

High-performance energy wonder

PTM compressed air motors are well known for their high-performance but still extremely efficient drive. In times of the energy revolution and sustainability, we have to economise on energy in general, also on compressed air.

The radial piston principle, that builds the basis of our motors, needs a minimum of compressed air to extract a maximum of power with an extremely high torque. Compared to other drive technologies our motors save up to 90% of compressed air and thus energy costs, making it the pioneering technology for the future.

The construction of our motors is purely mechanical, no electrics, no sensors. Their operation is thus extremely safe with regard to the application environment on the one hand. On the other hand, the motors are installed within a few minutes and immediately operable. You do not need any additional devices or a specialist such as an electronics technician.

Despite their high torque, PTM compressed air motors are small and compact. They are operable in clockwise as well as anti-clockwise rotation, resilient to standstill and waterproof according to protection class IP67. This means they are safely applicable in wet or dusty environments.

Each type of our motor has different characteristics. Their application spectrum ranges from the operation in medical technology devices and the control of waterpipes to the drive of production machines of dynamite ignitors in explosive atmospheres and the operation of conveyor belts in the food industry.

In all these projects, and many more, our engineers have developed completely new machines and systems in close cooperation with our customers. Please convince yourself of the versatility of our motors and the know-how of our engineers. We are curious about what we can do for you...

DRIVE TECHNOLOGY

BASIC Motor

FOR UNCOMPLICATED APPLICATIONS

EXEMPLARY APPLICATIONS

- Drive of friction wheels
- Drive of balance systems
- Drive of mining and construction machinery; processing of lime, gypsum, concrete, cement
- Drive of conveyor belts
- Sealing of screw caps
- Tension in paper, waving and winding machines



ACCESSORIES >> see pages 52 / 53

DATA	Torque	Air consumption at 100 rpm and average power	Diameter	Height
Motor 450	4 Nm	25 l/min	99 mm	50.5 mm
Motor 900	8 Nm	50 l/min	99 mm	65 mm
Motor 1800	16 Nm	100 l/min	159 mm	67.5 mm
Motor 3600	32 Nm	200 l/min	159 mm	89.5 mm

The data indicated above applies to **all** motor types.

The BASIC motor is suitable for simple applications without any special requirements. It is available optionally with three different sealing concepts:

- Viton gasket for high temperature and chemical resistance
- Acetone-resistant, solvent-resistant gasket
- Silicone-free gasket - for an oil-free application without releases

EFFICIENT



ROBUST



HIGH-PERFORMANCE



SILENT



ATEX motor

Certified by TÜV Süd with ATEX certificate II 2 G Ex h IIC T5 Gb X, II 2 D Ex h IIIC T100°C Db X, our ATEX motors are applicable in all explosive areas of ATEX zone 1. The purely mechanical construction avoids the development of heat or sparks during operation, which could inflame flammable substances such as alcohol, solvents or dusty or dust-producing substances. Furthermore, the motor does not need an additional electricity supply. (Technical data page 46)



-  ATEX-CERTIFIED
-  SILENT
-  HIGH-PERFORMANCE
-  EFFICIENT





EXEMPLARY APPLICATIONS

- Drive of conveyor belts
- Drive of machines in chemical plants
- Drive of mills and milling plants
- Drive of bulk material transport systems
- Drive of machines in explosive areas
- Drive of machines for the handling of explosive substances/components

IP68 waterproof motor

This motor is waterproof according to protection class IP68 even under extreme conditions. It can be operated permanently underwater and applied in dusty environments. This makes its cleaning very easy. It is seawater-resistant and withstands a water depth of up to 40 metres. (Technical data page 46)



- IP68 WATERPROOF 
- ROBUST 
- EFFICIENT 
- HIGH-PERFORMANCE 

EXEMPLARY APPLICATIONS

- Drive of machines in humid or wet environments
- Drive of brushes and belts in washing facilities
- Drive of rotary axes and brushes in cleaning systems
- Drive of submersibles
- Automatic closing mechanism in pipe systems
- Drive in humidification systems
- Drive in filling plants and lines

Stainless-steel motor

The stainless-steel motor is the all-rounder of our motor product portfolio. Its high resistance against acids and chemicals makes it extremely robust even when used with aggressive substances, for example for cleaning or for sterilisation with hydrogen peroxide for hygienic applications. As it is waterproof according to protection class IP68, it can be operated underwater or in wet or dusty environments. It is classified with clean room class ISO 1 according to DIN 14644 and thus is applicable in all clean rooms. ATEX-certified by TÜV Süd with certificate II 2 G Ex h IIC T5 Gb X / II 2 D Ex h IIIC T100°C Db X, it is operable safely in all explosive areas of ATEX zone 1. (Technical data page 46)



ATEX-CERTIFIED



HYGIENIC



IP68 WATERPROOF



CLEAN ROOM CLASSIFIED

EXEMPLARY APPLICATIONS

- Drive in clean rooms
- Drive of conveyor belts
- Drive of packaging machines
- Drive of brushes and belts in washing facilities
- Drive of rotary axes and brushes in cleaning systems
- Drive of submersibles
- Automatic closure mechanism in pipe systems
- Drive in humidification systems
- Drive in filling plants and lines, breweries
- Drive in the milk collection technology
- Drive of bakery and pastry machines
- Drive of machines in chemical plants
- Drive of mills and milling plants



Ferrite-free motor

Ferrite is a mixed crystal of ferric and a small proportion of carbon. It becomes magnetic under the influence of magnetic fields. That is why it is not suitable for applications which produce magnetic fields and, additionally, are influenced negatively by other magnetic fields. We therefore exclusively use non-magnetic materials such as ceramics. Additionally, the mechanical construction of our motors avoids potential interferences that may be caused by electronics or sensors. The ferrite-free drive is applicable in sensitive applications with magnetic fields such as MRI devices. (Technical data page 46)

WITHOUT MAGNETIC FIELDS



HIGH ELECTROMAGNETIC COMPATIBILITY



NO INTERFERENCE POTENTIALITY

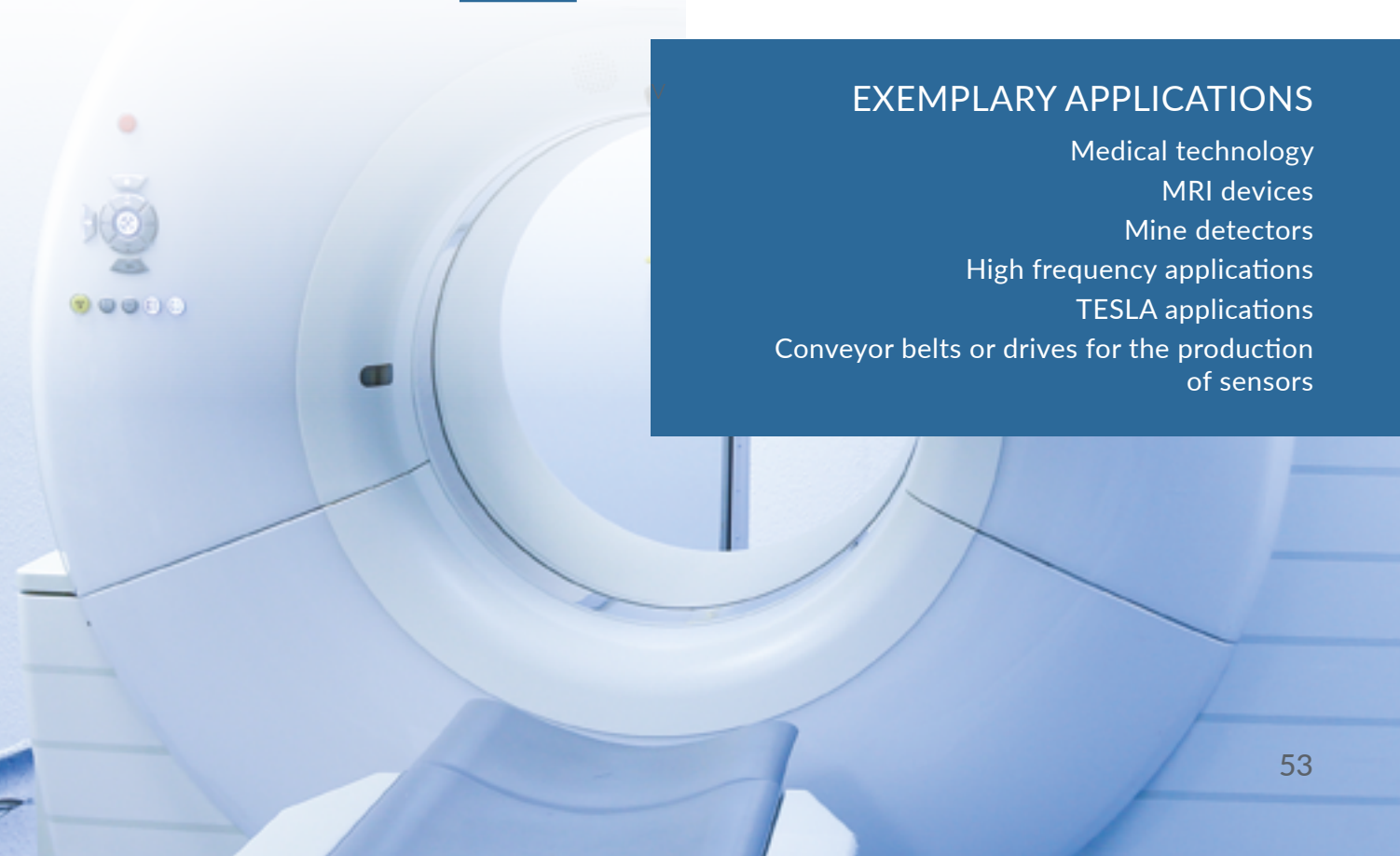


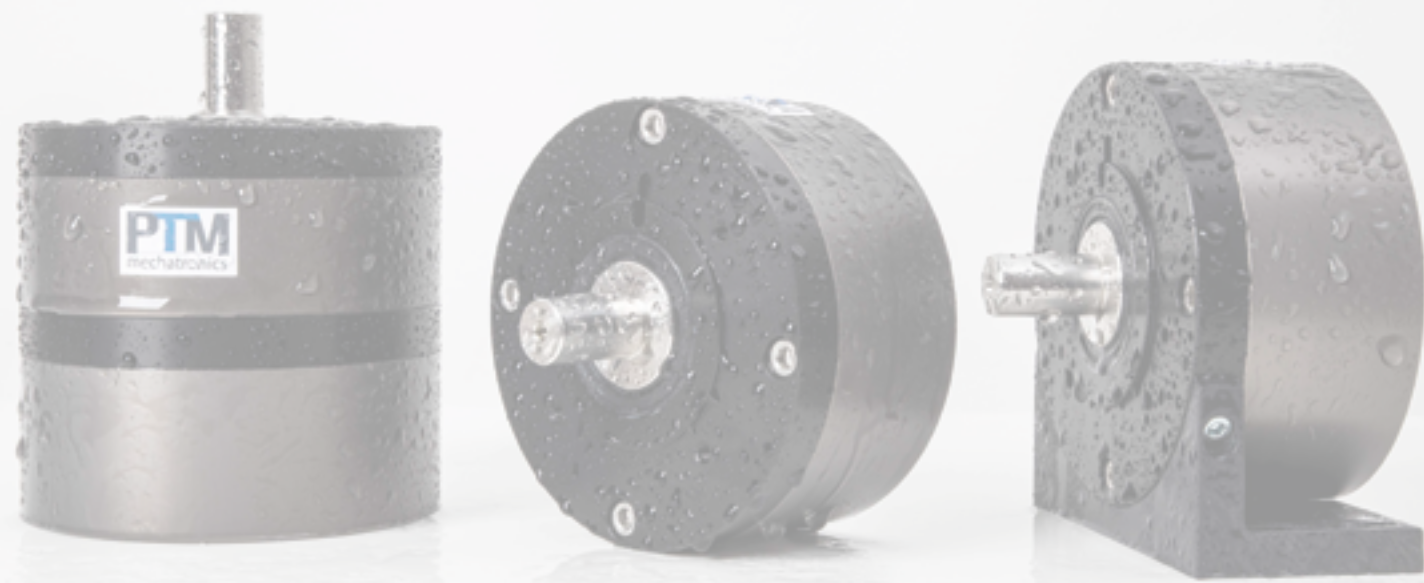
LONG-TERM EXPERTISE



EXEMPLARY APPLICATIONS

- Medical technology
- MRI devices
- Mine detectors
- High frequency applications
- TESLA applications
- Conveyor belts or drives for the production of sensors





Accessory motors

AIR CONNECTION WITH 90° ANGLE



TRANSMISSION



VARIOUS SHAFT SEALS:

- **Viton** – for high temperature and chemical resistance
- **Acetone-resistant** – made of solvent-resistant EPDM for a long product durability
- **Silicone-free** – oil-free application without releases
- **FDA-conform** – made of EPDM with FDA approval for a hygienic application in food & pharma



BEARING FLANGE



MOUNTING FLANGE



MOUNTING ANGLE

SHAFT WITH FEATHER KEY IN VARIOUS DIAMETERS



SHAFT SMOOTH IN VARIOUS DIAMETERS

REV COUNTER



MAINTENANCE UNIT FOR SUPPLY AIR TREATMENT



SUSTAINABILITY & ENVIRONMENT

EDUCATION

We care for the education of the next generation by yearly training places.



ENERGY BALANCE

According to energy audit EN16247-1 our company's energy values are significantly lower than the average of our industry.



EFFICIENCY

Our compressed air motors consume little energy while providing the maximum power.



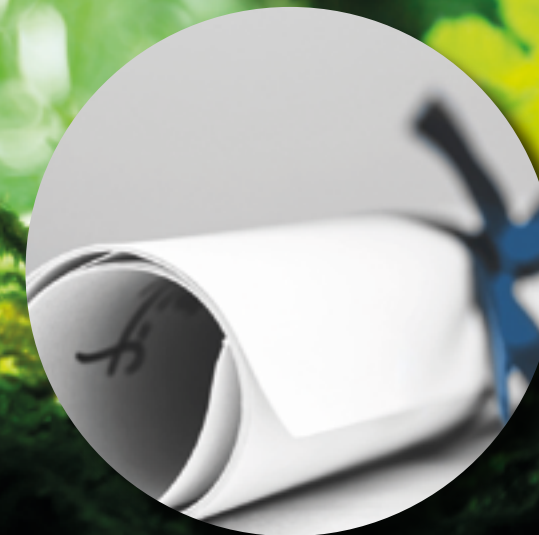
EMPLOYEES

Together we create a positive work environment with respect and equality.



SAFETY

We secure our future by regular certification audits and sound planning.



Drive and stirring technology for

PHARMA | FOOD | COSMETICS | CHEMICALS | AUTOMATION



Bearing flange



Drive type	0450 / 0900	1800 / 3600
Art. no.	1803	1806

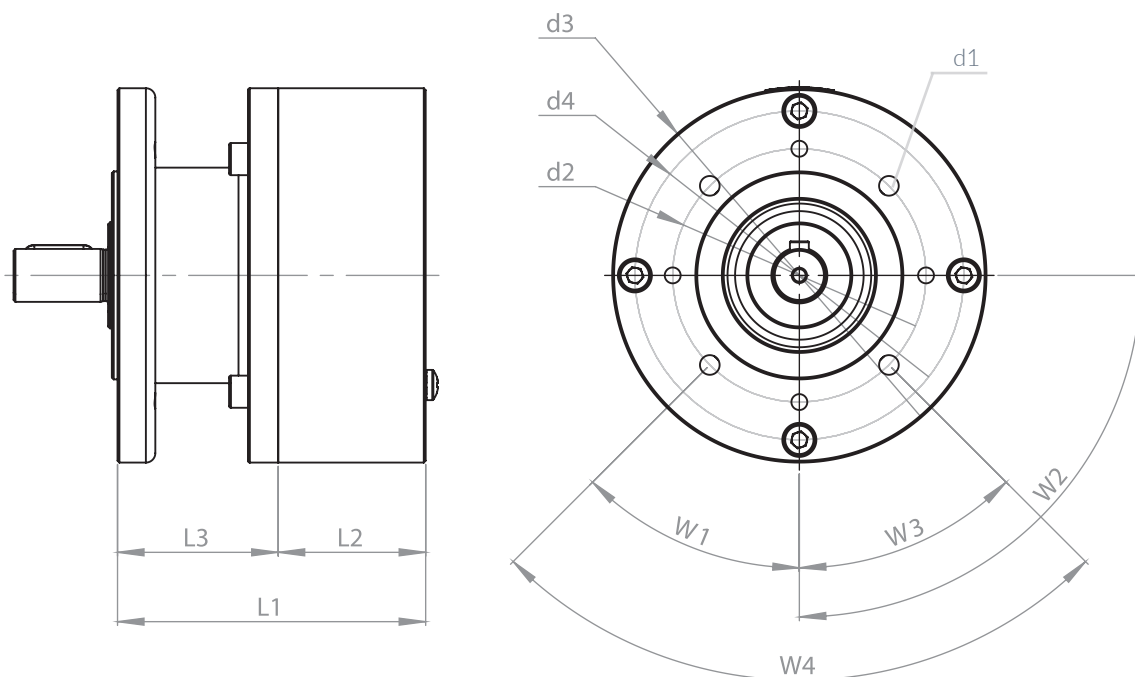
Drive type	0450 / 0900	1800 / 3600
Art. no.	1811	1814



WE GENERATE MOVEMENT IN SPECIAL ENVIRONMENTS.

DIMENSIONS

All dimensions in mm.



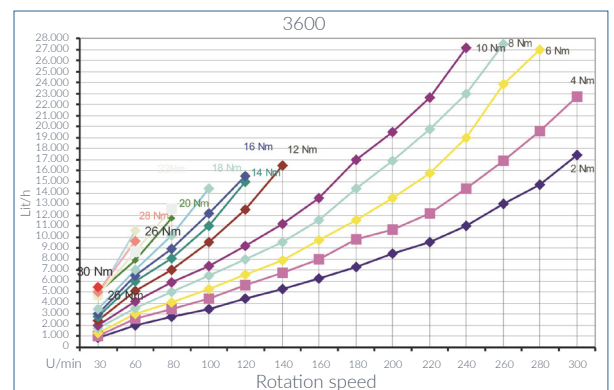
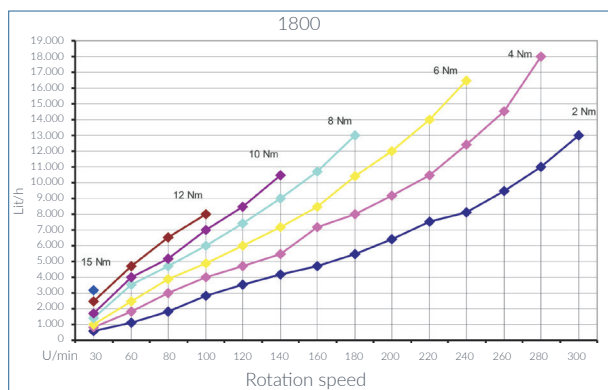
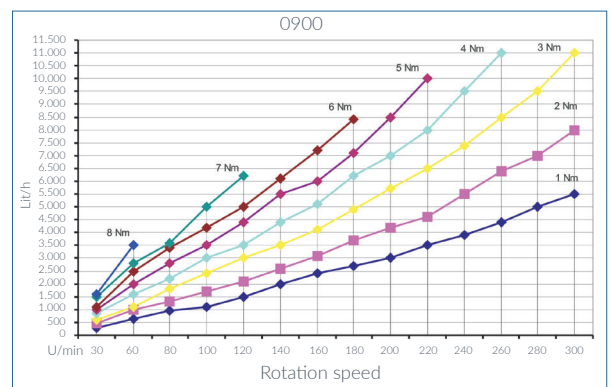
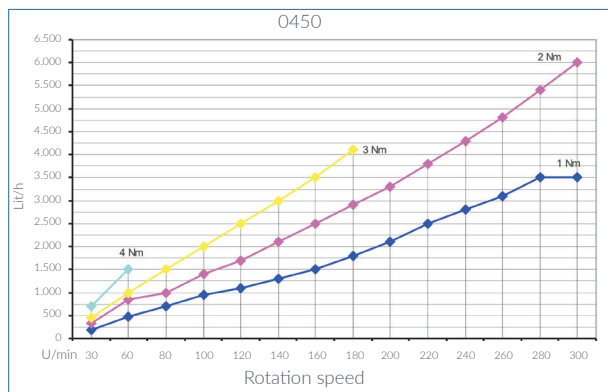
Drive type	0450	0900	1800	3600
L1	81.5	96	105.5	127.5
L2	39	53.5	55	77
L3	42.5	42.5	50.5	50.5
d1 ø	5.2	5.2	8.5	8.5
d2 ø	67	67	115	115
d3 ø	99	99	159	159
d4 ø	87	87	140	140
W1	45	45	45	45
W2	90	90	90	90
W3	45	45	20	20
W4	90	90	90	90
Starting torque	4 Nm	8 Nm	16 Nm	32 Nm
Max. axial load	625 N	625 N	1250 N	1250 N
Radial dyn. C	2100 N	2100 N	3500 N	3500 N
Radial stat. Co	1250 N	1250 N	2500 N	2500 N
Max. permissible axial tilting moment	5 Nm	5 Nm	10 Nm	10 Nm
Weight aluminium [kg / lbs]	1.3 / 2.87	1.5 / 3.31	3.8 / 8.38	4.4 / 9.70

WE GENERATE MOVEMENT IN SPECIAL ENVIRONMENTS.

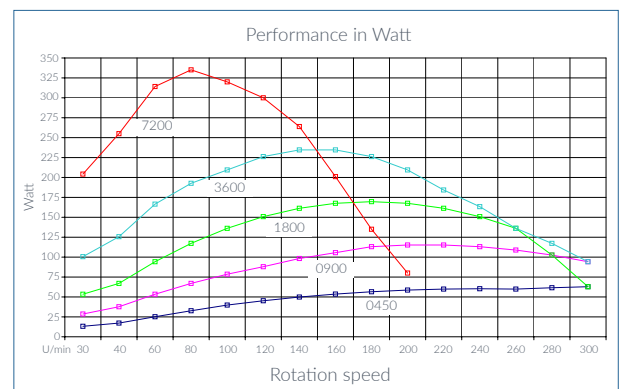
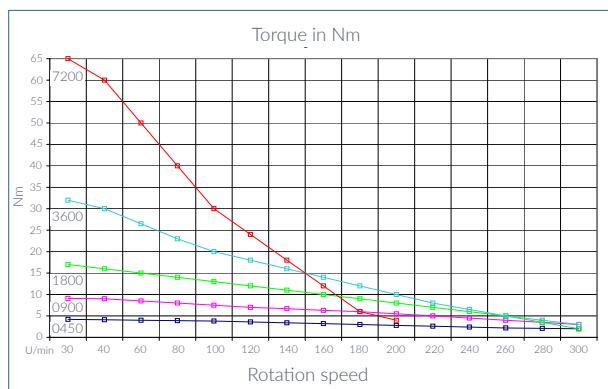
Performance data & transmissions

PERFORMANCE DATA

ROTATION SPEED – PERFORMANCE - AIR CONSUMPTION



TORQUE - PERFORMANCE



WE GENERATE MOVEMENT IN SPECIAL ENVIRONMENTS.

TRANSMISSIONS

(For motor data please refer to the data sheet of the respective motor)



Motor	0450			0900			1800			3600		
Art. No.	5039	5040	5041	5039	5040	5041	5042	5043	5044	5042	5043	5044
Transmission	3:1	9:1	1:2	3:1	9:1	1:2	3:1	9:1	1:2	3:1	9:1	1:2
L1 [mm]	120	146	120	134.5	160.5	134.5	161	192.5	161	183	214.5	183
L2 [mm]	94	120	94	108.5	134.5	108.5	120	151.5	120	142	173.5	142
L3 [mm]	92.5	118.5	92.5	107	133	107	117.5	149	117.5	139.5	171	139.5
Max. rotation speed [1/min]	100	33	600	100	33	600	100	33	600	100	33	600
Starting torque [Nm]	12	36	2	24	72	4	48	144	8	96	288	16
Weight kg (motor with transmission)	2	2.8	2.1	2.1	3	2.3	5.7	7.9	5.9	7.5	8.5	6.5

TRANSMISSION STAINLESS STEEL MOTOR

Motor	0450 INOX			0900 INOX			1800 INOX			3600 INOX		
Art. No.	5045	5046	5047	5045	5046	5047	5048	5049	5050	5048	5049	5050
Transmission	3:1	9:1	1:2	3:1	9:1	1:2	3:1	9:1	1:2	3:1	9:1	1:2

WE GENERATE MOVEMENT IN SPECIAL ENVIRONMENTS.