

**Safety**



**Economy**

**Diversity**

**Environment**

**Horizontal Magnetic Drive Centrifugal Pumps**



## ***Introduction***

Lutz magnetically driven centrifugal pumps are the ideal complement to our range of existing products. The pumps are designed and constructed to address the needs and concerns we have today with respect to safety, cost, diversity and our environment.

From the smallest TMB series to the G3 series, we have taken the same care to provide you with reliable and quality products.

A choice of engineered plastics and differentiated bearing materials allows great flexibility in the handling of highly aggressive chemicals. The use of Neodymium magnets in the TMR series permits high temperature liquids to be pumped and gives a longer service life under harsh conditions.

The sealless design means greater environmental safety and no system downtimes common to pumps fitted with mechanical seals.

Additionally, the G2 and G3 TMR series have the patented self-aligning mechanism to prevent damage caused by dry-running or incipient cavitation.

The Lutz range of magnetically driven centrifugal pumps are used in many industrial sectors, from flow rates as low as 20 lpm to 800 lpm. We look forward to providing you with a solution to your pumping needs.

Jürgen Lutz



# Lutz Horizontal Centrifugal Pumps

The right solution for every pumping requirement



## TMR G2 / TMR G3 series

With the TMR series, Lutz offers a reliable magnetically coupled pump with a patented magnetic axial thrust self-aligning system that easily handles critical suction conditions caused by pressure loss. When used together with the "R" bearing system, the pumps are suitable for dry running. The series is designed for medium (TMR G2) to large pumping capacity (TMR G3) at higher system pressures.

Pump capacity: up to 48 m<sup>3</sup>/h (800 l/min)  
Pumping head: up to 42 m



## AM series

With a proven track record, the AM series is ideal for transfers with medium flows, circulation and low pressure systems. The glass reinforced polypropylene and ECTFE housing combined with the available choice of bearing materials allow the AM series to be used in a wide range of applications with an 85% coverage of frequently use chemicals.

Pump capacity: up to 200 l/min  
Pumping head: up to 12 m



## TMB series

The TMB series is specially designed for installation in small systems and equipment. The sturdy construction and reduced dimensions make the series suitable for OEM application.

Pump capacity: up to 65 l/min  
Pumping head: up to 8 m

EU-Patent No. 1152151  
US-Patent No. 6,551,075

# Lutz Horizontal Centrifugal Pumps

## Magnetically coupled



### Fields of application

- ✓ Galvanic and surface processing systems
- ✓ Water treatment and wastewater systems
- ✓ Etching and cleaning systems
- ✓ Printed circuit board manufacturing
- ✓ Chemical industry (general)
- ✓ Galvanic/acid process plant engineering
- ✓ Photo industry
- ✓ Solar system

### Ideally designed for pumping:

Many liquids which include acids, bases, mixtures of acids and bases, solvents, alkali stripping baths, galvanic baths, photo-chemicals as well as radioactive, sterile, expensive or highly corrosive liquids.

### Features

#### ■ Sealless

The impeller is driven by the magnetic force of the outer magnets, therefore no mechanical seal is required. As the pump housing is hermetically sealed no leaks can occur.

#### ■ Different bearing systems for different needs

Bearing materials of carbon, ceramic, silicon carbide and Rulon® make it possible to configure pumps individually for difficult operating conditions, such as dry running, suspended solids, or highly aggressive media.

#### ■ Operating safety and high level of efficiency

The use of high-performance permanent magnets ensures high transmission forces even at elevated temperatures. The design of the bearing system and use of compatible materials reduce energy loss through friction.

### Customer benefits

#### ✓ Power and efficiency

Maximum level of efficiency through optimised hydraulics results in lower power requirements.

#### ✓ Long service life

The use of high quality materials ensures a long service life.

#### ✓ Highly cost-effective

#### ✓ Easy to maintain

Small number of components and wear parts can be replaced without special tools, thus reducing cost and lengthy downtimes.

ATEX:



The GX version of the AM/TMR series, complies with the requirements of ATEX directive 94/9/EC. Thus they can be used in hazardous (Ex) areas.





# Lutz Horizontal Centrifugal Pumps

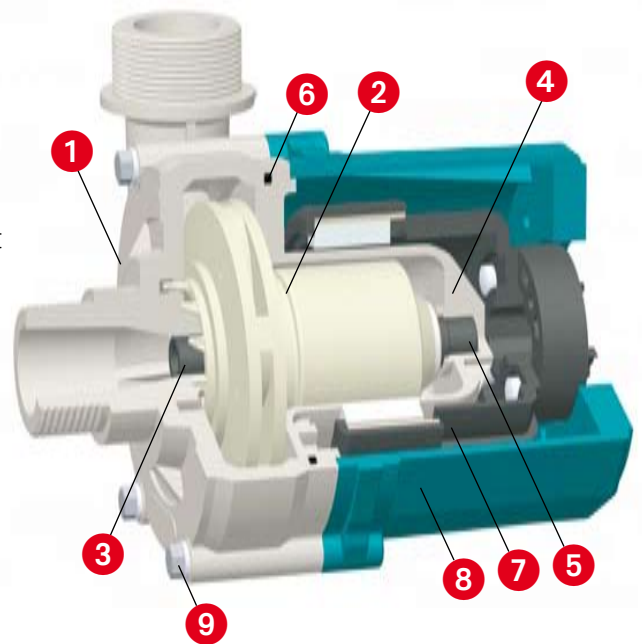
Leak-free and reliable

## Operating principle

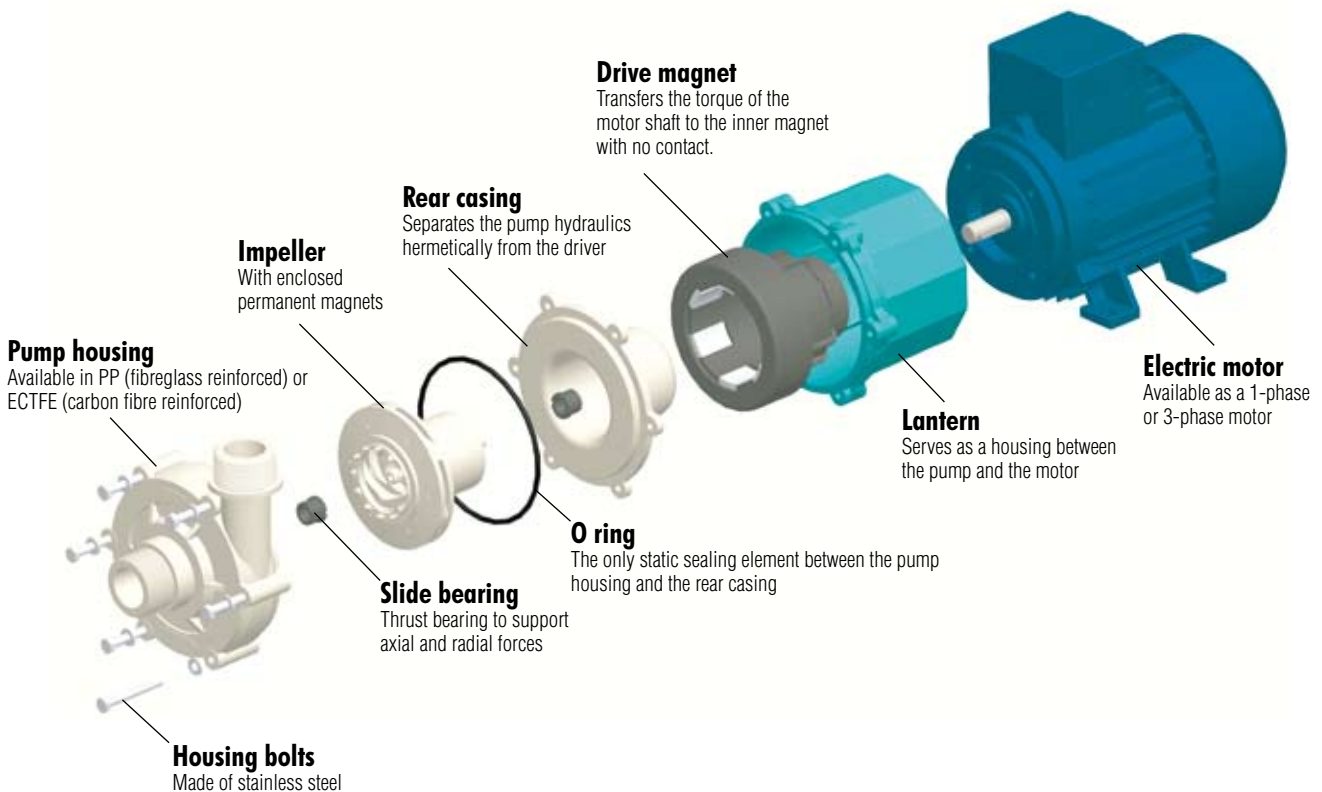
The magnetic coupling consists of two magnetic rotors separated from each other by a closed rear casing. The drive magnetic rotor positioned on the motor shaft transfers the torque of the motor via a rotating magnetic field to the inner rotor enclosed in the rear casing. Depending on the pump design, the driven rotor is directly or indirectly connected with the impeller. Thus the impeller is driven without the need of a shaft seal. The pumped liquid lubricates the bearing of the pump. A static seal between the pump housing and the separate rear casing acts as a sealing element to the atmosphere.

Lutz horizontal centrifugal pumps with magnetic coupling are running leakage- and maintenance-free.

- 1 Pump housing
- 2 Impeller with magnet
- 3 Front bushing
- 4 Rear casing
- 5 Rear bushing
- 6 O-Ring
- 7 Drive magnet
- 8 Bracket
- 9 Housing bolts



## Exploded view



# Lutz Horizontal Centrifugal Pumps

## TMB Series

### General Description

The TMB features a single-stage centrifugal impeller and a magnetic drive. The range of TMB pumps includes five models to deliver flows from 12 - 62 l/min. and heads from 1.9 - 8 meters.

The TMB is made entirely of thermoplastics, with outstanding chemical and mechanical resistance made from glassfibre reinforced polypropylene (GFR/PP) or ETCFE.

Materials of construction on wetted end components are ceramics for the spindle, reinforced PTFE bearings and a FKM O-ring gasket.

The drive magnet, located outside the casing and attached to the motor shaft, drives the magnetic impeller assembly inside the casing.

The traditional shaft seal and the consequent leakage problems are eliminated.

There is no corrosion of the outer parts (motor and bearings) in the environment.

The TMB's compact size, low noise, and absence of a mechanical seal make these pumps ideal for many applications.

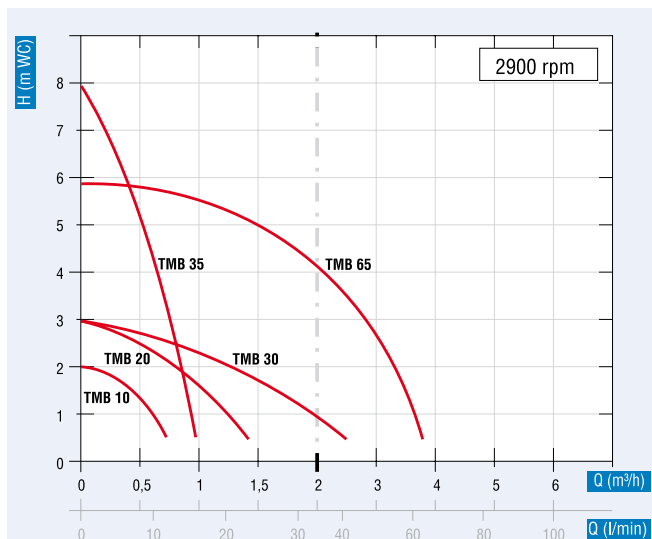


### Pump construction

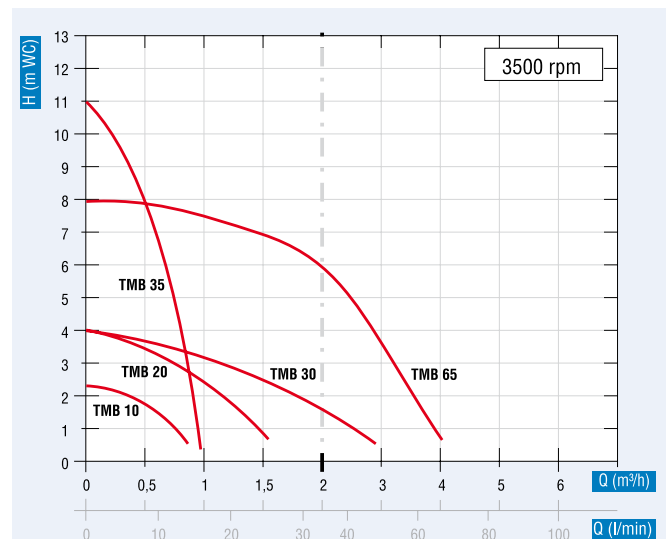
- **Pump material**  
**WR:** Polypropylene (glass fibre reinforced)  
**GF:** ECTFE (carbon fibre filled)
- **Bearing material**  
 Rulon®, ceramics
- **Sealing of casing**  
 Viton®
- **Magnet**  
 Ferrite

### Performance curve

#### 50 Hz



#### 60 Hz



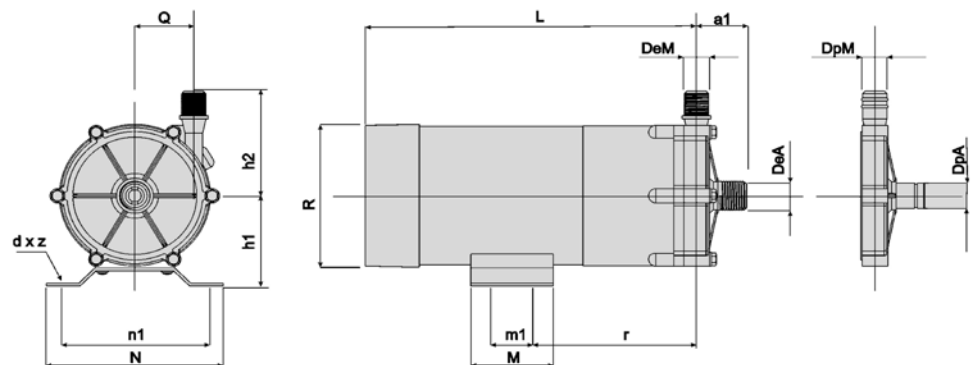
# TMB Series

## Technical Data

TMB	10	20	30	35	65
De M (BSP/NPT)	-	3/4" AG	3/4" AG	3/8" AG	1" AG
De A (BSP/NPT)	-	3/4" AG	3/4" AG	1/2" AG	1" AG
Dp M	14	17	20	18	26
Dp A	14	18	20	18	26
a1	31	37	48	34	62
h1	45	55	60	60	67
h2	47	74	75	75	84
L	100	181	206	206	222
m1	16	30	40	40	40
M	30	50	64	64	68
n1	78	70	100	100	120
N	90	92	120	120	144
Q	17	30	32	40	45
r	46,5	75	94	94	115
R	70	90	90	90	115
d x z	Ø 5 x 4	Ø 6 x 4	Ø 8 x 4	Ø 8 x 4	Ø 8 x 4

Dimensions with IEC-Motor

Dimensions in mm



Type	TMB 10	TMB 20 - 30 - 35 - 65	TMB 35
<b>Construction</b>	<b>WR</b>	<b>WR</b>	<b>GF</b>
Volute casing	Polypropylene (glass fibre reinforced)	Polypropylene (glass fibre reinforced)	ECTFE
Rear casing			(carbon fibre filled)
Centrifugal impeller			
Operating temperature	0 up to +60 °C	0 up to +60 °C	0 up to +110 °C
Environment temperature	0 up to +45 °C	0 up to +45 °C	0 up to +45 °C
<b>Bearing system</b>	<b>N<sub>1</sub></b>	<b>N<sub>1</sub></b>	<b>N<sub>1</sub></b>
Guide bearing	-	Rulon®	Rulon®
Shaft	SS	ceramics	ceramics
Thrust ring	Rulon®	ceramics	ceramics
O ring	Viton®	Viton®	Viton®
Screws	SS	SS	SS

Technical data		TMB 10	TMB 20	TMB 30	TMB 35	TMB 65
Inlet-Ø	BSP	-	G 3/4 OT	G 3/4 OT	G 1/2 OT	G 1 OT
Outlet-Ø	BSP	-	G 3/4 OT	G 3/4 OT	G 3/8 OT	G 1 OT
Hose connection	Inlet (mm)	14	18	20	18	26
	Outlet (mm)	14	17	20	18	26
Motor power (IEC) 50 Hz	W	15	29	57	57	97
Motor		1-Phase 230 V / 50 Hz				

Viton® and Kalrez® are registered Trademarks of DuPont Performance Elastomers. Rulon® is a registered Trademark of Saint-Gobain. OT = Outer thread IT= Inner thread

# Lutz Horizontal Centrifugal Pumps

## AM Series

### General Description

The AM pump is a magnetic driven pump, designed to meet the continuous demands of the marketplace.

These pumps are close coupled, horizontal end-suction centrifugals. The bodies are entirely built with reinforced thermoplastic polymers. The materials for the internal components are ceramic oxides, high density carbon, and fluorinated elastomers.

### Performance

The drive magnet, located outside the casing and attached to the motor shaft, drives the magnetic impeller assembly inside the casing.

Special materials allow for occasional dry running operation.

The AM is built from three types of materials for a variety of applications, ranging from ultrapure water to wastewater, slightly abrasive liquids, caustics, and acids.

The AM is able to work at maximum capacity, transferring fluid with specific gravities up to 1.8 kg/dm<sup>3</sup>. The drive assembly is made of powerful Neodymium-Iron-Boron magnets.

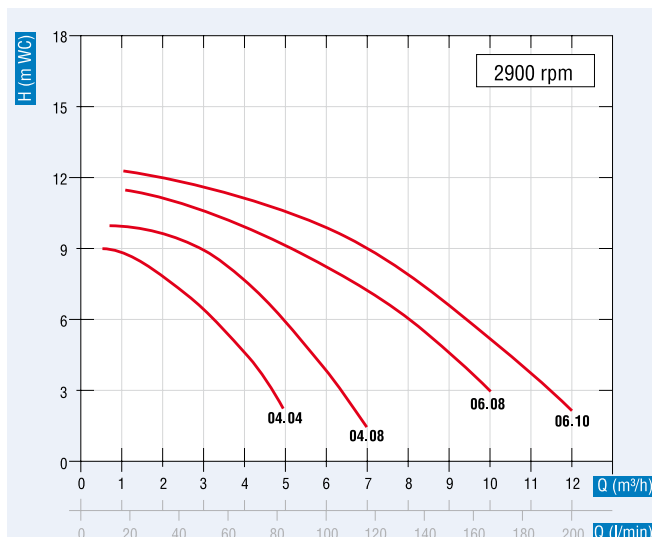


### Pump construction

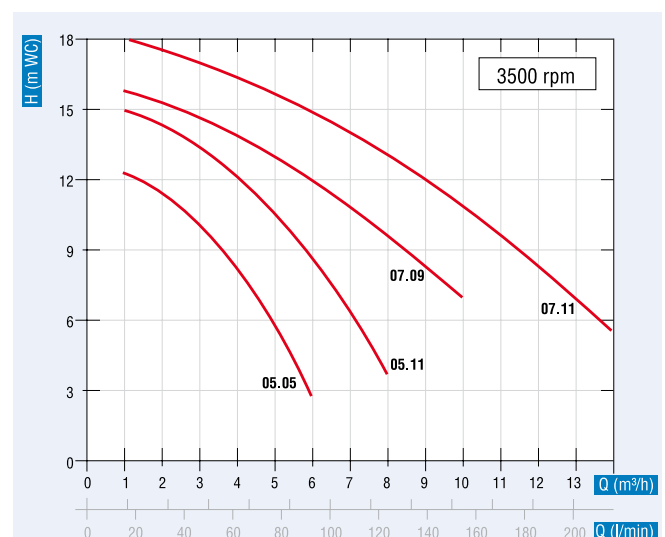
- **Pump material**  
**WR:** Polypropylene (glass fibre reinforced)  
**GF/GX:** ECTFE (carbon fibre filled)
- **Bearing material**  
Carbon, ceramics, silicon carbide, Rulon®
- **Sealing of casing**  
Viton®, EPDM or Kalrez®

### Performance curve

#### 50 Hz



#### 60 Hz

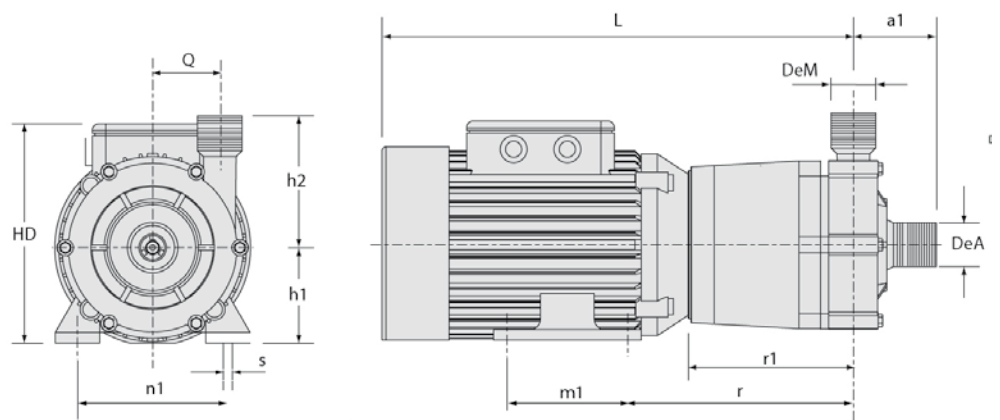


Single performance curve in 50 Hz and 60 Hz on request.




AM	04.04			04.08			06.08			06.10		
DeM (BSP-NPT)	3/4" AG			1" AG			1 1/4" AG			1 1/4" AG		
DeA (BSP-NPT)	3/4" IG			1" AG			1 1/4" AG			1 1/4" AG		
a1	62			62			62			62		
a1.1	/			70			70			70		
Q	47			49			53			53		
h2	100			100			100			100		
h2.1	/			108			108			108		
	<b>N</b>	<b>P</b>	<b>S</b>	<b>N</b>	<b>P</b>	<b>S</b>	<b>N</b>	<b>P</b>	<b>S</b>	<b>N</b>	<b>P</b>	<b>S</b>
L*	330	330	348	330	348	348	348	348	388	348	388	388
h1	63	63	71	63	71	71	71	71	80	71	80	80
HD*	160	160	177	160	177	177	177	177	190	177	190	190
m1	80	80	90	80	90	90	90	90	100	90	100	100
n1	100	100	112	100	112	112	112	112	125	112	125	125
r1	123	123	123	123	123	123	123	123	133	123	133	133

Dimensions with IEC-Motor



Dimensions in mm

Type	WR			GF			GX 	
Category 2 (acc. to ATEX)	no			no			yes	
Volute casing	Polypropylene (glass fibre reinforced)			ECTFE (carbon fibre filled)			ECTFE (carbon fibre filled)	
Rear casing								
Centrifugal impeller								
Operating temperature	-5 up to +80 °C			-20 up to +100 °C			-20 up to +100 °C	
Environment temperature	0 up to +40 °C			-20 up to +40 °C			-20 up to +40 °C	
Bearing system	R <sub>1</sub>	X <sub>1</sub>	N <sub>1</sub>	R <sub>2</sub>	X <sub>2</sub>	N <sub>2</sub>	R <sub>2</sub>	N <sub>2</sub>
Guide bearing	HD-carbon	SiC	Rulon®	HD-carbon	SiC	Rulon®	HD-carbon	Rulon®
Shaft	ceramics			SiC			SiC	
Thrust ring	ceramics			SiC			SiC	
O ring	Viton® <sup>1)</sup>			Viton® <sup>1)2)</sup>			Viton® <sup>1)2)</sup>	
Screws	SS			SS			SS	

On request: <sup>1)</sup>EPDM and <sup>2)</sup>FFKM (Kalrez®)

Technical data	04.04			04.08			06.08			06.10					
Motor selection	N	P	S	N	P	S	N	P	S	N	P	S			
Inlet-∅	BSP			G 3/4 IT			G 1 OT			G 1 1/4 OT					
Outlet-∅	BSP			G 3/4 OT			G 1 OT			G 1 1/4 OT					
Hose connector	mm			25.5			-			-					
Inlet and outlet flange	DN			-			25			32					
Density max.	kg/dm <sup>3</sup>			1.05	1.35	1.8	1.05	1.35	1.8	1.05	1.35	1.8			
Motor power (IEC) 50 Hz	kW			0.18	0.25	0.37	0.25	0.37	0.55	0.37	0.55	0.75	0.55	0.75	1.1
Motor	3-Phase 400 V / 50 Hz, IP 55 (1-Phase 230 V / 50 Hz)														

\*Special voltages on request Viton® and Kalrez® are registered Trademarks of DuPont Performance Elastomers. Rulon® is a registered Trademark of Saint-Gobain. OT = Outer thread IT= Inner thread

# Lutz Horizontal Centrifugal Pumps

## TMR: Absolutely safe for dry running

### For almost all liquids

The use of high-quality materials in the housing and bearing ensure pumps of the TMR series have excellent chemical and mechanical properties. In addition to pure liquids, suspensions containing small amounts of solids and high-density liquids can also be pumped.

### Designed for dry running

The patented “magnetic axial thrust self-aligning system” makes it possible to operate all TMR pumps with HD carbon slide bearings (“R” bearing system) under dry running conditions for a limited amount of time with no danger.

### Sturdy design

The housing has reinforcing ribs for pressure bearing. A metallic protection plate (G2 optional) provides additional stability and protects the pump housing from mechanical damage caused by fluctuating system pressures.



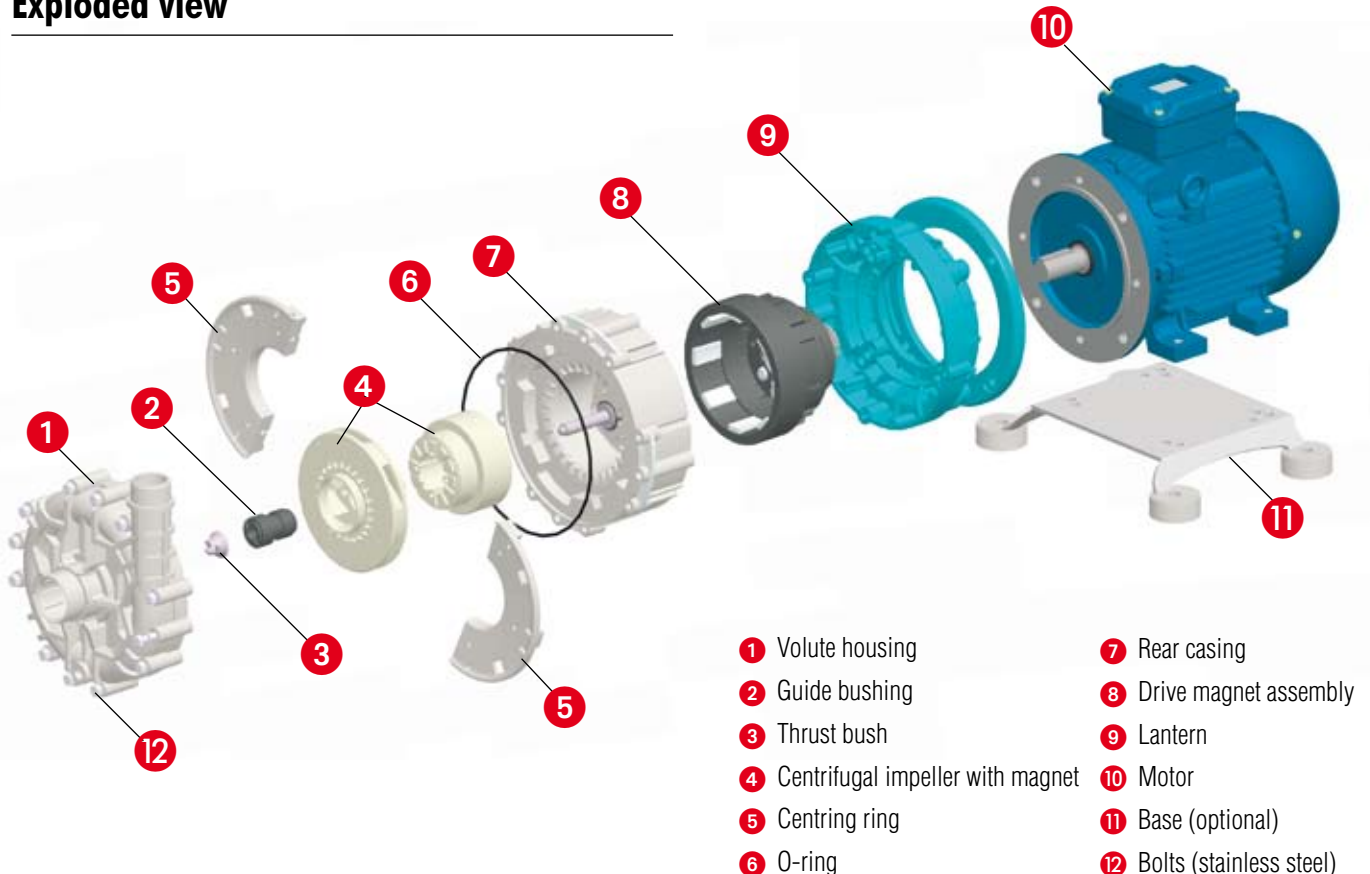
### Lower downtimes

Assembly or disassembly of the pump housing does not require special tools, plus the simple design, using few wearing parts and components, all ensure a quick and simple maintenance.

### Suction and discharge connections

Suction and discharge connections, are available with threads (BSP, NPT) or flanges (ISO, ANSI).

## Exploded view

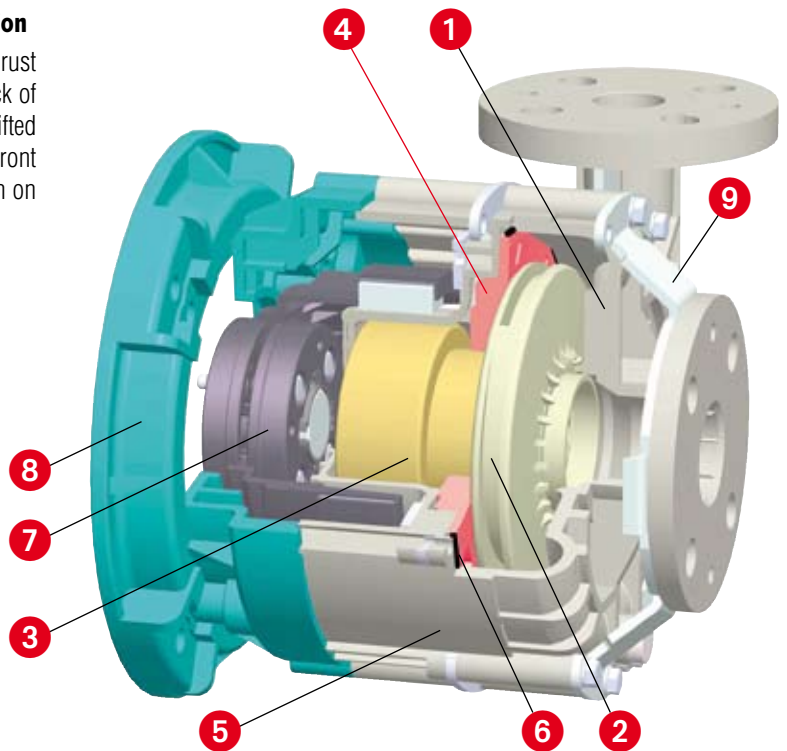


## Magnetic axial thrust compensation

### The operating principle of magnetic axial thrust compensation

Introducing an additional magnetic field ensures permanent axial thrust compensation. If dry running occurs due to a drop in pressure, lack of liquid or for other reasons, the impeller assembly is automatically shifted by the additional magnetic field to a neutral position between the front and back axial bearings. In this position there is negligible friction on the axial bearings.

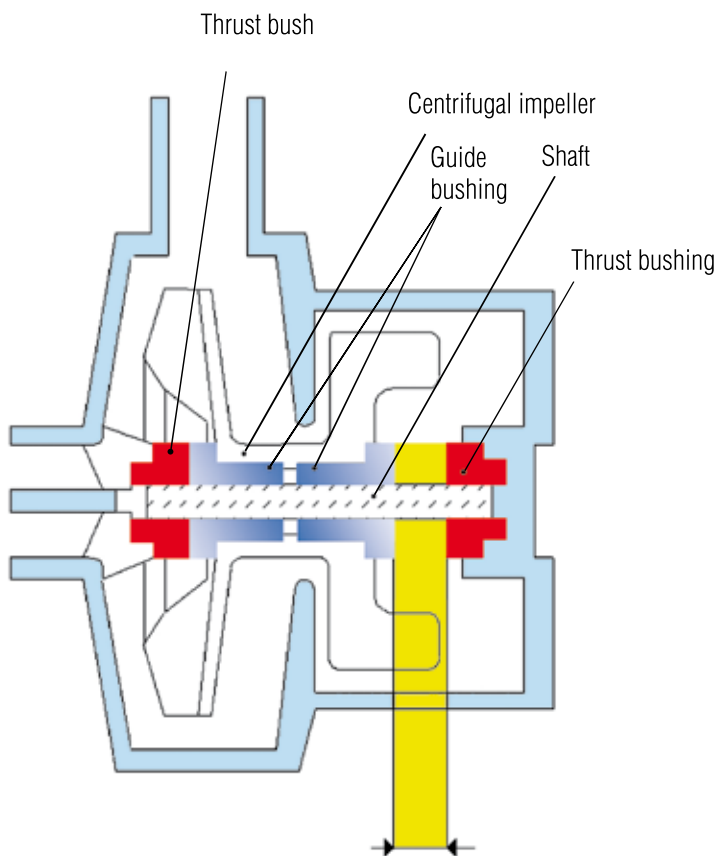
- 1 Pump housing
- 2 Impeller
- 3 Permanent magnet
- 4 **Central disk with additional magnetic field**
- 5 Rear casing
- 6 O ring
- 7 Drive magnet
- 8 Bracket
- 9 Guard plate



EU-Patent No. 1152151

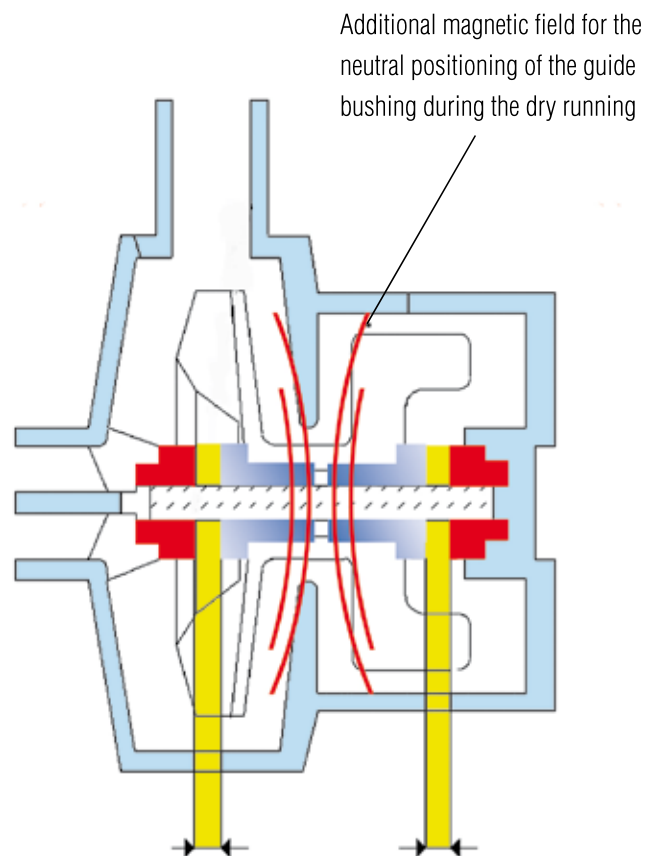
US-Patent No. 6,551,075

### Normal running



Generously dimensioned guide bushing for continuous operation

### Dry running operation



Contact free operation upon dry running

# Lutz Horizontal Centrifugal Pumps

## TMR G2 Series

### General Description

The G2 pump was designed to meet the continuous demand of the marketplace. Excess friction is eliminated by controlling the impeller movement through the use of an additional magnetic field. This patented solution is called the two axial directions self-aligning system.

### Features

The G2 is defined as “sealless” because the rear casing divides the two magnetic units, creating a sealless hermetic case all around the impeller. The drive magnet system excludes any type of rotating seal. The only needed seal is provided by an O-ring gasket between the volute casing and the rear casing. Another benefit of the G2 is that it allows the pumping of any chemical, at low or medium temperature, with pumps made of GFR-PP (glass fibre reinforced polypropylene) or CFF-E-CTFE (Etylene-Chloro Trifluoro Etylene carbon fibre filled). Due to the internal materials of the pump, you can pump both clean fluids and mediums with solids in suspension, or those that are moderately abrasive. Liquids with a specific gravity up to 1.8 kg/dm<sup>3</sup> can be pumped at maximum flow with the correct corresponding pump: N-standard, P-powered or S-strong-powered, respectively.



### Pump construction

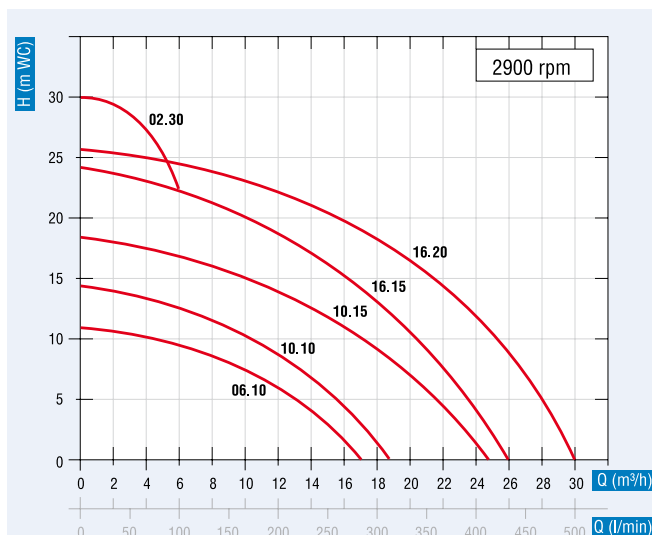
- Patented two axial directions self-aligning system
- **Pump material**  
**WR:** Polypropylene (glass fibre reinforced)  
**GF/GX:** ECTFE (carbon fibre filled)
- **Bearing material**  
Rulon®, carbon, ceramics, silicon carbide
- **Housing seal**  
Viton®, EPDM or Kalrez®
- **Drive magnet**  
Neodymium-Iron-Boron

**EU-Patent No. 1152151**

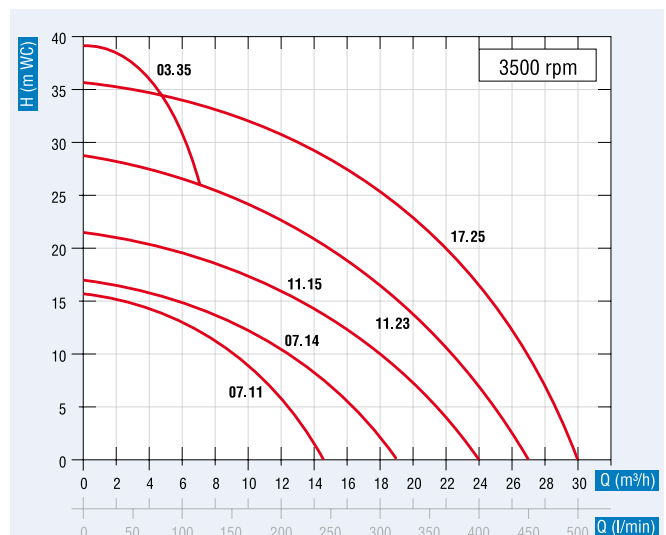
**US-Patent No. 6,551,075**

### Performance curve

#### 50 Hz



#### 60 Hz



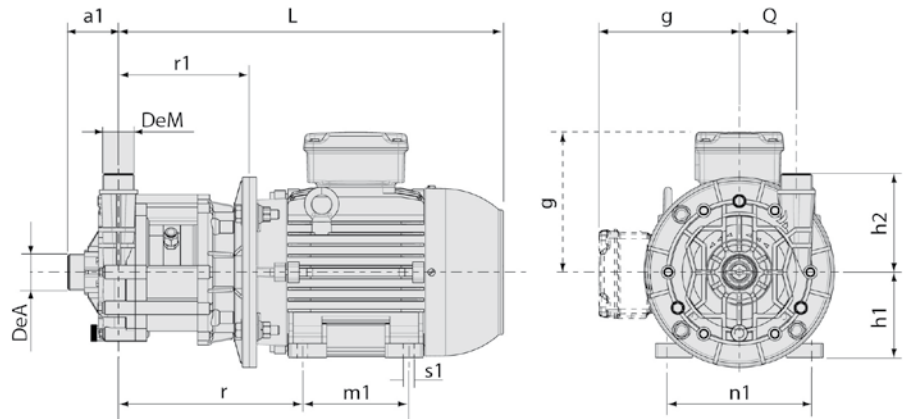
Single performance curve in 50 Hz and 60 Hz on request.

# TMR G2 Series


## Technical Data

TMR G2	06.10			10.10			10.15			16.15			16.20		02.30		
<b>IEC-Size</b>	71	80A	80B	80A	80B	90S	80B	90S	90L	90S	90L	100	90L	100	90L	100	
De M (BSP/NPT)	1 1/4"			1 1/4"			1 1/4"			1 1/4"			1 1/4"		1 1/4"		
De A (BSP/NPT)	1 1/2"			1 1/2"			1 1/2"			1 1/2"			1 1/2"		1 1/2"		
DNM	32			32			32			32			32		32		
DNA	40			40			40			40			40		40		
a1	67			67			67			67			67		67		
L	356	385		385	405		385	405	430	405	430	478	430	478	430	478	
Q	75			75			75			75			75		75		
h1	71	80		80	90		80	90		90	100	90	100	90	100	100	
h2	130			130			130			130			130		130		
r1	149			149			149			149			164	149	164	149	164
m1	90	100		100			100	125		100	125	140	125	140	125	140	
n1	112	125		125	140		125	140		140	160	140	160	140	160	160	
s1	7	8		8			8			8			10	8	10	8	10
g	106	110		110	142		110	142		142	155	142	155	142	155	142	155
d x z (ISO)	18 x 4			18 x 4			18 x 4			18 x 4			18 x 4		18 x 4		
d x z (ANSI)	16 x 4			16 x 4			16 x 4			16 x 4			16 x 4		16 x 4		

Dimensions with IEC-Motor



Dimensions in mm

Type	WR			GF			GX 	
Category 2 (acc. to ATEX)	no			no			yes	
Volute casing	Polypropylene			ECTFE			ECTFE	
Rear casing	(glass fibre reinforced)			(carbon fibre filled)			(carbon fibre filled)	
Centrifugal impeller								
Operating temperature	-5 up to +80 °C			-20 up to +100 °C			-20 up to +100 °C	
Environment temperature	0 up to +40 °C			-20 up to +40 °C			-20 up to +40 °C	
Bearing system	R <sub>1</sub>	X <sub>1</sub>	N <sub>1</sub>	R <sub>2</sub>	X <sub>2</sub>	N <sub>2</sub>	R <sub>2</sub>	N <sub>2</sub>
Guide bearing	HD-carbon	SiC	Rulon®	HD-carbon	SiC	Rulon®	HD-carbon	Rulon®
Shaft	ceramics			SiC			SiC	
Thrust ring	ceramics			SiC			SiC	
O-ring	Viton® <sup>1)</sup>			Viton® <sup>1)2)</sup>			Viton® <sup>1)2)</sup>	
Screws	SS			SS			SS	

On request: <sup>1</sup>EPDM and <sup>2</sup>FFKM (Kalrez)

Technical data	06.10			10.10			10.15			16.15			16.20			02.30					
Motor selection	N	P	S	N	P	S	N	P	S	N	P	S	N	P	S	N	P	S			
∅ Inlet	BSP			G 1 1/2 OT			G 1 1/2 OT			G 1 1/2 OT			G 1 1/2 OT			G 1 1/2 OT					
∅ Outlet	BSP			G 1 1/4 OT			G 1 1/4 OT			G 1 1/4 OT			G 1 1/4 OT			G 1 1/4 OT					
Suction and pressure flange ISO	Suction (mm) Pressure (mm)			40 32 (40*)			40 32 (40*)			40 32 (40*)			40 32 (40*)			40 32 (40*)					
Density max.	kg/dm <sup>3</sup>			1.05	1.35	1.8	1.05	1.35	1.8	1.05	1.35	1.8	1.1	1.35	1.8	1.05	1.35	1.8			
Power (IEC) 50 Hz	kW			0.55	0.75	1.1	0.75	1.1	1.5	1.1	1.5	2.2	1.5	2.2	3	2.2	3	—	2.2	3	—
Motor	3-Phase 400 V / 50 Hz / IP 55 (1-Phase 230 V / 50 Hz < 3 kW)																				

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# Lutz Horizontal Centrifugal Pumps

## TMR G3 Series

### General Description

The G3 pump was designed to meet the continuous demand of the marketplace. Excess friction is eliminated by controlling the impeller movement through the use of an additional magnetic field. This patented solution is called the two axial directions self-aligning system.

### Features

The G3 is defined as “sealless” because the rear casing divides the two magnetic units, creating a sealless hermetic case all around the impeller. The drive magnet system excludes any type of rotating seal. The only needed seal is provided by an O-ring gasket between the volute casing and the rear casing. Another benefit of the G3 is that it allows the pumping of any chemical, at low or medium temperature, with pumps made of GFR-PP (glass fibre reinforced polypropylene) or CFF-E-CTFE (Etylene-Chloro Trifluoro Etylene carbon fibre filled). Due to the internal materials of the pump, you can pump both clean fluids and mediums with solids in suspension, or those that are moderately abrasive. Liquids with a specific gravity up to 1.8 kg/dm<sup>3</sup> can be pumped at maximum flow with the correct corresponding pump: N-standard, P-powered or S-strong-powered, respectively.



### Pump construction

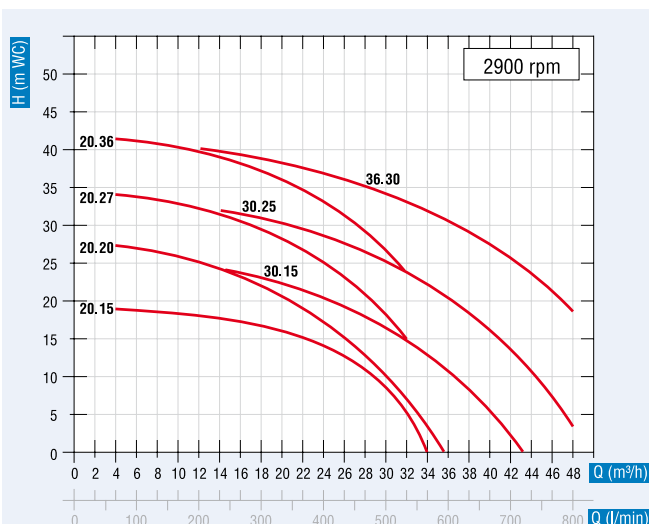
- Patented two axial directions self-aligning system
- SS armoured housing
- **Pump material**  
**WR:** Polypropylene (glass fibre reinforced)  
**GF/GX:** ECTFE (carbon fibre filled)
- **Bearing material**  
 HD-carbon, silicon carbide, Rulon®, ceramics
- **Housing seal**  
 Viton®, EPDM or Kalrez®
- **Drive magnet**  
 Neodymium-Iron-Boron

**EU-Patent No. 1152151**

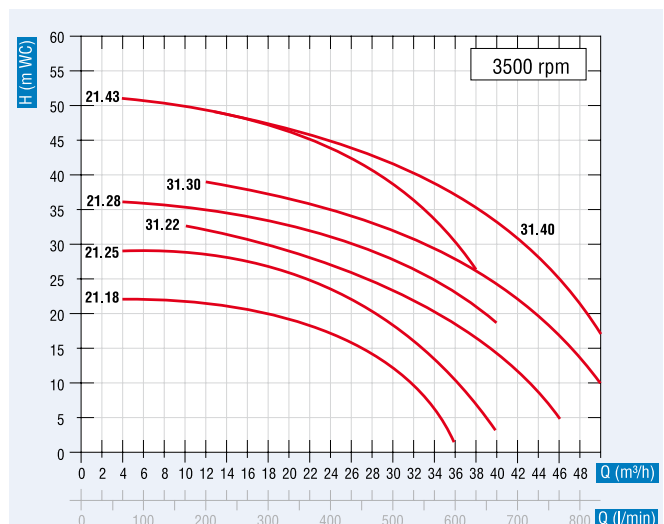
**US-Patent No. 6,551,075**

### Performance curve

#### 50 Hz



#### 60 Hz



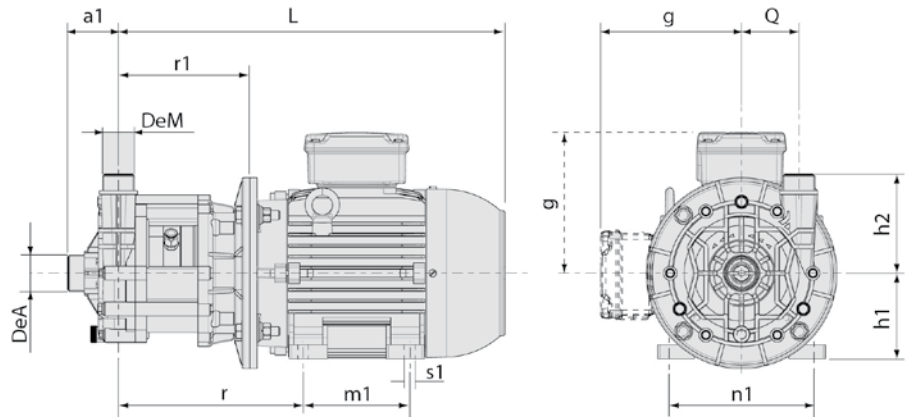
\*Being prepared Single performance curve in 50 Hz and 60 Hz on request.

# TMR G3 Series

## Technical Data

TMR G3	20.15			20.20			20.27			20.36			30.15			30.25			36.30		
IEC-Size	90L	100L	112M	100L	112M	132SA	112M	132SA	132SB	132SA	132SB	112M	132SA	132SB	132SA	132SB	132SB				
De M (BSP/NPT)	1 1/2"			1 1/2"			1 1/2"			1 1/2"			1 1/2"			1 1/2"					
De A (BSP/NPT)	2"			2"			2"			2"			2"			2"					
DNM	40			40			40			40			40			40					
DNA	50			50			50			50			50			50					
a1	70			70			70			70			70			70					
L	469	512	521	512	521	578	521	578	578	521	578	578	521	578	578	578					
Q	96			96			96			96			96			96					
h1	90	100	112	100	112	132	112	132	132	112	132	132	112	132	132	132					
h2	160			160			160			160			160			160					
r	244	261	268	261	268	307	268	307	307	268	307	307	268	307	307	307					
r1	188	198		198	218	198	218	218	218	198	218	218	198	218	218	218					
m1	125	140		140		140	140	140	140	140	140	140	140	140	140	140					
n1	140	160	190	160	190	216	190	216	216	190	216	216	190	216	216	216					
s1	8	10		10		10	10	10	10	10	10	10	10	10	10	10					
g	142	155	168	155	168	181	168	181	181	168	181	181	168	181	181	181					
d x z (ISO)	18x4			18x4			18x4			18x4			18x4			18x4					
d x z (ANSI)	16-19x4<			16-19x4			16-19x4			16-19x4			16-19x4			16-19x4					

Dimensions with IEC-Motor



Dimensions in mm

Type	WR			GF			GX	
Category 2 (acc. to ATEX)	no			no			yes	
Volute casing	Polypropylene (glass fibre reinforced)			ECTFE (carbon fibre filled)			ECTFE (carbon fibre filled)	
Rear casing								
Centrifugal impeller								
Operating temperature	-5 up to +80 °C			-20 up to +100 °C			-20 up to +100 °C	
Environment temperature	0 up to +40 °C			-20 up to +40 °C			-20 up to +40 °C	
Bearing system	R <sub>1</sub>	X <sub>1</sub>	N <sub>1</sub>	R <sub>2</sub>	X <sub>2</sub>	N <sub>2</sub>	R <sub>2</sub>	N <sub>2</sub>
Guide bearing	HD-carbon	SiC	Rulon®	HD-carbon	SiC	Rulon®	HD-carbon	Rulon®
Shaft	ceramics			SiC			SiC	
Thrust ring	ceramics			SiC			SiC	
O ring	Viton® <sup>1)</sup>			Viton® <sup>1) 2)</sup>			Viton® <sup>1) 2)</sup>	
Screws	SS			SS			SS	

On request: <sup>1)</sup>EPDM and <sup>2)</sup>FFKM (Kalrez®)

Technical data	20.15			20.20			20.27			20.36			30.15			30.25			36.30					
Motor selection	N	P	S	N	P	S	N	P	S	N	P	S	N	P	S	N	P	S	N	P	S			
∅ Inlet	BSP			G 2 OT			G 2 OT			G 2 OT			G 2 OT			G 2 OT			G 2 OT					
∅ Outlet	BSP			G 1 1/2 OT			G 1 1/2 OT			G 1 1/2 OT			G 1 1/2 OT			G 1 1/2 OT			G 1 1/2 OT					
Suction and pressure flange ISO	Suction (mm)			50			50			50			50			50			50					
	Pressure (mm)			40			40			40			40			40			40					
Density max.	kg/dm <sup>3</sup>			1.05	1.35	1.8	1.05	1.35	1.8	1.05	1.35	1.8	1.05	1.35	1.8	1.05	1.35	1.8	1.05	1.35	1.8			
Power (IEC) 50 Hz	kW			2.2	3	4	3	4	5.5	4	5.5	7.5	5.5	7.5	11	4	5.5	7.5	5.5	7.5	11	7.5	11	-
Motor	3-Phase 400 V / 50 Hz, IP 55																							

Viton® and Kalrez® are registered Trademarks of DuPont Performance Elastomers. Rulon® is a registered Trademark of Saint-Gobain. OT = Outer thread IT= Inner thread

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In this brochure, we would like to take this opportunity to give you an overview of our product range. Naturally, we welcome any enquiries you may have, so please do not hesitate to contact us or one of our offices or distributors for further help or assistance.

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