	3 – 9	3 – 9
Taper DIN 238		B 12	B 12	B 12
Tapping in steel	mm	M 6	M 6	M 14
Tapping in aluminium	mm	M 8	M 8	M 16
Ø machine	mm	38	38	52
Machine length	mm	251	251	318
Noise level	dB(A)	77	77	78
Weight without hose	kg	1.20	1.20	2.20
Air consumption	l/sec	4.5	4.5	9.0
Hose I.D.	mm	6	6	10
Connection		G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		pendular chuck	pendular chuck	pend. chuck, side handle

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories

Type	Tapping chuck assy.	Drill chuck key	Integral chuck jaws	Side handles
GE 8 without round wedge	9 369 982	9 369 834	9 369 954	03256-00-5
G 14 with round wedge	9 369 833	9 369 834	9 369 955	03208-97-6



Swivel joint

Variacor 60001-60-6

Further Information see p. 138

Tapping machines in straight version with lever valve on request.

Air saw

For sheet steel, aluminium and plastics



SRV 110

- The air saw is ideal for the processing of sheet steel (autobody sheet, pipes out of sheet metal etc.), aluminium and plastics
- High cutting speed
- High performance at low air consumption
- Low noise level
- Anti vibration system patented
- Saw blades of steel
- Safety lever according to EN 792
- Fulfills the European Union guideline 2002 / 44 / EC with the vibration value of 2 m / s²

Technical data

Type		SRV 110
Order No.		29800-27-6
Number of blows	rpm	9 000
Stroke length	mm	8
Air consumption	l / sec	1.5
Noise level	dB(A)	80
Ø machine	mm	41
Machine length	mm	210
Weight without hose	kg	1.15
Hose I. D.	mm	8
Connection		G 1/4"
Accessories supplied		wrench, 1 set of saw blade

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.



Saw blades | length 96 mm

Range of application	Tooth distance	Teeth per inch	Order No.
ST 37 / V2A and non-ferrous metals up to 1 mm. Suitable for curved cut.	0.8 mm	32	29905-10-6
ST 37 / V2A and non-ferrous metals up to 2 mm. Suitable for curved cut.	1.0 mm	24	29905-11-6
ST 37 / V2A and non-ferrous metals up to 2.5 mm. Wood, plastics, laminated fabrics.	1.8 mm	14	29905-12-6

Assembly and torque measuring technology





The many advantages of MANNESMANN DEMAG impact wrenches:

- Excellent power / weight ratios and very small reaction forces
- Easy and non-tiring to use
- Comfortable to service thanks to their two-part housing
- High power production with an economical air consumption
- For robust use in all branches of industry
- Can be used over a wide range thanks to adjustable impact strength
- Exhaust air through the handle

Hammer mechanism options:

- 1 TWIN hammer mechanism allows two strikes per round on both sides of the drive spindle
- 2 The three jaw system strikes both jaws of the drive spindle simultaneously for an outstanding high power
- 3 One jaw hammer mechanism strike once on one side of the drive spindle for a very powerful impulse

Impact wrenches

Guideline values for torques and pretensioning forces according to DIN 13

Screw quality according to DIN 267

Size	screw width internal mm	screw width external mm	3.6 torque Nm	4.6 torque Nm	4.8 torque Nm	5.6 torque Nm	5.8 torque Nm	6.9 torque Nm	8.8 torque Nm	10.9 torque Nm	12.9 torque Nm
M 4	3	7	0.85	1.10	1.50	1.40	1.90	2.30	2.90	4.10	4.90
M 5	4	9	1.70	2.20	3.00	2.80	3.70	4.50	6.00	8.50	10.00
M 6	5	10	2.90	3.90	5.10	4.80	6.40	7.70	10.00	14.00	17.00
M 8	6	13	7.00	9.30	12.00	12.00	16.00	19.00	25.00	35.00	41.00
M 10	8	17	14.00	19.00	25.00	23.00	31.00	37.00	49.00	69.00	83.00
M 12	10	19	24.00	32.00	43.00	40.00	54.00	65.00	86.00	120.00	145.00
M 14	12	22	39.00	51.00	68.00	64.00	86.00	105.00	135.00	190.00	230.00
M 16	14	24	59.00	79.00	105.00	98.00	130.00	155.00	210.00	295.00	355.00
M 18	14	27	81.00	110.00	145.00	135.00	180.00	215.00	290.00	405.00	485.00
M 20	17	30	115.00	155.00	205.00	190.00	255.00	305.00	410.00	580.00	690.00
M 22	17	32	155.00	205.00	275.00	260.00	345.00	415.00	550.00	780.00	930.00
M 24	19	36	200.00	265.00	350.00	330.00	440.00	530.00	710.00	1 000	1 200
M 27	19	41	295.00	390.00	520.00	490.00	650.00	780.00	1 050	1 500	1 800
M 30	22	46	395.00	530.00	710.00	660.00	880.00	1 050	1 450	2 000	2 400
M 33	24	50	540.00	720.00	960.00	900.00	1 200	1 450	1 900	2 700	3 250
M 36	27	55	690.00	920.00	1 250	1 150	1 550	1 850	2 450	3 450	4 150
M 39	27	60	920.00	1 200	1 600	1 500	2 000	2 400	3 200	4 500	5 400
M 42	32	65	1 100	1 500	1 950	1 850	2 450	2 950	3 950	5 550	6 650
M 45	32	70	1 400	1 850	2 450	2 300	3 100	3 700	4 950	6 950	8 350
M 48	36	75	1 700	2 250	3 000	2 800	3 750	4 450	5 950	8 400	10 100
M 52	36	80	2 150	2 900	3 850	3 600	4 800	5 750	7 650	10 800	12 900
M 56	—	85	2 700	3 600	4 800	4 500	5 950	7 150	9 550	13 400	16 100
M 60	—	90	3 350	4 450	5 950	5 550	7 400	8 900	11 900	16 700	20 000
M 64	—	95	4 000	5 350	7 150	6 700	8 950	10 700	14 300	20 100	24 100
M 68	—	100	4 850	6 500	8 650	8 100	10 800	13 000	17 300	24 300	29 100

The table shows an overview of necessary torques for screws and nuts of all grades.



Impact wrenches

- Type E 10 PS3 with quick-change chuck
- Type E 25 P: long lifetime because the strike mechanism is permanently greased by an oil bath
- Type E 26 P with vibration 2.5 m/s^2



E 10 P3



E 10 PS3



E 16 P3



E 24 P3

Technical data

Type		E 10 P3	E 10 PS3	E 16 P3	E 18 P3	E 24 P3	E 25 P	E 26 P
Order No.		29501-56-5	29501-57-5	03954-77-4	29915-32-5	29908-31-5	29946-37-6	29946-38-6
For screws up to	mm	M 6 – M 12	M 6 – M 12	M 6 – M 18	M 8 – M 18	M 14 – M 24	M 14 – M 24	M 14 – M 24
Torque max.	Nm	140	80	350	400	950	1 500	1 500
Driv. square end		3/8"	1/4" SWF	1/2"	1/2"	3/4"	3/4"	3/4"
Length	mm	155	165	180	185	214	189	203
Throttle stages		4	4	4	4	4	—	—
Air consumption	m ³ /min	0.28	0.28	0.40	0.68	0.77	0.95	0.95
Weight	kg	1.20	1.25	2.35	2.40	4.15	5.68	6.20
Number of blows	p. min.	2 600	2 600	1 500	1 100	1 000	830	900
Free speed	rpm	10 000	10 000	8 000	6 800	5 300	4 800	4 800
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 3/8" i	G 1/2" i	G 1/2" i
Hose I. D.	mm	10	10	10	10	10	13	13
Noise level	dB(A)	72	72	72	85	85	87	91
Hammer mechanism		jaw hammer mechanism	jaw hammer mechanism	jaw hammer mechanism	TWIN hammer mechanism	three jaw hammer mechanism	TWIN hammer mechanism	three jaw hammer mechanism

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories supplied

E 10 – E 18	Clamp, impact grease, oil bottle
E 24 – E 56	Thread socket, impact grease, oil bottle

Accessories

Swivel joint

1/4" × 1/4" internal / external	60001-60-6
3/8" × 3/8" internal / external	60001-61-6
1/2" × 1/2" internal / external	60001-62-6



Impact wrench with swivel joint



E 30 P



E 36 P1



E 40 F



E 40 P

Technical data

Type		E 30 P	E 33 P	E 36 P1	E 40 F	E 40 P
Order No.		03050-07-4	29946-39-6	29927-80-6	03204-07-4	60010-92-6
For screws up to	mm	M 16 – M 26	M 18 – M 33	M 18 – M 40	M 18 – M 40	M 18 – M 45
Torque max.	Nm	1 800	2 500	3 000	3 185	3 700
Driv. square end		1"	1"	1"	1"	1"
Length	mm	191	203	224	293	240
Throttle stages		—	—	—	—	—
Air consumption	m ³ /min	0.95	1.10	1.35	1.20	1.35
Weight	kg	6.48	7.27	9.35	10.80	10.85
Number of blows	p. min.	850	780	780	750	755
Free speed	rpm	4 500	4 300	3 100	3 200	3 000
Connection		G 3/8" i	G 1/2" i	G 1/2" i	G 1/2" i	G 1/2" i
Hose I. D.	mm	13	13	13	13	13
Noise level	dB(A)	89	92	90	90	90
Hammer mechanism		three jaw hammer mechanism	three jaw hammer mechanism	three jaw hammer mechanism	three jaw hammer mechanism	three jaw hammer mechanism

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.



Extended drive spindle E 33 P (150 mm)

Accessories

For Types E 33 – 56

Throttle control 1/2" i	03024-47-4
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For Type E 30

Throttle control 3/8" i	60010-93-6
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Impact wrenches



E 56 F



A 71

Technical data

Type		E 56 F	A 71	A 81
Order No.		032 045 74	45700-01-6	45800-01-6
For screws up to	mm	M 24 – M 55	M 30 – M 80	M 50 – M 110
Torque max.	Nm	5 200	8 000	24 000
Driv. square end		1 1/2"	1 1/2"	2 1/2"
Length	mm	355	448	535
Throttle stages		—	—	—
Air consumption	m ³ /min	1.60	2.80	5.50
Weight	kg	15.50	32.00	67.00
Number of blows	p. min.	650	515	400
Free speed	rpm	3 200	2 300	2 100
Connection		G 1/2" i	G 3/4" i	G 1" i
Hose I. D.	mm	16	19	25
Noise level	dB(A)	90	104	104
Hammer mechanism		three jaw hammer mechanism	three jaw hammer mechanism	three jaw hammer mechanism

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.



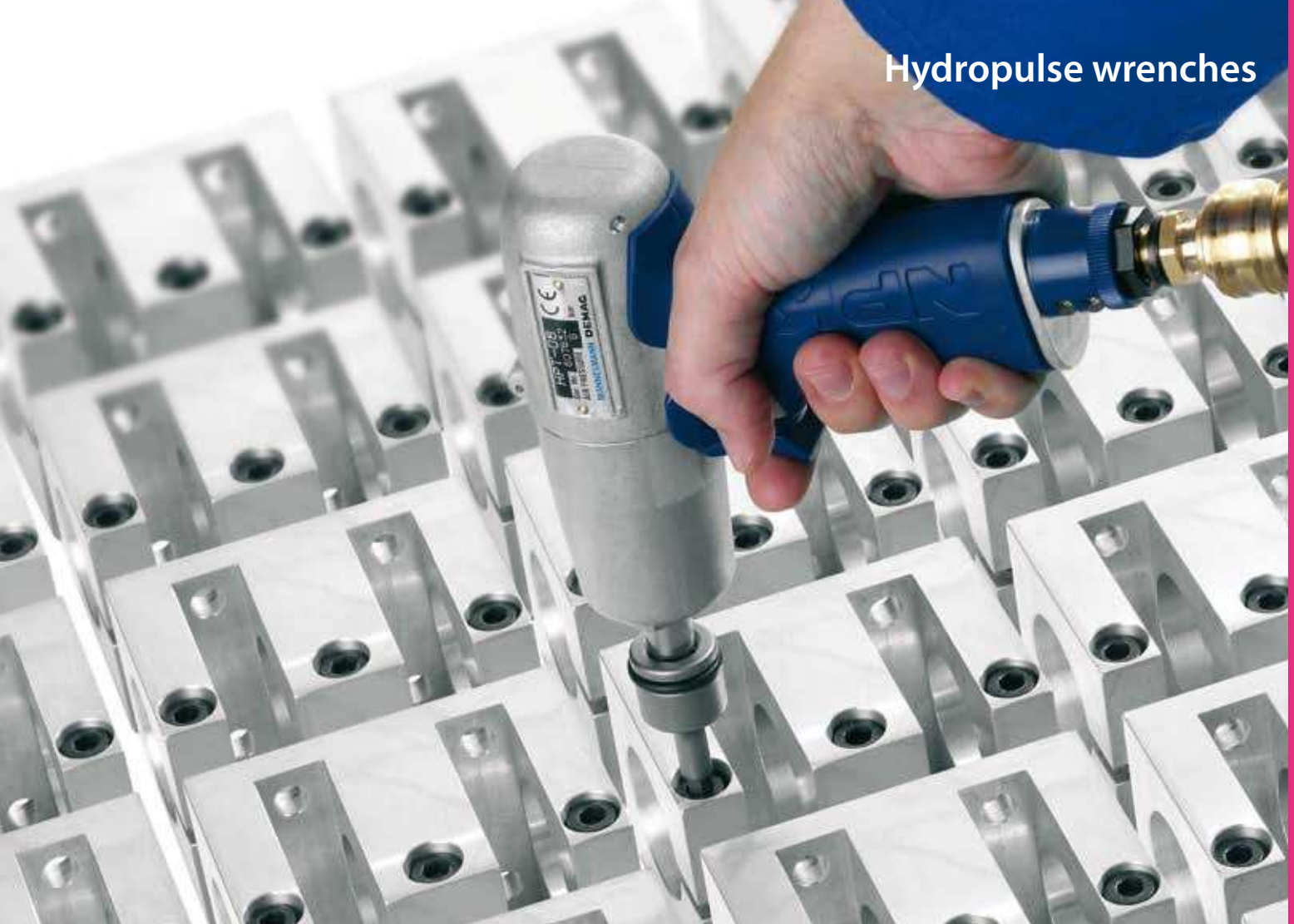
Impact wrench with holster

Holster

for impact and hydropulse wrenches

- Universal and protective
- Tool is always within reach
- Tidy working area

Für E 10 – E 18, HPT, ULT 60012-17-6



Hydropulse wrenches are used when high product quality is demanded. MANNESMANN DEMAG hydropulse wrenches guarantee:

- High torque repetition accuracy
- Easy setting of the torque desired
- Long service life – up to six times the tool life compared to conventional impact wrenches
- Handiness thanks to the optimum position of the centre of gravity as well as the ergonomically designed handle
- No reaction forces
- Low vibration and noise levels
- Very high cut-off accuracy

Recommended torque range

The data on the following pages are approximate values, the actual torque depends on the fastening conditions, accessories being used and the operating pressure.

Hydropulse wrenches HPT

With switch-off



HPT



Light-weight with high accuracy

The new hydropulse wrenches are the right solutions for small dimensions, where torque between 7 and 50 Nm is needed. The innovative double vane impulse unit procures an increased torque accuracy for hard and soft joints.

- Rubber handle
- New ergonomical design
- No colour coating
- Exhaust air in every direction possible
- Double chamber motor with 25% more power
- Low noise level
- Non-lubricated working

Technical data

Type		HPT 06	HPT 08	HPT 05 A	HPT 06 A	HPT 07 A
Order No.		29939-41-6	29939-42-6	29939-45-6	29939-43-6	29939-44-6
Switch-off		no	no	yes	yes	yes
For screws up to	mm	M 6	M 8	M 5	M 6	M 6-8
Recommended torque range hard connection	min.-max.	22-37	35-50	15-22	20-30	28-40
Recommended torque range soft connection	min.-max.	19-34	30-45	7-12	10-20	18-30
Driv. square end		3/8"	3/8"	3/8"	3/8"	3/8"
Length	mm	146	153	165	171	171
Air consumption	m ³ /min	0.30	0.30	0.35	0.35	0.35
Weight	kg	0.85	0.89	1.00	1.10	1.10
Free speed	rpm	6 500	6 500	6 000	6 000	6 000
Connection		NPT 1/4" i	NPT 1/4" i	NPT 1/4" i	NPT 1/4" i	NPT 1/4" i
Hose I. D.	mm	6	6	6	6	6
Noise level	dB(A)	85	85	85	85	85
Accessories supplied		Thread socket, 2 allen keys				

Power and free speed at 6 bar operating pressure.



Quick-change chuck



Impulse wrench oil



Swivel joint

Quick-change chuck with spindle guide

Drive 3/8"	937 64 05
Power take-off 1/4"	

Impulse wrench oil

1 litre	0950 05 50
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Accessories

Swivel joint	600 016 06
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Hydropulse wrenches ULT

With switch-off

Light-weight with high accuracy

The new hydropulse wrenches are the right solutions for small dimensions, where torque between 7 and 50 Nm is needed. The innovative double vaneimpulse unit procures an increased torque accuracy for hard and soft joints.

- Rubber handle
- New ergonomical design
- No colour coating
- Rubber housing protection cap
- Exhaust air in every direction (360°) possible
- 9 vane double chamber motor
- Low noise level
- Non-lubricated working



ULT 50

Technical data

Type		ULT 50 D	ULT 50	ULT 60 D	ULT 60	ULT 70
Order No.		60012-18-6	60012-19-6	60012-20-6	60012-21-6	60012-22-6
Switch-off		yes	yes	yes	yes	yes
For screws up to	mm	M 6	M 6	M 8	M 8	M 8 – 10
Torque range	Nm	7 – 15,5	7 – 15,5	15 – 32	15 – 32	30 – 55
Driv. square end		1/4" SWF	3/8"	1/4" SWF	3/8"	3/8"
Length	mm	163	160	175	172	178
Air consumption	m ³ /min	0.25	0.25	0.35	0.35	0.40
Weight	kg	0.92	0.92	0.95	0.95	1.05
Free speed	rpm	4 400	4 400	6 700	6 700	6 000
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Hose I. D.	mm	6	6	9	9	9
Noise level	dB(A)	78	78	80	80	80
Accessories supplied		Thread socket, 2 allen keys				

Power and free speed at 6 bar operating pressure.

Type		ULT 90	ULT 100	ULT 130	ULT 150
Order No.		60012-23-6	60012-24-6	60012-26-6	60012-27-6
Switch-off		yes	yes	yes	yes
For screws up to	mm	M 10 – 12	M 12	M 14	M 16
Torque range	Nm	50 – 85	70 – 130	110 – 150	140 – 210
Driv. square end		1/2"	1/2"	1/2"	3/4"
Length	mm	190	197	215	238
Air consumption	m ³ /min	0.53	0.55	0.73	0.70
Weight	kg	1.45	1.70	2.30	2.80
Free speed	rpm	5 700	5 200	4 000	3 700
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Hose I. D.	mm	9	13	13	13
Noise level	dB(A)	82	82	82	82

Accessories supplied

Thread socket, allen key for torque setting

Power and free speed at 6 bar operating pressure.

Hydropulse wrenches H

Without switch-off

- With rubber handle
- High torque accuracy
- Easy reversing
- Non-lubricated double chamber motor



H 50/1

Technical data

Type		H 30/1	H 40/1	H 50/1	H 60/1	H 70/1	H 80/1
Order No.		29908-42-6	29908-43-6	29908-44-6	29908-45-6	29908-46-6	29908-47-6
Switch-off		no	no	no	no	no	no
For screws up to	mm	M 10	M 10	M 12	M 14	M 14	M 16
Recom. torque range hard connection	min.-max.	44 – 64	60 – 90	70 – 110	90 – 135	118 – 167	129 – 210
Recom. torque range soft connection	min.-max.	40 – 60	55 – 85	65 – 100	85 – 125	100 – 155	115 – 200
Driv. square end		3/8"	3/8"	1/2"	1/2"	1/2"	3/4"
Length	mm	172	174	192	195	218	240
Air consumption	m ³ /min	0.45	0.50	0.55	0.60	0.80	0.90
Weight	kg	1.06	1.30	1.90	2.30	2.80	3.60
Free speed	rpm	6 500	6 200	5 300	4 500	3 500	3 000
Connection		NPT 1/4" i	NPT 1/4" i	NPT 1/4" i	NPT 1/4" i	NPT 1/4" i	NPT 1/4" i
Hose I. D.	mm	10	10	10	10	10	13
Noise level	dB(A)	83	83	83	83	83	93
Accessories supplied		Thread socket, 2 allen keys					

Power and free speed at 6 bar operating pressure.



Quick-change chuck



Impulse wrench oil



Swivel joint

Quick-change chuck with spindle guide

Drive 3/8" Power take-off 1/4"	937 64 05
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Impulse wrench oil

1 Liter	0950 05 50
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Accessories

Swivel joint	600 016 06
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- 90° pivoting, 360° turning
- For all air tools
- More flexibility at work
- Simple and flexible tightening
- hose and tool can be positioned in an optimal way

Swivel joint Variacor® The perfect partner for screw drivers



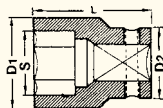
Impact wrenches and hydropulse wrenches

Accessories

- Spindle controlled inserts, extensions and quick change couplings available upon request
- Minimized torque loss
- Low vibration, less wear
- Perfect for impulse tools

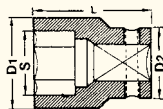
High-performance box spanner inserts

3/8" (square) □



Thread	SW mm	D1 mm	D2 mm	L mm max.	Order No.
M 4	8	13.8	19	34	9 376 195
M 6	10	16.4	19	34	9 376 197
M 8	13	20.2	19	34	9 376 199
M 8	14	21.5	22	34	9 376 200
M 10	17	25.4	22	34	9 376 201
M 12	19	27.9	22	34	9 376 202

1/2" (square) □

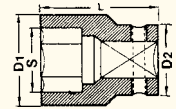


Thread	SW mm	D1 mm	D2 mm	L max. mm	Order No.	L max. mm	Order No.
M 6	10	17.6	25	40	9 376 204	85	9 376 215
M 7	11	18.9	25	40	9 376 205	85	9 376 216
M 8	13	21.4	25	40	9 376 206	85	9 376 217
M 8	14	22.7	25	40	9 376 207	85	9 376 218
M 10	17	26.6	30	40	9 376 208	85	9 376 219
M 12	19	29.1	30	40	9 376 209	85	9 376 220
M 14	22	32.9	30	40	9 376 210	85	9 376 221
M 16	24	35.4	30	45	9 376 211	85	9 376 222
M 18	27	39.3	30	50	9 376 212	85	9 376 223
M 20	30	43.0	30	50	9 376 213	—	—

High-performance box spanner inserts

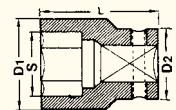
3/4" (square) □

Thread	SW mm	D1 mm	D2 mm	L max. mm	Order No.	L max. mm	Order No.
M 10	17	30.0	44	50	9 376 231	—	—
M 12	19	32.5	44	50	9 376 232	—	—
M 14	22	36.5	44	50	9 376 233	100	9 376 241
M 16	24	38.9	44	50	9 376 234	100	9 376 242
M 18	27	42.5	44	50	9 376 235	100	9 376 243
M 20	30	46.5	44	53	9 376 236	100	9 376 244
M 22	32	48.8	44	53	9 376 237	100	9 376 245
M 24	36	53.8	44	55	9 376 238	100	9 376 246
M 27	41	60.0	44	57	9 376 239	100	9 376 247
M 30	46	66.5	44	62	9 376 240	100	9 376 248



1" (square) □

Thread	SW mm	D1 mm	D2 mm	L max. mm	Order No.	L max. mm	Order No.
M 14	22	39.0	54	57	9 376 458	108	9 376 459
M 16	24	41.5	54	57	9 376 249	108	9 376 259
M 18	27	45.5	54	57	9 376 250	108	9 376 260
M 20	30	49.0	54	62	9 376 251	108	9 376 261
M 22	32	51.5	54	62	9 376 252	108	9 376 262
M 24	36	56.5	54	62	9 376 253	108	9 376 263
M 27	41	62.8	54	66	9 376 254	108	9 376 264
M 30	46	69.0	54	70	9 376 255	108	9 376 265
M 33	50	74.0	54	70	9 376 256	108	9 376 266
M 36	55	80.5	54	75	9 376 257	108	9 376 267
M 39	60	86.5	54	75	9 376 258	108	9 376 268

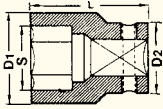


Impact wrenches and hydropulse wrenches

Accessories

High-performance box spanner inserts

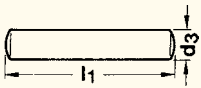
1 1/2" (square) 



Thread	SW mm	D1 mm	D2 mm	L max. mm	Order No.	L max. mm	Order No.
M 27	41	68	86	80	9 376 269	120	9 376 282
M 30	46	74	86	84	9 376 270	133	9 376 283
M 33	50	79	86	87	9 376 271	146	9 376 284
M 36	55	85	86	90	9 376 272	146	9 376 285
M 39	60	91	86	90	9 376 273	146	9 376 286
M 42	65	95	86	95	9 376 274	153	9 376 287
M 45	70	103	86	100	9 376 275	153	9 376 288
M 48	75	108	86	105	9 376 276	165	9 376 289
M 52	80	115	86	110	9 376 277	172	9 376 290
M 56	85	122	86	110	9 376 278	172	9 376 291
M 60	90	128	86	112	9 376 279	178	9 376 292
M 64	95	135	86	112	9 376 280	184	9 376 293
M 68	100	140	86	115	9 376 281	190	9 376 294
M 72	105	146	86	120	9 376 344	195	9 376 346
M 76	110	153	86	128	9 376 345	203	9 376 347

Replacement locking pins

For high-performance box-spanners, extensions,
holders and adapters



Driv. square end	D2 ∅ mm	Locking pin d3 × l1	Order No.
3/8"	19 – 20	2.5 × 14	9 315 149
3/8"	22	2.5 × 16	9 315 491
1/2"	24 – 26	3.0 × 20	9 315 165
1/2"	30	3.0 × 24	9 315 166
3/4"	44	4.0 × 36	9 315 182
3/4"	54	5.0 × 45	9 375 203
1"	54	5.0 × 45	9 315 203
1 1/2"	86	6.0 × 75	9 315 224
1 1/2"	127	6.0 × 110	9 315 498
2 1/2"	170	10.0 × 150	9 315 250

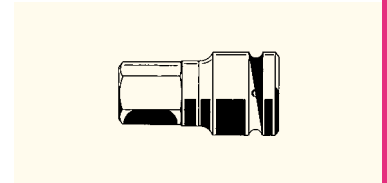
Spanner for socket head screws

3/8" (outer square) ○

SW mm	D2 mm	L mm	Order No.
M 6 / 5	22	50	9 376 500
M 8 / 6	22	50	9 376 501
M 10 / 8	22	50	9 376 502
M 12 / 10	22	50	9 376 503
M 14 / 12	22	50	9 376 504
M 16 / 14	22	50	9 376 505

1/2" (outer square) ○

SW mm	D2 mm	L mm	Order No.
M 6 / 5	30	50	9 376 506
M 8 / 6	30	50	9 376 507
M 10 / 8	30	50	9 376 508
M 12 / 10	30	50	9 376 509
M 14 / 12	30	50	9 376 510
M 16 / 14	30	50	9 376 511
M 22 / 17	30	55	9 376 528



3/4" (outer square) ○

SW mm	D2 mm	L mm	Order No.
M 22 / 17	44	62	9 376 512
M 24 / 19	44	62	9 376 513
M 30 / 22	44	62	9 376 514
M 33 / 24	44	62	9 376 515
M 36 / 27	44	62	9 376 516
M 42 / 32	44	62	9 376 518

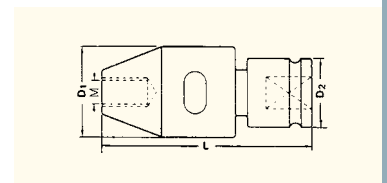
Stud bolt chuck

3/8" (square) ○

Thread	D1 mm	D2 mm	L max. mm	Order No.
M 6	34	22	72	030 248 74
M 8	34	22	72	030 250 74
M 10	34	22	72	030 251 74

1/2" (square) ○

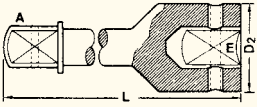
Thread	D1 mm	D2 mm	L max. mm	Order No.
M 10	34	30	84	030 259 74
M 12	34	30	84	030 260 74
M 14	45	30	102	030 261 74
M 16	45	30	102	030 262 74



Impact wrenches and hydropulse wrenches

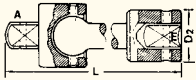
Accessories

Extensions



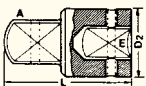
External square A	Intern. square E	D2 mm	L mm	Order No.
3/8"	3/8"	19	75	9 376 383
3/8"	3/8"	19	150	9 376 384
1/2"	1/2"	25	125	9 376 385
3/4"	3/4"	44	175	9 376 387
3/4"	3/4"	44	250	9 376 388
3/4"	3/4"	44	330	9 376 389
1"	1"	54	175	9 376 390
1"	1"	54	330	9 376 391
1 1/2"	1 1/2"	86	250	9 369 218

Universal joints



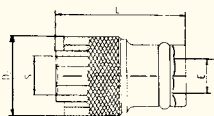
External square A	Intern. square E	D2 mm	L mm	Order No.
3/8"	3/8"	20	55	9 376 379
1/2"	1/2"	26	75	9 376 380
3/4"	3/4"	44	85	9 376 381
1"	1"	54	125	9 376 382

Connectors



External square A	Intern. square E	D2 mm	L mm	Order No.
1/2"	3/8"	22	45	9 369 227
1/2"	3/4"	44	70	9 369 226
3/4"	1"	54	70	9 369 225
1"	1 1/2"	86	115	9 369 224
1 1/2"	2 1/2"	127	145	9 369 229

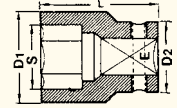
Quick-change chuck



Intern. hexagon S	Intern. square E	D2 mm	L mm	Order No.
7/16"	3/8"	28	46	9 376 404
7/16"	1/2"	30	55	9 376 402

Bit holder

Intern. hexagon S	Intern. square E	D2 mm	L mm	Order No.
7/16"	3/8"	22	32	9 369 173
7/16"	1/2"	24	37	9 369 174



Bits, 11 mm, 7/16"

Thread	Size S	SW mm	Blade mm	Length L mm	Order No.
Hexagon socket screws ○					
M 5	—	4	—	55	9 376 296
M 6	—	5	—	55	9 376 297
M 8	—	6	—	55	9 376 298
M 10	—	8	—	55	9 376 299
M 12	—	10	—	55	9 376 300
M 14	—	12	—	55	9 376 301
M 16	—	14	—	55	9 376 302





MANNESMANN DEMAG screwdrivers are suitable for all fields of application, both for individual jobs and for series production. Constant product improvements have led to the high standard of quality of present-day rotary screwdrivers: with automatic cut-off and friction clutch, in straight, angle or pistol grip versions.

- Very high switch-off accuracy, due to the automatic clutch, with variations of 5 % of the rated value under ideal conditions
- Quick-change chuck
- Quick and easy torque adjustment from the outside
- Low noise and vibration values
- Push start for straight screwdrivers
- Ergonomically designed handle for operator-friendly use and safe operation without fatigue
- No oil required
- With automatic shut-off screwdrivers with full torque range in reverse direction for screw opening capability
- Cost-saving and easy to service due to long-life motors and clutches
- Dry running motors

- Easy torque setting
- Ergonomic handle
- Variable use, but mainly for self cutting screws
- Comfortable reverse button

Screwdrivers

Pistol grip and straight design

With slip clutch

1.5 – 10.0 Nm

With lever start on request.



A 8-450 URPS



A 8-500 URS

Technical data

Type		A 6-900 URPS	A 8-450 URPS	A 6-1 000 URS	A 8-500 URS
Order No.		60011-39-6	60008-42-6	60011-40-6	60011-49-6
Start		pressure start	pressure start	push start	push start
Free speed	rpm	900	450	1 000	500
For screws up to		M 6	M 8	M 6	M 8
Reversible		yes	yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range	Nm	1.5 – 8.0	1.5 – 10.0	1.5 – 8.0	1.5 – 10.0
Noise level	dB(A)	78	78	77	77
Air consumption	l / sec	9.0	9.0	9.0	9.0
Weight without hose	kg	0.98	0.98	0.82	0.82
Ø machine	mm	36	36	40	40
Machine length	mm	224	224	226	226
Hose I. D.	mm	8	8	8	8
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied					wrench, support

Power and free speed at 6 bar operating pressure.

Torque springs

A6-900 URPS	white, Ø 2.5 mm, 1.5 – 6.0 Nm, installed red, Ø 3.5 mm, 4 – 8 Nm, included
A6-1000 URS	white, Ø 2.5 mm, 1.5 – 6.0 Nm, installed Farbe Rot, Ø 3.5 mm, 4 – 8 Nm, included
A8-450 URPS	white, Ø 2.5 mm, 1.5 – 6.5 Nm, installed red, Ø 3.5 mm, 3.5 – 10.0 Nm, included
A8-500 URS	white, Ø 2.5 mm, 1.5 – 6.5 Nm, installed red, Ø 3.5 mm, 3.5 – 10.0 Nm, included

Screwdrivers

Straight design with automatic clutch

0.4 – 5.0 Nm

- Reverse push button
- Quick change coupling
- Easy external torque setting
- Ergonomic anti-slip softgrip
- Non-lubricated use applicable



1



2



Technical data

Type		A 4-902 UAS	A 4-902 UAS H	A 4-552 UAS	A 4-552 UAS H
Order No.		29949-18-6	60010-91-6	60008-24-6	60001-17-6
Illustration		1	2	1	2
Start		push start	lever start	push start	lever start
Free speed	rpm	950	950	650	650
For screws up to		M 4	M 4	M 4	M 4
Reversible		yes	yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range	Nm	0.4 – 4.5	0.4 – 4.5	0.4 – 5.0	0.4 – 5.0
Noise level	dB(A)	73	73	73	73
Air consumption	l/ sec	5.5	5.5	5.5	5.5
Weight without hose	kg	0,59	0,60	0,59	0,60
Ø machine	mm	38	38	38	38
Machine length	mm	230	228	230	228
Hose I. D.	mm	6	6	6	6
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrench, support			

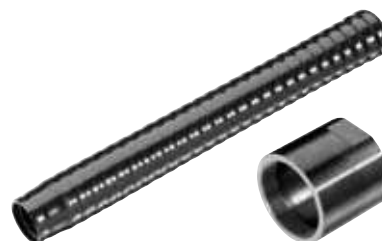
Power and free speed at 6 bar operating pressure.

Torque springs

A4-902 UAS	Grey, Ø 3.2 mm, 0.8 – 4.5 Nm, installed
A4-902 UAS H	Black, Ø 2.2 mm, 0.4 – 1.3 Nm, included
A4-552 UAS	Grey, Ø 3.2 mm, 0.8 – 5.0 Nm, installed
A4-552 UAS H	Black, Ø 2.2 mm, 0.4 – 1.3 Nm, included

Accessories

Exhaust hose for types A4	29501-35-6
Cylindric housing for use with tool support	600 091 96



Screwdrivers

Straight design with automatic clutch

0.4 – 12.0 Nm



3

Technical data

Type		A 5-1350 UAS	A 6-1000 UAS	A 8-850 UAS	A 8-400 UAS
Order No.		60014-83-6	60014-82-6	60014-84-6	60014-81-6
Illustration		—	—	—	3
Start		push start	push start	push start	push start
Free speed	rpm	1 350	1 000	850	400
For screws up to		M 5	M 6	M 6	M 8
Reversible		yes	yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range	Nm	0.4 – 5.0	3.5 – 8.0	3.5 – 9.5	3.5 – 12.0
Noise level	dB(A)	75	75	75	75
Air consumption	l/sec	6	6	6	6
Weight without hose	kg	0.80	0.90	0.90	0.90
Ø machine	mm	40	40	40	40
Machine length	mm	235	255	255	255
Hose I. D.	mm	8	8	8	8
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrench, support			

Power and free speed at 6 bar operating pressure.

Torque springs

A5-1350 UAS	
	Grey, Ø 3.2 mm, 1.0 – 5.0 Nm, installed Black, Ø 2.2 mm, 0.4 – 1.3 Nm, included

Screwdrivers

Pistol grip with automatic clutch

0.4 – 24.0 Nm



A 5-653 UAPS

- Automatic shut-off
- Quick-change chuck
- Automatic start with button
- Low noise level thanks to integrated silencing
- Ergonomic handle
- Trigger start
- Non-lubricated
- Hand grip in middle position available

Technical data

Type		A 5-653 UAPS	A 5-1300 UAPS	A 6-1000 UAPS	A 8-400 UAPS	A 10-450 UAPS
Order No.		60008-21-6	60010-80-6	60010-79-6	60010-81-6	29501-23-6
Start		trigger start	trigger start	trigger start	trigger start	trigger start
Free start	rpm	650	1300	1000	400	450
For screws up to		M 5	M 5	M 6	M 8	M 10
Reversible		yes	yes	yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range	Nm	0.6 – 5.0	0.4 – 5.0	3.5 – 8.0	3.5 – 12.0	7.0 – 24.0
Noise level	dB(A)	71	73	73	73	77
Air consumption	l/sec	6.0	7.0	7.0	7.0	10.0
Weight without hose	kg	0.72	0.87	0.97	0.97	1.75
Ø machine	mm	37	38	38	38	46
Machine length	mm	209	190	210	210	265
Hose I.D.	mm	6	6	6	6	6
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrenches for setting the torque				

Power and free speed at 6 bar operating pressure.

Torque springs

A 5-653 UAPS	Grey, Ø 3.2 mm, 0.8 – 5.0 Nm, installed Black, Ø 2.2 mm, 0.4 – 1.2 Nm, included
A 5-1300 UAPS	Grey, Ø 3.2 mm, 1.0 – 5.0 Nm, installed Black, Ø 1.2 mm, 0.4 – 1.3 Nm, included



A 8-400 UAPS



A 10-450 UAPS

- Easy and quick setting of the torque on the outside
- Reversible
- Small design of the angle heads
- Rugged, tried and tested design
- Long lifetime
- Low noise level
- High repeating accuracy
- Signal tone at the end of the cycle
- Even torque with hard and soft connections
- Non-lubricated

Winkelschrauber

Safety lever start with automatic clutch

0.8 – 60 Nm



AW 4-950 UA



AW 10-352 UA

Technical data

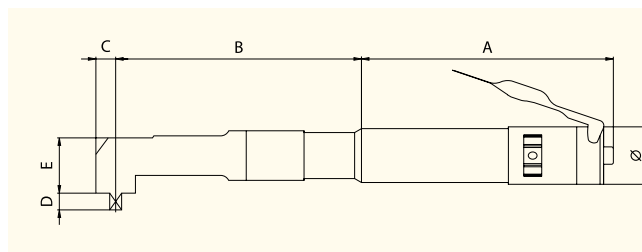
Type		AW 4-950 UA	AW 4-650 UA	AW 8-602 UA	AW 10-352 UA	AW 10-400 UA	AW 12-301 UA
Order No.		60010-96-6	60010-95-6	29939-31-6	29939-35-6	29900-34-6	29900-35-6
Start		lever start	lever start	lever start	lever start	lever start	lever start
Free start	rpm	950	650	600	350	400	300
For screws up to		M 4	M 4	M 8	M 10	M 10	M 12
Reversible		yes	yes	yes	yes	yes	yes
Drive		1/4"	1/4"	3/8"	3/8"	3/8"	1/2"
Torque range	Nm	0.8 – 4.0	0.8 – 5.0	3.0 – 14.0	11.5 – 26.0	18.0 – 40.0	29.0 – 60.0
Noise level	dB(A)	73	73	77	77	77	77
Air consumption	l/sec	5.5	5.5	10	10	13	13
Weight without hose	kg	0.70	0.70	1.40	1.45	2.05	2.30
Ø machine	mm	32	32	40	40	40	40
Machine length	mm	276	276	334	331	419	438
Hose l. D.	mm	5	5	8	8	10	10
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrenches for setting the torque					

Power and free speed at 6 bar operating pressure.

Types AW 4-950 UA, AW 4-650 UA and AW 10-352 UA with allen screw C 6.3 – 1/4" allen screw available.

Dimensions | mm

Type	Ø x L	A	B	C	D	E
AW 4-...	32 x 276	157	109	100	8.5	20.0
AW 8-602 UA	40 x 334	195	125	140	12.0	34.5
AW 10-352 UA	40 x 331	180	137	140	12.0	34.5
AW 10-400 UA	40 x 419	240	163	160	16.0	40.0
AW 12-301 UA	40 x 438	240	178	200	16.5	45.5



Suspension device

AW 8-602 UA, AW 10-352 UA	29946-57-6
AW 10-400 UA, AW 12-301 UA	29946-66-6



Ratchet screwdrivers

Compact design, 6 – 120 Nm

- Small design for the use in difficult to access areas
- Isolating soft grip
- Reversible for clockwise and anti-clockwise rotation
- MDR 2100 with speed regulation
- Exhaust air outlet and thread connection with 360° rotation capacity



MDR 2100



MDR 2101



Technical data

Type		MDR 2100	MDR 2101	MDR 2102	MDR 2103
Order No.		82400-10-2	82400-20-2	82400-30-2	82400-40-2
Driv. square end		1/4"	3/8"	1/2"	1/2"
Free speed	rpm	220	180	180	180
For screws up to		M 10	M 10	M 10	M 10
Working torque	Nm	6 – 33	13 – 120	13 – 120	13 – 120
Torque max.	Nm	55	160	160	160
Noise level	dB(A)	82	84	84	84
Air consumption	l/sec	4.7	10.8	10.8	10.8
Weight	kg	0.6	1.3	1.3	1.3
Length (total)	mm	200	270	270	270
Hose I.D.	mm	8 (5/16")	10 (3/8")	10 (3/8")	10 (3/8")
Connection		NPT 1/4"	NPT 1/4"	NPT 1/4"	NPT 1/4"
Vibration	m/s ²	3.5	3.3	3.7	3.7

Power and free speed at 6 bar operating pressure.



MDR 2102



MDR 2103

- For use in one or multi spindle linear screw units or automatic assembly lines
- Low noise level
- Push start version upon request
- Tightening control via air pressure signal possible
- Highest reliability
- Rotation clockwise
- Non-lubricated
- Also reversible with quick change chuck and telescope front end

Built-in screw drivers

With automatic switch-off

Clockwise



MCZE 4A

Technical data

Type		MCZE 4A	MCZE 5A	MCSE 8A	MCSE 10A	MCY 11A
Order No.		29946-58-6	29946-59-6	29946-60-6	29946-61-6	29946-62-6
Start		direct start	direct start	direct start	direct start	direct start
Free speed	rpm	900	550	1 000	500	550
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range	Nm	0.6 – 3.8	0.6 – 5.0	2.5 – 8.0	2.5 – 10.0	7.0 – 24.0
Noise level	dB(A)	72	72	77	77	76
Air consumption	l/sec	7	7	9	9	10
Weight without hose	kg	0.70	0.70	0.98	0.98	1.50
Hose I. D.	mm	6	6	8	8	8
Connection		G 1/8" i	G 1/8" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrenches for setting the torque				

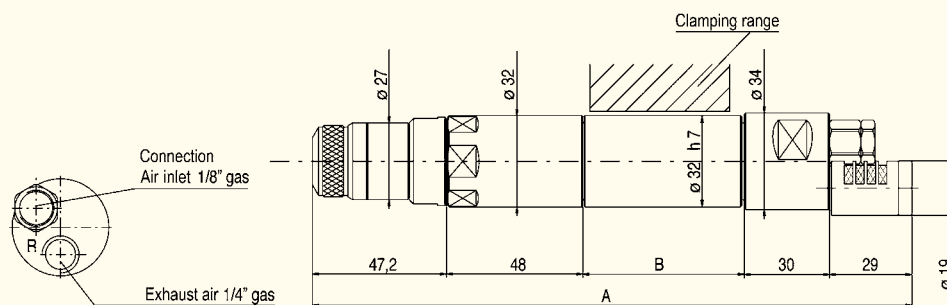
Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Torque springs

MCZE 4A	gold, 1.6 – 3.8 Nm, installed brown, 0.7 – 2.9 Nm, included	MCSE 8A	blue, 2.5 – 8.0 Nm, installed
MCZE 5A	neutral, 1.7 – 5.0 Nm, installed brown, 0.7 – 3.3 Nm, included	MCSE 10A	neutral, 2.5 – 10.0 Nm, installed
		MCY 11A	violet, 7.0 – 24.0 Nm, installed

Dimensions of models MCZE (mm)

Dimensions (mm)	A	B
MCZE	251.6	70



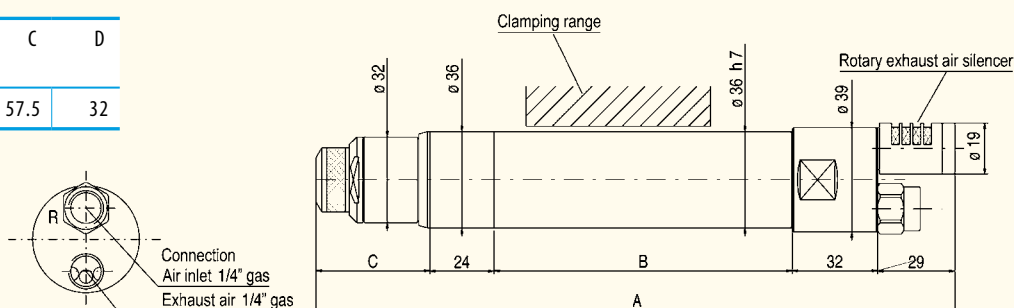
Compressed air fitted screwdrivers

With automatic switch-off

Clockwise

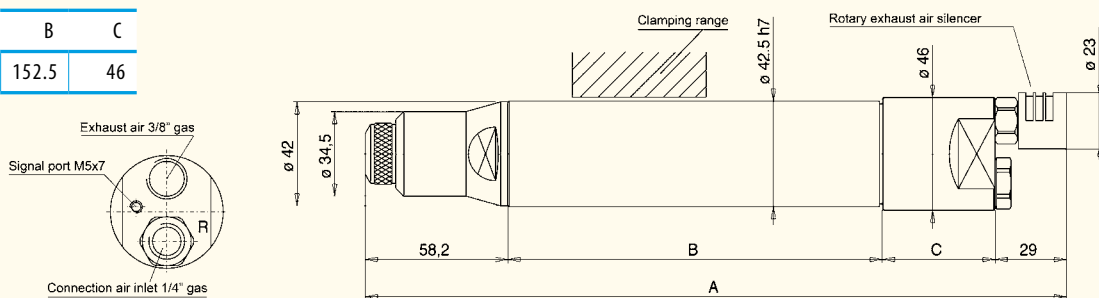
Dimensions of models MCSE (mm)

Dimensions (mm)	A	B	C	D
MCSE	266	111.5	57.5	32

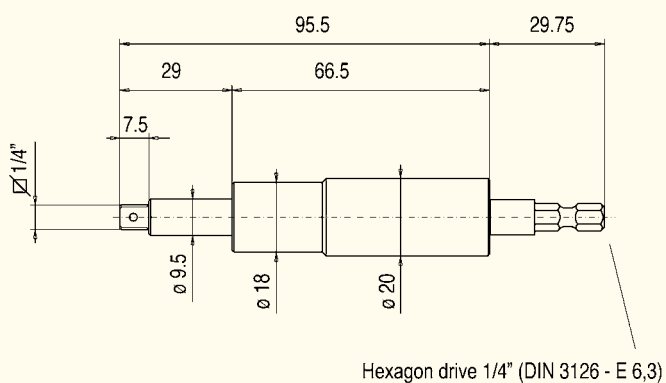


Dimensions of models MCY (mm)

Prop. (mm)	A	B	C
MCY	315.5	152.5	46



Telescope front end | 1/4" (square)



Telescope front ends make easier to arrange the screws and reduce the axial load on the mechanical parts of the motor. Whenever several screws shall be tightened simultaneously the telescope front end compensates the start height differences between the screws. A built-in guiding sleeve ensures a permanent alignment of the telescope front end. The telescope front end is combined with the components named above. A specific adaptor must be attached if required. The spring tension force of the telescope front end in the final position will be approx. 3.5 kg.

The ideal tool for industrial manufacturing within sensitive ranges: more mobility, better quiet running and for use in clean rooms.

Brushless electrical screwdrivers

Straight design, without clutch

- ESD design as standard
- Torque and speed to be adjusted infinitely variable
- Softstart setting
- Ergonomic housing for the perfect grip
- Reversible
- Low noise level
- Low frequent service
- Seperate control unit
- Available also with clutch
- Angle head can be attached



BRL 07 AS

Technical data

Type		BRL 07 AS	BRL 10 AS	BRL 16 AS
Order No.		60011-45-6	60011-46-6	60011-47-6
Start		lever start	lever start	lever start
Free speed	rpm	1 000	650	450
For screws up to		M 3	M 3	M 4
Reversible		yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"
Torque range hard	Nm	0.10 – 0.70	0.25 – 1.00	0.10 – 1.60
Weight	kg	0.35	0.35	0.35
Ø machine	mm	33	33	33
Machine length	mm	205	205	205
Voltage	V/DC	36	36	36
Accessories supplied		1 torque spring, cable 2.5 m long		

Control unit for BRL

Type	EDU 1 BR	
Order No.	60011-48-6	
Input voltage	V/AC Hz	90 – 260 50/60
Output voltage	V/DC	36
Weight	kg	0.95
Dimensions	mm	135 × 180 × 65
Torque range setting		L 0 – 30%, H 20 – 100%
Power cable length	m	2.0



Control unit

Electrical screwdrivers

Straight version

The ideal tool for industrial manufacturing within sensitive ranges: more mobility, better quiet running and for use in clean rooms.



FAB 10 RE/FR

- ESD design as standard
- Torque and speed to be adjusted infinitely variable
- Softstart setting
- Ergonomic housing for the perfect grip
- Reversible
- Low noise level
- Low frequent service
- Seperate control unit
- Automatic clutch $\pm 3\%$
- Angle head can be attached

Technical data

Type		FAB 10 RE/FR	FAB 12 RE/FR	FAB 12 PS/FR	FAB 18 RE/FR	FAB 18 PS/FR
Order No.		29946-44-6	29946-45-6	29946-46-6	29946-47-6	29946-48-6
Start		lever start	lever start	push start	lever start	push start
Free speed	rpm	1 000	1 000	1 000	650	650
For screws up to		M 3	M 3	M 3	M 4	M 4
Reversible		yes	yes	yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range hard	Nm	0.05 – 0.80	0.20 – 1.20	0.20 – 1.20	0.30 – 1.80	0,30 – 1.80
Weight	kg	0.48	0.48	0.48	0.48	0.48
Ø machine	mm	33	33	33	33	33
Machine length	mm	220	220	220	220	220
Voltage	V/DC	30	30	30	30	30
Accessories supplied		1 torque spring, cable 2.5 m long				

Control unit for FAB and RAF (Push and lever start, pistol design)

Type	EDU 1 FR	
Order No.	29946-49-6	
Input voltage	V/AC Hz	90 – 260 50/60
Output voltage	V/DC	18 – 27
Weight	kg	0.60
Dimensions	mm	138 × 118 × 67
With softstart setting	sec	0 – 2
With speed control		infinitely variable 60 – 100 % of the speed stated
Power cable length	m	2.0



Control unit

The ideal tool for industrial manufacturing within sensitive ranges: more mobility, better quiet running and for use in clean rooms.

- ESD design as standard
- Torque and speed to be adjusted infinitely variable
- Softstart setting
- Ergonomic housing for the perfect grip
- Reversible
- Low noise level
- Low frequent service
- Seperate control unit
- Automatic clutch $\pm 3\%$
- Angle head can be attached

Electrical screwdrivers Straight design



RAF 32 NS/FR

Technical data

Type		RAF 32 NS/FR 29946-40-6	RAF 32 PS/FR 29946-41-6	RAF 38 NS/FR 29946-42-6	RAF 38 PS/FR 29946-43-6
Order No.					
Start		lever start	push start	lever start	push start
Free speed	rpm	1 000	1 000	650	650
For screws up to		M 4	M 4	M 4	M 4
Reversible		yes	yes	yes	yes
Drive		F 1/4"	F 1/4"	F 1/4"	F 1/4"
Torque range hard	Nm	0.7 – 3.2	0.7 – 3.2	0.9 – 3.8	0.9 – 3.8
Weight	kg	0.65	0.65	0.65	0.65
Ø machine	mm	39	39	39	39
Machine length	mm	225	225	225	225
Voltage	V/DC	30	30	30	30
Accessories supplied		1 torque spring, cable 2.5 m long			



RAF 32 NS/FR with control unit

Nut clammer



MS 50-45

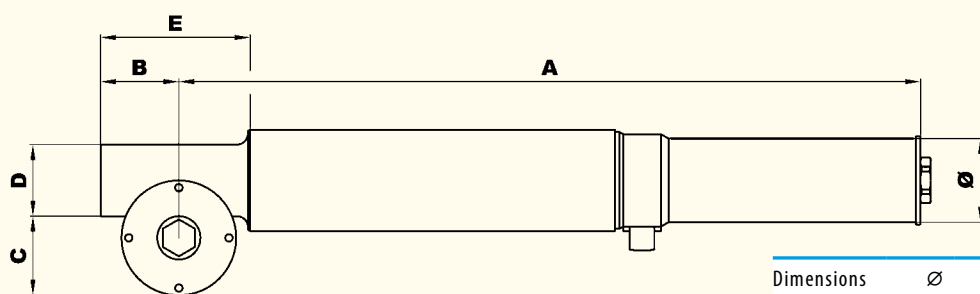
- For tightening and loosening screw connections
- Reliable, robust, for tough applications
- Rugged design
- Long lifetime
- Adjustment of sledges in machine tools
- Reversible by simply using the upper (clockwise) or lower (anti-clockwise) hexagon

Technical data

Type		MS 50-45	MS 90-125
Order No.		29501-58-6	29946-56-6
Valve		push button	push button
Free speed	rpm	450	125
For screws up to		M 10	M 12
Torque range max.	Nm	50	90
Driv. square end	mm	F 12	F 12
Length	mm	373	373
Smallest axle distance	mm	34	34
Air consumption	l/sec	13	13
Weight	kg	2.20	2.35
Noise level	dB(A)	77	77
Hose I. D.	mm	10	10
Connection	G	1/4" i	1/4" i

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Dimensions



Dimensions (mm)	Ø	A	B	C	D	E
MS	38	337,3	35,6	35,9	32,6	68

Accessories

Connector, hexagon 12 mm, square 1/2"	29501-54-3
---------------------------------------	------------

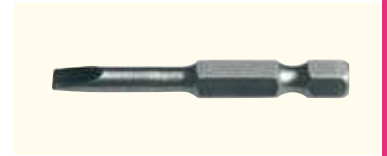
Insert tools

External hexagon 1/4" (DIN 3126)

Bits

Slotted

Thread	Bit width mm	Bit thickness mm	Length mm	Order No.
M 2	3.0	0.5	50	9 376 112
M 2.5	4.0	0.5	50	9 376 114
M 2.6	4.5	0.6	50	9 376 115
M 3	5.0	0.8	50	9 376 116
M 4	6.0	1.0	50	9 376 118
M 4	7.0	1.0	50	9 376 119
M 5	8.0	1.2	50	9 376 120
M 6	9.0	1.6	50	9 376 121



Pozidriv | Philips

Thread	Wood screws	Size	Length mm	Pozidriv Order No.	Philips Order No.
M 2 – M 3	2.0 – 3.0	1	50	9 376 461	9 376 125
M 3.5 – M 5	3.5 – 5.0	2	50	9 376 462	9 376 126
M 6	5.5 – 7.0	3	50	9 376 463	9 376 127
M 8 – M 10	8.0	4	50	9 376 464	9 376 128



Hexagon (DIN 7426)

Thread	Bit width mm	Length mm	Order No.
M 3	2.5	50	9 376 129
M 4	3.0	50	9 376 130
M 5	4.0	50	9 376 131
M 6	5.0	50	9 376 132
M 8	6.0	50	9 376 133
M 10	8.0	50	9 376 134
M 12	10.0	50	9 376 135



Torx

Size S	Length L mm	Order No.
T 10	50	9 376 480
T 15	50	9 376 481
T 20	50	9 376 482
T 25	50	9 376 483
T 30	50	9 376 484
T 40	50	9 376 485

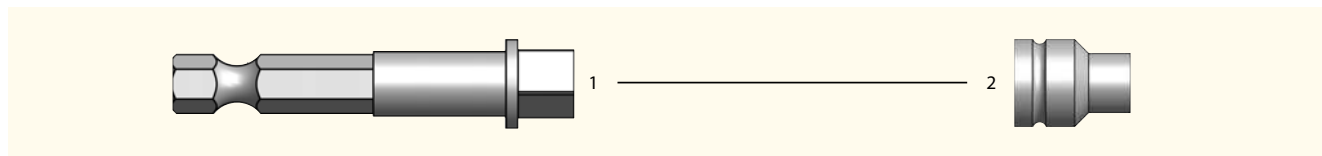
Bits also available in
70, 76, 102, 127 und 152 mm.



Insert tools

External hexagon 1/4" (DIN 3126)

Socket and holder



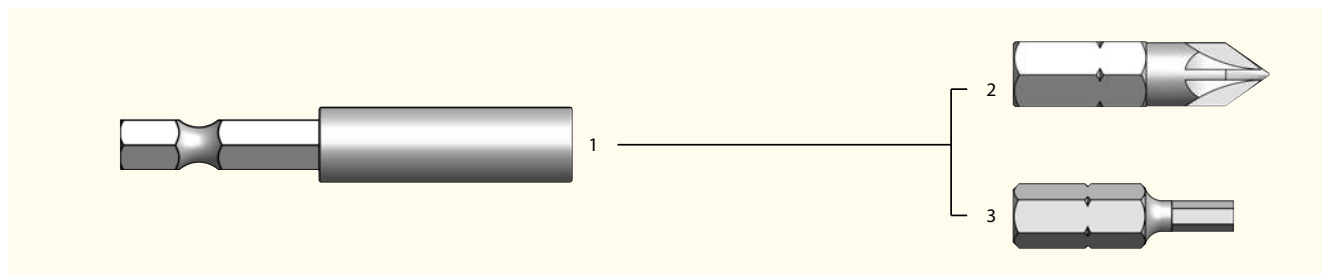
1 Holder for bits

Drive	Driven side	Length mm	Order No.
1/4"	1/4"	100	9 376 453
1/4"	1/4"	50	9 376 136
1/4"	3/8"	100	9 376 454
1/4"	3/8"	50	9 376 137

2 For holder with 1/4" square

Thread	Schlüsselweite mm	Length mm	Order No.
M 6	10.0	25	9 376 339
M 7	11.0	25	9 376 340
M 8	13.0	25	9 376 341

Holder with and without magnet, bits



1 Holder for bits

Driven side	Length mm	Order No.
1/4"	57	9 376 447
1/4"	75	* 9 376 448

* with permanent magnet

2 Pozidriv | Philips

Thread	Wood screws	Size	Length mm	Pozidriv Order No.	Philips Order No.
M 2.5 – M 3	2.0 – 3.0	1	25	9 376 396	9 376 109
M 3.5 – M 5	3.5 – 5.0	2	25	9 376 397	9 376 110
M 6	5.5 – 7.0	3	25	9 376 398	—

3 Hexagon

Thread	Bit width mm	Length mm	Order No.
M 4	3.0	25	9 376 141
M 5	4.0	25	9 376 142
M 6	5.0	25	9 376 143
M 8	6.0	25	9 376 144
M 10	8.0	25	9 376 145
M 12	10.0	25	9 376 146

Linear tool stand for ergonomic workplace design

- Tool stand can be rotated through 360°
- Linear ball bearings for easy running
- No torque is transferred back into the worker's wrist
- Fast tool change

Handling technology Linear stands and parallel arms



Parallel arm



Linear stand

Technical data

Type		Linear stand 1	Linear stand 2	Linear stand 3	Parallel arm*
Order No.		29808-61-5	29808-62-5	29808-63-5	29946-69-6
Height	mm	1 130	1 130	1 130	580
Vertical stroke max.	mm	440	440	440	430
Working radius min. – max.	mm	220 – 600	220 – 600	220 – 600	850
Torque range max.	Nm	25	25	25	25
Weight	kg	2	4	4	2
Bearing load spring balancer max.	kg	2	4	4	—
Ø tool holder	mm	26 – 38	26 – 38	35 – 50	28 – 48

* Weight compensation and adjustment through pneumatic cylinders and pressure reducer.

ReadStar II and ReadStar TT



ReadStar II

For the basic torque checking in your production line, which requires no SPC evaluation

- Saves up to 200 measured values
- Automatic transducer recognition
- Visual measuring control display (LED red, green and yellow)
- ReadStar TT with transducer included (1, 4, 12 or 30 Nm) and assembly task simulator
- Special programs for the measurement of pulse screwdrivers, screwdrivers, click wrenches and backlash
- Serial USB adapter available upon request

Technical data

Type		ReadStar II	ReadStar TT	ReadStar TT	ReadStar TT	ReadStar TT
Order No.		29807-82-8	29807-17-8	29807-18-8	29807-15-8	29807-16-8
Adjustable units		Nm, Ncm, kgm, kgcm, ft.lbs, in.lb, oz.inches				
Power supply		2 baby cells (batteries or accumulators), operating time approx. 70 hours, powersafe, operating with charger				
Torque range	Nm	—	0.1 – 1,0	0.4 – 4.0	1.2 – 12.0	3.0 – 30.0
Dimensions W × D × H	mm	166 × 190 × 66	166 × 190 × 75	166 × 190 × 75	166 × 190 × 75	166 × 190 × 75
Weight	kg	0.9	2.3	2.3	2.3	2.3
Screw size, simulator		—	M 4 × 20	M 6 × 25	M 8 × 35	M 10 × 35
Accessories		Manual, batteries				

Calibration: traceable to national standard, UKAS / DKD.

Interfaces: printer- / PC-connection, serial RS 232, 9-pin-sub-D, transducer connection 25-pin-sub-D (only ReadStar II).

Accessories

Power adaptor	29808-41-8
PC / printer cable	29808-42-8



ReadStar TT

Suitable transducers
 rotating *see page 111*
 static *see page 112*

For dynamic torque measurement

- Approved for ongoing use with impulse wrenches
- Patented transfer system for highest accuracy
- Automatic transducer recognition
- Immune to interference
- Robust compact design
- High-resolution angle transducer
- Torque transducer with coiled cable 900 mm, expandable up to 2 500 mm

Rotating transducers TCRA



TCRA 10

Technical data | Torque only

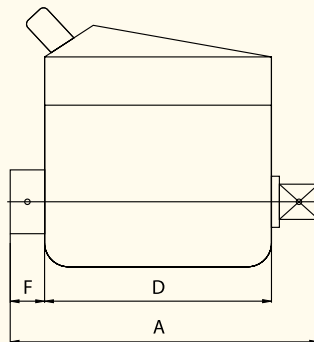
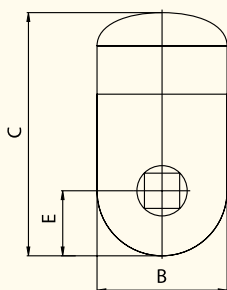
Type		TCRA 2*	TCRA 5*	TCRA 10*	TCRA 20*	TCRA 10/1
Order No.		29807-21-8	29807-22-8	29807-23-8	29807-24-8	29807-25-8
Measuring range min. – max.	Nm	0.2 – 2	0.5 – 5	1 – 10	2 – 20	1 – 10
Drive / power take-off		1/4"	1/4"	1/4"	1/4"	1/4"

Type		TCRA 20/1	TCRA 25	TCRA 75	TCRA 180	TCRA 250
Order No.		29807-26-8	29807-27-8	29807-28-8	29807-29-8	29807-30-8
Measuring range min. – max.	Nm	2 – 20	2.5 – 25	7.5 – 75	18 – 180	25 – 250
Drive / power take-off		1/4"	3/8"	3/8"	1/2"	3/4"

Type		TCRA 500	TCRA 750	TCRA 1400	TCRA 3000
Order No.		29807-31-8	29807-32-8	29807-33-8	29807-34-8
Measuring range min. – max.	Nm	50 – 500	75 – 750	140 – 1 400	300 – 3 000
Drive / power take-off		3/4"	1"	1"	1 1/2"

Calibration: traceable to national standard, UKAS / DKD.

Accuracy: > ± 0.3 % f. s. d. after calibration. Overload capacity: 25 % f. s. d.



Proportions (mm)		A	B	C	D	E	F
*1/4"	hexagon	116.0	30	56.0	56.0	13.0	39
1/4"	square	71.5	30	56.0	56.0	13.0	6
3/8"	square	77.0	30	59.5	56.0	15.0	8
1/2"	square	87.0	42	70.0	58.0	21.0	12
3/4"	square	106.0	52	81.0	60.0	26.0	21
1"	square	125.0	63	91.5	64.5	31.5	29

Suitable display units
ReadStar II see page 110

Static transducers TCSA



TCSA 5

For static torque measurement

- Ideal for the measurement of click and torque wrenches
- Approved for ongoing use with impulse wrenches
- Patented transfer system for highest accuracy
- Automatic transducer recognition
- Immune to interference
- Optional with assembly task simulator
- with cable 1 000 mm, without strain

Tightening set to simulate hard and soft joints up to TCSA 1000 available upon request.

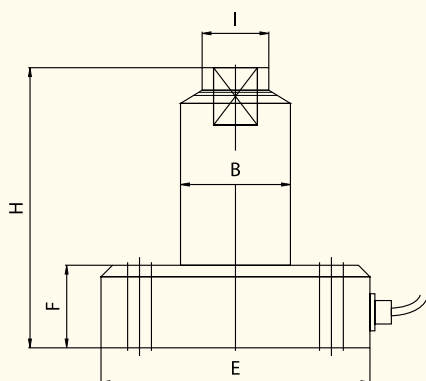
Technical data | Torque only

Type		TCSA 5	TCSA 11	TCSA 28	TCSA 67	TCSA 135
Order No.		29807-61-8	29807-62-8	29807-63-8	29807-64-8	29807-65-8
Measuring range min. – max.	Nm	0.5 – 5	1.1 – 11	2.8 – 28	6.7 – 67	13.5 – 135
Drive		1/4"	1/4"	1/4"	3/8"	3/8"

Type		TCSA 270	TCSA 540	TCSA 1000	TCSA 1600	TCSA 3000
Order No.		29807-66-8	29807-67-8	29807-68-8	29807-70-8	29807-69-8
Measuring range min. – max.	Nm	27 – 270	54 – 540	100 – 1 000	160 – 1 600	300 – 3 000
Drive		1/2"	3/4"	3/4"	1" (außen)	1 1/2" (außen)

Calibration: traceable to national standard, UKAS / DKD.

Accuracy: > ± 0.3 % f. s. d. after calibration. Overload capacity: 40 % f. s. d.



Proport. (mm)	B	E	F	H	I	Order No.
TCSA 5	54	100	25	76.5	16	29807-61-8
TCSA 11	54	100	25	76.5	16	29807-62-8
TCSA 28	54	100	25	76.5	16	29807-63-8
TCSA 67	54	100	25	86.0	24	29807-64-8
TCSA 135	54	100	25	86.0	24	29807-65-8
TCSA 270	54	100	25	95.0	30	29807-66-8
TCSA 540	59	100	25	112.0	44	29807-67-8
TCSA 1000	59	100	25	112.0	44	29807-68-8
TCSA 1600	59	100	25	124.0	53	29807-70-8
TCSA 3000	59	100	25	124.0	53	29807-69-8

Suitable display units
ReadStar II *see page 110*



Chipping hammers, needle pistols



SHV 150

GNV 19 | GNV 28

SHV 150

- To remove welding cinder and paint as well as for concrete plastering
- Extremely low vibrations level: 2 m/s^2
- Patented vibration system
- Noise level under 80 dB(A)
- Blowing function available on request

Needle pistols

- Versatile use for burring, cleaning, separating slag, trimming of castings, roughening, removing of paint
- Easy change of needles with bayonet joint
- Vibration level $\leq 2 \text{ m/s}^2$
- Patented vibration system
- Low air consumption

Technical data

Type		SHV 150	GNV 19	GNV 28	NGV 18
Order No.		35970-00-6	60000-73-6	60003-89-6	29701-11-6
Valve		lever	lever	lever	lever
Number of blows	per minute	9 000	6 600	5 500	8 700
Frequency	Hz	150	110	91	145
Exhaust air		to the front	to the front	to the front	to the front
Vibration	m/s^2	2.0	≤ 2.0	≤ 2.5	3.5
Number of needles		—	19	28	18
Needle length	mm	—	127	140	125
Needle diameter	mm	—	3.2	3.2	3.0
Noise level	dB(A)	76	98	99	93
Air consumption	l/sec	1.5	2.2	2.3	1.6
Machine diameter	mm	40	49	49	40
Machine length	mm	210	272	290	310
Weight	kg	1.45	2.40	3.05	1.95
Hose I.D.	mm	6	10	10	10
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i
Accessories supplied		wrench	set of needles	set of needles	set of needles

Power and free speed at 6 bar operating pressure. Compressed air quality: oiled.

Accessories | Flat chisels, spare needles

Für Type		SHV 150	GNV 19	GNV 28	NGV 18
Flat chisel, carbide metal equipped	100 × 10 mm	39525606	—	—	—
Flat chisel, carbide metal equipped	100 × 17 mm	39525616	—	—	—
Flat chisel, carbide metal equipped	100 × 36 mm	39525626	—	—	—
Set of spare needles		—	9376918	9376919	9376917



NGV 18

Economic

The F+K riveting and cutting hammers are of low vibration and silent. Handle bar and cylinder are elastic and connected not force-fit. Additional dampening elements and silencers ensure the hammers to be environment friendly and easy to use tools.

Shearing hammer FK 120.3, FK 141.3

- To shear rivets mit shearing chisels and remove the rivet with a knock-out chisel

Riveting hammers

- To set rivets with a riveting header



Air riveting hammers, holders

The special ones: 8.8 – 14.1 kg



1

2

Technical data

Type		FK 120.3	FK 141.3	G 75
<i>Insert end</i>				
Round	R 23 × 65	526029	—	—
Round	R 31 × 70	—	526059	525651
Illustration		1	1	4
Fitting spring		●	●	—
Closed handle, steel		●	●	—
To shear rivets up to	∅	16	25	—
To set rivets up to	∅	—	—	—
Air consumption	m ³ / min	0.60	0.95	—
Piston diameter	mm	30	30	75
Piston stroke at 6 bar to rivet diameter	mm	—	—	2 650 N / 27
Piston stroke	mm	197	300	90
Length	mm	555	690	245
Weight	kg	8.8	14.1	9.0
Hose I. D.	mm	13	15	13
Connection		G 3/8" i	G 1/2" i	G 3/8" i

Power at 6 bar operating pressure.

Suitable

Riveting headers (set rivets) *see page 136*

Knock-out chisels (remove) *see page 136*

Shearing chisel *see page 136*

Air chisel hammers

The light ones: 0.68 – 1.14 kg

With chisel retaining spring



1

2

High-performance

With a weight starting from 0.68 kg F+K's lightweight chisel hammers are extremely versatile.

- Sensitive, controllable valve
- Recoil absorbing construction
- Sound absorbing exhaust ring
- Easy to maintain

Special solutions available on request.

Technical data

Type		FK 101.1	FK 101.2	FK 101.3	FK 101.4	FK 111.1	FK 111.2	FK 111.3	FK 111.4
Illustration		1	2	3	4	1	2	3	4
Insert end									
Round	R 10.3 × 36	525181	525183	525193	525162	525187	525158	525195	525156
Round hexagon	S 12.5 × 36	525180	525182	525192	525172	525186	525157	525194	525166
Pistol handle		●	—	—	—	●	—	—	—
Straight handle with push button		—	●	—	—	—	●	—	—
Straight handle with lever valve		—	—	●	—	—	—	●	—
Open handle with aluminium		—	—	—	●	—	—	—	●
Number of blows	per minute	6 100	6 100	6 100	6 100	4 400	4 400	4 400	4 400
Air consumption	m ³ / min	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Piston diameter	mm	16	16	16	16	16	16	16	16
Piston stroke	mm	30	30	30	30	45	45	45	45
Length	mm	180	172	162	214	188	194	193	236
Weight	kg	0.68	0.77	0.72	1.04	0.77	0.80	0.82	1.14
Hose I. D.	mm	8	8	8	8	8	8	8	8
Connection		G 1/4 " i	G 1/4 " i	G 1/4 " i	G 1/4 " i	G 1/4 " i	G 1/4 " i	G 1/4 " i	G 1/4 " i

Power at 6 bar operating pressure.



3

4

Air chisel hammers

The light ones: 1.3 – 3.4 kg

With chisel retaining spring



1



2

Anti vibration

F+K chisel hammers FK 102 G / FK 103 G convinces by its high ergonomics. The load by vibrations is reduced up to 60 %. With a sensible relieve of the wrists and elbows of the user.

Technical data

Type		FK 102.4	FK 102.5	FK 102.G	FK 103.4	FK 103.5	FK 103.G	M 13	M 23
Illustration		1	2	1	1	2	1	siehe Set	siehe Set
<i>Insert end</i>									
Round	R 14,3 × 50	5251530	5251260	—	5251630	5251290	5251460	33600-10-5	33750-10-5
Round hexagon (hex × 50)	RS 12,5 × 10,5 × 50	—	—	—	—	—	—	33600-20-5	33750-20-5
Round hexagon (hex × 50)	RS 14,3 × 12,5 × 50	5251531	5251261	5251411	5251631	5251291	5251461	33600-30-5	33750-30-5
Open handle with aluminium		●	—	●	●	—	●	●	●
Closed handle, steel		—	●	—	—	●	—	—	—
Number of blows	per minute	3 200	3 200	3 100	2 200	2 200	2 300	4 400	2 700
Air consumption	m ³ / min	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Piston diameter	mm	20	20	20	20	20	20	20	20.5
Piston stroke	mm	60	60	60	90	90	60	40	40
Length	mm	290	310	315	335	358	365	200	205
Weight	kg	1.80	3.10	2,40	2.10	3.40	2.60	1.30	2.30
Hose l. D.	mm	10	10	10	10	10	10	10	10
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i	G 1/4" i

Power at 6 bar operating pressure.



Chisel hammer set FK 102.4



Chisel hammer set M 13 / M 23

Chisel hammer set

M 13 RS 14.3	33620-30-5
M 23 RS 14.3	33760-30-5
FK 102.4 RS 14.3	33760-80-6

Air chisel hammers

The powerful ones: 4.1 – 7.9 kg



1

Sound absorbing

The silencer makes the quality chisel hammers of the middleweight class audibly more quiet. By turning the exhaust air can be led in the most favorable direction. The vibration dampening connection between cylinder and hand grip sensitively relieves the hand-arm system of the user.

Easy to maintain

The construction principle applied to the essentials makes service easier. Consequent use of tested materials enlarges the life time and lowers costs. Maintenance costs and downtimes are reduced.

Technical data

Type		FK 3.3	FK 4.3	FK 5.3	FK 6.3
Illustration		1	1	1	1
Insert end					
Round	R 17.5 × 60	5260532	5260542	5260552	5260562
Round	R 20 × 60	5260534	5260544	5260554	5260564
Round hexagon	RS 17.5 × 14.8 × 60	5260531	5260541	5260551	5260561
Round hexagon	RS 20 × 17 × 60	5260533	5260543	5260553	5260563
Conical		526053	526054	526055	526056
Haltefeder		●	●	●	●
Closed handle, steel		●	●	●	●
Number of blows	per minute	2 100	3 200	1 500	1 200
Air consumption	m ³ / min	0.62	0.82	0.90	0.70
Piston diameter	mm	23	30	30	30
Piston stroke	mm	83	72	102	137
Length	mm	345	365	415	406
Weight	kg	4.10	6.30	6.90	7.90
Hose I. D.	mm	13	13	13	13
Connection		G 3/8 " i	G 3/8 " i	G 3/8 " i	G 3/8 " i

Power at 6 bar operating pressure.



New product DR 5

With vibration dampening system
(vibration value 2.71 m/s²)

Air chisel hammers

The powerful ones: 4.15 – 6.70 kg



1



2



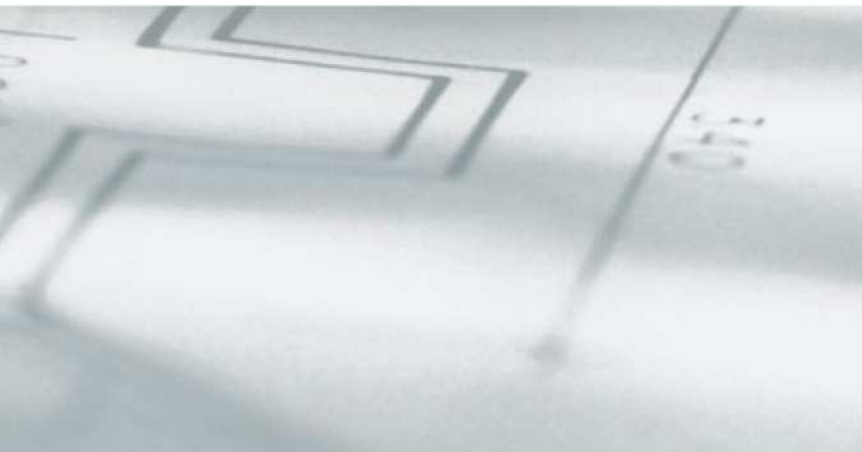
3

Technical data

Type		FK 2	FK 3	FK 4	FK 5	S 5700	DR 5
Illustration		1	1	1	1	2	3
Insert end							
Round	R 17.5 × 60	5259082	5259092	5259292	5259392	—	—
Round	R 20.0 × 60	5259084	5259094	5259294	5259394	35700505	—
Round hexagon	RS 17.5 × 14,8 × 60	5259081	5259091	5259291	5259391	—	* 5251011
Round hexagon	RS 20 × 17 × 60	5259083	5259093	5259293	5259393	35700705	* 5251013
Conical	SK 20-12	—	—	—	—	—	—
Screw cap		●	●	●	●	●	—
Closed handle, steel		●	●	●	●	●	●
Number of blows	per minute	2 800	2 100	3 200	1 500	2 000	2 200
Air consumption	m ³ / min	0.54	0.62	0.82	0.90	0.65	0.70
Piston diameter	mm	23	23	30	30	30	25
Piston stroke	mm	54	83	71	101	90	101
Length	mm	338	374	378	430	410	380
Weight	kg	4.15	4.48	6.25	6.73	6.70	5.50
Hose I. D.	mm	13	13	13	13	13	10
Connection		G 3/8" i	G 3/8" i	G 3/8" i	G 3/8" i	G 3/8" i	G 3/8" i

Power at 6 bar operating pressure.

* With retaining spring



Powerful Accessories see from page 132

Air Euro hammers

The strong ones: 8.8 – 12.0 kg



1

2

Silent, light, quiet running

F+K Euro hammers are indispensable when it comes up to challenging demolition works on construction sites. Optimized power-weight ratio, noise and vibration levels and the ergonomic hand grips ensure an easy working without a quick physical fatigue.

Versions

- with silencer
- without silencer
- with guided exhaust air

Technical data

Type		FK 2008 R 10	FK 2008.11	FK 2008 R 11	FK 2008 R 12	FK 2008 R 31	FK 2008 R 41	FK 2008 R 71
Illustration		1	2	2	4	3	3	2
Insert end								
Round	R 25 × 75	52640710	52640211	52640711	52640712	52640731	—	—
Hexagon	S 22 × 82.5	—	—	—	—	—	52640741	52640771
Closed handle		●	●	●	●	●	●	●
Screw cap		●	●	●	●	—	—	●
Catch		—	—	—	—	●	●	—
Silencer		—	●	●	●	●	●	●
Sleeve valve guide		●	—	●	●	●	●	●
Guided exhaust air		—	—	—	●	—	—	—
Number of blows	min ⁻¹	1 700	1 700	1 700	1 700	1 700	1 700	1 700
Air consumption	m ³ / min	1.00	1.00	1.00	1.05	1.05	1.05	1.05
Piston diameter	mm	35	35	35	35	35	35	35
Piston stroke	mm	117	98	117	117	117	117	117
Length	mm	542	573	542	515	520	520	520
Weight	kg	10.0	8.8	10.4	12.0	11.7	11.7	9.8
Hose I. D.	mm	19	19	19	19	19	19	19
Connection external thread		G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "

Power at 6 bar operating pressure.

Accessories

Grease ampule	307/1655
---------------	----------

Air Euro hammers

The strong ones: 12.0 – 14.0 kg



3



4

Technical data

Type		FK 2012 R 10	FK 2012 R 11	FK 2012 R 12	FK 2012 R 30	FK 2012 R 31
Illustration		1	2	4	3	3
Insert end						
Round	R 25 × 75	52642010	52642011	52642012	52642030	52642031
Closed handle		●	●	●	●	●
Screw cap		●	●	●	—	—
Catch		—	—	—	●	●
Silencer		—	●	●	—	●
Sleeve valve guide		●	●	●	●	●
Guided exhaust air		—	—	●	—	—
Number of blows	min ⁻¹	1 200	1 200	1 200	1 200	1 200
Air consumption	m ³ / min	1.10	1.10	1.10	1.10	1.10
Piston diameter	mm	37	37	37	37	37
Piston stroke	mm	150	150	150	150	150
Length	mm	575	575	575	575	580
Weight	kg	12.0	12.8	14.0	13.0	13.8
Hose l. D.	mm	19	19	19	19	19
Connection external thread		G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "

Power at 6 bar operating pressure.

Air Euro hammers

The strong ones: 13.0 – 14.8 kg



Technical data

Type		FK 2012.40	FK 2012 R 41	FK 2012.42	FK 2012 R 61	FK 2012 R 81
Illustration		1	2	3	4	4
Insert end						
Round	R 25 × 75	—	—	—	52642061	—
Hexagon	S 22 × 82.5	52641040	52642041	52641042	—	52642081
Closed handle		●	●	●	—	—
Double handle		—	—	—	●	●
Screw cap		—	—	—	—	●
Catch		●	●	●	●	—
Silencer		—	●	●	●	●
Sleeve valve guide		—	●	—	●	●
Guided exhaust air		—	—	●	—	—
Number of blows	min ⁻¹	1 200	1 200	1 200	1 200	1 200
Air consumption	m ³ / min	1.10	1.10	1.10	1.10	1.10
Piston diameter	mm	37	37	37	37	37
Piston stroke	mm	150	150	150	150	150
Length	mm	575	580	580	555	555
Weight	kg	13.0	13.8	14.8	14.8	14.8
Hose I. D.	mm	19	19	19	19	19
Connection external thread		G 3/4"	G 3/4"	G 3/4"	G 3/4"	G 3/4"

Power at 6 bar operating pressure.

Air Euro hammers

The strong ones: 13.6 – 17.0 kg



1



2



3



4

Technical data

Type		FK 2015.10	FK 2015 R 10	FK 2015 R 11	FK 2015 R 21	FK 2015 R 30	FK 2015 R 31	FK 2015 R 71
Illustration		1	1	2	4	1 (S. 122)	3	2
Insert end								
Round	R 25 × 75	52641110	52642110	52642111	—	52642130	52642131	—
Hexagon	S 22 × 82.5	—	—	—	52642121	—	—	52642171
Closed handle		●	●	●	—	●	●	●
Double handle		—	—	—	●	—	—	—
Screw cap		●	●	●	—	—	—	●
Catch		—	—	—	●	●	●	—
Silencer		—	—	●	●	—	●	●
Sleeve valve guide		—	●	●	●	●	●	●
Number of blows	per minute	830	830	830	830	830	830	830
Air consumption	m ³ / min	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Piston diameter	mm	35	35	35	35	35	35	35
Piston stroke	mm	235	235	235	235	235	235	235
Length	mm	686	686	686	665	686	686	686
Weight	kg	13.6	15.0	15.5	17.0	16.0	16.5	15.8
Hose l. D.	mm	19	19	19	19	19	19	19
Connection external thread		G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "

Power at 6 bar operating pressure.

Air Euro hammers

The strong ones: 19.2 – 25.0 kg



1



2

Technical data

Type		FK 2020 R 50	FK 2020 R 51	FK 2020.61	FK 2020 R 90	FK 2020 R 91	FK 2020 R 94
Illustration		—	1	2	—	2	2
<i>Insert end</i>							
Round	R 25 × 75	52642250	52642251	52641261	—	—	—
Hexagon	S 25 × 108	—	—	—	52642290	52642291	52642294
Double handle		●	●	●	●	●	●
Screw cap		●	●	—	—	—	—
Catch		—	—	●	●	●	●
Silencer		—	●	●	—	●	●
Sleeve valve guide		●	●	—	●	●	●
Anti vibration with silencer		—	—	—	—	—	●
Number of blows	per minute	860	860	860	860	860	860
Air consumption	m ³ / min	1.20	1.20	1.20	1.20	1.00	1.00
Piston diameter	mm	40	40	40	40	40	40
Piston stroke	mm	225	225	225	225	225	225
Length	mm	665	665	665	665	730	665
Weight	kg	19.2	20.2	20.0	21.0	25.0	25.0
Hose I. D.	mm	19	19	19	19	19	19
Connection external thread		G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "	G 3/4 "

Power at 6 bar operating pressure.

High performance

The anti vibration system of the F+K rammers (2.1 m/s²) ensures a sensitively relieve of the hands and arms of the user.

- With round or guided rod piston, polygon or square
- With safety lever valve
- Sound absorbing exhaust ring
- Turning air connection
- With short or long version
- Optional with silencer for models ST 2 to ST 20
- Versions polygon and square: prevents the rod from turning



Technical data

Type		ST 03 R	ST 02 R	ST 02 V	ST 1 R 2	ST 1 P 2
Order No.		525485	525042	525043	5261112	5261122
Illustration		1	2	2	3	3
Piston form		round	round	square	round	polygon
Morse taper	1	metr. 10	●	●	—	—
Morse taper	2	—	—	—	●	●
Lever valve hood		push button	●	●	●	●
Number of blows	per minute	2 500	1 900	1 900	900	900
Air consumption	m ³ / min	0.20	0.40	0.40	0.50	0.50
Piston diameter	mm	16	23	23	26	26
Piston stroke	mm	40	70	70	125	125
Length total	mm	230	365	365	515	515
Weight	kg	1,0	2.5	2.5	5.0	5.0
Hose I. D.	mm	10	10	10	10	10
Connection		G 1/4 " i	G 1/4 " i	G 1/4 " i	G 1/4 " i	G 1/4 " i
Butt max.	kg	0.30	0.75	0.75	0.85	0.85

Power at 6 bar operating pressure.

Suitable ramming feet *see page 130*

Air rammers

The reliable ones: 3.9 – 9.4 kg



Technical data

Type		S 5100 with valve hood 35100205	S 5100 with short lever valve 35100305	S 5100 with long lever valve 35100405	S 5401 with short lever valve 35400215	S 5401 with long lever valve 35400315
Order No.		35100205	35100305	35100405	35400215	35400315
Illustration		1	2	3	2	3
Piston form		square	square	square	square	square
Morse taper	1	●	●	●	—	—
Morse taper	2	—	—	—	●	●
Lever valve hood		●	—	—	—	—
Lever valve short		—	●	—	●	—
Lever valve long		—	—	●	—	●
Number of blows	per minute	720	720	720	680	680
Air consumption	m ³ / min	0.40	0.40	0.40	0.70	0.70
Piston diameter	mm	22.50	22.50	22.50	36.00	36.00
Piston stroke	mm	155	155	155	175	175
Length total	mm	530	700	1260	840	1080
Weight	kg	3.90	4.65	5.50	8.80	9.40
Hose I. D.	mm	10	10	10	13	13
Connection		G 1/4" i	G 1/4" i	G 1/4" i	G 3/8" i	G 3/8" i
Butt max.	kg	0.75	0.75	0.75	1.80	1.80

Power at 6 bar operating pressure.

Suitable ramming feet *see page 130*

Air rammers

The reliable ones: 5.2 – 5.6 kg



1



Vibration dampener

Technical data

Type		ST 1 AR 2	ST 1 AP 2	ST 1 AR 1	ST 1 AP 1
Order No.		5261132	5261142	5261131	5261141
Illustration		1	1	1	1
Piston form		round	polygon	round	polygon
Morse taper	2	●	●	●	●
Lever valve short		●	●	—	—
Lever valve long		—	—	●	●
Number of blows	per minute	900	900	900	900
Air consumption	m ³ / min	0.50	0.50	0.50	0.50
Piston diameter	mm	26	26	26	26
Piston stroke	mm	125	125	125	125
Length total	mm	665	665	915	915
Weight	kg	5.2	5.2	5.6	5.6
Hose I. D.	mm	10	10	10	10
Connection		G 3/8 " i	G 3/8 " i	G 3/8 " i	G 3/8 " i
Butt max.	kg	0.85	0.85	0.85	0.85

Power at 6 bar operating pressure.

Accessories

Vibration dampener (for rammers ST 1 AP / AR and ST 2 – 20)	52 / 2270
Reduction (for rammers ST 1 AP / AR)	306 / 0218

Vibration dampener for setup change

- Reduces the vibration load up to 50 %
- Example ST 2 R 1:
without dampening system 25.2 m / s²
with dampening system 9.8 m / s²

Suitable ramming feet *see page 130*

Air rammers

The reliable ones: 8.7 – 12.7 kg

Vibration-damped



1

Technical data

Type		ST 1 AP 1 G	ST 1 AR 1 G	ST 2 P 1 G	ST 2 R 1 G
Order No.		5260081	5260091	5261531	5261541
Illustration		1	1	1	1
Piston form		polygon	round	polygon	round
Morse taper	2	●	●	●	●
Lever valve long		●	●	●	●
Number of blows	number of blows	900	900	800	800
Air consumption	m ³ / min	0.50	0.50	0.65	0.65
Piston diameter	mm	26	26	32	32
Piston stroke	mm	125	125	180	180
Length total	mm	900	900	1 080	1 080
Weight	kg	8.7	8.7	12.7	12.7
Hose I. D.	mm	13	13	13	13
Connection		G 3/8 " i	G 3/8 " i	G 3/8 " i	G 3/8 " i
Butt max.	kg	0.85	0.85	1.80	1.80

Power at 6 bar operating pressure.

Suitable ramming feet *see page 130*

Air rammers

The reliable ones: 8.8 – 12.5 kg



1



2

Technical data

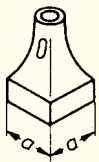
Type		ST 2 R 1	ST 2 R 5	ST 2 P 1	ST 2 P 5	ST 20 R 1	ST 20 R 5	ST 20 P 1	ST 20 P 5	ST 3 8 P
Order No.		5261151	5261155	5261161	5261165	5261171	5261175	5261181	5261185	525490
Illustration		1	2	1	2	1	2	1	2	1
Piston form		round	round	polygon	polygon	round	round	polygon	polygon	polygon
Morse taper	2	●	●	●	●	●	●	●	●	●
Lever valve long		●	●	●	●	●	●	●	●	●
Silencer		—	●	—	●	—	●	—	●	—
Number of blows	number of blows	800	800	800	800	800	800	800	800	750
Air consumption	m ³ / min	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.75
Piston diameter	mm	32	32	32	32	32	32	32	32	38
Piston stroke	mm	180	180	180	180	180	180	180	180	215
Length total	mm	1 190	1 190	1 190	1 190	1 190	1 190	1 190	1 190	1 340
Weight	kg	8.8	8.8	8.8	8.8	9.4	9.4	9.4	9.4	12.5
Hose I. D.	mm	10	10	10	10	10	10	10	10	13
Connection		G 3/8 " i	G 3/8 " i	G 3/8 " i	G 3/8 " i	G 3/8 " i	G 3/8 " i	G 3/8 " i	G 3/8 " i	G 3/8 " i
Butt max.	kg	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	3.0

Power at 6 bar operating pressure.

Suitable ramming feet *see page 130*

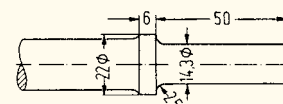
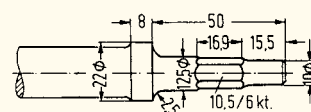
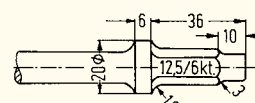
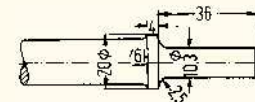
Accessories

Ramming feet



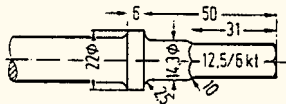
	Steel	Solid rubber	Morsekegel cm	Dimension mm	Weight kg	Order No.
Round						
	●	—	Metr. 10	30	0.15	527183
	●	—	1	40	0.20	529010
	●	—	1	60	0.50	39710006
	●	—	2	40	0.30	529210
	●	—	2	60	0.57	529230
	●	—	2	80	0.85	39720006
teethed	●	—	2	80	1.10	30592571
	—	●	1	40	0.36	39715006
	—	●	1	50	0.56	30590203
	—	●	1	60	0.60	30590303
	—	●	1	75	0.70	30590403
	—	●	2	40	0.30	30592103
	—	●	2	60	0.57	39725006
	—	●	2	75	0.68	39725016
Quadratic						
	●	—	1	40 × 40	0.24	529014
	●	—	1	60 × 60	0.43	39711006
	—	●	1	80 × 80	0.60	39716006
	●	—	2	40 × 40	0.60	529214
	●	—	2	60 × 60	0.69	529234
	●	—	2	80 × 80	0.85	39721006
	●	—	2	100 × 100	1.50	39721016
	—	●	2	80 × 80	0.70	39726006
Square						
	●	—	1	60 × 20	0.25	529060
	●	—	2	60 × 20	0.75	39722006
	●	—	2	70 × 15	0.80	529241
	●	—	2	75 × 50	0.78	39723006
teethed	●	—	2	80 × 33	0.75	529236
	—	●	1	50 × 25	0.45	39717016
	—	●	1	75 × 25	0.50	30590423
	—	●	1	75 × 45	0.53	39717006
	—	●	2	90 × 25	0.41	30592223
	—	●	2	75 × 25	0.50	30592423
	—	●	2	75 × 45	0.53	39727006
Wedge						
	—	●	1	50 × 50	0.42	39718006
	—	●	1	70 × 50	0.50	39718016
	—	●	2	50 × 50	0.36	39728006
	—	●	2	70 × 50	0.44	39728016
Wedge form (special model)						
	●	—	10	30	0.11	527183
	●	—	10	40 × 40	0.11	527190
	●	—	2	200	0.80	5292920
	●	—	2	450	1.20	5292922
	●	—	2	800	1.70	5292924

Type	Effect. length mm	Cutting width mm	Weight kg	Order No.
Insert end R 10.3 × 36 mm with collar				
Pointed chisel	150	—	0.20	39500356
Flat chisel	125	15	0.20	30522010
Flat chisel	150	15	0.25	39500406
Flat chisel	195	15	0.25	30522011
Flat chisel	250	15	0.30	30522012
Blank	125	—	0.20	30522000
<i>Special solutions</i>	<i>More lengths on request.</i>			
Insert end S 12.5 × 36 mm with collar				
Pointed chisel	125	—	0.15	39502356
Pointed chisel	200	—	0.25	30588051
Flat chisel	125	15	0.15	39502406
Flat chisel	195	15	0.25	39502416
Flat chisel	250	15	0.30	39502426
Breitmeißel	125	40	0.20	30588040
Blank	125	—	0.15	39502306
<i>Special solutions</i>	<i>More lengths on request.</i>			
Insert end R 12.5 ∅ / 10.5 / hex. ∅ 10 × 50 mm with collar				
Pointed chisel	135	—	0.20	39501356
Flat chisel	135	15	0.20	39501406
Blank	135	—	0.20	39501306
<i>Special solutions</i>	<i>More lengths on request.</i>			
Insert end R 14.3 × 50 mm with collar				
Pointed chisel	125	—	0.25	30523050
Pointed chisel	150	—	0.30	39503356
Pointed chisel	250	—	0.40	30523052
Flat chisel	135	20	0.30	30523010
Flat chisel	150	15	0.30	39503406
Flat chisel	250	15	0.40	39503426
Flat chisel	250	20	0.45	30523012
Blank	150	—	0.30	39503306
Blank	200	—	0.35	39503316
Blank	250	—	0.40	39503326
<i>Special solutions</i>	<i>More lengths on request.</i>			



Accessories

Chisels



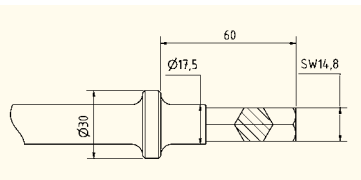
Type	Effect. length mm	Cutting width mm	Weight kg	Order No.
Insert end RS 14.3 × 12.5 × 50 mm with collar				
Pointed chisel	135	—	0.20	39504356
Pointed chisel	200	—	0.27	39504366
Pointed chisel	250	—	0.30	30589052
Flat chisel	135	15	0.20	39504406
Flat chisel	135	20	0.20	30589010
Flat chisel	200	15	0.27	39504416
Flat chisel	200	20	0.27	30589011
Flat chisel	250	20	0.30	30589012
Flat chisel	400	20	0.55	30589044
Flat chisel	450	20	0.68	30589045
Flat chisel	500	20	0.75	30589150
Flat chisel	800	20	1.30	30589151
Broad flat chisel	135	30	0.30	30589020
Broad chisel	180	40	0.35	39504506
Broad chisel	180	60	0.40	30589060
Blank	135	—	0.20	39504306
Blank	150	—	0.25	30589000
Blank	200	—	0.27	39504316
Blank	450	—	0.54	39504326

Special solutions More lengths on request.

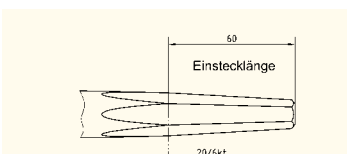
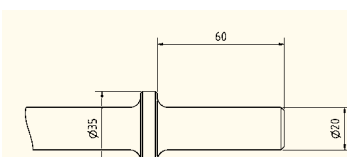
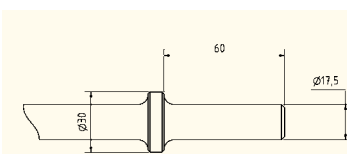
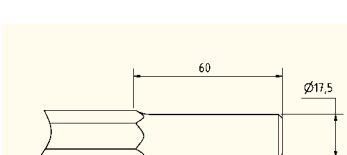
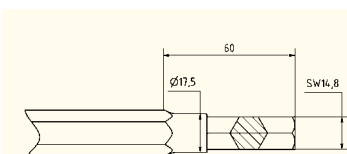
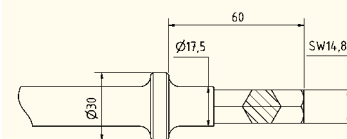
Insert end RS 17.5 × 14.8 × 60 mm with collar

Pointed chisel	140	—	0.50	39506356
Pointed chisel	190	—	0.60	39506366
Pointed chisel	260	—	0.70	39506376
Pointed chisel	350	—	0.90	30527053
Pointed chisel	450	—	1.20	30527054
Pointed chisel	600	—	1.60	30527055
Pointed chisel	700	—	2.00	30527057
Pointed chisel	1 000	—	2.60	30527058
Flat chisel	140	20	0.50	39506406
Flat chisel	190	20	0.60	39506416
Flat chisel	260	20	0.70	39506426
Flat chisel	260	30	0.70	30527011
Flat chisel	350	30	0.90	30527013
Flat chisel	450	30	1.20	30527014
Flat chisel	600	30	1.60	30527015
Flat chisel	750	30	2.00	30527016
Flat chisel	1 000	25	2.60	30527017
Flat chisel	1 500	25	3.80	30527019
Flat chisel	2 000	25	4.40	30527020

Special solutions More lengths on request.

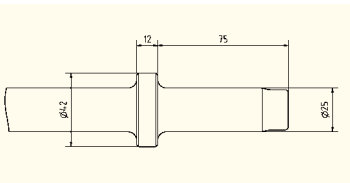
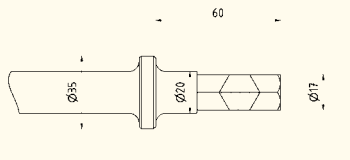


Type	Effect. length mm	Cutting width mm	Weight kg	Order No.
Insert end RS 17.5 × 14.8 × 60 mm with collar				
Broad chisel	200	60	0.70	30527042
Broad chisel	210	95	0.80	39506456
Blank	240	—	0.70	30527001
Special solutions	More lengths on request.			
Insert end RS 17.5 × 14.8 × 60 mm without collar				
Pointed chisel	320	—	0.90	39522376
Flat chisel	140	30	0.70	39522406
Flat chisel	250	30	0.80	39522416
Flat chisel	320	30	0,90	39522426
Flat chisel	440	30	1.00	—
Special solutions	More lengths on request.			
Insert end R 17.5 × 60 mm without collar				
Flachmeißel	440	30	1.50	39521436
Special solutions	More lengths on request.			
Insert end R 17.5 × 60 mm with collar				
Pointed chisel	250	—	0.80	30526051
Pointed chisel	450	—	1.50	30526054
Flat chisel	250	25	0.80	30526011
Flat chisel	260	20	0.80	39505406
Flat chisel	750	25	2.50	30526016
Broad chisel	210	40	0.90	30526021
Blank	260	—	0.80	39505306
Special solutions	More lengths on request.			
Insert end R 20 × 60 mm with collar				
Pointed chisel	250	—	0.90	30528051
Pointed chisel	350	—	1.20	39507356
Pointed chisel	450	—	1.50	39507366
Pointed chisel	750	—	2.60	39507376
Pointed chisel	1 000	—	3.50	39507386
Flat chisel	250	25	0.90	30528011
Flat chisel	450	20	1.50	30528014
Special solutions	More lengths on request.			
Insert end SK 20 – 12				
Flat chisel	260	30	0.60	39525406
Flat chisel	310	30	1.10	39525416
Flat chisel	510	30	1.50	39525426
Flat chisel	1 000	30	3.50	30512017
Special solutions	More lengths on request.			



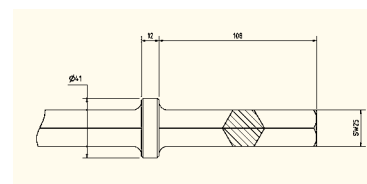
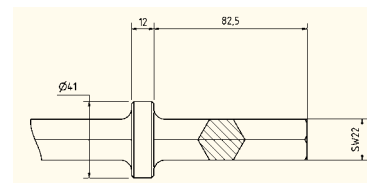
Accessories

Chisels



Type	Effect. length mm	Cutting width mm	Weight kg	Order No.
Insert end RS 20 × 17 × 60 mm with collar				
Pointed chisel	250	—	1.00	30529051
Pointed chisel	350	—	1.20	39508356
Pointed chisel	450	—	1.50	39508366
Pointed chisel	750	—	1.80	39508376
Flat chisel	250	30	1.10	30529011
Flat chisel	350	23	1.20	39508406
Flat chisel	350	30	1.20	30529013
Flat chisel	450	23	1.50	39508416
Flat chisel	450	30	1.50	30529014
Flat chisel	600	30	2.00	30529015
Flat chisel	750	30	2.40	30529016
Flat chisel	1 000	30	3.10	30529017
Flat chisel	1 250	30	3.40	30529018
Broad chisel	210	60	0.70	30529042
Blank	250	—	0.70	30529001
<i>Special solutions</i>	<i>More lengths on request.</i>			
Insert end R 25 × 75 mm with collar				
Pointed chisel	350	—	1.70	39509356
Pointed chisel	450	—	2.00	39509366
Pointed chisel	500	—	2.20	39509376
Pointed chisel	600	—	2.80	30532003
Pointed chisel	800	—	3.50	39509386
Pointed chisel	1 000	—	4.20	39509396
Pointed chisel	1 500	—	6.20	30532007
Pointed chisel	2 000	—	8.10	30532008
Pointed chisel	2 500	—	10.00	30532009
Flat chisel	350	25	1.70	39509406
Flat chisel	450	25	2.00	39509416
Flat spade	400	75	2.90	39509446
Flat spade	425	120	3.50	39509476
<i>Special solutions</i>	<i>More lengths on request.</i>			

Type	Effect. length mm	Cutting width mm	Weight kg	Order No.
Insert end S 22 × 82.5 mm with collar				
Pointed chisel	450	—	1.90	39511356
Pointed chisel	750	—	3.00	30544004
Pointed chisel	1 000	—	3.60	30544005
Pointed chisel	1 500	—	5.20	30544007
Pointed chisel	2 000	—	6.80	30544008
Flat chisel	450	25	1.90	39511406
Flat spade	400	120	3.50	39509486
Digging spade	400	75	3.20	39509456
<i>Special solutions</i>	<i>More lengths on request.</i>			
Insert end S 25 × 108 mm with collar				
Pointed chisel	450	—	2.40	39512356
Pointed chisel	600	—	3.70	30554003
Pointed chisel	1 000	—	4.60	30554005
Pointed chisel	1 500	—	6.40	30554007
Flat chisel	450	30	2.50	39512406
Flat spade	400	120	3.70	39509496
Digging spade	400	75	3.20	39509466
<i>Special solutions</i>	<i>More lengths on request.</i>			



Accessories

Riveting headers, knock-out chisels, shearing chisels



Riveting header



Knock-out chisel



Shearing chisel

Riveting headers (set rivets)

- For riveting hammers and holders
- For half-round rivet DIN 660 and 124

Rivet Ø	Order No.
Insert end R 23 × 65 mm	
6	5236606
8	5236608
10	5236610
12	5236612
13 14	5236614
16	5236616
18	5236618
19	5236619
20	5236620
Insert end R 31 × 70 mm	
10	5238610
12	5238612
13 14	5238614
16	5238616
18	5238618
19	5238619
20	5238620
22	5238622
24 25	5238624
27	5238627
28	5238628
30	5238630
31	5238631
33	5238633
34	5238634
36	5238636
37	5238637

Knock-out chisels (remove)

Rivet Ø	Cone Ø	Order No.
Insert end R 23 × 65 mm		
8 - 10	6 10	5236510
10 - 13	8 12	5236512
12 - 14	10 14	5236514
14 - 16	12 16	5236516
16 - 19	14 18	5236518
18 - 20	16 20	5236520
Insert end R 31 × 70 mm		
8 - 10	6 10	5238510
10 - 13	8 12	5238512
12 - 14	10 14	5238514
14 - 16	12 16	5238516
16 - 19	14 18	5238518
18 - 20	16 20	5238520
19 - 22	18 22	5238522
22 - 25	20 24	5238524
24 - 28	22 27	5238527
27 - 31	24 30	5238530
30 - 34	27 33	5238533

Shearing chisel

Effect. length mm	Width mm	Order No.
Insert end R 23 × 65 mm		
140	30	30536140
170	20	31809016
Insert end R 31 × 70 mm		
220	30	30538141



Zubehör

Variacor®-swivel joint

For all airtools



Variable swiveling



Example G 201 HV



More flexibility

The Variacor®-swivel joint can be used with all air tools and inelastic hoses.

System features

- No deviation of the hose means longer lifetime
- Less stress on the workers wrist and muscles means comfortable work
- Efficient: low pressure decrease, connection directly to the tool, hose and tool can be positioned in an optimal way

Dimensions



Connection	A	B	C		D
			internal thread	external thread	
1/4" × 1/4"	24.0	67	G 1/4"		G 1/4"
3/8" × 3/8"	29.5	82	G 3/8"		G 3/8"
1/2" × 1/2"	29.5	82	G 1/2"		G 1/2"



Accessories Variacor®-swivel joint 90° pivoting, 360° turning



Technical data

Connection	Thread	Air flow l/sec	Weight g	Ø internal mm	Order No.
1/4" × 1/4"	internal / external	12	72	7	60001-60-6
3/8" × 3/8"	internal / external	30	126	11	60001-61-6
1/2" × 1/2"	internal / external	30	132	11	60001-62-6

Max. 10 bar air pressure. Temperature range min. – max.: –10 to +70 °C.



Accessories

HoseGuard®- protection shut-off valve



Function scheme

HoseGuard®

Air system breakage protection beware of accidents!

The HoseGuard®-protection protects personel, machines and equipment against unpredictable damage which are common in case of a broken hose under pressure in these cases the shut-off valve throttles down the air pressure automatically and immediately.

Safety and comfort

- **Maintenance friendly**
Repair Possible While Plant Is Still Working
- **Cost Saving**
Economic, Competitive Pricing - No Superfluous Repairs
- **International safety standards**
Complies with the EU-Norm EN 983, § 5.3.4.3.2* und ISO 4414
- **Easy handling**
No settings needed, reliable protection against manipulation
- **Compact and variable**
Low weight, compatible with all compressed air systems, also as air flow limitation

Description

(see drawing above)

The air gets in at → P. The air stream passes the stamp → 1 and flows through the seating → 3. The air is slowed down by longitudinal groovings on the upper side of the stamp. At an excessive air flow the air cannot pass the stamp fast enough and presses it against the spring → 2 towards the seating.

Applications and installation

HoseGuard® shall be used with clean and dry air and offers optimum safety in every compressed air system, especially as an air flow limitation. With breaking on leaking (succeeding the allowed air flow) HoseGuard® closes the system concerned automatically by protecting it from further air feeding. The unconcerned system stays intact. After repairing teh damaged hose. HoseGuard® allows the hose to be refilled and set under pressure again automatically. Once the pressure level is reached, HoseGuard® opens automatically and allows to go on with working.



No further whipping air supply hoses!

Thread	Connection	Length mm	Ø SW mm	Air flow * l/min	Weight g	Order No.
internal, both sides	1/4"	48	22	0 – 560	30	60003-74-6
external / internal	1/4"	58	22	0 – 560	36	60003-65-6
internal, both sides	3/8"	59	27	0 – 950	58	60003-75-6
external / internal	3/8"	71	27	0 – 950	62	60003-66-6
internal, both sides	1/2"	65	30	0 – 2 300	78	60003-76-6
external / internal	1/2"	80	30	0 – 2 300	85	60003-77-6
internal, both sides	3/4"	76	30/36	0 – 3 800	107	60003-78-6
internal, both sides	1"	100	41/50	0 – 6 500	300	60003-79-6
internal, both sides	2"	130	70/80	0 – 16 000	775	60003-80-6

Max. ingoing pressure 18 bar, temperature range –20 to +80 °C.
 From 1" ingoing pressure max. 35 bar, temoerature range –20 to +120 °C.
 Air flow at 6 bar.

* EU-Norm EN 983-1996

§ 5.3.4.3.2

»Whenever a damage of a compressed air hose may cause danger through whipping or through exhaust of the compressed medium, the hose must be held or protected.«
 HoseGuard® complies to this Norm.

Accessories

Spring tensions, hose balancers



Spring tension

Hose balancer

Spring tensions

- Housing: impact-resistant plastic
- Rope housing: plastic
- Housing cover: steel sheet
- Pull of the rope control
- Snap hook
- Fully variable load control by clamping screw

Spring tension				
Order No.		38570-00-6	38580-00-6	38590-00-6
Ultimate load	kg	0.3 – 1.2	1.0 – 2.0	2.0 – 3.0
Cable extension	mm	1 200	2 000	2 000
Spring tension				
Order No.		38600-00-6	38610-00-6	38620-00-6
Ultimate load	kg	3.0 – 5.0	6.0 – 8.0	8.0 – 10.0
Cable extension	mm	3 000	3 000	2 000

Hose balancer

- Housing and hose housing: impact- and abrasion-resistant plastic
- Hose I.D. 6 mm with quick release fastener coupling
- Turning coupling for tool air supply R 1/4 "
- Security chain to prevent hose from falling down
- Hose extension 0.8 m
- Max. operating pressure 10 bar
- Flow rate 860 l / min at 6 bar

Hose balancer				
Order No.		29946-50-6	29946-51-6	
Ultimate load	kg	0.4 – 1.2	1.2 – 2.2	
Hose extension	mm	800	800	

Accessories

Service units, pressure reducers, special oil



Service unit and compressed air special oil



Pressure reducer and accessories



Service units

- Block-built
- Consist of pressure reducer and mist lubricator

Connection		1/4"	3/8"	1/2"	1"
Order No.		030 290 74	030 291 74	030 292 74	030 293 74
Operat. pressure min. - max.	bar	0.5 - 16	0.5 - 16	0.5 - 16	0.5 - 16
Flow rate max.	m ³ /min	0.57	1.20	1.20	1.90
Width × Height	mm	80 × 190	124 × 250	124 × 250	140 × 320

Pressure reducers

- Block-built
- Manual condensate drain

Connection		1/4"
Order No.		030 280 74
Operating pressure min. - max.	bar	0,5 - 16
Flow rate max.	m ³ /min	0,83
Width × Height	mm	40 × 190

Accessories

Distribution unit	R 3/8"	R 3/8"	R 1/2"
Order No.	9325215	9325216	9325217
Outlets	2	3	3

Double nipple	1/4"	3/8"	1/2"
Order No.	49410-50-6	49410-51-6	49410-52-6

Reducing nipple	1/2" × 3/8"	1" × 3/4"
Bestell-Nr.	9325210	9325211

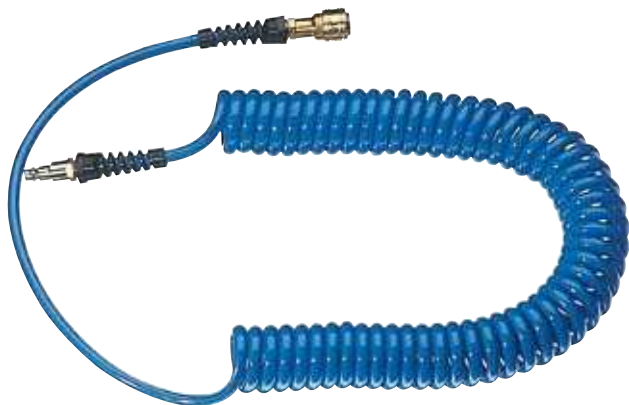
Compressed air special oil

- For mist lubricators and service units
- According to DIN 51 524-2 with viscosity class VG 32 according to ISO 3448
- Viscosity at 40 °C: -32 mm²/s; 32 cSt

Special oil	Bottle 1 Litre	Can 10 Liter
Order No.	095 055 33	095 085 33

Accessories

Spiral hoses



Spiral hose A



Spiral hose B

Spiral hose A

- Polyurethane
- Fitted with one-hand coupling and plug-in nipple DN 7.2

Dimensions internal / external mm	Diameter external mm	Effective length max. m	Order No.
6.5 / 10.0	52	3	9361817
6.5 / 10.0	52	6	9361818
8.0 / 12.0	65	6	9361819
9.0 / 13.0	68	6	9361820

Spiral hose B

- Polyurethane
- Fitted with a double-sided connection thread

Dimensions internal / external mm	Diameter external mm	Effective length max. m	Order No.
6 × 8 / R 1/4" a	75	5	9361815
9 × 12 / R 3/8" a	140	5	9361816

Fitting accessories

One-hand coupling

Internal thread steel	Order No.
1/4"	48909-53-6
3/8"	48909-54-6



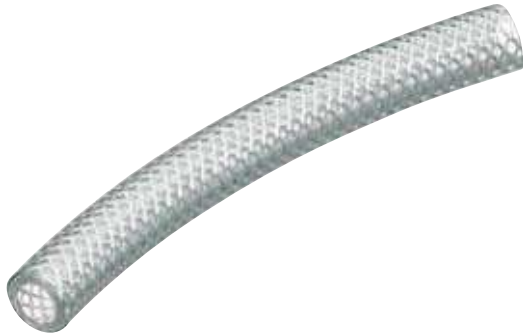
One-hand coupling

Plug-in nipple

Internal thread steel	Order No.
1/4"	48909-62-6
3/8"	48909-63-6



Plug-in nipple



PVC rubber hose



Compressed air rubber hose

PVC rubber hoses

- With polyester reinforcement threads
- For operating pressure 10 bar
- Temperature range: -20 to +60 °C

Diameter internal, mm	Diameter external, mm	Colour	Order No. sold by meter
5	7	blue	9361213
6	10	black	9361532
8	12	black	9361158
9	14	transparent	9361160
10	16	transparent	9361191

Compressed air rubber hoses

- DIN 20018
- With fabric insert for operating pressure 10 bar
- Temperature range: -20 to +60 °C

Diameter internal, mm	Diameter external, mm	Colour	Order No. sold by meter
10	22	black	9361114
13	25	black	9361115
16	26	black	9361116
19	31	black	9361117
25	39	black	9361118

Accessories

Hose clamps, hose clips



Hose clamp



Double ear hose clamp

Hose clamps, two-piece

Clamping range Hose diameter, external mm	Order No.
22 – 29	9361039
28 – 34	9361040

Double ear hose clamps

Clamping range Hose diameter, external mm	Order No.
9 – 11	9361058
11 – 13	9361047
13 – 15	9361048
15 – 18	9361052
23 – 27	9361063



Hose clip

Hose clips

- DIN 3017
- Band and lock of steel W1 zined

Clamping range Hose diameter, external mm	Order No.
10 – 16	9361029
12 – 20	9361036
20 – 32	9361037
25 – 40	9361038

Accessories

One-hand quick couplings, plug-in nipples



One-hand quick couplings (versions)



Plug-in nipples (versions)

One-hand quick couplings | DN 7.2 (brass)

– max. Durchfluß 900 ℓ/min.

Connection G	Thread	Order No.
1/4 "	external	48909-41-6
3/8 "	external	48909-42-6
1/2 "	external	48909-43-6
LW 6	hose socket	48909-25-6
LW 9	hose socket	48909-26-6
LW 13	hose socket	48909-27-6

Plug-in nipples | DN 7.2 (brass)

Connection G	Thread	Order No.
1/4 "	external	48909-23-6
LW 6	hose socket	9361482
LW 9	hose socket	48909-45-6
LW 13	hose socket	48909-46-6



One-hand quick couplings (versions)



Plug-in nipples (versions)

One-hand quick couplings | DN 7.4 (steel)

– max. Durchfluß 1 800 ℓ/min

Connection G	Thread	Order No.
1/4 "	external	48909-50-6
3/8 "	external	48909-51-6
1/2 "	external	48909-52-6
1/4 "	internal	48909-53-6
3/8 "	internal	48909-54-6
1/2 "	internal	48909-55-6
LW 8	hose socket	48909-56-6
LW 10	hose socket	48909-57-6
LW 13	hose socket	48909-58-6

Plug-in nipples | DN 7.4 (steel)

Connection G	Thread	Order No.
1/4 "	external	48909-59-6
3/8 "	external	48909-60-6
1/2 "	external	48909-61-6
1/4 "	internal	48909-62-6
3/8 "	internal	48909-63-6
LW 8	hose socket	48909-64-6
LW 10	hose socket	48909-65-6
LW 13	hose socket	48909-66-6

Accessories

Thread sleeves, air nozzles, claw couplings



Thread sleeve (version)



Air nozzle (version brass)

Thread sleeves with external thread

Connection G	For hose I.D.	Order No.
1/8"	6	9361381
1/4"	6	47092-05-6
1/4"	8	9361330
1/4"	10	9361479
3/8"	10	9361471
3/8"	13	9361477
1/2"	15	9361478

Air nozzles

For hose mm	Length mm	Nozzle Ø mm	Order No.
LW 10 aluminium	115	2	09505-60-0
LW 13 aluminium	115	2	09504-60-0
LW 13 brass	115	2	09506-60-0



Internal thread coupling



Hose coupling



Rubber sealing ring

Claw couplings | DIN 3489

Connection G	Thread	Order No. with rubber ring
3/8"	internal	9361347
1/2"	internal	9361348
3/4"	internal	9361349
1"	internal	9361350
1/4"	external	9361336
3/8"	external	9361337
1/2"	external	9361338
3/4"	external	9361339
1"	external	9361440
LW 10	hose coupling	9361356
LW 13	hose coupling	9361357
LW 15	hose coupling	9361358
LW 19	hose coupling	9361359

Accessories for claw couplings

Accessory	Order No.
Rubber sealing ring	9361364



1 Safety couplings

- Mounted at compressor side
- Residual pressure controlled two step release with sliding sleeve
- According to DIN EN 983 safety regulations
- Suitable for Euro coupling acc. DIN 14152 and for Walter coupling LP 006
- Nominal width 6 mm
- Max. air flow 1 200 ℓ/min

Connection	Thread	Order No.
G		
1/4 "	external	9361391
3/8 "	external	9361392
1/2 "	external	9361393
1/4 "	internal	9361394
3/8 "	internal	9361395
1/2 "	internal	9361396

2 Safety couplings with captive sealings and plastic sleeve

- Complies to safety standard DIN EN 983
- Suitable to plug-in nipples with a i.w. of 7.2 mm
- Max. air flow 1 400 ℓ/min
- Coupling force at 6 bar: 95 N

Connection	Thread	Order No.
G		
1/4 "	external	9361411
3/8 "	external	9361412
1/2 "	external	9361413

3 Safety venting couplings with plastic sleeve

- Complies to safety standard DIN EN 983
- Suitable to plug-in nipples with a i.w. of 7.2 mm
- Max. air flow 1 400 ℓ/min
- Coupling force at 6 bar: 95 N

Connection	Connection type	Order No.
G		
6 mm	Schlauch	9361414
9 mm	Schlauch	9361415
13 mm	Schlauch	9361416

4 Compressed air couplings with extreme air flow

- Max. air flow 2 150 ℓ/min
- Suitable to plug-in nipples with a i.w. of 7.2 mm
- Coupling force at 6 bar: 75 N
- Connection type: external thread with sealing coating

Connection	Thread	Order No.
G		
R 1/4 "	external	9361417
R 3/8 "	external	9361418
R 1/2 "	external	9361419

5 Compressed air couplings with extreme air flow

- Suitable to plug-in nipples with a i.w. of 7.2 mm
- Max. air flow 2 150 ℓ/min
- Coupling force at 6 bar: 75 N

Connection	Connection type	Order No.
G		
6 mm	Hose	9361420
9 mm	Hose	9361421
13 mm	Hose	9361422



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