

Reliable
precision for
sustained use.

Air tools for industry
Full-range catalogue
www.boschproductiontools.com



BOSCH
Technik fürs Leben

Bosch Air Technology

– Efficient use



Air technology from Bosch provides users with virtually unlimited applications. The versatility and reliability of Bosch is reflected everywhere: from the comprehensive range of accessories to the large spare parts warehouse in the Bosch Service Centre in Willershausen.

Advanced ergonomics

The lightweight Bosch Air Tools fit perfectly in your hand. They work quietly and with low vibration levels. The glass-fibre-reinforced, extremely robust plastic housing provides effective insulation against the cooling effect of compressed air and ensures maximum grip comfort.

The environmentally friendly range from Bosch

Environmental awareness is an important aspect at Bosch – from the initial idea for a product through energy-saving production, all the way to environmentally friendly packaging and disposal. For example, if a Bosch Air Tool is irreparable, it is recycled in the service centre. Bosch utilises the most modern technologies to save energy, for example, in the Murrhardt plant, heat recycling saves more than half a million litres of heating oil per year.

Convincing technology

There are many factors in favour of the unique Bosch Air Technology, providing professional users with ideal conditions:

- ▶ As no sparks are formed in the air motor, the tools are particularly suitable for work in damp and wet environments.
- ▶ Compact and lightweight, Bosch tools are versatile and convenient for the user.
- ▶ Simple construction means Bosch tools are easy to maintain and repair.
- ▶ The design is robust and suitable for a long running time.
- ▶ The expanding compressed air cools the tool continuously, thus excluding overheating and burn-out of the motor.
- ▶ As air is a non-dangerous drive medium, a high level of safety is guaranteed.

Information from the Internet

Bosch now offers users and others interested in production tools all current product information on the Internet. Here you will find a free online catalogue illustrating in text and pictures all the common cordless, pneumatic and high-frequency tools for industrial use. The desired products can be chosen on the basis of the part number or product designation; a product list helps in your search. More information on Page 4.

www.boschproductiontools.com

C·L·E·A·N

- C consumption optimised
- L lubrication free
- E ergonomic
- A air tool
- N noise reduction

Bosch CLEAN technology relieves strain on the user and the environment with lubrication-free work, low noise levels and reduced energy consumption.



Conformity

All air tools (without motors) listed in this catalogue conform with the following standards or standardised documents. EN 792, EN 50144, in accordance with the regulations of Directives 89/392/EEC.



Certified to ISO 9001
Certificate no.: FM 30078

Contents

Drills and rotary hammer

- 6** Selection guide for drills
- 8** Drills, rotary hammer
- 13** Accessories
- 14** Dimensional drawings

Grinders

- 16** Selection guide for grinders
- 18** Straight grinders
- 22** Vertical grinders
- 25** Accessories
- 26** Dimensional drawings

Screwdrivers, tappers, measuring devices

- 34** Torque accuracy
- 35** Guide values for tightening torques
- 36** Selection guide for screwdrivers
- 38** Lubrication-free operated straight screwdrivers
- 44** Lubrication-free operated centre grip screwdrivers
- 46** Straight screwdrivers
- 48** Centre grip screwdrivers
- 50** Angle shut-off wrenches
- 54** Impulse drivers
- 56** Impact wrenches
- 58** Tappers and lockover wrenches
- 60** Screwdriving and maintenance controller
- 61** Accessories
- 65** Dimensional drawings

Accessories

- 72** Spring pull and hose pull balancers
- 74** Quick-fastening couplings
- 78** Dimensional drawings

Motors

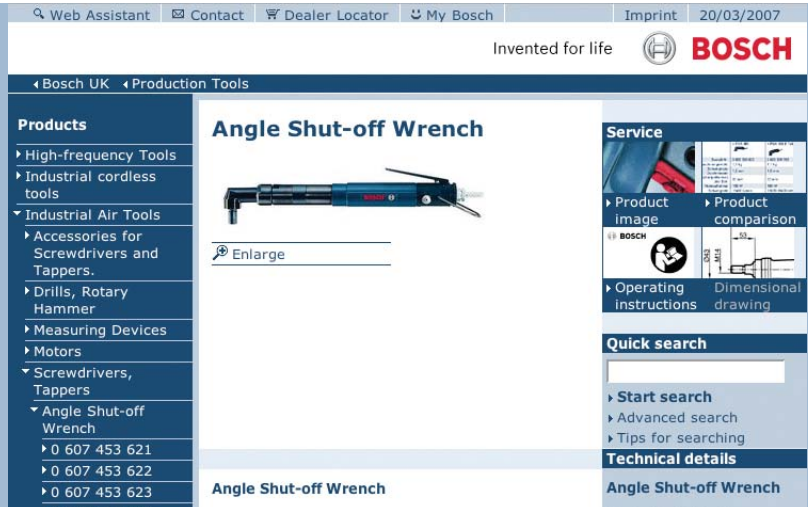
- 80** Motors
- 88** Accessories
- 89** Technical data
- 97** Dimensional drawings

Air technology

- 100** Air technology used correctly

An overview with one click: All production tools online

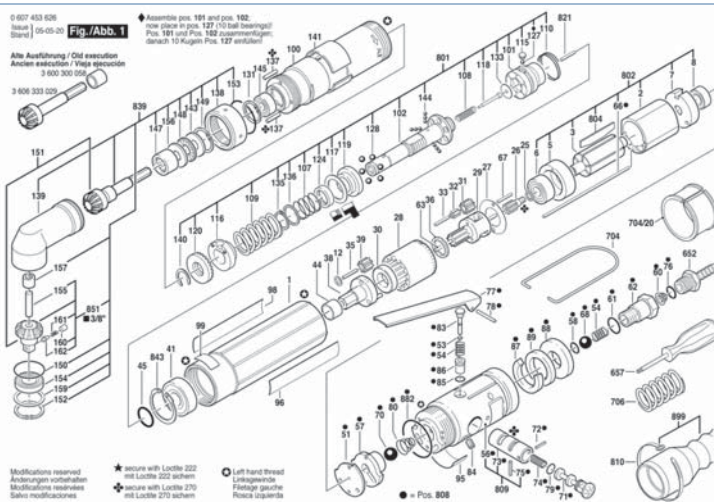
Operating instructions, pictures and dimensional drawings can be downloaded directly from the Internet.



Everything that users need to know can now be found on the Net: at www.boschproductiontools.com, a comprehensive online catalogue provides information on products and how they can be used. The selection of tools is made easier by the possibility to run comparisons between tools.

Users, for example, can display all air wrenches and compare their respective data such as output or rotational speed. Furthermore, they can find out the latest news about trade-fair dates, innovations and new developments from the Bosch Production Tools Division.

Within a short time, this provides users with all the relevant information they need to select the correct production tools.



A spare parts service informs users about which spare parts they need – and where they can order them.



Drills
and rotary hammer

Selection guide for drills

Choosing a drill is based on two criteria:

- ▶ the drilling diameter
- ▶ the recommended cutting speed of the material to be processed (see Page 12).




In the table, the optimal cutting speeds and drilling diameters for some common materials are allocated to the individual drill models.

These recommendations are based on guide speeds for HSS twist drill bits. If nothing is specified, the required drilling diameter is outside the capacity of the standard chuck.

The table shows which drill bit sizes the individual models can accept and the drilling speeds. The individual tools have additionally been assigned the maximum drilling diameters for steel, determined in tests.

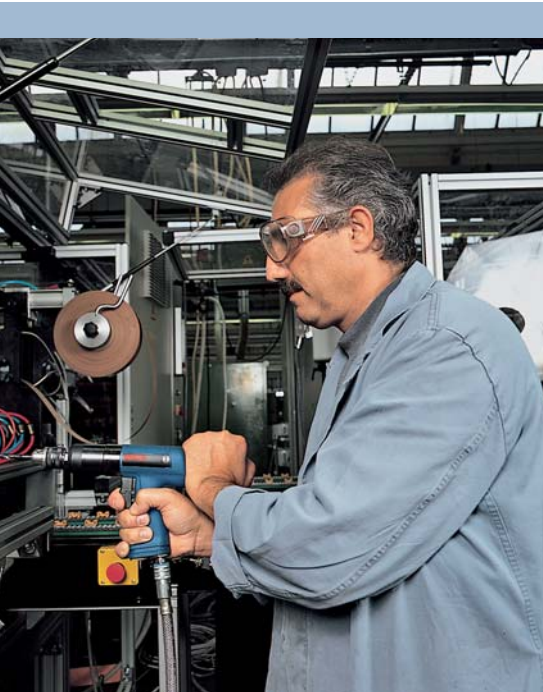
To ensure that a sufficient cutting speed is always achieved, some materials should be pre-drilled as of the following drilling diameter:

- ▶ Steel up to 600 N/mm²
as of 8 mm
- ▶ Steel over 600 N/mm²
as of 6 mm
- ▶ Cast iron up to 180 N/mm²
as of 10 mm
- ▶ Cast iron up to 300 N/mm²
as of 8 mm




	Part number	No-load speed (rpm)
Cutting speed (m/min):		
		controlled
	0 607 154 101	3200
	0 607 153 103	1000
	0 607 153 106*	1000
		uncontrolled
	0 607 161 100	2560
	0 607 161 102*	2560
	0 607 161 101	1200
		uncontrolled
	0 607 153 520	4000
	0 607 153 523*	4000
	0 607 153 521	3000
	0 607 153 524*	3000
	0 607 153 522	1300
		uncontrolled
	0 607 161 500	2560
	0 607 161 504*	2560
	0 607 161 501	1200
	0 607 161 505*	1200
	0 607 161 502	800
	0 607 161 506*	800
	0 607 161 503	640
0 607 161 507*	640	

* with keyless chuck

Drills



- ▶ The suitable drills for a very wide variety of materials
- ▶ Centre grip drills have a very ergonomic, glass-fibre-reinforced polyamide housing that ensures effortless working and protects the user against the dreaded "White finger syndrome"
- ▶ Air rotary hammer with the tried and tested pneumatic hammer mechanism
- ▶ For working in wet areas – where electric tools are unsafe

	Part number	Drill chuck
Drill 120/180 watts 	0 607 154 101	Keyed chuck
	0 607 153 103	Keyed chuck
	0 607 153 106	Keyless chuck
Drill 400 watts 	0 607 161 100	Keyed chuck
	0 607 161 102	Keyless chuck
	0 607 161 101	Keyed chuck
	0 607 161 103	Keyless chuck
Drill 180 watts 	0 607 153 520	Keyed chuck
	0 607 153 523	Keyless chuck
	0 607 153 521	Keyed chuck
	0 607 153 524	Keyless chuck
	0 607 153 522	Keyed chuck
	0 607 153 525	Keyless chuck

Max. drilling dia. in steel (mm)	No-load speed (rpm)	Power output (W)	Air consumption under load (l/s) (cfm)	Weight (kg)	Drill spindle thread	Connecting thread	Hose inner diameter (mm)	Comes complete with
	controlled							Keyed chuck or keyless chuck Chuck capacity 1-10 mm Hanging hook Hose nipple G 1/8"
4	3200	120	4.5	0.45	3/8"-24 UNF-2A	G 1/8"	6	
			9.5					
8	1000	180	6.0	0.73	3/8"-24 UNF-2A	G 1/8"	6	
			12.7					
8	1000	180	6.0	0.83	3/8"-24 UNF-2A	G 1/8"	6	
			12.7					
	uncontrolled							Keyed chuck or keyless chuck Chuck capacity 1-10 mm Hanging hook Hose nipple G 1/4" Auxiliary handle
8	2560	400	11.0	1.1	1/2"-20 UNF-2A	G 1/4"	10	
			23.3					
8	2560	400	11.0	1.3	1/2"-20 UNF-2A	G 1/4"	10	
			23.3					
10	1200	400	11.0	1.2	1/2"-20 UNF-2A	G 1/4"	10	
			23.3					
10	1200	400	11.0	1.45	1/2"-20 UNF-2A	G 1/4"	10	
			23.3					
	uncontrolled							Keyed chuck or keyless chuck Hose nipple G 1/4" Hanging hook
4	4000	180	6.0	0.8	3/8"-24 UNF-2A	G 1/4"	6	
			12.7					
4	4000	180	6.0	0.9	3/8"-24 UNF-2A	G 1/4"	6	
			12.7					
5	3000	180	6.0	0.8	3/8"-24 UNF-2A	G 1/4"	6	
			12.7					
5	3000	180	6.0	0.9	3/8"-24 UNF-2A	G 1/4"	6	
			12.7					
8	1300	180	6.0	0.8	3/8"-24 UNF-2A	G 1/4"	6	
			12.7					
8	1300	180	6.0	0.9	3/8"-24 UNF-2A	G 1/4"	6	
			12.7					

Max. drilling dia. in steel (mm)	No-load speed (rpm)	Power output (W)	Air consumption under load (l/s) (cfm)	Weight (kg)	Drill spindle thread	Connecting thread	Hose inner diameter (mm)	Comes complete with
	uncontrolled							Keyed chuck or keyless chuck Chuck capacity 1-10 mm Hose nipple G 1/4" Sintered metal silencer Auxiliary handle
8	2560	400	10.5	1.1	1/2"-20 UNF-2A	G 1/4"	10	
			22.2					
8	2560	400	10.5	1.3	1/2"-20 UNF-2A	G 1/4"	10	
			22.2					
10	1200	400	10.5	1.3	1/2"-20 UNF-2A	G 1/4"	10	
			22.2					
10	1200	400	10.5	1.5	1/2"-20 UNF-2A	G 1/4"	10	
			22.2					
13	800	400	10.5	1.45	1/2"-20 UNF-2A	G 1/4"	10	
			22.2					
13	800	400	10.5	1.5	1/2"-20 UNF-2A	G 1/4"	10	
			22.2					
13	640	400	10.5	1.45	1/2"-20 UNF-2A	G 1/4"	10	
			22.2					
13	640	400	10.5	1.6	1/2"-20 UNF-2A	G 1/4"	10	
			22.2					

Impact rate (bpm)	Power output (W)	Air consumption under load (l/s) (cfm)	Weight (kg)	Toolholder	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with		
3900	740	16	2.7	SDS-plus with auto-locking system	G 1/4"	13	The Bosch Air Rotary Hammer with its tried and tested pneumatic hammer mechanism is particularly suitable for damp and wet environments where an electric drive is unsuitable. It also offers safety and efficiency in the chemicals industry.	Auxiliary handle Depth stop Hose nipple Plastic carrying case		
		33.9								

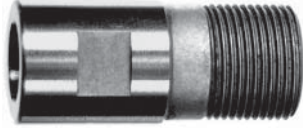



Recommended speeds for HSS twist drill bits

The Bosch Drill range comprises machines from 120 – 400 watts in straight and pistol format.

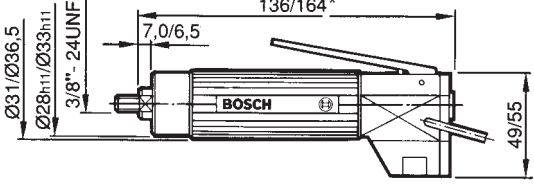
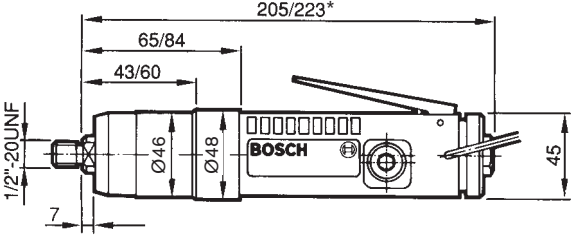
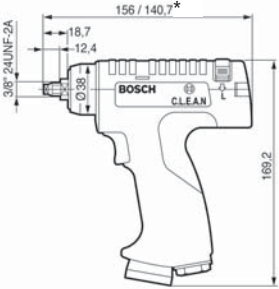
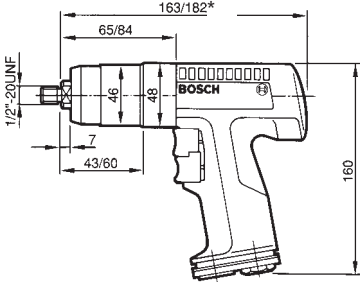
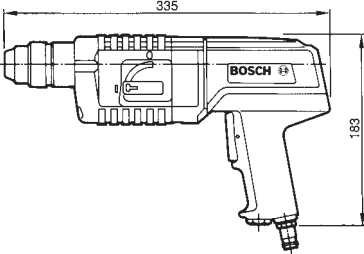
The table is intended to help you select the right drill.

up to drilling dia. (mm)	Steel up to 600 N/mm ² (rpm)	Steel over 600 N/mm ² (rpm)	Cast iron up to 180 N/mm ² (rpm)	Cast iron up to 300 N/mm ² (rpm)	Brass, copper, bronze (rpm)	Silumin (rpm)	Aluminium (rpm)
Cutting speed (m/min):	20 to 25	15 to 20	20 to 35	10 to 20	50 to 60	30 to 40	80 to 120
4	2380	1600	2200	1200	4400	2800	8000
5	1900	1270	1800	950	3500	2200	6400
6	1600	1060	1500	800	2900	1850	5300
7	1360	910	1300	680	2500	1600	4550
8	1200	800	1100	600	2200	1400	4000
9	1060	700	1000	530	1900	1200	3540
10	950	640	890	480	1700	1100	3200
11	860	580	810	430	1600	1000	2900
12	800	530	740	400	1500	930	2660
13	730	490	680	370	1350	860	2450
14	680	450	640	340	1250	800	2270
15	630	420	600	320	1150	740	2120
16	600	400	560	300	1100	700	2000
17	560	380	520	280	1050	660	1870
18	530	350	500	260	1000	620	1770
19	500	330	470	250	950	590	1680
20	480	320	450	240	900	560	1600
23	410	280	390	210	760	480	1380
30	310	210	300	160	580	370	1060

Special accessories for drills

		Part number	Use for drills Part number
Collet chuck 3/8" thread 	3/8" thread	3 608 570 003	0 607 154 101
	Collet dia. 6 mm	2 608 570 079	0 607 153 103
	Locking nut	3 603 342 001	0 607 153 106
			0 607 153 520 up to 525
Hanging hook 		3 601 923 019	0 607 153 520 up to 525
		2 604 720 004	0 607 154 101
			0 607 153 103
			0 607 153 106
		3 604 720 006	0 607 161 500 up to 507
Exhaust air set, decentralised 		3 607 030 024	0 607 161 101
			0 607 161 102
Exhaust air hose, centralised 		3 607 000 027	0 607 161 101
			0 607 161 102
		3 607 000 011	0 607 161 500 up to 507

Dimensional drawings Drills, rotary hammer

Dimensions in mm	Part number
	0 607 154 101 0 607 153 103* 0 607 153 106*
	0 607 161 100 0 607 161 101* 0 607 161 102 0 607 161 103*
	0 607 153 520 0 607 153 521 0 607 153 522* 0 607 153 523 0 607 153 524 0 607 153 525*
	0 607 161 500 0 607 161 501 0 607 161 502* 0 607 161 503* 0 607 161 504 0 607 161 505 0 607 161 506* 0 607 161 507*
	0 607 557 501

The specified dimensions are not binding.









Grinders




Selection guide for grinders




The selection of a grinder is based on the application. In both tables – for straight and vertical grinders – grinding work and bits have been assigned the suitable machines.

However, the individually different work conditions and ambient conditions mean that this recommendation serves only as a guide. When selecting a grinder to match the work requirement, the power output and other product characteristics must be taken into account.

Please note the manufacturer's specifications on abrasives!

	Part number	No-load speed (rpm)
	0 607 250 201/...206	55000
	0 607 250 202/...207	85000
	0 607 250 203/...208	85000
	0 607 254 100/...108	50000
	0 607 254 105/...107	50000
	0 607 254 101/...108	33000
	0 607 253 100/...104	21000
	0 607 253 101/...103	33000
	0 607 261 101/...104	26000
	0 607 261 102/...105	15000
	0 607 251 102/...103	21000

	Part number	No-load speed (rpm)
	0 607 361 100	5400
	0 607 352 100	13000
	0 607 355 100/...102	8500
	0 607 355 101/...103	6500
	0 607 356 100	8500
	6 607 356 101/...103	6500

-  perfectly suitable for this application
-  very suitable for this application
-  suitable for this application

Straight grinders



- ▶ High-speed mini grinders for the finest grinding and polishing work
- ▶ The suitable grinders for the widest variety of materials and work environments
- ▶ Long lifetime with the highest power output
- ▶ Comprehensive range of accessories

For grinding bits with
6 – 20 mm diameter

Straight grinders 50 watts



Part number	Permitted grinding bit dia. (mm)	No-load speed (rpm)
0 607 250 203	6	85000

0 607 250 208	6	85000
---------------	---	-------

Straight grinders 50 watts



0 607 250 202	6	85000
---------------	---	-------

0 607 250 207	6	85000
---------------	---	-------

Straight grinders 50 watts



0 607 250 201	10	55000
---------------	----	-------

0 607 250 206	10	55000
---------------	----	-------

Straight grinders 100 watts



0 607 254 100	13	50000
---------------	----	-------

0 607 254 106	13	50000
---------------	----	-------

Straight grinders 100 watts



0 607 254 105	13	50000
---------------	----	-------

0 607 254 107	13	50000
---------------	----	-------

Straight grinders 100 watts



0 607 254 101	20	33000
---------------	----	-------

0 607 254 108	20	33000
---------------	----	-------

Air consumption under load (l/s) (cfm)	Weight (kg)	Toolholder / Collet dia. (mm)	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
1.8 3.8	0.24	3	M 6	4.5	with lever switch	Collet 3 mm 2 open-ended spanners KW 6/8 Exhaust air hose
1.8 3.8	0.24	3 1/8"	M 6	4.5	with lever switch	Model ...208 also includes: Collet 1/8"
1.8 3.8	0.24	3	M 6	4.5	with rotary switch	Collet 3 mm 2 open-ended spanners KW 6/8 Exhaust air hose
1.8 3.8	0.24	3 1/8"	M 6	4.5		Model ...207 also includes: Collet 1/8"
1.8 3.8	0.12	3	M 6	4.5	with rotary switch	Collet 3 mm 2 open-ended spanners KW 6/8 Exhaust air hose
1.8 3.8	0.12	3 1/8"	M 6	4.5	with rotary switch	Model ...206 also includes: Collet 1/8"
2.7 5.7	0.43	3	G 1/8"	6	with lever switch	Collet 3 mm Collet 6 mm Locking nut Open-ended spanner KW 14 Hose nipple G 1/8"
2.7 5.7	0.43	3 1/8"	G 1/8"		with lever switch	Model ...106 also includes: Collet 1/8", collet 1/4"
2.7 5.7	0.43	3	G 1/8"	6	with lever switch	Collet 3 mm Locking nut 2 open-ended spanners KW 9 Hose nipple G 1/8"
2.7 5.7	0.43	3 1/8"	G 1/8"		with lever switch	Model ...107 also includes: Collet 1/8"
2.7 5.7	0.8	6	G 1/8"	6	with lever switch	Collet 6 mm Locking nut 2 open-ended spanners KW 14 Hose nipple G 1/8"
2.7 5.7	0.8	6 1/4"	G 1/8"		with lever switch	Model ...108 also includes: Collet 1/4"

Your specialist retailer can provide you with information on the complete range of quality accessories.

Straight grinders

- ▶ The suitable grinders for the widest variety of materials and work environments
- ▶ Long lifetime with the highest power output
- ▶ Comprehensive range of accessories

For grinding bits with 20 – 50 mm diameter

Straight grinders 220/240 watts



Straight grinders 400 watts



Straight grinders 450 watts



Part number	Permitted grinding bit dia. (mm)	No-load speed (rpm)
0 607 253 101	20	33000
0 607 253 103	20	33000
0 607 253 100	40	21000
0 607 253 104	40	21000
0 607 261 101	30	26000
0 607 261 104	30	26000
0 607 261 102	50	15000
0 607 261 105	50	15000
0 607 251 102	40	21000
0 607 251 103	40	21000

Power output (W)	Air consumption under load (l/s) (cfm)	Weight (kg)	Toolholder / Collet dia. (mm)	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
220	6.0 12.7	0.65	6	G 1/8"	6	with safety switch	Collet 6 mm Locking nut 2 open-ended spanners KW 14 Hose nipple G 1/8"
220	6.0 12.7	0.65	6 1/4"	G 1/8"	6	with safety switch	Model ...103 also includes: Collet 1/4"
240	6.0 12.7	0.65	6	G 1/8"	6	with safety switch, speed-controlled	Collet 6 mm Locking nut Open-ended spanner KW 14 Open-ended spanner KW 17
240	6.0 12.7	0.65	6	G 1/8"	6	with safety switch, speed-controlled	Hose nipple G 1/8" Model ...104 also includes: Collet 1/4"
400	11.0 23.3	0.65	6 1/4"	G 1/4"	10	with safety switch	Collet 6 mm Locking nut Open-ended spanner KW 14 Open-ended spanner KW 17
400	11.0 23.3	0.65	6 1/4"	G 1/4"	10	with safety switch	Hose nipple G 1/4" Hanging hook
400	11.0 23.3	0.7	6	G 1/4"	10	with safety switch, speed-controlled	Model ...106 and ...105 also include: Collet 1/4"
400	11.0 23.3	0.7	6 1/4"	G 1/4"	10	with safety switch, speed-controlled	
450	11.0 23.3	1.05	6	G 1/4"	10	with lever switch, speed-controlled	Collet 6 mm Locking nut 2 open-ended spanners KW 17 Hose nipple G 1/4"
450	11.0 23.3	1.05	6 1/4"	G 1/4"	10	with lever switch, speed-controlled	Hanging hook Model ...103 also includes: Collet 1/4"

Vertical grinders



- ▶ Constantly high power output
- ▶ Optimum work progress
- ▶ Clean and productive working

For grinding bits with
115 – 230 mm diameter

Vertical grinder 400 watts



Vertical grinder 550 watts



Vertical grinders 2500/3500 watts



Part number	Grinding bit dia. (mm)	No-load speed (rpm)	
0 607 361 100	170	5400	
	(Fibre)		
<hr/>			
0 607 352 100	115	13000	
<hr/>			
0 607 355 100	180	8500	
	0 607 355 102	180	8500
	0 607 356 100	180	8500
	0 607 356 102	180	8500
	0 607 355 101	230	6500
	0 607 355 103	230	6500
	0 607 356 101	230	6500
	0 607 356 103	230	6500

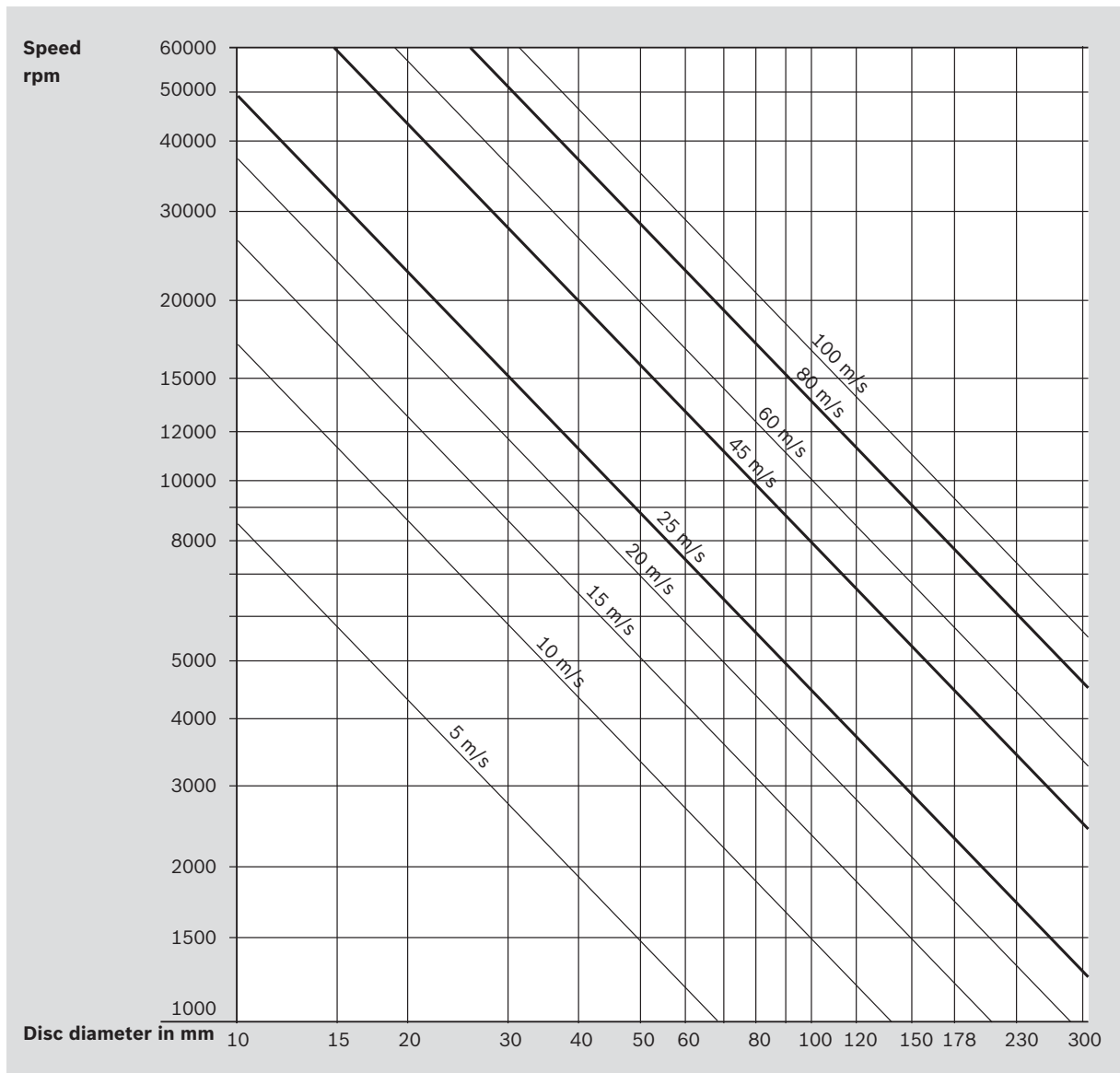
Power output (W)	Air consumption under load (l/s) (cfm)	Weight (kg)	Grinding spindle thread	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
400	11.0 23.3	0.95	M 14	G 1/4"	10	For sanding plates with fibre sanding sheets	Hand protector Sanding plate Face spanner Open-ended spanner KW 19 Hose nipple G 1/4" Auxiliary handle Clamp Silencer: (G 1/2") and plastic Sintered metal
550	12.5 26.5	1.6	M 14	G 1/4"	10	speed-controlled	Protective guard Flange nut Pin key Face spanner Hose nipple G 1/4" Silencer: (G 1/2") and plastic Sintered metal
2500	46.0	4.9	M 14	G 3/4"	19	speed-controlled	Round nut Flange nut Pin key KW 6
2500	46.0	4.9	5/8"-11	G 3/4"	19		Face spanner Open-ended spanner KW 19
3500	58.0	5.5	M 14	G 3/4"	19	speed-controlled	Hose nipple G 3/4" Protective guard
3500	58.0	5.5	5/8"-11	G 3/4"	19		
2500	42.0	5.2	M 14	G 3/4"	19	speed-controlled	
2500	42.0	5.2	5/8"-11	G 3/4"	19		
3500	53.0	5.5	M 14	G 3/4"	19	speed-controlled	
3500	53.0	5.5	5/8"-11	G 3/4"	19		

Your specialist retailer can provide you with information on the complete range of quality accessories.

Speed table for grinding bits

Permitted working speeds

Please note the following when using grinding stones: permitted speeds (rpm) depend on grinding bit diameter and length, as well as shank diameter and clamping length as per DIN 69170.



The table shows the relationship between the permitted diameter of the grinding discs and the speed.

Accessories for straight grinders

	0 607 250201/ ...202/ ...203/ ...206/ ...207/ ...208	0 607 254 100 0 607 254 101 0 607 254 106 0 607 254 108	0 607 253 100 0 607 253 104	0 607 253 101 0 607 253 103	0 607 261 101 0 607 261 102 0 607 261 104 0 607 261 105	0 607 251 102 0 607 251 103	0 607 254 105 0 607 254 107
--	---	--	--------------------------------	--------------------------------	--	--------------------------------	--------------------------------

Collet diameter

1.0 mm	3 609 201 185*	-	-	-	-	-	-
1.5 mm	3 609 201 186*	-	-	-	-	-	-
2.0 mm	3 609 201 187*	-	-	-	-	-	-
2.5 mm	3 609 201 188*	-	-	-	-	-	-
3/32"	3 609 201 189*	-	-	-	-	-	-
3.0 mm	2 609 200 158	1 608 570 059*	2 608 570 077	1 608 570 059*	2 608 570 077	2 608 570 077	1 608 570 010
1/8"	3 609 201 190	2 608 570 060	2 608 570 083	2 608 570 060	2 608 570 083	2 608 570 083	3 608 570 007
1/4"	-	2 608 570 072	2 608 570 085	2 608 570 072	2 608 570 085	2 608 570 085	-
6.0 mm	-	3 608 570 006	2 608 570 079	3 608 570 006	2 608 570 079	2 608 570 079	-
8.0 mm	-	-	2 608 570 081	-	2 608 570 081	2 608 570 081	-

Exhaust air hose, centralised

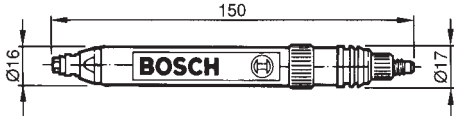
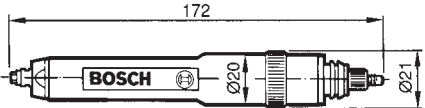
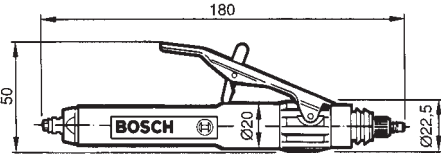
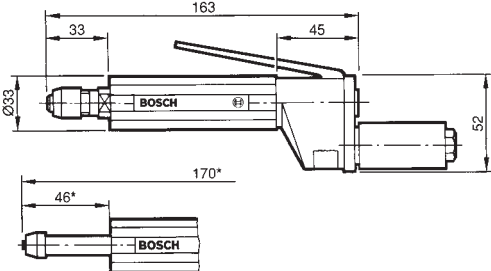
-	3 607 000 064	-	-	3 607 000 027	-	-
---	---------------	---	---	---------------	---	---

Exhaust air hose nipple, decentralised

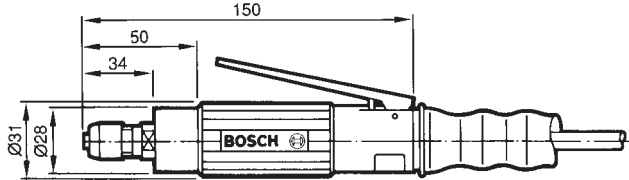
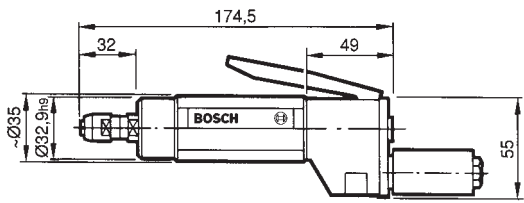
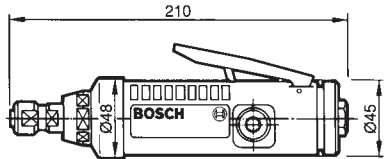
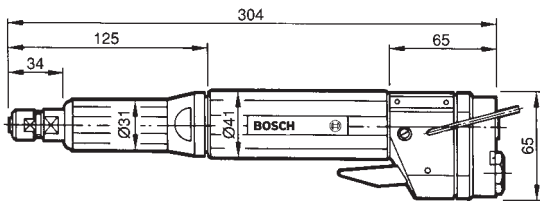
G 3/8" for hose dia. 12	3 607 010 011	-	-	-	-	-
Exhaust air set	-	-	-	3 607 030 024	-	-

* with locking nut

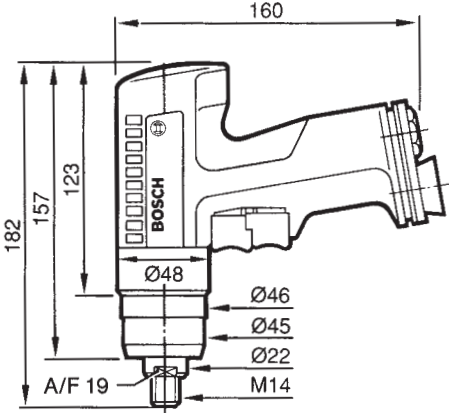
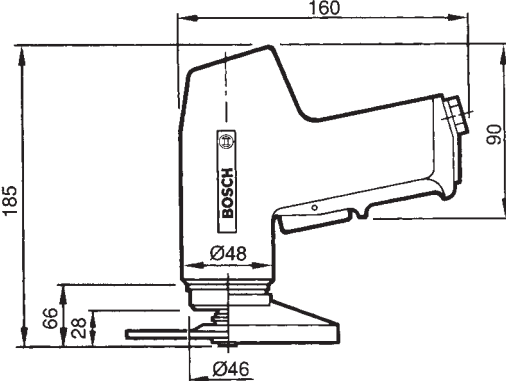
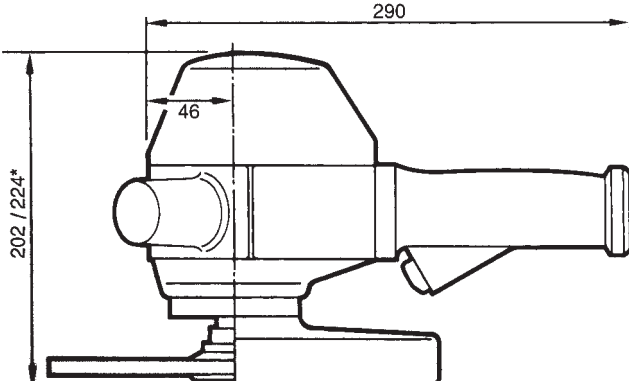
Dimensional drawings Straight grinders

Dimensions in mm	Part number
	0 607 250 201
	0 607 250 206
	0 607 250 202
	0 607 250 207
	0 607 250 203
	0 607 250 208
	0 607 254 100
	0 607 254 105*
	0 607 254 106
	0 607 254 107*

Dimensional drawings Straight grinders

Dimensions in mm	Part number
	<p>0 607 254 101</p> <p>0 607 254 108</p>
	<p>0 607 253 100</p> <p>0 607 253 101</p> <p>0 607 253 063</p> <p>0 607 253 104</p>
	<p>0 607 261 101</p> <p>0 607 261 102</p> <p>0 607 261 104</p> <p>0 607 261 105</p>
	<p>0 607 251 102</p> <p>0 607 251 103</p>

Dimensional drawings Straight grinders

Dimensions in mm	Part number
	<p>0 607 361 100</p>
	<p>0 607 352 100</p>
	<p>0 607 355 100 0 607 355 101* 0 607 356 100 0 607 356 101* 0 607 355 102 0 607 356 102 0 607 355 103* 0 607 356 103*</p>

The specified dimensions are not binding.



Screwdrivers

Tappers

Measuring devices

Technology that lasts

Air tools from Bosch are perfectly suitable for industrial use. They impress with their advanced technology, perfect ergonomics and excellent processing. The CLEAN technology ensures optimum working conditions and lowers air consumption and sound levels.



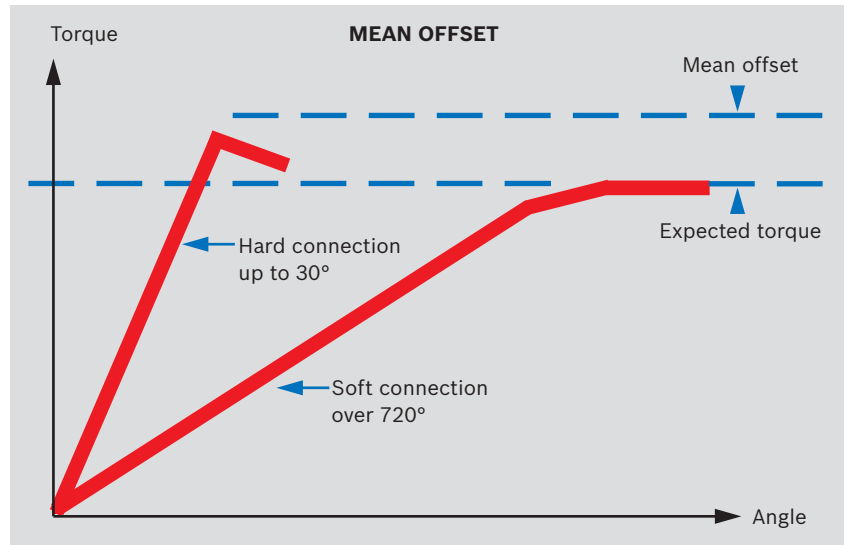
Bosch Air Tools for industry are versatile, efficient and reliable. This new generation of CLEAN air tools is lubrication-free which benefits the user by eliminating oil passing into the working environment air and lowering noise levels. At the same time C.L.E.A.N means reduced air consumption by up to 30%, saving energy and costs. The air tools are driven by oil-free compressed air, do not dirty workpieces and work significantly more quietly. That improves the conditions for workpiece and workplace and opens up new applications – e.g. in clean rooms. Exact shut-off clutches guarantee precise torque repetition for hard and soft connections. The glass-fibre-reinforced, ergonomically optimised polyamide housing effectively protects against cold, fits perfectly in your hand, and offers first-class operational comfort for continuous industrial use. Quality that sets standards in ecology, convenience and economic efficiency.

C·L·E·A·N

C consumption optimised
L lubrication free
E ergonomic
A air tool
N noise reduction

Shut-off accuracy

With Bosch Air Screwdrivers, the rate of torque reproduction is extremely high. Whether in a hard screwdriving application with 30° angle of rotation or in a soft situation with 720°, the clutch guarantees an extremely low mean value offset and torques that remain constant. Measurements in line with ISO 5393 ensure high clutch quality for sustained, reliable deployment in industry.

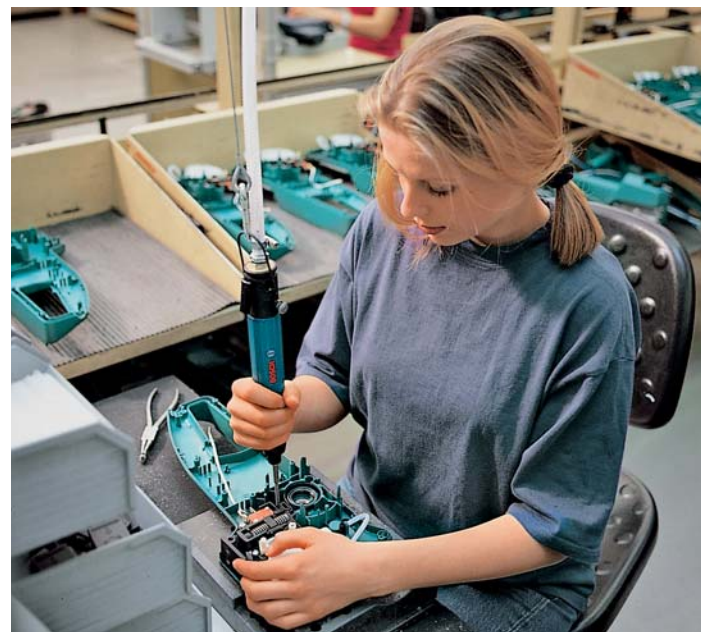


Economical work

The long lifetime of the tools is ensured by durable engineering design, high-quality materials and intensive quality control. The CLEAN screwdrivers mean that

lubricators in the supply lines and the associated maintenance overhead are things of the past. The screwdrivers are designed for low air consumption and user friendliness – thus reducing energy and maintenance costs. Ergonomics

and high speeds reduce the cycle times and optimise material flows.



Screwdriver features

Screwdrivers with adjustable automatic shut-off clutch

The automatic shut-off clutch is set using a key, making it impossible to change the set torque inadvertently. Their outstanding repetition accuracy makes them ideal for screw connections with high requirements as regards torque accuracy in industrial assembly shops. These screwdrivers are very low-noise, feature mini-

mal air consumption, and have long lifetimes.

Screwdrivers with adjustable lockover clutch

The lockover torque for machined screw connections as well as for wood, metal plate and cutting screws with medium torque accuracy is adjustable. Short or long activation times have a restricted influence on the final torque, as the rotational

impacts only slightly increase the final torque.

"S-Plus" screwdriver

The air screwdriver "S-Plus" (technical description: "rotary screwdriver with automatic shut-off and bypassing shut-off") features the entire know-how of the tried and tested model series of Bosch Air Production Tools. The "S-Plus" screwdriver for metal plate, driving, drilling and wood screws unifies the advantages of the automatic shut-off facility and lockover clutch. In bypassing the automatic shut off facility, it is possible to tighten screws where the initial torque is higher than the final tightening torque.

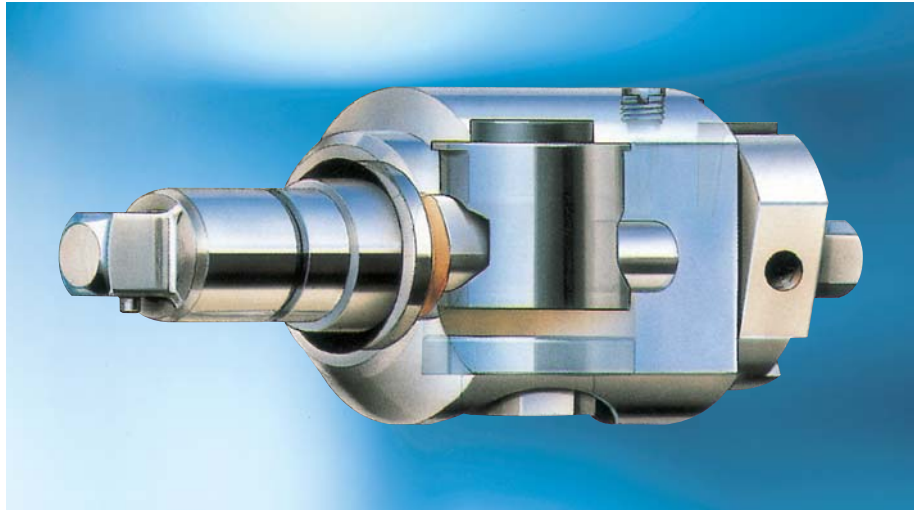


The new service-friendly 180-watt clutch with many advantages: precise shut-off, convenient handling and long lifetime.

Impulse drivers

Torque reaction and noise development are extremely small with these impulse drivers and the performance to weight ratio is outstanding. Impulse drivers offer a user-friendly alternative to impact wrenches and are of particularly compact design.

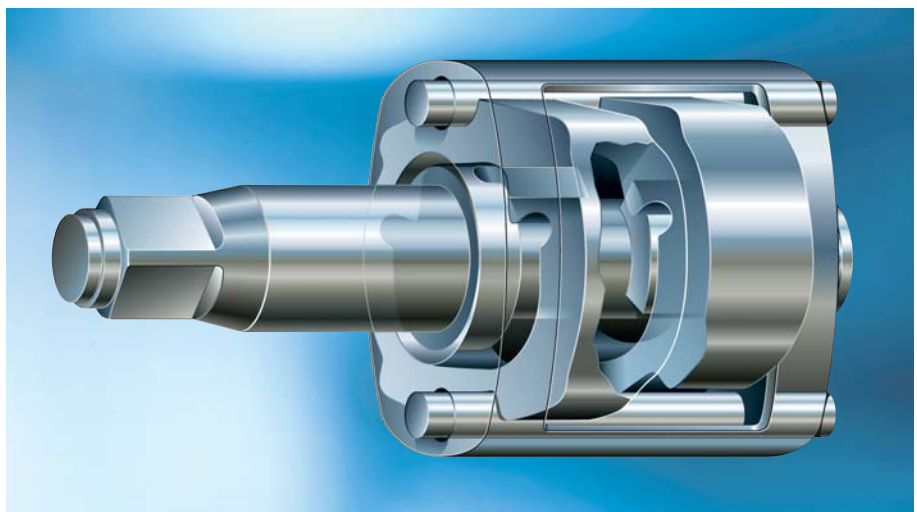
A unique principle for piston compression contributes to this. Impulse drivers are equipped with a hydraulic, oil-dampened impulse mechanism that guarantees long lifetime and shuts off when the torque is reached. This impulse mechanism consists only of three parts; these are more durable and able to withstand stronger loads than rotating piston impulse mechanisms. Any user can easily carry out the maintenance of an impulse driver without special tools.



The impulse unit with shut-off for the greatest convenience and greatest possible safety in continuous operation. The oil can be changed without special tools in less than five minutes!

Impact wrenches

The impact wrench is suitable for large screw diameters with low torque accuracy requirement. Its hammer mechanism tightens the screw connection with rotary impacts. This technology produces tools that are virtually reaction-free.



High-quality materials in the hammer mechanisms of the impact wrenches ensure precise function and long lifetime.












Achievable torque accuracy

Torque accuracy depending on screwdriver system and screwdriving application.

The torque that can be achieved for a screw connection depends on the type of screwdriving application. In order to obtain an equal basis for assessment, all the data for screwdrivers refers to inflexible or "hard" screw connec-

tions (30° angle of rotation) at 6.3 bar flow pressure. In the case of lower pressure or flexible or "soft" screw connections, some of the values that can be achieved are well below the nominal values. The torque dispersion also increases. Due to the wide variety of possibilities, specifications with absolute values are not possible. If in doubt, use a trial and error

system. The table provides an overview of the advantages and achievable torque accuracy of the individual wrench systems in various characteristic screwdriving applications.

Screwdriver systems		Shut-off clutch	Lockover clutch	Impulse mechanism	Impact mechanism	Direct drive (Standstill screwdriver)
						
Features		for high, consistent torque accuracy	for the common screw connection with sufficient torque accuracy	with low reaction torque, but with moderate torque accuracy	for high torques at restricted tolerance accuracy	for low torque accuracy. Maximum torque when choking the motor to standstill
Screwdriving applications	Angle of rotation up to M max.	Rating of the torque accuracy				
 Torque Revolutions	up to approx. 30°	very good	satisfactory	satisfactory	low – depending on requested M accuracy	low
 Torque Revolutions	up to approx. 60°	good to very good	low	satisfactory	low	low
 Torque Revolutions	above 60°	good – if shut-off function is still guaranteed	low	satisfactory	low	low
 Torque Revolutions		good – if shut-off function is still guaranteed	low	satisfactory	low	low
 Torque Revolutions	Angle of rotation not definable	good – if shut-off function is still guaranteed	low	satisfactory	low	low
 Torque Revolutions		good – if shut-off function is still guaranteed	satisfactory – if function is still guaranteed	low	low – if screw is still being turned	less suitable

Guide values for tightening torques

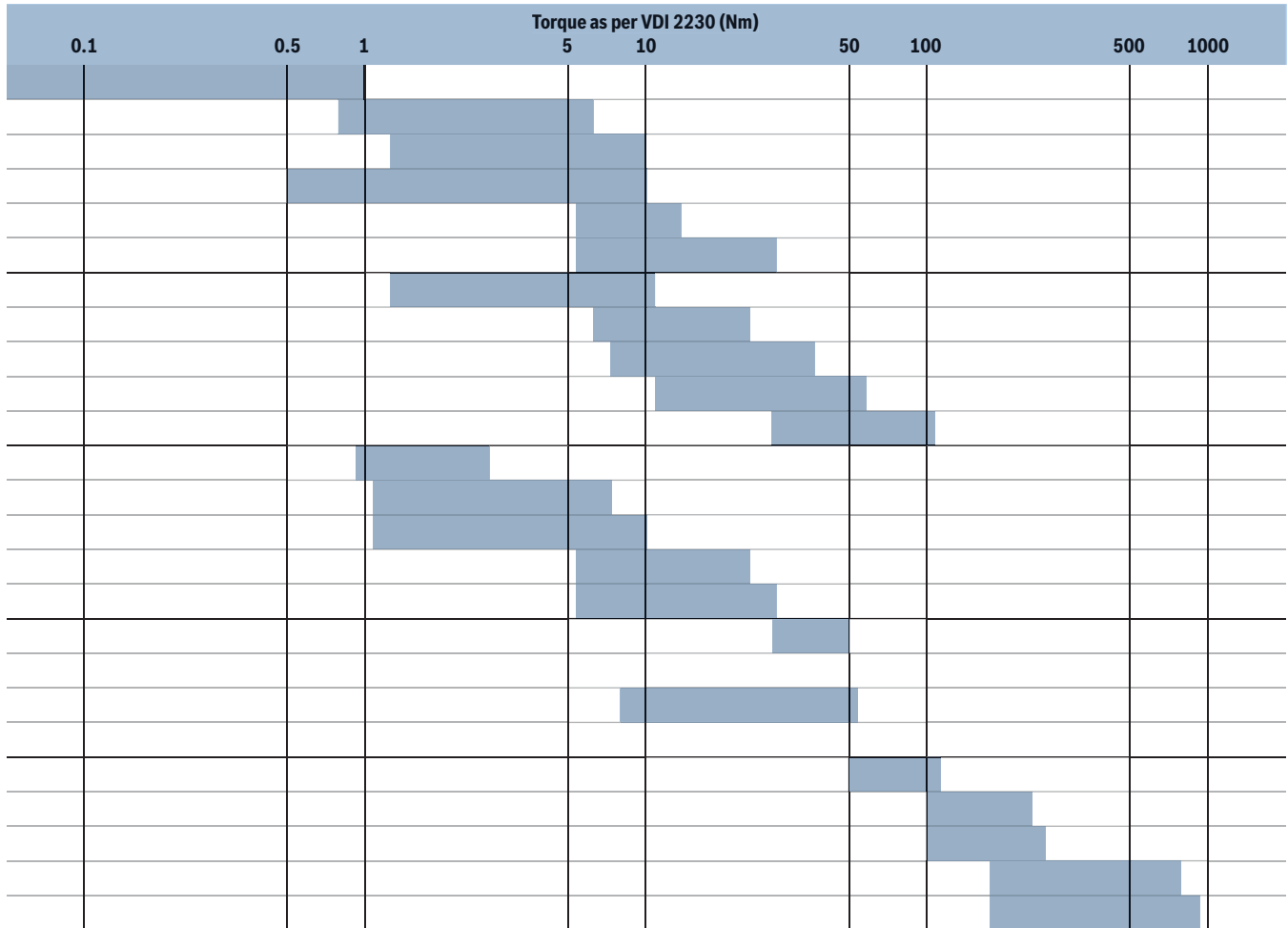
Guide values for maximum screw tightening torques in Nm. Assumed friction under the head $\mu_{\text{tot}} = 0.12$ calculated from the stressed cross-section; valid for set screws with standard metric thread as per DIN 13, Sheet 13; Head caps as per DIN 931, 933.

Strength categories as per DIN 267	5.8	6.8	6.9	8.8	10.9	12.9	14.9
M 1	0.0239	0.0287	0.0322	0.0382	0.0539	0.0646	0.0755
M 1.2	0.0456	0.0547	0.0618	0.0732	0.103	0.123	0.144
M 1.4	0.074	0.088	0.099	0.118	0.166	0.199	0.232
M 1.6	0.106	0.128	0.144	0.17	0.238	0.288	0.336
M 1.8	0.166	0.2	0.225	0.265	0.373	0.45	0.52
M 2	0.22	0.264	0.297	0.35	0.5	0.595	0.695
M 2.5	0.444	0.54	0.608	0.72	1.02	1.21	1.42
M 3	0.78	0.935	1.05	1.24	1.75	2.1	2.45
M 4	1.78	2.14	2.4	2.9	4	4.8	5.6
M 5	3.5	4.21	4.73	5.5	8	9.4	11
M 6	6.02	7.22	8.13	9.7	13.6	16.2	18.9
M 8	14.6	17.5	19.7	23	33	39	46
M 10	29	35	39	47	65	78	92
M 12	50	60	67	80	113	135	15
M 14	79	95	107	130	180	215	251
M 16	122	147	165	196	275	330	386
M 18	168	202	227	270	380	450	530
M 20	238	286	320	385	540	635	750
M 22	320	385	430	510	715	855	1010
M 24	410	490	455	650	910	1100	1290
M 27	605	725	815	960	1345	1615	1900
M 30	820	990	1110	1300	1830	2200	2600
M 33	1110	1340	1500	1770	2480	2980	3500
M 36	1430	1720	1930	2260	3170	3810	4500
M 39	1850	2220	2500	2970	4170	5000	5800
M 42	2290	2750	3100	3670	5170	6200	7230

Selection guide for screwdrivers

Torque is a decisive parameter for controlling the pretension force applied. The table provides an overview of the recommended torques for common screw and nut sizes. The recommended maximum torques apply to untreated, oil-lubricated screws (coefficient of friction = 0.125). The torques correspond to approx. 62% of the yield point.

	Part number
Screwdrivers with adjustable shut-off clutch / "S-Plus" screwdrivers <ul style="list-style-type: none"> ▶ For screw connections with high torque accuracy ▶ Upper torque range limited by reaction torques ▶ Other advantages: low-noise, low wear, long lifetime, no influence of the user on final torque 	0 607 459 2..
	0 607 454 2..
	0 607 453 2..
	0 607 453 4..
	0 607 461 2..
	0 607 461 4..
Angle shut-off wrenches <ul style="list-style-type: none"> ▶ For screw connections with high torque accuracy ▶ Other advantages: low-noise, low wear, long lifetime, no influence of the user on final torque 	0 607 453 6..
	0 607 451 6..
	0 607 461 6..
	0 607 452 6..
	0 607 457 6..
Screwdrivers with adjustable lockover clutch <ul style="list-style-type: none"> ▶ For normal screw connections with medium torque accuracy ▶ Upper torque range limited by reaction torques ▶ Restricted influence of the user on final torque due to alternating properties 	0 607 454 0../2..
	0 607 453 0../2..
	0 607 453 4..
	0 607 461 0../2..
	0 607 461 4..
Impulse drivers <ul style="list-style-type: none"> ▶ For screw connections with medium torque accuracy ▶ Virtually free of reaction torque, low-noise and low-wear ▶ Hardly any influence of the user on final torque 	0 607 661 1..
	0 607 661 5..
Impact wrenches <ul style="list-style-type: none"> ▶ For large screw diameters with high torque ▶ Virtually free of reaction torque, therefore no upward limitation 	0 607 450 614
	0 607 450 615
	0 607 450 618
	0 607 450 616
	0 607 450 619



Lubrication-free operated straight screwdrivers, 20 watts with integrated screw suction



For screws
from M 3 to M 6

Straight screwdrivers with
shut-off clutch



CLEAN



Straight screwdrivers with
S-Plus clutch



CLEAN



Part number	Screw dia. Quality category 8.8	Tightening torque (Nm) hard screwdriving application 30°
0 607 459 203	M 3	0.06–1
0 607 459 205	M 3	0.06–0.8
0 607 459 204	M 3	0.06–1

20-watt straight screwdrivers

- ▶ CLEAN technology
- ▶ Constant torque
- ▶ Noise-reduced
- ▶ Integrated screw suction with bit system
- ▶ Exhaust air hose optional
- ▶ Small, non-slip and breakproof plastic housing
- ▶ Minimal air consumption
- ▶ Low weight

Tightening torque (Nm) soft screwdriving application 720°	No-load speed (rpm)	Direction of rotation	Air consumption under load (l/s) (cfm)	Weight (kg)	Hex toolholder = internal hexagon QRC = quick-release chuck	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
0.06–0.9	800	R/L	2.2	0.2	3 mm hex	M 5	4	Push start	Spring for guide sleeve Hanging hook Sintered metal silencer Clutch springs 0.06-0.3 Nm (green) 0.2-0.6 Nm (brown) 0.5-1 Nm (orange)
			4.7						
0.06–0.6	1200	R/L	2.2	0.2	3 mm hex	M 5	4	Push start	
			4.7						
0.06–0.9	800	R/L	2.2	0.2	3 mm hex	M 5	4	Push and lever start	Spring for guide sleeve Hanging hook Sintered metal silencer Clutch springs 0.2-0.6 Nm (brown) 0.06-0.3 Nm (green) 0.5-1 Nm (orange)
			4.7						

Lubrication-free operated straight screwdrivers, 120 watts

120-watt straight screwdrivers

- ▶ CLEAN technology
- ▶ External torque setting without tool change
- ▶ Shut-off clutch for very fine torque setting and minimal torque dispersion
- ▶ Large torque range of 0.8 to 7 Nm
- ▶ Shut-off and lockover wrench in one due to "S-Plus" clutch
- ▶ Right-hand/left-hand rotation. Greater torque in left-hand rotation, in order to loosen screws more easily
- ▶ Minimal air consumption
- ▶ Quick-release chuck with double bit holder
- ▶ Clutch housing for screw supply (Fig. on Page 56)

For screws from M 3 to M 6

Straight screwdrivers with lockover clutch



CLEAN

Straight screwdrivers with shut-off clutch



CLEAN

Straight screwdrivers with S-Plus clutch for bypassing shut-off



CLEAN

Part number	Screw dia. Quality category 8.8	Tightening torque (Nm) hard screwdriving application 30°
0 607 454 006	M 4	0.8–2
0 607 454 007	M 5	0.8–3.4
0 607 454 238	M 4	0.8–3
0 607 454 239	M 5	0.8–3.4
0 607 454 228	M 4	0.8–2.5
0 607 454 229	M 4	0.8–3
0 607 454 230	M 5	0.8–3.4
0 607 454 231	M 5	0.8–5
0 607 454 232	M 4	0.8–7
0 607 454 234	M 4	0.8–3
0 607 454 235	M 5	0.8–3.4
0 607 454 236	M 5	0.8–5
0 607 454 237	M 6	0.8–7

Tightening torque (Nm) soft screwdriving application 720°	No-load speed (rpm)	Direction of rotation	Air consumption under load (l/s) (cfm)	Weight (kg)	Hex toolholder = internal hexagon QRC = quick-release chuck	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
0.8-2	1700	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Lever start	Hanging hook Hose nozzle Chuck key Clutch spring (yellow) Accessories Clutch spring 0.5-2 Nm (white)
			7.3						
0.8-3	1050	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Lever start	
			7.3						
0.8-2	1700	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Push start	
			7.3						
0.8-3	1050	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Push start	
			7.3						
0.8-1.5	2300	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Push start	
			7.3						
0.8-2	1700	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Push start	Hanging hook Hose nozzle Chuck key Clutch spring (yellow) Accessories Clutch spring 0.5-2 Nm (white)
			7.3						
0.8-3	1050	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Push start	
			7.3						
0.8-4.5	640	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Push start	
			7.3						
0.8-7	400	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Push start	
			7.3						
0.8-2	1700	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Push and lever start	
			7.3						
0.8-3	1050	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Push and lever start	
			7.3						
0.8-4.5	640	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Push and lever start	
			7.3						
0.8-7	400	R/L	3.4	0.8	1/4" QRC	G 1/4"	6	Push and lever start	
			7.3						

Lubrication-free operated straight screwdrivers, 180 watts



180-watt straight screwdrivers

- ▶ External torque setting without tool change
- ▶ Shut-off clutch for very fine torque setting and minimal torque dispersion
- ▶ Large torque range of 1.2 to 10 Nm
- ▶ Shut-off and lockover wrench in one due to "S-Plus" clutch
- ▶ Right-hand/left-hand rotation. Greater torque in left-hand rotation, in order to loosen screws more easily
- ▶ CLEAN technology
- ▶ Minimal air consumption
- ▶ Quick-release chuck with double bit holder
- ▶ Clutch housing for screw supply (Fig. on Page 56)

For screws from M 5 to M 6

Straight screwdrivers with lockover clutch



CLEAN

Straight screwdrivers with shut-off clutch



CLEAN

Straight screwdrivers with S-Plus clutch for bypassing shut-off



CLEAN

Part number	Screw dia. Quality category 8.8	Tightening torque (Nm) hard screwdriving application 30°
0 607 453 009	M 6	1.2-5.5
0 607 453 010*	M 6	1.2-7
0 607 453 233	M 5	1.2-3
0 607 453 234	M 5	1.2-4.5
0 607 453 229	M 5	1.2-4.5
0 607 453 230	M 6	1.2-5.5
0 607 453 231*	M 6	1.2-7
0 607 453 232*	M 6	1.2-10
0 607 453 235	M 5	1.2-3
0 607 453 236	M 5	1.2-4.5
0 607 453 237	M 6	1.2-5.5
0 607 453 238*	M 6	1.2-7
0 607 453 239*	M 6	1.2-10
0 607 453 240	M 6	1.2-5.5
0 607 453 241*	M 6	1.2-7
0 607 453 242*	M 6	1.2-10

Tightening torque (Nm) soft screwdriving application 720°	No-load speed (rpm)	Direction of rotation	Air consumption under load (l/s) (cfm)	Weight (kg)	Toolholder QRC = quick-release chuck	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
1.2-5	950	R/L	5.5 11.6	0.9	1/4" QRC	G 1/4"	6	Lever start	Hanging hook Chuck key Hose nipple Clutch spring (yellow) or *clutch spring (blue)
1.2-7	600	R/L	5.5 11.6	0.9	1/4" QRC	G 1/4"	6	Lever start	
1.2-2.5	2200	R/L	5.5 11.6	0.9	1/4" QRC	G 1/4"	6	Push start	
1.2-3	1500	R/L	5.5 11.6	0.9	1/4" QRC	G 1/4"	6	Push start	
1.2-3	1500	R/L	5.5 11.6	0.8	1/4" QRC	G 1/4"	6	Lever start	
1.2-5.5	950	R/L	5.5 11.6	0.8	1/4" QRC	G 1/4"	6	Lever start	
1.2-7	600	R/L	5.5 11.6	0.9	1/4" QRC	G 1/4"	6	Lever start	Models ...232 and ...239 incl. auxiliary handle
1.2-10	380	R/L	5.5 11.6	0.9	1/4" QRC	G 1/4"	6	Lever start	
1.2-2.5	2200	R/L	5.5 11.6	0.8	1/4" QRC	G 1/4"	6	Push start	
1.2-3	1500	R/L	5.5 11.6	0.8	1/4" QRC	G 1/4"	6	Push start	
1.2-5	950	R/L	5.5 11.6	0.8	1/4" QRC	G 1/4"	6	Push start	
1.2-7	600	R/L	5.5 11.6	0.9	1/4" QRC	G 1/4"	6	Push start	
1.2-10	380	R/L	5.5 11.6	0.9	1/4" QRC	G 1/4"	6	Push start	
1.2-5	950	R/L	5.5 11.6	0.8	1/4" QRC	G 1/4"	6	Push start	
1.2-7	600	R/L	5.5 11.6	0.9	1/4" QRC	G 1/4"	6	Push start	
1.2-10	380	R/L	5.5 11.6	0.9	1/4" QRC	G 1/4"	6	Push start	
									Model ...242 incl. auxiliary handle

Lubrication-free operated centre grip screwdrivers, 180 watts

180-watt centre grip screwdrivers

- ▶ External torque setting without tool change
- ▶ Shut-off clutch for very fine torque setting and minimal torque dispersion
- ▶ Large torque range of 1.2 to 10 Nm
- ▶ Shut-off and lockover wrench in one due to "S-Plus" clutch
- ▶ Right-hand/left-hand rotation. Greater torque in left-hand rotation, in order to loosen screws more easily
- ▶ CLEAN technology
- ▶ Minimal air consumption
- ▶ Quick-release chuck with double bit holder
- ▶ Clutch housing for screw supply (Fig. on Page 56)

For screws from M 5 to M 6

Centre grip screwdrivers with lockover clutch



Centre grip screwdrivers with shut-off clutch



Centre grip screwdrivers with shut-off clutch



Part number	Screw dia. Quality category 8.8	Tightening torque (Nm) hard screwdriving application 30°
0 607 453 434*	M 6	1.2–10
0 607 453 438*	M 6	1.2–7
0 607 453 435	M 6	1.2–5.5
0 607 453 436	M 5	1.2–4.5
0 607 453 437	M 5	1.2–3
0 607 453 439*	M 6	1.2–10
0 607 453 441*	M 6	1.2–7
0 607 453 440	M 6	1.2–5.5
0 607 453 443	M 5	1.2–3
0 607 453 442**	M 6	0.5–2
0 607 453 429*	M 6	1.2–10
0 607 453 433*	M 6	1.2–7
0 607 453 430	M 6	1.2–5.5
0 607 453 431	M 5	1.2–4.5
0 607 453 432	M 5	1.2–3

Tightening torque (Nm) soft screwdriving application 720°	No-load speed (rpm)	Direction of rotation	Air consumption under load (l/s) (cfm)	Weight (kg)	Toolholder QRC = quick-release chuck	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
1.2-10	380	R/L	5.5 11.7	0.9 kg	1/4" QRC	G 1/4"	6	Pushbutton start	Hose nipple G 1/4"
1.2-7	600	R/L	5.5 11.7	0.9 kg	1/4" QRC	G 1/4"	6	Pushbutton start	Silencer Chuck key
1.2-5	950	R/L	5.5 11.7	0.9 kg	1/4" QRC	G 1/4"	6	Pushbutton start	Clutch spring (yellow) or *clutch spring (blue)
1.2-3	1500	R/L	5.5 11.7	0.9 kg	1/4" QRC	G 1/4"	6	Pushbutton start	Hanging hook
1.2-2.5	2200	R/L	5.5 11.7	0.9 kg	1/4" QRC	G 1/4"	6	Pushbutton start	
1.2-10	380	R/L	5.5 11.6	0.9 kg	1/4" QRC	G 1/4"	6	Pushbutton start	Hose nipple G 1/4"
1.2-7	600	R/L	5.5 11.6	0.9 kg	1/4" QRC	G 1/4"	6	Pushbutton start	Silencer Chuck key
1.2-5	950	R/L	5.5 11.6	0.9 kg	1/4" QRC	G 1/4"	6	Pushbutton start	Clutch spring (yellow) or *clutch spring (blue) or **clutch spring (white)
1.2-3	1500	R/L	5.5 11.6	0.9 kg	1/4" QRC	G 1/4"	6	Pushbutton start	Hanging hook
0.5-2	600	R/L	5.5 11.6	0.9 kg	1/4" QRC	G 1/4"	6	Pushbutton start	
1.2-10	380	R/L	5.5 11.6	0.9 kg	1/4" QRC	G 1/4"	6	Push and push-button start	Hose nipple G 1/4"
1.2-7	600	R/L	5.5 11.6	0.9 kg	1/4" QRC	G 1/4"	6	Push and push-button start	Silencer Chuck key
1.2-5	950	R/L	5.5 11.6	0.9 kg	1/4" QRC	G 1/4"	6	Push and push-button start	Clutch spring (yellow) or *clutch spring (blue)
1.2-3	1500	R/L	5.5 11.6	0.9 kg	1/4" QRC	G 1/4"	6	Push and push-button start	Hanging hook
1.2-2.5	2200	R/L	5.5 11.6	0.9 kg	1/4" QRC	G 1/4"	6	Push and push-button start	

Straight screwdrivers

400 watts



400-watt rotary screwdrivers

- ▶ Most powerful rotary screwdriver
- ▶ External torque setting
- ▶ Wear-free shut-off clutch
- ▶ Variable due to modular system
- ▶ Ergonomic centre grip for optimum handling
- ▶ Robust, cold-insulating polyamide housing
- ▶ Exhaust air hose optional
- ▶ Low-vibration

For screws
from M 6 to M 8

**Straight screwdrivers with
lockover clutch**



**Straight screwdrivers with
shut-off clutch**



**Straight screwdrivers with
S-Plus clutch for
bypassing shut-off**



Part number	Screw dia. Quality category 8.8	Tightening torque (Nm) hard screwdriving application 30°
0 607 461 001	M 8	5.5–15
0 607 461 201	M 6	5.5–10
0 607 461 202	M 8	5.5–15
<hr/>		
0 607 461 205	M 6	5.5–10
0 607 461 203	M 8	5.5–13
0 607 461 206	M 6	5.5–15
0 607 461 204	M 6	8–19
0 607 461 207	M 6	8–19
<hr/>		
0 607 461 208	M 6	5.5–10
0 607 461 209	M 8	5.5–15

Tightening torque (Nm) soft screwdriving application 720°	No-load speed (rpm)	Direction of rotation	Air consumption under load (l/s) (cfm)	Weight (kg)	Toolholder QRC = quick-release chuck	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
5.5-14	700	R/L	11.0 23.3	1.3	1/4" QRC	G 1/4"	10	Lever start	Locking hook Hose nipple G 1/4" Hanging hook Auxiliary handle dia. 46 mm
5.5-10	1050	R/L	11.0 23.3	1.3	1/4" QRC	G 1/4"	10	Push start	
5.5-14	700	R/L	11.0 23.3	1.3	1/4" QRC	G 1/4"	10	Push start	
5.5-10	1050	R/L	11.0 23.3	1.3	1/4" QRC	G 1/4"	10	Push start	Locking hook Hose nipple G 1/4" Hanging hook Auxiliary handle dia. 46 mm
5.5-13	1200	R	10.2 21.6	1.3	1/4" QRC	G 1/4"	10	Push start	
5.5-14	700	R/L	11.0 23.3	1.3	1/4" QRC	G 1/4"	10	Push start	
8-17	800	R	10.2 21.6	1.3	1/4" QRC	G 1/4"	10	Push start	
8-17	800	R	10.2 21.6	1.3	1/4" QRC	G 1/4"	10	Lever start	
5.5-10	1050	R/L	11.0 23.3	1.3	1/4" QRC	G 1/4"	10	Push and lever start	Locking hook Hose nipple G 1/4" Hanging hook Auxiliary handle dia. 46 mm
5.5-14	700	R/L	11.0 23.3	1.3	1/4" QRC	G 1/4"	10	Push and lever start	

Centre grip screwdrivers

400 watts

400-watt rotary screwdrivers

- ▶ Most powerful rotary screwdriver
- ▶ External torque setting
- ▶ Wear-free shut-off clutch
- ▶ Variable due to modular system
- ▶ Ergonomic centre grip for optimum handling
- ▶ Robust, cold-insulating polyamide housing
- ▶ Exhaust air hose optional
- ▶ Low-vibration

For screws
from M 8 to M 10

**Centre grip screwdrivers
with lockover clutch**



**Centre grip screwdrivers
with shut-off clutch**



Part number	Screw dia. Quality category 8.8	Tightening torque (Nm) hard screwdriving application 30°
0 607 461 401	M 8	5.5–15
0 607 461 402	M 10	8.5–26
0 607 461 407	M 10	8.5–26
0 607 461 403	M 8	8.5–19
0 607 461 404	M 8	8.5–24
0 607 461 405	M 10	5.5–15
0 607 461 406	M 10	8.5–26
0 607 461 408	M 10	8.5–26
0 607 461 409	M 10	8.5–26

Tightening torque (Nm) soft screwdriving application 720°	No-load speed (rpm)	Direction of rotation	Air consumption under load (l/s) (cfm)	Weight (kg)	Toolholder QRC = quick-release chuck	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
5.5-13	700	R/L	10.2 21.6	1.4	1/4" QRC	G 1/4"	10	Pushbutton start	Locking hook Hose nipple G 1/4" Silencer Auxiliary handle dia. 46 mm
8.5-21	400	R/L	10.2 21.6	1.4	1/4" QRC	G 1/4"	10	Pushbutton start	
8.5-21	400	R/L	10.2 21.6	1.4	7/16" QRC	G 1/4"	10	Pushbutton start	
8.5-16	800	R	9.4 19.9	1.4	1/4" QRC	G 1/4"	10	Push and push-button start	Locking hook Hose nipple G 1/4" Silencer Auxiliary handle dia. 46 mm
8.5-20	640	R	9.4 19.9	1.4	1/4" QRC	G 1/4"	10	Push and push-button start	
5.5-13	700	R/L	10.2 21.6	1.4	1/4" QRC	G 1/4"	10	Push and push-button start	
8.5-21	400	R/L	10.2 21.6	1.4	1/4" QRC	G 1/4"	10	Push and push-button start	
8.5-21	400	R/L	10.2 21.6	1.4	7/16" QRC	G 1/4"	10	Push and push-button start	
8.5-27	450	R	9.4 19.9	1.4	7/16" QRC	G 1/4"	10	Push and push-button start	

Angle shut-off wrenches with shut-off clutch



For screws
from M 5 to M 16

**Angle shut-off wrenches
180 watts**



CLEAN

**Angle shut-off wrenches
370 watts**



**Angle shut-off wrenches
370 watts**



- ▶ Shut-off clutch for very fine torque setting and minimal torque dispersion
- ▶ Long lifetime
- ▶ External torque setting
- ▶ Small, rotating angle head
- ▶ Exhaust air hose optional
- ▶ Low-noise

Part number	Screw dia. Quality category 8.8	Tightening torque (Nm) hard screwdriving application 30°
0 607 453 621	M 5	1.5–8
0 607 453 622	M 5	1.5–8
0 607 453 623*	M 6	2–10
0 607 453 624*	M 6	2–10
0 607 453 625*	M 8	2–15
0 607 453 626*	M 8	2–15
<hr/>		
0 607 451 600	M 10	7–27
0 607 451 601	M 10	7–27
0 607 451 604	M 10	7–30
<hr/>		
0 607 451 606	M 10	7–27
0 607 451 607	M 10	7–27
0 607 451 605	M 10	7–30
0 607 451 602	M 10	7–28
0 607 451 603	M 10	7–28

Tightening torque (Nm) soft screwdriving application 720°	No-load speed (rpm)	Direction of rotation	Air consumption under load (l/s) (cfm)	Weight (kg)	Hex tool holder = internal hexagon Square = external square	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
1.5-7	670	R/L	4.7	1.1	1/4" square	G 1/4"	6	Centralised exhaust air guidance	Chuck key Hose nipple Clutch spring (yellow) or *clutch spring (blue)
			10.0						
1.5-7	670	R/L	4.7	1.1	1/4" hex	G 1/4"	6		
			10.0						
2-9	420	R/L	4.7	1.1	1/4" square	G 1/4"	6		
			10.0						
2-9	420	R/L	4.7	1.1	1/4" hex	G 1/4"	6		
			10.0						
2-14	260	R/L	4.7	1.1	1/4" square	G 1/4"	6		
			10.0						
2-14	260	R/L	4.7	1.1	3/8" square	G 1/4"	6		
			10.0						
7-24	360	R/L	11.9	1.6	3/8" square	G 1/4"	10	Decentralised exhaust air guidance	Locking hook Hose nipple G 1/4" Silencer - Plastic - Sintered metal
			25.2						
7-24	360	R/L	11.9	1.6	1/4" hex	G 1/4"	10		
			25.2						
7-30	280	R/L	11.9	1.6	3/8" square	G 1/4"	10		
			25.2						
7-24	360	R/L	11.9	1.5	3/8" square	G 1/4"	10	Centralised exhaust air guidance	Locking hook Hose nipple G 1/4"
			25.2						
7-24	360	R/L	11.9	1.5	1/4" hex	G 1/4"	10		
			25.2						
7-30	280	R/L	11.9	1.5	3/8" square	G 1/4"	10		
			25.2						
7-26	360	R	11.1	1.5	3/8" square	G 1/4"	10		
			23.5						
7-26	360	R	11.1	1.5	1/4" hex	G 1/4"	10		
			23.5						

Tightening torque (Nm) soft screwdriving application 720°	No-load speed (rpm)	Direction of rotation	Air consumption under load (l/s) (cfm)	Weight (kg)	Hex tool-holder = internal hexagon Square = external square	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
8-21	400	R/L	11.1 23.5	2.0	3/8" square	G 1/4"	10	Centralised exhaust air guidance	Locking hook Hose nipple G 1/4" Hanging hook Hanging hook (fitted) Hose nipple
8-21	400	R/L	11.1 23.5	2.0	1/4" hex	G 1/4"	10		
8-34	260	R/L	11.1 23.5	2.2	3/8" square	G 1/4"	10		
8-39	300	R	10.2 21.6	2.2	3/8" square	G 1/4"	10		
10-38	570	R/L	15 31.8	1.5	3/8" square	G 1/4"	10	Centralised exhaust air guidance	Hose nipple Chuck key
16-56	400	R/L	15 31.8	1.5	3/8" square	G 1/4"	10		
20-68	320	R/L	15 31.8	1.5	3/8" square	G 1/4"	10		
2-16	1200	R/L	15 31.8	1.0	-	G 1/4"	10		
								Please order the angle head separately	
31 -70	270	R/L	16.2 34.3	3.4	1/2" square	G 3/8"	10	Decentralised exhaust air guidance	Locking hook Hose nipple G 3/8" Hanging hook with support Silencer - Plastic - Sintered metal
39-90	200	R/L	16.2 34.3	3.4	1/2" square	G 3/8"	10		
50-110	100	R/L	20.0 42.3	3.6	1/2" square	G 3/8"	10		

Impulse drivers

- ▶ CLEAN technology
- ▶ Extremely lightweight impulse driver
- ▶ Ergonomic, fibre-reinforced polyamide housing with centre grip for balanced centre of gravity and optimum handling
- ▶ Wear-free shut-off clutch that reacts to mechanical centrifugal force
- ▶ Impulse unit with innovative, unique piston compression principle consisting of only three parts with seals. This means less oil consumption, rapid oil change and optimised integrated cooling
- ▶ High speed due to robust, powerful motor with dual chamber for fast, efficient working
- ▶ Right-hand/left-hand rotation. Greater torque in left-hand rotation, in order to loosen screws more easily
- ▶ Hanging hook for vertical and horizontal use

For screws from M 6 to M 10

Impulse drivers without shut-off



Impulse drivers with shut-off



CLEAN

Impulse drivers with shut-off



CLEAN

Part number	Screw dia. Quality category 8.8	Tightening torque (Nm) hard screwdriving application 30°	Tightening torque (Nm) soft screwdriving application 720°
0 607 661 101	M 8	20–35	16–28
0 607 661 102	M 8	20–35	16–28
0 607 661 103	M 10	30–50	23–40
0 607 661 104	M 10	30–50	23–40
0 607 661 509	M 6	8–18	5–15
0 607 661 510	M 6	8–18	5–15
0 607 661 505	M 8	13–35	12–29
0 607 661 506	M 8	13–35	12–29
0 607 661 507	M 10	28–60	16–47
0 607 661 508	M 10	28–60	16–47

Recommended tightening torque: fatigue limit at stated screw dia., quality category 8.8
 Maximum tightening torque: peak value with larger screw dia. – fatigue limit not stated.

No-load speed (rpm)	Direction of rotation	Model series (W)	Air consumption under load (l/s) (cfm)	Weight (kg)	Square toolholder = external square QRC = quick-release chuck	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
3800	R/L	400	8	1.5	3/8" square	G 1/4"	10		Hose nipple G 1/4" Auxiliary handle Hanging hook Screwdriver
			17						
3800	R/L	400	8	1.5	7/16" QRC	G 1/4"	10		
			17						
3800	R/L	400	8	1.5	3/8" square	G 1/4"	10		
			17						
3800	R/L	400	8	1.5	7/16" QRC	G 1/4"	10		
			17						
4000	R/L	300	8	1	3/8" square	G 1/4"	6	Torque can be set from outside on impulse mechanism	Hose nipple Allen key Hanging hook
			17						
4000	R/L	300	8	1	1/4" QRC	G 1/4"	6		
			17						
4500	R/L	300	9	1	3/8" square	G 1/4"	10		
			19						
4500	R/L	300	9	1	1/4" QRC	G 1/4"	10		
			19						
4700	R/L	300	11	1.3	1/2" square	G 1/4"	10	Torque can be set from outside on impulse mechanism	Hose nipple Allen key Hanging hook
			23.2						
4700	R/L	300	11	1.3	7/16" QRC	G 1/4"	10		
			23.2						

Impact wrenches

- ▶ High speed for fast, efficient working
- ▶ Outstanding power and low weight
- ▶ Robust impact wrench with long lifetime
- ▶ Simply designed, powerful dual hammer mechanism made of high-alloyed materials
- ▶ Impact force can be controlled via throttle valve

For screws from M 12 to M 30

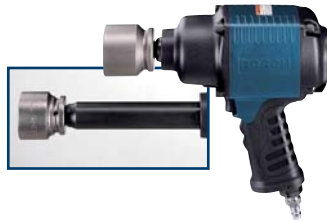
Impact wrench torque in 3 stages



Impact wrench torque in 3 stages



Impact wrench torque in 3 stages



Part number	Screw dia. Quality category 8.8	Recommended tightening torque at 6.3 bar (Nm)
0 607 450 614	M 14	50–150
0 607 450 615	M 18	150–350
0 607 450 618	M 18	150–300
0 607 450 616	M 27	300–900
0 607 450 619	M 27	300–850

Max. tightening torque (Nm)	No-load speed (rpm)	Direction of rotation	Air consumption under load (l/s) (cfm)	Weight (kg)	Square toolholder = external square	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
200	10000	R/L	6 12.7	1.3	3/8" square	1/4" NPT	10	Torque can be set in right-hand rotation	Hanging hook Hose nipple
550	7000	R/L	9 19	2.3	1/2" square	1/4" NPT	10	Torque can be set in right-hand rotation	Hanging hook Hose nipple
500	7000	R/L	9 19	2.6	1/2" square + ext. spindle	1/4" NPT	10	Torque can be set in right-hand rotation	Hanging hook Hose nipple
1200	4600	R/L	12 25.4	5	3/4" square	3/8" NPT	13	Torque can be set in right-hand rotation	Hanging hook Hose nipple
1150	4500	R/L	12 25.4	5.9	3/4" square + ext. spindle	3/8" NPT	13	Torque can be set in right-hand rotation	Hanging hook Hose nipple

Tappers and lockover wrenches

- ▶ One-handed left/right operation
- ▶ Long lifetime
- ▶ Outstanding power for any application
- ▶ Tightening torque can be controlled

For thread from M 5 to M 12

Tappers without clutch



Tappers with lockover clutch without chuck



Centre grip screwdrivers with pushbutton start



Part number	Thread and stud bolt dia. (mm)	Tightening torque (Nm)
0 607 461 410	up to 8	up to 18
0 607 461 411	up to 10	up to 26
0 607 461 412	up to 8	up to 18
0 607 461 413	up to 10	up to 26
0 607 453 421	up to 5	1.2-5.5
0 607 453 422	up to 5	1.2-4.5
0 607 461 407	up to 12	8.5-26

No-load speed (rpm)	Direction of rotation	Model series (W)	Air consumption under load (l/s)/ (cfm)	Weight (kg)	Hex toolholder = internal hexagon QRC = quick-release chuck	Connecting thread	Hose inner diameter (mm)	Comments	Comes complete with
560	R/L	400	12 25.4	1.4	7/16" QRC	G 1/4"	10	Direct drive without chuck Can be used for thread-cutting in feedthrough holes and as a direct screwdriver	Hose nipple G 1/4" Silencer Auxiliary handle dia. 46 mm
400	R/L	400	12 25.4	1.4	7/16" QRC	G 1/4"	10		
560	R/L	400	12 25.4	1.4	7/16" QRC	G 1/4"	10		
400	R/L	400	12 25.4	1.4	7/16" QRC	G 1/4"	10		
560	R/L	400	12 25.4	1.4	7/16" QRC	G 1/4"	10	Direct drive with pendulum chuck Can be used for thread-cutting in feedthrough holes and as a direct screwdriver	Hose nipple G 1/4" Silencer Auxiliary handle dia. 46 mm Pendulum chuck
400	R/L	400	12 25.4	1.4	7/16" QRC	G 1/4"	10		
950	R/L	180	4.7 10	1.2	1/4" hex	G 1/4"	6		
1500	R/L	180	4.7 10	1	1/4" hex	G 1/4"	6		
400	R/L	400	10.2 21.6	1.4	7/16" QRC	G 1/4"	10	With clutch without chuck Can be used for thread-cutting in blind holes and as a stud bolt tightener	Locking hook Hose nipple G 1/4" Silencer Auxiliary handle dia. 46 mm

Screwdriving and maintenance controller

PMC10



The PMC10 controls and documents the following:

- the screwdriving process
- the system pressure
- the compliance with maintenance intervals

The screwdriving and maintenance controller PMC10 optimises your processes and ensures your quality. It therefore offers you the possibility of tracing your screwdriving results. Incorrectly driven screws will not be a problem for you in future.

The enhanced possibility of setting the minimum flow pressure and the screwdriving duration prevent screws eating into the thread and prevent wrong screws. The PMC10 detects these immediately. If the pressure is too low, the screwdriver is automatically blocked.

Moreover, with the PMC10 you can define in advance the number of screws to be driven per workpiece, which makes it impossible for screws to be forgotten about.








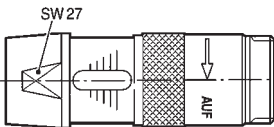

Screwdriving and maintenance controller PMC10

Article number		0 607 958 990	0 607 958 991
Rated voltage	V	230	115
Frequency	Hz	50	60
Hose inner diameter	mm	10	10
	in	3/8	3/8
Rated pressure	bar	6.3	6.3
	psi	91	91
Weight (EPTA 2001)	kg	8.0	8.0
	lbs	17.6	17.6
Protection category		IP 54	IP 54

Another enhanced function enables you to also define a maintenance interval for conducting preventive maintenance. Thanks to the traceability and clarity of the OK and Not OK cases, you always know the cause of an error.



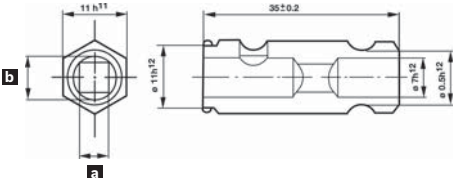
The screwdriving and maintenance controller PMC10 can be used for all Bosch Shut-off Wrenches with lever or pushbutton start, and for our impact wrenches and impulse drivers.

Accessories for screwdrivers

		Part number	For model series (W)	Capacity mm
Auxiliary handle sleeve – for straight screwdrivers		3 600 499 001	120	–
				
Auxiliary handle – standard version	Chuck capacity 46 mm	3 602 025 009	400	46
				
Auxiliary handle – for straight screwdrivers		3 607 031 352	120	–
		3 607 031 351	180	–
Hanging hook for angle drivers		3 601 310 016	180	33
		3 601 310 000	370	38
Hanging hook with support option for pistol-grip and angle drivers		3 604 720 006	400	48 – 51
				
Exhaust air hose set	centralised	3 600 712 008	20	–
	centralised	3 607 000 064	120/180	–
	Exhaust air set, decentralised, straight version	3 607 000 083	120/180	–
Exhaust air hose	centralised, straight version	3 607 000 027	370/400	–
	centralised, for pistol-grip screwdrivers	3 607 000 011	400	–
	Exhaust air set, decentralised, straight version	3 607 030 024	400	–
Clutch housing for screw supply		3 605 125 058	120	
		3 605 125 057	180	
Clutch spring (white) 0.5 - 2 Nm		3 604 618 003	120/180	
				



		Part number	For model series (W)	Capacity mm
Guide sleeve		3 600 329 000	400	
Screw cap		3 600 508 014	400	
Spring		3 604 615 000	400	
Union nut		3 603 313 002	400	
Screw head		for 180 W angle drivers	0 607 453 631	180
		1/4" quick-release chuck		
Offset screw head		1/4" square	0 607 453 617	180/370 DWAS 16
		1/4" internal hexagon	0 607 453 618	180/370 DWAS 16
		3/8" square	0 607 453 620	180/370 DWAS 16
		1/4" quick-release chuck	0 607 453 630	180/370 DWAS 16
Protective cap		for angle screw head 180 W	3 605 500 171	
		for angle screw head 370 W	3 605 500 175	
Protective cap		for all 1/4" quick-release chucks	3 605 500 172	



Accessories for tappers

		Part number	For model series (W)	Comments
Twin-jaw chuck		(jointed) M 5 – M 12	3 608 573 000	for thread-cutting
		with 7/16" hex shank arbour		
Thread chuck		(fixed) with 7/16" hex shank arbour	3 608 502 000	appropriate for tappers: M 5, M 6, M 8, 1/4" shank
		required countersink at taper		
		a (mm)	b (mm)	
		4.95	6.3	
		5.55	7.3	

Accessories for 20-watt screwdrivers

Tools with 3 mm hex shank arbour manufactured to DIN 3126
Integrated version for usage with and without suction

	Part number	Size	Cross head type	Design	Shank length without drive (mm)
⊕ Slotted screw					
3 mm bits for 20-watt screwdrivers					
	3 608 520 001	0.5 x 3 mm			
	3 608 520 002	0.6 x 4 mm			
	3 608 520 003	0.8 x 5 mm			
⊕ ⊕ Cross-head screw					
3 mm bits for 20-watt screwdrivers					
	3 608 520 004	0 (2.8 mm)	Phillips ⊕		
	3 608 520 005	1 (4.5 mm)	Phillips ⊕		
	3 608 520 006	0 (2.8 mm)	Pozidrive ⊕ ⊕		
	3 608 520 007	1 (4.5 mm)	Pozidrive ⊕ ⊕		
⊕ TORX					
3 mm bits for 20-watt screwdrivers					
	3 609 202 738	T 5			
	3 609 202 739	T 6			
	3 609 202 740	T 7			
	3 609 202 741	T 8			
	3 609 202 742	T 9			
	3 609 202 743	T 10			
Adapter 3 mm to 1/4" with QRC					
	3 609 202 751				
Blank for production of the guide sleeve					
	3 608 723 001				

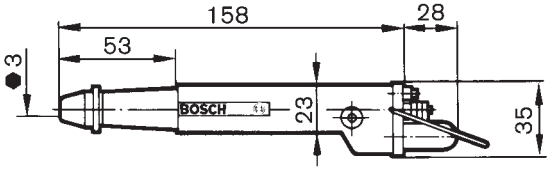
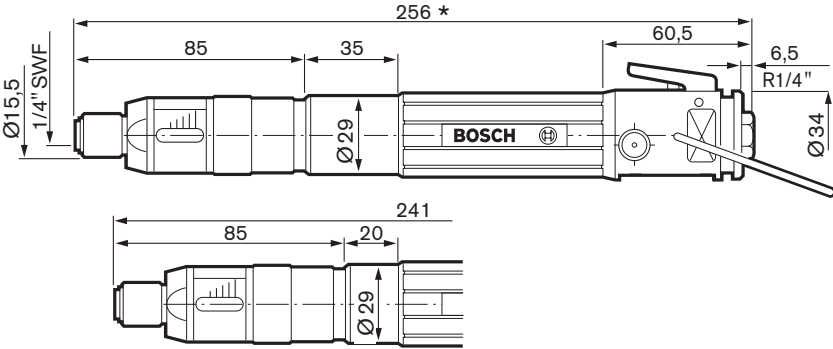
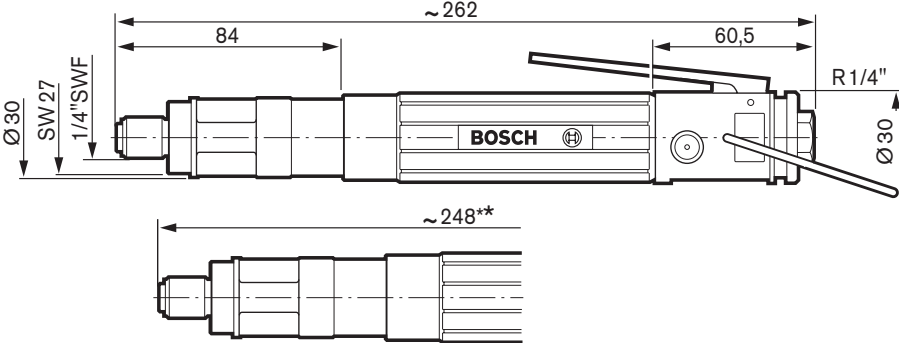
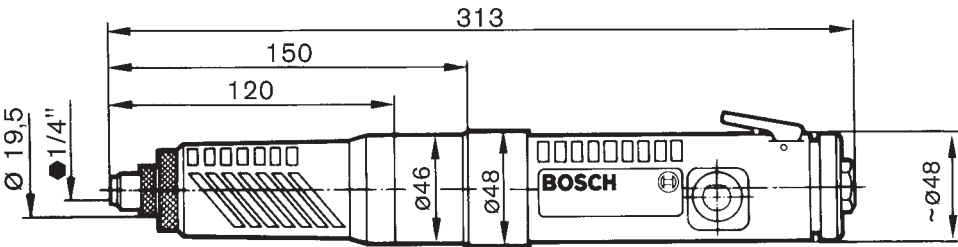
	Part number	For model series (W)	Comments
Storage valve			
	1 609 202 845	20	
Sorting plates for screw/bolt size			
	M 1.6/M 2	3 609 202 826	20
	M 2.5	3 609 202 827	20
	M 3/M 4	3 609 202 828	20

Your specialist retailer can provide you with information on the complete range of quality accessories.

Pressure query for shut-off wrenches

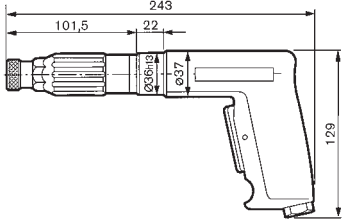
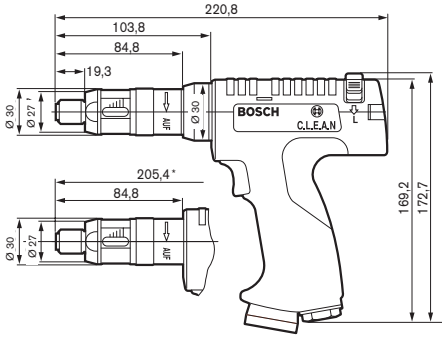
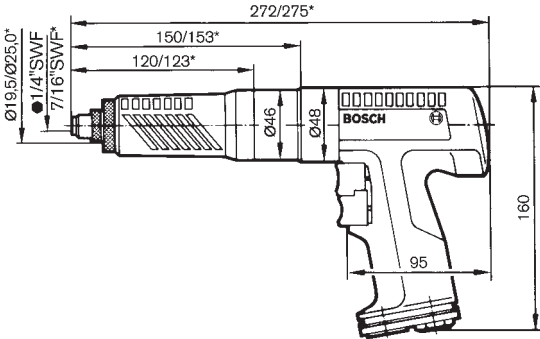
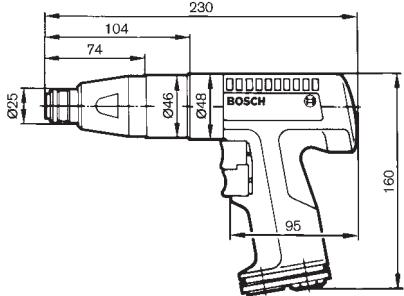
		Part number	For model series (W)	Tool number	
Pressure query	Centre grip screwdrivers	3 609 202 745	180	0 607 453 429	
				0 607 453 430	
				0 607 453 431	
				0 607 453 432	
				0 607 453 433	
				0 607 453 439	
				0 607 453 440	
				0 607 453 441	
				0 607 453 442	
				0 607 453 443	
			3 609 202 791	400	0 607 461 403
					0 607 461 404
					0 607 461 409
			3 609 202 746	400	0 607 461 405
					0 607 461 406
				0 607 461 408	
		Centre grip impulse drivers	3 609 202 745	300	0 607 661 509
					0 607 661 510
					0 607 661 505
					0 607 661 506
					0 607 661 507
				0 607 661 508	
		Angle drivers	3 609 202 A08	550	0 607 452 603
					0 607 452 604
					0 607 452 605
					0 607 452 606

Dimensional drawings Straight screwdrivers

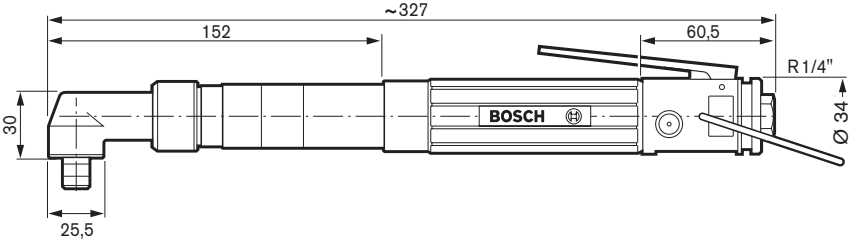
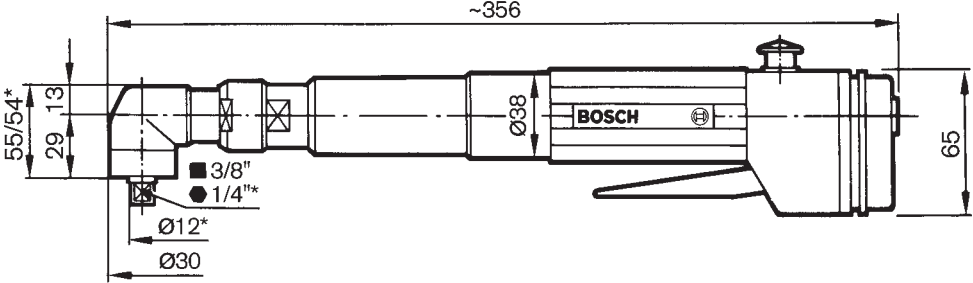
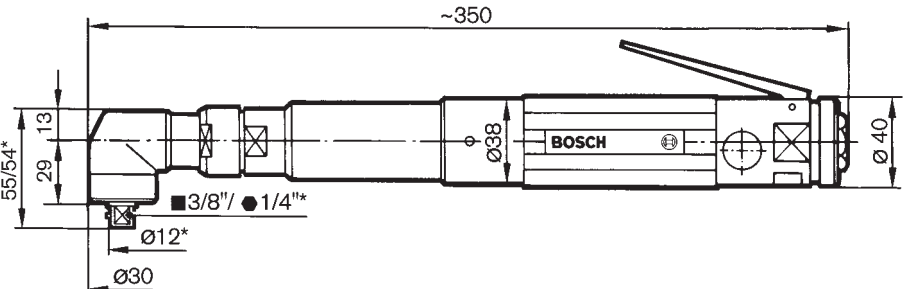
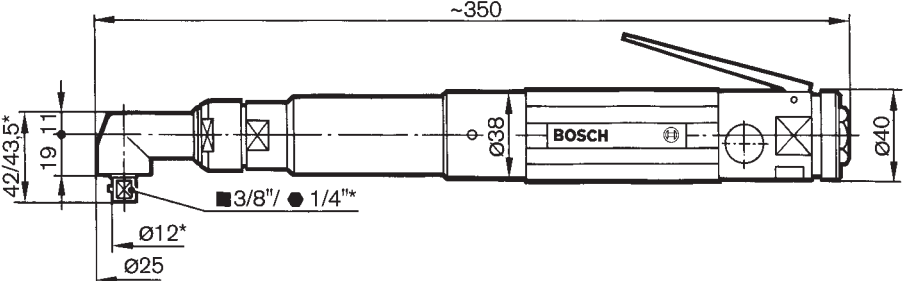
Dimensions in mm	Part number
	0 607 459 203 0 607 459 204 0 607 459 205
	0 607 454 006 0 607 454 007 0 607 454 228* 0 607 454 229 0 607 454 230 0 607 454 231 0 607 454 232 0 607 454 234 0 607 454 235 0 607 454 236 0 607 454 237 0 607 454 238 0 607 454 239*
	0 607 453 009 0 607 453 010 0 607 453 229* 0 607 453 230 0 607 453 231 0 607 453 232 0 607 453 233* 0 607 453 234* 0 607 453 235* 0 607 453 236* 0 607 453 237 0 607 453 238 0 607 453 239 0 607 453 240 0 607 453 241 0 607 453 242
	0 607 461 001 0 607 461 201 0 607 461 202 0 607 461 203 0 607 461 204 0 607 461 205 0 607 461 206 0 607 461 207 0 607 461 208 0 607 461 209

Dimensional drawings

Centre grip screwdrivers and tappers

Dimensions in mm	Part number
	0 607 453 421
	0 607 453 422
	0 607 453 429*
	0 607 453 430*
	0 607 453 431
	0 607 453 432
	0 607 453 433
	0 607 453 434*
	0 607 453 435*
	0 607 453 436
	0 607 453 437
	0 607 453 438
	0 607 453 439*
	0 607 453 440*
	0 607 453 441*
	0 607 453 442*
	0 607 453 443*
	0 607 461 401
	0 607 461 402
	0 607 461 403
	0 607 461 404
	0 607 461 405
	0 607 461 406
	0 607 461 407*
	0 607 461 408*
	0 607 461 409*
	0 607 461 410
	0 607 461 411
	0 607 461 412
	0 607 461 413

Dimensional drawings Angle shut-off wrenches

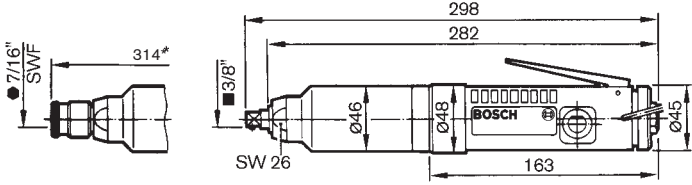
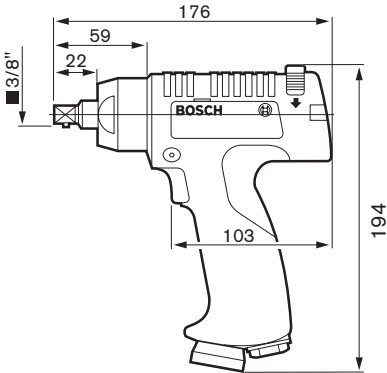
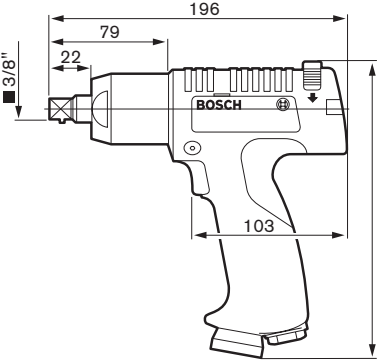
Dimensions in mm	Part number
	0 607 453 621 0 607 453 622 0 607 453 623 0 607 453 624 0 607 453 625 0 607 453 626
	0 607 451 600 0 607 451 601* 0 607 451 604
	0 607 451 602 0 607 451 603* 0 607 451 605
	0 607 451 606 0 607 451 607*

Dimensional drawings Angle shut-off wrenches

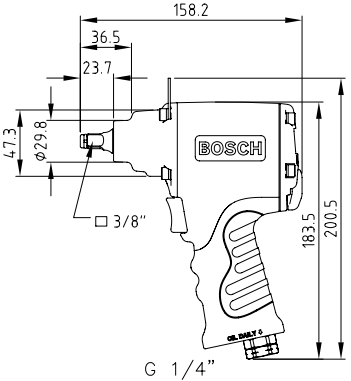
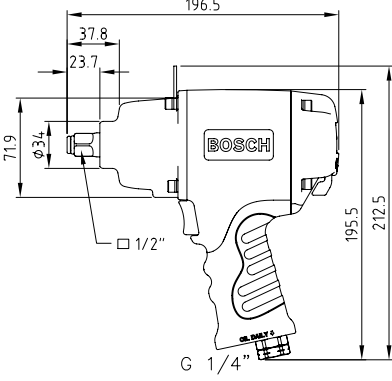
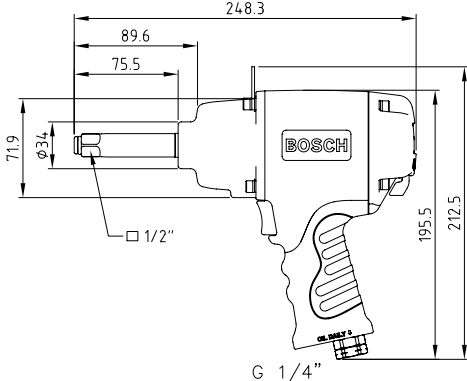
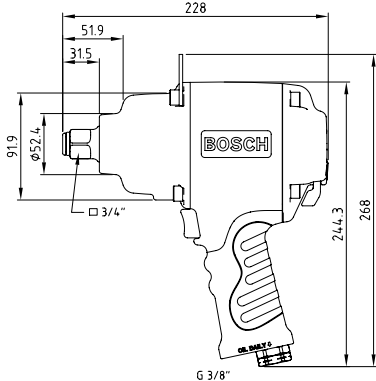
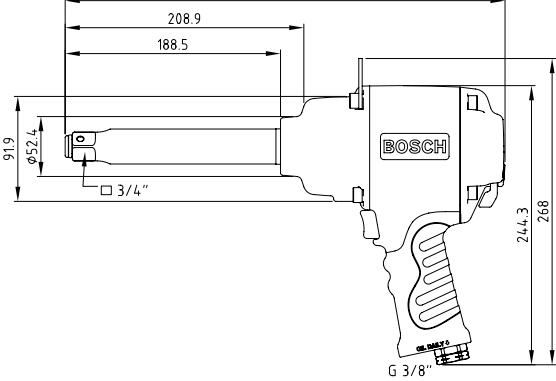
Dimensions in mm	Part number
<p>400/360*</p> <p>44/35*</p> <p>■ 3/8" ● 1/4" (Typ. 605)</p> <p>Ø35 / Ø28*</p>	0 607 461 600
	0 607 461 602
	0 607 461 604*
	0 607 461 605*
<p>391</p> <p>192</p> <p>142</p> <p>110</p> <p>43</p> <p>29.9</p> <p>31.4</p> <p>184</p> <p>36.8</p> <p>115</p> <p>38*</p> <p>35</p> <p>38</p> <p>35</p> <p>37</p> <p>51</p> <p>48</p> <p>22</p> <p>41</p>	0 607 452 603
	0 607 452 604
	0 607 452 605
<p>508</p> <p>49</p> <p>■ 1/2"</p> <p>Ø41</p>	0 607 457 600
	0 607 457 601
<p>533</p> <p>66</p> <p>14</p> <p>35</p> <p>66</p> <p>■ 1/2"</p> <p>Ø20</p> <p>Ø41</p>	0 607 457 602

Dimensional drawings

Impulse drivers

Dimensions in mm	Part number
 <p>Technical drawing of a Bosch impulse driver. Dimensions shown: 7/16" SWF, 314*, 298, 282, 3/8", SW 26, Ø46, Ø43, 163, Ø45.</p>	<p>0 607 661 101 0 607 661 102* 0 607 661 103 0 607 661 104*</p>
 <p>Technical drawing of a Bosch impulse driver. Dimensions shown: 176, 59, 22, 3/8", 103, 194.</p>	<p>0 607 661 505 0 607 661 506 0 607 661 509 0 607 661 510</p>
 <p>Technical drawing of a Bosch impulse driver. Dimensions shown: 196, 79, 22, 3/8", 103.</p>	<p>0 607 661 507 0 607 661 508</p>

Dimensional drawings Impact wrenches

Dimensions in mm	Part number
 <p>Technical drawing of a Bosch impact wrench, model G 1/4". The drawing shows the front view with the following dimensions: total length 158.2 mm, distance from front to trigger 36.5 mm, distance from front to handle 23.7 mm, handle height 47.3 mm, front diameter $\varnothing 29.8$ mm, and a square hole of size 3/8". The overall height is 200.5 mm, and the distance from the front to the handle is 183.5 mm.</p>	<p>0 607 450 614</p>
 <p>Technical drawing of a Bosch impact wrench, model G 1/4". The drawing shows the front view with the following dimensions: total length 196.5 mm, distance from front to trigger 37.8 mm, distance from front to handle 23.7 mm, handle height 71.9 mm, front diameter $\varnothing 34$ mm, and a square hole of size 1/2". The overall height is 212.5 mm, and the distance from the front to the handle is 195.5 mm.</p>	<p>0 607 450 615</p>
 <p>Technical drawing of a Bosch impact wrench, model G 1/4". The drawing shows the front view with the following dimensions: total length 248.3 mm, distance from front to trigger 89.6 mm, distance from front to handle 75.5 mm, handle height 71.9 mm, front diameter $\varnothing 34$ mm, and a square hole of size 1/2". The overall height is 212.5 mm, and the distance from the front to the handle is 195.5 mm.</p>	<p>0 607 450 618</p>
 <p>Technical drawing of a Bosch impact wrench, model G 3/8". The drawing shows the front view with the following dimensions: total length 228 mm, distance from front to trigger 51.9 mm, distance from front to handle 31.5 mm, handle height 91.9 mm, front diameter $\varnothing 52.4$ mm, and a square hole of size 3/4". The overall height is 268 mm, and the distance from the front to the handle is 244.3 mm.</p>	<p>0 607 450 616</p>
 <p>Technical drawing of a Bosch impact wrench, model G 3/8". The drawing shows the front view with the following dimensions: total length 385 mm, distance from front to trigger 208.9 mm, distance from front to handle 188.5 mm, handle height 91.9 mm, front diameter $\varnothing 52.4$ mm, and a square hole of size 3/4". The overall height is 268 mm, and the distance from the front to the handle is 244.3 mm.</p>	<p>0 607 450 619</p>

The specified dimensions are not binding.



Accessories

Spring pull and hose pull balancers

- ▶ Robust metal safety hanger including spring hook
- ▶ Bowden cable with high-quality distributor valve and safety coupling for uniform pulling out behaviour
- ▶ Spring fracture safety device for balancers with a load greater than 3 kg
- ▶ Cable change possible without disassembly of the spring drum
- ▶ Easy change of the weight class due to modular structure

For loads of 0.3 kg to 17 kg

Balancer



Balancer



Balancer



Balancer



Hose pull balancer



Part number

0 607 950 920

0 607 950 921

0 607 950 922

0 607 950 923

0 607 950 931

0 607 950 937

0 607 950 924

0 607 950 925

0 607 950 926

0 607 950 927

0 607 950 928

0 607 950 938

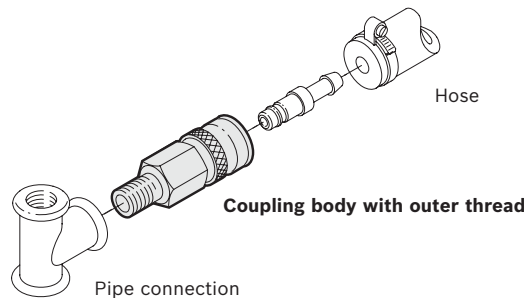
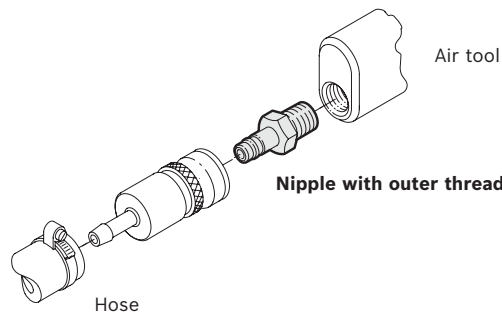
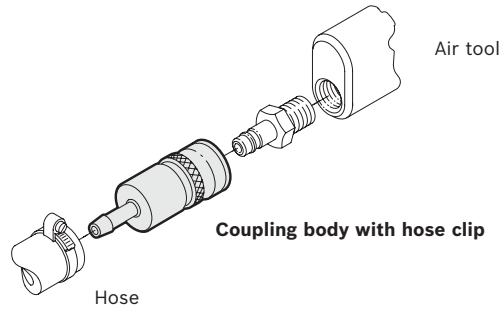
0 607 950 939

0 607 950 940

Min. load (kg)	Max. load (kg)	Max. stroke (mm)	Weight (kg)	Comments
0.3	1.2	1200	0.5	Retractor with adjustable load bearing range
0.6	1	2000	0.7	Retractor with adjustable load bearing range
1	2	2000	0.7	
2	3	2000	0.8	
0.5	2	2000	0.7	Retractor with adjustable load bearing range and lock
1.5	3	2000	0.8	
3	5	2000	3	Retractor with adjustable load bearing range
6	8	2000	3.2	
8	10	2000	3.4	
9	14	2000	3.4	Balancer with adjustable load bearing range
13	17	2000	3.6	
0.4	1.2	800	1.2	Retractor with adjustable load bearing range; Balancer equipped with quick-fastening coupling 1 609 233 009
1.2	2.2	800	1.2	The Bowden cable normally used does not feature on these balancers and is replaced with the air supply hose.
2.2	3	800	1.2	Hose diameter 5 mm

Your specialist retailer can provide you with information on the complete range of quality accessories.

Quick-fastening couplings



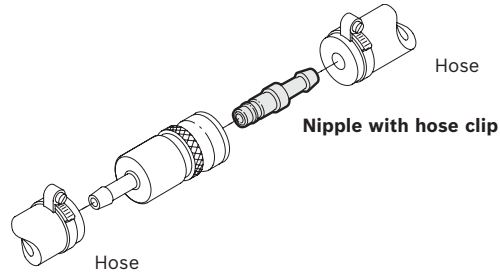
Accessories part number
1 609 233 008
1 609 233 009
1 609 233 010
1 609 233 011
1 609 233 012
1 609 233 013
1 609 233 014
1 609 233 015
1 609 233 016
1 609 233 034
1 609 233 035
1 609 233 036
1 609 233 037
1 609 233 038
1 609 233 039
1 609 233 040
1 609 233 017
1 609 233 018
1 609 233 019
1 609 233 020
1 609 233 021
1 609 233 022

*Couplings with different air admission cannot be coupled to each other.

Air admission (l/s) at 6 bar and 0.5 bar pressure loss*	Hose connection dia. (mm)	(inches)	Thread connection
33	6	1/4"	-
69.9			
33	8	5/16"	-
69.9			
33	10	3/8"	-
69.9			
33	13	1/2"	-
69.9			
66.5	6	5/16"	-
140.9			
66.5	10	3/8"	-
140.9			
66.5	13	1/2"	-
140.9			
66.5	16	5/8"	-
140.9			
66.5	19	3/4"	-
140.9			
33	-	-	G 1/8"
69.9			
33	-	-	G 1/4"
69.9			
33	-	-	G 3/8"
69.9			
33	-	-	G 1/2"
69.9			
66.5	-	-	G 1/4"
140.9			
66.5	-	-	G 3/8"
140.9			
66.5	-	-	G 1/2"
140.9			
33	-	-	G 1/4"
69.9			
33	-	-	G 3/8"
69.9			
33	-	-	G 1/2"
69.9			
66.5	-	-	G 3/8"
140.9			
66.5	-	-	G 1/2"
140.9			
66.5	-	-	G 3/4"
140.9			

Your specialist retailer can provide you with information on the complete range of quality accessories.

Quick-fastening couplings



Accessories part number
1 609 233 024
1 609 233 025
1 609 233 026
1 609 233 027
1 609 233 028
1 609 233 029
1 609 233 030
1 609 233 031
1 609 233 032
1 609 233 033

*Couplings with different air admission cannot be coupled to each other.

Air admission (l/s) at 6 bar and 0.5 bar pressure loss*	Hose connection dia. (mm)	(inches)	Thread connection
33	6	1/4"	–
69.9			
33	8	5/16"	–
69.9			
33	10	3/8"	–
69.9			
33	13	1/2"	–
69.9			
66.5	6	1/4"	–
140.9			
66.5	8	5/16"	–
140.9			
66.5	10	3/8"	
140.9			
66.5	13	1/2"	–
140.9			
66.5	16	5/8"	
140.9			
66.5	19	3/4"	
140.9			

Dimensional drawings Balancers

Dimensions in mm					with cable pull	Part number
a	b	c	d	e	f	
70	67	33	100	215	1200	0 607 950 920
-	58.5	37	120	310	2000	0 607 950 921
-	58.5	37	120	310	2000	0 607 950 922
-	58.5	37	120	310	2000	0 607 950 923
168	77	48	175	440	2000	0 607 950 924
168	77	48	175	440	2000	0 607 950 925
168	77	48	175	440	2000	0 607 950 926
188	130	-	180	400	2000	0 607 950 927
188	130	-	180	400	2000	0 607 950 928
-	63.5	42	120	310	2000	0 607 950 931
-	63.5	42	120	310	2000	0 607 950 937

Dimensional drawings Hose pull balancers

Dimensions in mm					Part number
a	b	c	d	e	
140	81	141	-	800	0 607 950 938
140	81	141	440	800	0 607 950 939
140	81	141	440	800	0 607 950 940

The specified dimensions are not binding.



Motors

Motors

- ▶ Safe, versatile, extremely resilient
- ▶ Reliable in continuous use
- ▶ No sparks are formed in the motor
- ▶ No burn-out
- ▶ CLEAN technology

From 100 to 370 watts

Motor 100/120 watts



Motor 180 watts



CLEAN

Part number	Choke torque (Nm)	No-load speed (rpm)
0 607 954 306	2.0	1850
0 607 954 307	0.9	4100
0 607 954 304	2.1	2200
0 607 954 305	1.0	4900
0 607 953 335	6.5	620
0 607 953 336	4.5	1000
0 607 953 337	3.0	1600
0 607 953 338	1.5	2800
0 607 953 340	1.0	3800
0 607 953 346	4.5	1000
0 607 953 348	1.5	2800
0 607 953 331	7.7	740
0 607 953 332	4.7	1190
0 607 953 333	3.2	1875
0 607 953 334	1.6	3300
0 607 953 339	1.1	4500

Direction of rotation R = to the right L = to the left	Power output (W)	Air consumption under load (l/s)/ (cfm)	Weight (kg)	Spindle dimensions	Connecting thread	Hose inner diameter (mm)	Operating curve	Comments	Comes complete with		
R/L	100	5.0	0.37	3/8"-24 UNF-2A	G 1/8"	6	69258	Activation via separate valve, no valve built in. Max. axial load of motor shaft $F_{AX} = 250$ N Max. radial load of motor shaft $F_{RA} = 10$ N	Hose nipple G 1/8" Silencer G 1/4"		
		10.6									
R/L	100	5.0	0.32	3/8"-24 UNF-2A	G 1/8"	6	73928				
		10.6									
R	120	4.5	0.37	3/8"-24 UNF-2A	G 1/8"	6	66879				
		9.5									
R	120	4.5	0.32	3/8"-24 UNF-2A	G 1/8"	6	71580				
		9.5									
R/L	180	5.5	0.68	3/8"-24 UNF-2A	G 1/8"	6	41437			Activation via separate valve, no valve built in. Max. axial load of motor shaft $F_{AX} = 400$ N Max. radial load of motor shaft $F_{RA} = 16$ N	Hose nipple G 1/8" Silencer G 1/4"
		11.6									
R/L	180	5.5	0.68	3/8"-24 UNF-2A	G 1/8"	6	43748				
		11.6									
R/L	180	5.5	0.60	3/8"-24 UNF-2A	G 1/8"	6	48382				
		11.6									
R/L	180	5.5	0.68	3/8"-24 UNF-2A	G 1/8"	6	41655				
		11.6									
R/L	180	5.5	0.60	3/8"-24 UNF-2A	G 1/8"	6	55869				
		11.6									
R/L	180	5.5	0.68	Cyl. shaft dia. 10 h 6	G 1/8"	6	46075	Similar to Fig. on Page 70 Part no. 0 607 951 325			
		11.6									
R/L	180	5.5	0.60	Cyl. shaft dia. 10 h 6	G 1/8"	6	41746				
		11.6									
R	180	5.0	0.68	3/8"-24 UNF-2A	G 1/8"	6	87354				
		10.6									
R	180	5.0	0.68	3/8"-24 UNF-2A	G 1/8"	6	89544				
		10.6									
R	180	5.0	0.60	3/8"-24 UNF-2A	G 1/8"	6	41407				
		10.6									
R	180	5.0	0.60	3/8"-24 UNF-2A	G 1/8"	6	43841				
		10.6									
R	180	5.0	0.60	3/8"-24 UNF-2A	G 1/8"	6	53529				
		10.6									

Motors

- ▶ Safe, versatile, extremely resilient
- ▶ Reliable in continuous use
- ▶ No sparks are formed in the motor
- ▶ No burn-out
- ▶ CLEAN technology

From 100 to 370 watts

Motor 300/340/370 watts



Part number	Choke torque (Nm)	No-load speed (rpm)
0 607 951 304	25.0	490
0 607 951 305	15.0	780
0 607 951 306	9.0	1400
0 607 951 307	4.5	2700
0 607 951 300	25.0	600
0 607 951 301	15.0	930
0 607 951 302	9.0	1620
0 607 951 303	4.5	3330
0 607 951 322	22.0	540
0 607 951 314	25.0	490
0 607 951 315	15.0	780
0 607 951 316	9.0	1400
0 607 951 311	25.0	600
0 607 951 312	15.0	930
0 607 951 313	9.0	1620

Motor 340/370 watts



Direction of rotation R = to the right L = to the left	Power output (W)	Air consumption under load (l/s)/(cfm)	Weight (kg)	Spindle dimensions	Connecting thread	Hose inner diameter (mm)	Operating curve	Comments	Comes complete with	
R/L	340	10.5	0.90	3/8"-24 UNF-2A	G 1/8"	8	130695	Activation via separate valve, no valve built in. Max. axial load of motor shaft $F_{AX} = 850$ N Max. radial load of motor shaft $F_{RA} = 34$ N	Hose nipple G 1/8" Silencer G 3/8"	
		22.2								
R/L	340	10.5	0.90	3/8"-24 UNF-2A	G 1/8"	8	146107			
		22.2								
R/L	340	10.5	0.90	3/8"-24 UNF-2A	G 1/8"	8	60628			
		22.2								
R/L	340	10.5	0.80	3/8"-24 UNF-2A	G 1/8"	8	102389			
		22.2								
R	370	9.0	0.90	3/8"-24 UNF-2A	G 1/8"	8	114435			
		19.1								
R	370	9.0	0.90	3/8"-24 UNF-2A	G 1/8"	8	120664			
		19.1								
R	370	9.0	0.90	3/8"-24 UNF-2A	G 1/8"	8	108461			
		19.1								
R	370	9.0	0.80	3/8"-24 UNF-2A	G 1/8"	8	123762			
		19.1								
R	370	9.0	0.90	3/8"-24 UNF-2A	G 1/8"	8	105449	with underblow for better start-up under load		
		19.1								
R/L	340	10.5	0.87	3/8" □	G 1/8"	8	130695	Activation via separate valve, no valve built in. Max. axial load of motor shaft $F_{AX} = 850$ N Max. radial load of motor shaft $F_{RA} = 34$ N	Hose nipple G 1/8" Silencer G 3/8"	
		22.2								
R/L	340	10.5	0.87	3/8" □	G 1/8"	8	146107			
		22.2								
R/L	340	10.5	0.87	3/8" □	G 1/8"	8	60628			
		22.2								
R	370	9.0	0.87	3/8" □	G 1/8"	8	102389			
		19.1								
R	370	9.0	0.87	3/8" □	G 1/8"	8	114435			
		19.1								
R	370	9.0	0.87	3/8" □	G 1/8"	8	120664			
		19.1								

Motors

- ▶ Stirring or pumping liquid media
- ▶ Rolling e.g. hoses
- ▶ Adjusting, lifting and lowering e.g. roller blinds
- ▶ Tensioning straps

From 340 to 740 watts

Motor 340 watts



Part number	Choke torque (Nm)	No-load speed (rpm)
0 607 951 325	25.0	490
0 607 951 326	9.0	1400
0 607 951 318	25.0	490

Motor 340 watts



0 607 951 323	25.0	490

Motor 500/550 watts



0 607 952 303	28.0	650
0 607 952 304	15.5	1150
0 607 952 305	6.5	2700
0 607 952 300	28.0	760
0 607 952 301	15.5	1350
0 607 952 302	6.5	3000

Motor 620/740 watts



0 607 957 301	36.0	610
0 607 957 300	36.0	720

Direction of rotation R = to the right L = to the left	Power output (W)	Air consumption under load (l/s)	Weight (kg)	Spindle dimensions	Connecting thread	Hose inner diameter (mm)	Operating curve	Comments	Comes complete with
R/L	340	10.5	0.90	Cyl. shaft dia. 12 j 6	G 1/8"	8	140024	Activation via separate valve, no valve built in. Max. axial load of motor shaft $F_{AX} = 850$ N Max. radial load of motor shaft $F_{RA} = 34$ N	Hose nipple G 1/8" Silencer G 3/8"
		22.2							
R/L	340	10.5	0.90	Cyl. shaft dia. 12 j 6	G 1/8"	8	63039		
		22.2							
R/L	340	10.5	0.90	Cyl. shaft dia. 10 h 6	G 1/8"	8	133837		
		22.2							
R/L	340	10.5	0.98	3/8" □ with	G 1/8"	8	136982	Activation via separate valve, no valve built in. Max. axial load of motor shaft $F_{AX} = 850$ N Max. radial load of motor shaft $F_{RA} = 34$ N	Hose nipple G 1/8" Silencer G 3/8"
		22.2	Axial balancing						
			10 mm stroke						
R/L	500	13.5	1.40	1/2"-20 UNF-2A	G 1/4"	10	98637	Activation via separate valve, no valve built in. Ventilation of the direction of rotation not being used. Max. axial load of motor shaft $F_{AX} = 1250$ N Max. radial load of motor shaft $F_{RA} = 50$ N	Hose nipple G 1/4" Silencer G 1/2"
		28.6							
R/L	500	13.5	1.40	1/2"-20 UNF-2A	G 1/4"	10	101085		
		28.6							
R/L	500	13.5	1.20	1/2"-20 UNF-2A	G 1/4"	10	103255		
		28.6							
R	550	12.0	1.40	1/2"-20 UNF-2A	G 1/4"	10	91348		
		25.4							
R	550	12.0	1.40	1/2"-20 UNF-2A	G 1/4"	10	93841		
		25.4							
R	550	12.0	1.20	1/2"-20 UNF-2A	G 1/4"	10	96270		
		25.4							
R/L	620	17.5	1.32	1/2"-20 UNF-2A	G 1/4"	10	71359	Activation via separate valve, no valve built in. Max. axial load of motor shaft $F_{AX} = 1550$ N Max. radial load of motor shaft $F_{RA} = 62$ N	Hose nipple G 1/4" Silencer G 1/2"
		37.0							
R	740	16.0	1.32	1/2"-20 UNF-2A	G 1/4"	10	66678		
		33.9							

Motors

- ▶ Stirring or pumping liquid media
- ▶ Rolling e.g. hoses
- ▶ Adjusting, lifting and lowering e.g. roller blinds
- ▶ Tensioning straps

From 340 to 740 watts

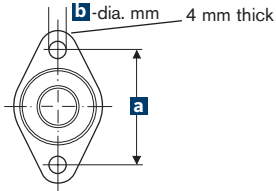
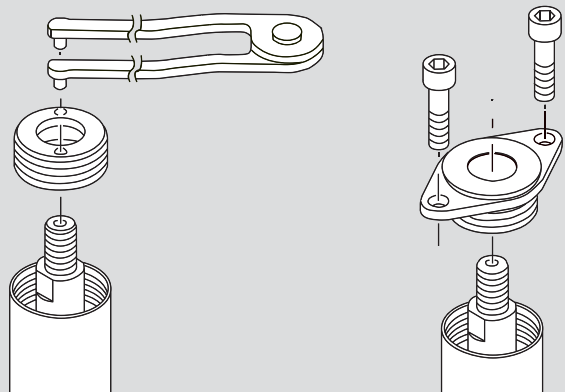



Motor 620/740 watts



Part number	Choke torque (Nm)	No-load speed (rpm)
0 607 957 308	90.0	250
0 607 957 309	65.0	340
0 607 957 310	36.0	610
0 607 957 315	36.0	610
0 607 957 314	170.0	140
0 607 957 305	90.0	290
0 607 957 306	65.0	400
0 607 957 307	36.0	720
0 607 957 317	160.0	120

Direction of rotation R = to the right L = to the left	Power output (W)	Air consumption under load (l/s)	Weight (kg)	Spindle dimensions	Connecting thread	Hose inner diameter (mm)	Operating curve	Comments	Comes complete with
R/L	620	17.5	2.10	1/2"□	G 1/4"	10	49375	Activation via separate valve, no valve built in. Max. axial load of motor shaft $F_{AX} = 1550$ N Max. radial load of motor shaft $F_{RA} = 62$ N	Hose nipple G 1/4" Silencer G 1/2"
		37.0							
R/L	620	17.5	1.70	1/2"□	G 1/4"	10	51707		
		37.0							
R/L	620	17.5	1.70	1/2"□	G 1/4"	10	73715		
		37.0							
R/L	620	17.5	1.70	Cyl. shaft dia. 12 j 6	G 1/4"	10	76035		
		37.0							
R	740	16.0	2.10	1/2"□	G 1/4"	10	54209		
		33.9							
R	740	16.0	2.10	1/2"□	G 1/4"	10	78289		
		33.9							
R	740	16.0	1.70	1/2"□	G 1/4"	10	80557		
		33.9							
R	740	16.0	1.70	1/2"□	G 1/4"	10	68988		
		33.9							
R/L	620	17.5	2.10	1/2"□	G 1/4"	10			
		37.0							

Accessories for motors

		Part number	For motors in the model series	Thread	Dimensions in mm																										
					a	b																									
Mounting flange																															
		<table border="1"> <tr> <td>3 605 700 043</td> <td>120 W</td> <td>M 26 x 1 Left</td> <td>51</td> <td>7</td> </tr> <tr> <td>3 605 700 044</td> <td>180 W</td> <td>M 30 x 1 Left</td> <td>51</td> <td>7</td> </tr> <tr> <td>3 605 700 045</td> <td>370 W/300 W</td> <td>M 35 x 1 Left</td> <td>57</td> <td>7</td> </tr> <tr> <td>3 605 700 046</td> <td>550 W/740 W</td> <td>M 45 x 1 Left</td> <td>70</td> <td>9</td> </tr> <tr> <td>3 605 700 047</td> <td>740 W</td> <td>M 50 x 1 Left</td> <td>70</td> <td>9</td> </tr> </table>					3 605 700 043	120 W	M 26 x 1 Left	51	7	3 605 700 044	180 W	M 30 x 1 Left	51	7	3 605 700 045	370 W/300 W	M 35 x 1 Left	57	7	3 605 700 046	550 W/740 W	M 45 x 1 Left	70	9	3 605 700 047	740 W	M 50 x 1 Left	70	9
3 605 700 043	120 W	M 26 x 1 Left	51	7																											
3 605 700 044	180 W	M 30 x 1 Left	51	7																											
3 605 700 045	370 W/300 W	M 35 x 1 Left	57	7																											
3 605 700 046	550 W/740 W	M 45 x 1 Left	70	9																											
3 605 700 047	740 W	M 50 x 1 Left	70	9																											
<p>Fitting the mounting flange Unscrew the threaded ring with a hook spanner (left-hand thread!) and screw in the mounting flange. The motor can be bolted on to the mounting flange at the clamping device with two screws.</p>																															
Axial balancing																															
1/4" hex		1/4" QRC	3 607 030 018																												
Quick-release chuck																															
3/8"-24 UNF-2A		1/4" QRC	3 608 577 000																												
Collet chuck																															
3/8"-24 UNF-2A		<p>3/8" thread. Can only be used with separately ordered collet (e.g. dia. 6 mm 2 608 570 079) and locking nut 3 603 342 001.</p>	3 608 570 003 Can also be used for drills	0 607 154 101 0 607 153 103 ... 106 0 607 153 520 ... 525																											
Drill chuck, capacity 1 – 13 mm																															
Keyed chuck for drill spindle thread 1/2"-20 UNF-2A			1 608 571 030																												
Keyless chuck for drill spindle thread 1/2"-20 UNF-2A			1 608 572 024																												
Keyed chuck for drill spindle thread 3/8"-24 UNF-2A			1 608 571 020																												
Keyless chuck for drill spindle thread 3/8"-24 UNF-2A			1 608 572 067																												

Your specialist retailer can provide you with information on the complete range of quality accessories.

Motors, technical data

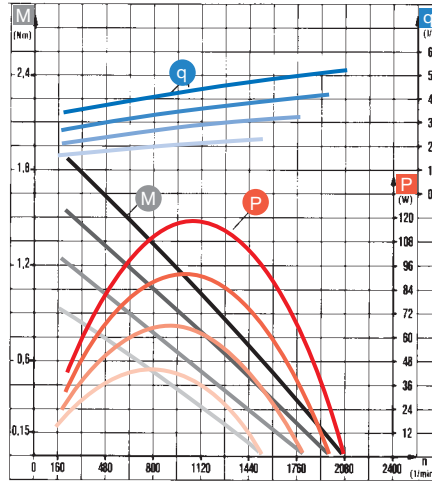
**Air motors
in the 120 W model series,
air connection 6 mm
inner diameter**

Operating curves:

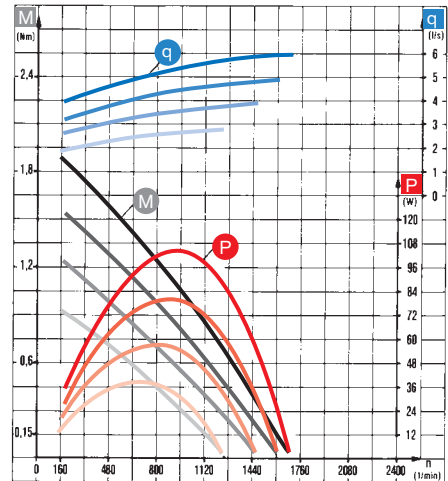
- M Torque
- P Power
- q Air consumption

at 6.3 bar — — —
 5.3 bar — — —
 4.3 bar — — —
 3.3 bar — — —

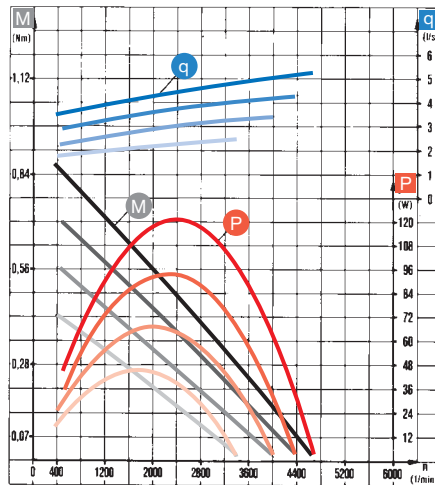
0 607 954 304
120 W series
R
Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at
6.3 bar = 2.1 Nm
5.3 bar = 1.9 Nm
4.3 bar = 1.5 Nm
3.3 bar = 1.1 Nm



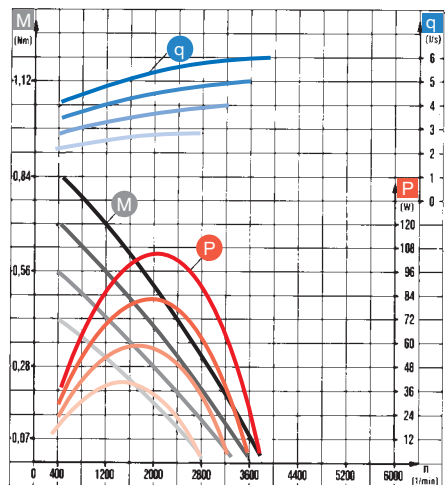
0 607 954 306
120 W series
R/L
Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at
6.3 bar = 2.0 Nm
5.3 bar = 1.8 Nm
4.3 bar = 1.4 Nm
3.3 bar = 1.0 Nm



0 607 954 305
120 W series
R
Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at
6.3 bar = 1.0 Nm
5.3 bar = 0.9 Nm
4.3 bar = 0.7 Nm
3.3 bar = 0.5 Nm



0 607 954 307
120 W series
R/L
Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at
6.3 bar = 0.9 Nm
5.3 bar = 0.8 Nm
4.3 bar = 0.6 Nm
3.3 bar = 0.5 Nm



Motors, technical data

Air motors in the 180 W model series, air connection 6 mm inner diameter

Operating curves:

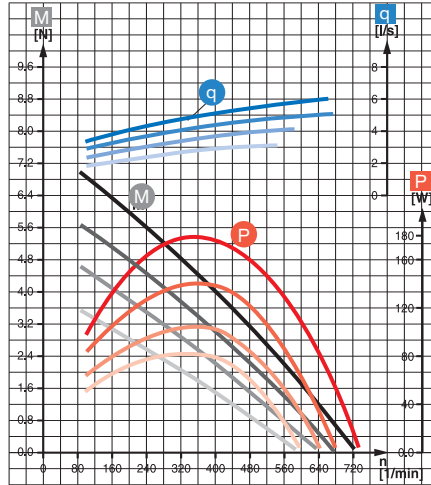
- M Torque
- P Power
- q Air consumption

at 6.3 bar

0 607 953 331
180 W series
R

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

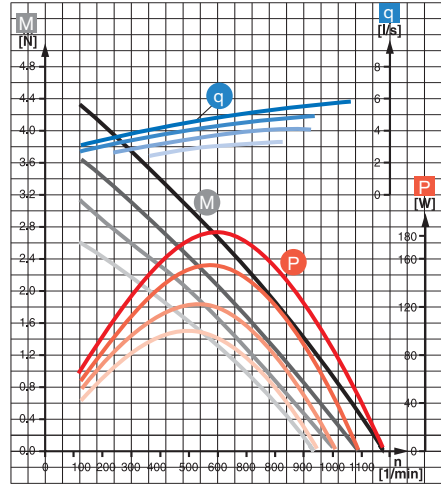
6.3 bar = 7.7 Nm
5.3 bar = 6.4 Nm
4.3 bar = 5.2 Nm
3.3 bar = 4.1 Nm



0 607 953 332
180 W series
R

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

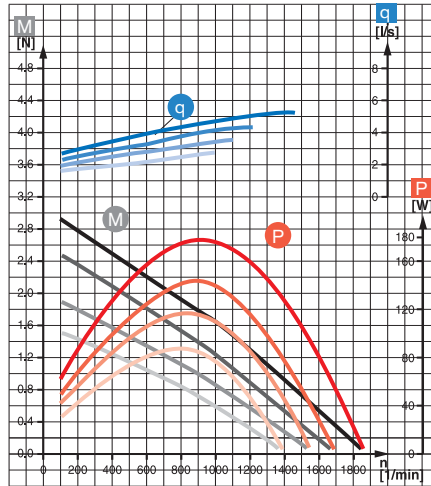
6.3 bar = 4.7 Nm
5.3 bar = 4.0 Nm
4.3 bar = 3.5 Nm
3.3 bar = 2.9 Nm



0 607 953 333
180 W series
R

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

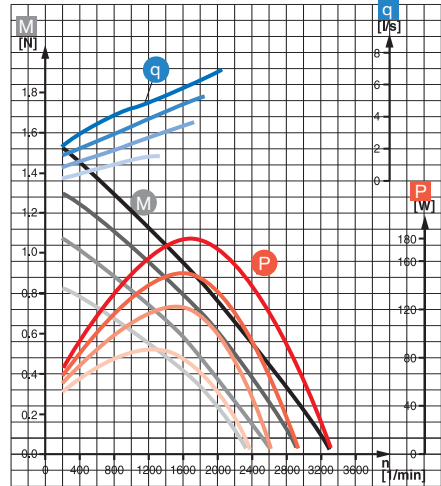
6.3 bar = 3.2 Nm
5.3 bar = 2.6 Nm
4.3 bar = 2.0 Nm
3.3 bar = 1.6 Nm



0 607 953 334
180 W series
R

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

6.3 bar = 1.6 Nm
5.3 bar = 1.3 Nm
4.3 bar = 1.1 Nm
3.3 bar = 0.9 Nm



Motors, technical data

Air motors in the 180 W model series, air connection 6 mm inner diameter

Operating curves:

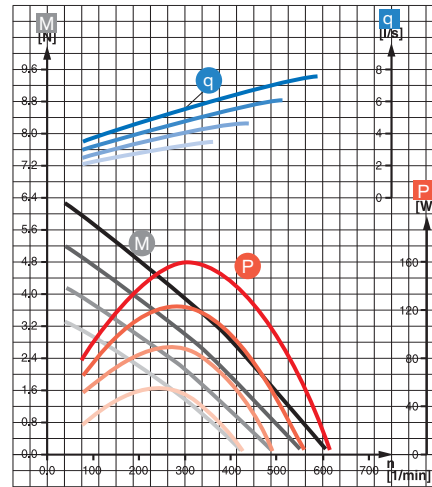
- M Torque
- P Power
- q Air consumption

at 6.3 bar — — —
 5.3 bar — — —
 4.3 bar — — —
 3.3 bar — — —

0 607 953 335
180 W series
R/L

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

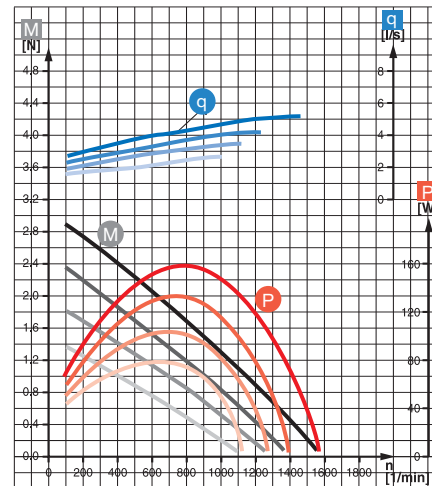
6.3 bar = 6.5 Nm
5.3 bar = 5.5 Nm
4.3 bar = 4.4 Nm
3.3 bar = 3.6 Nm



0 607 953 337
180 W series
R/L

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

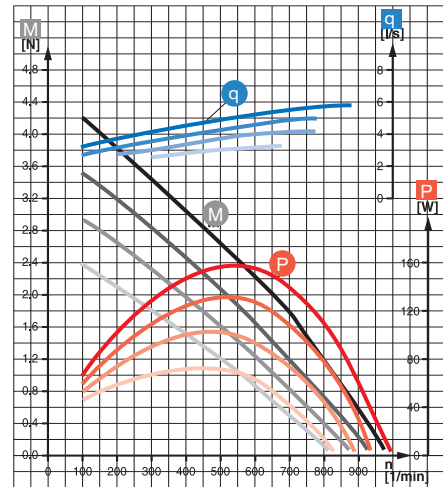
6.3 bar = 2.9 Nm
5.3 bar = 2.3 Nm
4.3 bar = 1.8 Nm
3.3 bar = 1.4 Nm



0 607 953 336
0 607 953 346
180 W series
R/L

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

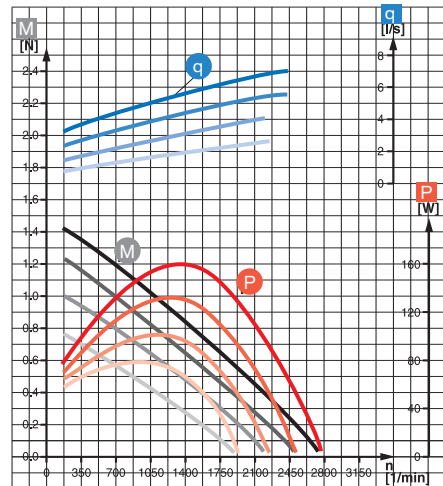
6.3 bar = 4.5 Nm
5.3 bar = 3.9 Nm
4.3 bar = 3.2 Nm
3.3 bar = 2.6 Nm



0 607 953 338
0 607 953 348
180 W series
R/L

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

6.3 bar = 1.4 Nm
5.3 bar = 1.2 Nm
4.3 bar = 1.0 Nm
3.3 bar = 0.8 Nm



Motors, technical data

Air motors in the 180 W model series, air connection 6 mm inner diameter

Operating curves:

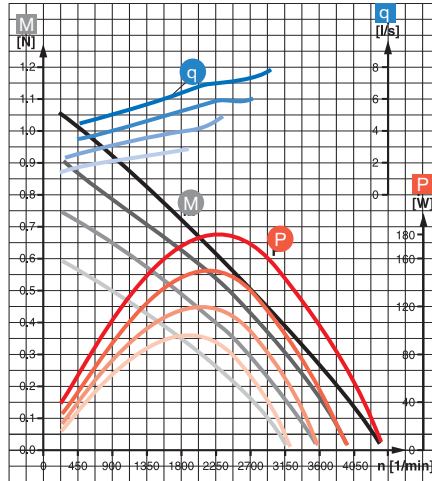
- M Torque
- P Power
- q Air consumption

- at 6.3 bar ————
- 5.3 bar ————
- 4.3 bar ————
- 3.3 bar ————

0 607 953 339
180 W series
R

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

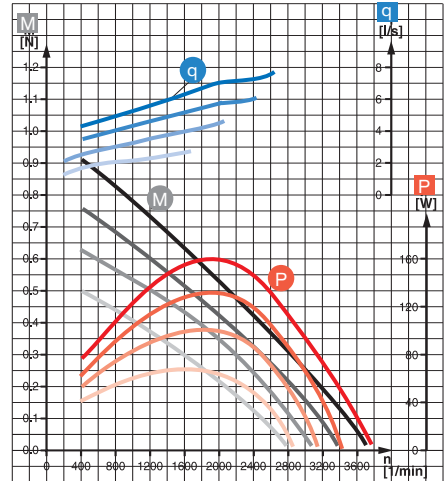
6.3 bar = 1.1 Nm
5.3 bar = 0.9 Nm
4.3 bar = 0.7 Nm
3.3 bar = 0.5 Nm



0 607 953 340
180 W series
R/L

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

6.3 bar = 1.0 Nm
5.3 bar = 0.9 Nm
4.3 bar = 0.7 Nm
3.3 bar = 0.5 Nm



Air motors in the 370 W model series, air connection 8 mm inner diameter

Operating curves:

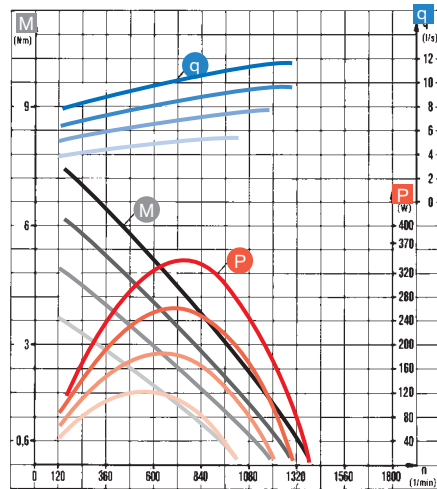
- M Torque
- P Power
- q Air consumption

- at 6.3 bar ————
- 5.3 bar ————
- 4.3 bar ————
- 3.3 bar ————

0 607 951 306
0 607 951 316
0 607 951 326
370 W series
R/L

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

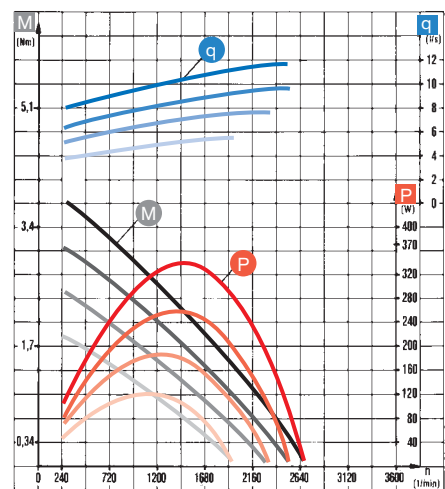
6.3 bar = 9.0 Nm
5.3 bar = 7.5 Nm
4.3 bar = 6.0 Nm
3.3 bar = 4.5 Nm



0 607 951 307
370 W series
R/L

Choke torque in "soft"
screwdriving applica-
tion (720° tightening
angle) at

6.3 bar = 4.5 Nm
5.3 bar = 3.5 Nm
4.3 bar = 3.0 Nm
3.3 bar = 2.0 Nm



Motors, technical data

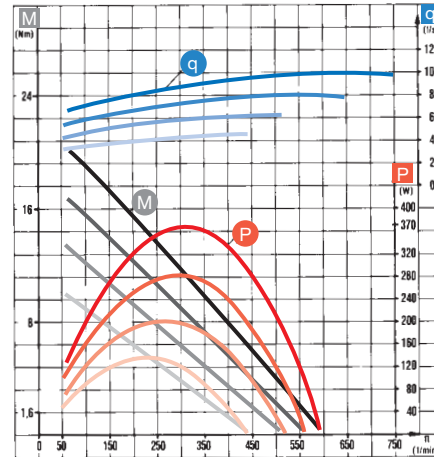
Air motors in the 370 W model series, air connection 10 mm inner diameter

Operating curves:

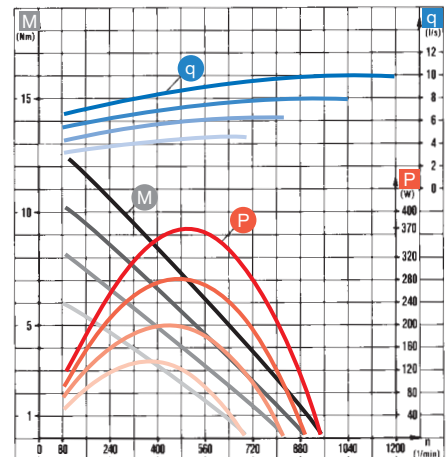
- M Torque
- P Power
- q Air consumption

at 6.3 bar ————
5.3 bar ————
4.3 bar ————
3.3 bar ————

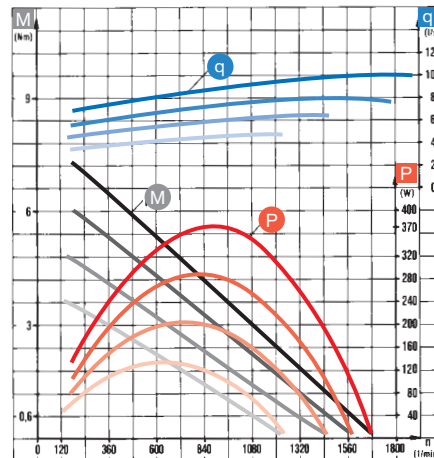
0 607 951 300 Choke torque in "soft" 6.3 bar = 25.6 Nm
0 607 951 311 screwdriving applica- 5.3 bar = 20.5 Nm
0 607 951 322 tion (720° tightening 4.3 bar = 16.5 Nm
370 W series angle) at 3.3 bar = 12.5 Nm
R



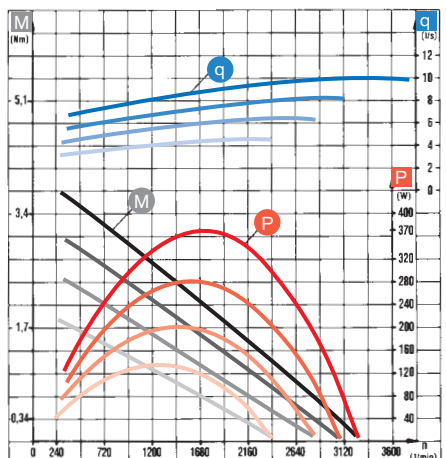
0 607 951 301 Choke torque in "soft" 6.3 bar = 15.0 Nm
0 607 951 312 screwdriving applica- 5.3 bar = 12.5 Nm
370 W series angle) at 4.3 bar = 10.0 Nm
R 3.3 bar = 7.5 Nm



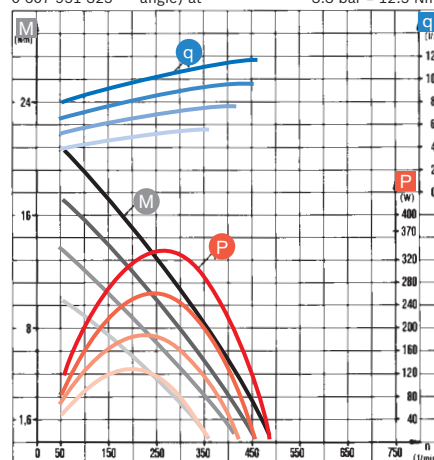
0 607 951 302 Choke torque in "soft" 6.3 bar = 9.0 Nm
0 607 951 313 screwdriving applica- 5.3 bar = 7.5 Nm
370 W series angle) at 4.3 bar = 6.0 Nm
R 3.3 bar = 4.5 Nm



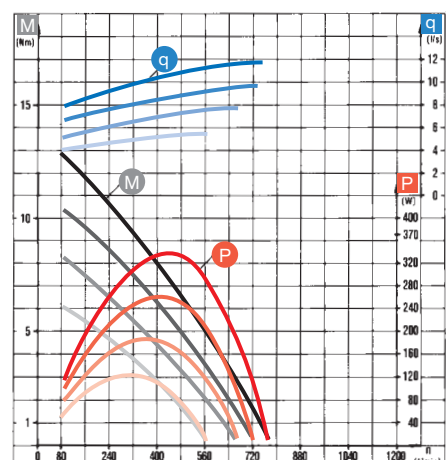
0 607 951 303 Choke torque in "soft" 6.3 bar = 4.5 Nm
370 W series angle) at 5.3 bar = 3.5 Nm
R 4.3 bar = 3.0 Nm
3.3 bar = 2.0 Nm



0 607 951 304 370 W series, R/L Choke torque in "soft" 6.3 bar = 25.0 Nm
0 607 951 314 screwdriving applica- 5.3 bar = 20.5 Nm
0 607 951 318 tion (720° tightening 4.3 bar = 16.5 Nm
0 607 951 323 angle) at 3.3 bar = 12.5 Nm
0 607 951 325 R/L



0 607 951 305 Choke torque in "soft" 6.3 bar = 15.0 Nm
0 607 951 315 screwdriving applica- 5.3 bar = 12.5 Nm
370 W series angle) at 4.3 bar = 10.0 Nm
R/L 3.3 bar = 7.5 Nm



Motors, technical data

Air motors in the 550 W model series, air connection 10 mm inner diameter

Operating curves:

- M Torque
- P Power
- q Air consumption

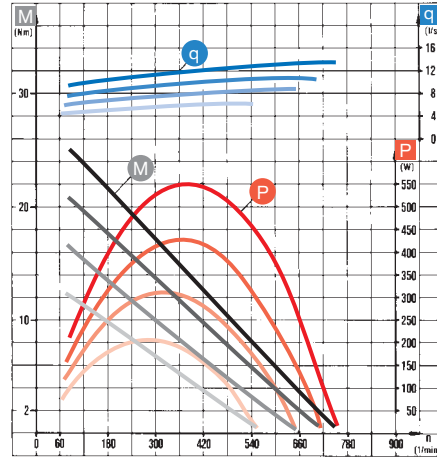
at 6.3 bar

5.3 bar

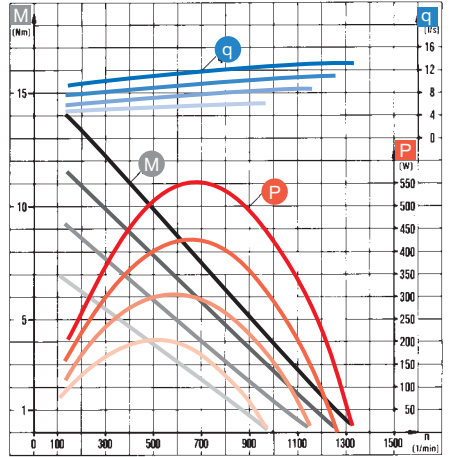
4.3 bar

3.3 bar

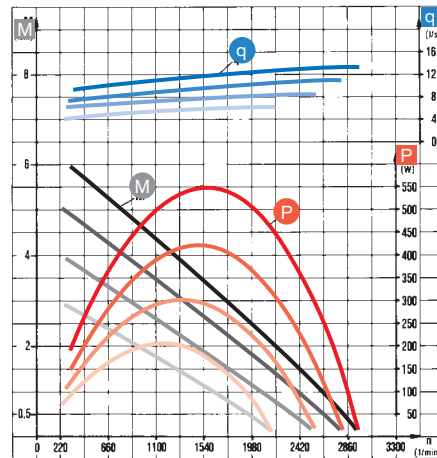
0 607 952 300 550 W series R
Choke torque in "soft" screwdriving application (720° tightening angle) at
6.3 bar = 28.0 Nm
5.3 bar = 23.6 Nm
4.3 bar = 18.5 Nm
3.3 bar = 14.0 Nm



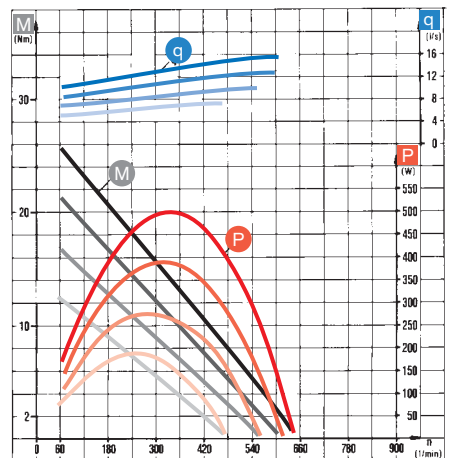
0 607 952 301 550 W series R
Choke torque in "soft" screwdriving application (720° tightening angle) at
6.3 bar = 15.5 Nm
5.3 bar = 13.0 Nm
4.3 bar = 10.0 Nm
3.3 bar = 7.5 Nm



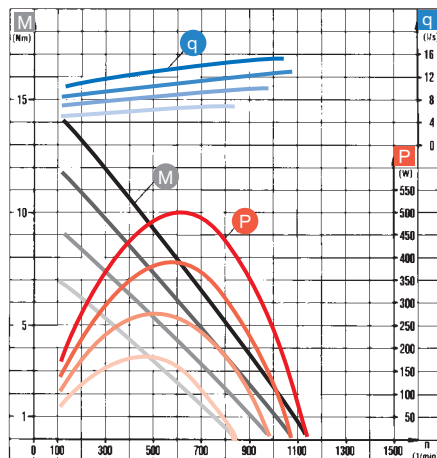
0 607 952 302 550 W series R
Choke torque in "soft" screwdriving application (720° tightening angle) at
6.3 bar = 6.5 Nm
5.3 bar = 5.0 Nm
4.3 bar = 4.0 Nm
3.3 bar = 3.0 Nm



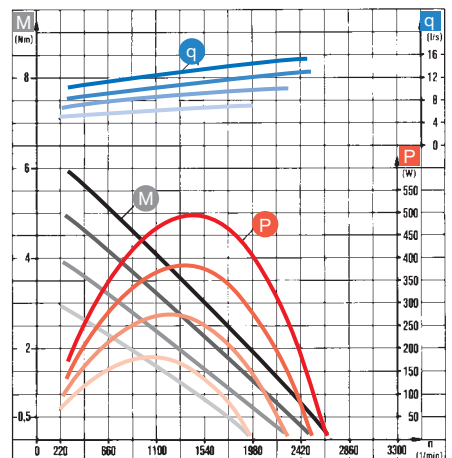
0 607 952 303 550 W series R/L
Choke torque in "soft" screwdriving application (720° tightening angle) at
6.3 bar = 28.0 Nm
5.3 bar = 23.6 Nm
4.3 bar = 18.5 Nm
3.3 bar = 14.0 Nm



0 607 952 304 550 W series R/L
Choke torque in "soft" screwdriving application (720° tightening angle) at
6.3 bar = 15.5 Nm
5.3 bar = 13.0 Nm
4.3 bar = 10.0 Nm
3.3 bar = 7.5 Nm



0 607 952 305 550 W series R/L
Choke torque in "soft" screwdriving application (720° tightening angle) at
6.3 bar = 6.5 Nm
5.3 bar = 5.0 Nm
4.3 bar = 4.0 Nm
3.3 bar = 3.0 Nm



Motors, technical data

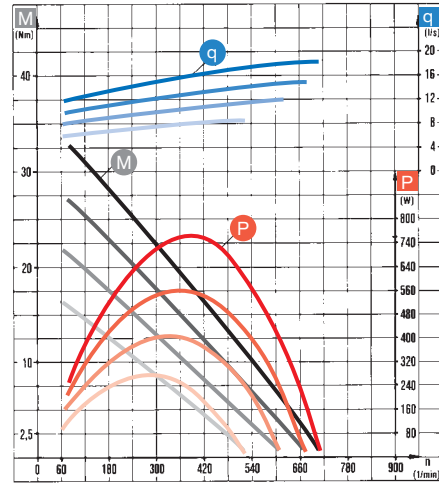
Air motors in the 740 W model series, air connection 10 mm inner diameter

Operating curves:

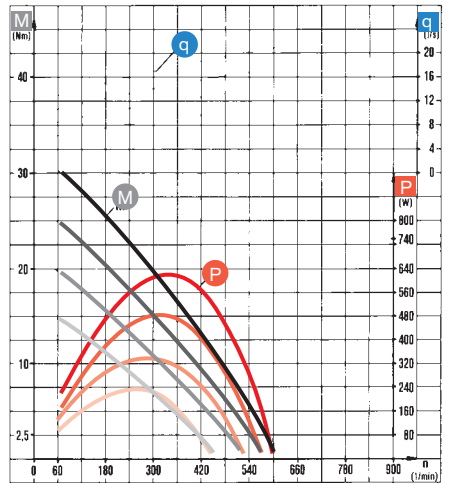
- M Torque
- P Power
- q Air consumption

at 6.3 bar

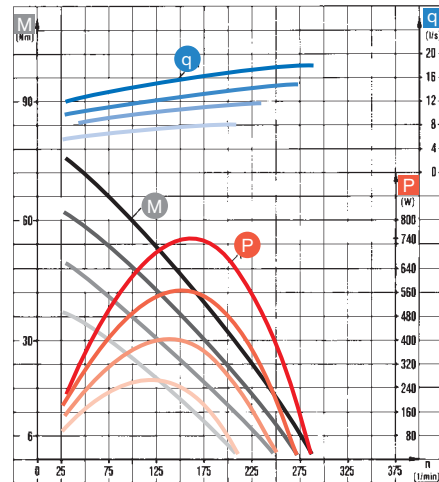
0 607 957 300 Choke torque in "soft" 6.3 bar = 36.0 Nm
 0 607 957 307 screwdriving applica- 5.3 bar = 30.0 Nm
 740 W series tion (720° tightening 4.3 bar = 24.0 Nm
 R angle) at 3.3 bar = 18.0 Nm



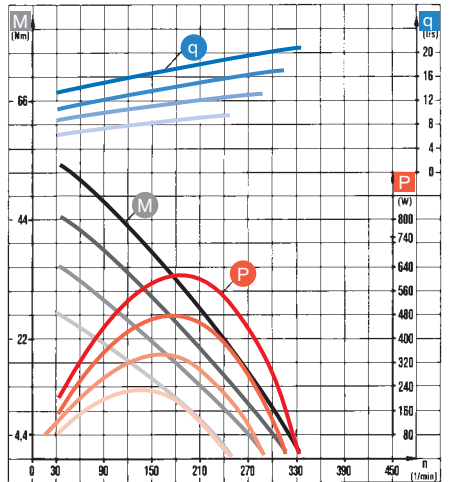
0 607 957 301 Choke torque in "soft" 6.3 bar = 36.0 Nm
 0 607 957 310 screwdriving applica- 5.3 bar = 30.0 Nm
 0 607 957 315 tion (720° tightening 4.3 bar = 24.0 Nm
 0 607 957 317 angle) at 3.3 bar = 18.0 Nm
 740 W series R/L



0 607 957 305 Choke torque in "soft" 6.3 bar = 90.0 Nm
 740 W series screwdriving applica- 5.3 bar = 74.5 Nm
 R tion (720° tightening 4.3 bar = 60.8 Nm
 angle) at 3.3 bar = 45.0 Nm



0 607 957 306 Choke torque in "soft" 6.3 bar = 65.0 Nm
 740 W series screwdriving applica- 5.3 bar = 54.8 Nm
 R tion (720° tightening 4.3 bar = 43.5 Nm
 angle) at 3.3 bar = 32.5 Nm



Motors, technical data

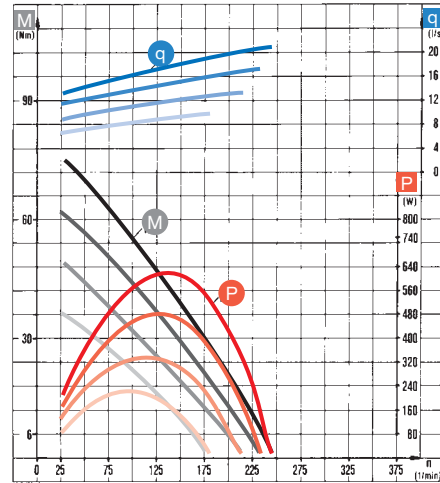
Air motors in the 740 W model series, air connection 10 mm inner diameter

Operating curves:

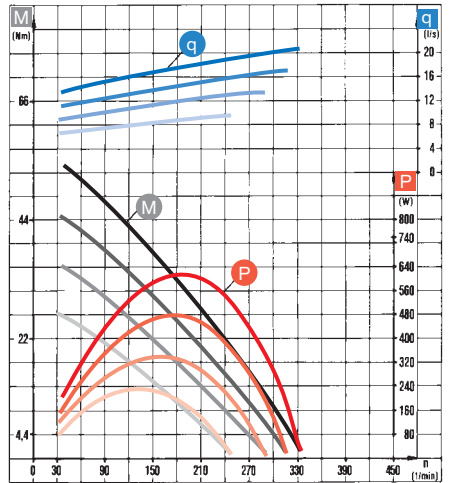
- M Torque
- P Power
- q Air consumption

at 6.3 bar ————
5.3 bar ————
4.3 bar ————
3.3 bar ————

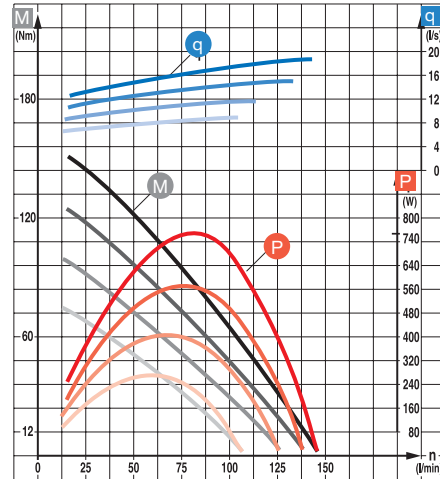
0 607 957 308 Choke torque in "soft" 6.3 bar = 90.0 Nm
740 W series screwdriving applica- 5.3 bar = 74.5 Nm
R/L tion (720° tightening 4.3 bar = 60.0 Nm
angle) at 3.3 bar = 45.8 Nm



0 607 957 309 Choke torque in "soft" 6.3 bar = 65.0 Nm
740 W series screwdriving applica- 5.3 bar = 54.8 Nm
R/L tion (720° tightening 4.3 bar = 43.5 Nm
angle) at 3.3 bar = 32.5 Nm



0 607 957 314 Choke torque in "soft" 6.3 bar = 170 Nm
740 W series screwdriving applica- 5.3 bar = 148 Nm
R tion (720° tightening 4.3 bar = 120 Nm
angle) at 3.3 bar = 90 Nm

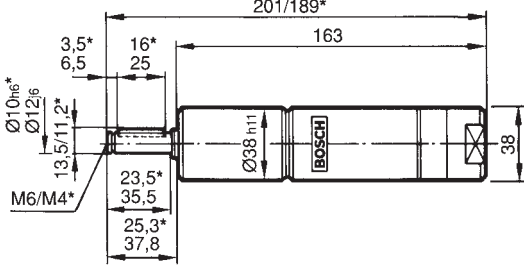
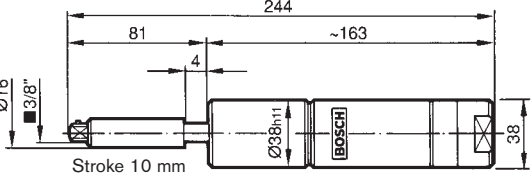
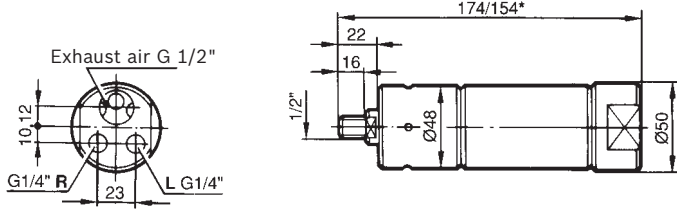
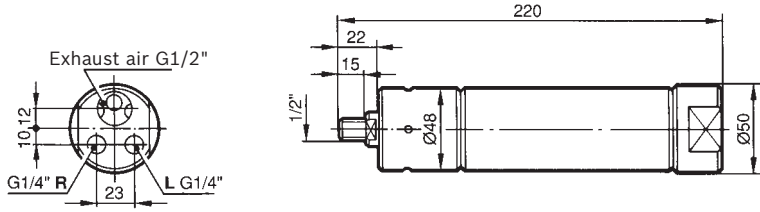
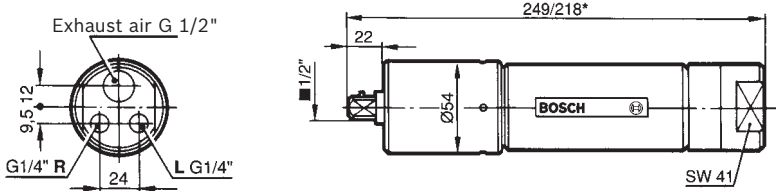


Dimensional drawings Motors

Dimensions in mm	Part number
	0 607 954 306
	0 607 954 307
	0 607 954 304*
	0 607 954 305*
	0 607 953 335
	0 607 953 336
	0 607 953 337
	0 607 953 338
	0 607 953 340
	0 607 953 346
	0 607 953 348
	0 607 953 331
	0 607 953 332
	0 607 953 333
0 607 953 334	
0 607 953 339	
	0 607 951 304*
	0 607 951 305*
	0 607 951 306
	0 607 951 307
	0 607 951 300*
	0 607 951 301*
	0 607 951 302
	0 607 951 303
	0 607 951 322*
	0 607 951 314
	0 607 951 315
	0 607 951 316
	0 607 951 311
	0 607 951 312
	0 607 951 313

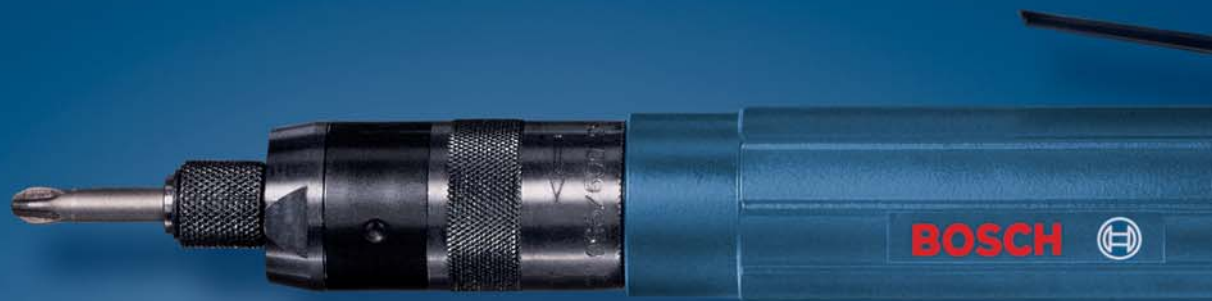
Purely right-hand rotators do not feature the "L" connection

Dimensional drawings Motors

Dimensions in mm	Part number
	0 607 951 325* 0 607 951 326 0 607 951 318*
	0 607 951 323
	0 607 952 303 0 607 952 304 0 607 952 305* 0 607 952 300 0 607 952 301 0 607 952 302*
	0 607 957 301 0 607 957 300
	0 607 957 308 0 607 957 309* 0 607 957 310* 0 607 957 315* 0 607 957 314 0 607 957 305 0 607 957 306* 0 607 957 307* 0 607 957 317

Purely right-hand rotators do not feature the "L" connection

The stated dimensions are not binding.

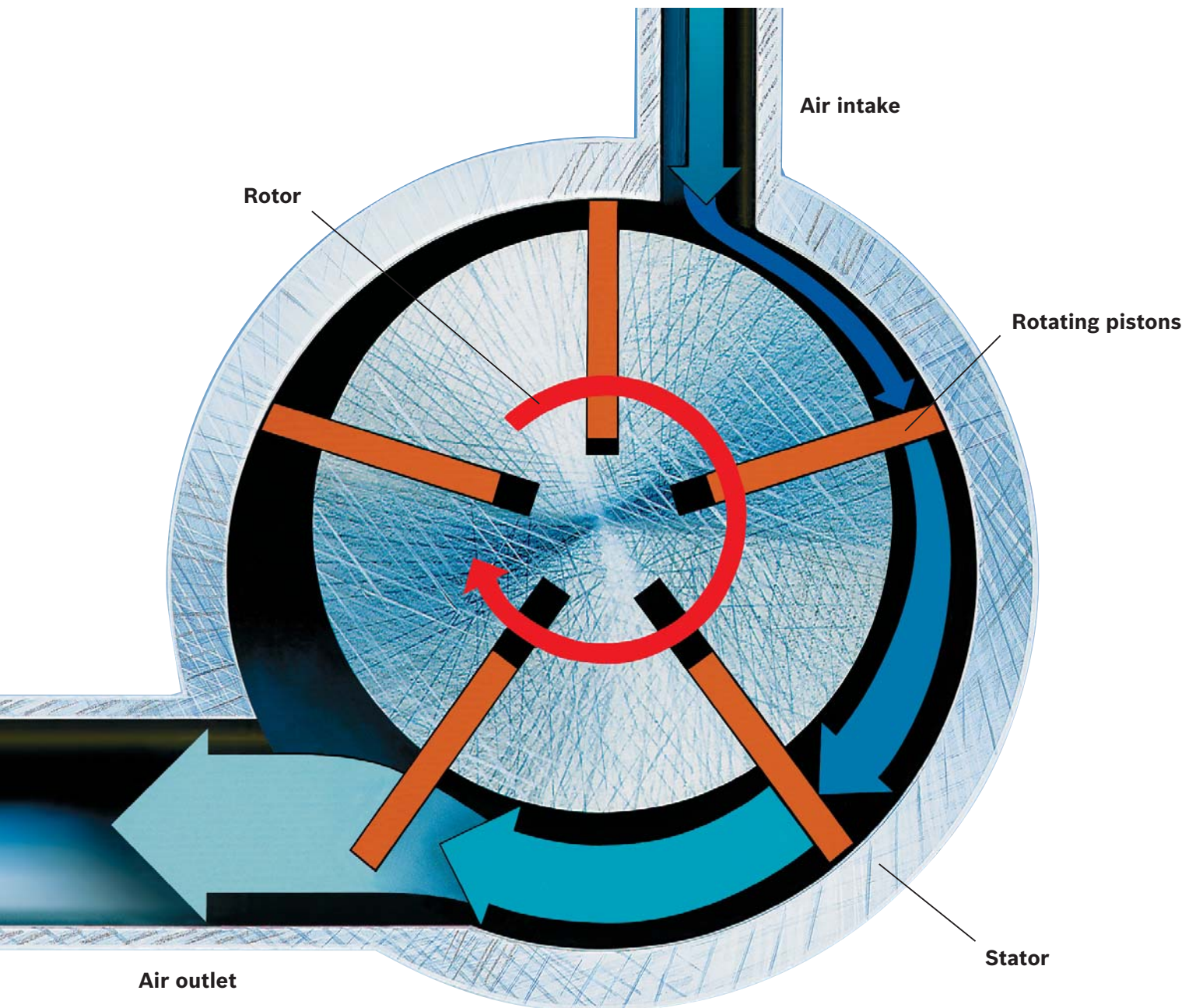


Air technology

A guide for the user

Air technology used correctly

Air tools are an integral part of the production tool range from Bosch. We want to pass this know-how on to you. This guide therefore deals with the basic features of compressed air as a drive medium for air tools. It discusses the structure of the motor, the maintenance, the piping system with simple rough calculations and possible operating errors.



The driving force

The air motor

The individual tools are designed differently depending on the intended range of applications; the drive motor and its structure are, however, in principle always the same – apart from the different sizes.

Due to its high power at small dimensions, the slide-valve motor or rotating piston air motor is best suited to handheld air tools. It is driven by means of the expansion of compressed air, enabling it to perform mechanical work.

Essentially, the rotating piston air motor consists of the stator, the rotor that holds the rotating pistons in longitudinal slots, and the sealing plates that close off the stator on both ends, and the rotor bearing.

The eccentric arrangement of the rotor in relation to the stator creates a sickle-shaped work chamber that is divided into individual chambers by the rotating pistons. These chambers are sealed against one another, as their own centrifugal force means that the rotating pistons press against the inner wall of the stator when they are running. The compressed air flowing through the inlet channel presses on the chambers and makes the rotor turn. The air inlet and outlet are arranged depending on the desired direction of rotation. As a rule, in order to achieve the right working speed in each case, there are planetary gears in front of the motor.

The following typical features make the air motor the ideal drive element for all different kinds of application ranges:

- ▶ The air motor has constantly favourable torque behaviour for different applications. With increasing load and decreasing speed, the torque rises to a maximum at standstill (Fig. 1) – this is utilised, for example, in screwdrivers.
- ▶ It is possible to operate the motor until standstill, which rules out the possibility of failure due to overload.
- ▶ The standstill torque is infinitely adjustable by adjusting the pressure of the compressed air being supplied (pressure controller). The speed is infinitely adjustable by adjusting the flow rate (throttle valve).
- ▶ Small dimensions and a low weight allow for fatigue-free working and a versatile range of applications.
- ▶ The robust, uncomplicated design guarantees long running time and low susceptibility to failure.
- ▶ Another advantage is the lack of susceptibility to external influences such as dust, moisture, etc.
- ▶ Air tools offer a high level of operational safety because the drive medium (air) is safe and – due to the lack of spark formation – cannot trigger an explosion (observe the special regulations for working in explosion-hazardous areas).

Since the expanding compressed air cools the tool, the machine does not overheat.

- ▶ Using the tools in wet and damp areas is not a problem.
- ▶ Easy maintenance and repair.
- ▶ The air pressure should not fall below 6.3 bar at the tool inlet (flow pressure) in order to ensure full power output at the work spindle.

Characteristic curves of an air motor

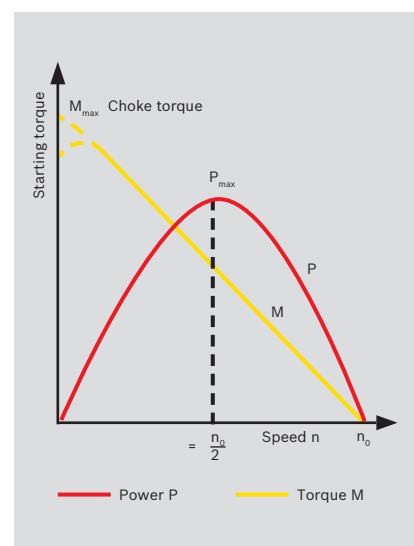


Fig. 1 Characteristic curves of an air motor

For optimum lifetime

The maintenance unit

Despite various measures (drainage systems etc. after the compressor), it cannot be avoided that the compressed air cools down further the longer the pipes are and, therefore, release water again. Scale and rust can also occur – especially on older pipes. However, these constituents are separated if a compressed-air filter is installed shortly before the tool. A pneumatic oiler should certainly be installed downstream of the filter, in order to mix an oil mist with the throughflowing compressed air. This oil is required for lubrication of the air motor, especially in continuous operation.

Maintenance units should be connected as close as possible to the tool. Their size must correspond to the air throughput at the supply point.

If a certain operating pressure is desired or pressure fluctuations from the supply lines are to be compensated, a pressure controller with manometer can be fitted in the maintenance unit between the filter and lubricator (Fig. 2). To achieve the longest possible lifetime of tools, the compressed air must be prepared by means of a maintenance unit. More details can be found in the operating instructions for air tools.

Oil for the maintenance unit or direct lubrication:
Motor oil SAE 20 or SAE 10.

The clean solution for air screwdrivers

Bosch has developed a new generation of air tools: the CLEAN series. CLEAN stands for consumption optimised, lubrication free, ergonomic, air tool and noise reduction.

The advantages:

- ▶ Up to 30% less air consumption than conventional air tools.
- ▶ This reduces energy costs and protects the environment.
- ▶ The tools are driven with oil-free compressed air – but also work with air containing oil.
- ▶ No soiling of workpieces, the workplace stays clean.
- ▶ The CLEAN screwdrivers are considerably quieter than other air screwdrivers.

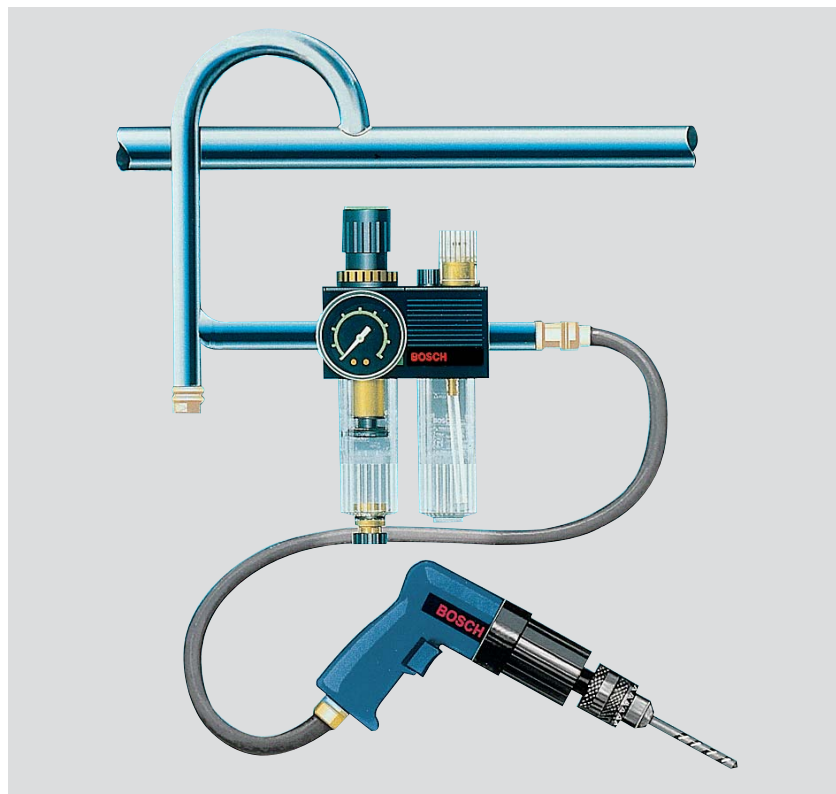
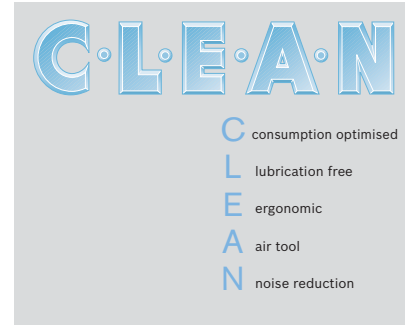


Fig. 2 Maintenance unit

First link in the chain

The compressed-air system

Although Bosch does not manufacture any compressed-air systems, we should still discuss the basic structure of this kind of system (please obtain more detailed information from the compressor manufacturer).

Compressor

The following four types of compressor are usually used:

- ▶ Piston compressor.
Depending on the pressure range, there are one-stage or two-stage piston compressors, e.g. one-stage for a final pressure of up to approx. 10 bar, two-stage for a final pressure of up to approx. 17 bar.
- ▶ Rotation compressor
- ▶ Screw-type compressor
- ▶ Turbo compressor

Pressure tank control

The compressed air conveyed by the compressor is stored in a pres-

sure tank (air chamber), which also serves as a buffer to compensate pressure fluctuations. In this way, brief consumption peaks are covered without the operating pressure in the pipe fluctuating or dropping too severely. The air requirement when the consumption peaks are present should not exceed the delivery quantities of the compressor for a lengthy period of time. The pressure in the tank is controlled by way of the fact that the compressor is switched off when a maximum pressure (e.g. 12 bar) is reached and is switched on when a pressure falls to a minimum value (e.g. 8 bar). During this time span, the pressure tank and the feed lines act as a reservoir for the tools.

Idle control

In the case of medium to large piston compressors, this usually takes place by opening and

closing sliders or valves. This prevents continuous deactivation and activation of the electric motor and the associated high starting current.

Bypass on-off control

The bypass on-off control on small to medium-sized compressor systems is performed by means of a pressure monitor, which switches the electric motor on and off depending on the tank pressure.

The following rule of thumb applies:

$V \approx 0.9 - 1 Q$ with bypass on-off control

$V \approx 0.4 Q$ with idle control;
where

V = Chamber volume (m^3)

Q = Delivery quantity of the compressor (m^3/min).

Additional pressure tanks are often installed at the end of the piping system or before large-scale consumers, in order to compensate impact loads.

Correct dimensioning

The piping system

The following simple example shows how the load of compressor and pressure tank can be determined depending on the consumer:

Compressor:

Delivery quantity 1000 l/min (35.3 cfm)

Pressure tank:

Volume 500 l (17.6 cf)

Switching cycle between 12 and 8 bar.

At a final pressure of 12 bar, the compressor switches off. Until the compressor is switched on again at 8 bar, $12 \text{ bar} - 8 \text{ bar} = 4 \text{ bar}$ and thus $500 \times 4 = 2000 \text{ l}$ (70.6 cf) is available to the consumer in this range, i.e. at air consumption of 2000 l/min (70.6 cfm) a continuous operating period of 1 minute is possible or at air consumption of 500 l/min (17.6 cfm) an operat-

ing period of four minutes. Here, it must be borne in mind that many tools, especially screwdrivers, are only switched on for short periods. For example, if an impact wrench with an average air consumption of 20 l/s (42.4 cfm) is used four times a minute and works for 3 seconds per screw connection (3 x 4 seconds pure working time in one minute), it actually only

requires $20 \times 3 \times 4 = 240$ l (8.5 cf) in this period.
 Therefore, $2000 : 240 = 8.33$ min. pass before the compressor switches on again at 8 bar network pressure.
 As with the selection of the compressor and pressure tank, any increase in consumption that may occur later, e.g. due to production extension, must also be taken into account when setting up the supply network.

In practice, it is usually not possible to prevent the compressed air cooling in the pipe. To ensure that condensed water that occurs in the process cannot flow back towards the compressor, the pipes are laid at a slight incline of 2 – 3% in the direction of flow. Condensate traps can then collect the water at the lowest points of the piping system. To also keep the condensate away from the tapping points to a large extent, branch-offs are usually led upwards out of the main pipe (Fig. 4).
 The pipe or hose inner diameter has a major influence on the performance of the air tools. Insufficiently dimensioned pipes

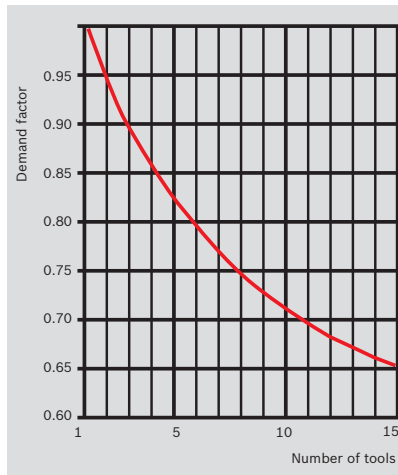


Fig. 3 Demand factor

increase the flow resistances and result in a corresponding drop in machine power. The following factors must be taken into account when selecting the pipe cross-sections (if possible, not under 3/4" for pipelines):

- ▶ Air quantity, pipe pressure, flow velocity, pressure losses.
- ▶ Length of the pipe.
- ▶ Quantity and type of pipe fittings such as elbows, bends, T-pieces, constrictions, maintenance unit, couplings, etc.
- ▶ Future increase in air requirement and possible extension of the system.

When determining and checking the pipe cross-section, take into account that all tools are never in use simultaneously. This is accounted for by multiplying with what is known as the demand factor (Fig. 3).

The pressure loss caused by the resistance in the fittings etc. is accounted for by adding approx. 30% to the actual pipe length. The pressure loss to distant parts of the system should not amount to more than 10% of the network pressure, if possible. If pressure losses of 1 bar or more occur, then the circumstances in the piping system absolutely must be examined.

Generally, closed circular pipelines are used in large piping systems because better supply of the active tapping points is guaranteed if the load is rising (Fig. 4).

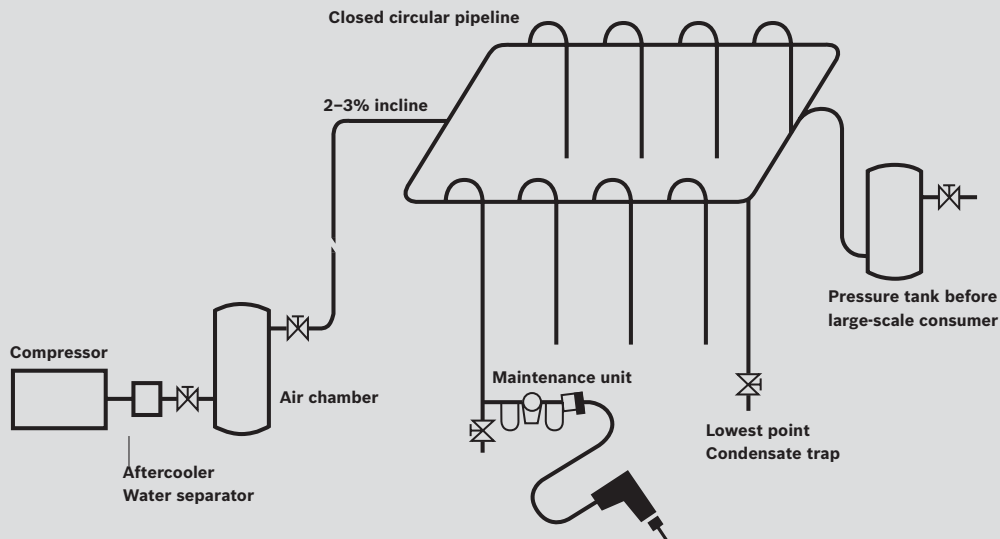


Fig. 4 Diagram of a compressed-air system

Rough calculation for pipe dimensioning

Calculations using exact equations are too extensive for tradesmen; besides, individual factors are difficult or even impossible to acquire. To nevertheless give you something to go by, the diagram (Fig. 5) for determining the pipe inner diameter can be used to perform a short rough calculation. Example: the sum of the air consumption values of six machines results in 36 l/s (76.3 cfm). Fig. 3 provides a demand factor of 0.79 for 6 machines; this results in $36 \times 0.79 = 28.5$ l/s (60.4 cfm). With this value, you can calculate the dimensions of the pipe by using the diagram (Fig. 5). Based on the air quantity of approx. 28.5 l/s (60.4 cfm) decompressed air, this

results in a pipe inner diameter of at least 1". A theoretical pipe length of 130 m (actual length 100 m + 30% allowance for pressure loss at fittings, elbows, etc.) results in a pipe inner diameter of 1.5". If additional machines need to be connected to this pipe, their air consumption must be taken into account in the calculation. An already available system can be checked in the same way. Unlike calculation of the pipe cross-sections, the compressor size is determined by the input factor. The input factor expresses the actual running time of the tool as a percentage. For systems that mainly have screwdrivers connected to them, this factor is

in the range of approx. 5 to 15%; whereas for systems with grinders operated in continuous use (e.g. fettling shops), a value of 30 to 70% has to be expected. To determine the required compressor size as accurately as possible, it is however best to check the circumstances on-site and then determine the input factor, or consult a compressor manufacturer.

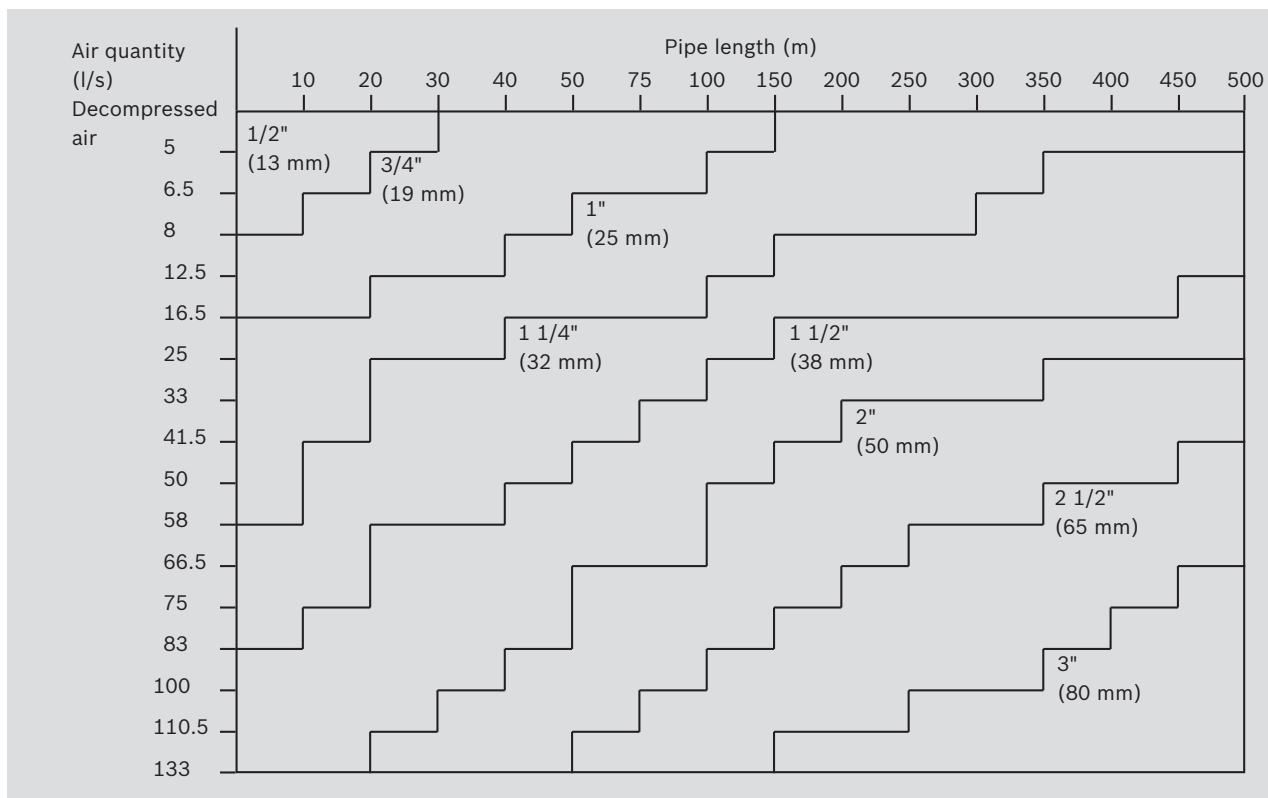


Fig. 5 Pipe dimensioning

More dynamics due to speed control

From practical experience, for practical application: frequent operating errors.

Certain operating errors are usually the cause of unsatisfactory results or faults.

The following are frequent errors:

- ▶ Incorrectly selected tools (machine too weak or too strong for the intended purpose).
- ▶ Insufficient air quantity and insufficient pressure or no constant pressure directly before the tool.
- ▶ Insufficient cross-section of the feed line.
- ▶ Missing maintenance devices, dirt, water and missing oil lead to premature failure of the machine due to fast wear and rust formation in the motor.
- ▶ Knocked-out, blunt or unsuitable bits reduce efficiency.

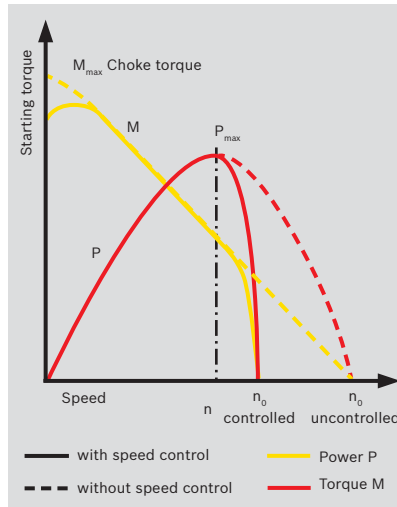


Fig. 6 Characteristic curves with and without speed control

The speed control offers the following advantages:

- ▶ High grinding performance
- ▶ Lower disc consumption
- ▶ Time-saving
- ▶ Reduced motor wear
- ▶ Lower noise level

The sensitive speed controller enables virtually constant working speed and, therefore, grinding in the right range at a consistent circumferential speed. As the speed increases, the controller weights swivel outwards, causing the valve body to make the inflow cross-section smaller. If the speed is reduced, the force of the return spring outweighs them, and the cross-section enlarges (Fig. 7).

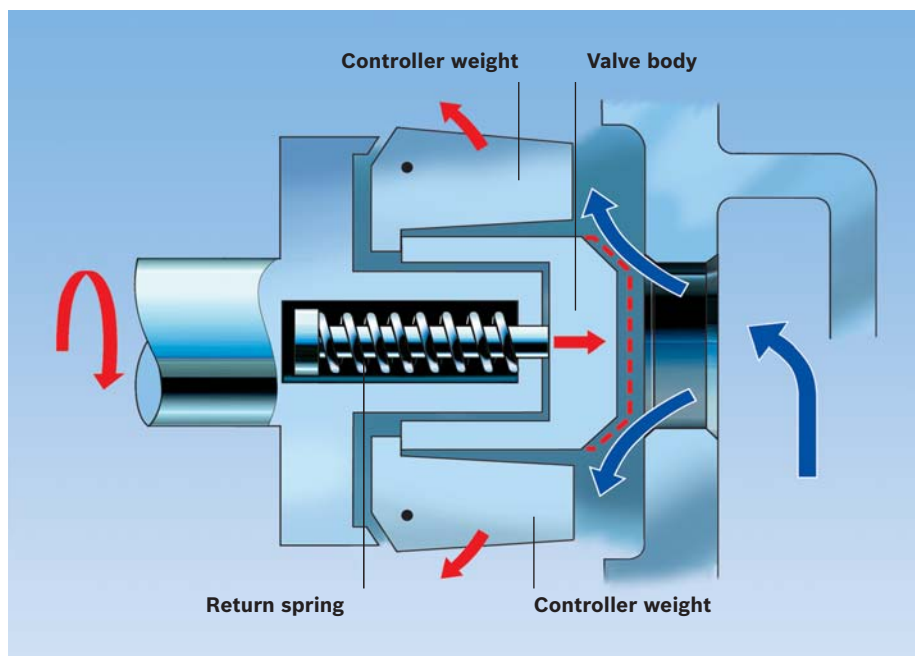


Fig. 7 Speed control

Exhaust air guidance and sound-proofing

The advantages:

- ▶ Environmentally friendly because the exhaust air can be diverted through the exhaust air hose at any position into the atmosphere or into an exhaust air tank and optimum sound-proofing is also achieved.
- ▶ In this way, exhaust air containing oil cannot contaminate any sensitive screwdriving parts, nor can it disperse chips or grinding dust.
- ▶ The user is not affected by the diverted compressed air.
- ▶ The exhaust air guidance improves the work conditions for the user. The auxiliary silencer or a hose nipple with exhaust air hose can be replaced in a very short time.

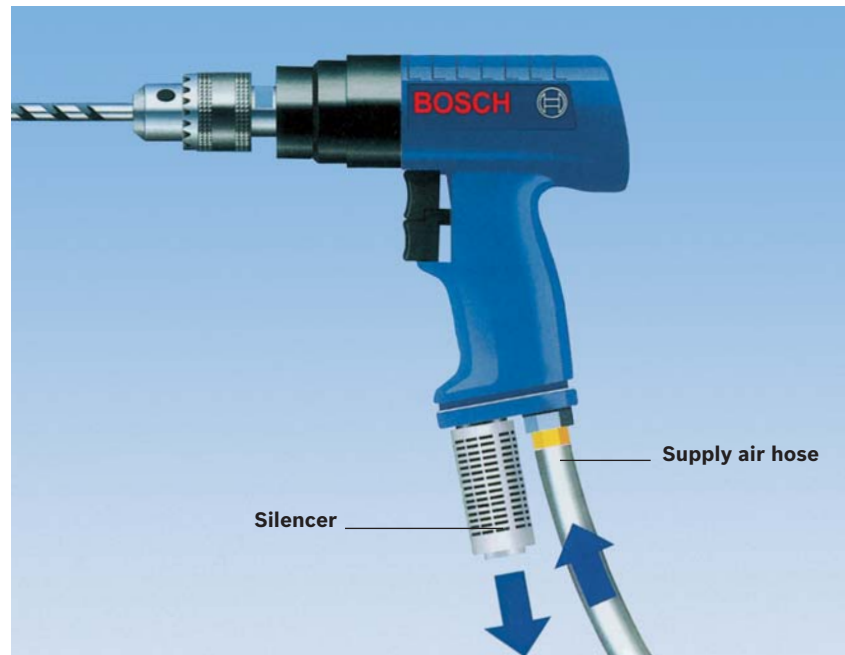


Fig. 8 The silencer reduces the work noise to a minimum

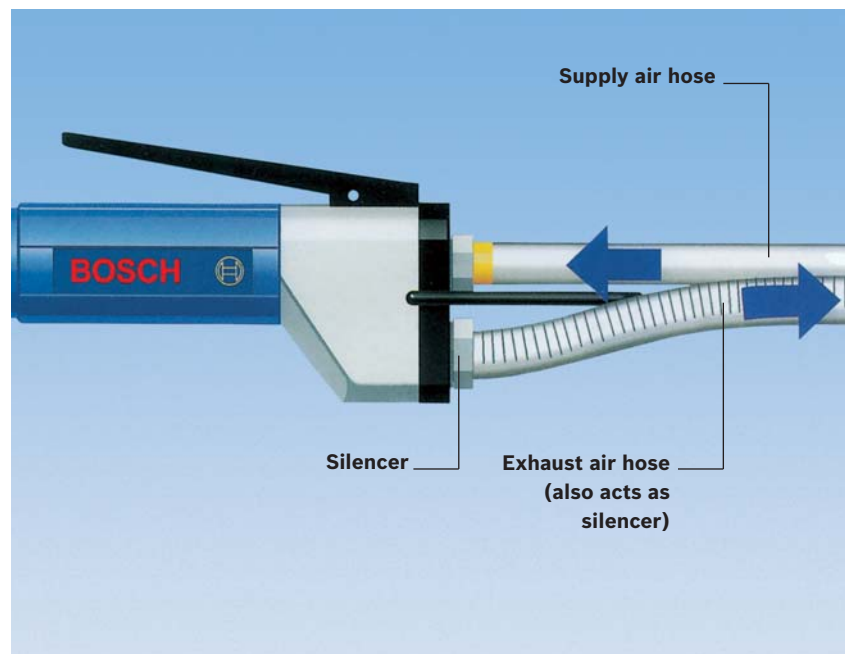


Fig. 9 The exhaust air hose protects the user, the environment and the workpiece

Bosch Service Quality



The Bosch CD-ROM Service information system

provides information on Bosch Power Tools over the last 25 years – including spare parts lists and exploded drawings and saves you time and money in spare parts management.



The Bosch Fax Service

offers direct, inexpensive access to important service documents such as spare parts lists, exploded drawings and forms. Information can be called up round the clock – even on Sundays and bank holidays.



The Bosch Spare Parts Service

guarantees, in 99% of all cases, that the spare part you require is in stock, ensuring you can quickly return to your work.



The Bosch Recycling Service

offers environmental protection that anybody can actively take part in.

Bosch production tools, cordless tools and battery packs that are past their lifetime are taken back at no charge via specialist retailers or directly and sent for recycling.

Robert Bosch GmbH
Power Tool Division
Marketing, Sales Production Tools

P.O. Box 10 01 56
D-70745 Leinfelden-Echterdingen
e-mail: ProductionTools@de.bosch.com
www.boschproductiontools.com

1 619 DA0 117 (04.07)
Printed in Federal Republic of Germany.
Imprimé en République Fédérale
d'Allemagne. Subject to technical
alterations. No liability is accepted
for printing errors.