MANNESMANN
DEMAG

Partner der Profis

Air motors

Content

Our strengths: technical advice, project work, innovation and quality

Dear customers,

We are glad to present our new motor catalogue to you. This catalogue as print media shall give you a first overview about our model range.

A complete overview about our power spectrum is available in the internet at www. mannesmann-demag.com. There you can find further very helpful tools and additional information. Besides an air motor selection programme there are 3D stp-, dxf- and pdf files available. You can also find variations of our models if available.

With the search function you can find older or obsolete motor models. Some of them can still be produced due to our modular system. If this is not applicable you can find the 1:1 replacement models.

With this catalogue we want to introduce our component systems for the first time. As a manufacturer of air motors it is self explaining that we can offer planetary gears or motor units or design a customized solution.

You can find further information on page 6.

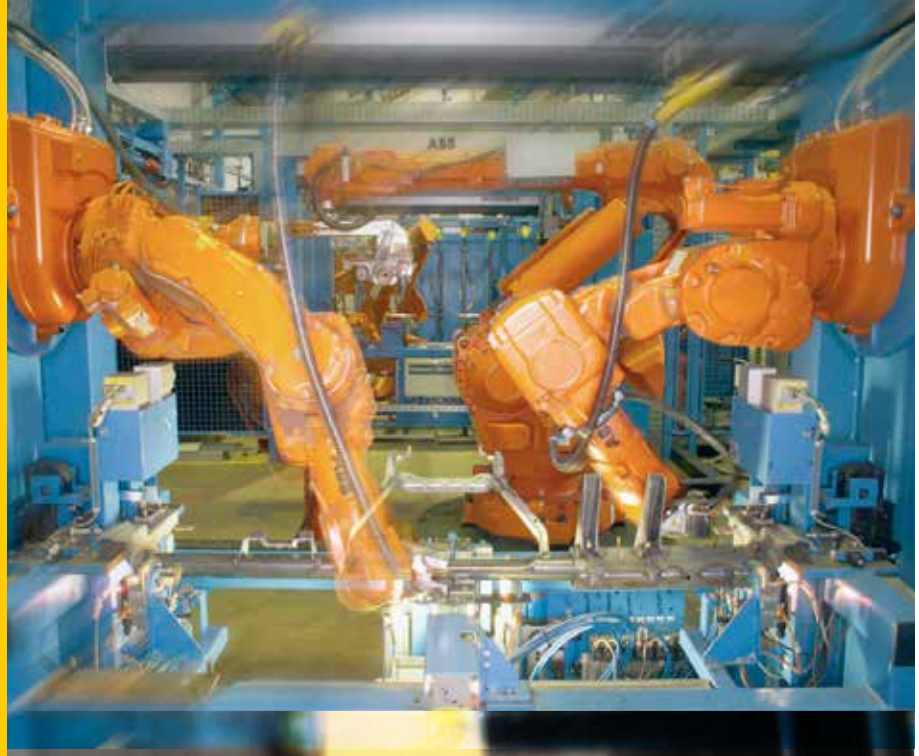
Many of our industrial solutions like the motors for brushing, drilling, mixing or deburring spindles are based on our motors shown in this catalogue. We are proud to be known as reliable contact for special solutions and customized motors. Very often small modifications result in your product solutions.

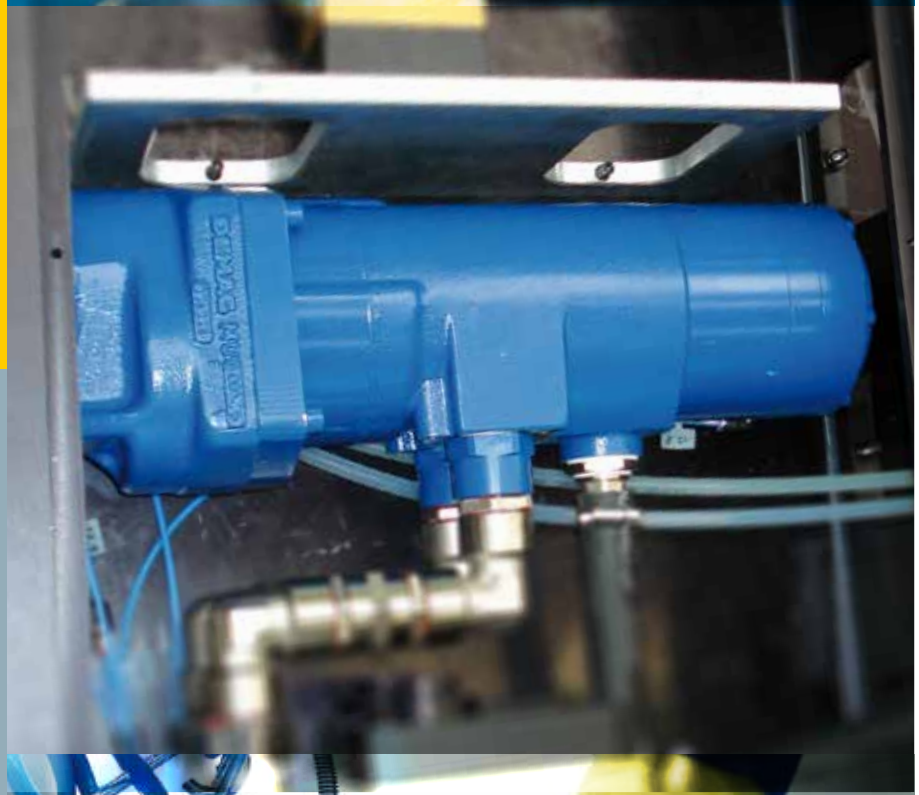
These modifications can be implemented win a short time - for small and for large quantities.

Gain benefit with our non-binding motor consulting. It makes always sense to get advise for the layout of new projects. Short ways in our company and the tight contact between our sales and the construction team is not only our factor for success but yours.

I look forward to give you personal advice.

Claus-Werner Bay
Dipl.-Wirtsch.-Ing
General Manager





Top level quality motors - 100% Made in Germany

Air motors made by MANNESMANN DEMAG
- robust and trouble free
- simple and infinitely variable
- proven in many applications
- adjustable torque / speed
- switch-on time 100%
- resistant to stalling
- no sparks
- reversible with control valve
- high starting torque
- no electronic devices necessary
- safe working in a temperature environment of -30 to +100°C
- reliable with low service input
- certified according to DIN EN ISO 9001:2008 and ATEX

MANNESMANN DEMAG air motors are suitable for extreme working conditions. For ATEX applications motors up to 1.2 kW are available:
- High torques
- high radial and axiale load
- robust design
- seaworthy cast aluminium housing
- low power-weight ratio
- low service input
- long lifetime

WWW.MANNESMANN-DEMAG.COM

Always available, always updated

FINDING, NOT SEARCHING

@

Motor selection the easy way

Essential for the construction:
Download the 3-dimensional
models of our motor types

PROFESSIONAL CAD

3D step files

Essential for the construction:
Download the 3-dimensional
models of our motor types

SEE HOW IT WORKS

Videos

Learn more about
applications and function
with our short video specials

MOTOR DATA CALCULATOR

With the new free tool of
MANNESMANN DEMAG you can
determine the relevant operating points
(torque/ speed) easily.
- working pressure is variable to prove
  whether the desired speed values will
  be reached
- for all motors resistant to stalling

MORE SERVICE

On our website you can always find
our latest model range and...
- technical information / news
- accessories and spare parts
- dimensional drawings
- operating manuals
- special solutions

Vane Air motors

Besides many other drive possibilities the vane air motor has gained a leading position. It has a high power density and is smaller and lighter than a comparable electric motor. it is simple and robust. The activation of the motors is done by a air supply line.

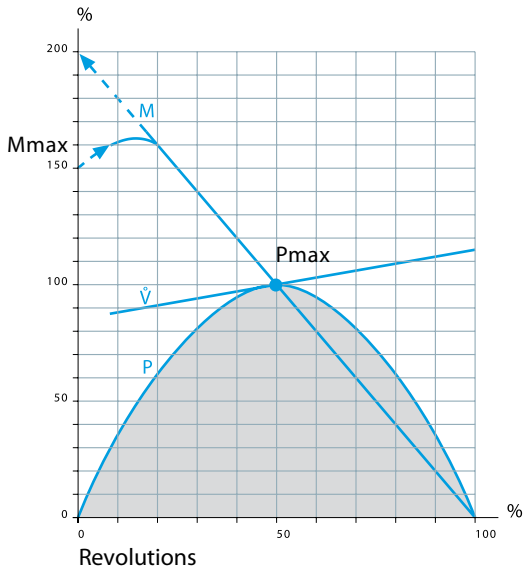
Below you will find explanations about various possibilities to adjust or change the parameters of an air motor.

Speed under load and torque under load

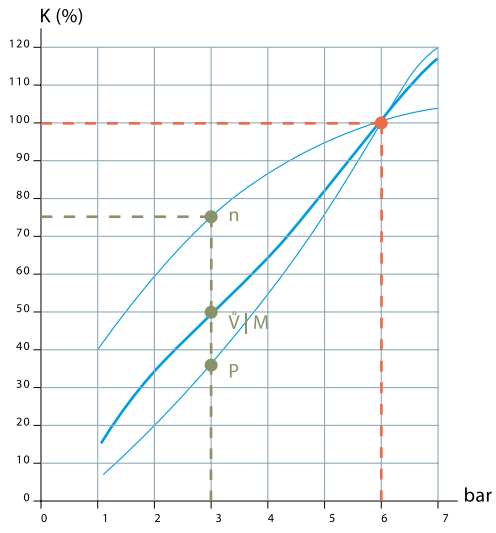
Depending on the application different technical data of a motor can be relevant. In a classical application like transport, lifting, positioning or mixing the torque under load and the sped under load are decisive. An economical solution is to select the air motor according to these data. The torque under load and speed under load - also known as nominal torque and nominal speed - is reached at a 50% loaded motor. In this situation the motor reaches its maximum power (Pmax). This power value is achieved at 50% of the free speed of the motor. this is the vertex in the graph in pic. 1. If more load is put on the motor, the speed drops down and the torque reaches its maximum value (Mmax) just before the motor stalls (see pic. 1).

M torque
V air consumption
P power

Pic. 1



Pic. 2



Pic. 2 shows speed, torque, air consumption and power in relation to the working pressure.

Example 1: MRD 38-260
working pressure 6 bar
M (torque under load)= 14 Nm
n (speed under load) = 260 rpm
P (power) = 380 W

Example 2: MRD 38-260
working pressure 3 bar
M (torque under load)= 7 Nm
n (speed under load) = 195 rpm
P (power) = 142 W

Special applications

In brushing or drilling applications the free speed is decisive. the selection of the air motor must be made according to the brush diameter, weight or drill diameter, material and others.

In tigthening applications the maximum torque is decisive for closing, the starting torque for opening operations.

If an air motor shall not be used with its specific speed unde load or torque under load (data related on 6 bar working pressure), it can be throttled either by the ingoing air pressure or by the air exhaust.

Learn more about the two different ways to adjust the air motor.

Adjusting power

Air motors can be throttled down either with the decreasing the ingoing air or by lowering the working pressure. This is advantageous if a long switch-on time is required.Using an air motor at 6 bar means less wear and a longer life time compared to 6 bar working pressure. To compensate theloss of power and torque it is necessary to select a more powerful motor. This can enlarge outstandingly the lifetime especially in a non-lubricated use (see pic 2).

Speed regulation

The speed regulation is basically possible via the ingoing and the exhaust air. To lower the speed without decreasing the power too much, the motor should be throttled on the exhaust side. In this way the speed can be lowered up to 50%. We recommend to use speed throttles to ensure a simple regulation.

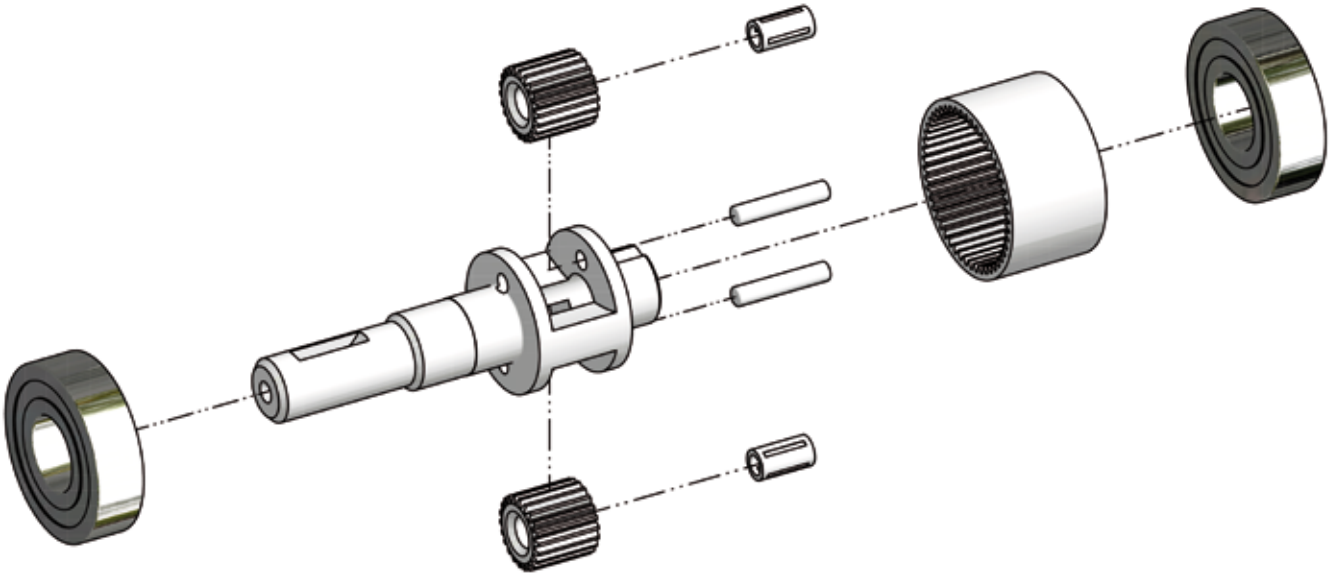
Application consulting

There are many applications and opportunities the air motors can offer so we recommend to get in contact with us to find the best suitable air motor for your project. We advise you reliably and with prfound knowledge. Let us know your project data and our construction team will implement the most cost effective solution. We are with you until the initiation. this convinces worldwide.

Planetary gears and motor drives

Gears for special machine builders

As manufacturer of air motors we also produce components and sets like (customized) planetary gears or motor blocks.



Planetary gears

Modules

We can offer planetary gears with module from 0,3 to 1,5 fromour standard programme. The planetary gears can reach amax. torque of 800 Nm. the drive side of the planetary gears can be customized according to your needs.

Reduction

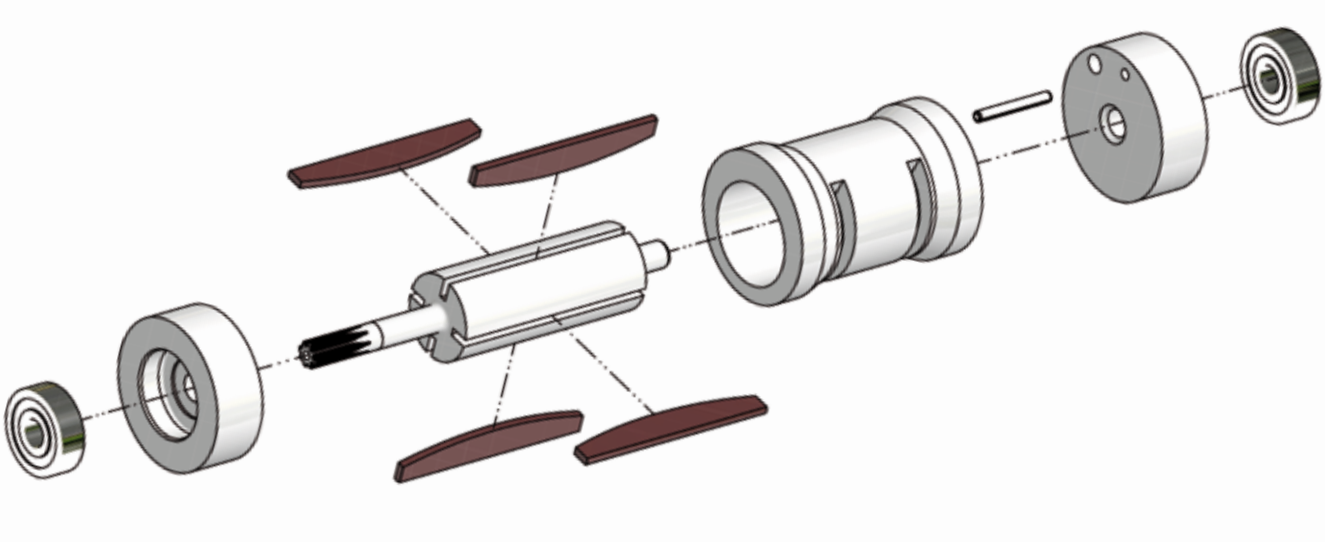
The planetary gears are available in reduction from 3i to 8i

Built-In

The planetary gears can be integrated into your fixture or housing directly. We support you with our construction in dimensioning the installation situation of the planetary gears. Besides the assembly of planetary gears we also offer component assembly - means the planetary gears are assembled with the housing. Depending on the assembly we can also offer function and torque tests

Motor units for air drives

We also offer air motors without gears (motor unit) as a component.The power range of the motorsare typically in a range between 100 - 4400 Watt, with a corresponding speed between 8000 - 30000 rpm. The motor unit is adjusted to fit into your existing housing. Of course we will advise you to opimize the air supply and exhaust guiding. Similar to the gear units we are ready to assembly the motor unit completely into your product and to test it.



The most suitable motor is matched to your application regarding power and construction.

Classical applications for our air motors / motor units are e.g.:

- → in mixers, as built-in solution or in manual use
- → for sewer duct cleaning
- → for grinding work
- → as drive for drilling or grinding in medical appliances

Air motors from A to Z

Exhaust air oil trap

An air motor reaches its maximum lifetime when lubricated. If an oil mist is not wanted at the working zone and the exhaust air cannot guided away via a long hose we recommend to integrate an oil trap. The lubrication oil in the exhaust is guided into the oil trap and collected (filters out up to 99%). The clean air escapes into the environment. Depending on the integration the oil trap reduces the noise level up to 40 dB(A).

→ Accessories

Shaft variations

We supply various shaft and flange variations like hole distances, diameters and other according to your requirements.

Resistant to stalling air motors

Resistant to stalling air motors can be loaded up to the maximum torque. Once the stalling torque is reached the motor will stop automatically - it will not be damaged. In case that the motor is stopped by a harsh blocking high torques may appear. In repeated blocking these overloads may cause damage - we ask you to inform us in advance in such a case - we have solutions for that available.

→ Not resistant to stalling air motors

Flange variations

round oval threaded threaded cap

clockwise counterclockwise

reversible clockwise reversible counterclockwise

Turning directions - air motor connection

Clockwise turning air motors = MRD models
counterclockwise turing air motors = MLD models
Torque and power are equal on both models.
All clockwise turning motors are available as counter clockwise turning models.

Reversible motors = MUD models
the corresponding air supply is engraved at the air inlet with the letters
L = counterclockwise
R = clockwise

ATEX

Air motors with ATEX are built according the terms of guideline 94 / 9 EG (ATEX) for appliances and protection systems to use in compliance with the guideline in explosion endangered areas.
The following certificates are available:

Zone 1 and 2 gas athmosphere ⟨Ex⟩II 2G c T5 –20 °C ≤ TA ≤ +40 °C
Zone 21 and 22 dust athmosphere ⟨Ex⟩II 2GD c IIC T4 D 135 ° –20 °C ≤ TA ≤ +50 °C

Working pressure

All given technical data of the air motors are related to a working pressure of 6,3 bar. Reducing the working pressure leads to reduced technical values. This may be wanted in certain applications to adjust the motor perfectly to the structural condition.
→ p. 4, pic. 2

Speed throttle

Whenever the given technical data are required but the speed shall be lowered we recommend to use a speed throttle valve. The throttle is mounted on the exhaust opening. The throttle is a combined throttle valve and silencer.

Stainless steel motors

Stainless steel air motors are mainly used in the food and chemical industry. They are resistant against aggressive cleaning agents or corrosive air. All outer parts are made of stainless steel.

The following steel is in use:
Air inlet, housing, cap, flange, shaft X 10 Cr Ni S 18-9

Motors with integrated brake

The motor models MUB are supplied with a force locked brake that is released directly with the air supply line of the air motor. No additional air line is needed. The maximum brake force of the motor is equal to the starting torque.

The models MUD 300, 400 and 600 are supplied with a spring loaded frictional force brake. The brake is relaeased by an own air supply line. This line must be charged before the air motor receives its working air. The air line of the brake must be charged with a minimum of 4.8 bar pressure (at 0 bar the brake is locked).

High torque air motors

The motors with high torque values are standard air motors equipped with additional gears. With these gears the motors achieve a high torque at a low speed. The air consumption is as low as with a standard model. The gears are robust, have a high continuous running torque and can be used up to the stalling torque.

Not resistant to stalling air motors

These motors are design for use at very low speed, at a very small designand small loads. The maximum torque of the motors may not exceeded as it will damage the motor seriously. The air motors are given with free speed only because the speed on aload below the maximum torque is nearly constant and does not vary.

Non-lubrication air motors

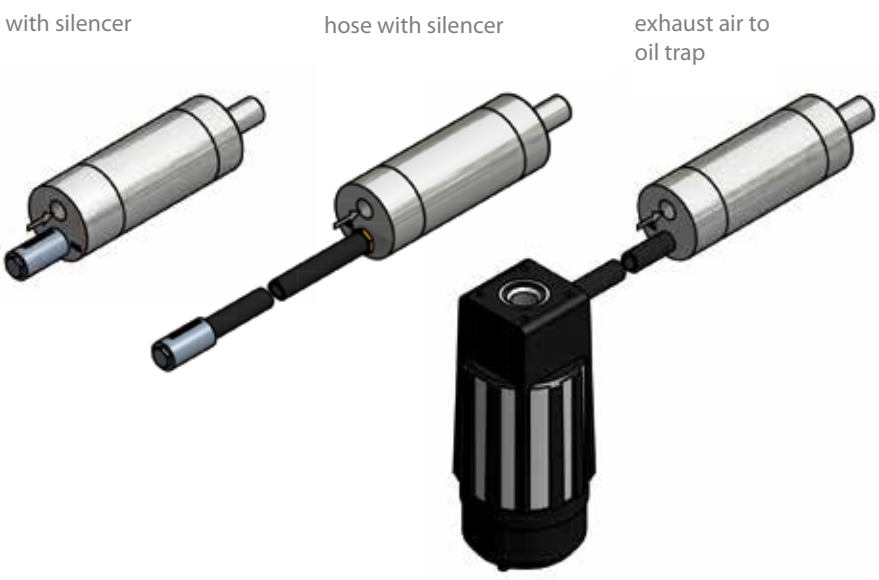
the majority of our range is available in a non-lubrication version. On a completely dry air supply without lubrication the free speed of the motor may drop in relation to the period in use. Lubrication does not harm these air motors. Actually the life time of the vanes increases. In a shift or ongoing use appliation we recommend to select a non-lubrication motor and to lubricate it.

Standard air motors need to be lubricated with appprox. 2-3 oil drops per minute. The excessive oil can be filtered by an oil trap.

Silencers

The mechanical operating noise of an air motor is very low. The expanding exhaust air is significantly responsible for the noise level of air motors. To lower the noise level dB(A) a silencer should be mounted in the exhaust opening of MRD, MUD and MU(B) 300, 400, 600 air motor models. The MUB 23 models is equipped with a sintered plate lo lower the noise level. Therefore the noise level depends mainly on the design of the mounted silencer and reaches for the models from 110 W to 1200 W an average of 77 dB(A).

Methods of noise dampening



Hose diameters

Please see the technical data of the corresponding motor for recommended hose diameters. The diameter is calculated for a maximum length of 3 metres. On air supply hoses exceeding 3 m please mind the air pressure drop - it may be necessary to select a bigger hose diameter.

Temperatures

MANNESMANN DEMAG air motors are designed for extreme working environments. Environmental temperatures from -30 °C to +100 °C and a high relative humidity do not effect the motor. Icing may appear on low outside temperatures at the area of the expanding exhaust air. This does not harm the the performance of the motor. For very high outside temperatures (up to 160 °C) we can supply special motors upon request.

Overload safety clutches

For the use of not resistant to stalling air motors we recommend to mount an overload safety clutch. This is obligatory in applications where the stalling of the motor may appear.

Filter lubrication unit (FLU)

The reliability / life time of an air motor is provided / extended by the mounted FLU. the smaller the distance to the motor teh more efficient it is. Once the distance of motor and FLU is more than 3 m it is obligatory to check whether the air motor is supplied with enough oil.

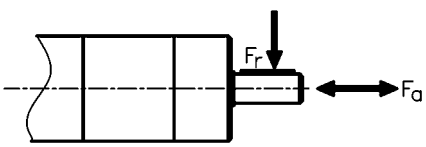
We recommend a FLU consisting of pressure regulator, mist lubricator and condensate filter. The air flow of the FLU should allow the necessary air consumption of the motor.
→ Accessories

Control valve

In general a 3 / 2 way control valve is used for a non-reversible motor (MRD or MLD) a 5 / 3 way control valve for reversible motors (MUD) to effect a start-stop or change of direction. The air flow should be larger than the required air consumption of the selected motor.

→ Technical data of the motor
→ Accessories

When connecting a reversible motor please mind that the not activated air supply line must be ventilated. The air flow volume of the ventilation system needs to be minimum double of the motors' air consumption volume to avoid a loss of torque and/or speed.



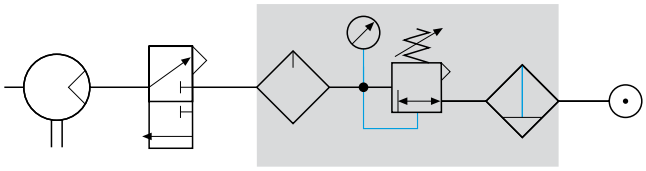
Shaft load

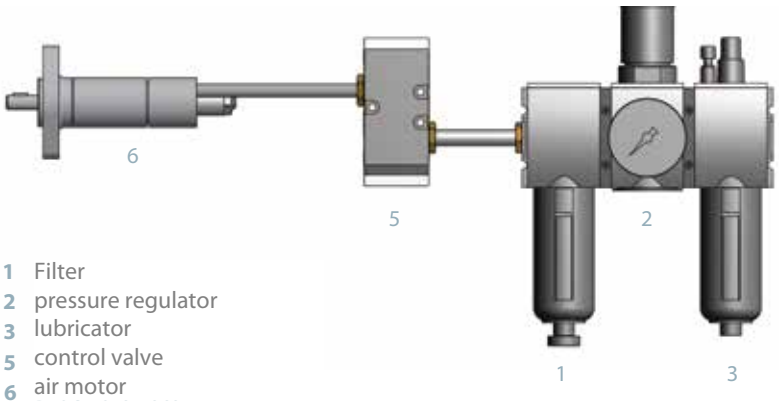
Please find the data for the maximum shaft load at → Technical data of the motor .
If a higher load is required due to the application we can adapt the motors by using different bearings.
The allowed loads are related to vibration free mounted air motors. If the motor is exposed to vibration and or percussion the axial load increases and the life time of the mounted bearings are reduced.

Installation scheme

Clockwise or counterclockwise running motor

P2/2 or 3/2 way control valve

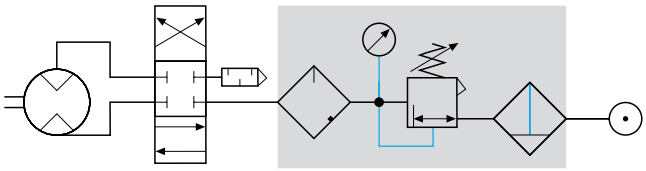


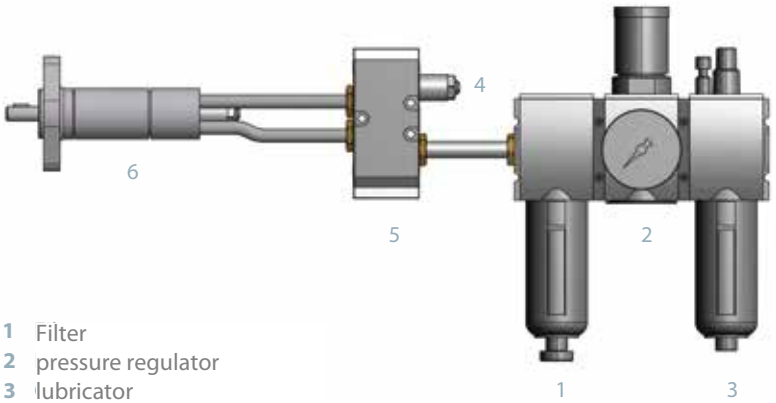


1 Filter
2 pressure regulator
3 lubricator
5 control valve
6 air motor

Reversible motor

Control valve 4/3 or 5/3 mounted at side (MU models) or at backside (MUD models)





1 Filter
2 pressure regulator
3 lubricator
4 silencer
5 control valve
6 air motor

Built-In motors
Pneumatic spindles

Built-in air motors
with collet

EBM with collet

Technical Data

Model with collet (clockwise) Article No.		**EBM 19000 S** 60001-04-7	**EBM 5200 S** 29937-63-7	**EBM 2900 S** 29937-61-7	**EBM 2400 S** 29937-62-7	**EBM 1200 S** 60003-85-7
Model with collet (counterclockwise) Article No.		**EBM 19000 SL** 29946-52-7	**EBM 5200 SL** 60026-90-7	**EBM 2900 SL** 29948-32-7	**EBM 2400 SL** 60003-86-7	**EBM 1200 SL** 60017-80-7
Free speed	min^{-1}	19 000	5 200	2 900	2 400	1 200
Power	Watt	380	380	380	380	380
ER-collet supplied	mm	6	6	6	6	6
ER-collets available	mm | "	3 | 5 | 8 | 10	3 | 5 | 8 | 10	3 | 5 | 8 | 10	3 | 5 | 8 | 10	3 | 5 | 8 | 10
Exhaust air*		to rear	to rear	to rear	to rear	to rear
Noise level (clockwise turning model)	dB(A)	72	72	72	72	72
Air consumption	l / sec	8,5	8,5	8,5	8,5	8,5
Weight	kg	1,12	1,12	1,12	1,12	1,42
push in supply hose	Ø mm, internal/ external	10 | 12	10 | 12	10 | 12	10 | 12	10 | 12
power and speed related to 6,3 bar working pressure						

- For installation in transfer lines, machine tools and robot cells
- stainless steel housing
- stainless steel collet spindles
- Ideal for drilling or brushing
- without valve for central control
- small diameters for narrow center distances
- With splash guard to protect against dust, water or chips

Further accessories please see page 87

Exhaust variations

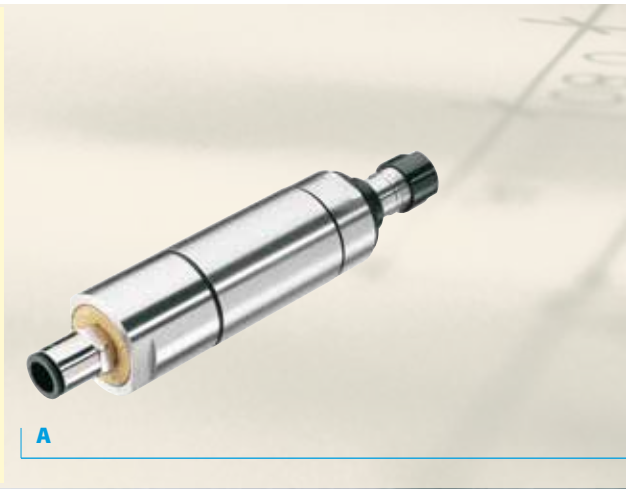
A Models EBM 19000 to 1200 S and EBM 5200 B and 3500 B are supplied with a sintered plate as standard

B * counterclockwise models with guided air exhaust as standard. Clockwise models are available with guided exhaust upon request

C Guided exhaust

D With a speed throttle (Article No. 9361705) the speed of the motor can be adjusted exactly.

E The Exhaust air can be guided into an oil trap (Article No. 60025986) and filtered 99%



A

→ Drawings please see page 20

Built-in air motors
with drill chuck

EBM 5000 B | EBM 38-5200 B

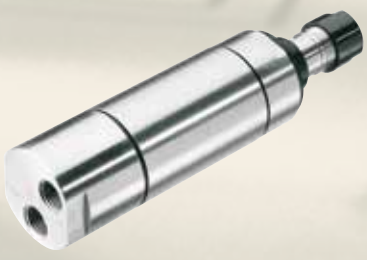
Technical Data

Model Article No.		EBM 38-5200 B 29937-64-7	EBM 38-2900 B 60009-26-7	EBM 38-2400 B 60009-25-7	EBM 38-1200 B 60008-71-7	EBM 5000 B 29937-41-7	EBM 3500 B 60009-24-7
Free speed	min^{-1}	5 200	2 900	2 400	1 200	5 000	3 500
Power	Watt	380	380	380	380	160	160
Clamping range drill chuck	mm	1 – 10	1 – 10	1 – 10	1 – 10	1 – 6	1 – 6
DIN cone / thread		3/8 " × 24 UNF	3/8 " × 24 UNF	3/8 " × 24 UNF	3/8 " × 24 UNF	B 10	B 10
Turning direction		clockwise	clockwise	clockwise	clockwise	clockwise	clockwise
Exhaust air		to rear	to rear	to rear	to rear	to rear	to rear
Noise level	dB(A)	76 *	76 *	76 *	76 *	71	71
Air consumption	l / sec	8,5	8,5	8,5	8,5	5,0	5,0
Weight	kg	1,20	1,20	1,20	1,50	0,62	0,62
Connection thread		G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "	—	—
push in supply hose	Ø mm, internal/ external	—	—	—	—	6 | 8	6 | 8

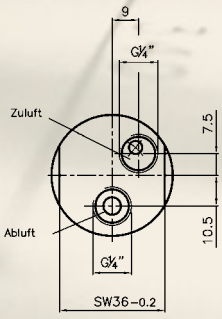
power and speed related to 6,3 bar working pressure
* with speed throttle, Article number 9 361 705

– For installation in transfer lines, machine tools and robot cells
– Stainless steel housing
– Ideal for drilling or brushing
– without valve for central control
– small diameters for narrow center distances

Further accessories please see page 87



B



C

D

E

→ Drawings please see page 20

Built-in air motors
reversible

EBMU 40

Model Article No.		EBMU 23-4000 B 60009-28-7	EBMU 23-2000 B 60009-31-7	EBMU 23-1000 B 60009-34-7	EBMU 40-4800 B 60008-19-7	EBMU 40-3400 B 60008-17-7	EBMU 40-3000 B 60008-15-7
Free speed	min^{-1}	4 000	2 000	1 000	4 800	3 400	3 000
Power	Watt	230	230	230	550	550	550
Clamping range drill chuck	mm	1 – 10	1 – 10	1 – 10	1 – 10	1 – 10	1 – 10
DIN cone / thread		3/8 " × 24 UNF	3/8 " × 24 UNF	3/8 " × 24 UNF	1/2 " × 20 UNF	1/2 " × 20 UNF	1/2 " × 20 UNF
Turning direction		reversible	reversible	reversible	reversible	reversible	reversible
Exhaust air		to rear	to rear	to rear	to rear	to rear	to rear
Noise level	dB(A)	72	72	72	78	78	78
Air consumption	l / sec	7,8	7,8	7,8	15	15	15
Weight	kg	1,25	1,25	1,55	2,60	2,60	2,60
Connection thread		G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "	G 1/4 "

power and speed related to 6,3 bar working pressure

- For installation in transfer lines, machine tools and robot cells
- stainless steel housing
- ideal for brushing
- without valve for central control
- small diameters for narrow center distances
- even wear on brushes through right / left hand rotation means longer life time

Further accessories please see page 87

→ Drawings please see page 20 and 21

EBS 504 ZG | EBS 520 ER | EWBS 38-520 | EBS 520 WK

Technical Data

Type Bestell-Nr.		**EBS 504 ZG** 29937-30-7	**EBS 520 ER** 29938-81-7	**EBS 520 WK** 60003-50-7	**EWBS 38-520** 60001-29-5
Free speed	min $^{-1}$	500	520	520	520
Motorleistung	Watt	160	380	380	380
Start method		Push-Start	external	external	external
Turning direction		clockwise	clockwise	clockwise	clockwise
Exhaust air		to rear	to rear	to rear	to rear
Aufnahme		—	—	10 mm	1/4 "– 6 kt.
Collet supplied	mm	8	8	—	—
Collets available	mm	5 | 6 | 1/4 " | 10	3 | 5 | 6 | 10	—	—
Compensation of angle error max.		—	—	± 7 °	—
Compensation of angle error max.	mm	—	—	± 0,5	—
Noise level	dB(A)	65	77 *	77 *	76 *
Air consumption	l / sec	5,3	8,5	8,5	8,5
Weight	kg	0,75	1,40	1,20	2,30
push in supply hose	⌀ mm, internal/ external	6 | 8	10 | 12	10 | 12	10 | 12

power and speed related to 6,3 bar working pressure

- For installation in transfer lines, machine tools and robot cells
- stainless steel housing
- stainless steel collet spindles
- ideal for brushing and chamfering
- Collets up to 10 mm
- Model EBS 520:
  with splash guard to protect against dust, water or chips
- Push start on EBS 504 saves energy
- Model EBS 520 WK:
  With spiral clutch to compensate axial and radial misalignment,
  suitable for chamfering tool with shaft
  ⌀ 10 mm

Zubehör

HSS- chamfering tool 3 teeth / 1/4" hex / 90°	EWBS 38-520
chamfering range 2,5 - 10,4 mm	48109-21-6
chamfering range 3,2 - 16,5 mm	48109-22-6
chamfering range 5 - 25 mm	48109-24-6

→ Drawings please see page 21

Angle vane air motors
clockwise, non-lubrication with speed throttle

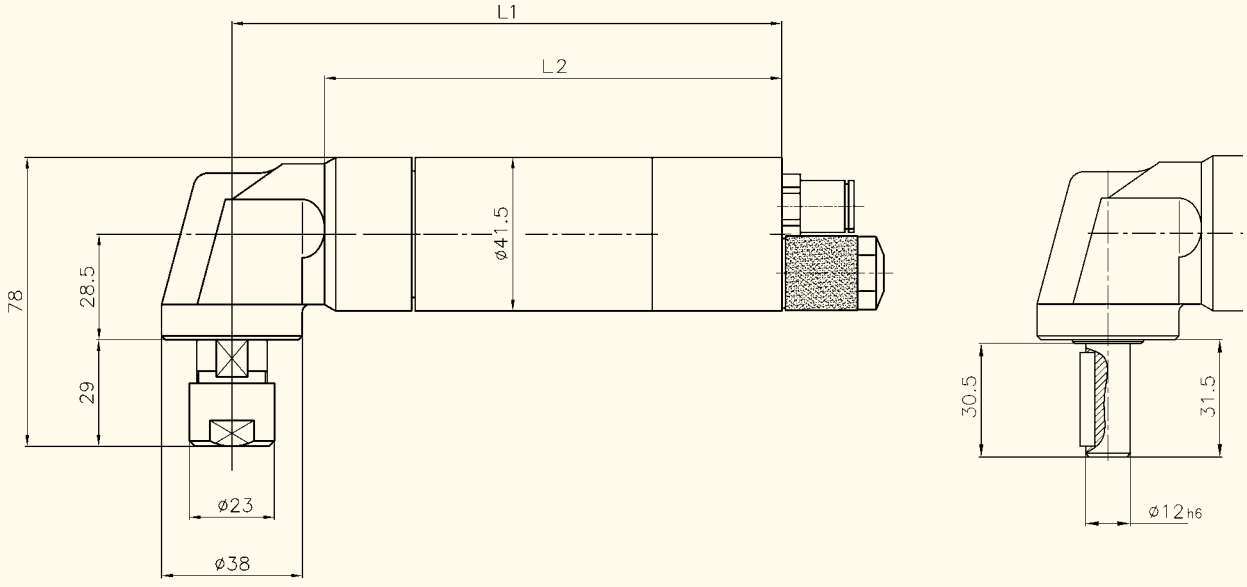
- For grinding, deburring and brushing
- Also available with cylindrical shaft (see dimensions)

Stainless steel model

Model stainless steel		MRDW 38-18000	MRDW 38-5200	MRDW 38-2900	MRDW 38-2300	MRDW 38-1100	MRDW 38-640
with collet*	Article No.	60000-61-7	60001-74-7	29945-73-7	29945-74-7	29945-75-7	29944-00-7
cylindrical shaft	Article No.	29947-32-7	29947-31-7	29947-30-7	29947-29-7	29947-28-7	60007-52-7
Free speed	min $^{-1}$	18 000	5 200	2 900	2 300	1 100	640
* ER-collet supplied		8	8	8	8	8	8
Resistant to stalling		Yes	No	No	No	No	No
max. ongoing drive torque	Nm	—	1	1	1	1	1
Air consumption	l / s	8,3	8,3	8,3	8,3	8,3	8,3
Weight	kg	1,40	1,40	1,40	1,40	1,40	1,40
Length L1	mm	148,5	148,5	148,5	148,5	181,0	181,0
Length L2	mm	123,5	123,5	123,5	123,5	156,0	156,0

power and speed related to 6,3 bar working pressure

Dimensions (mm)



Pneumatic spindles

ES 350 ER | ES 280 ER | ES 200 ER | ES 170 ER

Technical Data

Model with ZG collet (clockwise) Article No.		• **ES 350 ZG** 60012-16-7	• **ES 280 ZG** 29924-53-7	• **ES 200 ZG** 60008-31-7	• **ES 170 ZG** 29924-45-7
Model with ER collet (clockwise) Article No.		• **ES 350 ER** 60012-15-7	• **ES 280 ER** 29924-52-7	• **ES 200 ER** 60008-32-7	• **ES 170 ER** 29924-44-7
Free speed	min $^{-1}$	35 000	28 000	20 000	15 000
Power	Watt	300	380	400	800
Turning direction		clockwise	clockwise	clockwise	clockwise
Exhaust**		to rear	to rear	to rear	to rear
• ZG-collet supplied	mm	6	6	6	8
• ZG-collets available	mm | "	3 | 4 | 5 | 8 | 1/4 "	3 | 5 | 8 | 1/4 "	3 | 5 | 8 | 1/4 "	3 | 5 | 6 | 1/4 " | 10
• ER-collet supplied	mm	6	6	6	8
• ER-collets available	mm	3 | 4 | 5	3 | 5 | 8 | 10	3 | 5 | 8 | 10	3 | 5 | 6 | 10
Carbide burrs	max. mm	10	10	12	15
Mounted points	max. mm	16	16	25	32
Noise level	dB(A)	79	80	72	86
Air consumption	l / sec	8,3	11,5	8,5	15,8
Weight	kg	0,42	0,75	1,10	1,65
push in supply hose	Ø mm, internal/ external	6 | 8	10 | 12	10 | 12	10 | 12

power and speed related to 6,3 bar working pressure
* counterclockwise upon request | ** with guided exhaust air upon request

- For installation in transfer lines, machine tools and robot cells

- stainless steel housing
- stainless steel collet spindles
- With collet or high precision collet

- High true running accuracy
- paired ball bearings for longer life time and a smooth running
- With splash guard to protect against dust, water or chips

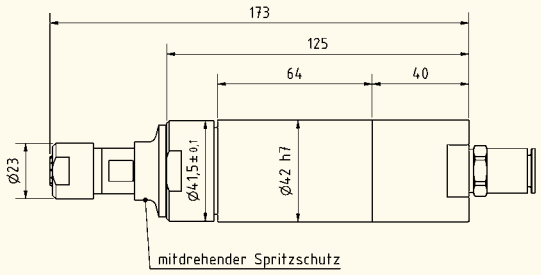
CNC-grinding spindles and many variations are available from the MANNESMANN DEMAG- special catalogue "Pneumatic Spindles" at www.mannesmann-demag.com

Further accessories please see page 87

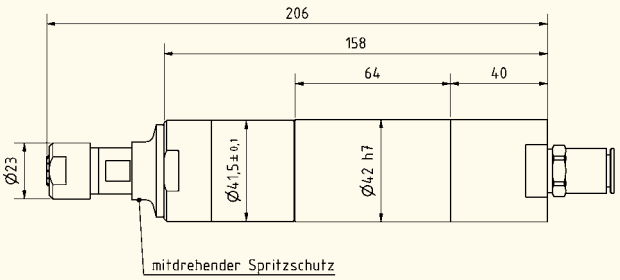
→ Drawings please see page 22

Drawings
Built-in air motors

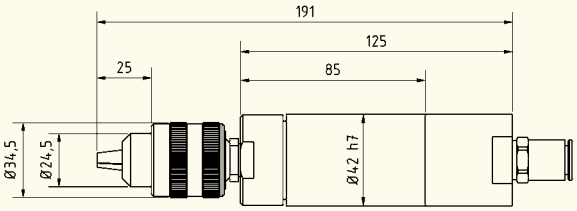
Page 14 | EBM 19000 S bis 2400 S, EBM 19000 SL bis 2400 SL



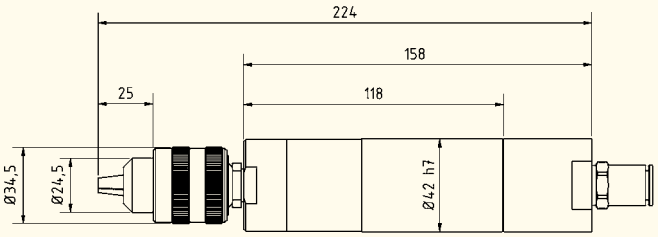
Page 14 | EBM 1200 S, 1200 SL



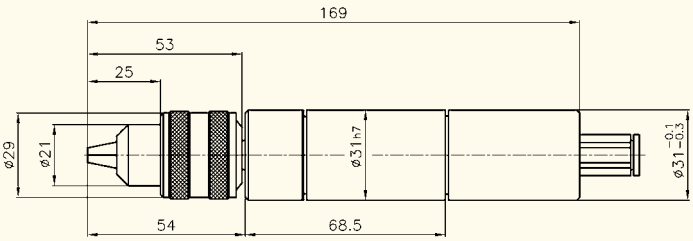
Page 15 | EBM 38-5200 B, 38-2900 B, 38-2400 B



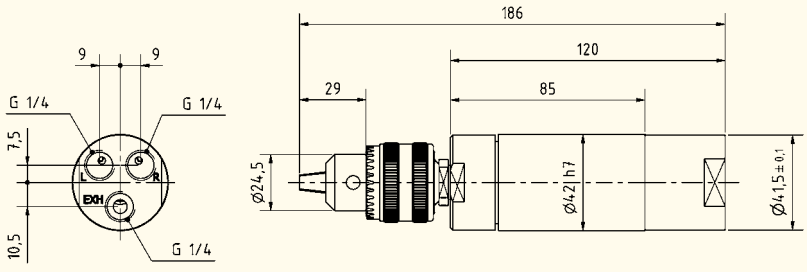
Page 15 | EBM 38-1200 B



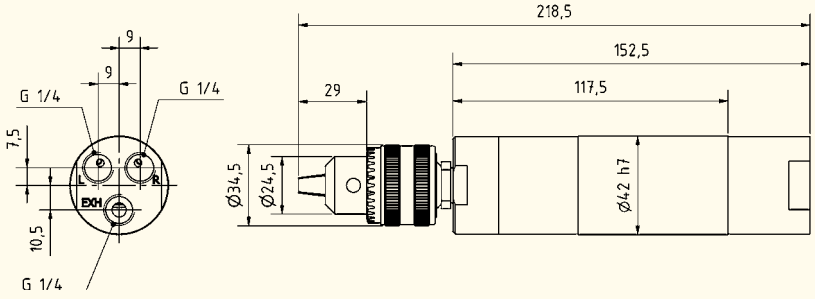
Page 15 | EBM 5000 B und EBM 3500 B



Page 16 | EBMU 23-4000 B und EBMU 23-2000 B

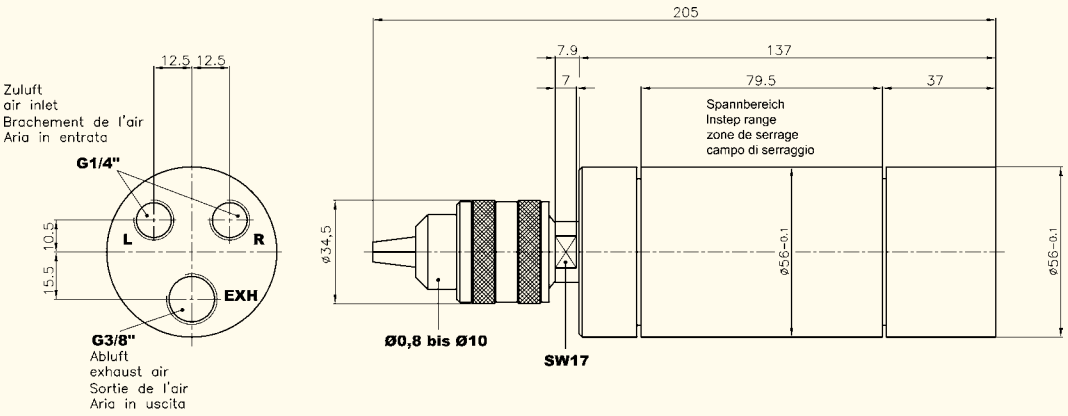


Page 16 | EBMU 23-1000 B

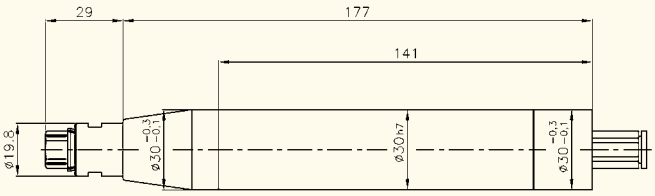


Drawings
Built-in air motors

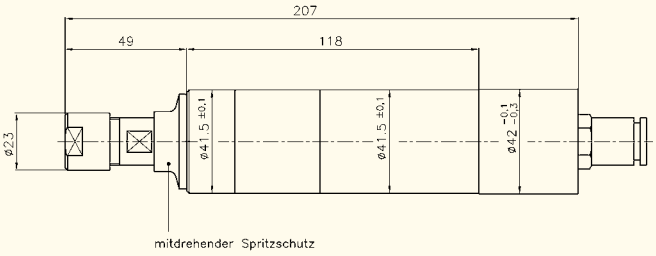
Page 16 | EBMU 40-4800 B, EBMU 40-3400 B, EBMU 40-3000 B



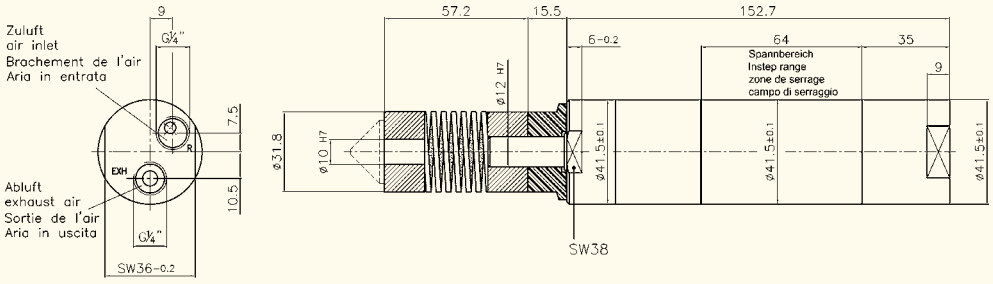
Page 17 | EBS 504 ZG



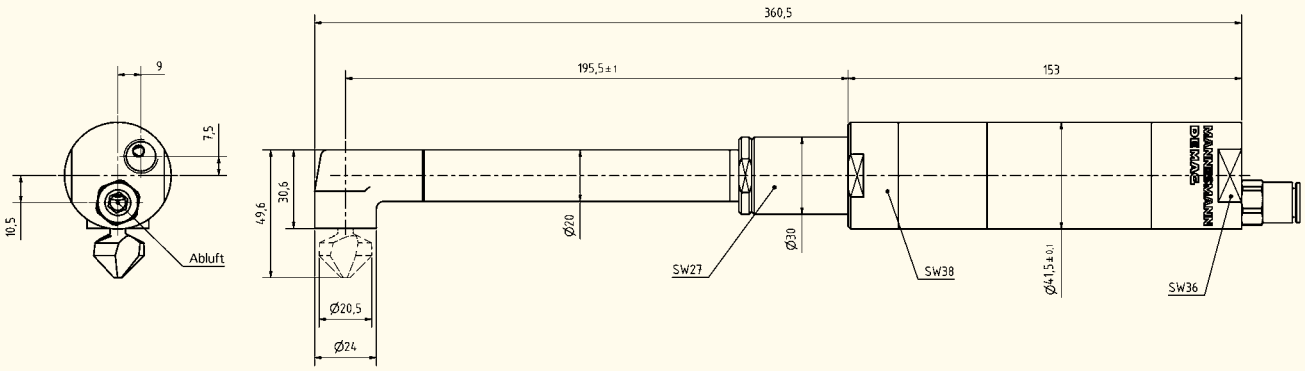
Page 17 | EBS 520 ER



Page 17 | EBS 520 WK

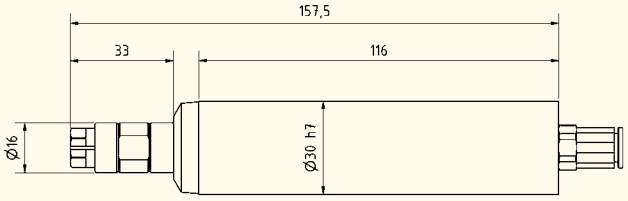


Page 17 | EWBS 38-520

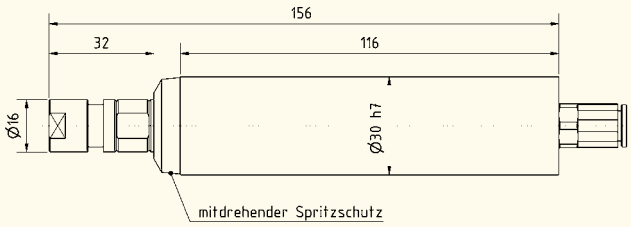


Drawings
Pneumatic spindles

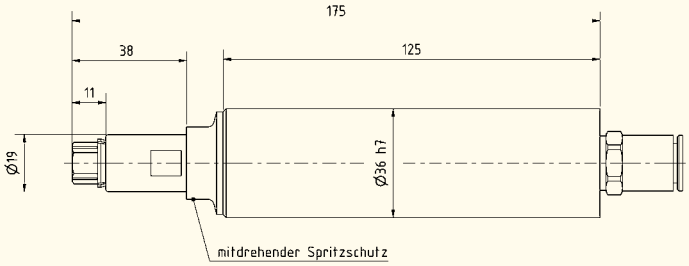
Page 19 | ES 350 ZG



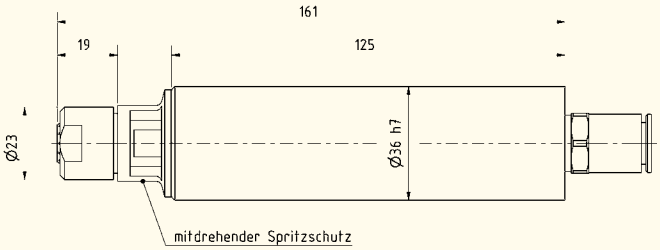
Page 19 | ES 350 ER



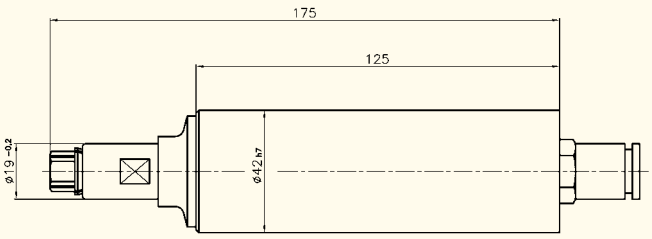
Page 19 | ES 280 ZG



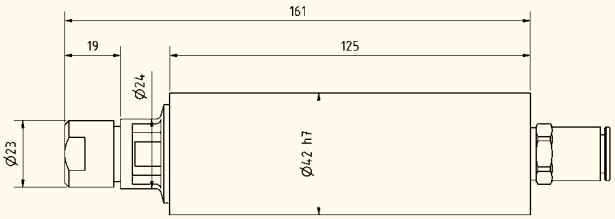
Page 19 | ES 280 ER



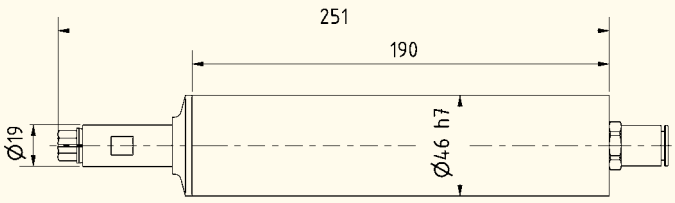
Page 19 | ES 200 ZG



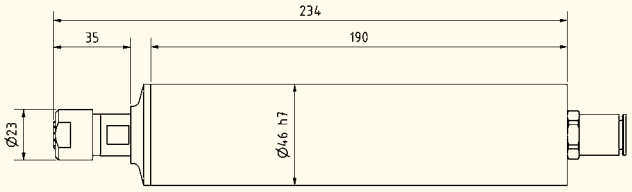
Page 19 | ES 200 ER



Page 19 | ES 170 ZG



Page 19 | ES 170 ER



Clockwise turning air motors
Models MRD

Clockwise turning air motors

All clockwise turning motors available as counterclockwise version!

Made in Germany

The clock- or counterclockwise turning models of the resistant to stalling motors can be loaded to their given maximum torque.

Once the motor reaches its maximum torque it will automatically stop. The motor will not be damaged when overloaded.

The first step to select the suitable motor is to define the operating range, means torque under load (M) and speed under load (n).

Power (P) will result as:

$$P\ (W) = M\ (Nm) \cdot 2\ \pi\ \frac{n}{60}\ (\frac{1}{s}) \qquad 1\ W = 1\ \frac{Nm}{s}$$

Clockwise
0,20 kW resistant to stalling

Article No. for
ATEX upon request

→ www.mannesmann-demag.com

Flange

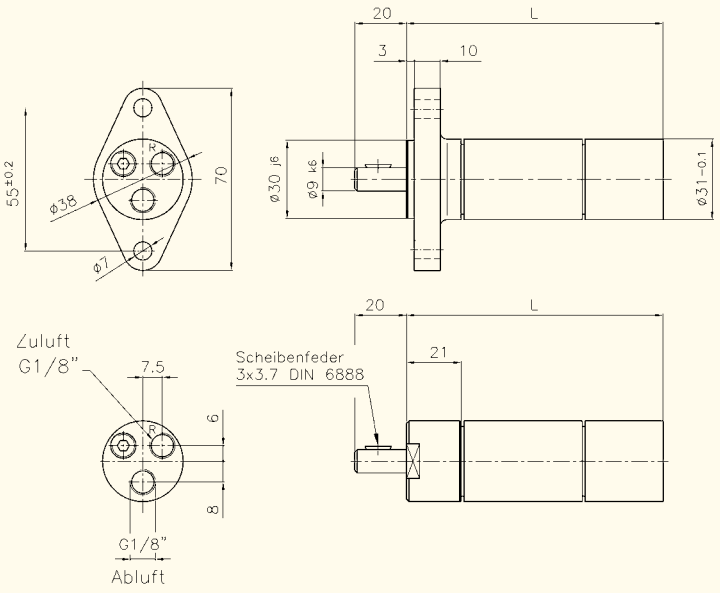
Cap

Technical Data

Model stainless steel Flange Cap	Article No. Article No.	**MRD 12-3250** 29905-86-7 60033-02-7	**MRD 12-1900** 29905-87-7 60033-01-7	**MRD 12-810** 29905-88-7 29929-04-7	**MRD 12-480** 29905-89-7 60032-99-7	**MRD 12-280** 29905-90-7 60032-98-7
Speed under load	min^{-1}	3 250	1 900	810	480	280
Torque under load	Nm	0,58	1,0	2,4	4,0	6,8
Starting torque	Nm	0,87	1,5	3,5	6,0	10
Stalling torque	Nm	1,2	2,0	4,7	8,0	14
Free speed	min^{-1}	6 500	3 800	1 620	960	560
Air consumption	l / s	5,6	5,6	5,6	5,6	5,6
Radial shaft load	N	700	700	700	700	700
Axial shaft load	N	600	600	600	600	600
Supply hose	mm / i	6	6	6	6	6
Exhaust hose	mm / i	8	8	8	8	8
Weight	kg	0,38	0,38	0,52	0,52	0,52
Length L	mm	100	100	126	126	126

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. 30

Clockwise
0,25 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

Motor selection easy

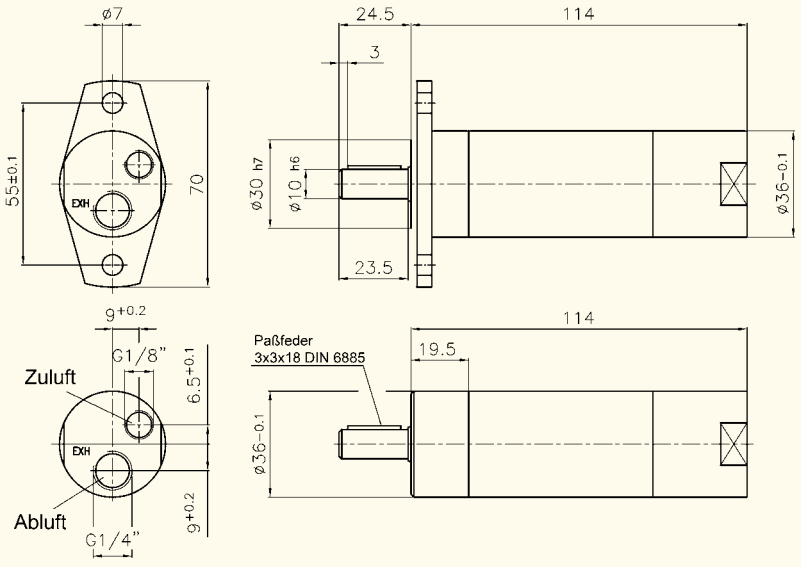
Flange

Technical Data

Model stainless steel Flange Article No. Cap Article No.		**MRD 25-9600** 60032-59-7 29945-11-7	**MRD 25-2200** 29948-29-7 29945-12-7	**MRD 25-1650** 60005-75-7 29945-13-7	**MRD 25-1040** 60003-91-7 29945-14-7
Speed under load	min $^{-1}$	9 600	2 200	1 650	1 040
Torque under load	Nm	0,25	1,1	1,5	2,4
Starting torque	Nm	0,38	1,7	2,3	3,6
Stalling torque	Nm	0,50	2,2	3,0	4,8
Free speed	min $^{-1}$	19 200	4 400	3 300	2 080
Air consumption	l / s	5,0	5,0	5,0	5,0
Radial shaft load	N	1 100	1 100	1 100	1 100
Axial shaft load	N	900	900	900	900
Supply hose	mm / i	6	6	6	6
Exhaust hose	mm / i	10	10	10	10
Weight	kg	0,65	0,65	0,65	0,65

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→foot flange p. 90

Clockwise
0,25 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

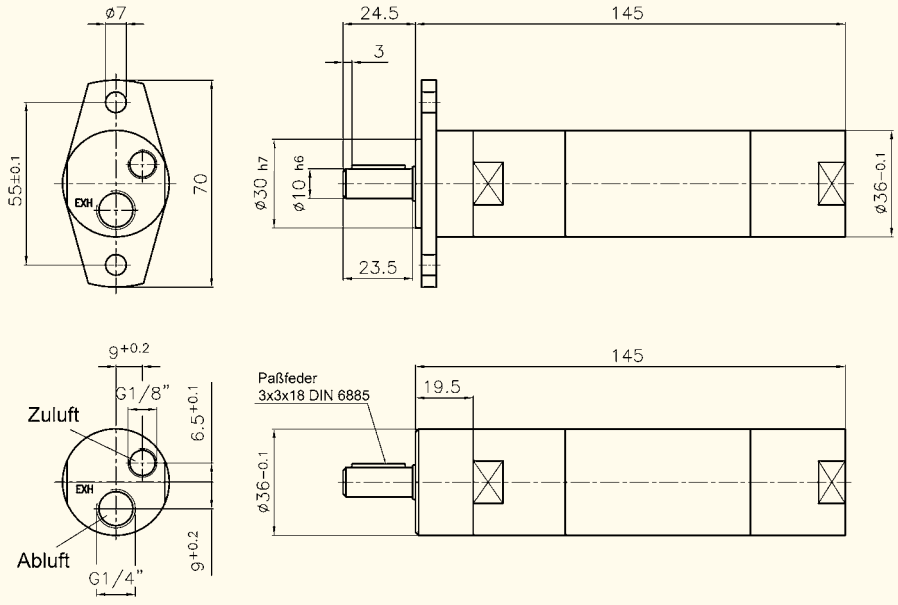
→ www.mannesmann-demag.com

Cap

		MRD 25-535 60025-94-7 29945-15-7	MRD 25-380 60007-35-7 29945-16-7	MRD 25-235 60018-75-7 29945-17-7
	min⁻¹	535	380	235
	Nm	4,3	6,0	10
Starting torque	Nm	6,5	9,0	15
Stalling torque	Nm	8,6	12	20
Free speed	min⁻¹	1 070	760	470
Air consumption	l / s	5,3	5,3	5,3
Radial shaft load	N	1 100	1 100	1 100
Axial shaft load	N	900	900	900
Supply hose	mm / i	6	6	6
Exhaust hose	mm / i	10	10	10
Weight	kg	0,85	0,85	0,85

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. 90

Clockwise
0,38 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

Motor selection easy

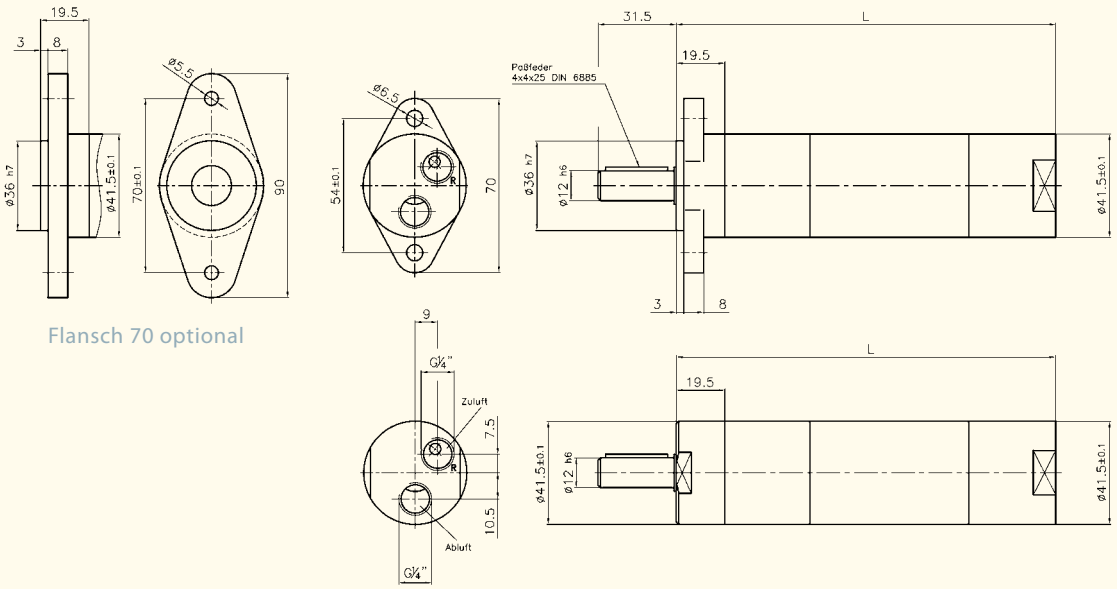
Flange

Technical Data

Model stainless steel		MRD 38-9400	MRD 38-2600	MRD 38-1460	MRD 38-1180
Flange	Article No.	60016-22-7	60027-62-7	29931-21-7	29931-71-7
Cap	Article No.	29925-98-7	29920-81-7	29925-99-7	29926-00-7
Speed under load	min⁻¹	9 400	2 600	1 460	1 180
Torque under load	Nm	0,40	1,4	2,6	3,1
Starting torque	Nm	0,60	2,2	3,8	4,7
Stalling torque	Nm	0,80	2,9	5,1	6,3
Free speed	min⁻¹	18 800	5 200	2 920	2 360
Air consumption	l / s	8,3	8,3	8,3	8,3
Radial shaft load	N	1 300	1 300	1 300	1 300
Axial shaft load	N	1 000	1 000	1 000	1 000
Supply hose	mm / i	8	8	8	8
Exhaust hose	mm / i	10	10	10	10
Weight	kg	0,90	0,90	0,90	0,90
Length L	mm	120	120	120	120

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Flansch 70 optional

→ foot flange p. 90

Clockwise
0,38 kW resistant to stalling, non lubrication

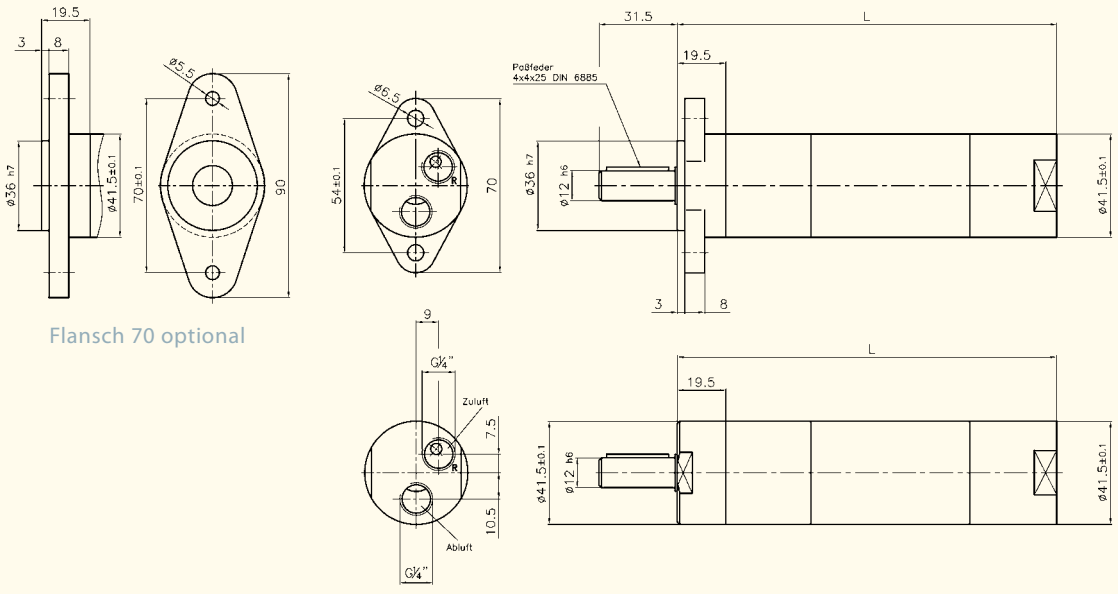
Article No. for ATEX upon request

→ www.mannesmann-demag.com

Cap

		MRD 38-580 29935-14-7 29910-85-7	MRD 38-320 29945-93-7 29910-86-7	MRD 38-260 29946-23-7 29925-85-7	MRD 38-160 29927-53-7 29910-88-7
	min $^{-1}$	580	320	260	160
	Nm	6,4	12	14	23
Starting torque	Nm	9,6	17	21	35
Stalling torque	Nm	13	23	29	43
Free speed	min $^{-1}$	1 160	640	520	320
Air consumption	l / s	8,3	8,3	8,3	8,3
Radial shaft load	N	1 300	1 300	1 300	1 300
Axial shaft load	N	1 000	1 000	1 000	1 000
Supply hose	mm / i	8	8	8	8
Exhaust hose	mm / i	10	10	10	10
Weight	kg	1,20	1,20	1,20	1,50
Length L	mm	152,5	152,5	152,5	185

(mm)



Flansch 70 optional

→ foot flange p. 90

Clockwise
0,38 kW resistant to stalling, non lubrication, threaded shaft

3D .stp-files
→ www.mannesmann-demag.com

Motor selection easy

Flange

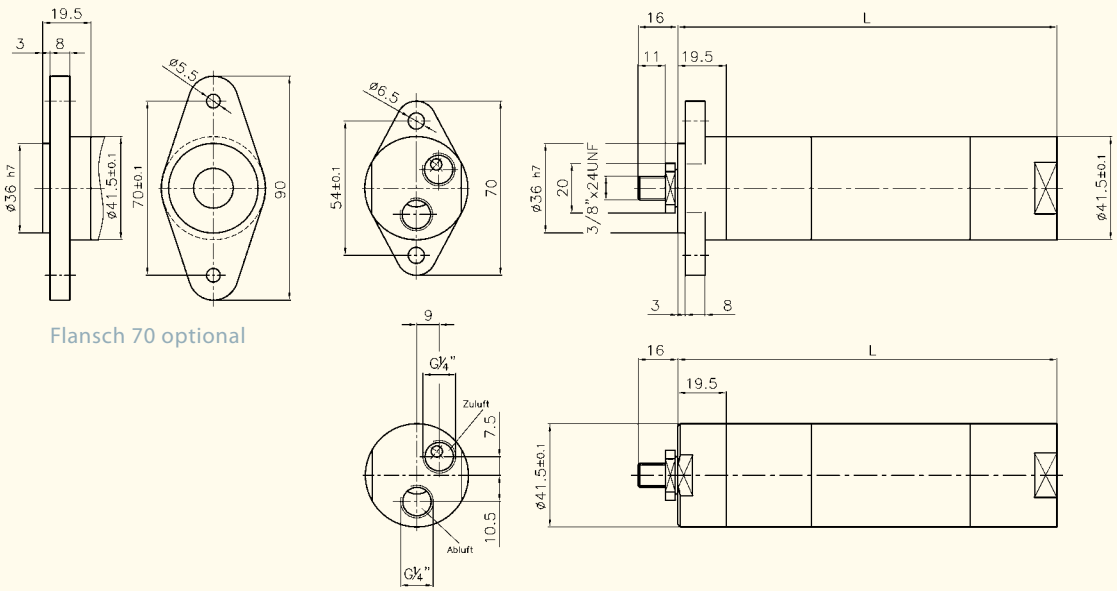
Cap

Technical Data

Model stainless steel		MRD 38-2600 3/8"	MRD 38-1460 3/8"	MRD 38-1180 3/8"	MRD 38-580 3/8"
Flange	Article No.	60019-57-7	29927-58-7	60032-87-7	29944-44-7
Cap	Article No.	29924-16-7	29927-59-7	29939-21-7	29944-51-7
Speed under load	min^{-1}	2 600	1 460	1 180	580
Torque under load	Nm	1,4	2,6	3,1	6,4
Starting torque	Nm	2,2	3,8	4,7	9,6
Stalling torque	Nm	2,9	5,1	6,3	13
Free speed	min^{-1}	5 200	2 920	2 360	1 160
Air consumption	l / s	8,3	8,3	8,3	8,3
Radial shaft load	N	400	400	400	400
Axial shaft load	N	1 000	1 000	1 000	1 000
Supply hose	mm / i	8	8	8	8
Exhaust hose	mm / i	10	10	10	10
Weight	kg	0,90	0,90	0,90	1,20
Length L	mm	120	120	120	152,5

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Flansch 70 optional

→foot flange p..90

Clockwise
0,38 kW resistant to stalling, non lubrication, threaded shaft

Article No. for ATEX upon request

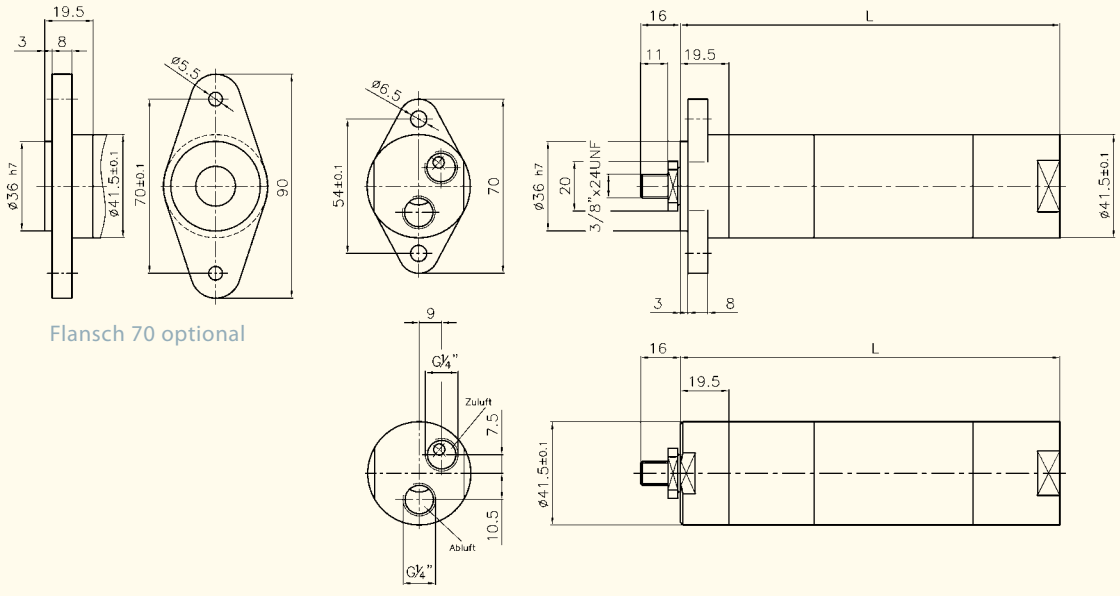
→ www.mannesmann-demag.com

Cap

Technical Data

	MRD 38-320 3/8" 60032-85-7 29944-05-7	MRD 38-260 3/8" 60032-84-7 29944-52-7	MRD 38-160 3/8" 29920-54-7 29926-09-7
min^{-1}	320	260	160
Nm	12	14	23
Nm	17	21	35
Nm	23	29	43
min^{-1}	640	520	320
l / s	8,3	8,3	8,3
N	400	400	400
N	1 000	1 000	1 000
mm / i	8	8	8
mm / i	10	10	10
kg	1,20	1,20	1,50
mm	152,5	152,5	185

(mm)



Flansch 70 optional

→foot flange p.. 90

Clockwise
0,38 kW resistant to stalling, non lubrication, high torque

3D .stp-files
→ www.mannesmann-demag.com

Motor selection easy

Flange

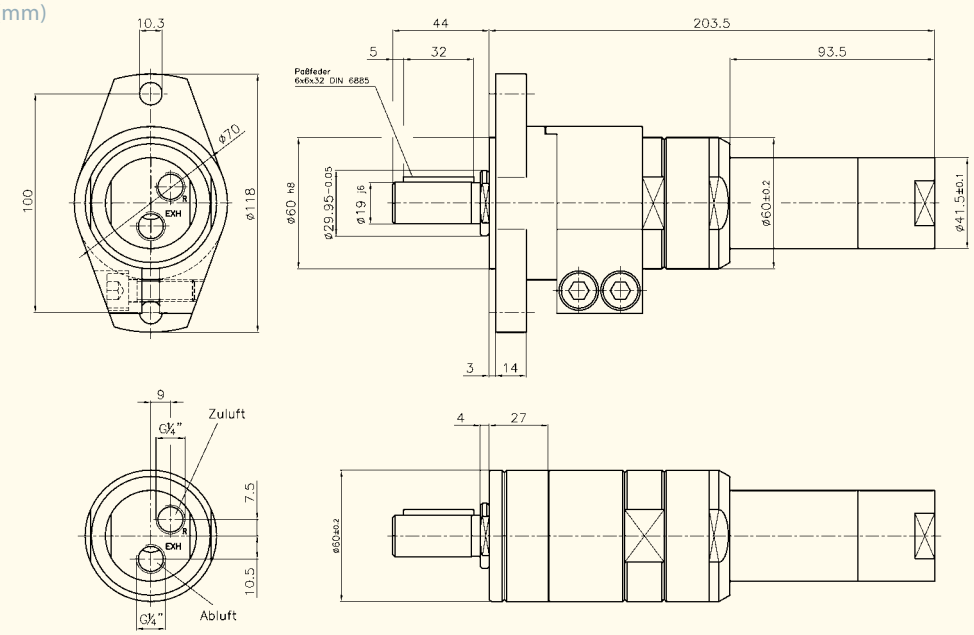
Cap

Technical Data

Model standard steel Flange Article No. Cap Article No.		MRD 38-100 60031-85-5 60008-79-5	MRD 38-70 60031-84-5 60008-80-5	MRD 38-55 60031-83-5 60008-81-5	MRD 38-40 60031-82-5 60008-82-5	MRD 38-33 60031-81-5 60008-83-5
Speed under load	min $^{-1}$	100	70	55	40	33
Torque under load	Nm	36	52	66	90	110
Starting torque	Nm	54	77	99	135	165
Stalling torque	Nm	72	103	132	180	220
Free speed	min $^{-1}$	200	140	110	80	66
Air consumption	l / s	8,3	8,3	8,3	8,3	8,3
Radial shaft load	N	3 900	3 900	3 900	3 900	3 900
Axial shaft load	N	1 800	1 800	1 800	1 800	1 800
Supply hose	mm / i	8	8	8	8	8
Exhaust hose	mm / i	10	10	10	10	10
Weight	kg	2,6	2,6	2,6	2,6	2,6

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→foot flange p. 91

Clockwise
0,38 kW resistant to stalling, non lubrication, high torque

Article No. for ATEX upon request

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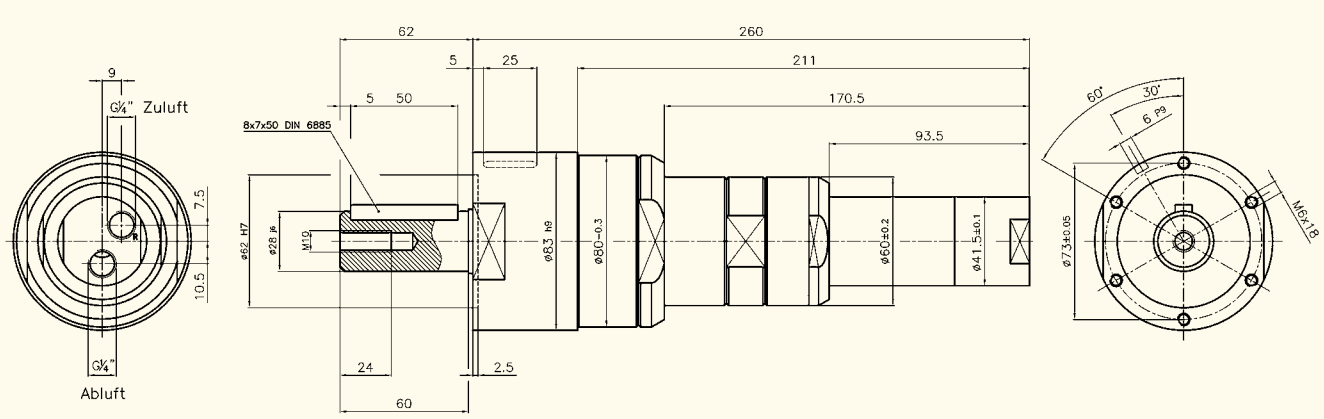
Standardausführung

Technical Data

Model standard steel	Article No.	MRD 38-25 60008-84-5	MRD 38-20 60008-85-5	MRD 38-15 60008-86-5	MRD 38-10 60008-87-5
Speed under load	min⁻¹	25	20	15	10
Torque under load	Nm	145	181	241	362
Starting torque	Nm	218	272	362	543
Stalling torque	Nm	290	362	482	724
Free speed	min⁻¹	50	40	30	20
Air consumption	l / s	8,3	8,3	8,3	8,3
Radial shaft load	N	5 600	5 600	5 600	5 600
Axial shaft load	N	2 800	2 800	2 800	2 800
Supply hose	mm / i	8	8	8	8
Exhaust hose	mm / i	10	10	10	10
Weight	kg	5,0	5,0	5,0	5,0

Power and speed related to 6,3 bar working pressure

(mm)



Clockwise
0,62 kW resistant to stalling

3D .stp-files

Motor selection easy

→ www.mannesmann-demag.com

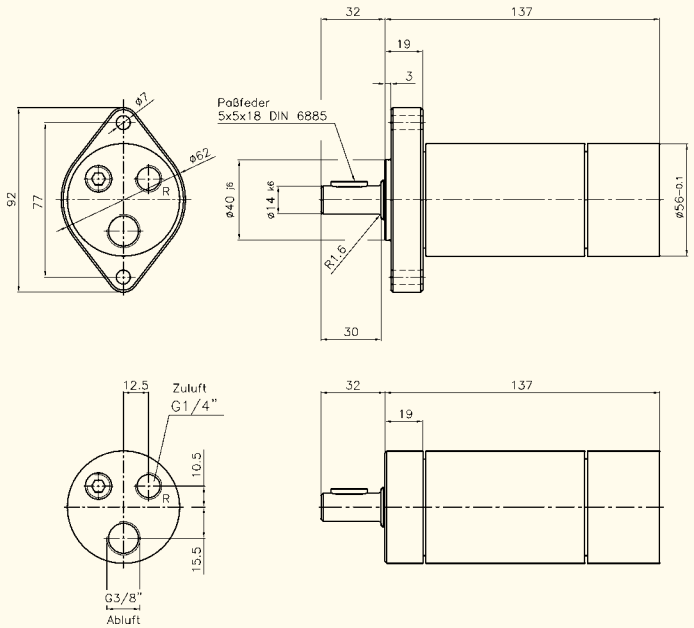
Flange

Technical Data

Model stainless steel Flange Article No. Cap Article No.		MRD 55-11000 29906-29-7 60033-30-7	MRD 55-2800 29906-30-7 60033-29-7	MRD 55-2200 29906-31-7 60033-28-7	MRD 55-1800 29906-32-7 60033-27-7
Speed under load	min⁻¹	11 000	2 800	2 200	1 800
Torque under load	Nm	0,54	2,1	2,7	3,3
Starting torque	Nm	0,81	3,2	4,0	4,9
Stalling torque	Nm	1,1	4,2	5,4	6,6
Free speed	min⁻¹	22 000	5 600	4 400	3 600
Air consumption	l / s	14,6	14,6	14,6	14,6
Radial shaft load	N	2 100	2 100	2 100	2 100
Axial shaft load	N	1 500	1 500	1 500	1 500
Supply hose	mm / i	10	10	10	10
Exhaust hose	mm / i	16	16	16	16
Weight	kg	1,00	1,40	1,40	1,40

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. 91

Clockwise
0,62 kW resistant to stalling

Article No. for ATEX upon request

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Flange

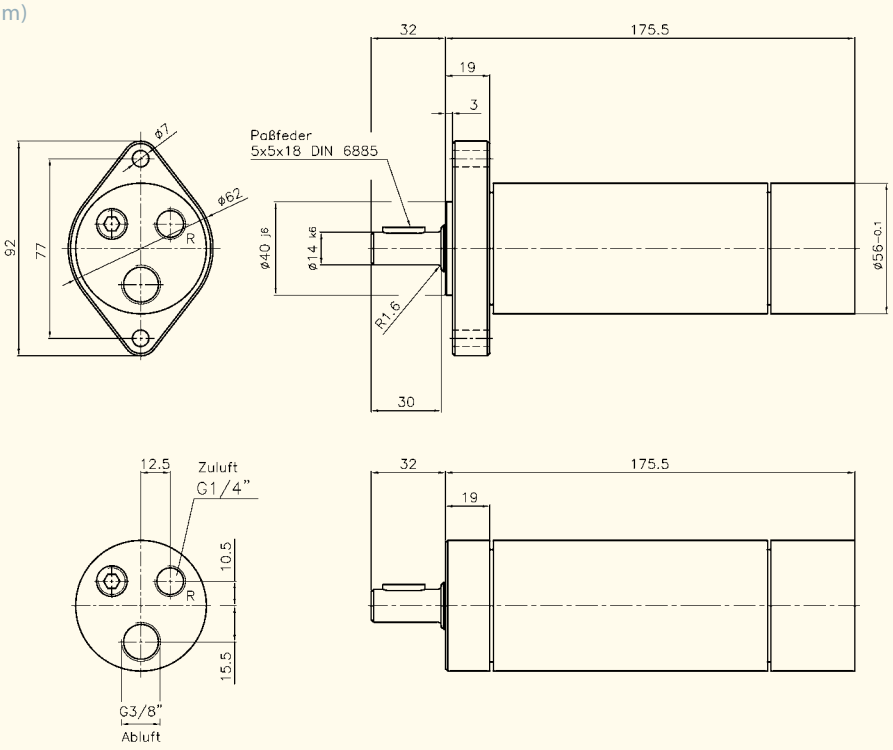
Cap

Technical Data

Model stainless steel		MRD 55-650	MRD 55-500	MRD 55-400	MRD 55-300	MRD 55-250
Flange	Article No.	29906-33-7	29906-34-7	29906-35-7	29906-36-7	29906-37-7
Cap	Article No.	60033-26-7	60033-25-7	60033-24-7	60033-23-7	60033-22-7
Speed under load	min⁻¹	650	500	400	300	250
Torque under load	Nm	9,1	12	15	20	24
Starting torque	Nm	14	18	22	30	36
Stalling torque	Nm	18	24	30	39	47
Free speed	min⁻¹	1 300	1 000	800	600	500
Air consumption	l / s	14,6	14,2	14,2	14,2	14,2
Radial shaft load	N	2 100	2 100	2 100	2 100	2 100
Axial shaft load	N	1 500	1 500	1 500	1 500	1 500
Supply hose	mm / i	10	10	10	10	10
Exhaust hose	mm / i	16	16	16	16	16
Weight	kg	1,80	1,80	1,80	1,80	1,80

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. **91**

Clockwise
0,62 kW resistant to stalling, high torque

3D .stp-files

Motor selection easy

→ www.mannesmann-demag.com

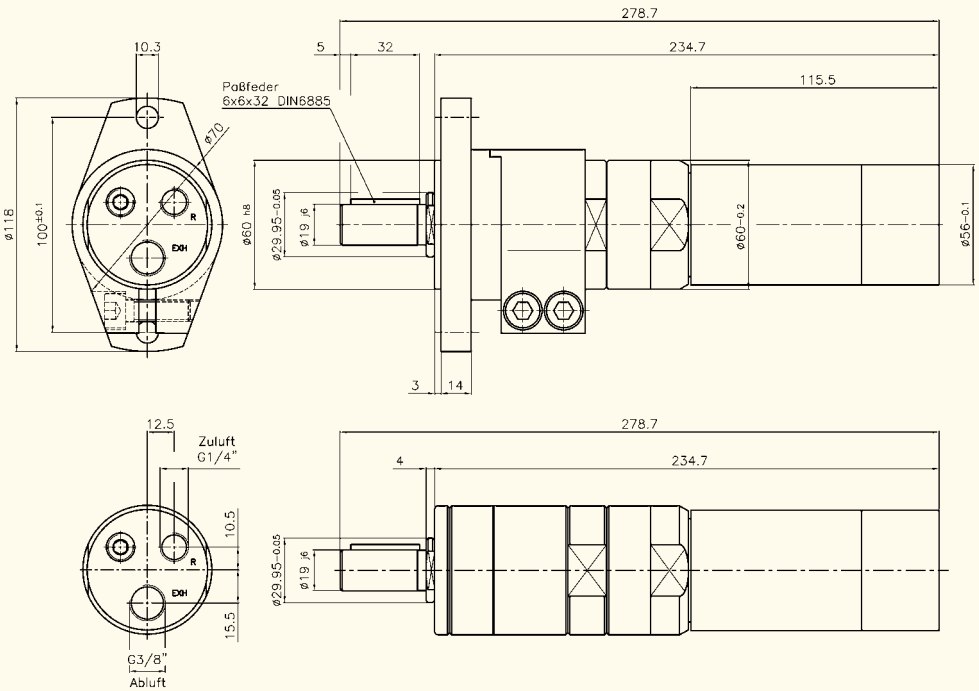
Flange

Technical Data

Model standard steel Flange Article No. Cap Article No.		MRD 55-105 60031-93-5 60009-97-5	MRD 55-75 60031-92-5 60009-98-5	MRD 55-50 60031-91-5 60009-99-5
Speed under load	min^{-1}	105	75	50
Torque under load	Nm	56	79	118
Starting torque	Nm	84	119	177
Stalling torque	Nm	112	158	236
Free speed	min^{-1}	210	150	100
Air consumption	l / s	14,6	14,6	14,6
Radial shaft load	N	3 900	3 900	3 900
Axial shaft load	N	1 800	1 800	1 800
Supply hose	mm / i	10	10	10
Exhaust hose	mm / i	16	16	16
Weight	kg	5,5	5,5	5,5

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→foot flange p. 91

Clockwise
0,62 kW resistant to stalling, high torque

Article No. for ATEX upon request

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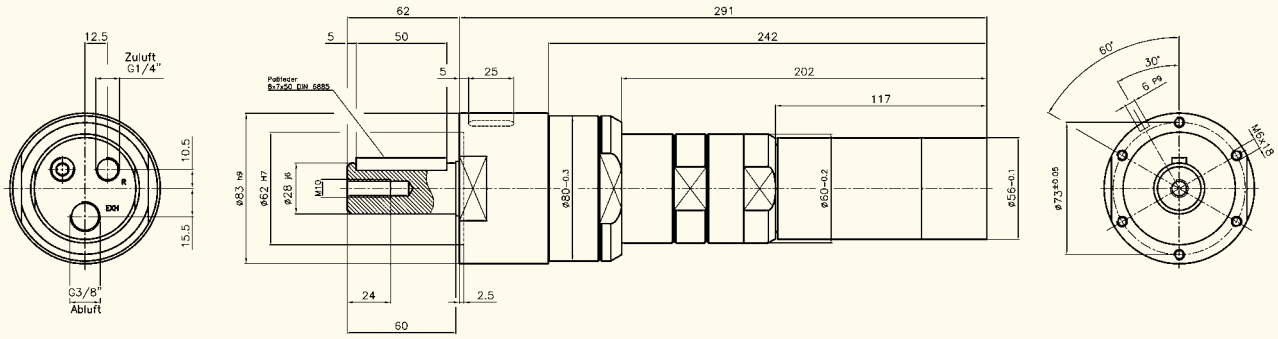
Standardausführung

Technical Data

Model standard steel	Article No.	**MRD 55-25** 60010-00-5	**MRD 55-16** 60010-01-5
Speed under load	min⁻¹	25	16
Torque under load	Nm	236	370
Starting torque	Nm	354	555
Stalling torque	Nm	472	740
Free speed	min⁻¹	50	32
Air consumption	l / s	14,6	14,6
Radial shaft load	N	5 600	5 600
Axial shaft load	N	2 800	2 800
Supply hose	mm / i	10	10
Exhaust hose	mm / i	16	16
Weight	kg	5,5	5,5

Power and speed related to 6,3 bar working pressure

(mm)



Clockwise
0,65 kW resistant to stalling, high torque

3D .stp-files
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Motor selection easy

Flange

Technical Data

Model standard steel		MRD 65-10500	MRD 65-2900	MRD 65-2300	MRD 65-1300	MRD 65-650	MRD 65-500
Flange	Article No.	60031-45-5	60031-46-5	60031-47-5	60031-48-5	60031-49-5	60031-50-5
Cap	Article No.	60024-55-5	60024-56-5	60024-57-5	60024-58-5	60024-59-5	60024-60-5
	min⁻¹	10 500	2 900	2 300	1 300	650	500
Torque under load	Nm	0,59	2,1	2,7	4,7	9,4	12
Starting torque	Nm	0,89	3,2	4,0	7,0	14	18
Stalling torque	Nm	1,2	4,2	5,4	9,4	19	14
Free speed	min⁻¹	21 000	5 800	4 600	2 600	1 300	1 000
Air consumption	l / s	13	13	13	13	13	13
Radial shaft load	N	1 400	1 400	1 400	1 400	1 400	1 400
Axial shaft load	N	1 200	1 200	1 200	1 200	1 200	1 200
Supply hose	mm / i	13	13	13	13	13	13
Exhaust hose	mm / i	16	16	16	16	16	16
Weight	kg	1,1	1,1	1,1	1,1	1,5	1,5
Length L	mm	129,5	129,5	129,5	129,5	164,5	164,5

Power and speed related to 6,3 bar working pressure

Model standard steel		MRD 65-290	MRD 65-145	MRD 65-85	MRD 65-60	MRD 65-35	MRD 65-25
Flange	Article No.	60031-51-5	60031-52-5	60031-53-5	60031-54-5	—	—
Cap	Article No.	60024-61-5	60024-62-5	60024-63-5	60024-64-5	60024-65-5	60024-66-5
Speed under load	min⁻¹	290	145	85	60	35	25
Torque under load	Nm	21	40	70	98	166	233
Starting torque	Nm	31	60	104	148	249	349
Stalling torque	Nm	62	80	140	196	332	466
Free speed	min⁻¹	580	290	140	120	70	50
Air consumption	l / s	13	13	13	13	13	13
Radial shaft load	N	1 400	3 900	3 900	3 900	5 600	5 600
Axial shaft load	N	1 200	1 800	1 800	1 800	2 800	2 800
Supply hose	mm / i	13	13	13	13	13	13
Exhaust hose	mm / i	16	16	16	16	16	16
Weight	kg	1,5	2,4	2,4	2,4	5,4	5,4
Length L	mm	164,5	213	213	213	269	269

Power and speed related to 6,3 bar working pressure

→foot flange p. 91

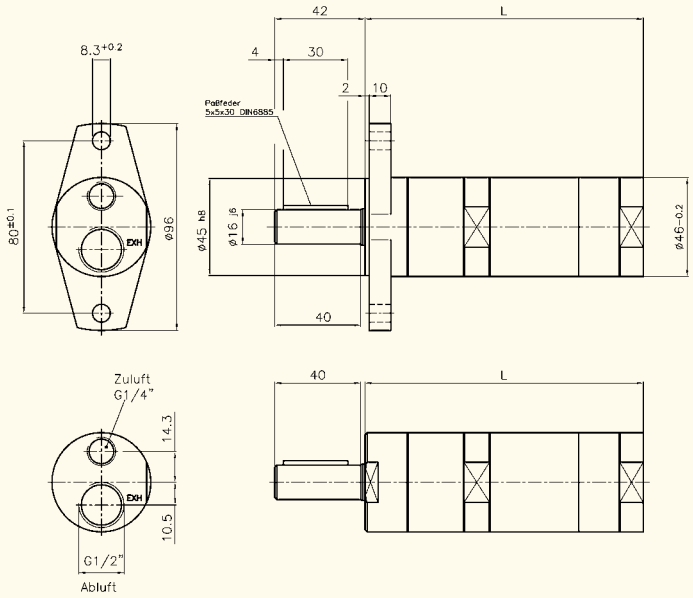
Clockwise
0,65 kW resistant to stalling, high torque

Article No. for ATEX upon request

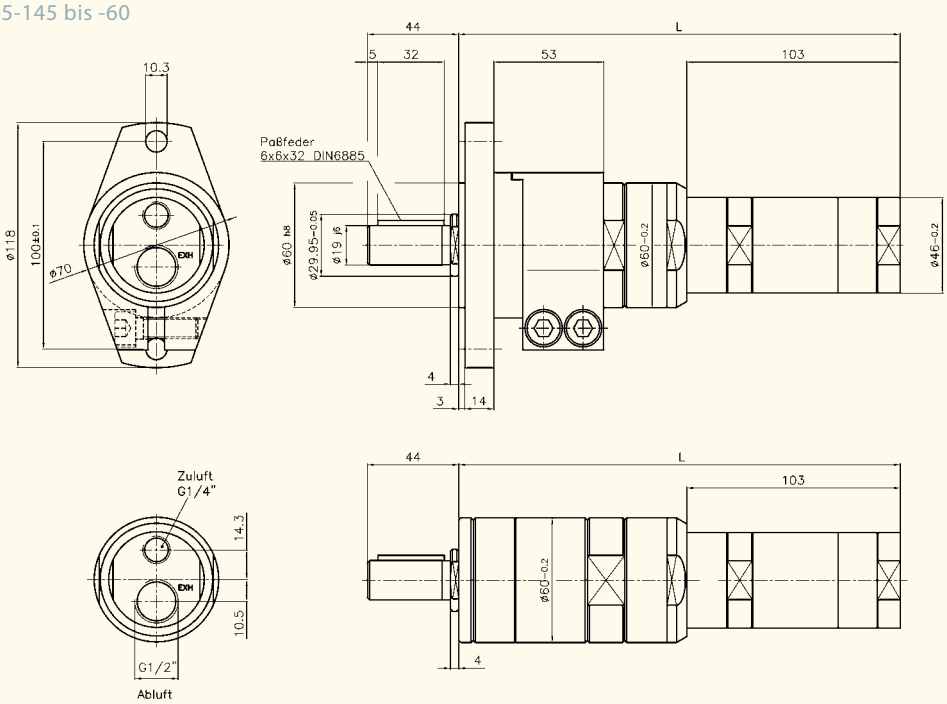
→ www.mannesmann-demag.com

Dimensions (mm)

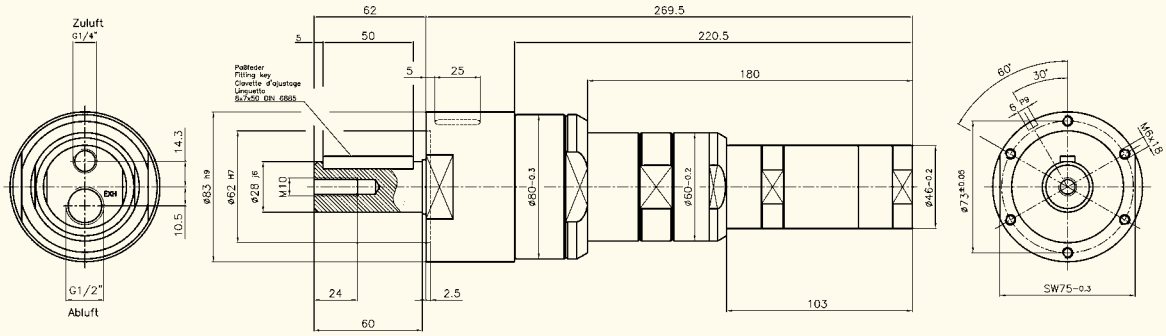
MRD 65-10500 bis -290



MRD 65-145 bis -60



MRD 65-35 und -25



Clockwise
0,84 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

Motor selection easy

Flange

Technical Data

Model standard steel		MRD 84-10800	MRD 84-3000	MRD 84-2370	MRD 84-1350	MRD 84-660	MRD 84-520
Flange	Article No.	60031-57-5	60031-58-5	60031-59-5	60031-60-5	60031-61-5	60031-62-5
Cap	Article No.	60024-67-5	60024-68-5	60024-69-5	60024-70-5	60024-71-5	60024-72-5
	min⁻¹	10 800	3 000	2 370	1 350	660	520
Torque under load	Nm	0,70	2,7	3,3	5,9	12	15
Starting torque	Nm	1,1	4,0	5,0	8,9	18	23
Stalling torque	Nm	1,4	5,4	6,6	12	24	30
Free speed	min⁻¹	21 600	6 000	4 740	2 700	1 320	1 040
Air consumption	l / s	16	16	16	16	16	16
Radial shaft load	N	1 400	1 400	1 400	1 400	1 400	1 400
Axial shaft load	N	1 200	1 200	1 200	1 200	1 200	1 200
Supply hose	mm / i	13	13	13	13	13	13
Exhaust hose	mm / i	16	16	16	16	16	16
Weight	kg	1,2	1,2	1,2	1,2	1,4	1,4
Length L	mm	135,5	135,5	135,5	135,5	170,5	170,5

Power and speed related to 6,3 bar working pressure

Model standard steel		MRD 84-295	MRD 84-145	MRD 84-90	MRD 84-60	MRD 84-35	MRD 84-25
Flange	Article No.	60031-63-5	60031-64-5	60031-65-5	60031-66-5	—	—
Cap	Article No.	60024-73-5	60024-74-5	60024-75-5	60024-76-5	60024-77-5	60024-78-5
Speed under load	min⁻¹	295	145	90	60	35	25
Torque under load	Nm	27	53	86	129	215	
Starting torque	Nm	40	80	128	198	232	
Stalling torque	Nm	54	106	172	258	430	
Free speed	min⁻¹	590	290	180	120	70	
Air consumption	l / s	16	16	16	16	16	
Radial shaft load	N	1 400	3 900	3 900	3 900	5 600	
Axial shaft load	N	1 200	1 800	1 800	1 800	2 800	
Supply hose	mm / i	13	13	13	13	13	
Exhaust hose	mm / i	16	16	16	16	16	
Weight	kg	1,4	2,5	2,5	2,5	5,5	5,5
Length L	mm	170,5	219	219	219	275	275

Power and speed related to 6,3 bar working pressure

Starting torque
Stalling torque
free speed
air consumption
radial shaft load
axial shaft load
Supply hose
Exhaust hose
weight
Length L

→ foot flange p. 91

Clockwise
0,84 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

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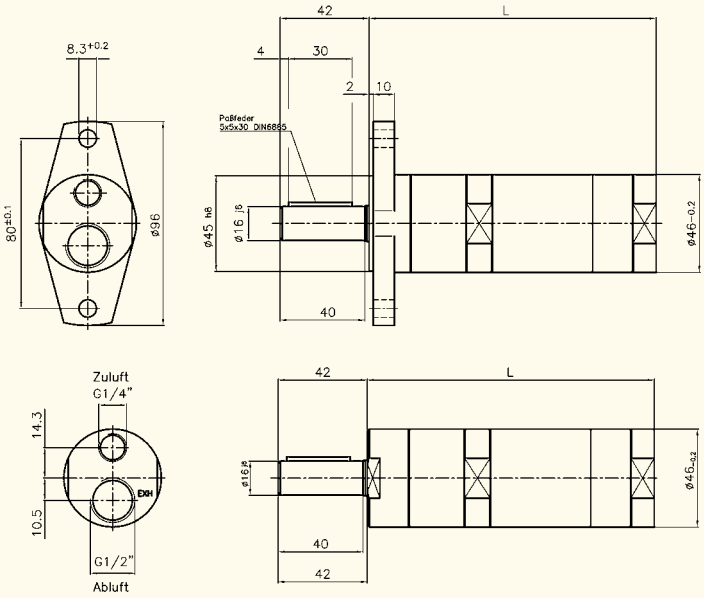
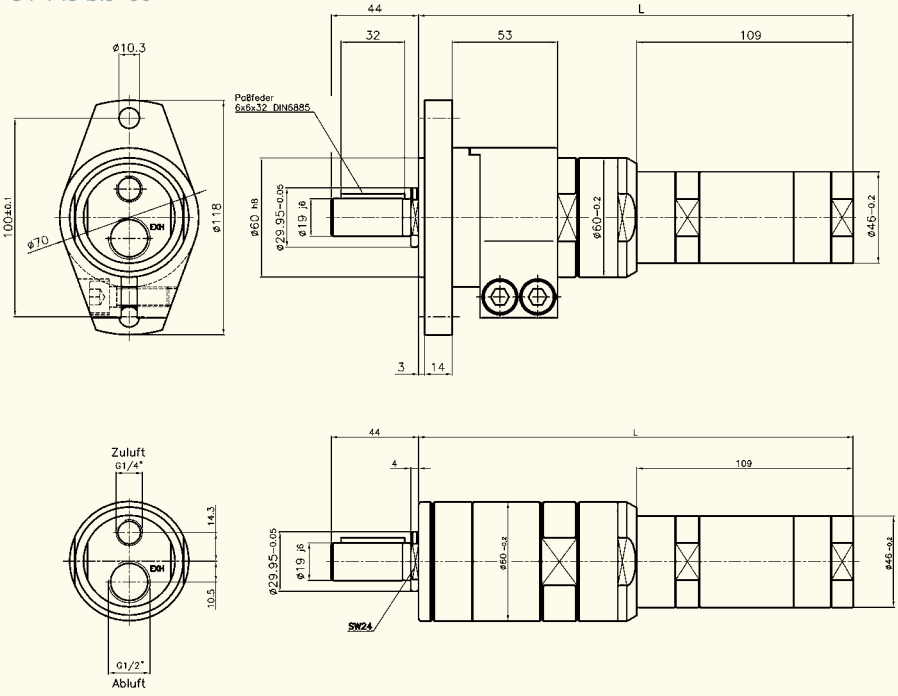
Dimensions (mm)

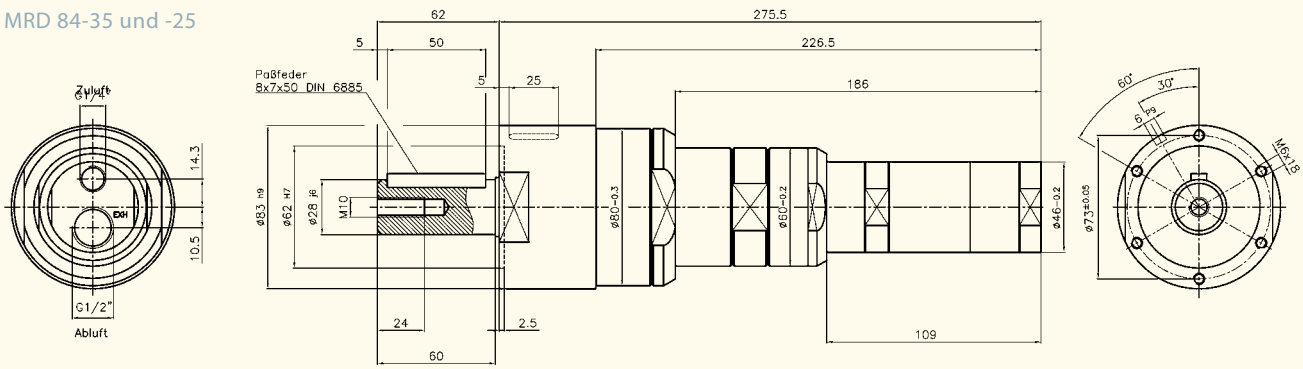
MRD 84-10800 bis -295



MRD 84-145 bis -60



MRD 84-35 und -25



Clockwise
1,2 kW resistant to stalling, non lubrication

3D .stp-files
→ www.mannesmann-demag.com

Motor selection easy

Flange

Cap

Technical Data

Model standard steel		MRD 120-9300	MRD 120-2700	MRD 120-1600	MRD 120-1200	MRD 120-600
Flange	Article No.	60032-09-5	60032-08-5	60032-07-5	60032-06-5	60032-05-5
Cap	Article No.	60002-30-5	60002-29-5	60002-28-5	60002-27-5	60002-26-5
Speed under load	min^{-1}	9 300	2 700	1 600	1 200	600
Torque under load	Nm	1,2	4,3	7,0	9,5	19
Starting torque	Nm	1,8	6,5	11	14	28
Stalling torque	Nm	2,4	8,6	14	19	38
Free speed	min^{-1}	18 600	5 400	3 200	2 400	1 200
Air consumption	l / s	23	23	23	23	23
Radial shaft load	N	3 900	3 900	3 900	3 900	3 900
Axial shaft load	N	1 800	1 800	1 800	1 800	1 800
Supply hose	mm / i	13	13	13	13	13
Exhaust hose	mm / i	16	16	16	16	16
Weight	kg	2,3	2,3	2,3	2,3	2,5
Length L	mm	199	199	199	199	199

Power and speed related to 6,3 bar working pressure

Model standard steel		MRD 120-360	MRD 120-260	MRD 120-140	MRD 120-85	MRD 120-65
Flange	Article No.	60032-04-5	60032-03-5	—	—	—
Cap	Article No.	60002-25-5	60002-24-5	60002-23-5	60002-22-5	60002-21-5
Speed under load	min^{-1}	360	260	140	85	65
Torque under load	Nm	32	44	82	135	176
Starting torque	Nm	47	66	123	202	264
Stalling torque	Nm	63	88	164	270	352
Free speed	min^{-1}	720	520	280	170	130
Air consumption	l / s	23	23	23	23	23
Radial shaft load	N	3 900	3 900	5 600	5 600	5 600
Axial shaft load	N	1 800	1 800	2 800	2 800	2 800
Supply hose	mm / i	13	13	13	13	13
Exhaust hose	mm / i	16	16	16	16	16
Weight	kg	2,5	2,5	4,6	4,6	4,6
Length L	mm	199	199	255	255	255

Power and speed related to 6,3 bar working pressure

→foot flange p. 91

Clockwise
1,2 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

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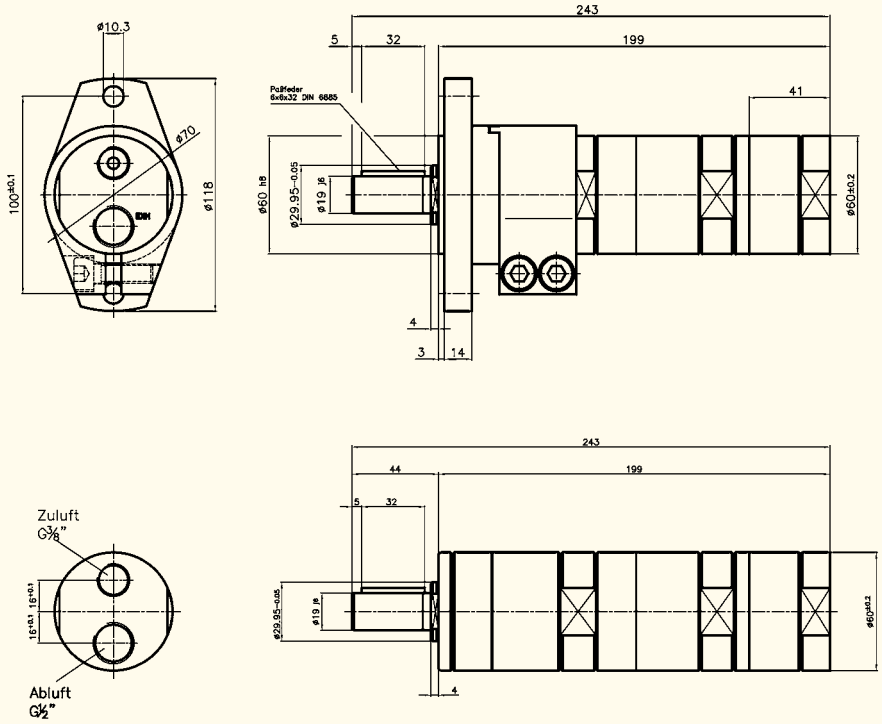
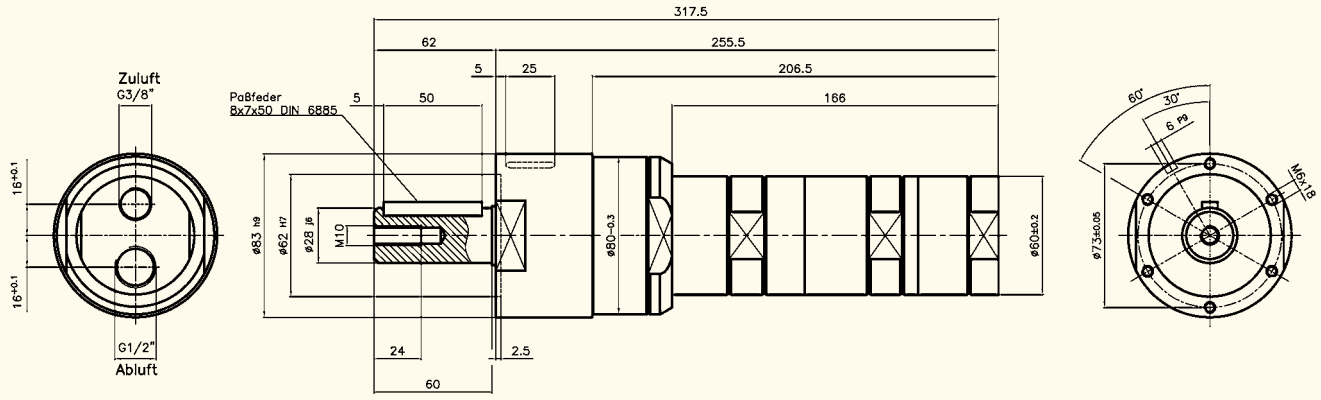
Motor selection easy

Dimensions (mm)

MRD 120-9300 bis -260



MRD 120-140 bis -65



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Reversible air motors
Models MU, MUD

Reversible
0,13 kW resistant to stalling

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

Motor selection easy

Flange

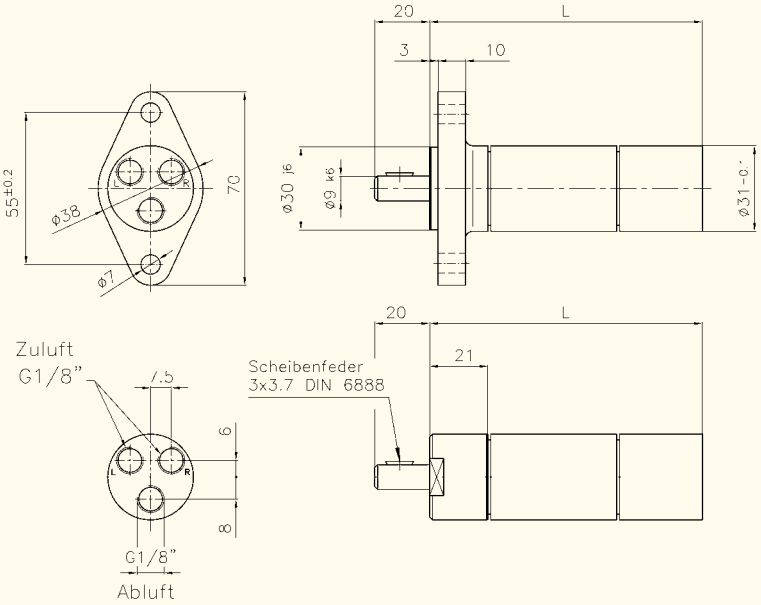
Cap

Technical Data

Model stainless steel Flange Article No. Cap Article No.		MUD 9-2300 29906-44-7 60032-96-7	MUD 9-1300 29906-45-7 29944-45-7	MUD 9-560 29906-46-7 29935-93-7	MUD 9-330 29906-47-7 60032-93-7	MUD 9-200 29906-48-7 60032-92-7
Speed under load	min^{-1}	2 300	1 300	560	330	200
Torque under load	Nm	0,54	0,95	2,2	3,8	6,2
Starting torque	Nm	0,81	1,4	3,3	5,6	9,3
Stalling torque	Nm	1,1	1,9	4,4	7,5	12
Free speed	min^{-1}	4 600	2 600	1 120	660	400
Air consumption	l / s	4,9	4,9	4,9	4,9	4,9
Radial shaft load	N	700	700	700	700	700
Axial shaft load	N	600	600	600	600	600
Supply hose	mm / i	6	6	6	6	6
Exhaust hose	mm / i	8	8	8	8	8
Weight	kg	0,45	0,45	0,57	0,57	0,57
Length L	mm	100	100	126	126	126

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. 90

Reversible
0,13 kW non lubrication
Low speed
Max. 10 Nm

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

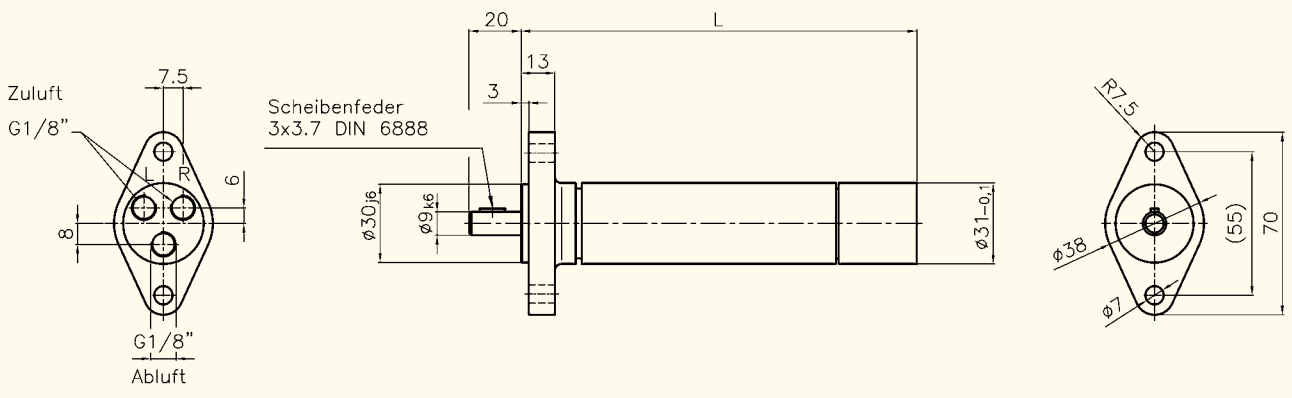
Motor selection easy

Flange

Model stainless steel Flange	Article No.	**MUD 9-165** 29907-20-7	**MUD 9-96** 29907-21-7	**MUD 9-56** 29907-22-7	**MUD 9-24** 29907-23-7
Free speed	min⁻¹	165	96	56	24
Max. allowed torque	Nm	10	10	10	10
Air consumption	l / s	4,9	4,9	4,9	4,9
Radial shaft load	N	700	700	700	700
Axial shaft load	N	600	600	600	600
Supply hose	mm / i	6	6	6	6
Exhaust hose	mm / i	8	8	8	8
Weight	kg	0,73	0,73	0,73	0,87
Length L	mm	152	152	152	178

Power and speed related to 6,3 bar working pressure

(mm)



Reversible
0,16 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

Motor selection easy

Flange

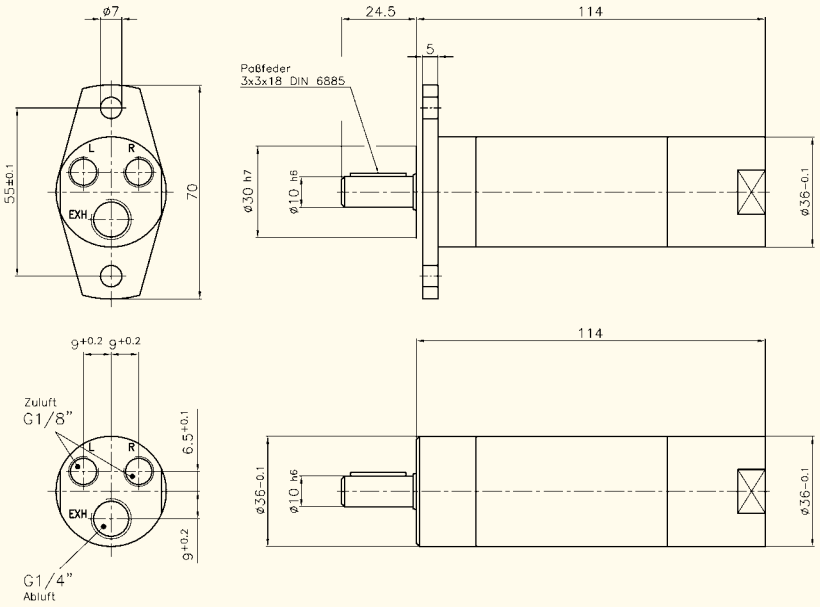
Cap

Technical Data

Model stainless steel		MUD 16-6500	MUD 16-1400	MUD 16-1050	MUD 16-650
Flange	Article No.	60030-28-7	60008-07-7	60006-39-7	60017-71-7
Cap	Article No.	29945-01-7	29945-02-7	29945-03-7	29945-04-7
Speed under load	min^{-1}	6 500	1 400	1 050	650
Torque under load	Nm	0,24	1,1	1,5	2,4
Starting torque	Nm	0,36	1,7	2,3	3,6
Stalling torque	Nm	0,48	2,2	3,0	4,8
Free speed	min^{-1}	13 000	2 800	2 100	1 300
Air consumption	l / s	5,0	5,0	5,0	5,0
Radial shaft load	N	1 100	1 100	1 100	1 100
Axial shaft load	N	900	900	900	900
Supply hose	mm / i	6	6	6	6
Exhaust hose	mm / i	10	10	10	10
Weight	kg	0,65	0,65	0,65	0,65

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. 90

Reversible
0,16 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

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Motor selection easy

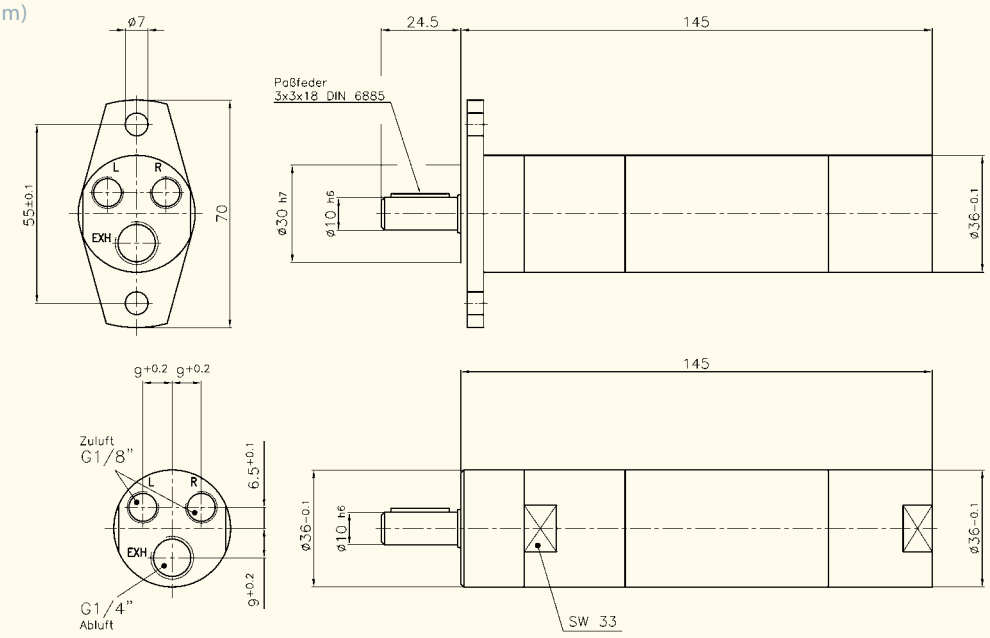
Flange

Cap

		MUD 16-310 60006-26-7 29945-05-7	MUD 16-240 60009-01-7 29945-06-7	MUD 16-140 60005-74-7 29945-07-7
Speed under load	min^{-1}	310	240	140
Torque under load	Nm	5,0	6,7	11
Starting torque	Nm	7,5	10	16
Stalling torque	Nm	10	13	22
Free speed	min^{-1}	620	480	280
Air consumption	l / s	5,0	5,0	5,0
Radial shaft load	N	1 100	1 100	1 100
Axial shaft load	N	900	900	900
Supply hose	mm / i	6	6	6
Exhaust hose	mm / i	10	10	10
Weight	kg	0,85	0,85	0,85

Power and speed related to 6,3 bar working pressure

(mm)



→ foot flange p. 90

Reversible
0,23 kW resistant to stalling, non lubrication

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Motor selection easy

Flange

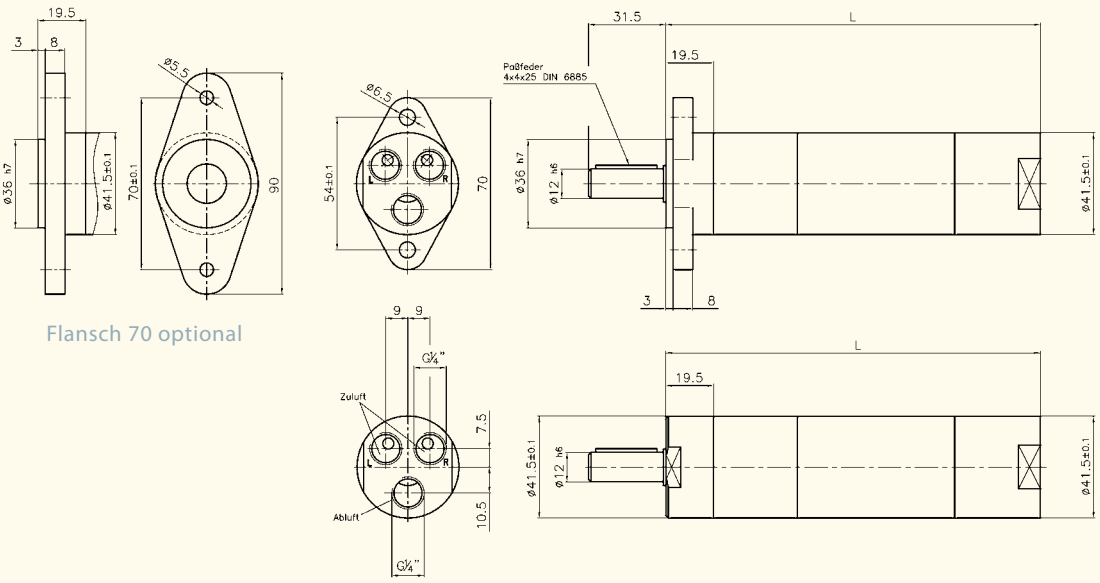
Cap

Technical Data

Model stainless steel		MUD 23-7000	MUD 23-1960	MUD 23-1090	MUD 23-880
Flange	Article No.	60003-90-7	60002-12-7	29945-63-7	60018-63-7
Cap	Article No.	29926-01-7	29920-82-7	29926-02-7	29926-03-7
Speed under load	min⁻¹	7 000	1 960	1 090	880
Torque under load	Nm	0,31	1,1	2,0	2,5
Starting torque	Nm	0,46	1,7	3,0	3,8
Stalling torque	Nm	0,62	2,2	4,0	5,0
Free speed	min⁻¹	14 000	3 920	2 180	1 760
Air consumption	l / s	7,8	7,8	7,8	7,8
Radial shaft load	N	1 300	1 300	1 300	1 300
Axial shaft load	N	1 000	1 000	1 000	1 000
Supply hose	mm / i	8	8	8	8
Exhaust hose	mm / i	10	10	10	10
Weight	kg	0,90	0,90	0,90	0,90
Length L	mm	120	120	120	120

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Flansch 70 optional

→ foot flange p. 90

Reversible
0,23 kW resistant to stalling, non lubrication

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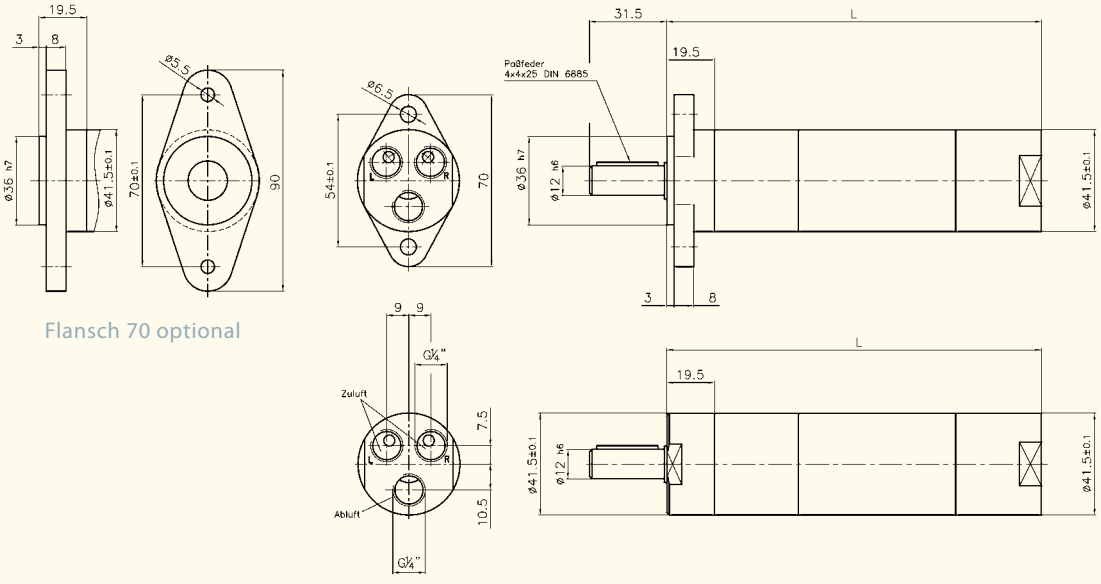
Flange

Cap

		MUD 23-435 29945-55-7 29910-81-7	MUD 23-240 29944-25-7 29910-82-7	MUD 23-190 29928-20-7 29910-83-7	MUD 23-120 29927-52-7 29910-84-7
Speed under load	min⁻¹	435	240	190	120
Torque under load	Nm	5,0	9,2	12	18
Starting torque	Nm	7,5	14	17	27
Stalling torque	Nm	10	18	23	37
Free speed	min⁻¹	870	480	380	240
Air consumption	l / s	7,8	7,8	7,8	7,8
Radial shaft load	N	1 300	1 300	1 300	1 300
Axial shaft load	N	1 000	1 000	1 000	1 000
Supply hose	mm / i	8	8	8	8
Exhaust hose	mm / i	10	10	10	10
Weight	kg	1,20	1,20	1,20	1,50
Length L	mm	152,5	152,5	152,5	185

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Flansch 70 optional

→ foot flange p. 90

Reversible
0,23 kW resistant to stalling, non lubrication, high torque

Article No. for ATEX upon request

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Motor selection easy

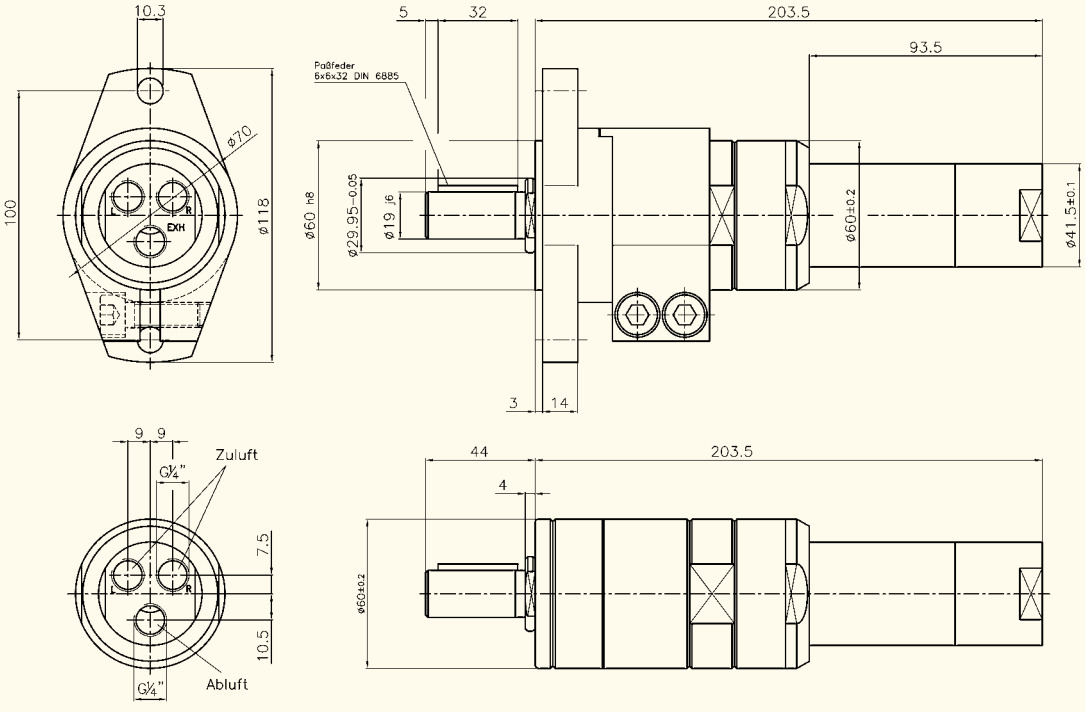
lCap

Technical Data

Model standard steel Flange Article No. Cap Article No.		MUD 23-70 60031-73-5 60008-88-5	MUD 23-55 60031-72-5 60008-89-5	MUD 23-40 60031-71-5 60008-90-5	MUD 23-30 60031-70-5 60008-91-5	MUD 23-25 60031-69-5 60008-92-5
Speed under load	min⁻¹	70	55	40	30	25
Torque under load	Nm	32	40	55	74	88
Starting torque	Nm	47	60	83	110	132
Stalling torque	Nm	63	80	110	147	176
Free speed	min⁻¹	140	110	80	60	50
Air consumption	l / s	7,8	7,8	7,8	7,8	7,8
Radial shaft load	N	3 900	3 900	3 900	3 900	3 900
Axial shaft load	N	1 800	1 800	1 800	1 800	1 800
Supply hose	mm / i	8	8	8	8	8
Exhaust hose	mm / i	10	10	10	10	10
Weight	kg	2,6	2,6	2,6	2,6	2,6

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. 91

Reversible
0,23 kW resistant to stalling, non lubrication, high torque

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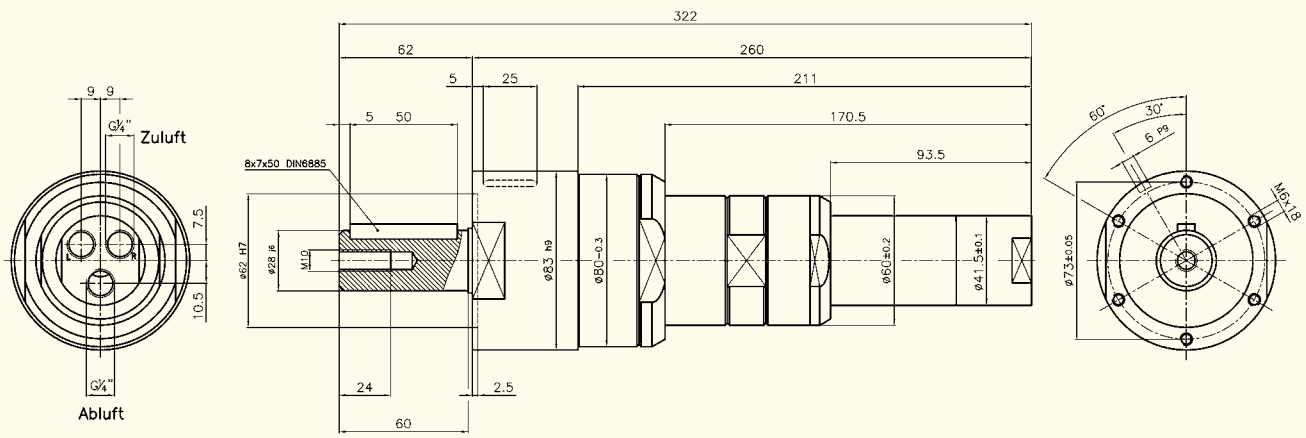
Standard

Technical Data

Model standard steel	Article No.	MUD 23-20 60008-93-5	MUD 23-15 60008-94-5	MUD 23-10 60008-95-5	MUD 23-7 60008-96-5
Speed under load	min⁻¹	20	15	10	7
Torque under load	Nm	110	147	220	313
Starting torque	Nm	165	220	330	469
Stalling torque	Nm	220	293	440	626
Free speed	min⁻¹	40	30	20	14
Air consumption	l / s	7,8	7,8	7,8	7,8
Radial shaft load	N	5 600	5 600	5 600	5 600
Axial shaft load	N	2 800	2 800	2 800	2 800
Supply hose	mm / i	8	8	8	8
Exhaust hose	mm / i	10	10	10	10
Weight	kg	5,0	5,0	5,0	5,0

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Reversible
0,23 kW non lubrication,
Low speed
Max. 30 Nm

Article No. for ATEX upon request

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Motor selection easy

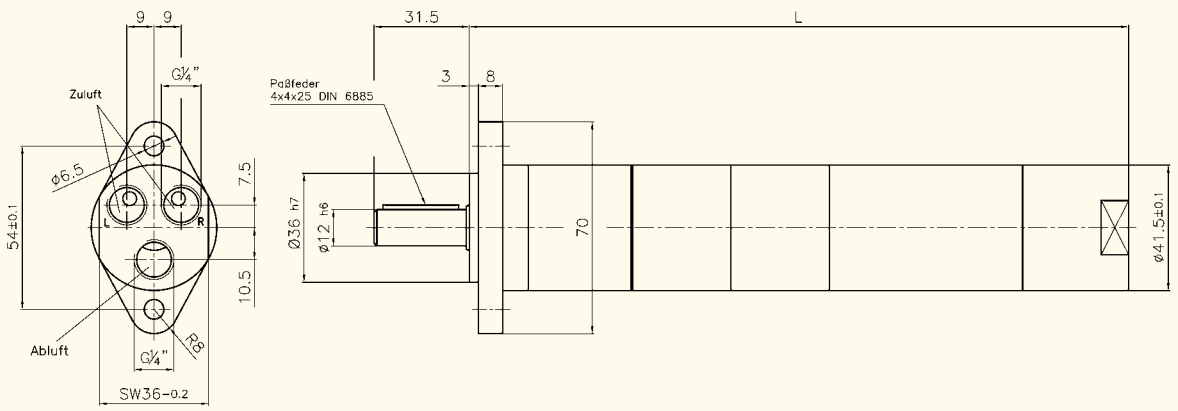
Flange

Technical Data

Model stainless steel Flange	Article No.	MUD 23-85 60028-66-7	MUD 23-65 60027-91-7	MUD 23-37 60019-95-7	MUD 23-30 60028-65-7
Free speed	min⁻¹	85	65	37	30
Max. allowed torque	Nm	30	30	30	30
Air consumption	l / s	7,8	7,8	7,8	7,8
Radial shaft load	N	1 300	1 300	1 300	1 300
Axial shaft load	N	1 000	1 000	1 000	1 000
Supply hose	mm / i	8	8	8	8
Exhaust hose	mm / i	10	10	10	10
Weight	kg	1,80	1,80	1,80	1,80
Length L	mm	218	218	218	218

Power and speed related to 6,3 bar working pressure

(mm)



Reversible
0,23 kW non lubrication,
Low speed
Max. 30 Nm

Article No. for
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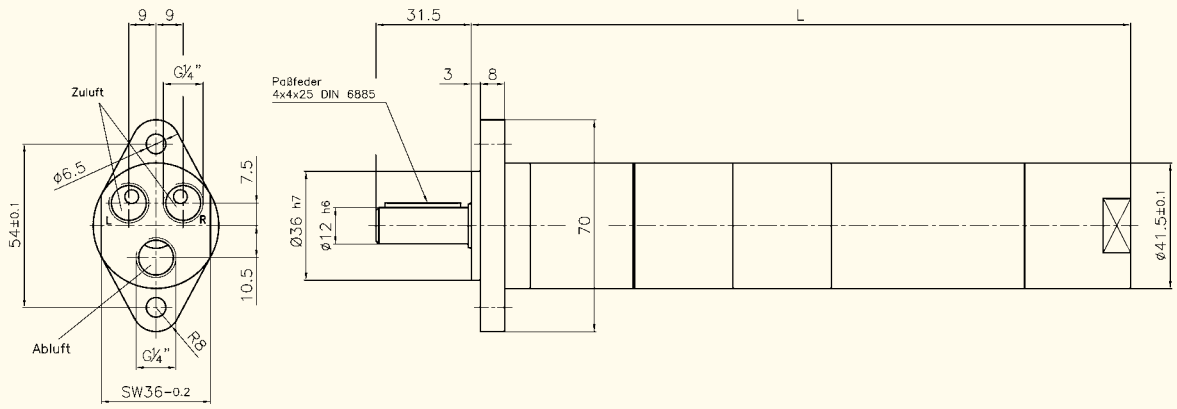
Flange

Model stainless steel Flange	Article No.	MUD 23-18 60028-64-7	MUD 23-10 60028-63-7	MUD 23-5 60027-37-7
	min $^{-1}$	18	10	5
	Nm	30	30	30
	l / s	7,8	7,8	7,8
	N	1 300	1 300	1 300
	N	1 000	1 000	1 000
	mm / i	8	8	8
	mm / i	10	10	10
	kg	2,10	2,10	2,40
	mm	250,5	250,5	282,5

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Reversible
0,50 kW resistant to stalling

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Motor selection easy

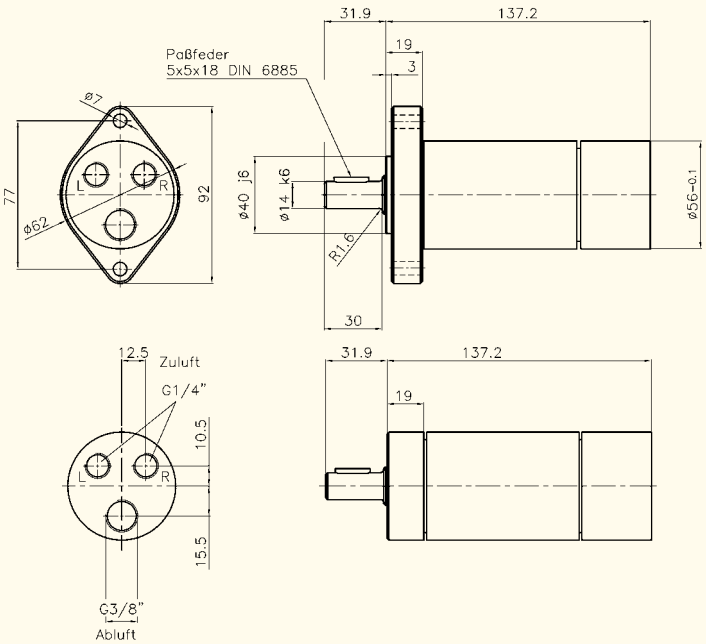
Flange

Technical Data

Model stainless steel		MUD 40-9500	MUD 40-2400	MUD 40-1700	MUD 40-1500
Flange	Article No.	29906-80-7	29906-81-7	29906-82-7	29906-83-7
Cap	Article No.	60033-20-7	60033-19-7	60033-18-7	60033-17-7
Speed under load	min⁻¹	9 500	2 400	1 700	1 500
Torque under load	Nm	0,50	2,0	2,8	3,2
Starting torque	Nm	0,75	3,0	4,2	4,8
Stalling torque	Nm	1,00	4,0	5,6	6,4
Free speed	min⁻¹	19 000	4 800	3 400	3 000
Air consumption	l / s	12,6	12,6	12,6	12,6
Radial shaft load	N	2 100	2 100	2 100	2 100
Axial shaft load	N	1 500	1 500	1 500	1 500
Supply hose	mm / i	10	10	10	10
Exhaust hose	mm / i	16	16	16	16
Weight	kg	1,40	1,70	1,70	1,70

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. 91

Reversible
0,50 kW resistant to stalling

Article No. for
ATEX upon request

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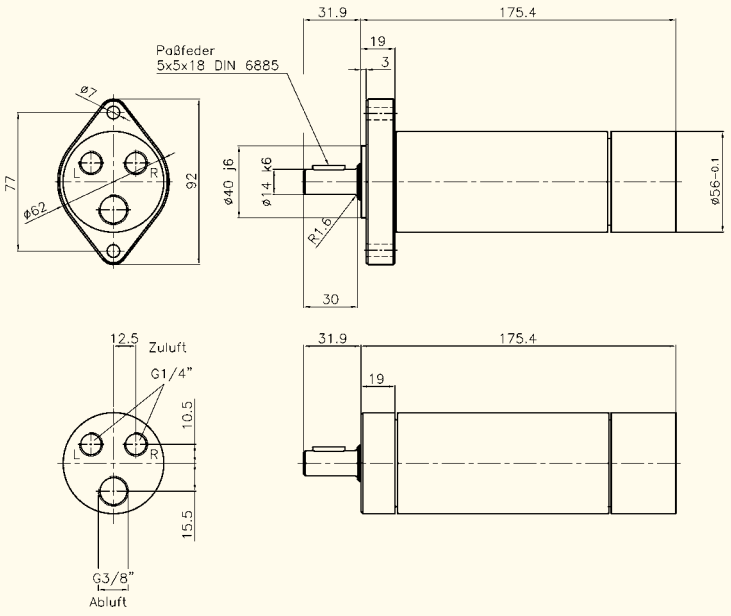
Flange

Cap

		MUD 40-575 29906-84-7 60033-16-7	MUD 40-430 29906-85-7 60033-15-7	MUD 40-355 29906-86-7 60033-14-7	MUD 40-265 29906-87-7 60001-75-7	MUD 40-220 29906-88-7 60033-12-7
Speed under load	min^{-1}	575	430	355	265	220
Torque under load	Nm	8,3	11	13	18	22
Starting torque	Nm	12	17	20	27	33
Stalling torque	Nm	17	22	27	36	43
Free speed	min^{-1}	1 150	860	710	530	440
Air consumption	l / s	12,6	12,6	12,6	12,6	12,6
Radial shaft load	N	2 100	2 100	2 100	2 100	2 100
Axial shaft load	N	1 500	1 500	1 500	1 500	1 500
Supply hose	mm / i	10	10	10	10	10
Exhaust hose	mm / i	16	16	16	16	16
Weight	kg	2,00	2,00	2,00	2,00	2,00

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. 91

Reversible
0,50 kW resistant to stalling
High torque

Article No. for ATEX upon request

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Motor selection easy

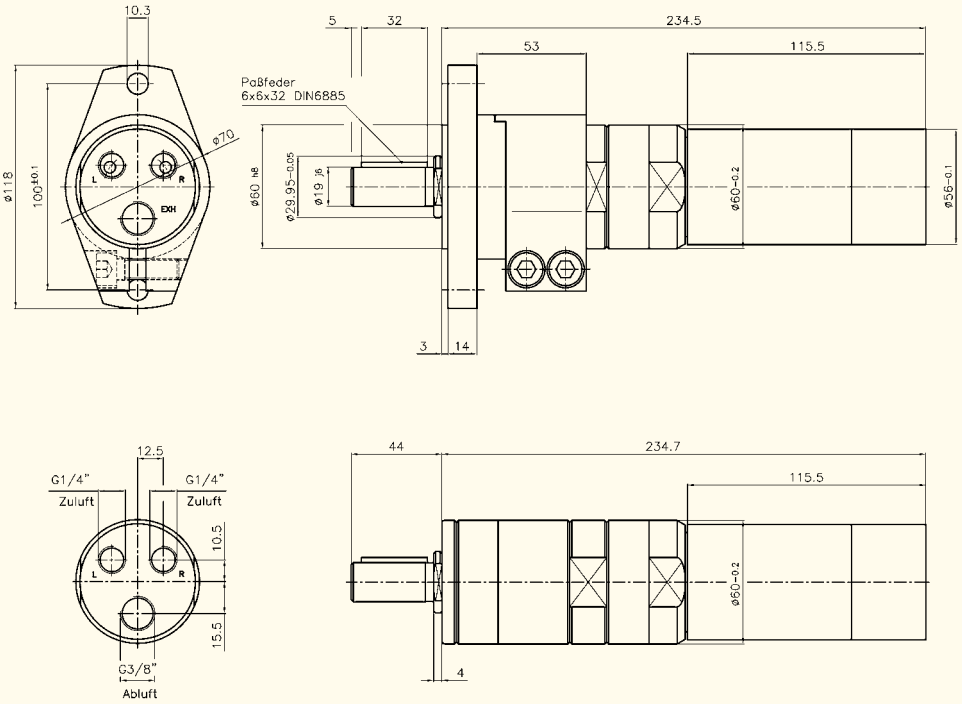
Cap

Technical Data

Model standard steel Flange Article No. Cap Article No.		**MUD 40-90** 60031-89-5 60009-92-5	**MUD 40-65** 60031-88-5 60009-93-5	**MUD 40-40** 60031-87-5 60009-94-5
Speed under load	min^{-1}	90	65	40
Torque under load	Nm	53	73	119
Starting torque	Nm	80	110	179
Stalling torque	Nm	106	146	238
Free speed	min^{-1}	180	130	80
Air consumption	l / s	12,6	12,6	12,6
Radial shaft load	N	3 900	3 900	3 900
Axial shaft load	N	1 800	1 800	1 800
Supply hose	mm / i	10	10	10
Exhaust hose	mm / i	16	16	16
Weight	kg	5,5	5,5	5,5

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. 91

Reversible
0,50 kW resistant to stalling
High torque

Article No. for
ATEX upon request

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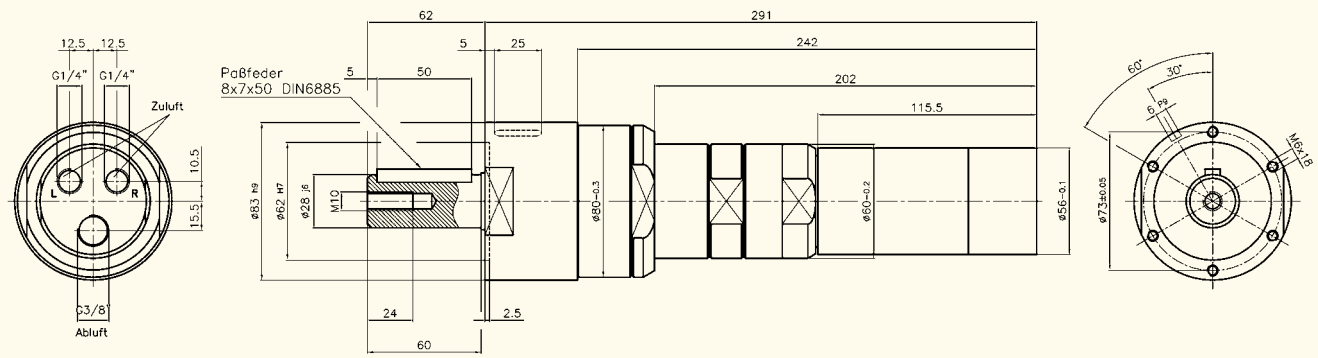
Standard

Technical Data

Model standard steel	Article No.	**MUD 40-20** 60009-95-5	**MUD 40-14** 60009-96-5
Speed under load	min $^{-1}$	20	14
Torque under load	Nm	238	341
Starting torque	Nm	357	512
Stalling torque	Nm	476	682
Free speed	min $^{-1}$	40	28
Air consumption	l / s	12,6	12,6
Radial shaft load	N	5 600	5 600
Axial shaft load	N	2 800	2 800
Supply hose	mm / i	10	10
Exhaust hose	mm / i	16	16
Weight	kg	5,5	5,5

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Reversible
0,53 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

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Motor selection easy

Flange

Cap

Technical Data

Model standard steel		MUD 53-8100	MUD 53-2260	MUD 53-1780	MUD 53-1000	MUD 53-500	MUD 53-390
Flange	Article No.	60031-30-5	60031-29-5	60031-28-5	60031-27-5	60031-26-5	60031-25-5
Cap	Article No.	60025-02-5	60025-05-5	60025-13-5	60025-27-5	60025-07-5	60025-15-5
Speed under load	min^{-1}	8 100	2 260	1 780	1 000	500	390
Torque under load	Nm	0,62	2,3	2,8	5,0	10	13
Starting torque	Nm	0,90	3,8	4,2	7,0	15	19
Stalling torque	Nm	1,2	4,6	5,6	10	20	25
Free speed	min^{-1}	16 200	4 520	3 560	2 000	1 000	780
Air consumption	l / s	13	13	13	13	13	13
Radial shaft load	N	1 400	1 400	1 400	1 400	1 400	1 400
Axial shaft load	N	1 200	1 200	1 200	1 200	1 200	1 200
Supply hose	mm / i	13	13	13	13	13	13
Exhaust hose	mm / i	16	16	16	16	16	16
Weight	kg	1,1	1,1	1,1	1,1	1,5	1,5
Length L	mm	129,5	129,5	129,5	129,5	164,5	164,5

Power and speed related to 6,3 bar working pressure

Model standard steel		MUD 53-220	MUD 53-110	MUD 53-65	MUD 53-45	MUD 53-27	MUD 53-20
Flange	Article No.	60028-52-5	60031-23-5	60031-22-5	60031-21-5	—	—
Cap	Article No.	60025-29-5	60025-17-5	60025-19-5	60025-35-5	60025-21-5	60025-37-5
Speed under load	min^{-1}	220	110	65	45	27	20
Torque under load	Nm	23	44	75	108	176	238
Starting torque	Nm	34	66	112	162	265	358
Stalling torque	Nm	45	88	150	216	352	476
Free speed	min^{-1}	440	220	130	90	54	40
Air consumption	l / s	13	13	13	13	13	13
Radial shaft load	N	1 400	3 900	3 900	3 900	5 600	5 600
Axial shaft load	N	1 200	1 800	1 800	1 800	2 800	2 800
Supply hose	mm / i	13	13	13	13	13	13
Exhaust hose	mm / i	16	16	16	16	16	16
Weight	kg	1,5	2,4	2,4	2,4	5,4	5,4
Length L	mm	164,5	213	213	213	269,5	269,5

Power and speed related to 6,3 bar working pressure

→ foot flange p. 91

Reversible
0,53 kW resistant to stalling, non lubrication

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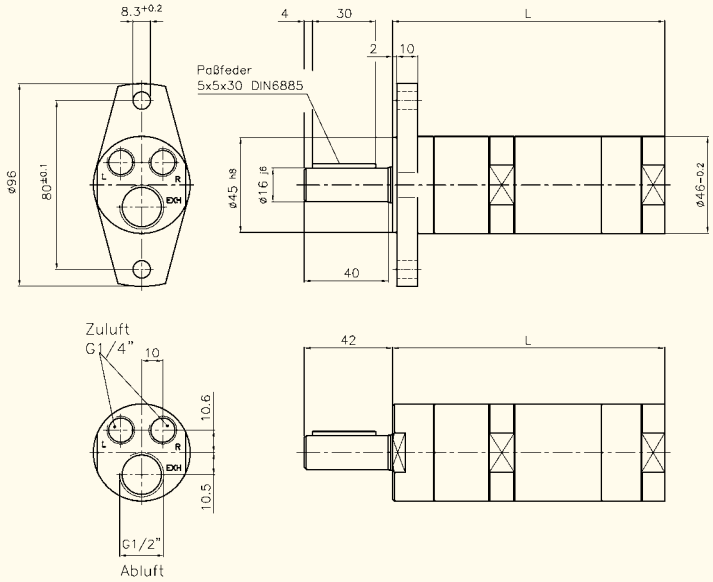
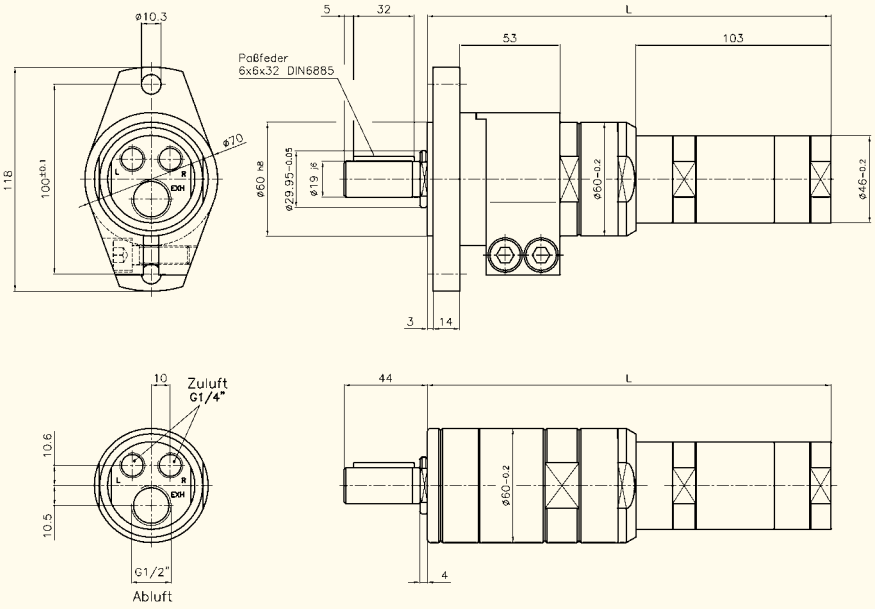
Dimensions (mm)

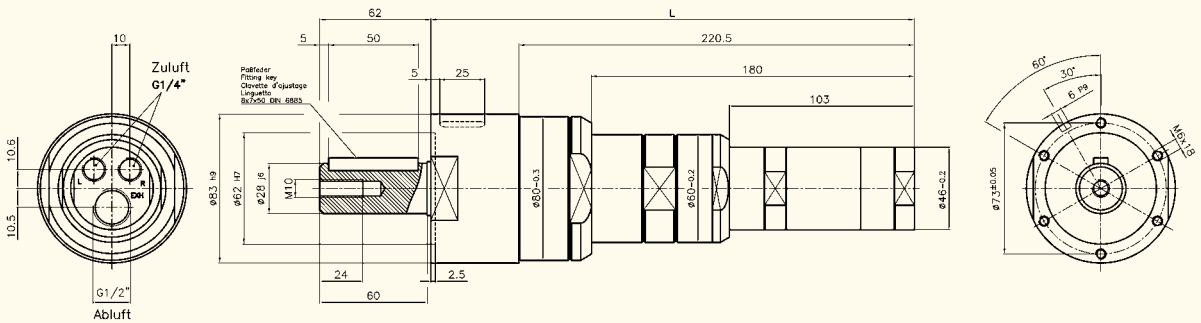
MUD 53-8100 bis -220



MUD 53-110 bis -45



MUD 53-27 und -20



Reversible
0,62 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

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Motor selection easy

Flange

Cap

Technical Data

		MUD 62-8600 60031-33-5 60025-39-5	MUD 62-2400 60031-34-5 60025-41-5	MUD 62-1890 60031-35-5 60025-61-5	MUD 62-1000 60031-36-5 60025-53-5	MUD 62-525 60031-37-5 60025-43-5	MUD 62-370 60031-38-5 60025-63-5
Speed under load	min⁻¹	8 600	2 400	1 890	1 000	525	370
Torque under load	Nm	0,70	2,4	3,1	5,9	11	16
Starting torque	Nm	1,0	3,7	4,6	8,8	16	23
Stalling torque	Nm	1,4	4,8	6,2	12	22	31
Free speed	min⁻¹	17 200	4 800	3 780	2 000	1 050	740
Air consumption	l / s	14	14	14	14	14	14
Radial shaft load	N	1 400	1 400	1 400	1 400	1 400	1 400
Axial shaft load	N	1 200	1 200	1 200	1 200	1 200	1 200
Supply hose	mm / i	13	13	13	13	13	13
Exhaust hose	mm / i	16	16	16	16	16	16
Weight	kg	1,2	1,2	1,2	1,2	1,6	1,6
Length L	mm	135,5	135,5	135,5	135,5	170,5	170,5

Power and speed related to 6,3 bar working pressure

Model standard steel Flange Article No. Cap Article No.		MUD 62-230 60031-39-5 60025-55-5	MUD 62-120 60031-40-5 60025-65-5	MUD 62-70 60031-41-5 60025-67-5	MUD 62-50 60031-42-5 60025-45-5	MUD 62-28 — 60025-69-5	MUD 62-20 — 60025-47-5
Speed under load	min⁻¹	230	120	70	50	28	20
Torque under load	Nm	25	47	81	114	197	277
Starting torque	Nm	37	71	122	171	296	416
Stalling torque	Nm	50	94	162	228	394	554
Free speed	min⁻¹	460	240	140	100	56	40
Air consumption	l / s	14	14	14	14	14	14
Radial shaft load	N	1 400	3 900	3 900	3 900	5 600	5 600
Axial shaft load	N	1 200	1 800	1 800	1 800	2 800	2 800
Supply hose	mm / i	13	13	13	13	13	13
Exhaust hose	mm / i	16	16	16	16	16	16
Weight	kg	1,6	2,5	2,5	2,5	5,5	5,5
Length L	mm	170,5	219	219	219	275,5	275,5

Power and speed related to 6,3 bar working pressure

→ foot flange p. 91

Reversible
0,62 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

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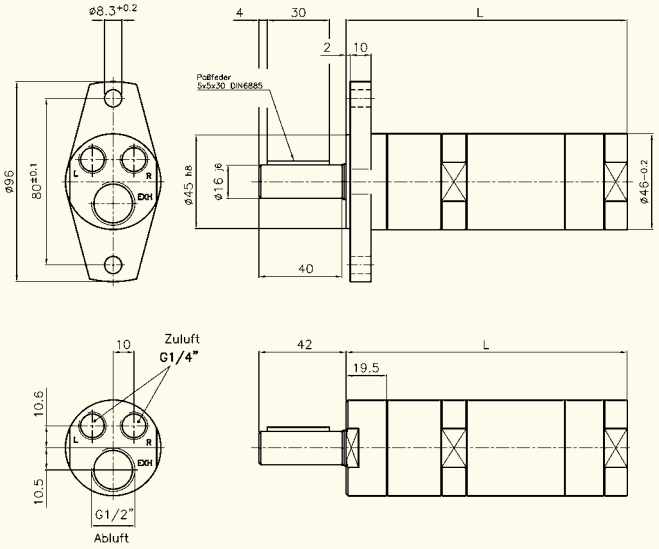
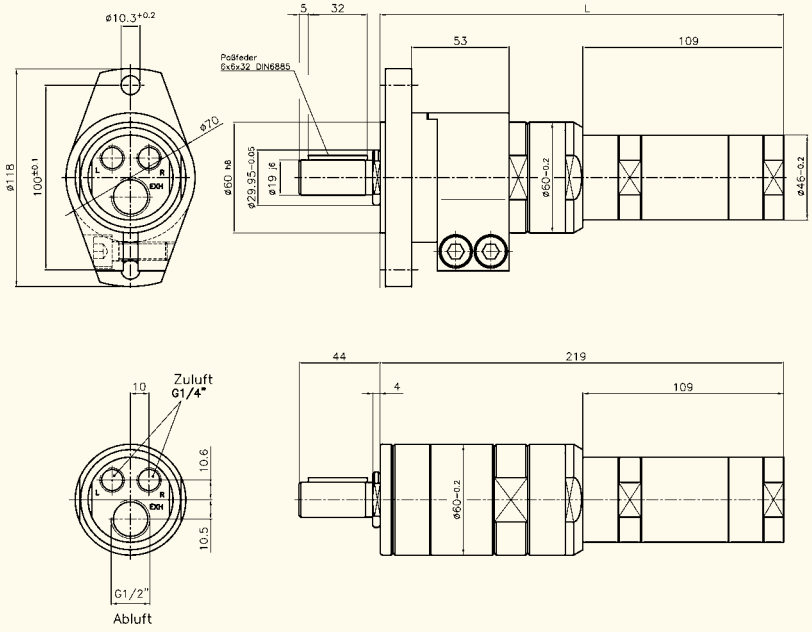
Motor selection easy

Dimensions (mm)

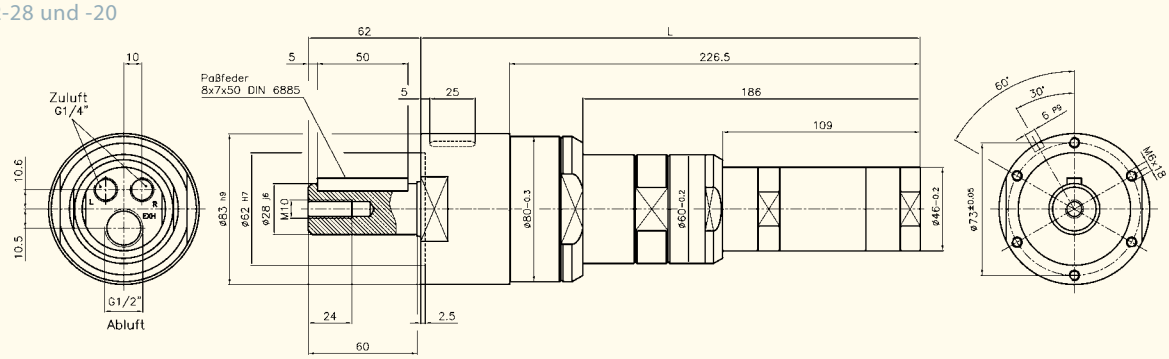
MUD 62-8600 bis -230



MUD 62-120 bis -50



MUD 62-28 und -20



Reversible
0,82 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

Motor selection easy

Flange

Technical Data

Model standard steel		MUD 82-6800	MUD 82-2000	MUD 82-1200	MUD 82-900	MUD 82-425	MUD 82-260
Flange	Article No.	60032-01-5	60032-00-5	60031-99-5	60031-98-5	60031-97-5	60031-96-5
Cap	Article No.	60002-50-5	60002-49-5	60002-48-5	60002-47-5	60002-46-5	60002-45-5
Speed under load	min^{-1}	6 800	2 000	1 200	900	425	260
Torque under load	Nm	1,2	3,9	6,5	8,7	19	30
Starting torque	Nm	1,7	5,8	9,5	13	27	45
Stalling torque	Nm	2,3	7,8	13	17	37	60
Free speed	min^{-1}	13 600	4 000	2 400	1 800	850	520
Air consumption	l / s	18	18	18	18	18	18
Radial shaft load	N	3 900	3 900	3 900	3 900	3 900	3 900
Axial shaft load	N	1 800	1 800	1 800	1 800	1 800	1 800
Supply hose	mm / i	13	13	13	13	13	13
Exhaust hose	mm / i	16	16	16	16	16	16
Weight	kg	2,3	2,3	2,3	2,3	2,5	2,5
Length L	mm	199	199	199	199	199	199

Power and speed related to 6,3 bar working pressure

Model standard steel		MUD 82-200	MUD 82-100	MUD 82-65	MUD 82-45
Flange	Article No.	60031-95-5	—	—	—
Cap	Article No.	60002-44-5	60002-43-5	60002-42-5	60002-41-5
Speed under load	min^{-1}	200	100	65	45
Torque under load	Nm	39	78	120	174
Starting torque	Nm	59	117	180	261
Stalling torque	Nm	78	156	240	348
Free speed	min^{-1}	400	200	130	90
Air consumption	l / s	18	18	18	18
Radial shaft load	N	3 900	5 600	5 600	5 600
Axial shaft load	N	1 800	2 800	2 800	2 800
Supply hose	mm / i	13	13	13	13
Exhaust hose	mm / i	16	16	16	16
Weight	kg	2,5	4,6	4,6	4,6
Length L	mm	199	255,5	255,5	255,5

Power and speed related to 6,3 bar working pressure

→ foot flange p. 91

Reversible
0,82 kW resistant to stalling, non lubrication

Article No. for ATEX upon request

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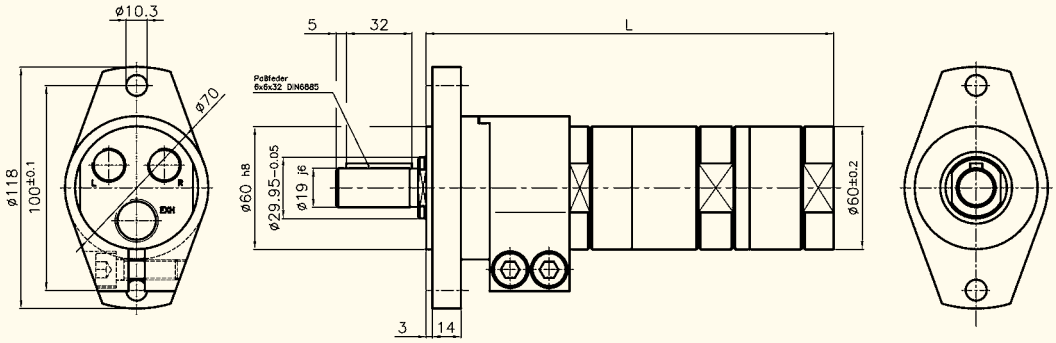
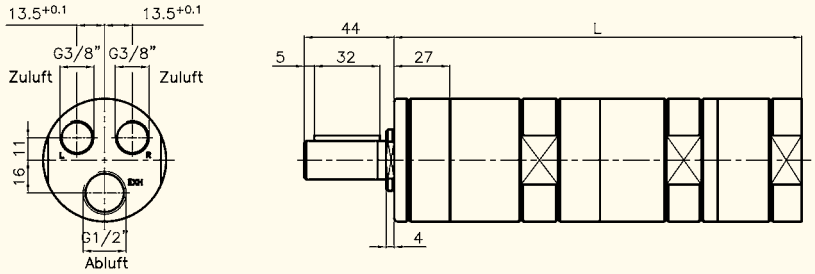
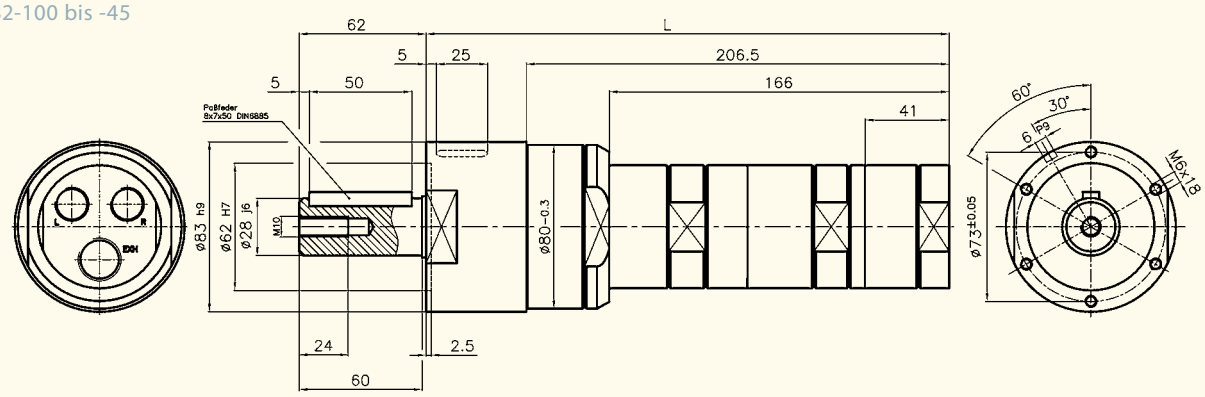
Dimensions (mm)

MUD 82-6800 bis -200





MUD 82-100 bis -45



You did not find your solution? We will be glad to give advice

Reversible
1,46 kW resistant to stalling

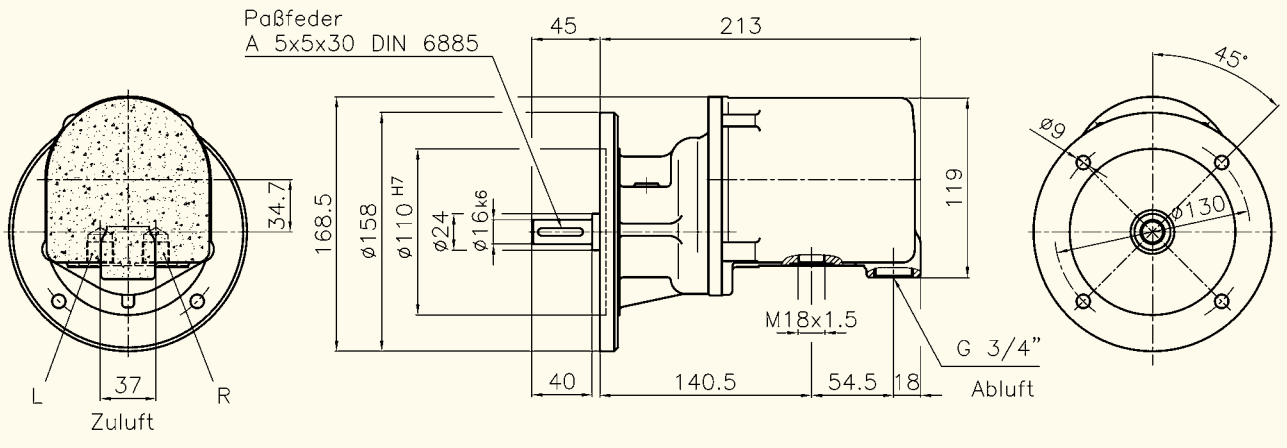
→ www.mannesmann-demag.com

Standard

Model standard Flange	Article No.	MU 200-3000 46640-00-5	MU 200-1400 46600-00-5
Speed under load	min⁻¹	3 000	1 400
Torque under load	Nm	4,8	10
Starting torque	Nm	7,2	15
Stalling torque	Nm	9,6	20
Free speed	min⁻¹	6 000	2 800
Air consumption	l / s	32	32
Radial shaft load	N	2 500	2 500
Axial shaft load	N	2 300	2 300
Supply hose	mm / i	15	15
Exhaust hose	mm / i	15	15
Weight	kg	5,50	5,50

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Reversible
1,46 kW resistant to stalling

Article No. for ATEX upon request

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Motor selection easy

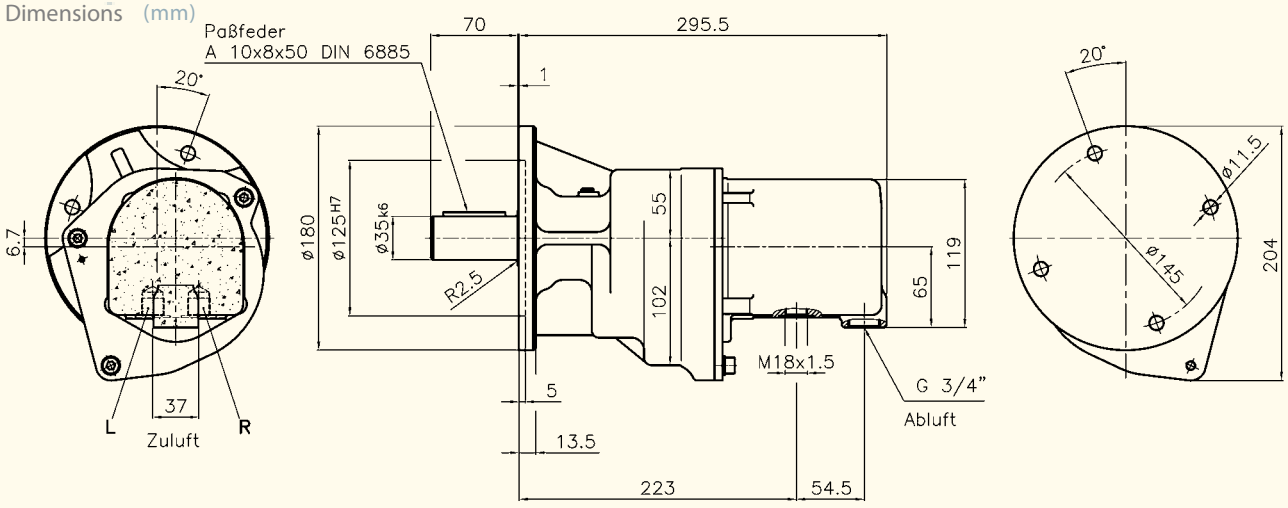
Standard

Technical Data

Model standard Flange	Article No.	MU 200-750 46650-05-5	MU 200-500 46650-03-5	MU 200-250 46650-00-5	MU 200-125 46610-01-5	MU 200-75 46630-00-5	MU 200-50 46610-00-5
Speed under load	min^{-1}	750	500	250	125	75	50
Torque under load	Nm	19	28	56	112	186	279
Starting torque	Nm	28	42	84	168	279	419
Stalling torque	Nm	37	56	112	224	372	558
Free speed	min^{-1}	1 500	1 000	500	250	150	100
Air consumption	l / s	32	32	32	32	32	32
Radial shaft load	N	3 500	3 500	3 500	3 500	3 500	3 500
Axial shaft load	N	2 300	2 300	2 300	2 300	2 300	2 300
Supply hose	mm / i	15	15	15	15	15	15
Exhaust hose	mm / i	15	15	15	15	15	15
Weight	kg	11,50	11,50	11,50	11,50	11,50	11,50

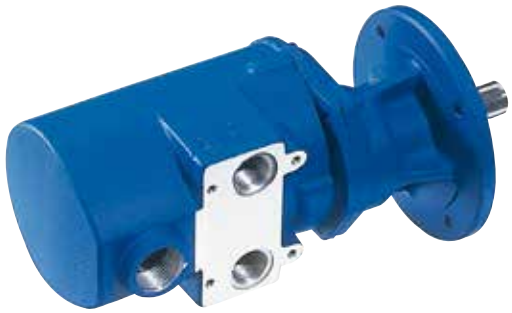
Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Reversible
2,20 kW resistant to stalling

→ www.mannesmann-demag.com

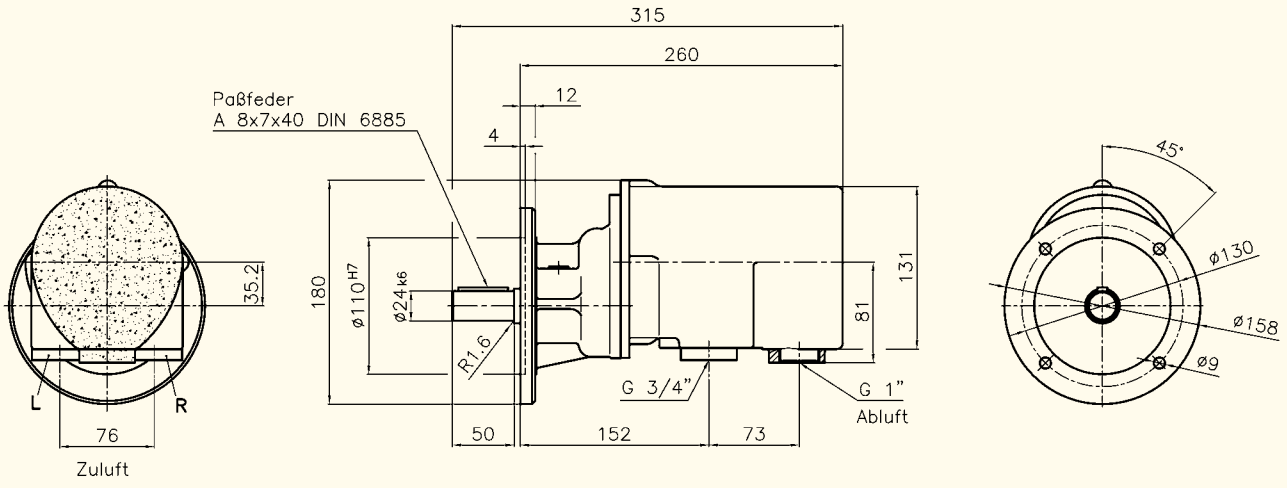


Standard

Model standard Flange	Article No.	**MU 300-2800** 46660-11-5	**MU 300-1400** 46660-06-5
Speed under load	min⁻¹	2 800	1 400
Torque under load	Nm	7,5	15
Starting torque	Nm	11	23
Stalling torque	Nm	15	30
Free speed	min⁻¹	5 600	2 800
Air consumption	l / s	47	47
Radial shaft load	N	2 400	2 400
Axial shaft load	N	2 300	2 300
Supply hose	mm / i	19	19
Exhaust hose	mm / i	19	19
Weight	kg	11,00	11,00

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Reversible
2,20 kW resistant to stalling

Article No. for ATEX upon request

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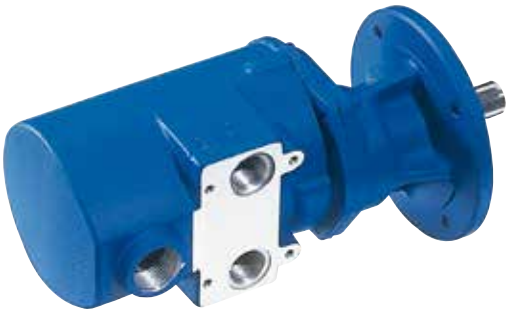
Motor selection easy



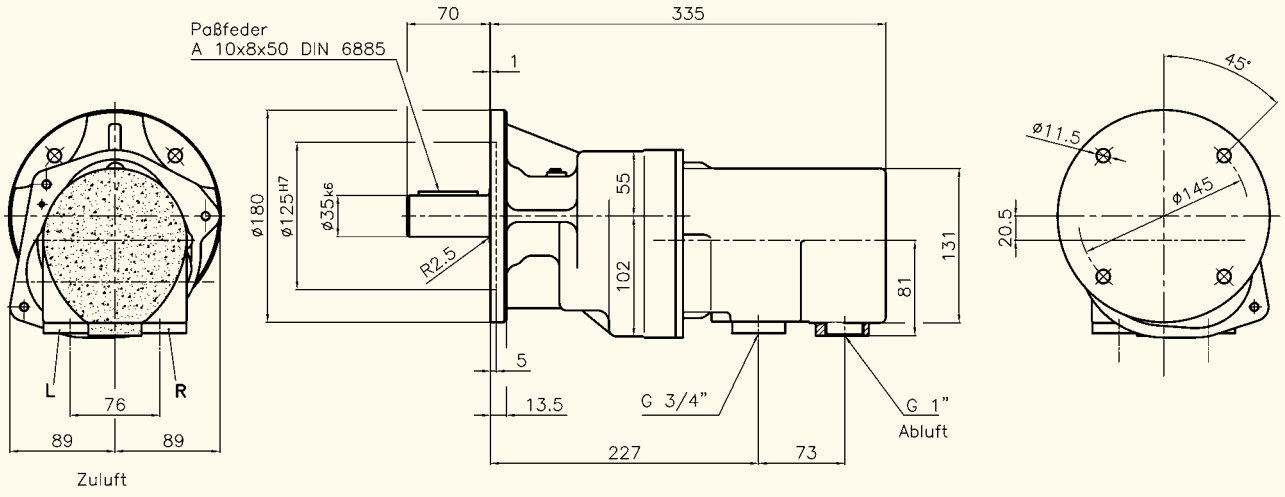
Standard

Technical Data

Model standard Flange	Article No.	MU 300-750 46660-04-5	MU 300-500 46660-03-5	MU 300-250 46660-02-5	MU 300-125 46660-07-5	MU 300-75 46660-01-5
Speed under load	min⁻¹	750	500	250	125	75
Torque under load	Nm	29	43	85	169	282
Starting torque	Nm	44	64	128	254	423
Stalling torque	Nm	58	86	170	338	564
Free speed	min⁻¹	1 500	1 000	500	250	150
Air consumption	l / s	47	47	47	47	47
Radial shaft load	N	3 500	3 500	3 500	3 500	3 500
Axial shaft load	N	2 300	2 300	2 300	2 300	2 300
Supply hose	mm / i	19	19	19	19	19
Exhaust hose	mm / i	19	19	19	19	19
Weight	kg	16,00	16,00	16,00	16,00	16,00

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Reversible
2,90 kW resistant to stalling

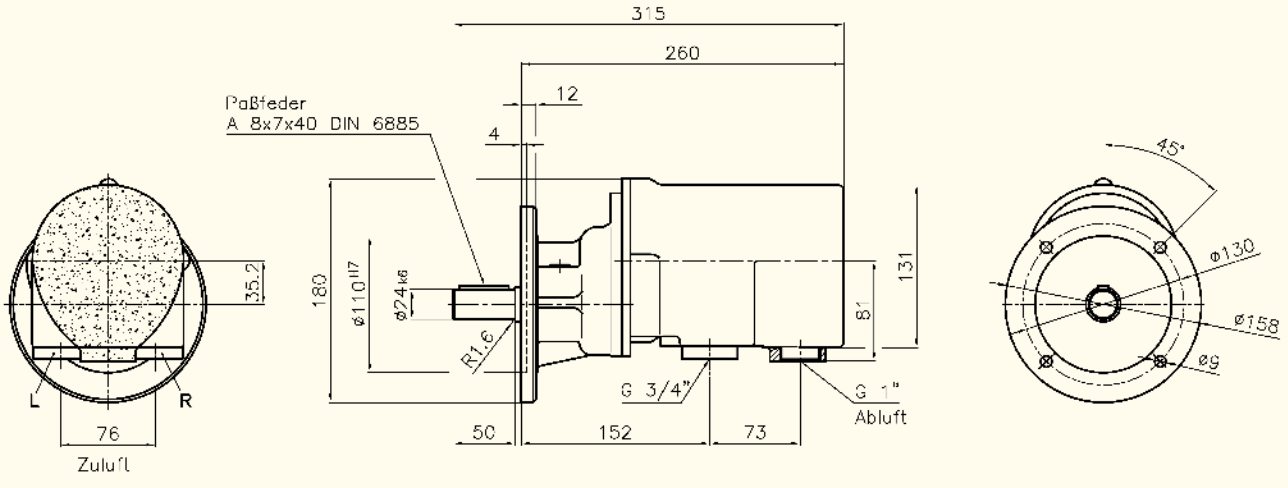
→ www.mannesmann-demag.com

Standard

Model standard Flange	Article No.	**MU 400-2800** 46670-11-5	**MU 400-1400** 46670-06-5
Speed under load	min $^{-1}$	2 800	1 400
Torque under load	Nm	10	20
Starting torque	Nm	15	30
Stalling torque	Nm	20	40
Free speed	min $^{-1}$	5 600	2 800
Air consumption	l / s	60	60
Radial shaft load	N	2 400	2 400
Axial shaft load	N	2 300	2 300
Supply hose	mm / i	19	19
Exhaust hose	mm / i	19	19
Weight	kg	12,00	12,00

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Reversible
2,90 kW resistant to stalling

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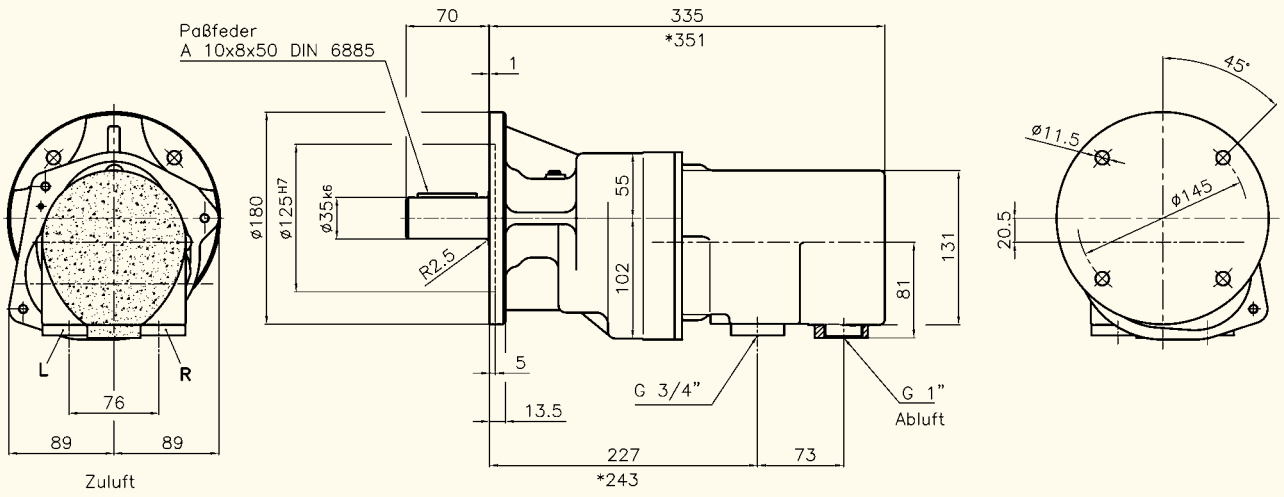
Motor selection easy

Standard

Technical Data

Model standard Flange	Article No.	MU 400-750 46670-04-5	MU 400-500 46670-03-5	MU 400-250 46670-02-5	MU 400-125 46670-07-5	MU 400-75 V * 29928-94-5
Speed under load	min⁻¹	750	500	250	125	75
Torque under load	Nm	38	56	113	225	375
Starting torque	Nm	56	84	170	338	563
Stalling torque	Nm	75	112	226	450	750
Free speed	min⁻¹	1 500	1 000	500	250	150
Air consumption	l / s	60	60	60	60	60
Radial shaft load	N	3 500	3 500	3 500	3 500	3 500
Axial shaft load	N	2 300	2 300	2 300	2 300	2 300
Supply hose	mm / i	19	19	19	19	19
Exhaust hose	mm / i	19	19	19	19	19
Weight	kg	17,00	17,00	17,00	17,00	18,50

Dimensions (mm)



Reversible
4,40 kW resistant to stalling

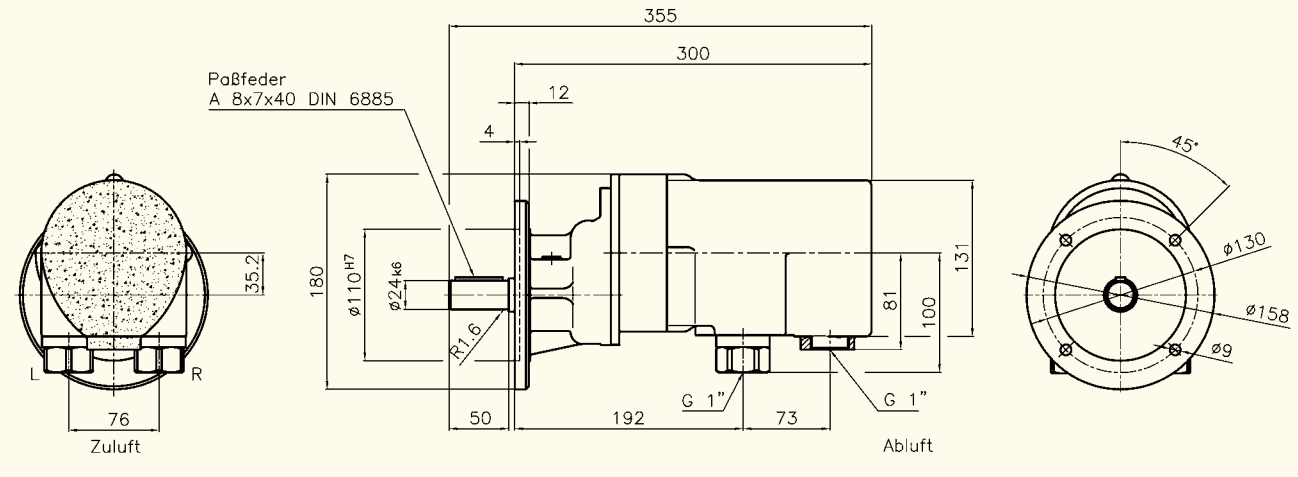
→ www.mannesmann-demag.com

Standard

Model standard Flange	Article No.	**MU 600-2800** 46680-08-5	**MU 600-1400** 46680-07-5
Speed under load	min $^{-1}$	2 800	1 400
Torque under load	Nm	15	30
Starting torque	Nm	23	45
Stalling torque	Nm	30	60
Free speed	min $^{-1}$	5 600	2 800
Air consumption	l / s	83	83
Radial shaft load	N	2 400	2 400
Axial shaft load	N	2 300	2 300
Supply hose	mm / i	25	25
Exhaust hose	mm / i	25	25
Weight	kg	13	13

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Reversible
4,40 kW resistant to stalling

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

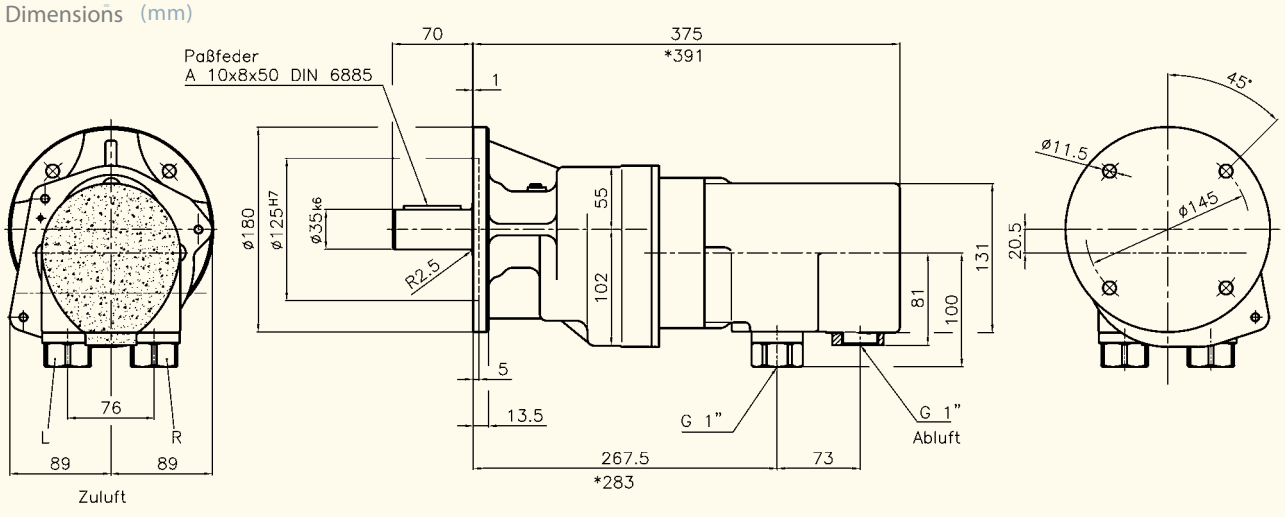
Motor selection easy

Standard

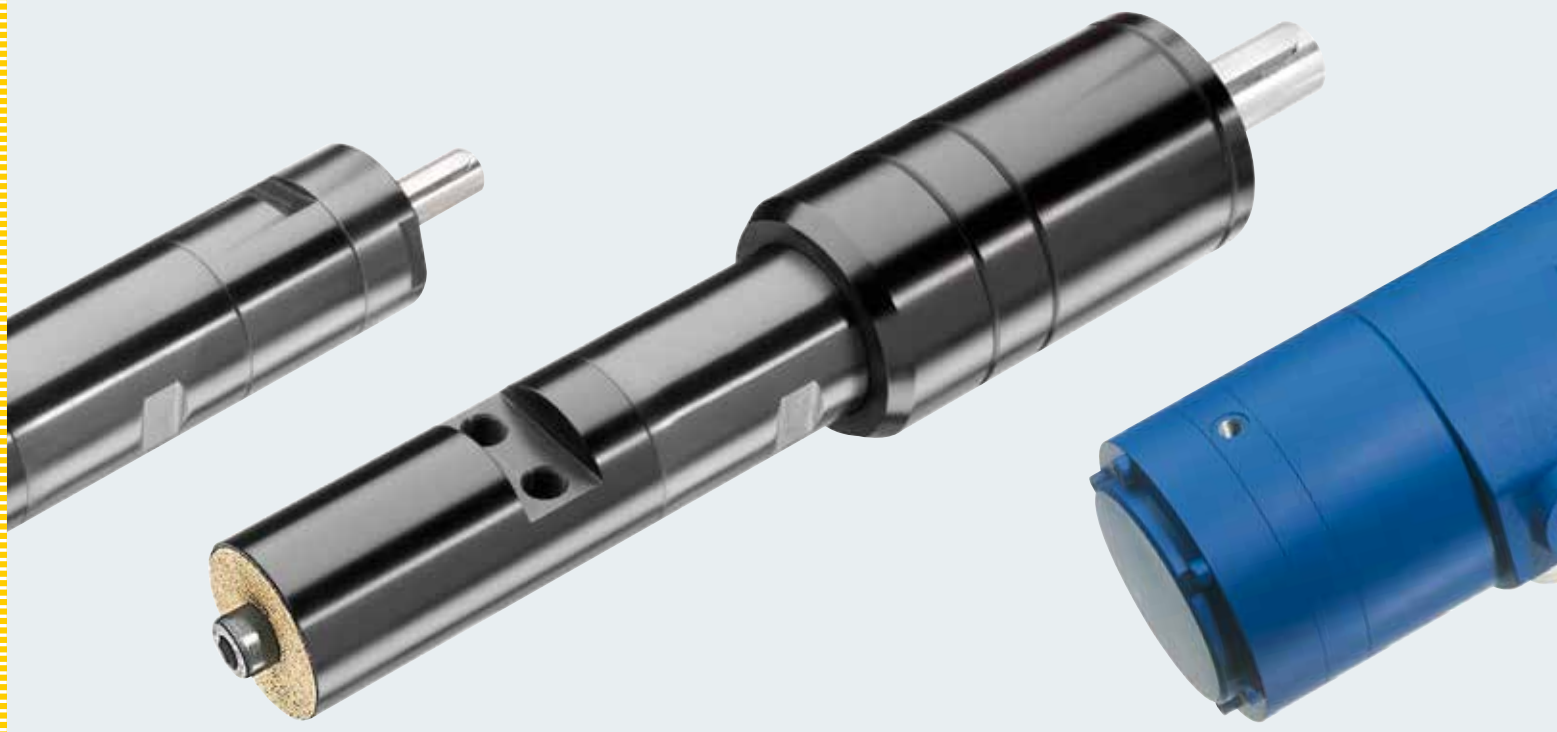
Technical Data

Model standard Flange	Article No.	MU 600-750 46680-05-5	MU 600-500 46680-03-5	MU 600-250 46680-00-5	MU 600-75 V* 29936-40-5
Speed under load	min⁻¹	750	500	250	75
Torque under load	Nm	57	85	170	563
Starting torque	Nm	86	128	255	845
Stalling torque	Nm	114	170	340	1 126
Free speed	min⁻¹	1 500	1 000	500	150
Air consumption	l / s	83	83	83	83
Radial shaft load	N	3 500	3 500	3 500	3 500
Axial shaft load	N	2 300	2 300	2 300	2 300
Supply hose	mm / i	25	25	25	25
Exhaust hose	mm / i	25	25	25	25
Weight	kg	18	18	18	19,5

Dimensions (mm)



Air motors with integrated brake
Models MUB



Air motors with integrated brake

Made in Germany

The MUB 23 models are equipped with a non-positive stopping brake activated directly with the air supply line of the motor. No additional control air line is needed. The maximum brake force is equal to the starting torque of the respective model. The brake is activated and prevents from a further rotation of the drive shaft when the ingoing air supply line is closed.

The series MUB 300, 400 and 600 are equipped with a spring-actuated friction force brake. The brake is controlled by a seperate control pipe which has to be vented before the motor receives its working air. The control pipe must be vented with a minimum 4.8 bar to open the brake (control pipe without pressure = stopping brake fixed).

→ Suitable for extreme working conditions

Brake motor
0,23 kW resistant to stalling, non-lubrication, reversible

Article No. for ATEX upon request

3D .stp-files
→ www.mannesmann-demag.com

Motor selection easy

Flansch

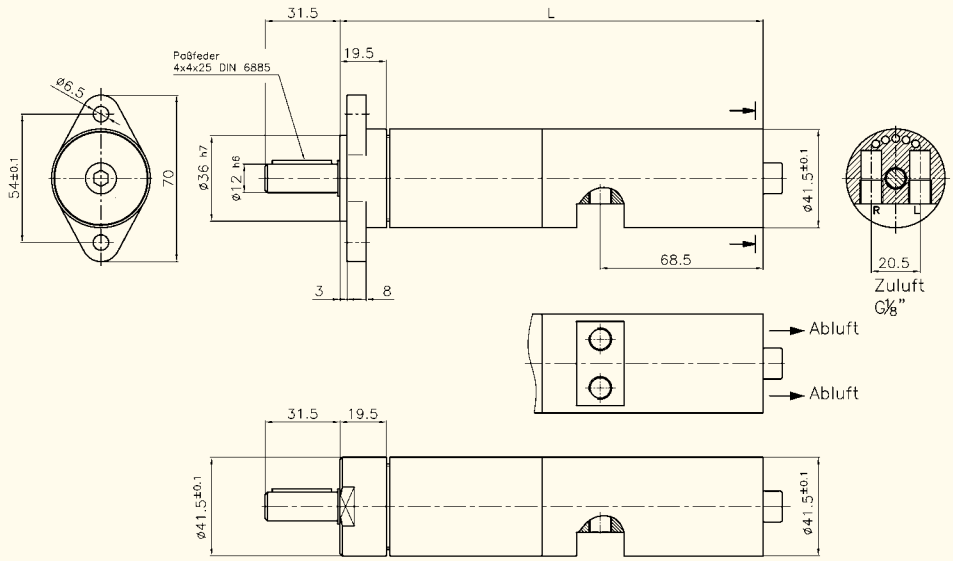
Deckel

Technical Data

Model stainless steel Flange Article No. Cap Article No.		**MUB 23-7000** 60032-81-5 60009-02-5	**MUB 23-1960** 60032-80-5 60009-03-5	**MUB 23-1090** 60032-79-5 60009-04-5	**MUB 23-880** 60032-78-5 60009-05-5
Speed under load	min^{-1}	7 000	1 960	1 090	880
Torque under load	Nm	0,31	1,1	2,0	2,5
Starting torque	Nm	0,46	1,7	3,0	3,8
Brake force	Nm	0,46	1,7	3,0	3,8
Stalling torque	Nm	0,62	2,2	4,0	5,0
Free speed	min^{-1}	14 000	3 920	2 180	1 760
Air consumption	l / s	7,8	7,8	7,8	7,8
Radial shaft load	N	1 300	1 300	1 300	1 300
Axial shaft load	N	1 000	1 000	1 000	1 000
Supply hose	mm / i	8	8	8	8
Exhaust hose	mm / i	—	—	—	—
Weight	kg	1,3	1,3	1,3	1,3
Length L	mm	178	178	178	178

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. 90

Brake motor
0,23 kW resistant to stalling, non-lubrication, reversible

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

Motor selection easy

Flansch

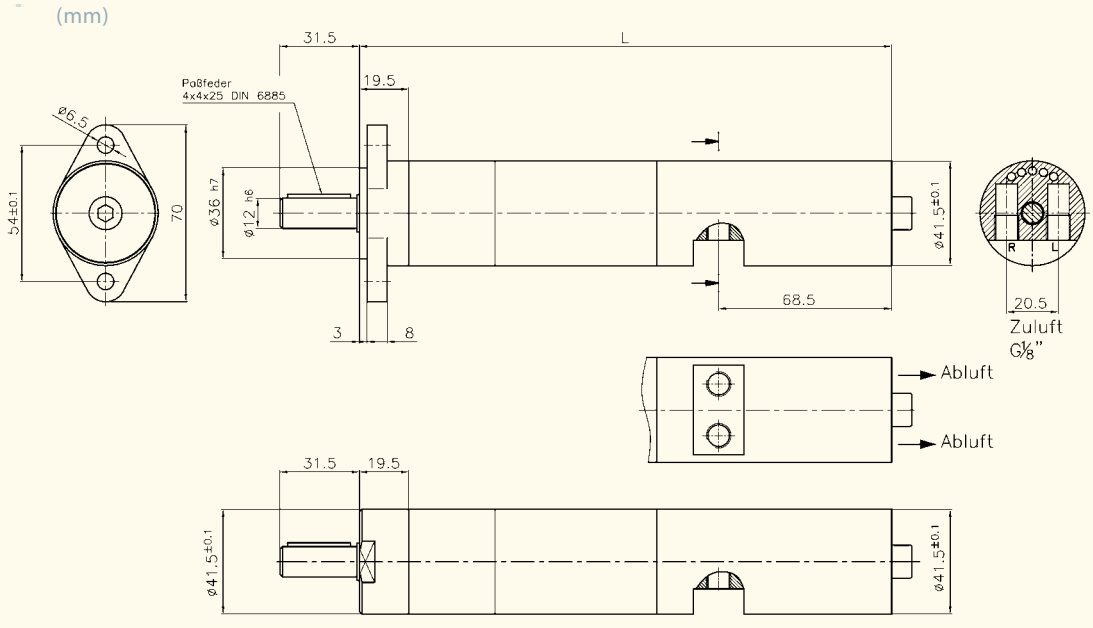
Deckel

Technical Data

Model stainless steel		MUB 23-435	MUB 23-240	MUB 23-190	MUB 23-120
Flange	Article No.	60032-77-5	60032-76-5	60032-75-5	60032-74-5
Cap	Article No.	60009-06-5	60009-07-5	60009-08-5	60009-09-5
Speed under load	min⁻¹	435	240	190	120
Torque under load	Nm	5,0	9,2	12	18
Starting torque	Nm	7,5	14	17	27
Brake force	Nm	7,5	14	17	27
Stalling torque	Nm	10	18	23	37
Free speed	min⁻¹	870	480	380	240
Air consumption	l / s	7,8	7,8	7,8	7,8
Radial shaft load	N	1 300	1 300	1 300	1 300
Axial shaft load	N	1 000	1 000	1 000	1 000
Supply hose	mm / i	8	8	8	8
Exhaust hose	mm / i	—	—	—	—
Weight	kg	1,6	1,6	1,6	2,1
Length L	mm	210,5	210,5	210,5	243

Power and speed related to 6,3 bar working pressure

(mm)



→ foot flange p. 90

Brake motor
0,23 kW resistant to stalling, non-lubrication, reversible

Article No. for ATEX upon request

→ www.mannesmann-demag.com

Flansch

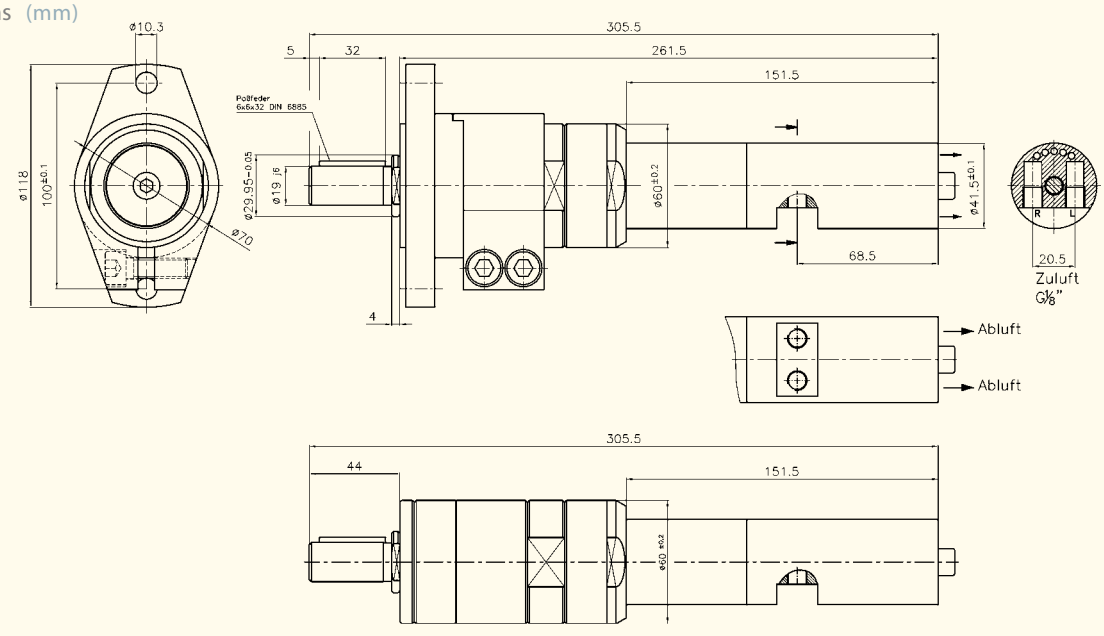
Deckel

Technical Data

Model stainless steel Flange Cap	Article No. Article No.	**MUB 23-70** 60031-79-5 60009-10-5	**MUB 23-55** 60031-78-5 60009-11-5	**MUB 23-40** 60031-77-5 60009-12-5	**MUB 23-30** 60031-76-5 60009-13-5	**MUB 23-25** 60031-75-5 60009-14-5
Speed under load	min^{-1}	70	55	40	30	25
Torque under load	Nm	32	40	55	74	88
Starting torque	Nm	47	60	83	110	132
Brake force	Nm	47	60	83	110	132
Stalling torque	Nm	63	80	110	147	176
Free speed	min^{-1}	140	110	80	60	50
Air consumption	l / s	7,8	7,8	7,8	7,8	7,8
Radial shaft load	N	3 900	3 900	3 900	3 900	3 900
Axial shaft load	N	1 800	1 800	1 800	1 800	1 800
Supply hose	mm / i	8	8	8	8	8
Exhaust hose	mm / i	—	—	—	—	—
Weight	kg	3,2	3,2	3,2	3,2	3,2

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



→ foot flange p. **91**

Brake motor
0,23 kW resistant to stalling, non-lubrication, reversible

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

Motor selection easy

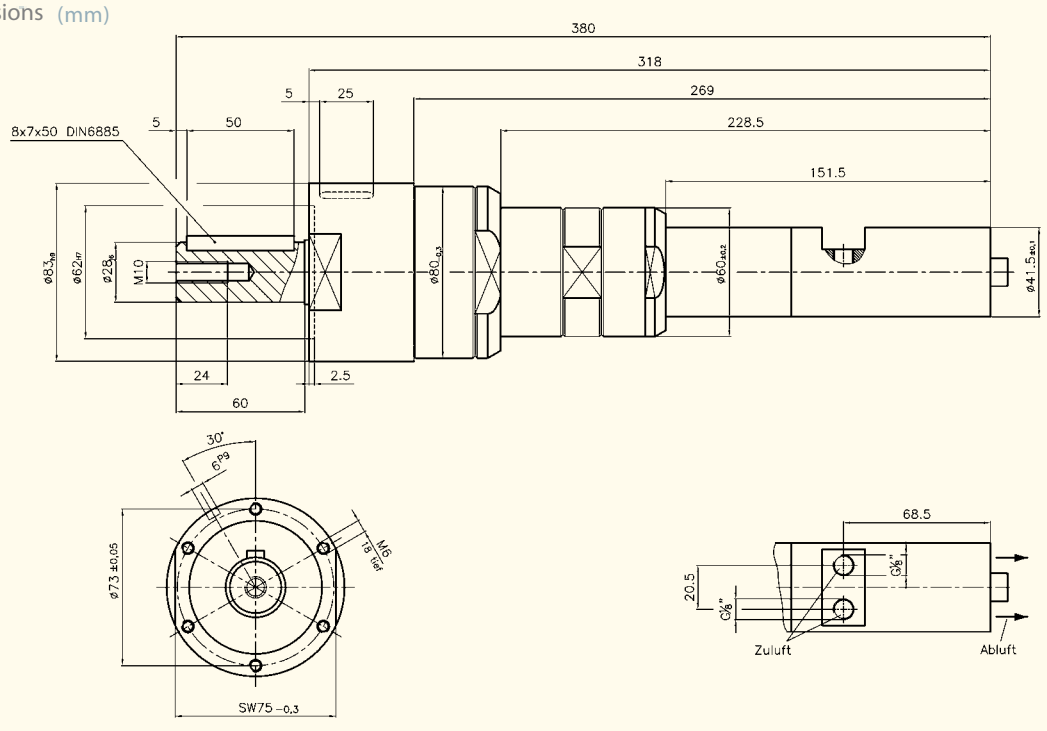
Standard

Technical Data

Model standard Flange	Article No.	**MUB 23-20** 60009-15-5	**MUB 23-15** 60009-16-5	**MUB 23-10** 60009-17-5	**MUB 23-7** 60009-18-5
Speed under load	min^{-1}	20	15	10	7
Torque under load	Nm	110	147	220	313
Starting torque	Nm	165	220	330	469
Brake force	Nm	165	220	330	469
Stalling torque	Nm	220	293	440	626
Free speed	min^{-1}	40	30	20	14
Air consumption	l / s	7,8	7,8	7,8	7,8
Radial shaft load	N	5 600	5 600	5 600	5 600
Axial shaft load	N	2 800	2 800	2 800	2 800
Supply hose	mm / i	8	8	8	8
Exhaust hose	mm / i	—	—	—	—
Weight	kg	5,6	5,6	5,6	5,6

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Brake motor
2,2 kW resistant to stalling, reversible

Article No. for ATEX upon request

→ www.mannesmann-demag.com

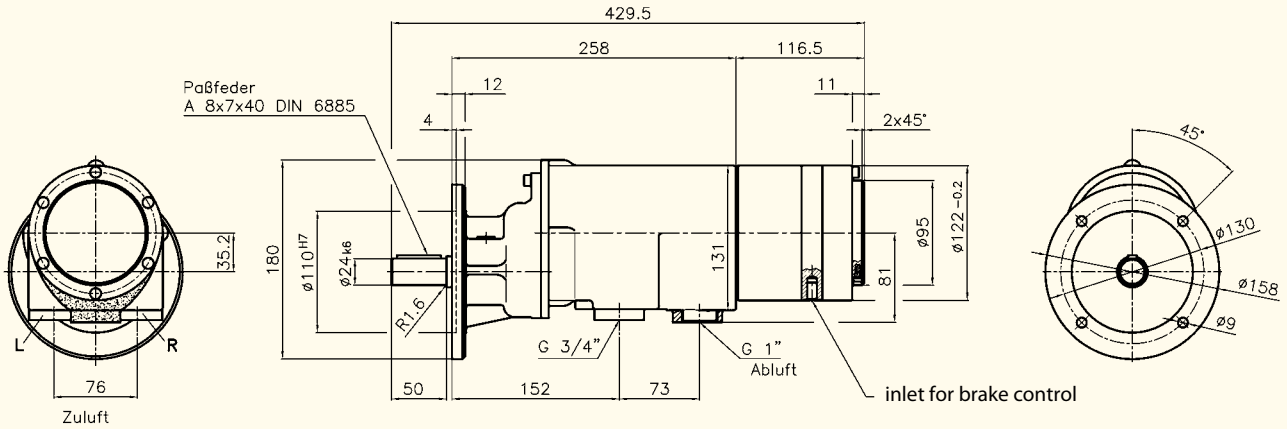
Standard

Technical Data

Model standard Flange	Article No.	**MUB 300-2800** 29701-80-5	**MUB 300-1400** 29701-81-5
Speed under load	min $^{-1}$	2 800	1 400
Torque under load	Nm	7,50	15
Starting torque	Nm	11	23
Brake force	Nm	15	33
Stalling torque	Nm	15	30
Free speed	min $^{-1}$	5 600	2 800
Air consumption	l / s	47	47
Radial shaft load	N	2 400	2 400
Axial shaft load	N	2 300	2 300
Supply hose	mm / i	19	19
Exhaust hose	mm / i	19	19
Weight	kg	16,5	16,5

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Brake motor
2,2 kW resistant to stalling, reversible

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

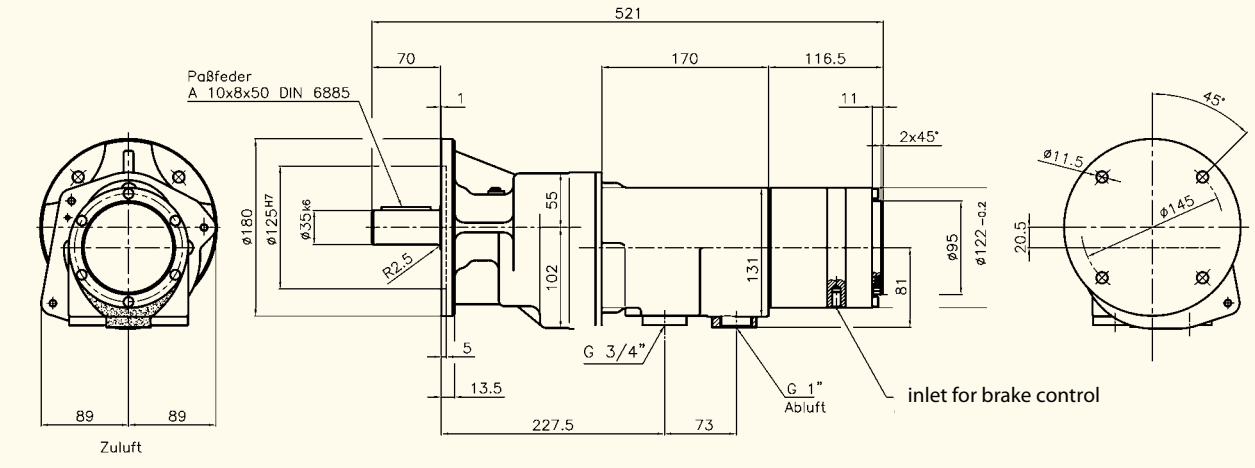
Motor selection easy

Standard

Model standard Flange	Article No.	MUB 300-750 29701-82-5	MUB 300-500 29701-83-5	MUB 300-250 29701-84-5	MUB 300-125 29602-79-5	MUB 300-75 29701-85-5
Speed under load	min⁻¹	750	500	250	125	75
Torque under load	Nm	29	43	85	169	282
Starting torque	Nm	44	65	128	254	423
Brake force	Nm	64	95	187	372	620
Stalling torque	Nm	58	86	170	338	564
Free speed	min⁻¹	1 500	1 000	500	250	150
Air consumption	l / s	47	47	47	47	47
Radial shaft load	N	3 500	3 500	3 500	3 500	3 500
Axial shaft load	N	2 300	2 300	2 300	2 300	2 300
Supply hose	mm / i	19	19	19	19	19
Exhaust hose	mm / i	19	19	19	19	19
Weight	kg	21,5	21,5	21,5	21,5	21,5

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Brake motor
2,9 kW resistant to stalling, reversible

Article No. for ATEX upon request

→ www.mannesmann-demag.com

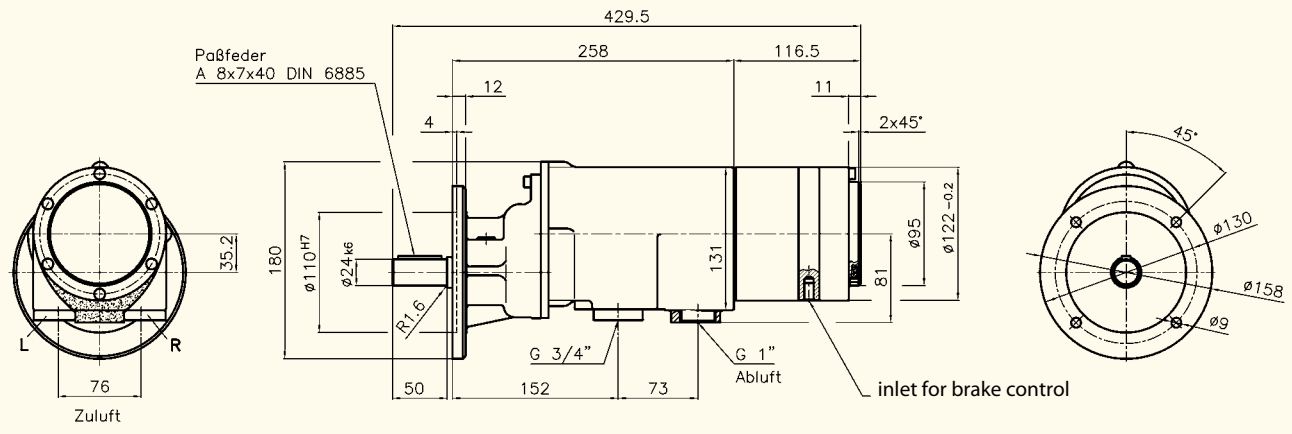
Standard

Technical Data

Model standard Flange	Article No.	**MUB 400-2800** 29701-86-5	**MUB 400-1400** 29701-87-5
Speed under load	min⁻¹	2 800	1 400
Torque under load	Nm	10	20
Starting torque	Nm	15	30
Brake force	Nm	18	36
Stalling torque	Nm	20	40
Free speed	min⁻¹	5 600	2 800
Air consumption	l / s	60	60
Radial shaft load	N	2 400	2 400
Axial shaft load	N	2 300	2 300
Supply hose	mm / i	19	19
Exhaust hose	mm / i	19	19
Weight	kg	17,5	17,5

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Brake motor
2,9 kW resistant to stalling, reversible

Article No. for ATEX upon request

3D .stp-files → www.mannesmann-demag.com

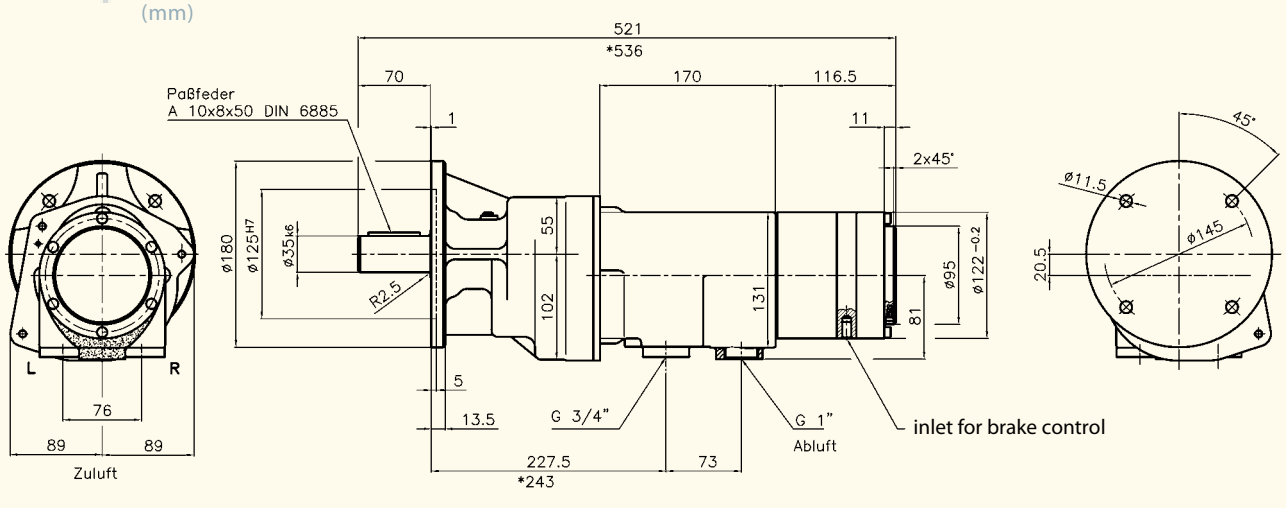
Motor selection easy

Standard

Model standard Flange	Article No.	MUB 400-750 29701-88-5	MUB 400-500 29701-89-5	MUB 400-250 29701-90-5	MUB 400-125 29701-91-5	MUB 400-75 V * 29942-54-5
Speed under load	min⁻¹	750	500	250	125	75
Torque under load	Nm	38	56	113	225	375
Starting torque	Nm	56	84	170	338	563
Brake force	Nm	68	101	203	405	675
Stalling torque	Nm	75	112	226	450	750
Free speed	min⁻¹	750	500	500	250	150
Air consumption	l / s	60	60	60	60	60
Radial shaft load	N	3 500	3 500	3 500	3 500	3 500
Axial shaft load	N	2 300	2 300	2 300	2 300	2 300
Supply hose	mm / i	19	19	19	19	19
Exhaust hose	mm / i	19	19	19	19	19
Weight	kg	22,5	22,5	22,5	22,5	24,5

Power and speed related to 6,3 bar working pressure

(mm)



Brake motor
4,4 kW resistant to stalling, reversible

Article No. for ATEX upon request

→ www.mannesmann-demag.com

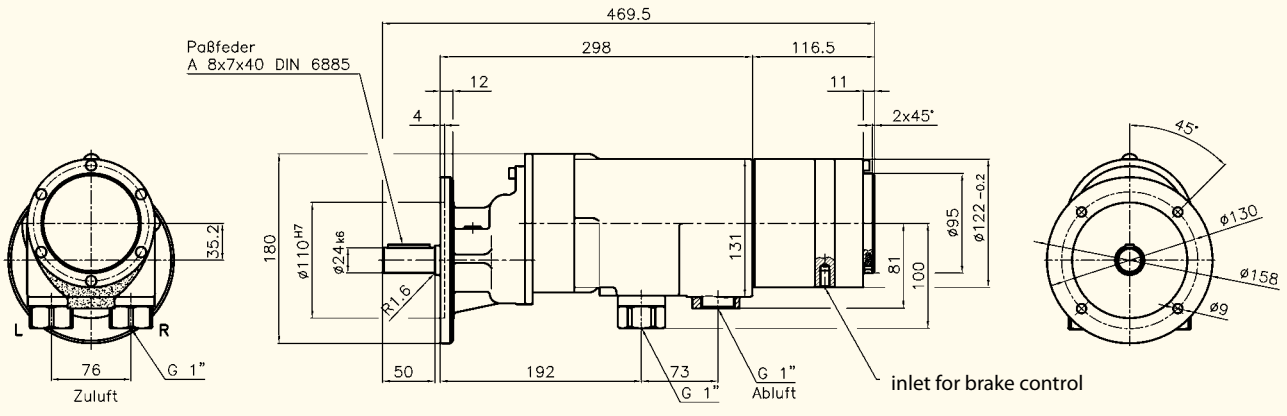
Standard

Technical Data

Model standard Flange	Article No.	**MUB 600-2800** 29701-93-5	**MUB 600-1400** 29701-94-5
Speed under load	min⁻¹	2 800	1 400
Torque under load	Nm	15	30
Starting torque	Nm	23	45
Brake force	Nm	20	39
Stalling torque	Nm	30	60
Free speed	min⁻¹	5 600	2 800
Air consumption	l / s	83	83
Radial shaft load	N	2 400	2 400
Axial shaft load	N	2 300	2 300
Supply hose	mm / i	25	25
Exhaust hose	mm / i	25	25
Weight	kg	18,5	18,5

Power and speed related to 6,3 bar working pressure

Dimensions (mm)



Brake motor
4,4 kW resistant to stalling, reversible

3D .stp-files

Motor selection easy

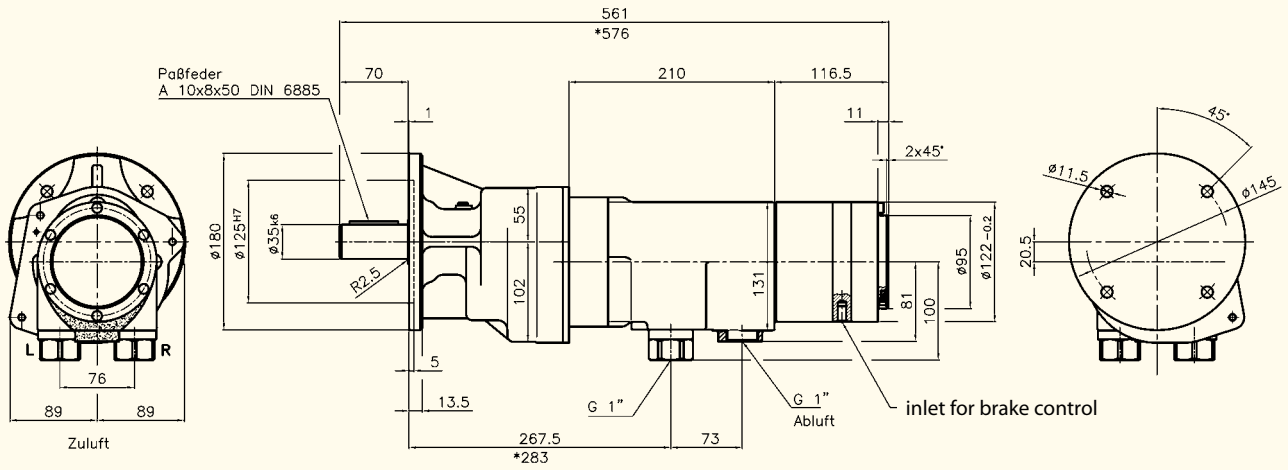
→ www.mannesmann-demag.com

Standard

Model standard Flange	Article No.	**MUB 600-750** 29701-95-5	**MUB 600-500** 29701-96-5	**MUB 600-250** 29701-97-5	**MUB 600-75 V *** 29942-55-5
Speed under load	min $^{-1}$	750	500	250	75
Torque under load	Nm	57	85	170	563
Starting torque	Nm	86	128	255	845
Brake force	Nm	74	111	221	732
Stalling torque	Nm	114	170	340	1 126
Free speed	min $^{-1}$	1 500	1 000	500	150
Air consumption	l / s	83	83	83	83
Radial shaft load	N	3 500	3 500	3 500	3 500
Axial shaft load	N	2 300	2 300	2 300	2 300
Supply hose	mm / i	25	25	25	25
Exhaust hose	mm / i	25	25	25	25
Weight	kg	23,50	23,50	23,50	25,00

Power and speed related to 6,3 bar working pressure

Dimensions (mm)

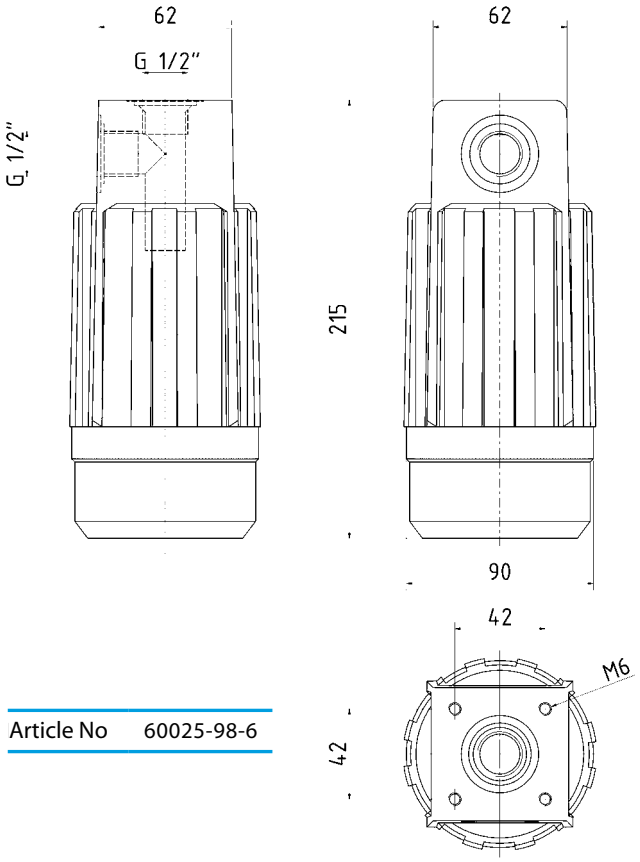


Accessories

Oil trap and silencer

With the oil trap the exhaust air is collected centrally. The device filters up to 99% of the oil in the exhaust air and dampenes up to 40 dB(A) of the noise.

multi air inlet	2 x G 1/2"
max. working pressure	10 bar
air flow	2000 l/min
temperature range	-10°C to +60°C
weight	0,8 kg



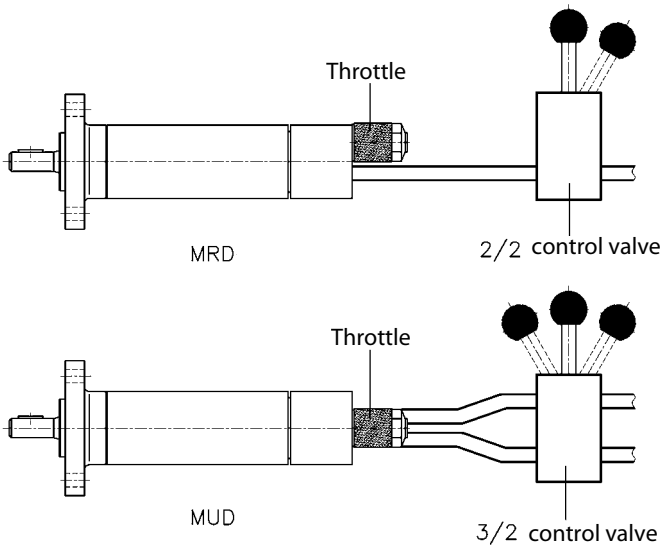
Article No	60025-98-6

Filter lubrication unit

Connection Thread Article No		**G 1/4"** 030 290 74	**G 3/8"** 030 291 74	**G 1/2"** 030 292 74	**G 1"** 030 293 74
working pressure min-max	Bar	0,5 – 16	0,5 – 16	0,5 – 16	0,5 – 16
air flow max	m³ / min	1,50	1,80	3,40	5,00
width x height	mm	96 × 203	96 × 203	140 × 273	195 × 273

Speed throttle with silencer

Thread	G 1/8"	G 1/4"	G 3/8"	G 1/2"
Article No	9361 707	9361 705	9361 706	9361 708



Silencer

Thread	G 1/4"	G 3/8"	G 1/2"	G 3/4"	G 1"
Article No	47004-18-6	49589-03-6	49589-02-6	49589-00-6	49589-01-6

Plug in connectors - outer thread

Hose (straight | Ø mm)	Thread	Article No
4	G 1/8"	9359 311
6	G 1/8"	9359 309
8	G 1/8"	9359 305
10	G 1/4"	9359 319
12	G 1/4"	9359 304
12	G 3/8"	9359 306
4	M 5	9359 310
6	M 5	9359 307
6	M 7 × 1	9359 308

Plug in connectors - internal thread

Hose (straight | Ø mm)	Thread	Article No
8	i G 1/4"	9359 328
10	i G 1/4"	9359 317

Accessories

Angle air connector

Thread	**i G 1/4" und G 1/4"**
Article No	9359 371

Plug in angle connectors

Hose (outer | ⌀ mm)	Thread	Article No
6	G 1/8"	9358 140
8	G 1/8"	9359 302
12	G 1/4"	9359 303

Plug in connectors - internal thread

Hose (outer | ⌀ mm)	Thread	Article No
6	G 1/8"	9361 381
6	G 1/4"	47092-05-6
8	G 1/4"	9361 330
13	G 3/8"	9361 477
13	G 1/2"	9361 493

ZG- collets

Model	page	3,0	4,0	5,0	6,0	8,0	1/4"	10,0
EBS 504 ZG	17	—	—	9369 816	9369 837	9369 818	9369 987	9369 817
ES 350 ZG	19	9369 841	9369 846	9369 847	9369 826	9369 843	9369 872	—
ES 280 – 170 ZG	19	—	—	9369 816	9369 837	9369 818	9369 987	9369 817

ER- collets

Model	page	2,5	3,0	5,0	5,95 – 6,0	6,0	7,95 – 8,0	8,0	10,0
all EBM	14, 15	9369 851	9369 855	9369 850	9369 880	9369 839	9369 848	9369 842	9369 852
EBS 520 ER	17	9369 851	9369 855	9369 850	9369 880	9369 839	9369 848	9369 842	9369 852
MRDW 38	18	9369 851	9369 855	9369 850	9369 880	9369 839	9369 848	9369 842	9369 852
ES 350 ER	19	—	9369 853	9369 838	—	9369 836	—	—	—
ES 280 – 170 ER	19	9369 851	9369 855	9369 850	9369 880	9369 839	9369 848	9369 842	9369 852

Drill chuck, chuck wrench

Model	page	drill chuck	drill chuck wrench	quick change drill chuck
all EBM 38-…	15	9376 022	9369 811	9369 988
EBM 5000 B EBM 3500 B	15	9376 019	9369 811	9369 990
all EBMU 23-…	16	9369 785	9369 811	9376 040
all EBMU 40-…	16	9369 788	9376 018	—

Accessories
Foot flanges

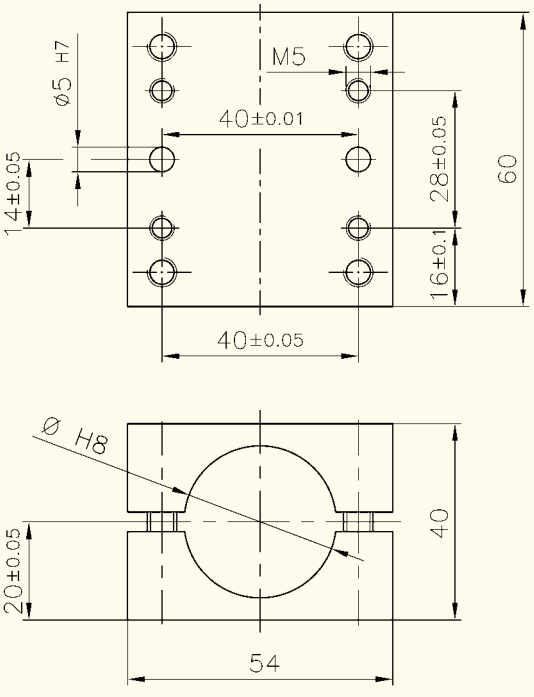
Example for Ø 41,5 mm

Example for Ø 60 mm

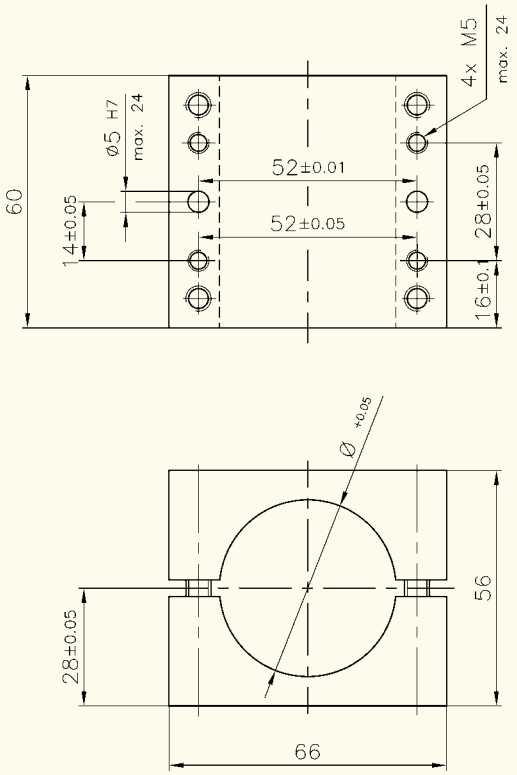
clamping (Ø mm)	30,0	31,0	36,0	38,0	41,5	42,0	46,0	56,0	60,0
Article No	29948-14-5	29945-28-5	29945-29-5	29945-30-5	29945-31-5	29948-41-5	60034-56-5	29945-32-5	60017-97-5

(mm)

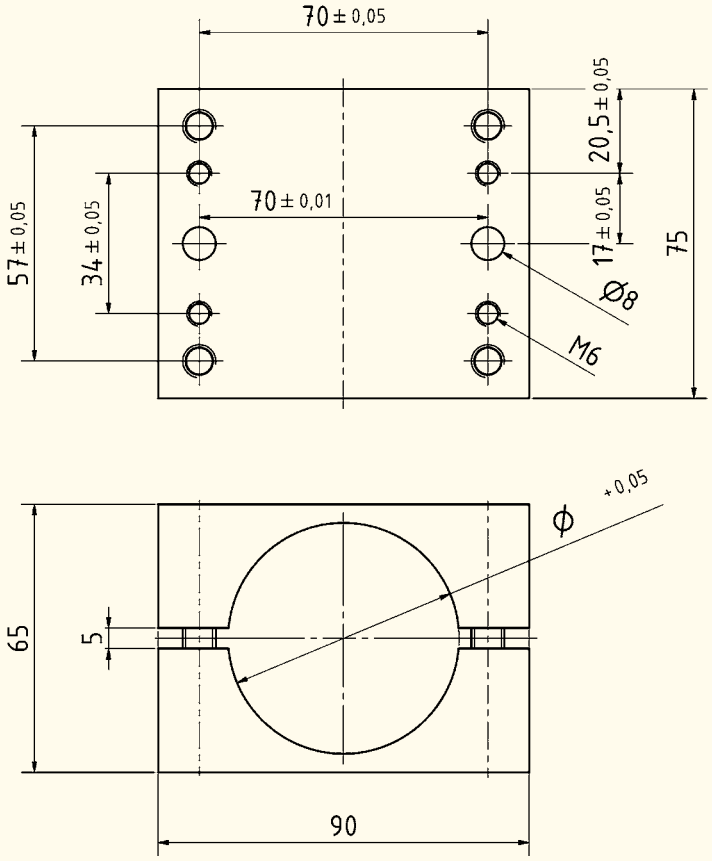
Ø 30 und 31



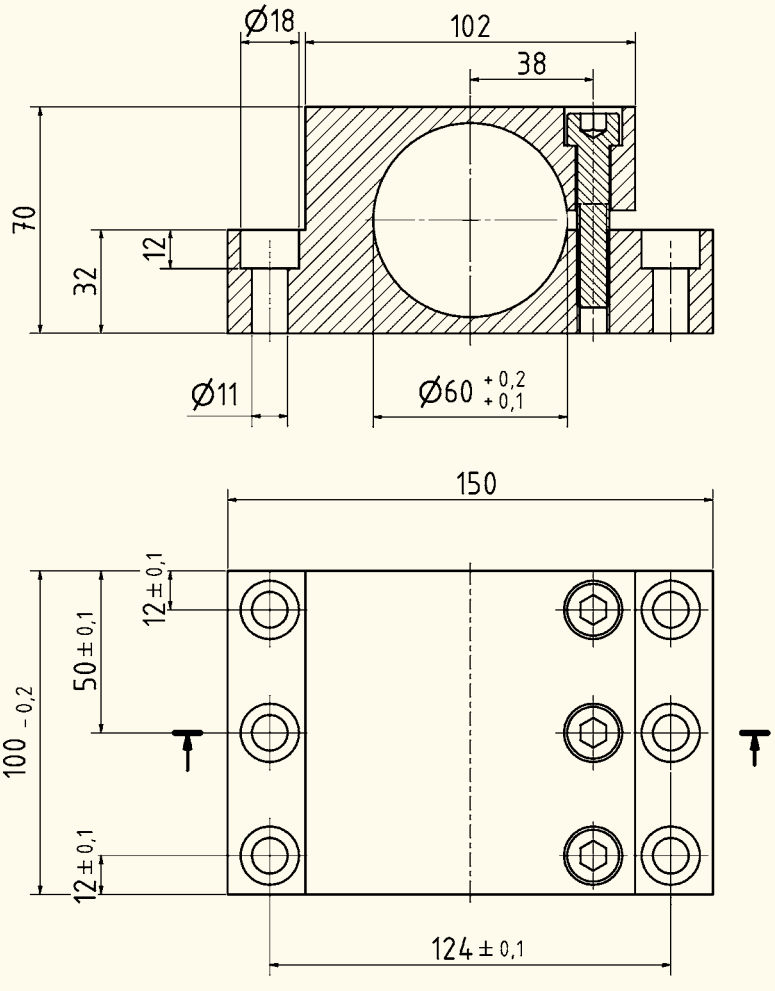
Ø 36 | 38 | 41,5 | 42



Ø 46 und 56



Ø 60



Option
Motors with quick change chuck for fast and easy tool exchange

Quick change chuck (SWF) with ER 16 collets
Suitable for brushing and drilling applications

Mounted for your needs: Select a motor type and the corresponding ER 16 quick change chuck. The device consists of a quick change chuck and collets, which ensure a fast and easy tool change.

Collet and SWF

Motor with SWF

Tool exchange with wrench ...

... or manually

Quick tool exchange

The collet holder include an ER 16 collet for a save and tight clamping of the tool shaft. With this it is easy to use tool insert with round shafts up to 10 mm diameter.

The insert tool to be changed can be prepared during secondary time in a - this saves time in the automated process primary time.

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The complete power spectrum

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- → Precision industrial tool for flexible automation
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- → Drilling and cutting
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- → Air motors
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