

Desoutter



IndustrialTools



AIR MOTORS

*160 W to 2900 W
Comprehensive range
Lubrication free
Stainless steel
High torques*

More Than Productivity

Why choose Desoutter Air Motors ?

Desoutter offers a wide range of rotating vane air motors in stainless steel and lubrication free versions, with power ranging from 0.16 kW (0.21 hp) to 2.9 kW (3.9 hp). Most motors can be supplied as either unidirectional with a threaded shaft, or reversible with a keyed shaft. Alternative output options are also available. Desoutter air motors can also be ATEX certified for environments with potentially explosive atmospheres.

Air motors are an ideal solution for many applications in such varied equipment as material handling, packaging, strapping, or printing machinery, petrochemical and agricultural equipment, food processing machinery, and many more custom and standard machines.

Air motors offer many advantages over electric motors, and are often the only feasible option for driving automation.

BENEFITS OF AIR MOTORS OVER ELECTRIC MOTORS

- MAY BE LOADED UNTIL FULLY STALLED
- OVERLOAD SAFE
- TORQUE INCREASE AT MOUNTING LOAD
- LOW INSTALLATION COSTS
- EXPLOSION PROOF
- OPERATIONALLY SAFE (DUST, GAS, WATER)
- LOW WEIGHT AND SMALL SIZE
- HIGH POWER DENSITY
- CAN BE STERILIZED

The perfect solution for your application...



Textile



Marine



Petrochemical



Food Processing



Agricultural Equipment



Printing Machinery



Chemical



Strapping Machinery

Contents

General information	4
Selecting your air motor	5-7
M16 series	8-11
M25 series	12-17
M39 series	18-21
M84 series	22-24
2H410 series	25
M180 series	26
M290 series	28
Accessories	30
Installation and integration	31



ATEX available

Why choose a Air Motor



Heavy duty

- **VERY LOW MAINTENANCE**
- **RESISTANT TO AGGRESSIVE AGENTS**
- **SPECIAL DESIGN FOR FOOD INDUSTRY**
- **SUITABLE FOR HIGH AND LOW TEMPERATURES**
- **SUITABLE FOR DIRTY ATMOSPHERES**
- **ROBUST DESIGN**
- **NO RISK OF OVERHEATING**



Efficiency

- **LIGHT AND COMPACT PRODUCT**
- **STOP & START** REPEATEDLY WITHOUT DAMAGE
- **NO OVERLOAD RISK** MOTOR STALLS WITHOUT DAMAGE
- **ATEX AVAILABLE** FOR POTENTIALLY EXPLOSIVE ENVIRONMENTS
- **WIDE ACCESSORIES RANGE** & MODULAR OUTPUT FOR CUSTOMIZATION
- **EASY TO CONTROL, ADJUST, INSTALL & REVERSE**
- **HIGH PERFORMANCE WITH LOW AIR CONSUMPTION**



Environmentally Friendly

- **SUITABLE FOR CLEAN ATMOSPHERES**
- **DESIGNED FOR LOW AIR CONSUMPTION**
- **LUBRICATION FREE OPTION**
- **NO ADDITIONAL POLLUTION**

Selecting your Air Motor

Glossary information:

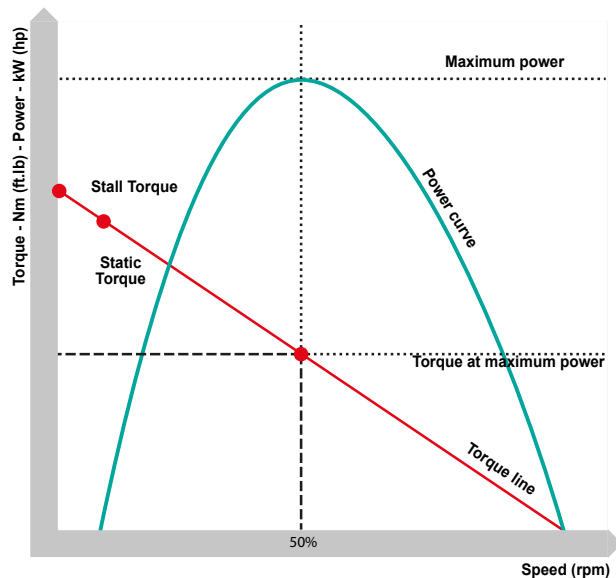
M R 16 12300 K S L SI	
<p>Vane Air Motor</p> <p>O = Clockwise rotation</p> <p>R = Reversible</p>	<p>Power in kW</p> <p>16 = 0.10-0.16</p> <p>25 = 0.16-0.25</p> <p>39 = 0.23-0.39</p> <p>65 = 0.50-0.65</p> <p>84 = 0.58-0.84</p> <p>180 = 1.40-1.83</p> <p>290 = 2.52-2.91</p>
	<p>Free speed</p> <p>12300</p> <p>K = Keyed shaft</p> <p>T = Threaded Shaft</p>
	<p>S = Stainless steel</p> <p>L = Lubrication free</p> <p>SI = Silencer included</p>

Air motor performance

Air motor performance depends on the air pressure and air flow being supplied to the tool. By adjusting pressure and flow, we can change the torque and speed output of the air motor. Air motor peak performance is at **6.3 bar (90 psi)**.

The **main technical references** of an air motor are:

- **POWER IN Watt (hp)**
- **SPEED AT MAXIMUM POWER, rpm**
- **TORQUE AT MAXIMUM POWER, Nm (ft.lb)**
- **STATIC TORQUE, Nm (ft.lb)**
- **FREE SPEED, rpm**
- **AIR CONSUMPTION AT MAXIMUM POWER, l/s (cfm)**



Some applications require a certain stall torque. This can be calculated by taking the torque at maximum power and multiplying this by two. Regulating the pressure is necessary when controlling the stall torque.

Selecting your Air Motor

Adjusting the performance of the Air Motor

The performance can be modified using a regulator that **reduces or increases the air pressure** to the motor. Consequently there is an decrease or increase of the power, **torque and speed values**.

To calculate performance when the supply pressure is different to 6.3 bar, multiply the data at 6.3 bar by the correction factors below.

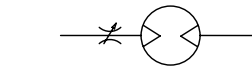
Performance coefficient vs the pressure:

AIR PRESSURE (Bar)	AIR PRESSURE (Psi)	SPEED	TORQUE	AIR CONSUMPTION
7	101	1.01	1.09	1.11
6	87	0.99	0.95	0.96
5	73	0.93	0.79	0.77
4	58	0.85	0.63	0.61
3	44	0.73	0.48	0.44

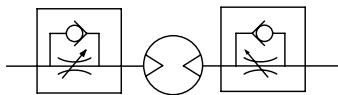
There are two methods to adjust the performance of a motor

- WITH AN AIR FLOW REGULATOR TO CONTROL THE SPEED
- WITH AN AIR PRESSURE REGULATOR TO CONTROL THE TORQUE

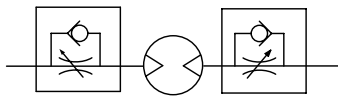
Speed is controlled by restricting the air flow to the motor.
The flow regulator should feature a combined non-return valve.



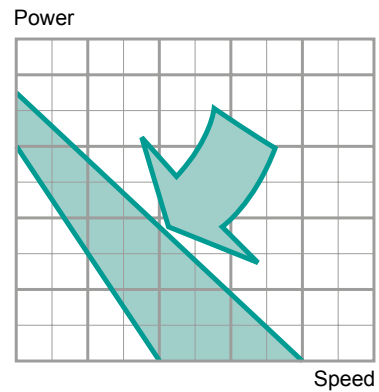
Supply throttling, non-reversible motor



Supply throttling, reversible motor



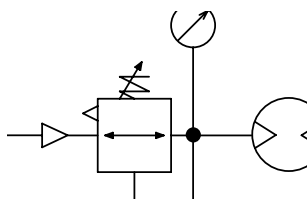
Exhaust throttling, reversible motor



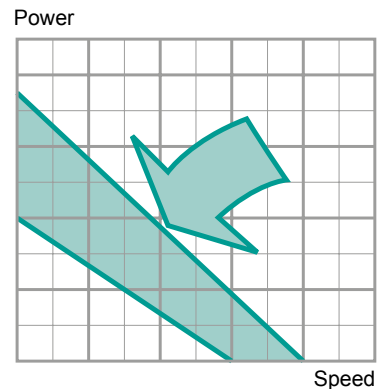
Regulation of the air motor performance

Air pressure is used to control torque
 Control should be via a regulator, filter, lubricator.

Torque is controlled by regulating the pressure of the motor air supply.



Pressure regulation at motor inlet



Selecting your Air Motor

General rules

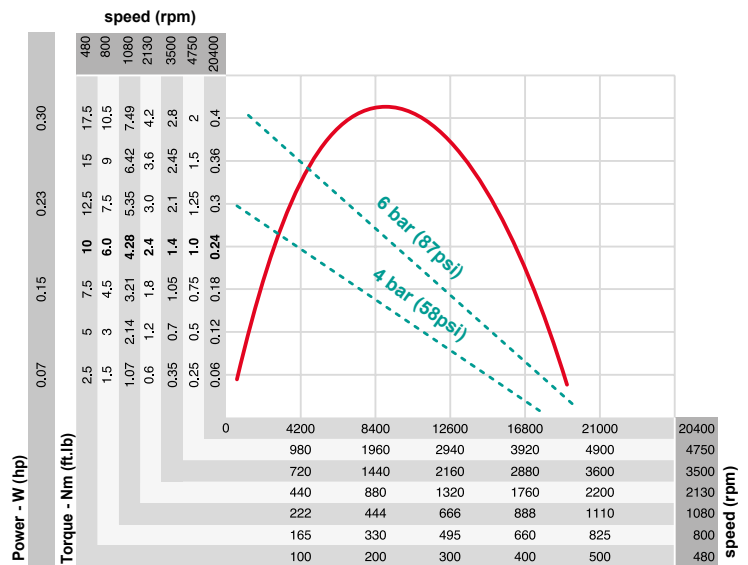
After first determining whether a single direction or a reversible motor is required, the next step is to consider the required output speed and torque together with the operational conditions.

As a general rule try to select a motor with twice the free speed of the speed required under load. By using the performance graphs indicated on the following pages it is then possible to ensure that the motor meets the requirements specified.

Example:

What motor is required to produce an output torque of 6 Nm at 200 rpm.

The motor should be reversible and 6.3 bar supply pressure is available.



• Step One

Select the motor type at maximum power

The maximum torque of the M25 Series motor is 10.8 Nm (7.4 ft-lb). Since a reversible motor is required the MR25 will be used.

• Step Two

Select the appropriate motor speed

As a rule try to select a motor with twice the free running speed of the speed required since this will usually coincide with the high power band of the motor. For this example we require 200 rpm so use a motor of about 400 rpm free running speed. The closest is 450 rpm so try the MR25-450-KL.

• Step Three

Confirm the motor is suitable for the application

By plotting both the torque (6 Nm - 4.4 ft-lb) and speed (200 rpm) on the graph an intersection is found. Provided the intersection is below the torque line for the motor (straight line) then the motor is suitable for the application.

M16-KL Series



0.11 to 0.16 kW (0.15 to 0.21 hp)

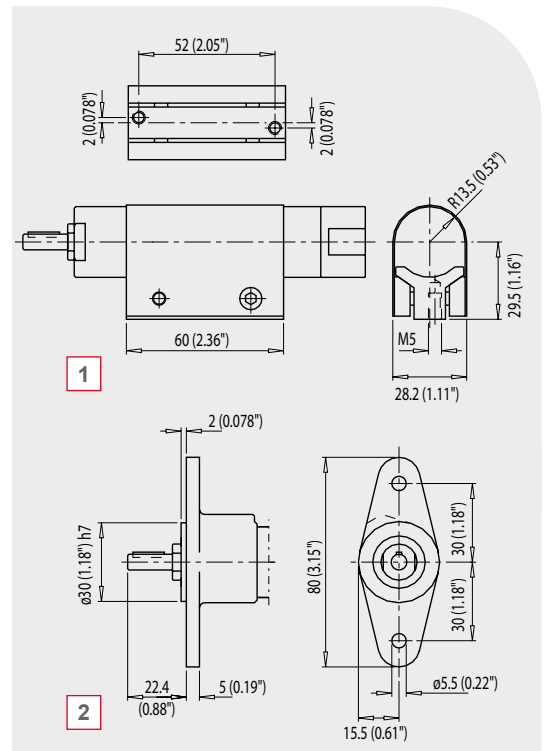
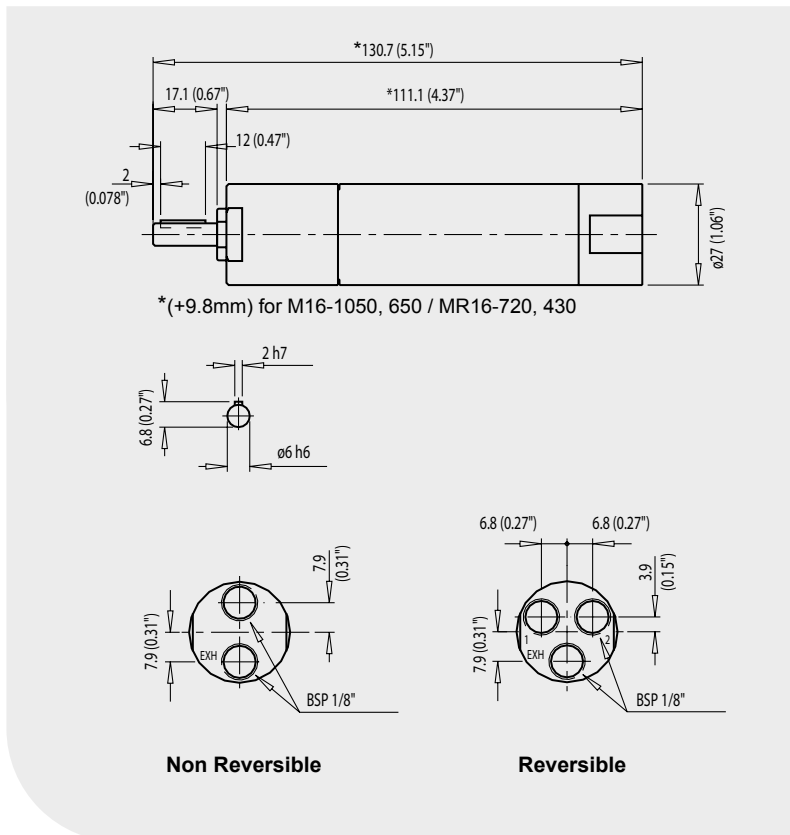


Certified according to directive **ATEX**
(II 2G T4 IIC D110°C* or II 2G T5 IIC D85°C**)



Air pressure 6.3 bar (91 psi)

MODEL	PART NUMBER	MAX OUTPUT		TORQUE AT MAX OUTPUT		MINI STARTING TORQUE		STALL TORQUE		FREE SPEED	AIR CONS. AT MAX OUTPUT		WEIGHT	
		Kw	hp	Nm	ft.lb	Nm	ft.lb	Nm	ft.lb	rpm	l/s	cfm	kg	lb
Non Reversible														
M16-19500-KL-ATEX*	205 147 892 4	0.16	0.21	0.17	0.13	0.29	0.21	0.34	0.25	19500	4	8.5	0.3	0.66
M16-4800-KL-ATEX**	205 147 893 4	0.16	0.21	0.7	0.52	1.23	0.91	1.4	1.03	4800	4	8.5	0.3	0.66
M16-2900-KL-ATEX**	205 147 894 4	0.16	0.21	1.15	0.85	2.0	1.48	2.3	1.7	2900	4	8.5	0.3	0.66
M16-1140-KL-ATEX**	205 147 895 4	0.16	0.21	2.9	2.1	5.1	3.8	5.8	4.28	1140	4	8.5	0.33	0.73
M16-700-KL-ATEX**	205 147 896 4	0.16	0.21	4.8	3.5	8.5	6.27	9.6	7.1	700	4	8.5	0.33	0.73
Reversible														
MR16-13000-KL-ATEX*	205 147 897 4	0.11	0.15	0.15	0.11	0.24	0.18	0.3	0.22	13000	3.6	7.6	0.37	0.82
MR16-3400-KL-ATEX**	205 147 898 4	0.11	0.15	0.62	0.46	1.01	0.74	1.24	0.91	3400	3.6	7.6	0.37	0.82
MR16-2000-KL-ATEX**	205 147 899 4	0.11	0.15	1.03	0.76	1.67	1.23	2.1	1.5	2000	3.6	7.6	0.37	0.82
MR16-800-KL-ATEX**	205 147 900 4	0.11	0.15	2.6	1.92	4.2	3.1	5.2	3.8	800	3.6	7.6	0.4	0.88
MR16-490-KL-ATEX**	205 147 901 4	0.11	0.15	4.3	3.2	6.9	5.1	8.6	6.3	490	3.6	7.6	0.4	0.88

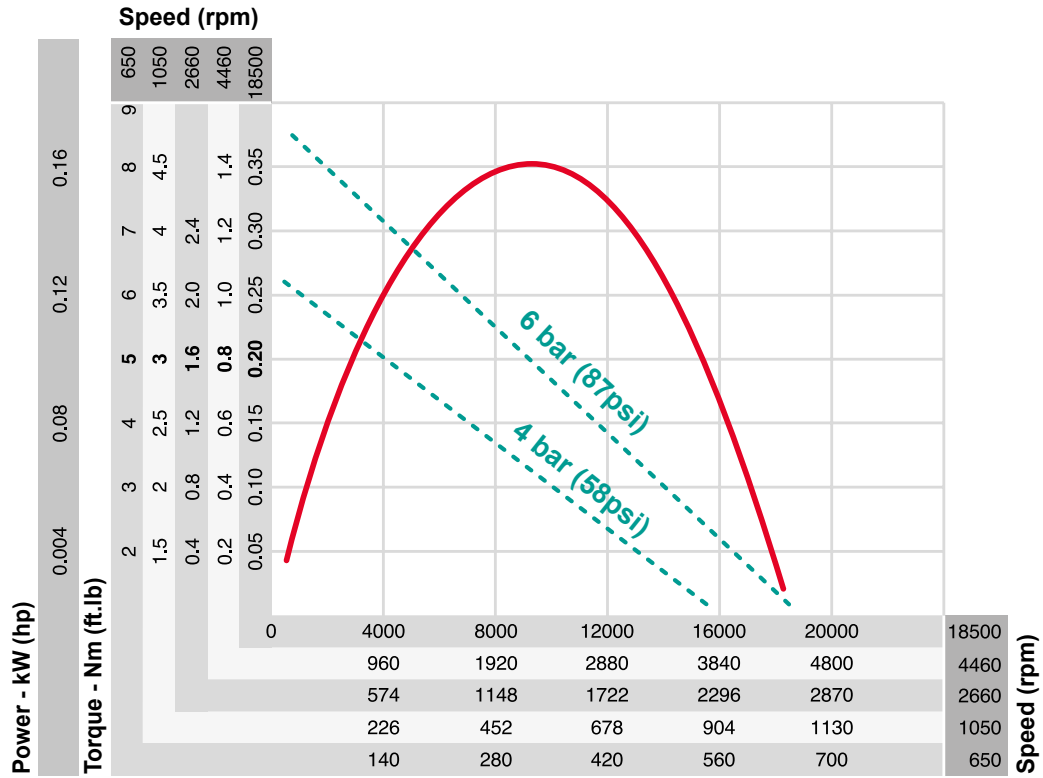


OPTIONAL ACCESSORIES

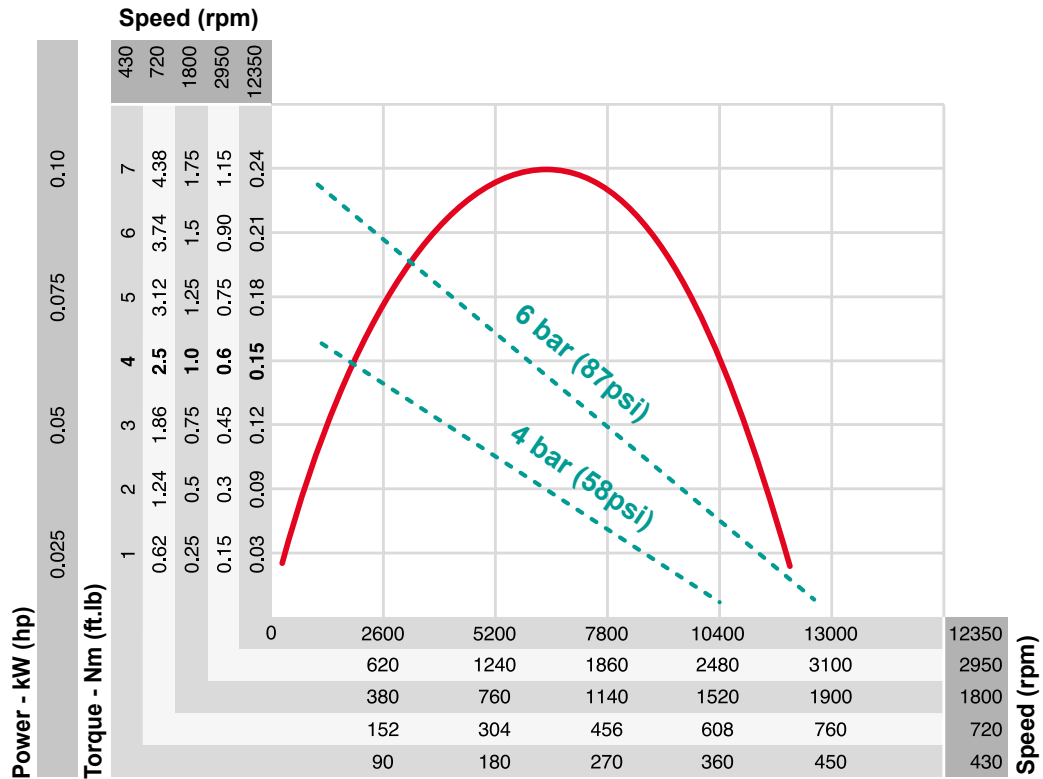
ITEM	PART NO.
1 Mounting foot	205 053 649 3
2 Mounting flange	205 053 640 3

Other optional accessories: see page 28

M16-KL at air pressure 6.3 bar (91 psi)
Non Reversible



MR16-KL at air pressure 6.3 bar (91 psi)
Reversible



M16-KSL Series



0.11 to 0.16 kW (0.15 to 0.21 hp)
Stainless steel

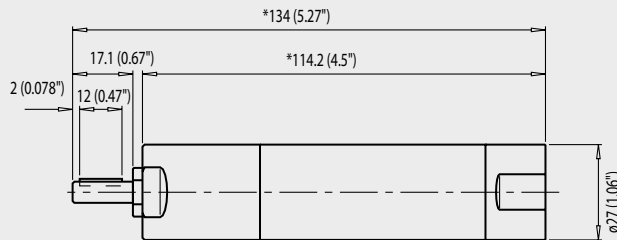


Certified according to directive ATEX
 (II 2G T4 IIC D110°C* or II 2G T5 IIC D85°C**)

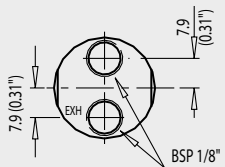
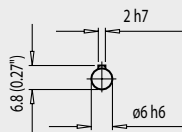


Air pressure 6.3 bar (91 psi)

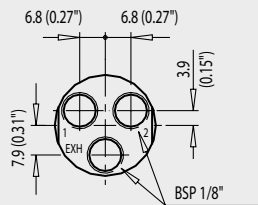
MODEL	PART NUMBER	MAX OUTPUT		TORQUE AT MAX OUTPUT		MINI STARTING TORQUE		STALL TORQUE		FREE SPEED	AIR CONS. AT MAX OUTPUT		WEIGHT	
		Kw	hp	Nm	ft.lb	Nm	ft.lb	Nm	ft.lb	rpm	l/s	cfm	kg	lb
Non Reversible														
M16-19500-KSL-ATEX*	205 147 902 4	0.16	0.21	0.17	0.13	0.29	0.21	0.34	0.25	19500	4	8.5	0.37	0.82
M16-4800-KSL-ATEX**	205 147 903 4	0.16	0.21	0.7	0.52	1.23	0.91	1.4	1.03	4800	4	8.5	0.37	0.82
M16-2900-KSL-ATEX**	205 147 904 4	0.16	0.21	1.15	0.85	2.0	1.48	2.3	1.7	2900	4	8.5	0.37	0.82
M16-1140-KSL-ATEX**	205 147 905 4	0.16	0.21	2.9	2.1	5.1	3.8	5.8	4.3	1140	4	8.5	0.4	0.88
M16-700-KSL-ATEX**	205 147 906 4	0.16	0.21	4.8	3.5	8.5	6.3	9.6	7.1	700	4	8.5	0.4	0.88
Reversible														
MR16-13000-KSL-ATEX*	205 147 907 4	0.11	0.15	0.15	0.11	0.24	0.18	0.3	0.22	13000	3.6	7.6	0.37	0.82
MR16-3400-KSL-ATEX**	205 147 908 4	0.11	0.15	0.62	0.46	1.01	0.74	1.24	0.91	3400	3.6	7.6	0.37	0.82
MR16-2000-KSL-ATEX**	205 147 909 4	0.11	0.15	1.03	0.76	1.67	1.23	2.1	1.5	2000	3.6	7.6	0.37	0.82
MR16-800-KSL-ATEX**	205 147 910 4	0.11	0.15	2.6	1.92	4.2	3.1	5.2	3.8	800	3.6	7.6	0.4	0.88
MR16-490-KSL-ATEX**	205 147 911 4	0.11	0.15	4.3	3.2	6.9	5.1	8.6	6.3	490	3.6	7.6	0.4	0.88



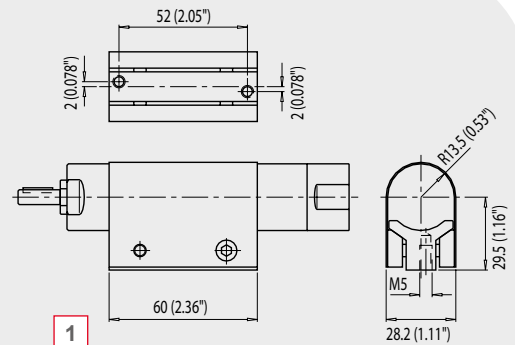
*(+ 9.8mm) for M16-1050, 650 / MR16-720, 430



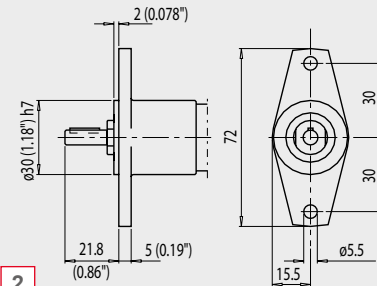
Non Reversible



Reversible



1



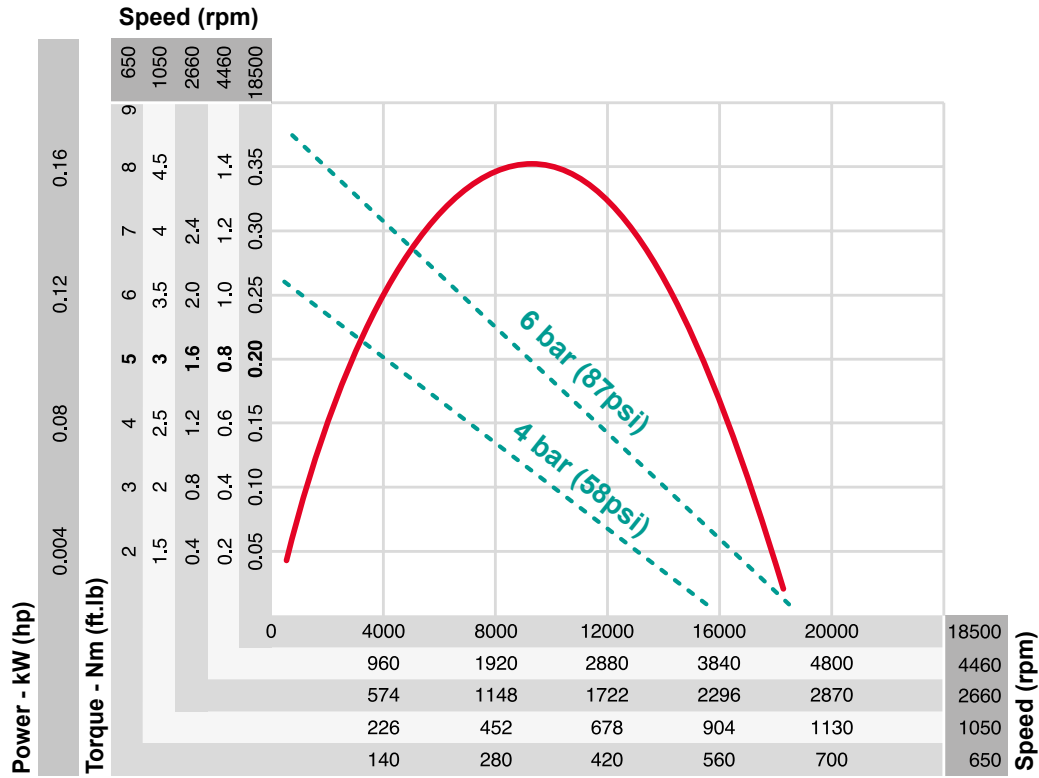
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OPTIONAL ACCESSORIES

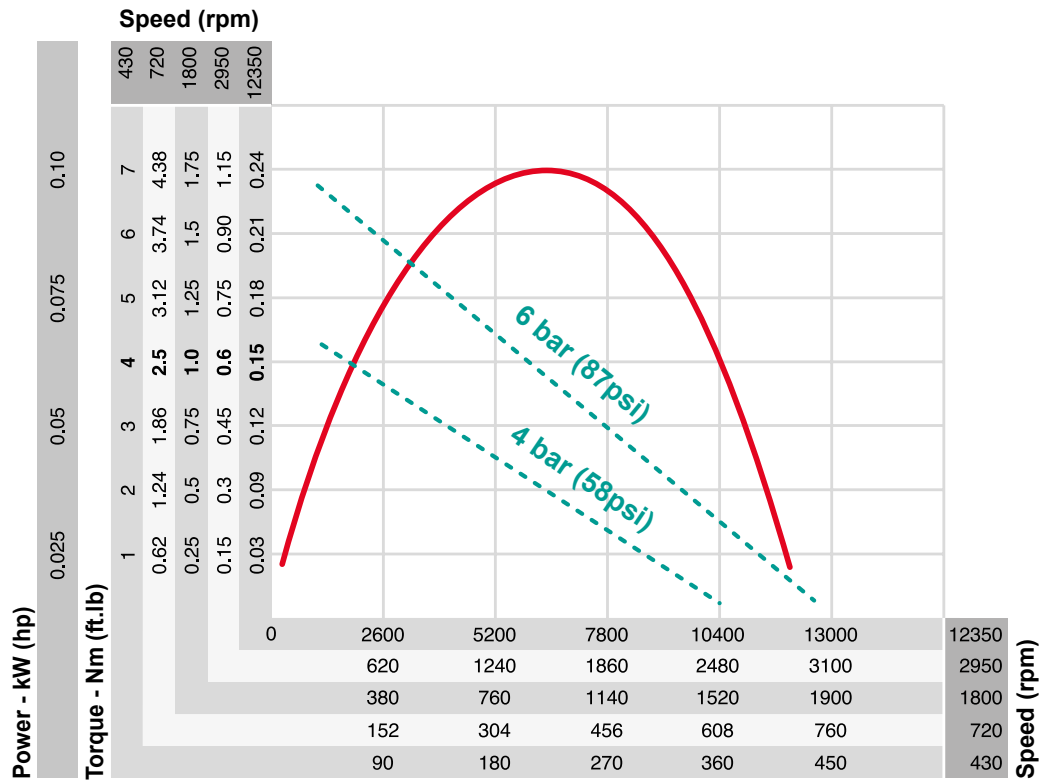
ITEM	PART NO.
1 Mounting foot	205 053 653 3
2 Mounting flange	205 053 645 3

Other optional accessories: see page 28

M16-KSL at air pressure 6.3 bar (91 psi)
Non Reversible



MR16-KSL at air pressure 6.3 bar (91 psi)
Reversible



M25-KL / TL Series



0.16 to 0.27 kW (0.21 to 0.36 hp)



Certified according to directive ATEX
(II 2G T4 IIC D110°C* or II 2G T5 IIC D85°C**)



A



B



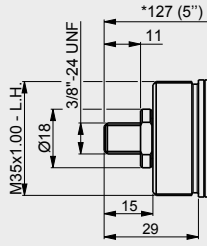
C

Air pressure 6.3 bar (91 psi)

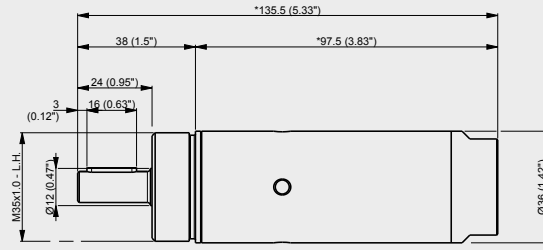
PIC	MODEL	PART NUMBER	MAX OUTPUT		TORQUE AT MAX OUTPUT		MINI STARTING TORQUE		STALL TORQUE		FREE SPEED	AIR CONS. AT MAX OUTPUT		WEIGHT	
			Kw	hp	Nm	ft.lb	Nm	ft.lb	Nm	ft.lb	rpm	l/s	cfm	kg	lb
Non Reversible - Keyed shaft															
A	M25-21500-KL-ATEX*	205 147 822 4	0.27	0.36	0.27	0.2	0.51	0.38	0.54	0.4	21500	5.3	11.2	0.55	1.21
A	M25-4700-KL-ATEX**	205 147 823 4	0.27	0.36	1.2	0.89	2.3	1.7	2.4	1.8	4700	5.3	11.2	0.55	1.21
A	M25-3550-KL-ATEX**	205 147 824 4	0.27	0.36	1.6	1.2	3.1	2.3	3.2	2.4	3550	5.3	11.2	0.55	1.21
A	M25-2100-KL-ATEX**	205 147 825 4	0.27	0.36	2.7	2.0	5.1	3.8	5.4	4.0	2100	5.3	11.2	0.55	1.21
A	M25-1040-KL-ATEX**	205 147 826 4	0.26	0.35	5.3	3.9	10.0	7.4	10.6	7.8	1040	5.3	11.2	0.75	1.65
A	M25-770-KL-ATEX**	205 147 827 4	0.26	0.35	7.1	5.2	13.5	10.0	14.2	10.5	770	5.3	11.2	0.75	1.65
A	M25-480-KL-ATEX**	205 147 828 4	0.26	0.35	11.8	8.7	22.0	16.2	23.6	17.4	480	5.3	11.2	0.75	1.65
Non Reversible - Threaded shaft															
B	M25-21500-TL-ATEX*	205 147 829 4	0.27	0.36	0.27	0.2	0.51	0.38	0.54	0.4	21500	5.3	11.2	0.55	1.21
B	M25-4700-TL-ATEX**	205 147 830 4	0.27	0.36	1.2	0.89	2.3	1.7	2.4	1.8	4700	5.3	11.2	0.55	1.21
B	M25-3550-TL-ATEX**	205 147 831 4	0.27	0.36	1.6	1.2	3.1	2.3	3.2	2.4	3550	5.3	11.2	0.55	1.21
B	M25-2100-TL-ATEX**	205 147 832 4	0.27	0.36	2.7	2.0	5.1	3.8	5.4	4.0	2100	5.3	11.2	0.55	1.21
B	M25-1040-TL-ATEX**	205 147 833 4	0.26	0.35	5.3	3.9	10.0	7.4	10.6	7.8	1040	5.3	11.2	0.75	1.65
B	M25-770-TL-ATEX**	205 147 834 4	0.26	0.35	7.1	5.2	13.5	10.0	14.2	10.5	770	5.3	11.2	0.75	1.65
B	M25-480-TL-ATEX**	205 147 835 4	0.26	0.35	11.8	8.7	22.0	16.2	23.6	17.4	480	5.3	11.2	0.75	1.65
Reversible - Keyed shaft															
C	MR25-13100-KL-ATEX*	205 147 836 4	0.16	0.21	0.24	0.18	0.32	0.24	0.48	0.35	13100	5.0	10.6	0.55	1.21
C	MR25-2850-KL-ATEX**	205 147 837 4	0.16	0.21	1.1	0.81	1.4	1.0	2.2	1.6	2850	5.0	10.6	0.55	1.21
C	MR25-2100-KL-ATEX**	205 147 838 4	0.16	0.21	1.4	1.0	1.9	1.4	2.8	2.1	2100	5.0	10.6	0.55	1.21
C	MR25-1300-KL-ATEX**	205 147 839 4	0.16	0.21	2.4	1.8	3.2	2.4	4.8	3.5	1300	5.0	10.6	0.55	1.21
C	MR25-640-KL-ATEX**	205 147 840 4	0.16	0.21	4.7	3.5	6.3	4.6	9.4	6.9	640	5.0	10.6	0.75	1.65
C	MR25-480-KL-ATEX**	205 147 841 4	0.16	0.21	6.3	4.6	8.5	6.3	12.6	9.3	480	5.0	10.6	0.75	1.65
C	MR25-290-KL-ATEX**	205 147 842 4	0.16	0.21	10.5	7.7	14.0	10.3	21.0	15.5	290	5.0	10.6	0.75	1.65

INCLUDED

M25-XXXX-TL

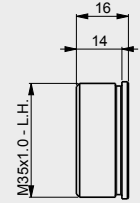


M25-XXXX-KL

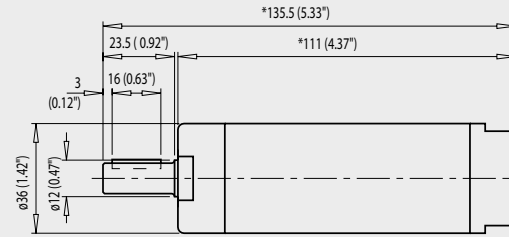
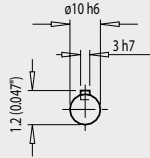


*(+31mm) for M25-1080, 800, 480

1

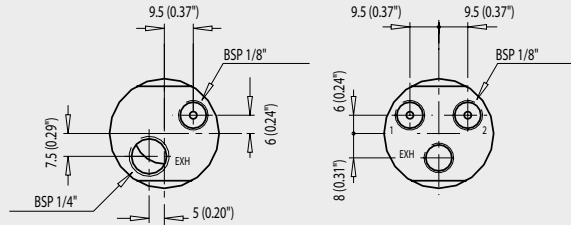
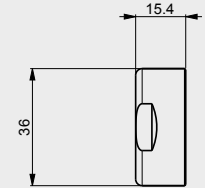


MR25-XXXX-KL



*(+31mm) MR25-650, 450, 280

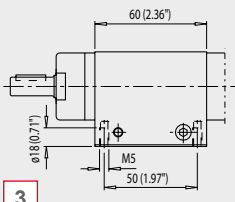
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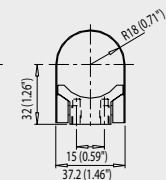
Non Reversible

Reversible

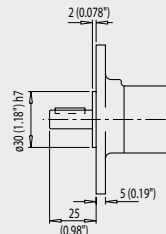
OPTIONAL



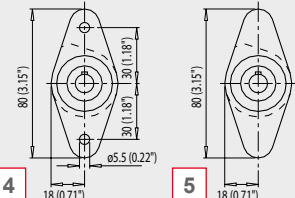
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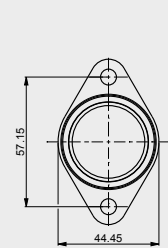
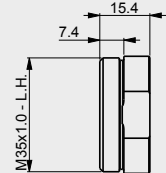
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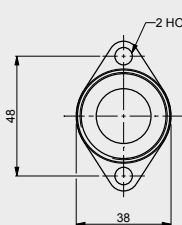
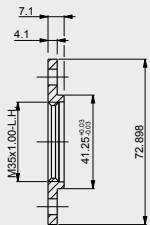
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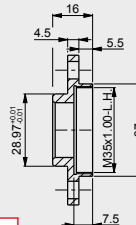
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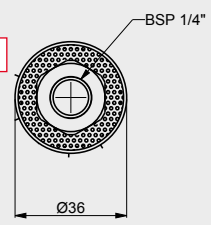
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8



9



INCLUDED

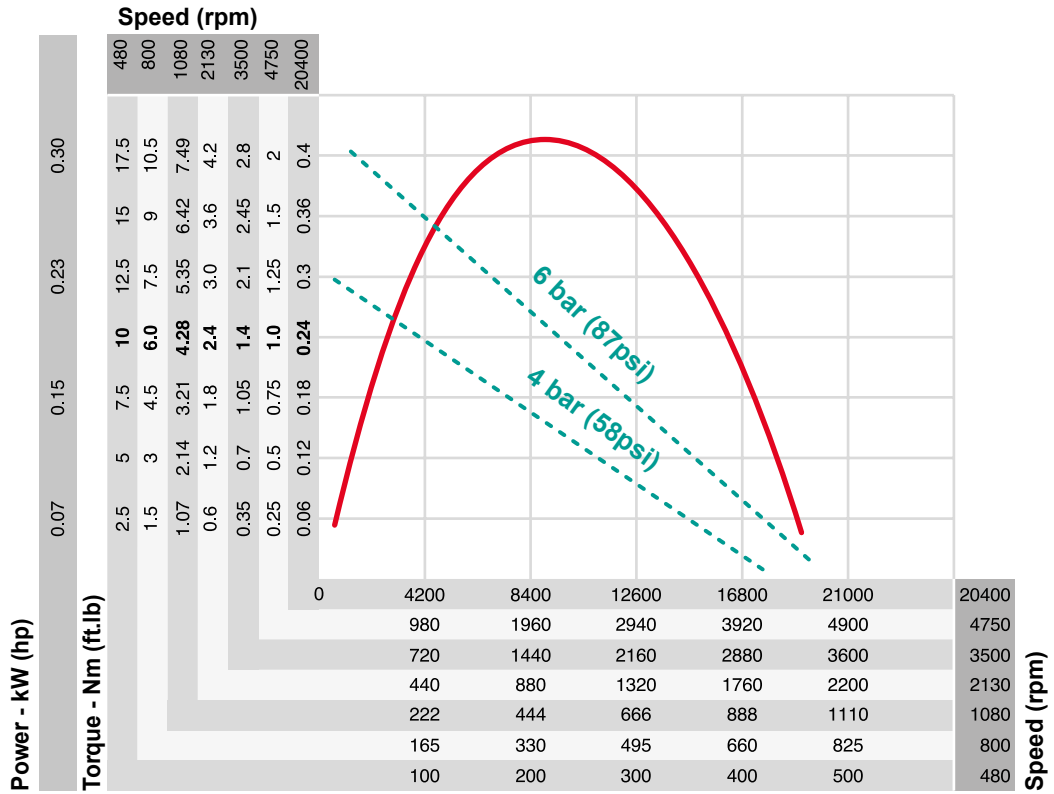
ITEM	PART NO.
1 Front nut threaded (M version)	205 055 778 3
2 Front nut (MR version)	205 053 654 3

OPTIONAL ACCESSORIES

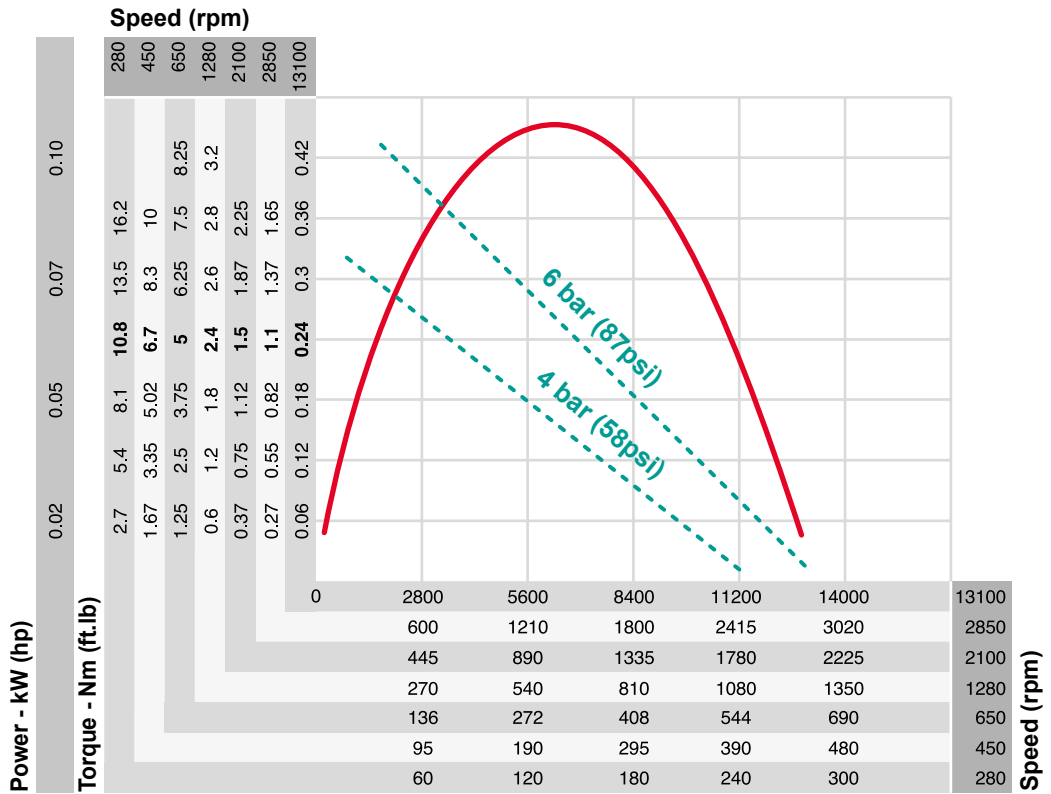
ITEM	PART NO.
3 Mounting foot	205 053 646 3
4 Mounting flange with holes (M/MR vers.)	205 054 062 3
5 Mounting flange without holes (M/MR vers.)	205 053 639 3
6 Front nut threaded (short thread)	205 055 024 3
7 Mounting flange with holes (M version)	286423
8 Mounting flange with holes (M version)	441653
9 Coaxial exhaust for M25	205 055 023 3

Other optional accessories: see page 30

M25-KL at air pressure 6.3 bar (91 psi)
Non Reversible



MR25-KL at air pressure 6.3 bar (91 psi)
Reversible





M25-KSL Series



0.16 to 0.27 kW (0.21 - 0.36 hp)
Stainless steel

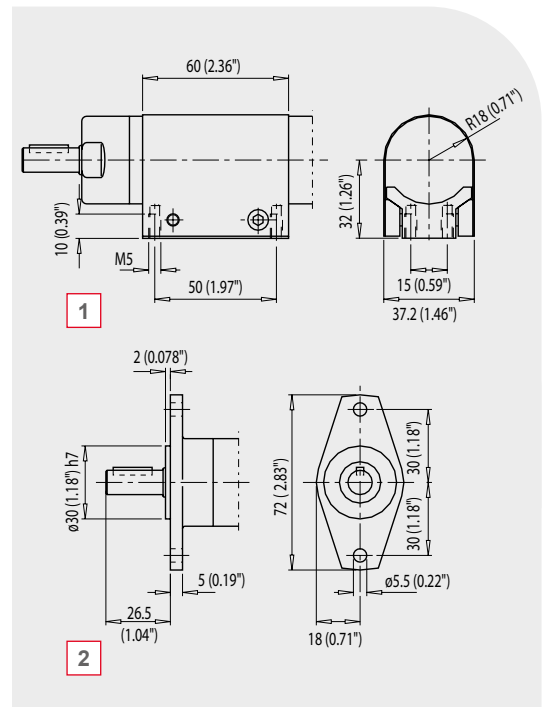
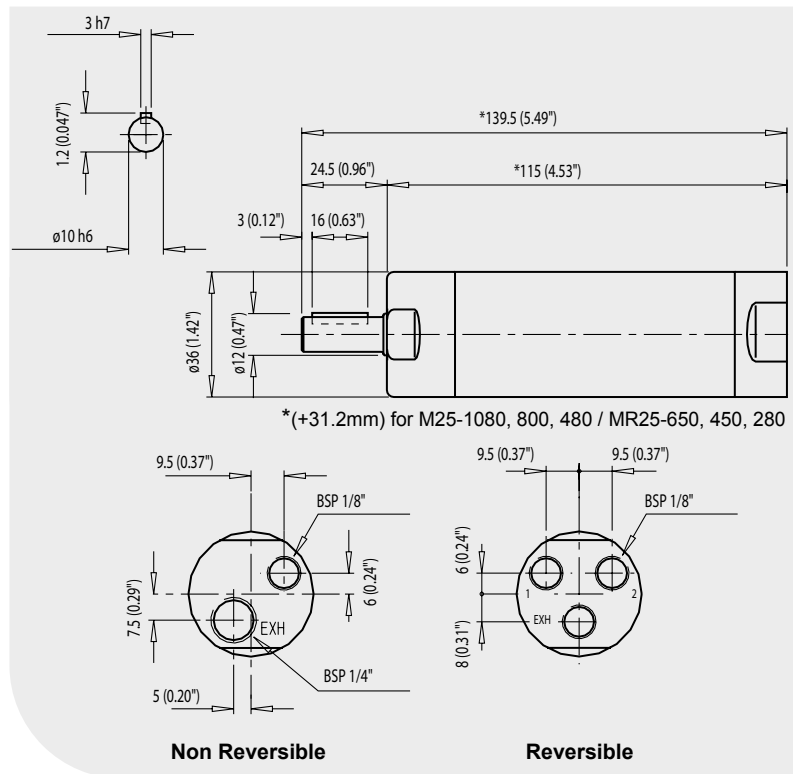


Certified according to directive ATEX
 (II 2G T4 IIC D110°C* or II 2G T5 IIC D85°C**)



Air pressure 6.3 bar (91 psi)

MODEL	PART NUMBER	MAX OUTPUT		TORQUE AT MAX OUTPUT		MINI STARTING TORQUE		STALL TORQUE		FREE SPEED	AIR CONS. AT MAX OUTPUT		WEIGHT	
		Kw	hp	Nm	ft.lb	Nm	ft.lb	Nm	ft.lb	rpm	l/s	cfm	kg	lb
Non Reversible														
M25-19500-KSL-ATEX*	205 147 843 4	0.27	0.36	0.27	0.2	0.51	0.38	0.54	0.4	19500	5.3	11.2	0.63	1.39
M25-4700-KSL-ATEX**	205 147 844 4	0.27	0.36	1.2	0.89	2.3	1.7	2.4	1.8	4700	5.3	11.2	0.63	1.39
M25-3550-KSL-ATEX**	205 147 845 4	0.27	0.36	1.6	1.2	3.1	2.3	3.2	2.4	3550	5.3	11.2	0.63	1.39
M25-2100-KSL-ATEX**	205 147 846 4	0.27	0.36	2.7	2.0	5.1	3.8	5.4	4.0	2100	5.3	11.2	0.63	1.39
M25-1040-KSL-ATEX**	205 147 847 4	0.26	0.35	5.3	3.9	10.0	7.4	10.6	7.8	1040	5.3	11.2	0.83	1.83
M25-770-KSL-ATEX**	205 147 848 4	0.26	0.35	7.1	5.2	13.5	10.0	14.2	10.5	770	5.3	11.2	0.83	1.83
M25-480-KSL-ATEX**	205 147 849 4	0.26	0.35	11.8	8.7	22.0	16.2	23.6	17.4	480	5.3	11.2	0.83	1.83
Reversible														
MR25-13100-KSL-ATEX*	205 147 850 4	0.16	0.21	0.24	0.18	0.32	0.24	0.48	0.35	13100	5.0	10.6	0.63	1.39
MR25-2800-KSL-ATEX**	205 147 851 4	0.16	0.21	1.1	0.81	1.4	1.0	2.2	1.6	2850	5.0	10.6	0.63	1.39
MR25-2100-KSL-ATEX**	205 147 852 4	0.16	0.21	1.4	1.0	1.9	1.4	2.8	2.1	2100	5.0	10.6	0.63	1.39
MR25-1300-KSL-ATEX**	205 147 853 4	0.16	0.21	2.4	1.8	3.2	2.4	4.8	3.5	1300	5.0	10.6	0.63	1.39
MR25-640-KSL-ATEX**	205 147 854 4	0.16	0.21	4.7	3.5	6.3	4.6	9.4	6.9	640	5.0	10.6	0.83	1.83
MR25-480-KSL-ATEX**	205 147 855 4	0.16	0.21	6.3	4.6	8.5	6.3	12.6	9.3	480	5.0	10.6	0.83	1.83
MR25-290-KSL-ATEX**	205 147 856 4	0.16	0.21	10.5	7.7	14.0	10.3	21.0	15.5	290	5.0	10.6	0.83	1.83

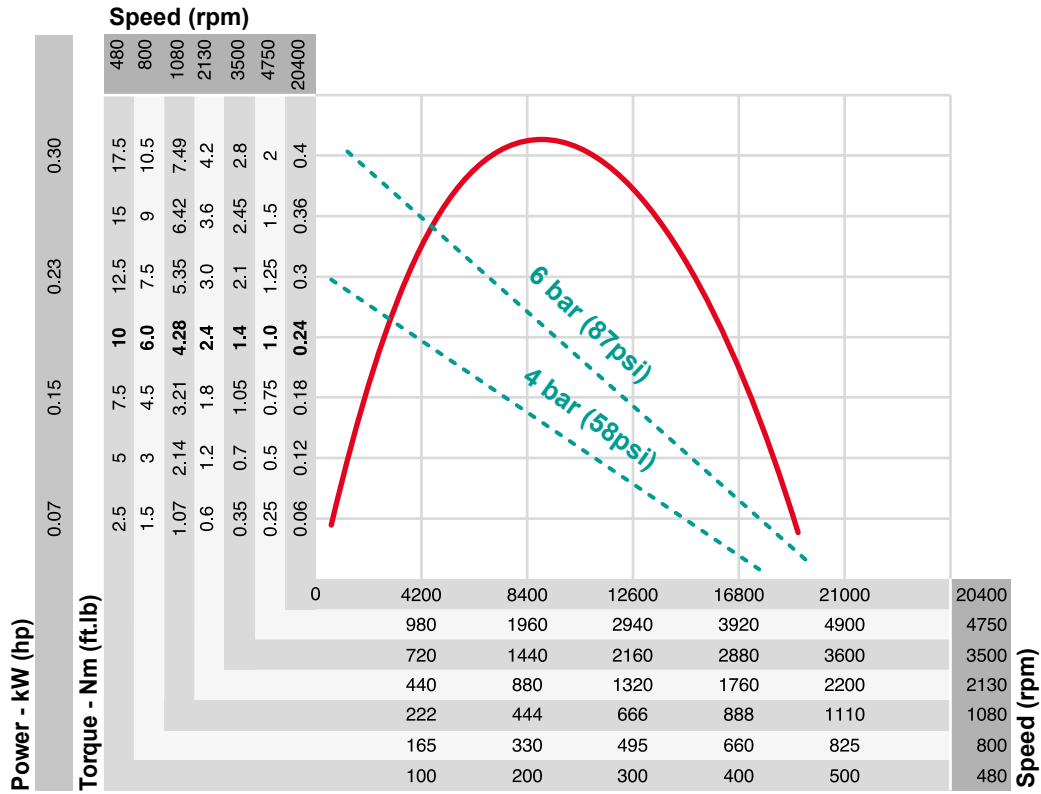


OPTIONAL ACCESSORIES

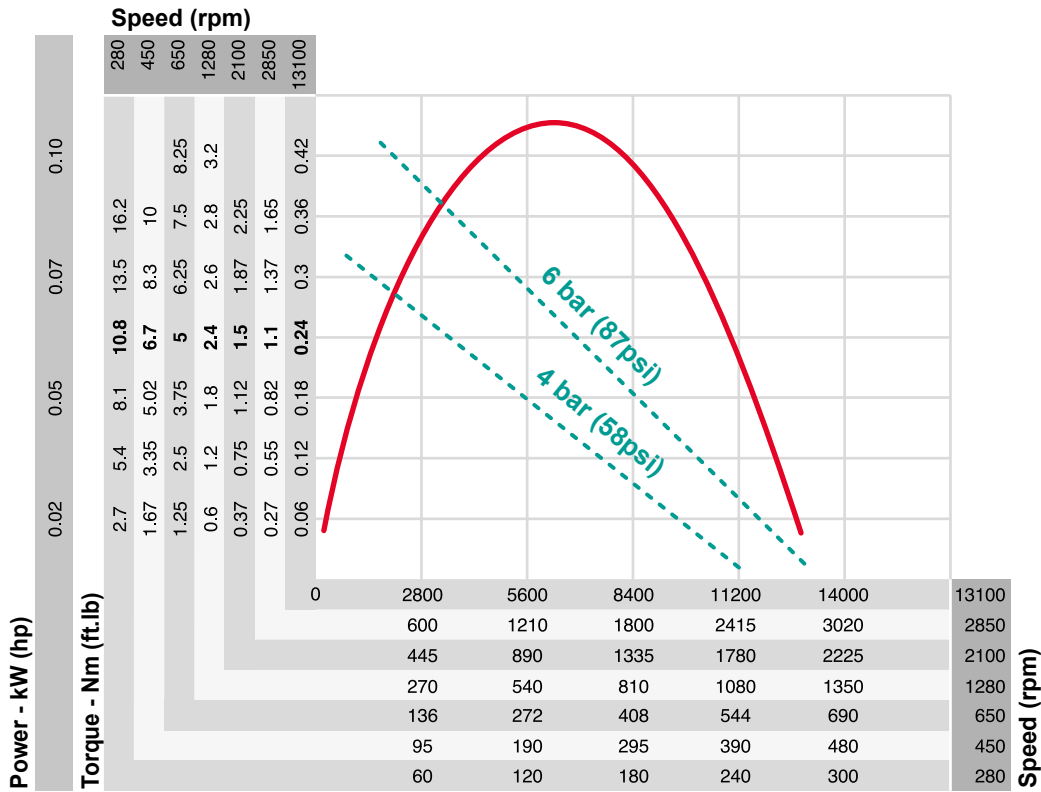
ITEM	PART NO.
1 Mounting foot	205 053 652 3
2 Mounting flange	205 053 644 3

Other optional accessories: see page 28

M25-KSL at air pressure 6.3 bar (91 psi)
Non Reversible




MR25-KSL at air pressure 6.3 bar (91 psi)
Reversible



M39-KL / TL Series

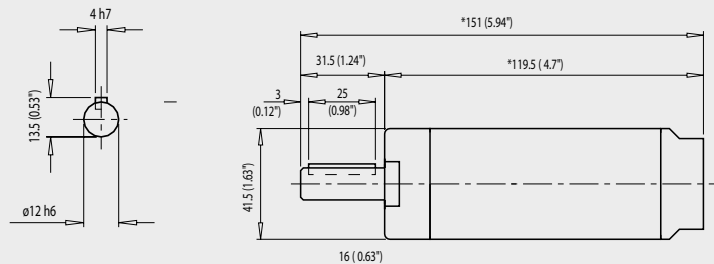
0.25 to 0.39 kW (0.34 to 0.52 hp)

 Certified according to directive ATEX
(II 2G T4 IIC D110°C* or II 2G T5 IIC D85°C**)

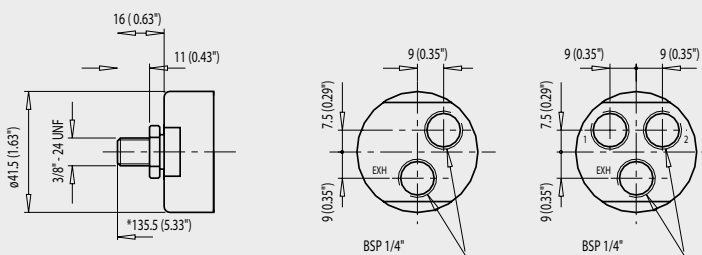


Air pressure 6.3 bar (91 psi)

MODEL	PART NUMBER	MAX OUTPUT		TORQUE AT MAX OUTPUT		MINI STARTING TORQUE		STALL TORQUE		FREE SPEED	AIR CONS. AT MAX OUTPUT		WEIGHT	
		Kw	hp	Nm	ft.lb	Nm	ft.lb	Nm	ft.lb	rpm	l/s	cfm	kg	lb
Non Reversible - Keyed shaft														
M39-19000-KL-ATEX*	205 147 857 4	0.39	0.52	0.4	0.3	0.76	0.56	0.8	0.59	19000	8.1	17.2	0.75	1.65
M39-5350-KL-ATEX**	205 147 858 4	0.39	0.52	1.4	1.0	2.7	2.0	2.8	2.1	5350	8.1	17.2	0.75	1.65
M39-3000-KL-ATEX**	205 147 859 4	0.39	0.52	2.6	1.9	4.9	3.6	5.2	3.8	3000	8.1	17.2	0.75	1.65
M39-2400-KL-ATEX**	205 147 860 4	0.39	0.52	3.2	2.4	6.1	4.5	6.4	4.7	2400	8.1	17.2	0.75	1.65
M39-1180-KL-ATEX**	205 147 861 4	0.38	0.51	6.4	4.7	12.0	8.9	12.8	9.4	1180	8.1	17.2	1.02	2.25
M39-650-KL-ATEX**	205 147 862 4	0.38	0.51	11.5	8.5	21.0	15.5	23.0	17.0	650	8.1	17.2	1.02	2.25
M39-520-KL-ATEX**	205 147 863 4	0.38	0.51	14.2	10.5	26.0	19.2	28.0	21.0	520	8.1	17.2	1.02	2.25
Non Reversible - Threaded shaft														
M39-19000-TL-ATEX*	205 147 864 4	0.39	0.52	0.4	0.3	0.76	0.56	0.8	0.59	19000	8.1	17.2	0.75	1.65
M39-5350-TL-ATEX**	205 147 865 4	0.39	0.52	1.4	1.0	2.7	2.0	2.8	2.1	5350	8.1	17.2	0.75	1.65
M39-3000-TL-ATEX**	205 147 866 4	0.39	0.52	2.6	1.9	4.9	3.6	5.2	3.8	3000	8.1	17.2	0.75	1.65
M39-2400-TL-ATEX**	205 147 867 4	0.39	0.52	3.2	2.4	6.1	4.5	6.4	4.7	2400	8.1	17.2	0.75	1.65
M39-1180-TL-ATEX**	205 147 868 4	0.38	0.51	6.4	4.7	12.0	8.9	12.8	9.4	1180	8.1	17.2	1.02	2.25
M39-650-TL-ATEX**	205 147 869 4	0.38	0.51	11.5	8.5	21.0	15.5	23.0	17.0	650	8.1	17.2	1.02	2.25
M39-520-TL-ATEX**	205 147 870 4	0.38	0.51	14.2	10.5	26.0	19.2	28.0	21.0	520	8.1	17.2	1.02	2.25
Reversible														
MR39-13300-KL-ATEX*	205 147 871 4	0.25	0.34	0.34	0.25	0.46	0.34	0.68	0.5	13300	7.9	16.8	0.75	1.65
MR39-3800-KL-ATEX**	205 147 872 4	0.25	0.34	1.2	0.89	1.6	1.2	2.4	1.8	3800	7.9	16.8	0.75	1.65
MR39-2000-KL-ATEX**	205 147 873 4	0.25	0.34	2.2	1.6	3.0	2.2	4.4	3.2	2000	7.9	16.8	0.75	1.65
MR39-1700-KL-ATEX**	205 147 874 4	0.25	0.34	2.7	2.0	3.7	2.7	5.4	4.0	1700	7.9	16.8	0.75	1.65
MR39-800-KL-ATEX**	205 147 875 4	0.25	0.34	5.4	4.0	7.0	5.2	10.8	8.0	800	7.9	16.8	1.02	2.25
MR39-450-KL-ATEX**	205 147 876 4	0.25	0.34	9.8	7.2	12.6	9.3	19.6	14.5	450	7.9	16.8	1.02	2.25
MR39-360-KL-ATEX**	205 147 877 4	0.25	0.34	12.1	8.9	15.6	11.5	24.0	17.8	360	7.9	16.8	1.02	2.25

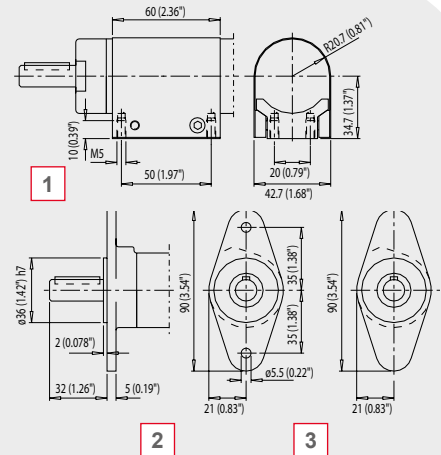


*(+33.5mm) for M39-1170, 650, 520 / MR39-800, 450, 360



Non Reversible

Reversible

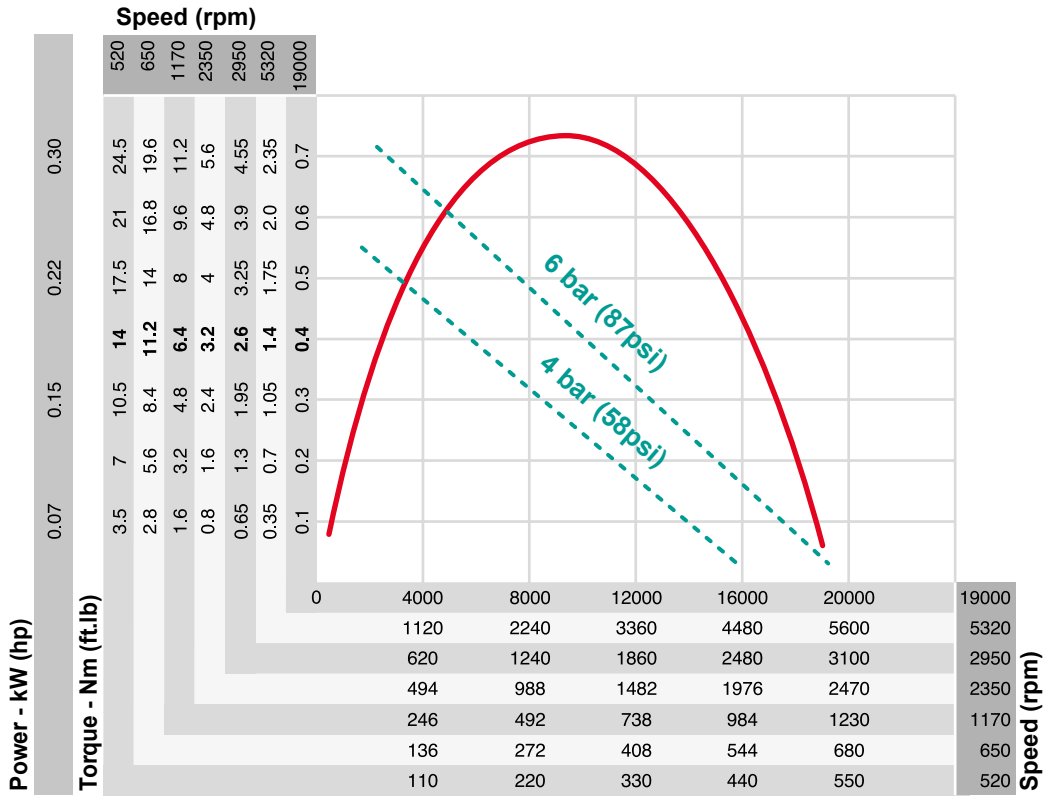


OPTIONAL ACCESSORIES

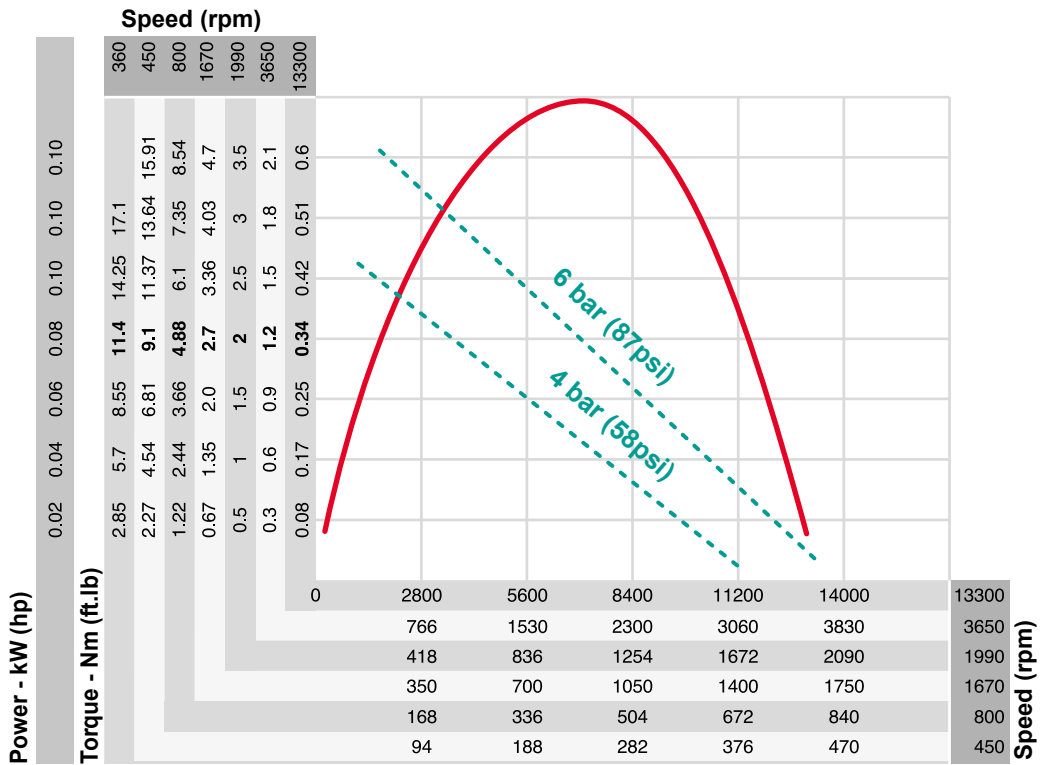
ITEM	PART NO.
1 Mounting foot	205 053 647 3
2 Mounting flange with holes	205 054 067 3
3 Mounting flange without holes	205 053 638 3

Other optional accessories: see page 28

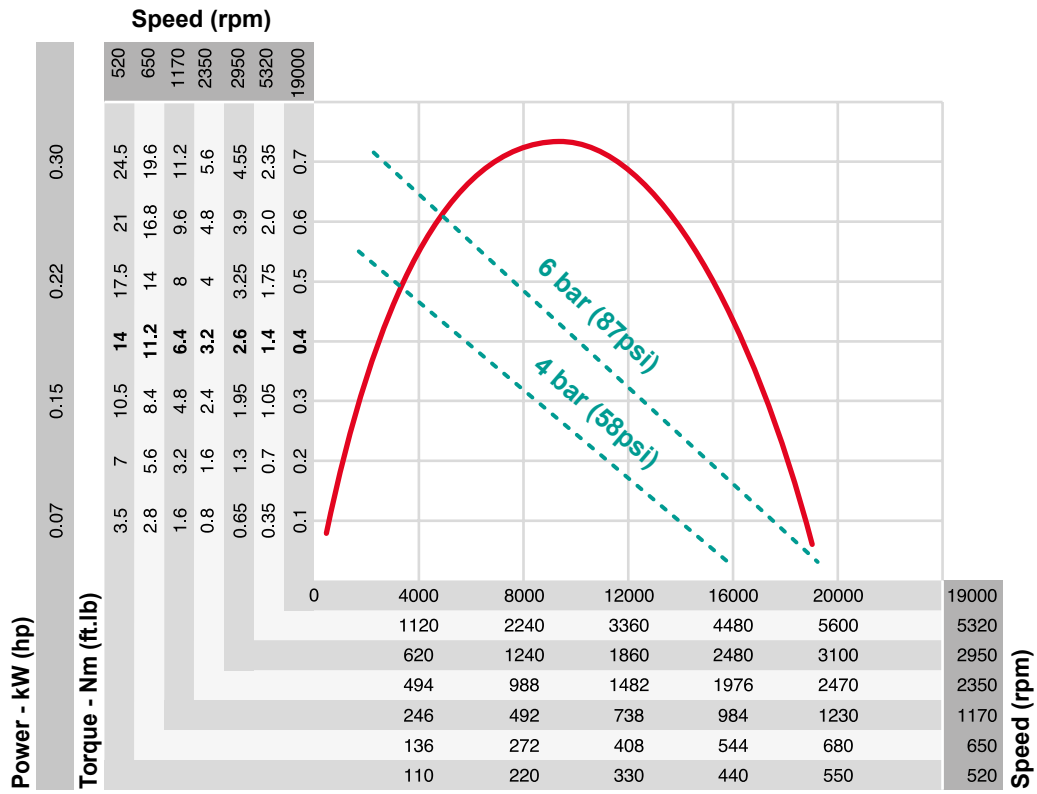
M39-KL at air pressure 6.3 bar (91 psi)
Non Reversible



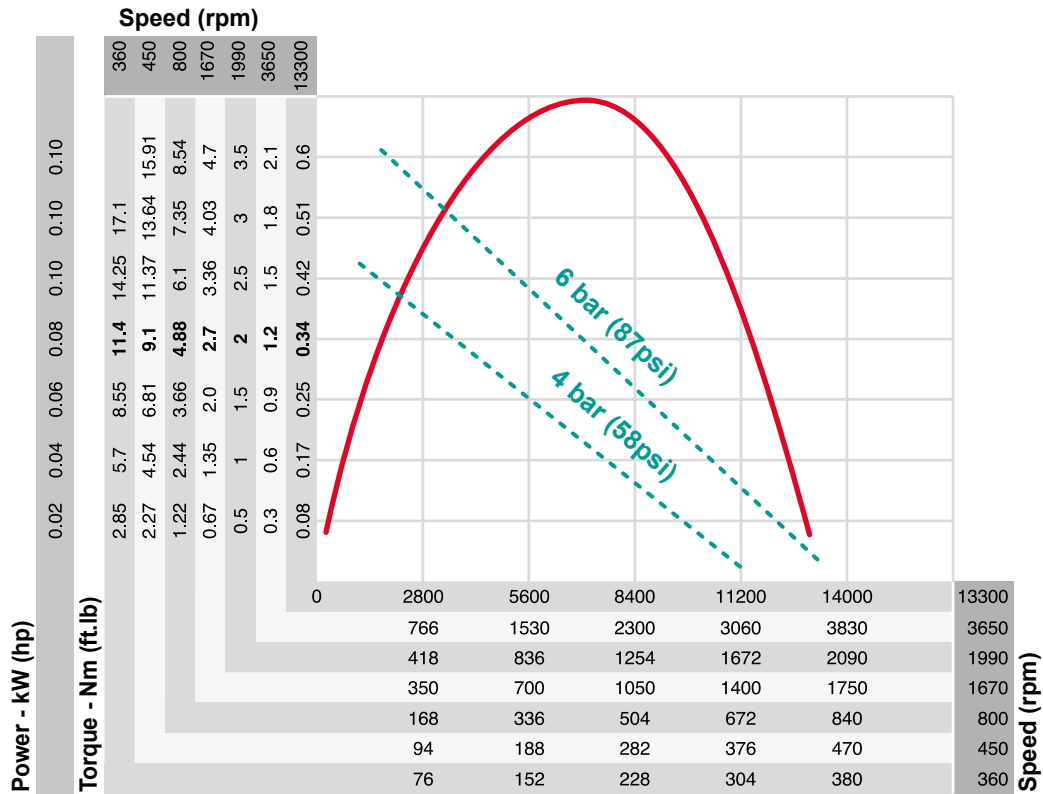
MR39-KL at air pressure 6.3 bar (91 psi)
Reversible



M39-KSL at air pressure 6.3 bar (91 psi)
Non Reversible



MR39-KSL at air pressure 6.3 bar (91 psi)
Reversible



M84-K Series

0.59 to 0.84 kW (0.79 to 1.13 hp)



Certified according to directive ATEX
(II 2G T4 IIC D110°C* or II 2G T5 IIC D85°C**)



Air pressure 6.3 bar (91 psi)

MODEL	PART NUMBER	MAX OUTPUT		TORQUE AT MAX OUTPUT		MINI STARTING TORQUE		STALL TORQUE		FREE SPEED	AIR CONS. AT MAX OUTPUT		WEIGHT	
		Kw	hp	Nm	ft.lb	Nm	ft.lb	Nm	ft.lb	rpm	l/s	cfm	kg	lb
Non Reversible - Keyed shaft														
M84-20000-K-ATEX*	205 147 912 4	0.84	1.13	0.74	0.55	1.2	0.89	1.48	1.09	20000	16.2	34.4	1.2	2.65
M84-6300-K-ATEX*	205 147 913 4	0.84	1.13	2.4	1.8	3.9	2.9	4.8	3.5	6300	16.2	34.4	1.2	2.65
M84-4000-K-ATEX*	205 147 914 4	0.84	1.13	3.8	2.8	6.1	4.5	7.6	5.6	4000	16.2	34.4	1.2	2.65
M84-2400-K-ATEX*	205 147 915 4	0.84	1.13	6.3	4.6	10.0	7.4	12.6	9.3	2400	16.2	34.4	1.2	2.65
M84-1400-K-ATEX**	205 147 916 4	0.82	1.1	10.5	7.7	17.0	12.5	21.0	15.5	1400	16.2	34.4	1.3	2.9
M84-900-K-ATEX**	205 147 917 4	0.82	1.1	16.5	12.2	26.0	19.2	33.0	24.3	900	16.2	34.4	1.3	2.9
M84-540-K-ATEX**	205 147 918 4	0.82	1.1	27.0	20.0	44.0	32.0	55.0	41.0	540	16.2	34.4	1.3	2.9
M84-300-K-ATEX**	205 147 919 4	0.81	1.09	48.0	35.0	77.0	57.0	95.0	70.0	300	16.2	34.4	2.7	6.0
M84-200-K-ATEX**	205 147 920 4	0.81	1.09	75.0	55.0	121.0	89.0	149.0	110.0	200	16.2	34.4	2.7	6.0
M84-115-K-ATEX**	205 147 921 4	0.81	1.09	124.0	91.0	201.0	148.0	248.0	183.0	115	16.2	34.4	2.7	6.0
M84-70-K-ATEX**	205 147 922 4	0.79	1.06	191.0	141.0	309.0	228.0	382.0	282.0	70	16.2	34.4	4.9	10.8
M84-45-K-ATEX**	205 147 923 4	0.79	1.06	299.0	221.0	485.0	358.0	598.0	441.0	45	16.2	34.4	4.9	10.8
Non Reversible - Threaded shaft														
M84-20000-T-ATEX*	205 148 141 4	0.84	1.13	0.74	0.55	1.2	0.89	1.48	1.09	20000	16.2	34.4	1.2	2.65
M84-4000-T-ATEX*	205 148 143 4	0.84	1.13	3.8	2.8	6.1	4.5	7.6	5.6	4000	16.2	34.4	1.2	2.65
M84-2400-T-ATEX*	205 148 144 4	0.84	1.13	6.3	4.6	10.0	7.4	12.6	9.3	2400	16.2	34.4	1.2	2.65
Reversible														
MR84-15800-K-ATEX*	205 147 924 4	0.63	0.84	0.71	0.52	0.96	0.71	1.42	1.0	15800	14	29.7	1.2	2.65
MR84-5000-K-ATEX*	205 147 925 4	0.63	0.84	2.3	1.7	3.1	2.3	4.6	3.4	5000	14	29.7	1.2	2.65
MR84-3200-K-ATEX*	205 147 926 4	0.63	0.84	3.6	2.7	4.9	3.6	7.2	5.3	3200	14	29.7	1.2	2.65
MR84-1900-K-ATEX*	205 147 927 4	0.63	0.84	6.0	4.4	8.1	6.0	12.0	8.9	1900	14	29.7	1.2	2.65
MR84-1100-K-ATEX**	205 147 928 4	0.62	0.83	10.1	7.4	13.5	10.0	20.0	14.9	1100	14	29.7	1.3	2.9
MR84-700-K-ATEX**	205 147 929 4	0.62	0.83	15.8	11.7	21.0	15.5	32.0	23.3	700	14	29.7	1.3	2.9
MR84-420-K-ATEX**	205 147 930 4	0.62	0.83	26.0	19.5	35.0	26.0	53.0	39.0	420	14	29.7	1.3	2.9
MR84-230-K-ATEX**	205 147 931 4	0.60	0.80	46.0	34.0	61.0	45.0	91.0	67.0	230	14	29.7	2.7	6.0
MR84-150-K-ATEX**	205 147 932 4	0.60	0.80	72.0	53.0	96.0	71.0	143.0	105.0	150	14	29.7	2.7	6.0
MR84-90-K-ATEX**	205 147 933 4	0.60	0.80	119.0	88.0	161.0	119.0	238.0	175.0	90	14	29.7	2.7	6.0
MR84-55-K-ATEX**	205 147 934 4	0.59	0.79	183.0	135.0	247.0	182.0	366.0	270.0	55	14	29.7	4.9	10.8
MR84-35-K-ATEX**	205 147 935 4	0.59	0.79	287.0	212.0	388.0	286.0	574.0	423.0	35	14	29.7	4.9	10.8



With Mounting Flange



With Mounting Foot



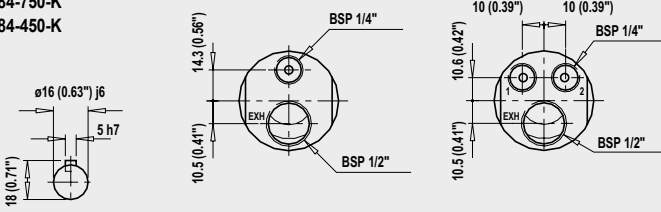
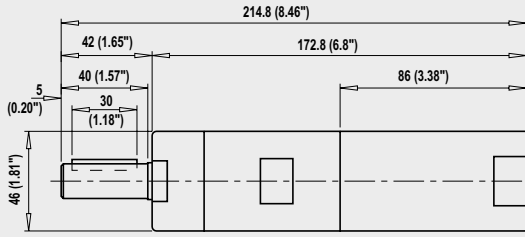
Curves:
see page 24

Non Reversible

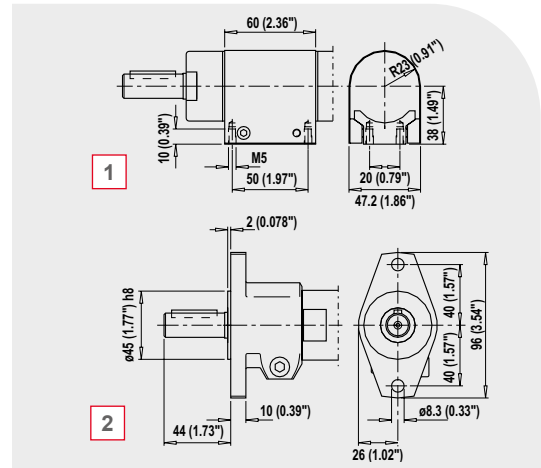
- M84-21000-K
- M84-6700-K
- M84-4200-K
- M84-2550-K
- M84-1500-K
- M84-960-K
- M84-570-K

Reversible

- MR84-17000-K
- MR84-5250-K
- MR84-3350-K
- MR84-2000-K
- MR84-1170-K
- MR84-750-K
- MR84-450-K



Non Reversible Reversible



OPTIONAL ACCESSORIES

ITEM	PART NO.
1 Mounting foot	205 053 650 3
2 Mounting flange	205 053 641 3

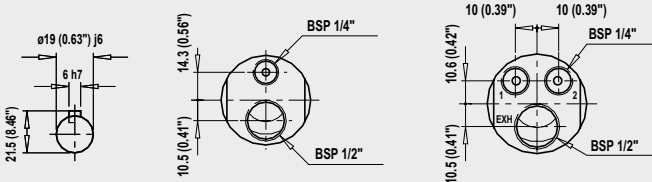
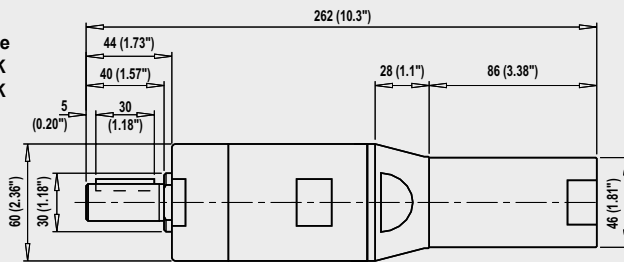
Other optional accessories: see page 28

Non Reversible

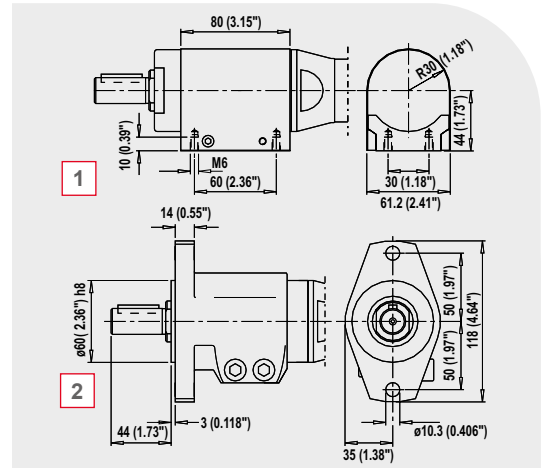
- M84-320-K
- M84-200-K
- M84-125-K

Reversible

- MR84-250-K
- MR84-160-K
- MR84-95-K



Non Reversible Reversible



OPTIONAL ACCESSORIES

ITEM	PART NO.
1 Mounting foot	205 053 648 3
2 Mounting flange	205 053 642 3

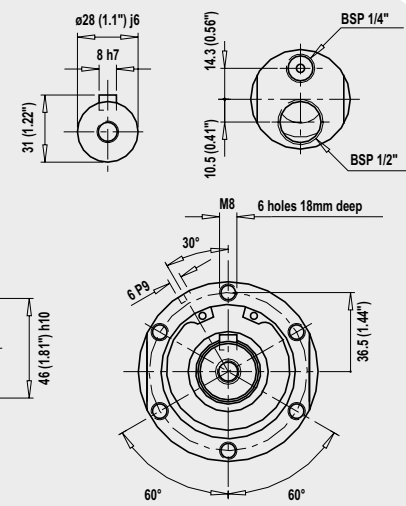
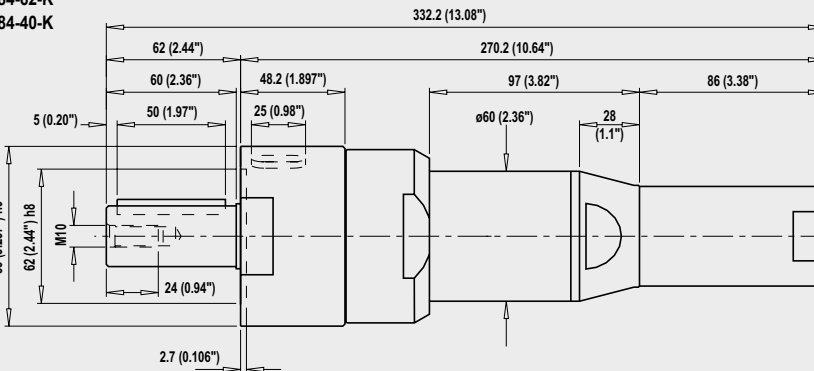
Other optional accessories: see page 28

Non Reversible

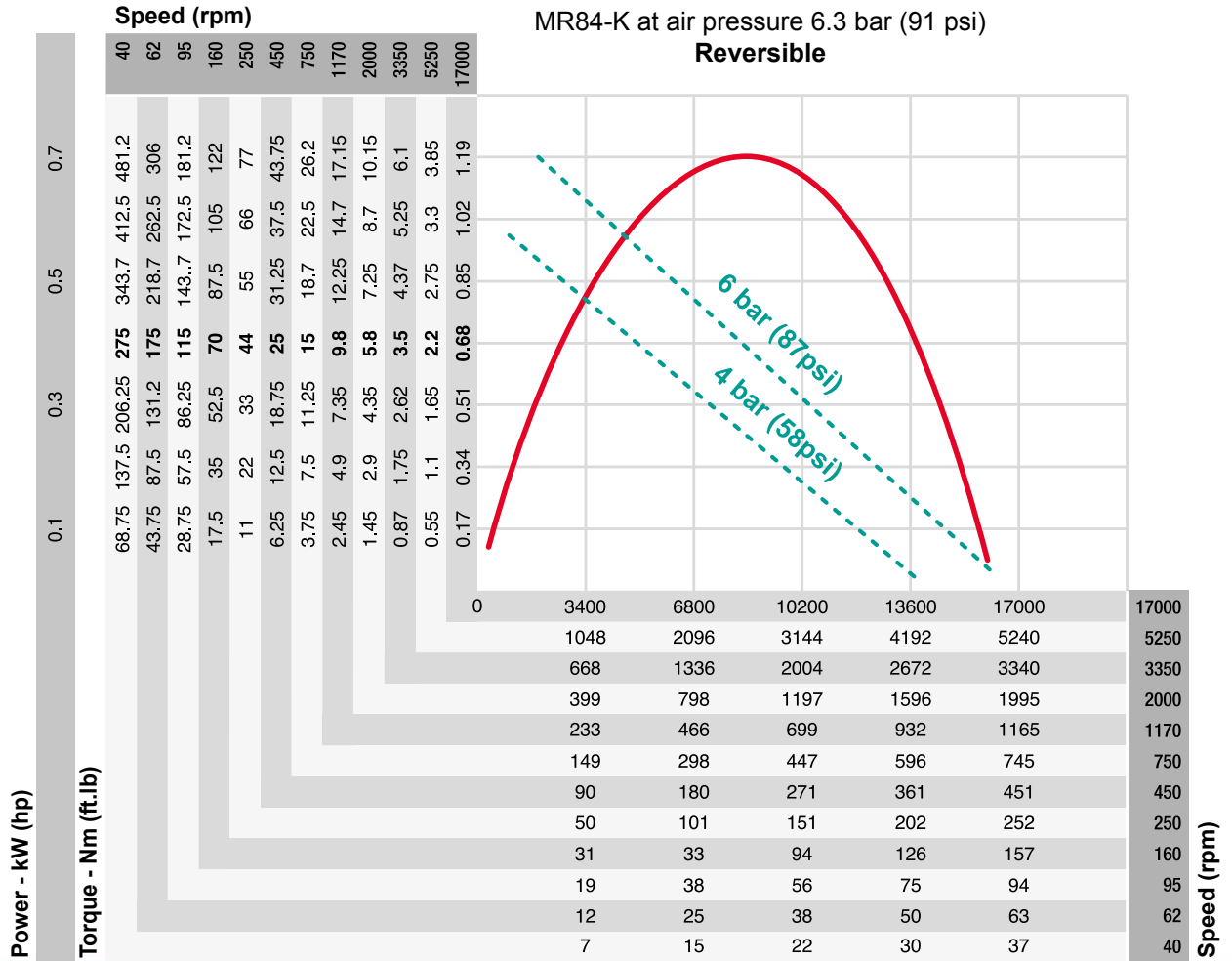
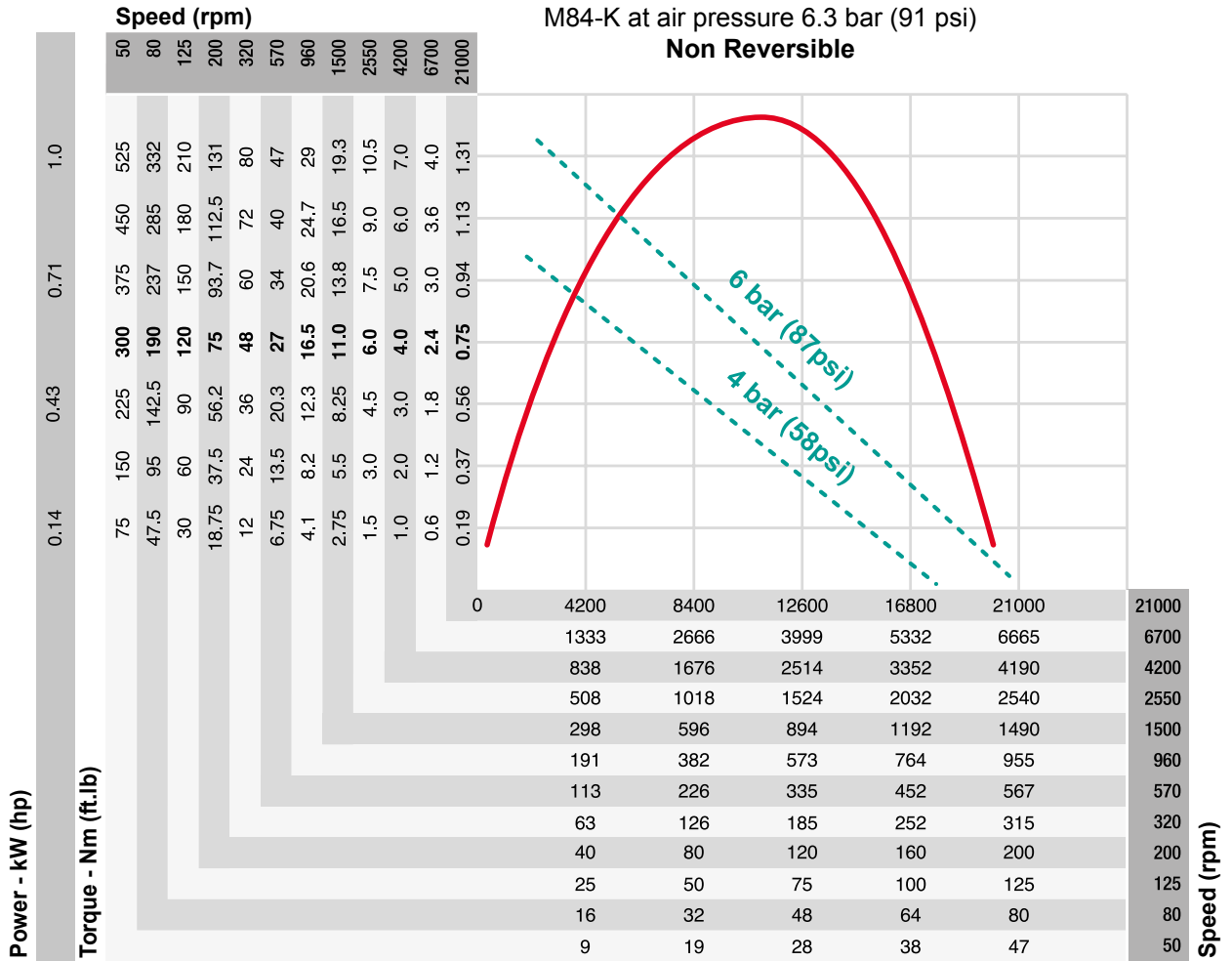
- M84-80-K
- M84-50-K

Reversible

- MR84-62-K
- MR84-40-K



M84-K Series



Serie 2H410

0.66 kw (0.85 ft.lb)

Maximum Torque 102 Nm (78 lbf-ft), Worm Drive Motors



For EX certification according to the ATEX directive (II 2G c IIC T6)

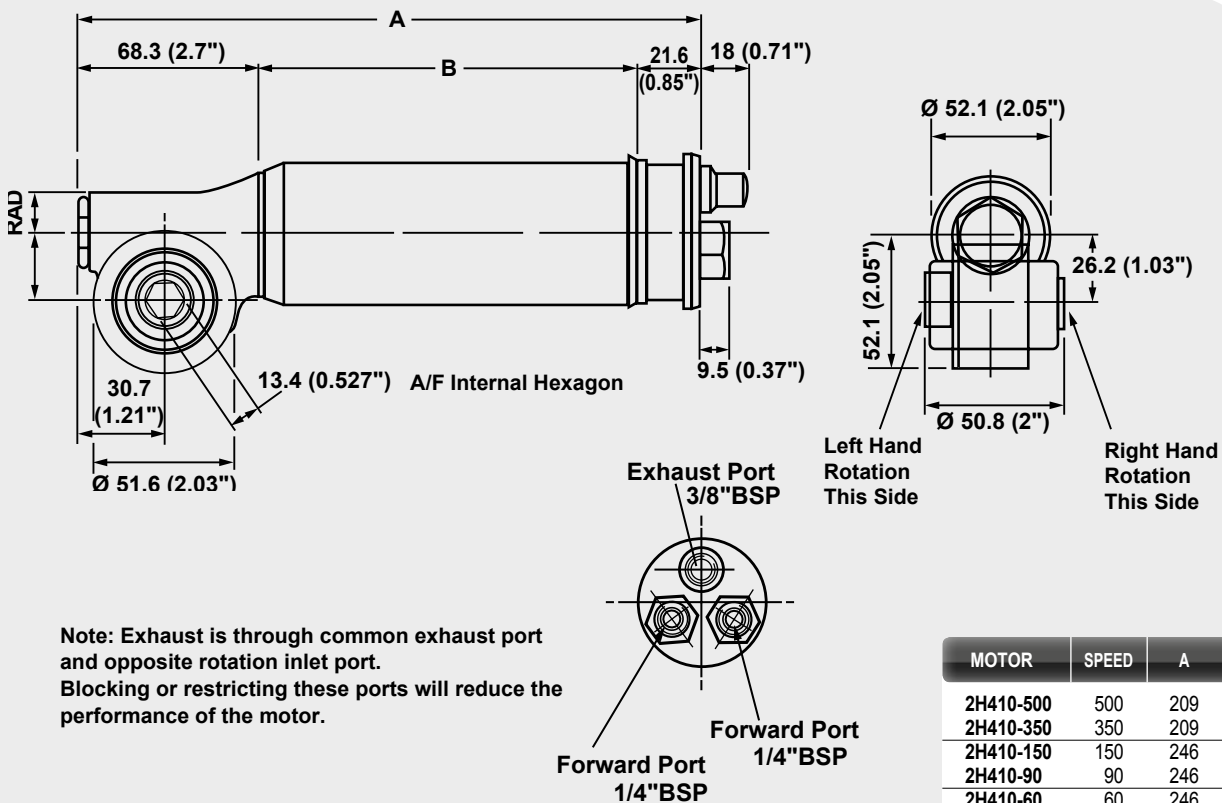
Air pressure 6.3 bar (91 psi)

MODEL	PART NUMBER	MAX OUTPUT		NO LOADE SPEED	TORQUE AT MAX OUTPUT		MIN HOSE BORE PRESSURE		MIN SAFE WORKING	MAX AIR CONSUMPTION		WEIGHT	
		kW	hp		rpm	Nm	ft.lb	mm		in.	bar	l/s	cfm

Reversible

2H410-500	1307664	0.66	0.85	500	39	28.8	12	1/2	6	17	36	1.7	3.7
2H410-350	1307744	0.66	0.85	350	51	37.6	12	1/2	6	17	36	1.7	3.7
2H410-150	1307824	0.66	0.85	150	102	75.2	12	1/2	6	17	36	2.0	4.4
2H410-90	1307904	0.66	0.85	90	102	75.2	10	3/8	4	10	21	2.0	4.4
2H410-60	1308054	0.66	0.85	60	102	75.2	10	3/8	2.8	9	19	2.0	4.4
2H410-500 ATEX	205 147 319 4	0.66	0.85	500	39	28.8	12	1/2	6	17	36	1.7	3.7
2H410-350 ATEX	205 147 320 4	0.66	0.85	350	51	37.6	12	1/2	6	17	36	1.7	3.7
2H410-150 ATEX	205 147 321 4	0.66	0.85	150	102	75.2	12	1/2	6	17	36	2.0	4.4
2H410-90 ATEX	205 147 322 4	0.66	0.85	90	102	75.2	10	3/8	4	10	21	2.0	4.4
2H410-60 ATEX	205 147 323 4	0.66	0.85	60	102	75.2	10	3/8	2.8	9	19	2.0	4.4

The 2H410 motor can also be supplied equipped with a worm drive gearbox, allowing the drive to be taken from each side of the head for either right hand or left hand rotation. The standard output is 13.33mm (0.527") size on flats internal hexagon. 3/8" or 1/2" square adaptors are available as an option.



M180 Series

1.41 to 1.83 kW (1.89 to 2.45 hp)

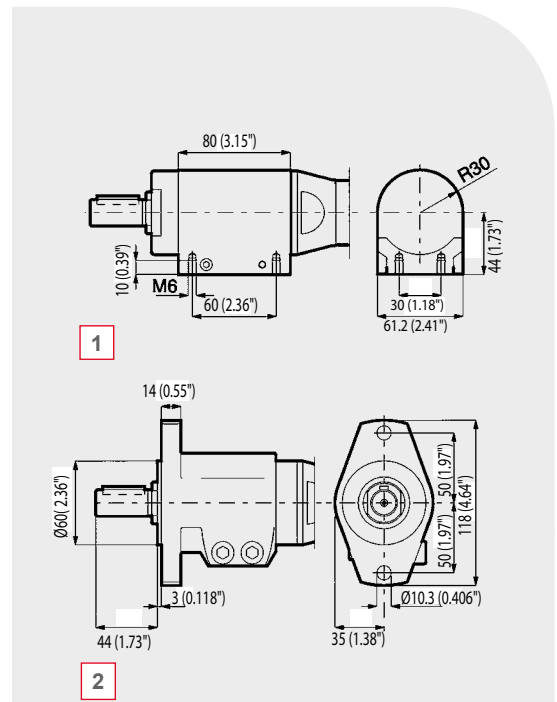
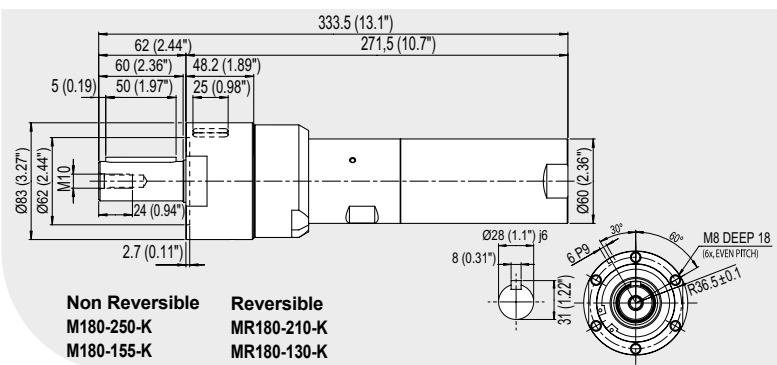
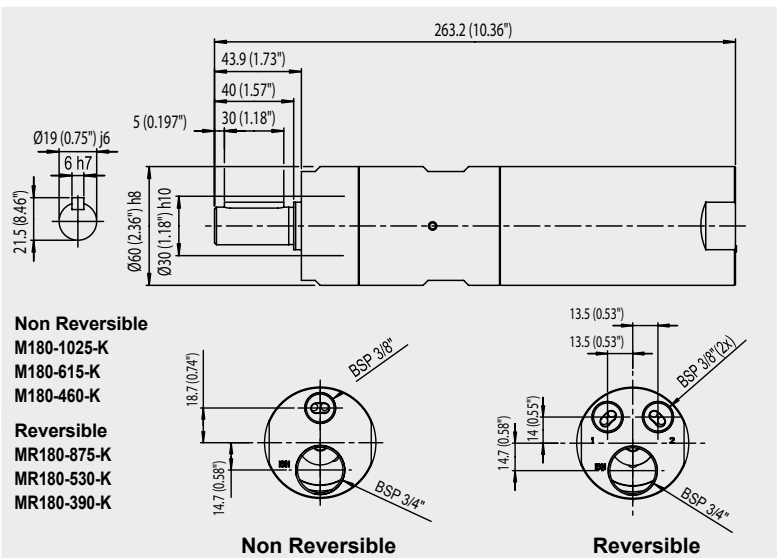


Certified according to directive ATEX II 2G T5 IIC D85°C



Air pressure 6.3 bar (91 psi)

MODEL	PART NUMBER	MAX OUTPUT		TORQUE AT MAX OUTPUT		MINI STARTING TORQUE		STALL TORQUE		FREE SPEED	AIR CONS. AT MAX OUTPUT		WEIGHT	
		Kw	hp	Nm	ft.lb	Nm	ft.lb	Nm	ft.lb	rpm	l/s	cfm	kg	lb
Non Reversible														
M180-950-K-ATEX	205 147 972 4	1.83	2.45	34	25	51	38	68	50	950	34	72	2.9	6.4
M180-600-K-ATEX	205 147 973 4	1.83	2.45	57	42	84	62	114	84	600	34	72	2.9	6.4
M180-440-K-ATEX	205 147 974 4	1.83	2.45	77	57	113	83	154	114	440	34	72	2.9	6.4
M180-230-K-ATEX	205 147 975 4	1.80	2.41	139	103	205	151	278	205	230	34	72	5.1	11.1
M180-145-K-ATEX	205 147 976 4	1.80	2.41	227	167	337	249	454	335	145	34	72	5.1	11.1
M180-230-K-SI-ATEX	205 147 977 4	1.80	2.41	139	103	205	151	278	205	230	34	72	5.3	11.7
M180-145-K-SI-ATEX	205 147 978 4	1.80	2.41	227	167	337	249	454	335	145	34	72	5.3	11.7
Reversible														
MR180-830-K-ATEX	205 147 965 4	1.43	1.92	29	21	37	27	58	43	830	31	66	2.9	6.4
MR180-500-K-ATEX	205 147 966 4	1.43	1.92	48	35	62	46	96	71	500	31	66	2.9	6.4
MR180-370-K-ATEX	205 147 967 4	1.43	1.92	64	47	84	62	128	94	370	31	66	2.9	6.4
MR180-200-K-ATEX	205 147 968 4	1.41	1.89	117	86	151	111	233	172	200	31	66	5.1	11.1
MR180-120-K-ATEX	205 147 969 4	1.41	1.89	191	141	249	184	382	282	120	31	66	5.1	11.1
MR180-200-K-SI-ATEX	205 147 970 4	1.41	1.89	117	86	151	111	233	172	200	31	66	5.3	11.7
MR180-120-K-SI-ATEX	205 147 971 4	1.41	1.89	191	141	249	184	382	282	120	31	66	5.3	11.7

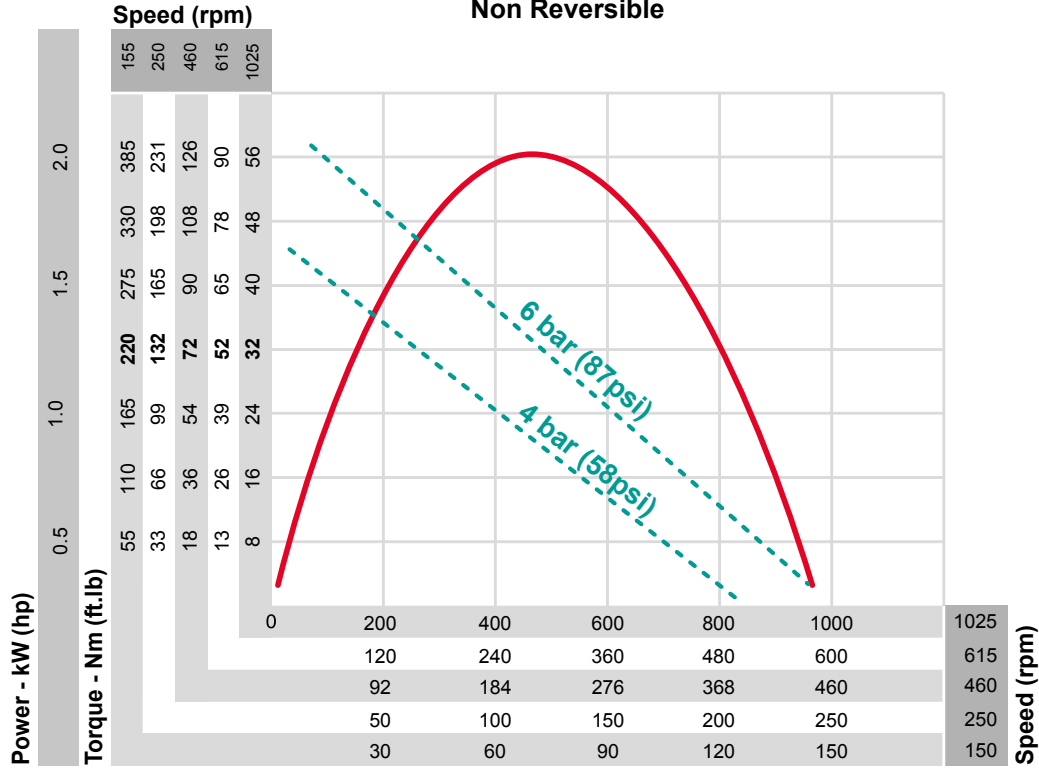


OPTIONAL ACCESSORIES

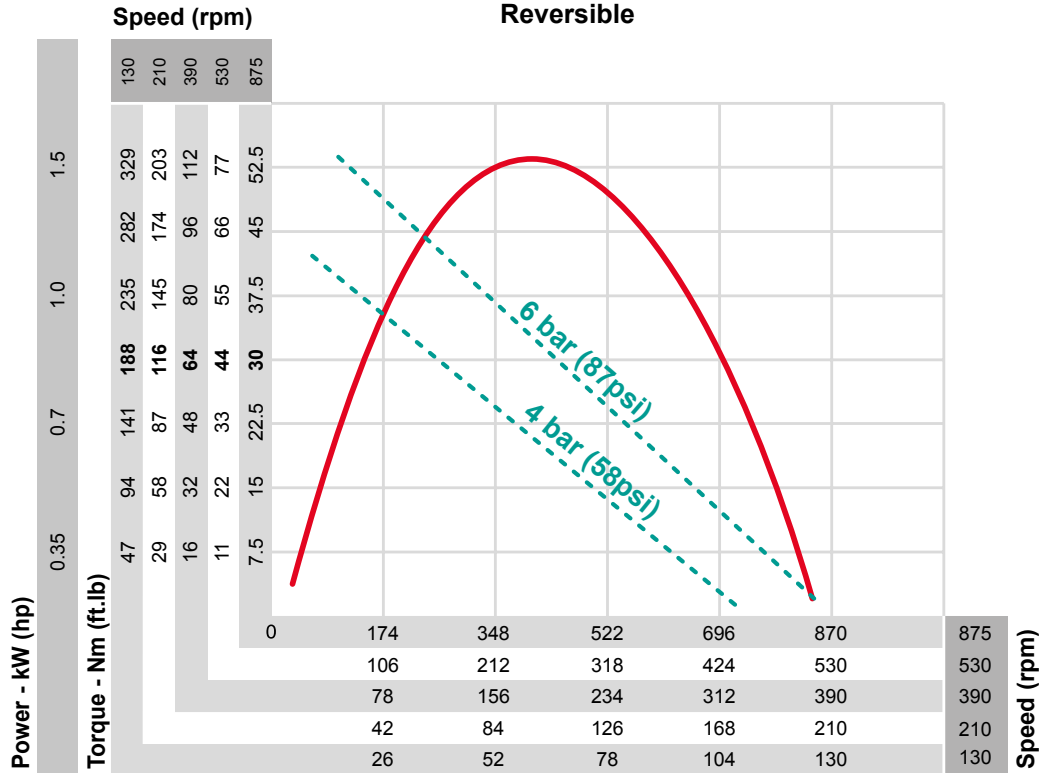
ITEM	PART NO.
1 Mounting foot	205 053 648 3
2 Mounting flange	205 053 642 3

Other optional accessories: see page 28

M180 at air pressure 6.3 bar (91 psi)
Non Reversible



MR180 at air pressure 6.3 bar (91 psi)
Reversible



M290 Series

2.35 to 2.8 kW (3.18 to 3.75 hp)

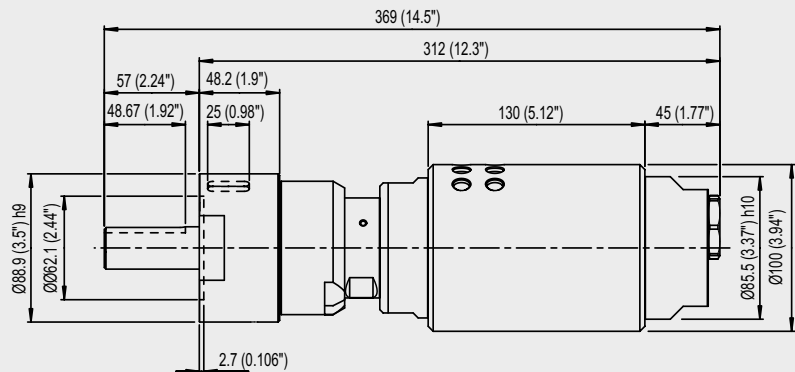


Certified according to directive ATEX
(II 2G T4 IIC D110°C* or II 2G T5 IIC D85°C**)

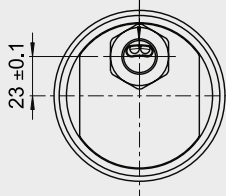


Air pressure 6.3 bar (91 psi)

MODEL	PART NUMBER	MAX OUTPUT		TORQUE AT MAX OUTPUT		MINI STARTING TORQUE		STALL TORQUE		FREE SPEED	AIR CONS. AT MAX OUTPUT		WEIGHT	
		Kw	hp	Nm	ft.lb	Nm	ft.lb	Nm	ft.lb	rpm	l/s	cfm	kg	lb
Non Reversible														
M290-2500-K-SI-ATEX*	205 147 962 4	2.8	3.75	22	16	35	26	44	32	2500	52	110	8.4	18.5
M290-620-K-SI-ATEX**	205 147 963 4	2.77	3.71	85	63	137	101	170	125	620	52	110	8.4	18.5
M290-160-K-SI-ATEX**	205 147 964 4	2.74	3.67	332	245	536	395	664	490	160	52	110	8.7	19.1
Reversible														
MR290-2300-K-SI-ATEX*	205 147 959 4	2.4	3.22	18	13.3	24	18	36	27	2300	52	110	8.4	18.5
MR290-600-K-SI-ATEX**	205 147 960 4	2.38	3.19	70	52.0	96	71	140	103	600	52	110	8.4	18.5
MR290-155-K-SI-ATEX**	205 147 961 4	2.35	3.18	274	202.0	374	276	548	404	155	52	110	8.7	19.1

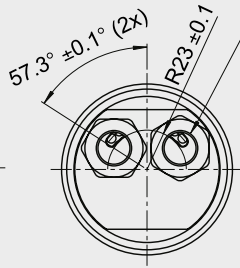


BSP 1/2" OR NPTF 1/2"-14



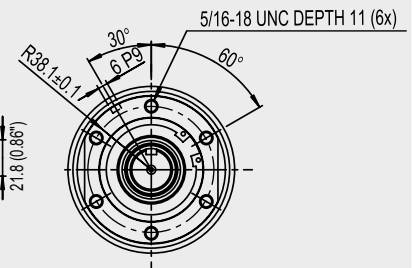
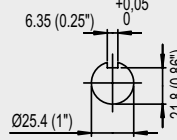
Non Reversible

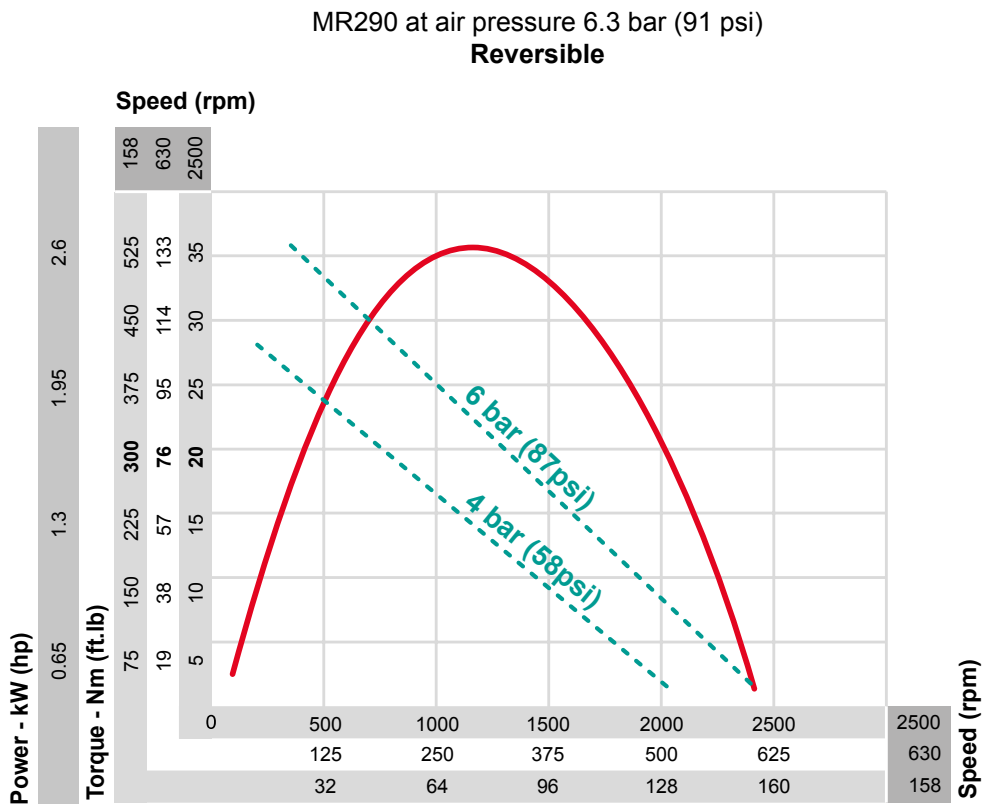
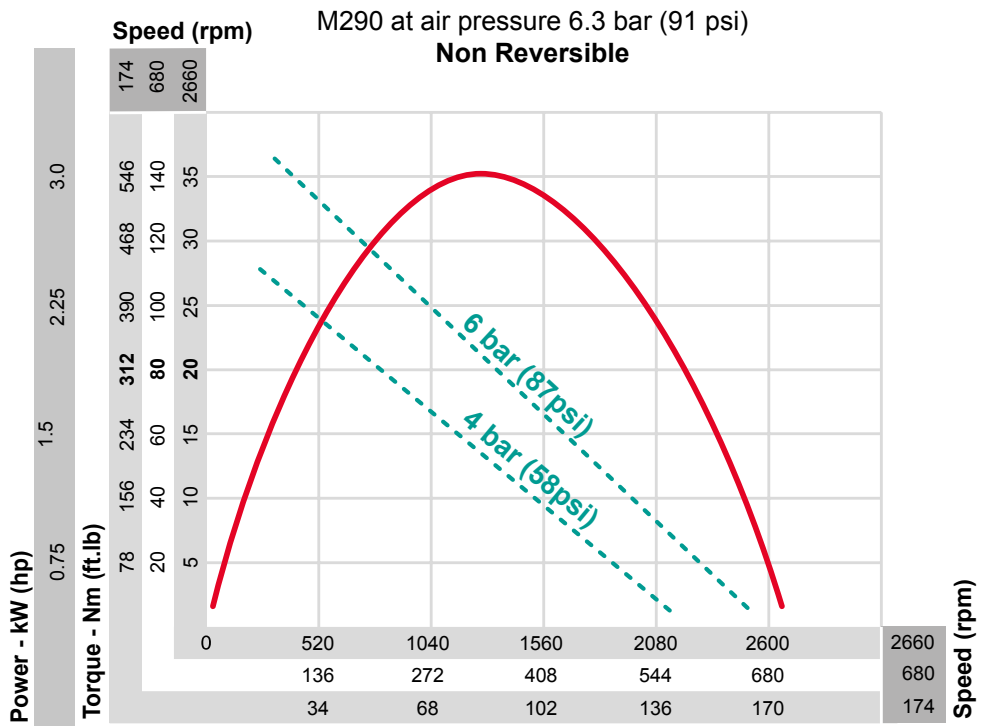
57.3° ±0.1° (2x)
R23 ±0.1



Reversible

BSP 1/2" OR NPTF 1/2"-14





Accessories

Good air quality is the key to getting the best of your air motor. It is therefore recommended that a regulator filter and lubricator is fitted to the air supply and that the air flow is suitably regulated.



M16-..../ M25-..../M39-..../ M84

OPTIONAL ACCESSORIES

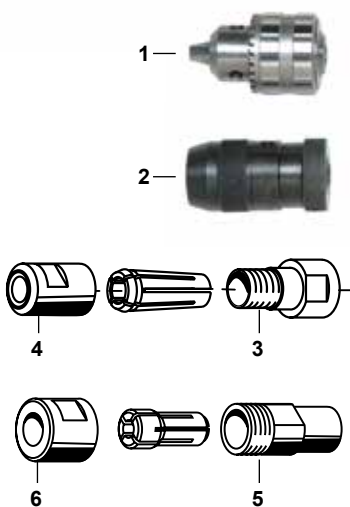
ITEM	M16	M25	M39	M84/M180
1 Silencer - sinter bronze (Noise clamp 15 dB(A) - Power loss 10)	205 054 1743	205 054 1753	205 054 1753	205 054 1763
2 Silencer (Noise clamp 20 dB(A) - Power loss 10)	205 054 1773	205 054 1773	205 054 1773	205 054 1773
3 Silencer (Noise clamp 25 dB(A) - Power loss 7)	205 054 1783	205 054 1783	205 054 1783	205 054 1783

The silencer 3 has a 1/2" threaded. They need to be connected to the motor via a tube or hose with suitable connections.

The silencer 2 has a 3/8" threaded port. M16, M25 and M39 need to be connected to the motor via a tube or hose with suitable connections.

M25-....TL / M39-....TL

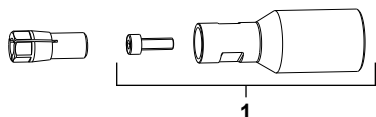
OPTIONAL ACCESSORIES



ITEM	PART NO.
1 Chuck threaded 3/8-24 UNF - cap. 5/16" (8mm) with key	205 053 013 3
1 Chuck threaded 3/8-24 UNF - cap. 3/8" (10mm) with key	205 052 954 3
1 Chuck threaded 3/8-24 UNF - cap. 1/2" (13mm) with key	473113
2 Keyless chuck threaded 3/8" UNF - cap 5/16" (8mm)	473433
2 Keyless chuck threaded 3/8" UNF - cap 3/8" (10mm)	473423
2 Keyless chuck threaded 3/8" UNF - cap 1/2" (13mm)	205 047 819 3
3 CNOMO collet-holder	615 523 018 0
4 CNOMO collet-nut	615 607 136 0
• CNOMO collet Ø 3mm	615 526 048 0
• CNOMO collet Ø 6mm	615 526 049 0
• CNOMO collet Ø 1/4" (6.35mm)	615 526 050 0
• CNOMO collet Ø 8mm	615 526 051 0
5 Serie 200 collet-holder	615 523 023 0
6 Serie 200 collet-nut	615 607 144 0
• Serie 200 resilient collet, collet Ø 1/8" (2.4 to 3.2mm)	615 526 061 0
• Serie 200 resilient collet, collet Ø 3.2 to 4mm	615 526 151 0
• Serie 200 resilient collet, collet Ø 3.7 to 4.5mm	615 526 152 0
• Serie 200 resilient collet, collet Ø 4.2 to 5mm	615 526 153 0
• Serie 200 resilient collet, collet Ø 4.7 to 5.5mm	615 526 154 0
• Serie 200 resilient collet, collet Ø 5.2 to 6mm	615 526 062 0
• Serie 200 resilient collet, collet Ø 1/4" (5.55 to 6.35mm)	615 526 063 0
• Serie 200 resilient collet, collet Ø 6.2 to 7mm	615 526 155 0
• Serie 200 resilient collet, collet Ø 6.7 to 7.5mm	615 526 156 0
• Serie 200 resilient collet, collet Ø 7.2 to 8mm	615 526 064 0
• Serie 200 resilient collet, collet Ø 7.7 to 8.5mm	615 526 157 0
• Serie 200 resilient collet, collet Ø 8.2 to 9mm	615 526 158 0
• Serie 200 resilient collet, collet Ø 3/8" (8.7 to 9.5mm)	615 526 065 0

MR39-....KL

OPTIONAL ACCESSORIES

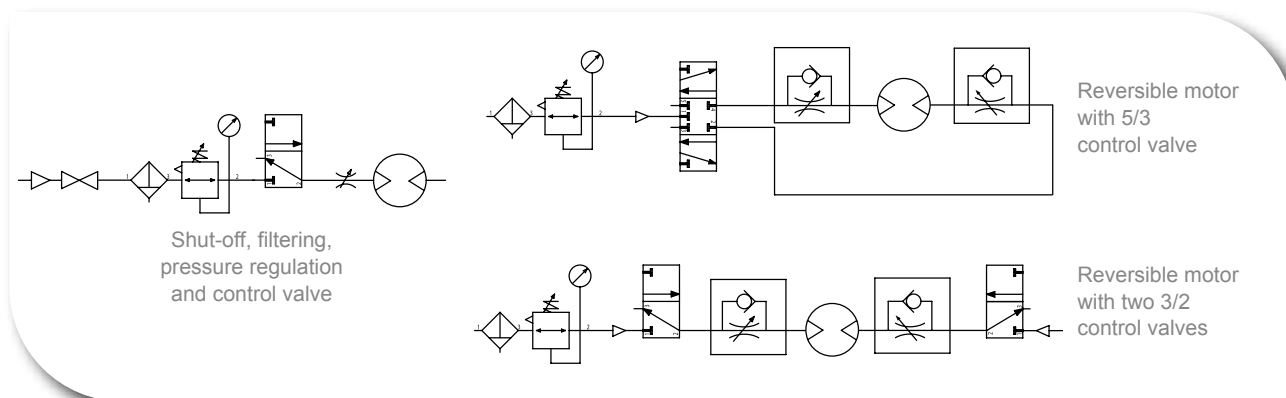


ITEM	PART NO.
1 Kit collar holder CNOMO	615 526 150 0
• CNOMO collet Ø 2,5 mm	615 526 089 0
• CNOMO collet Ø 3 mm	615 526 044 0
• CNOMO collet Ø 3,2 mm (1/8")	615 526 045 0
• CNOMO collet Ø 4 mm (5/32")	615 526 090 0
• CNOMO collet Ø 5 mm	615 526 092 0
• CNOMO collet Ø 6 mm	615 526 046 0
• CNOMO collet Ø 6,4 mm (1/4")	615 526 047 0

Installation and incorporation

- **Good air quality is the key to achieving the best Air Motor efficiency**, in terms of Power, Torque, Speed and life time performance, it is recommended to have air with which is supplied **must be filtered and regulated, and advisable to use Filter, Regulator, Lubricator, air flow regulator.**
- **Always use the recommended air hose bore for air feed and exhaust hoses**
- It is advisable that the **diameter of the exhaust hose is greater than the air supply hose.**
- **Check that the couplings don't reduce the air flow.**
- Minimum air network pressure: **7 bar (101 psi)** and regulator pressure setting: **6.3 bar (91.4 psi)**
- Pipe length between air treatment unit and valve: **max. 1.5m (4.9 ft)**
- Pipe length between valve and air motor: **max. 3m (9.8 ft)**

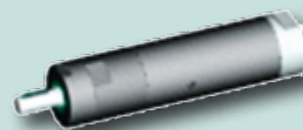
MOTOR TYPE	INLET CONNECTION THREAD	EXHAUST CONNECTION THREAD	INLET HOSE DIAMETER		EXHAUST HOSE DIAMETER (Non reversible)		EXHAUST HOSE DIAMETER (Reversible)	
			mm	in.	mm	in.	mm	in.
	BSP	in.						
M16	1/8	1/8	5.0	3/16	8.0	5/16	6.3	1/4
M25	1/8	1/4	6.3	1/4	10.0	3/8	8.0	5/16
M39	1/4	1/4	8.0	5/16	10.0	3/8	8.0	5/16
M84	1/4	1/2	10.0	3/8	16.0	5/8	13.0	1/2
M180	3/8	3/4	13.0	1/2	20.0	13/18	13.0	1/2
M290	1/2	-	16.0	5/8	-	-	16.0	5/8



For more information about **Air Line Accessories and Stands** please ask for the Desoutter Industrial Tools catalogue (Part No. 2050484013) or visit www.desouttertools.com



3D available on website



Log on to www.desouttertools.com and go to dedicated air motor website...

More Than Productivity



www.desouttertools.com

English
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January 2015 - Issue 5