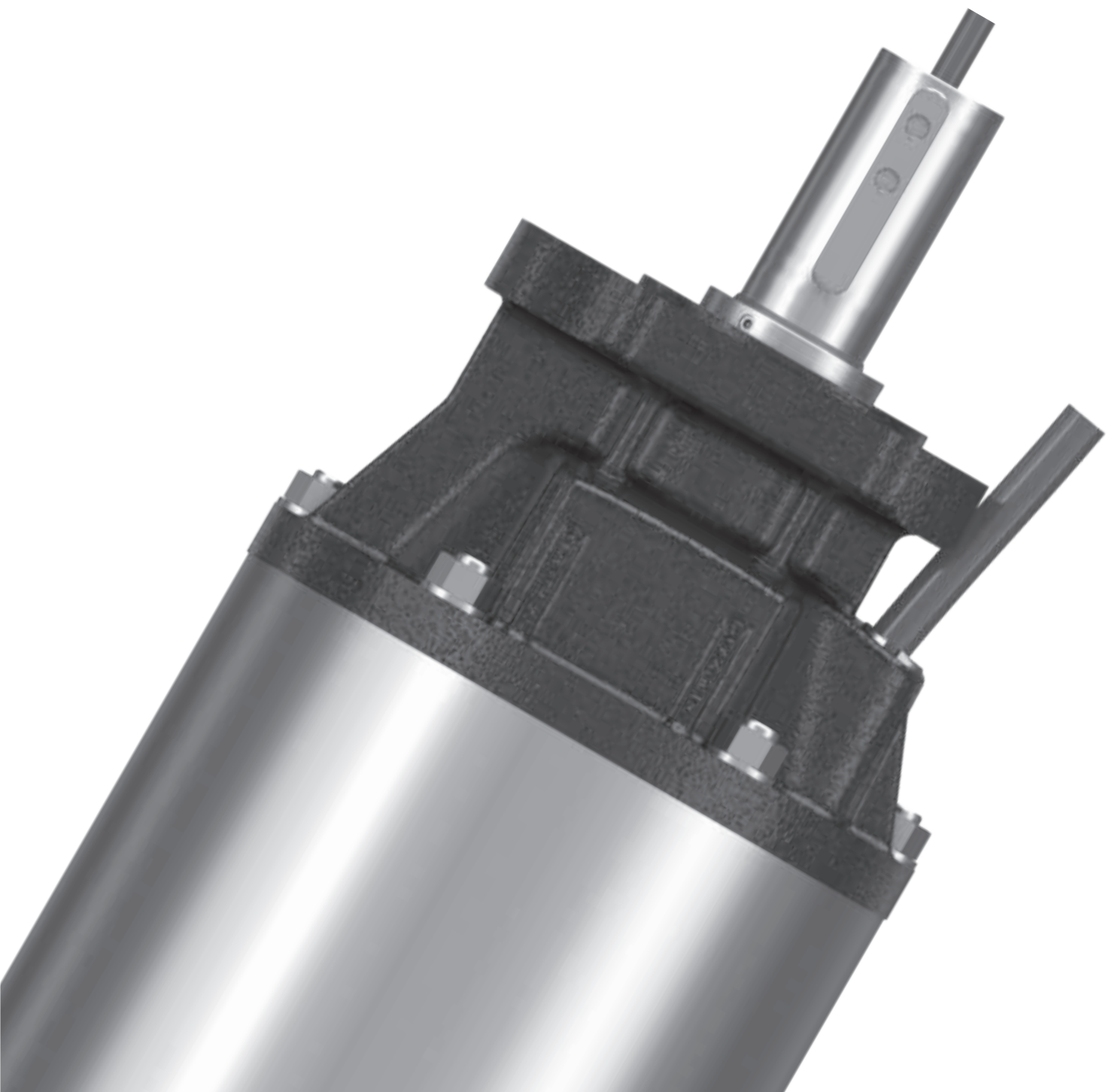


**TR**

6", 8", 10", 12", 14" SUBMERSIBLE MOTORS







### TECHNICAL DATA

**Maximum immersion depth:** 300 m

**Flanges, thread:** NEMA 6"

**Maximum number of starts:** 15/h

**Protection class:** IP 68

**Cooling flow speed:** 0,5 m/s up to +50°C with PE2+PA windings (up to +40°C for 60 HP version)

**Single phase power input:** not available

**Three phase power input:** 3x230 V 50 Hz / 3x400 V 50 Hz / 3x500V 50 Hz

**Power input tolerance:** +6% / -10%

**Power cable length:** 5 m up to 35 HP, 8 m up to 60 HP

**Possible type of installation:** vertical or horizontal up to 50 HP

**Special versions on request:** for the direct start, available with the PT100 or PTC temperature probe predisposition, voltage and power cables of different length, SiC/SiC mechanical seal, available in AISI 316 stainless steel or in AISI 904 stainless steel

6" rewindable asynchronous two-pole submersible motor. Designed for pressurization, lifting water from underground and use in irrigation systems in agriculture. To be combined with a pump body.

### CONSTRUCTION FEATURES OF THE MOTOR

Two-pole rewindable asynchronous motor. Jacket in AISI 304 stainless steel. Cooling and lubrication of the thrust unit and bushings by a mixture of water and glycol. Rotor mounted on a self-centering Mitchell type thrust bearing unit capable of withstanding high axial loads. The stator is a rewindable type made with copper wire coated with PE2 + PA. The cable is ACS and WRAS certified. Motor suitable for use with variable frequency drive (30 Hz - 50 Hz) in the version with PE2 + PA winding. Electrical protection must be guaranteed by the user. The motor is available with direct or star-delta starting. On request it can be supplied with a predisposition for the installation of the PT100 or PTC temperature sensor. The motor is available in the AISI 316 stainless steel, the TR6N version, and in AISI 904 stainless steel, the TR6R version.



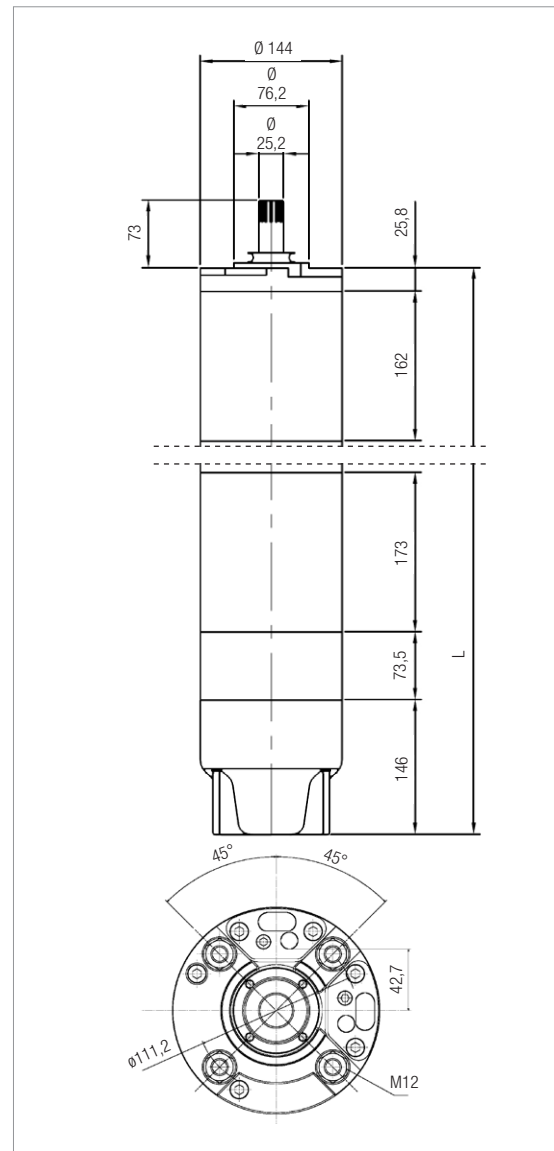
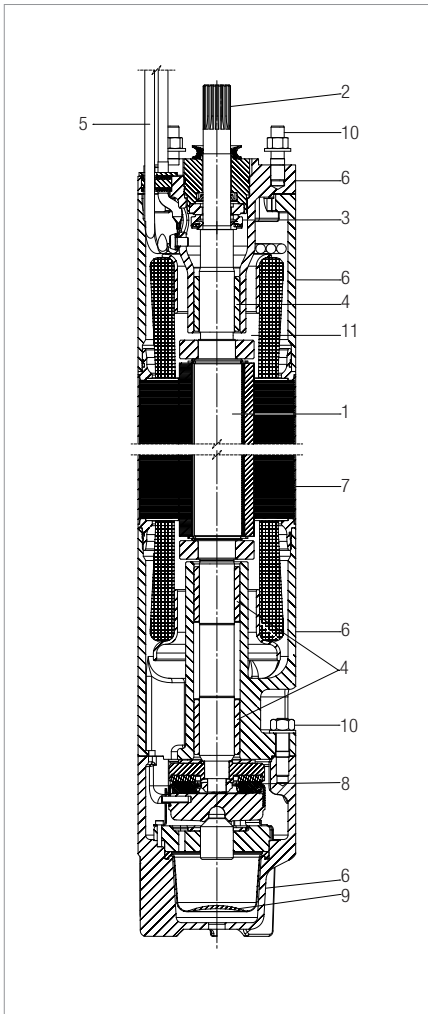
The stator is rewindable and made from PE2+PA coated copper wire.



The rotor is mounted on a Mitchell type self-centering thrust block capable of withstanding high axial loads.

### MATERIALS

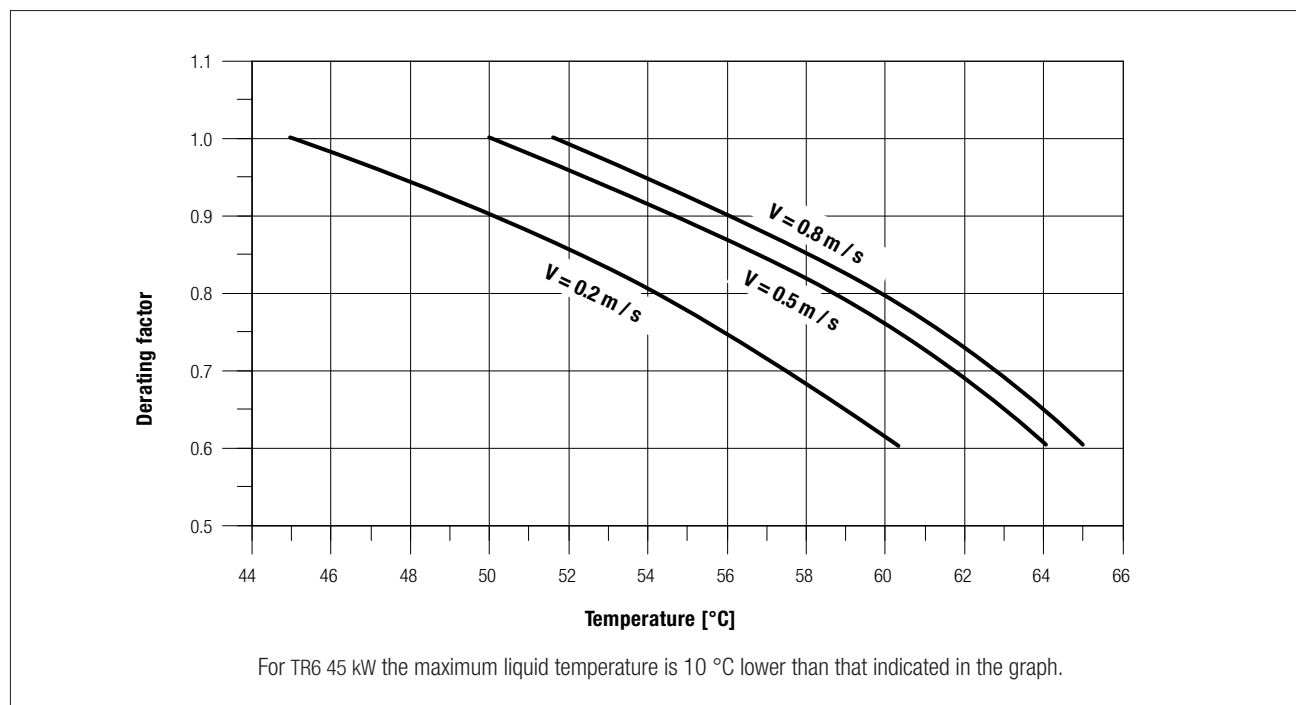
N.	PARTS	STD VERSION	316 SS VERSION	904 SS VERSION
1	SHAFT	STEEL ASTM A 105	STEEL ASTM A 105	STEEL ASTM A 105
2	SHAFT END	STAINLESS STEEL EN 1.4401 - AISI 316	STAINLESS STEEL EN 1.4401 - AISI 316	STAINLESS STEEL EN 1.4462 - AISI 318LN
3	MECHANICAL SEAL	CARBON - CERAMIC	SIC/SIC	SIC/SIC
4	BUSHINGS	GRAPHITE	GRAPHITE	GRAPHITE
5	CABLE	ROUND - 07V2B-F	ROUND - 07V2B-F	ROUND - 07V2B-F
6	STRUCTURAL PARTS	CAST IRON EN 0.6025 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4408 - AISI 316	STAINLESS STEEL EN 1.4517
7	EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4307 - AISI 304L	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4539 - AISI 904L
8	THRUST BEARING	STEEL - GRAPHITE - ALUMINA	STEEL - GRAPHITE - ALUMINA	STEEL - GRAPHITE - ALUMINA
9	DIAPHRAGM	EPDM	EPDM	EPDM
10	BOLTS & SCREW	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316	STAINLESS STEEL EN 1.4539 - AISI 904L
11	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL	WATER + GLYCOL



### DIMENSIONS - THREE-PHASE MOTORS

TYPE	P2		LENGTH mm	WEIGHT STD kg	WEIGHT 316 SS kg	WEIGHT 904 SS kg	AXIAL THRUST N
	hp	kW					
50 Hz	7,5	5,5	787	47	48,5	48,5	27500
	10	7,5	817	50	51,5	51,5	27500
	12,5	9,3	847	52	53,5	53,5	27500
	15	11	877	57	58,5	58,5	27500
	17,5	13	907	63	64,5	64,5	27500
	20	15	977	74	75,5	75,5	27500
	25	18,5	1037	80	81,5	81,5	27500
	30	22	1067	92	93,5	93,5	27500
	35	26	1137	103	104,5	104,5	27500
	40	30	1192	107	108,5	108,5	27500
	50	37	1292	113	114,5	114,5	27500
	60	45	1457	135	136,5	136,5	27500

### DOWNGRADING



### ELECTRICAL DATA - THREE-PHASE MOTORS - DOL

MODEL	P2		POWER SUPPLY 50Hz	I <sub>n</sub> A	I <sub>a</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR6 - 5,5 KW - 400 V - T	7,5	5,5	3 x 400 V ~	13	3,7	7295	2870	0,81	75	3x6 + 1x6	n.a.	5
TR6 - 7,5 KW - 400 V - T	10	7,5	3 x 400 V ~	18	3,7	9977	2870	0,8	75	3x6 + 1x6	n.a.	5
TR6 - 9,3 KW - 400 V - T	12,5	9,3	3 x 400 V ~	21	3,6	11785	2860	0,81	78	3x6 + 1x6	n.a.	5
TR6 - 11 KW - 400 V - T	15	11	3 x 400 V ~	25	3,7	14203	2860	0,82	77	3x6 + 1x6	6x6 + 2x6	5
TR6 - 13 KW - 400 V - T	17,5	13	3 x 400 V ~	29	3,8	16475	2870	0,82	79	3x6 + 1x6	6x6 + 2x6	5
TR6 - 15 KW - 400 V - T	20	15	3 x 400 V ~	32	4,2	18401	2860	0,83	79	3x6 + 1x6	6x6 + 2x6	5
TR6 - 18,5 KW - 400 V - T	25	18,5	3 x 400 V ~	39	4,5	22427	2890	0,83	82	3x6 + 1x6	6x6 + 2x6	5
TR6 - 22 KW - 400 V - T	30	22	3 x 400 V ~	49	5,5	26819	2880	0,79	82	3x6 + 1x6	6x6 + 2x6	5
TR6 - 26 KW - 400 V - T	35	26	3 x 400 V ~	58	5,7	31745	2880	0,79	82	3x6 + 1x6	6x6 + 2x6	5
TR6 - 30 KW - 400 V - T	40	30	3 x 400 V ~	65	5	36477	2870	0,81	82	3x10 + 1x10	6x6 + 2x6	8
TR6 - 37 KW - 400 V - T	50	37	3 x 400 V ~	80	5,05	44895	2860	0,81	77	3x10 + 1x10	6x6 + 2x6	8
TR6 - 45 KW - 400 V - T	60	45	3 x 400 V ~	93,1	5,5	54826	2825	0,85	82	3x16 + 1x16	6x10 + 2x10	8

**P2:** Nominal power  
**V:** Nominal voltage  
**I<sub>n</sub>:** Nominal current  
**I<sub>a</sub>/I<sub>n</sub>:** Starting current/Nominal current  
**P1:** Absorbed power

**N:** Rotations per minute - R.p.m  
**Cos φ:** Power factor  
**η:** Yield  
**Ø:** Cable cross section  
**LC:** Cable length

### ELECTRICAL DATA - STAR/DELTA STARTING

MODEL	P2 (HP)	P2 kW	POWER SUPPLY 50Hz	I <sub>n</sub> (A)	I <sub>s</sub> /I <sub>n</sub>	N (min <sup>-1</sup> )	CABLE	
							Ø mm <sup>2</sup>	LC (m)
TR617 - 13KW	17,5	13	3 x 400 V ~	30,5	3,8	2850	4x6	5
TR620 - 15 KW	20	15	3 x 400 V ~	34,8	4,2	2860	4x6	5
TR625 - 18,5 KW	25	18,5	3 x 400 V ~	41,4	4,5	2860	4x6	5
TR630 - 22 KW	30	22	3 x 400 V ~	49	5,5	2880	4x6	5
TR635 - 26 KW	35	26	3 x 400 V ~	58,1	5,7	2880	4x6	5
TR640 - 30 KW	40	30	3 x 400 V ~	64,9	5	2870	4x6	5
TR650 - 37 KW	50	37	3 x 400 V ~	80,5	5,1	2860	4x6	5
TR660 - 45 KW	60	45	3 x 400 V ~	93,1	5,1	2825	4x6	5

Supplied with 2 cables.



### TECHNICAL DATA

**Maximum immersion depth:** 300 m

**Flanges, thread:** NEMA 8"

**Maximum number of starts:** 10/h

**Protection class:** IP 68

**Cooling flow speed:** 0,5 m/s up to +45°C with rewindable in PE2+PA

**Single phase power input:** not available

**Three phase power input:** 3x400 V 50 Hz / 3x500 V 50 Hz

**Power input tolerance:** +6% / -10%

**Power cable length:** 8 m

**Possible type of installation:** vertical or horizontal up to 125 HP

**Special versions on request:** voltage and power cables of different length; for the direct start version only, provision for the PT100 or PTC temperature probe, available in AISI 316 stainless steel or in AISI 904 stainless steel.

8" asynchronous submersible motor, designed for pressurization, lifting water from underground and use in irrigation systems in agriculture. To be combined with a pump body.

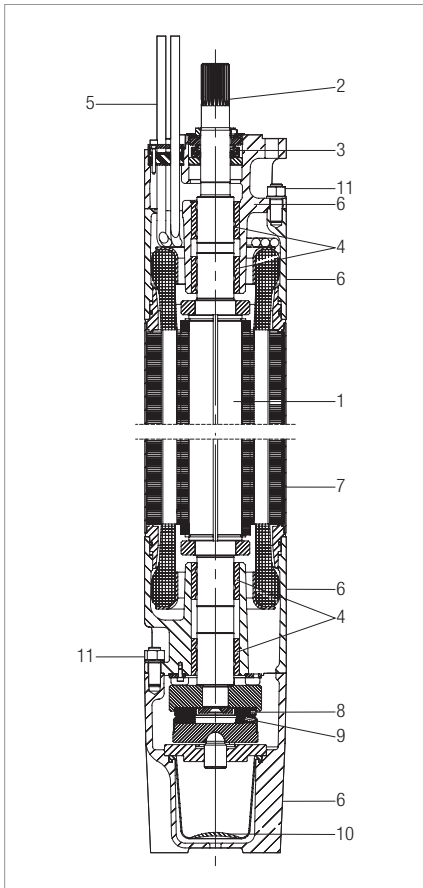
### CONSTRUCTION FEATURES OF THE MOTOR

Rewindable asynchronous two or four pole motor. Jacket in AISI 316 stainless steel. Cooling and lubrication of the thrust unit and bushings by a mixture of water and glycol. SiC/SiC mechanical seal. Rotor mounted on a self-centering Mitchell type thrust bearing unit capable of withstanding high axial loads. The stator is a rewindable type made with copper wire coated with PE2 + PA. The cable is ACS and WRAS certified. Motor suitable for use with variable frequency drive (30 Hz - 50 Hz) in the version with PE2 + PA winding. Electrical protection must be guaranteed by the user. The motor is available with direct or star-delta starting supplied with a single-pole cable directly connected to the winding and earthing cable. On request it can be supplied with a predisposition for the installation of the PT100 or PTC temperature sensor. Motor available as TR8N in AISI 316 stainless steel and version TR8R in AISI 904 stainless steel.



The stator is rewindable and made from PE2+PA coated copper wire.

The rotor is mounted on a Mitchell type self-centering thrust block capable of withstanding high axial loads.



### MATERIALS

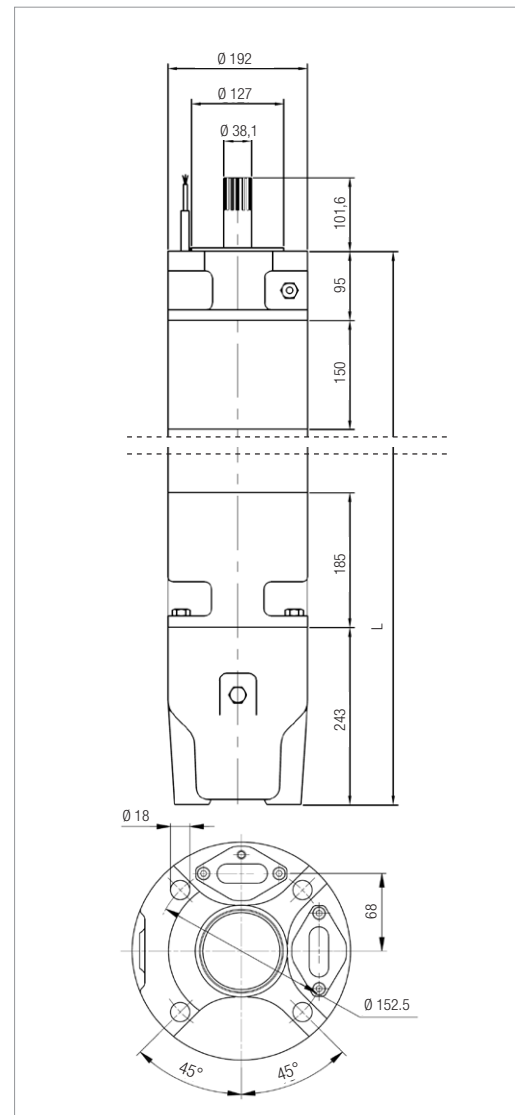
N.	PARTS	STD VERSION	316 SS VERSION	904 SS VERSION
1	SHAFT	STEEL ASTM A 105	STEEL ASTM A 105	STEEL ASTM A 105
2	SHAFT END	STAINLESS STEEL EN 1.4401 - AISI 316	STAINLESS STEEL EN 1.4401 - AISI 316	STAINLESS STEEL EN 1.4462 - AISI 318LN
3	MECHANICAL SEAL	SIC/SIC	SIC/SIC	SIC/SIC
4	BUSHINGS	GRAPHITE	GRAPHITE	GRAPHITE
5	CABLE	ROUND - 07V2B-F	ROUND - 07V2B-F	ROUND - 07V2B-F
6	STRUCTURAL PARTS	CAST IRON EN 0.6025 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4408 - AISI 316	STAINLESS STEEL EN 1.4517
7	EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4539 - AISI 904L
8	THRUST BEARING	CERAMIC - GRAPHITE	CERAMIC - GRAPHITE	CERAMIC - GRAPHITE
9	DIAPHRAGM	EPDM	EPDM	EPDM
10	BOLTS & SCREW	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316	STAINLESS STEEL EN 1.4539 - AISI 904L
11	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL	WATER + GLYCOL

### DIMENSIONS - THREE-PHASE MOTORS - 2 poles

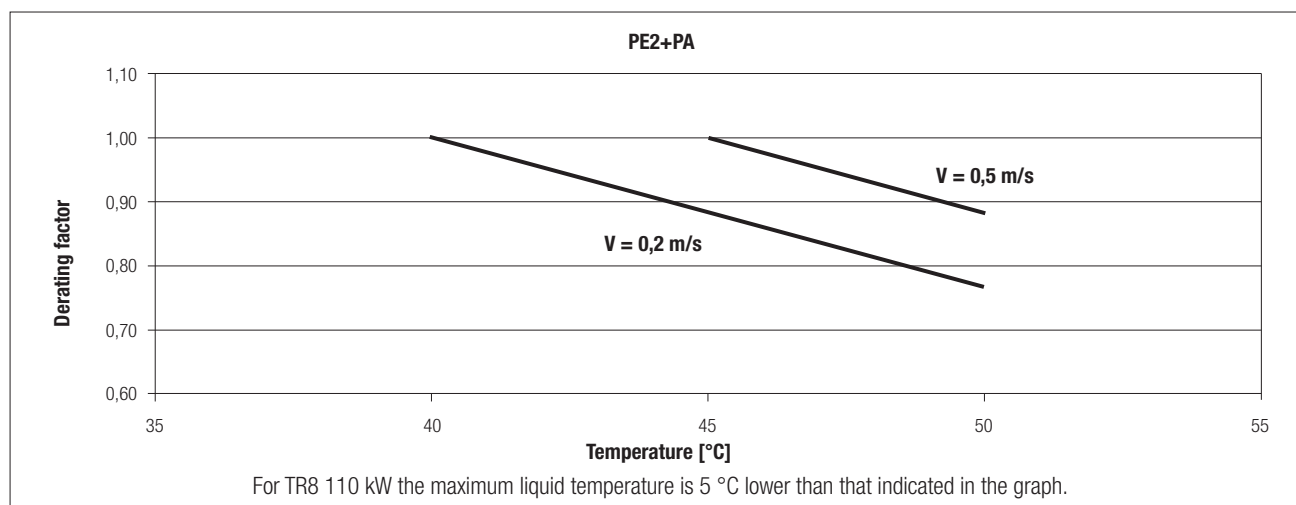
TYPE	P2		LENGTH mm	WEIGHT STD kg	WEIGHT 316 SS kg	WEIGHT 904 SS kg	AXIAL THRUST N
	hp	kW					
50 Hz	30	22	1040	126	128,5	128,5	60000
	35	26	1080	134	136,5	136,5	60000
	40	30	1140	146	148,5	148,5	60000
	50	37	1190	156	158,5	158,5	60000
	60	45	1300	177	179,5	179,5	60000
	75	55	1380	192	194,5	194,5	60000
	85	63	1520	218	220,5	220,5	60000
	100	75	1620	237	239,5	239,5	60000
	125	92	1860	283	285,5	285,5	60000
150	110	2090	333	335,5	335,5	60000	

### DIMENSIONS - THREE-PHASE MOTORS - 4 poles

TYPE	P2		LENGTH mm	WEIGHT STD kg	WEIGHT 316 SS kg	WEIGHT 904 SS kg	AXIAL THRUST N
	hp	kW					
50 Hz	15	11	1140	146	148,5	148,5	60000
	20	15	1190	156	158,5	158,5	60000
	25	18,5	1300	177	179,5	179,5	60000
	30	22	1380	192	194,5	194,5	60000
	35	26	1520	218	220,5	220,5	60000
	40	30	1620	237	239,5	239,5	60000
	50	37	1860	283	285,5	285,5	60000



### DOWNGRADING



### ELECTRICAL DATA - THREE-PHASE MOTORS - 2 POLES - DOL

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>a</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR8 - 22 KW - 400 V - 2P	30	22	3 x 400 V ~	45	5,3	26604	2890	0,84	83	3x16 + 1x16	6x10 + 2x10	8
TR8 - 26 KW - 400 V - 2P	35	26	3 x 400 V ~	54	5,1	31969	2880	0,85	81	3x16 + 1x16	6x10 + 2x10	8
TR8 - 30 KW - 400 V - 2P	40	30	3 x 400 V ~	61	5,7	35923	2890	0,85	84	3x16 + 1x16	6x10 + 2x10	8
TR8 - 37 KW - 400 V - 2P	50	37	3 x 400 V ~	75	5,7	44167	2890	0,85	84	3x16 + 1x16	6x10 + 2x10	8
TR8 - 45 KW - 400 V - 2P	60	45	3 x 400 V ~	92	6	52266	2910	0,82	86	3x16 + 1x16	6x10 + 2x10	8
TR8 - 55 KW - 400 V - 2P	75	55	3 x 400 V ~	109	5,9	64190	2900	0,85	86	3x16 + 1x16	6x16 + 2x16	8
TR8 - 63 KW - 400 V - 2P	85	63	3 x 400 V ~	126	5,7	72455	2910	0,83	87	3x16 + 1x16	6x16 + 2x16	8
TR8 - 75 KW - 400 V - 2P	100	75	3 x 400 V ~	145	5,8	86395	2910	0,86	87	3x16 + 1x16	6x16 + 2x16	8
TR8 - 92 KW - 400 V - 2P	125	92	3 x 400 V ~	177	5,9	105461	2890	0,86	87	3x25 + 1x25	6x16 + 2x16	8
TR8 - 110 KW - 400 V - 2P	150	110	3 x 400 V ~	213	5,8	128387	2890	0,87	86	3x25 + 1x25	6x16 + 2x16	8

### ELECTRICAL DATA - THREE-PHASE MOTORS - 4 POLES - DOL

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>a</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR8 - 11 KW - 400 V - 4P	15	11	3 x 400 V ~	25,9	5	13817	1455	0,77	80	3x16 + 1x16	6x10 + 2x10	8
TR8 - 15 KW - 400 V - 4P	20	15	3 x 400 V ~	33,7	4,9	18912	1445	0,81	80	3x16 + 1x16	6x10 + 2x10	8
TR8 - 18,5 KW - 400 V - 4P	25	18,5	3 x 400 V ~	41,4	4,7	23233	1450	0,81	81	3x16 + 1x16	6x10 + 2x10	8
TR8 - 22 KW - 400 V - 4P	30	22	3 x 400 V ~	49,7	4,7	27547	1450	0,8	82	3x16 + 1x16	6x10 + 2x10	8
TR8 - 26 KW - 400 V - 4P	35	26	3 x 400 V ~	58	4,7	32147	1450	0,8	82	3x16 + 1x16	6x10 + 2x10	8
TR8 - 30 KW - 400 V - 4P	40	30	3 x 400 V ~	64,8	4,4	37263	1440	0,83	82	3x16 + 1x16	6x10 + 2x10	8
TR8 - 37 KW - 400 V - 4P	50	37	3 x 400 V ~	81,8	4,5	45338	1455	0,8	83	3x16 + 1x16	6x10 + 2x10	8

**P2:** Nominal power  
**V:** Nominal voltage  
**I<sub>n</sub>:** Nominal current  
**I<sub>a</sub>/I<sub>n</sub>:** Starting current/Nominal current  
**P1:** Absorbed power

**N:** Rotations per minute - R.p.m  
**Cos φ:** Power factor  
**η:** Yield  
**Ø:** Cable cross section  
**LC:** Cable length

### ELECTRICAL DATA - STAR/DELTA STARTING

MODEL	P2 (HP)	P2 kW	POWER SUPPLY 50Hz	IN (A)	Is/In	N (min <sup>-1</sup> )	CABLE	
							Ø mm <sup>2</sup>	LC (m)
TR840 - 30 KW	40	30	3 x 400 V ~	61	5,7	2890	4x10	8
TR850 - 37 KW	50	37	3 x 400 V ~	75	5,7	2890	4x10	8
TR860 - 45 KW	60	45	3 x 400 V ~	92	6	2910	4x10	8
TR875 - 55 KW	75	55	3 x 400 V ~	109	5,9	2900	4x16	8
TR885 - 63 KW	85	63	3 x 400 V ~	126	5,7	2910	4x16	8
TR8100 - 75 KW	100	75	3 x 400 V ~	145	5,8	2910	4x16	8
TR8125 - 92 KW	125	92	3 x 400 V ~	177	5,9	2890	4x16	8
TR8150 - 110 KW	150	110	3 x 400 V ~	213	5,8	2890	4x16	8

Supplied with 2 cables.



### TECHNICAL DATA

**Maximum immersion depth:** 300 m

**Flanges, thread:** 10"

**Maximum number of starts:** 8/h

**Protection class:** IP 68

**Cooling flow speed:** 0,5 m/s up to +45°C with rewindable in PE2+PA

**Single phase power input:** not available

**Three phase power input:** 3x400 V 50 Hz / 3x500 V 50 Hz

**Power supply tolerance:** +6% / -10%

**Power cable length:** 8 m

**Possible type of installation:** vertical or horizontal up to 230 HP

**Special versions on request:** voltage and power cables of different length; for the direct start version only, provision for the PT100 or PTC temperature probe, available in AISI 316 stainless steel or in AISI 904 stainless steel

10" asynchronous two-pole submersible motor designed for pressurization, lifting water from underground and use in irrigation systems in agriculture.

### CONSTRUCTION FEATURES OF THE MOTOR

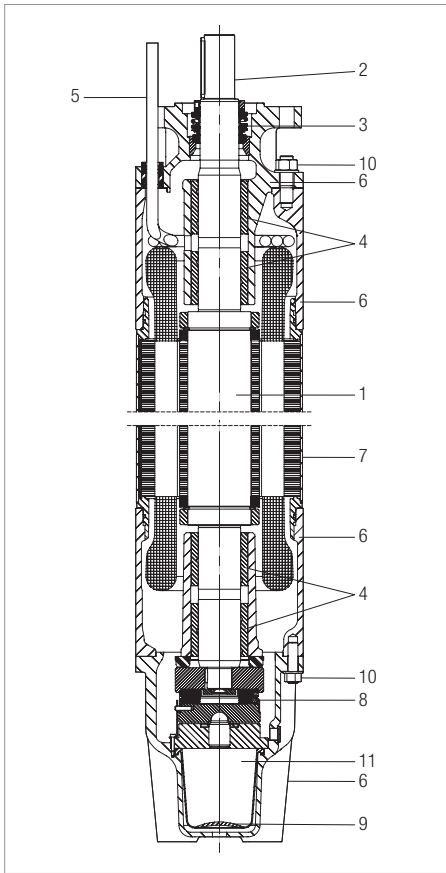
Rewindable asynchronous two or four pole motor. Jacket in AISI 316 stainless steel. Cooling and lubrication of the thrust unit and bushings by a mixture of water and glycol. SiC/SiC mechanical seal. Rotor mounted on a self-centering Mitchell type thrust bearing unit capable of withstanding high axial loads. The stator is a rewindable type made with copper wire coated with PE2 + PA. The motor is available with direct or star-delta starting supplied with a single-pole cable directly connected to the winding and earthing cable. The cable is ACS and WRAS certified. Motor suitable for use with variable frequency drive (30 Hz - 50 Hz) in the version with PE2 + PA winding. Electrical protection must be guaranteed by the user. On request it can be supplied with a predisposition for the installation of the PT100 or PTC temperature sensor. Motor available as TR10N in AISI 316 stainless steel and version TR10R in AISI 904 stainless steel. To be combined with a pump body.



The stator is rewindable and made from PE2+PA coated copper wire.



The rotor is mounted on a Mitchell type self-centering thrust block capable of withstanding high axial loads.



### MATERIALS

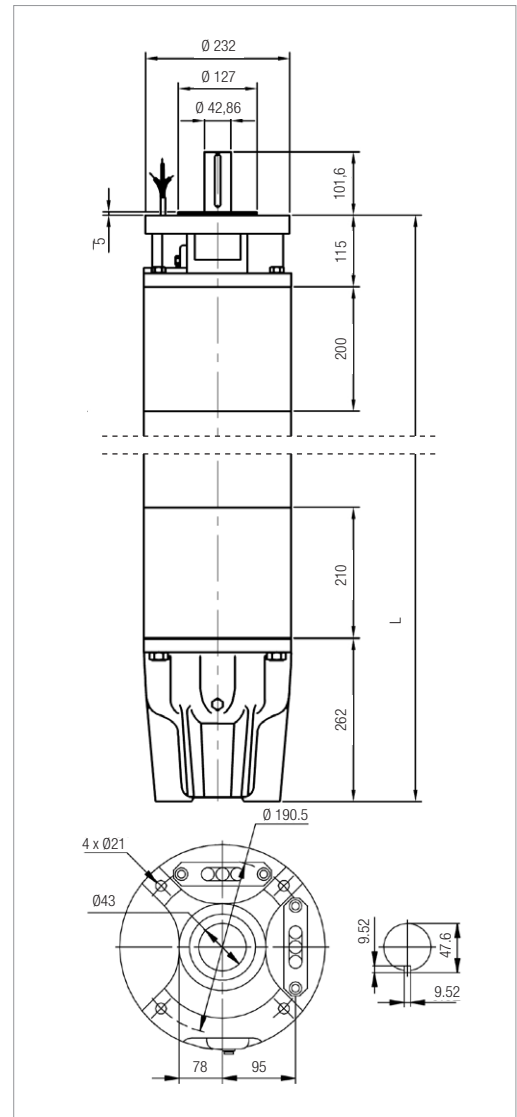
N.	PARTS	STD VERSION	316 SS VERSION	904 SS VERSION
1	SHAFT	STEEL ASTM A 105	STEEL ASTM A 105	STEEL ASTM A 105
2	SHAFT END	STAINLESS STEEL EN 1.4462 - AISI 318LN	STAINLESS STEEL EN 1.4462 - AISI 318LN	STAINLESS STEEL EN 1.4462 - AISI 318LN
3	MECHANICAL SEAL	SIC/SIC	SIC/SIC	SIC/SIC
4	BUSHINGS	GRAPHITE	GRAPHITE	GRAPHITE
5	CABLE	ROUND - 07V2B-F	ROUND - 07V2B-F	ROUND - 07V2B-F
6	STRUCTURAL PARTS	CAST IRON EN 0.6025 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4408 - AISI 316	STAINLESS STEEL EN 1.4517
7	EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4539 - AISI 904L
8	THRUST BEARING	CERAMIC - GRAPHITE	CERAMIC - GRAPHITE	CERAMIC - GRAPHITE
9	DIAPHRAGM	EPDM	EPDM	EPDM
10	BOLTS & SCREW	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316	STAINLESS STEEL EN 1.4539 - AISI 904L
11	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL	WATER + GLYCOL

### DIMENSIONS - THREE-PHASE MOTORS - 2 poles

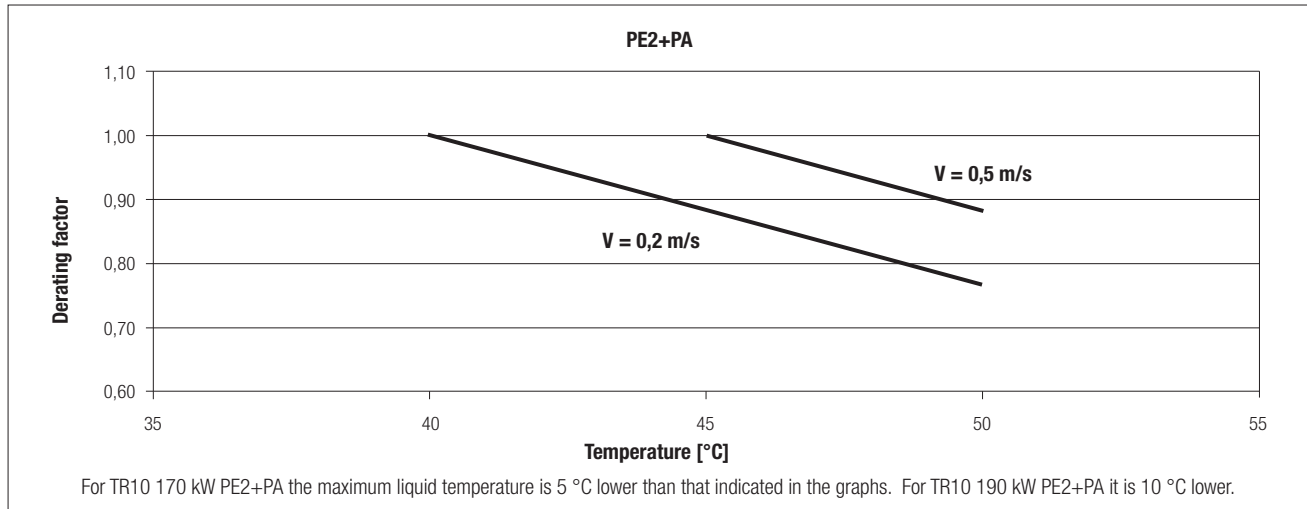
TYPE	P2		LENGTH mm	WEIGHT STD kg	WEIGHT VERSION AISI 316 kg	WEIGHT VERSION AISI 904 kg	AXIAL THRUST N
	hp	kW					
50 Hz	100	75	1400	280	290	290	60000
	125	92	1500	330	340	340	60000
	150	110	1690	385	395	395	60000
	180	132	1870	435	445	445	60000
	200	147	2070	500	510	510	60000
	230	170	2220	540	550	550	60000
	260	190	2400	580	590	590	60000

### DIMENSIONS - THREE-PHASE MOTORS - 4 poles

TYPE	P2		LENGTH mm	WEIGHT STD kg	WEIGHT VERSION AISI 316 kg	WEIGHT VERSION AISI 904 kg	AXIAL THRUST N
	hp	kW					
50 Hz	40	30	1270	250	260	260	60000
	50	37	1400	280	290	290	60000
	60	45	1500	330	340	340	60000
	75	55	1690	385	395	395	60000
	100	75	1870	435	445	445	60000
	125	92	2070	500	510	510	60000
	150	110	2070	521	531	531	60000



### DOWNGRADING



### ELECTRICAL DATA - THREE-PHASE MOTORS - 2 poles - DOL

MODEL	P2		POWER INPUT 50Hz	In A	Ia/In	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR10 - 75 KW - 400 V - 2P	100	75	3 x 400 V ~	148	5,4	86131	2910	0,84	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 92 KW - 400 V - 2P	125	92	3 x 400 V ~	185	5,6	105101	2910	0,82	88	3x50 + 1x25	6x35 + 2x25	8
TR10 - 110 KW - 400 V - 2P	150	110	3 x 400 V ~	217	5,7	126287	2910	0,84	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 132 KW - 400 V - 2P	180	132	3 x 400 V ~	257	5,7	149566	2910	0,84	88	3x50 + 1x25	6x35 + 2x25	8
TR10 - 147 KW - 400 V - 2P	200	147	3 x 400 V ~	300	6,2	168355	2920	0,81	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 170 KW - 400 V - 2P	230	170	3 x 400 V ~	348	6	195292	2920	0,81	83	3x50 + 1x25	6x35 + 2x25	8
TR10 - 190 KW - 400 V - 2P	260	190	3 x 400 V ~	405	5,9	221668	2930	0,79	86	3x50 + 1x25	6x35 + 2x25	8

### ELECTRICAL DATA - THREE-PHASE MOTORS - 4 poles - DOL

MODEL	P2		POWER INPUT 50Hz	In A	Ia/In	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR10 - 30 KW - 400 V - 4P	40	30	3 x 400 V ~	63	5,3	34918	1455	0,8	85	3x50 + 1x25	6x35 + 2x25	8
TR10 - 37 KW - 400 V - 4P	50	37	3 x 400 V ~	78	5,5	43232	1460	0,8	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 45 KW - 400 V - 4P	60	45	3 x 400 V ~	91	4,6	52329	1450	0,83	85	3x50 + 1x25	6x35 + 2x25	8
TR10 - 55 KW - 400 V - 4P	75	55	3 x 400 V ~	110	5,3	62492	1455	0,82	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 75 KW - 400 V - 4P	100	75	3 x 400 V ~	153	5,4	85861	1455	0,81	88	3x50 + 1x25	6x35 + 2x25	8
TR10 - 92 KW - 400 V - 4P	125	92	3 x 400 V ~	185	5,3	105101	1450	0,82	87	3x50 + 1x25	6x35 + 2x25	8
TR10 - 110 KW - 400 V - 4P	150	110	3 x 400 V ~	221	5,8	127084	1450	0,83	87	3x50 + 1x25	6x35 + 2x25	8

**P2:** Nominal power  
**V:** Nominal voltage  
**In:** Nominal current  
**Ia/In:** Starting current/Nominal current  
**P1:** Absorbed power

**N:** Rotations per minute - R.p.m  
**Cos φ:** Power factor  
**η:** Yield  
**Ø:** Cable cross section  
**LC:** Cable length

### ELECTRICAL DATA - STAR/DELTA STARTING

MODEL	P2 (HP)	P2 kW	POWER SUPPLY 50Hz	IN (A)	Is/In	N (min <sup>-1</sup> )	CABLE	
							Ø mm <sup>2</sup>	LC (m)
TR10100 - 75 KW	100	75	3 x 400 V ~	148	5,4	2910	3x35	8
TR10125 - 92 KW	125	92	3 x 400 V ~	185	5,6	2910	3x35	8
TR10150 - 110 KW	150	110	3 x 400 V ~	217	5,7	2910	3x35	8
TR10180 - 132 KW	180	132	3 x 400 V ~	257	5,7	2910	3x35	8
TR10200 - 147 KW	200	147	3 x 400 V ~	300	6,2	2920	3x35	8
TR10230 - 170 KW	230	170	3 x 400 V ~	348	6	2920	3x35	8
TR10260 - 190 KW	260	190	3 x 400 V ~	405	5,9	2920	3x35	8

Supplied with 2 cables.



### TECHNICAL DATA

**Maximum immersion depth:** 300 m

**Flanges, thread:** 12"

**Maximum number of starts:** 5/h

**Protection class:** IP 68

**Cooling flow speed:** 0,5 m/s up to +45°C with rewindable in PE2+PA

**Single phase power input:** not available

**Three phase power input:** 3x400 V 50 Hz / 3x500 V 50 Hz

**Power input tolerance:** +6% / -12%

**Maximum working pressure:** 60 bar

**Direction of rotation:** to be specified when ordering, the standard version is anti-clockwise.

**Power cable length:** 8 m

**Possible type of installation:** vertical or horizontal up to 260 HP

**Special versions on request:** voltage and power cables of different length; for the direct start version only, provision for the PT100 or PTC temperature probe, available in AISI 316 stainless steel

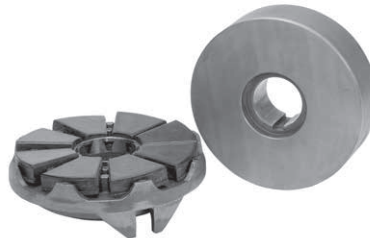
12" asynchronous two-pole submersible motor, designed for pressurization, lifting water from underground and use in irrigation systems in agriculture.

### CONSTRUCTION FEATURES OF THE MOTOR

Rewindable asynchronous two or four pole motor. Jacket in AISI 316 stainless steel. Cooling and lubrication of the thrust unit and bushings by a mixture of water and glycol. SiC/SiC mechanical seal. Rotor mounted on a self-centering Mitchell type thrust bearing unit capable of withstanding high axial loads. The stator is a rewindable type made with copper wire coated with PE2 + PA. Supplied with a single-pole cable directly connected to the winding and earthing cable. The cable is ACS and WRAS certified. Motor suitable for use with variable frequency drive (30 Hz - 50 Hz) in the version with PE2 + PA winding. Electrical protection must be guaranteed by the user. The motor is available with direct or star-delta starting. On request it can be supplied with a predisposition for the installation of the PT100 or PTC temperature sensor. Motor available as TR12N in AISI 316 stainless steel and version TR12R in AISI 904 stainless steel. To be combined with a pump body.

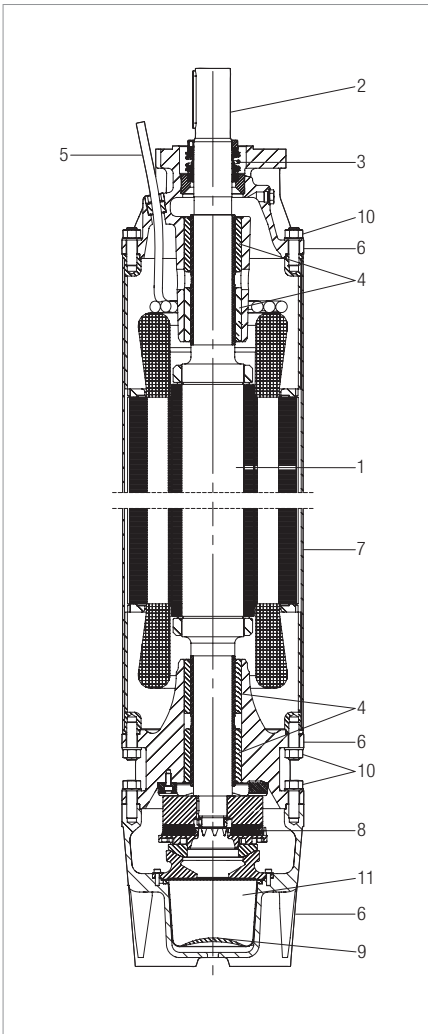


The stator is rewindable and made from PE2+PA coated copper wire.

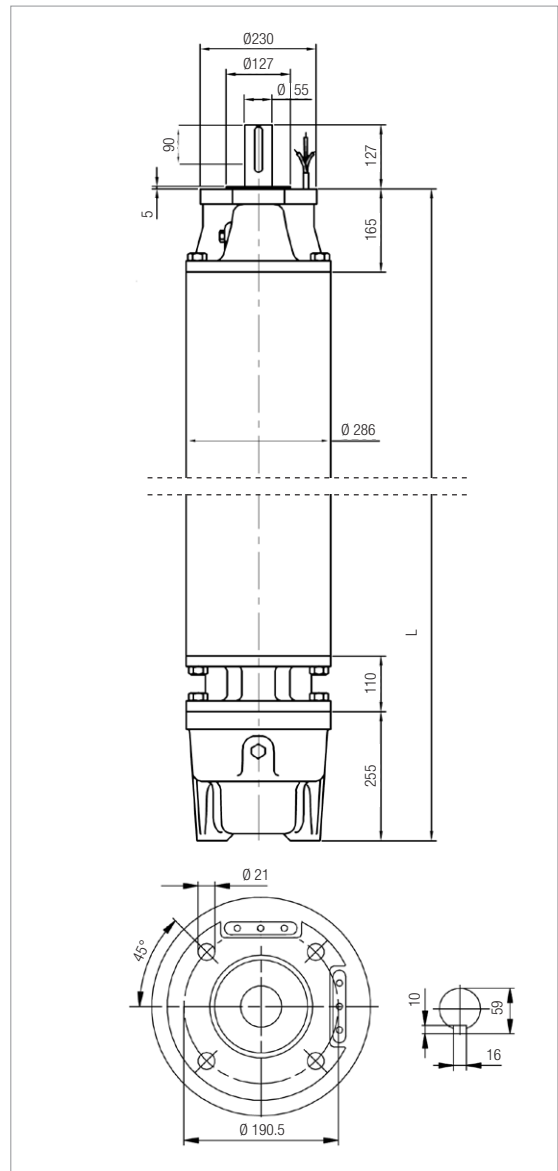


The rotor is mounted on a Mitchell type self-centering thrust block capable of withstanding high axial loads.

### MATERIALS



N.	PARTS	STD VERSION	316 SS VERSION	904 SS VERSION
1	SHAFT	STEEL ASTM A 105	STEEL ASTM A 105	STEEL ASTM A 105
2	SHAFT END	STAINLESS STEEL EN 1.4462 - AISI 318 LN	STAINLESS STEEL EN 1.4462 - AISI 318 LN	STAINLESS STEEL EN 1.4462 - AISI 318 LN
3	MECHANICAL SEAL	SIC/SIC	SIC/SIC	SIC/SIC
4	BUSHINGS	NBR	NBR	STEEL S275/NBR
5	CABLE	ROUND - 07V2B-F	ROUND - 07V2B-F	ROUND - 07V2B-F
6	STRUCTURAL PARTS	CAST IRON EN 0.6025 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4408 - AISI 316	STAINLESS STEEL EN 1.4517
7	EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4539 - AISI 904L
8	THRUST BEARING	STEEL - RUBBER	STEEL - RUBBER	STEEL - RUBBER
9	DIAPHRAGM	EPDM	EPDM	EPDM
10	BOLTS & SCREW	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316	STAINLESS STEEL EN 1.4539 - AISI 904L
11	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL	WATER + GLYCOL



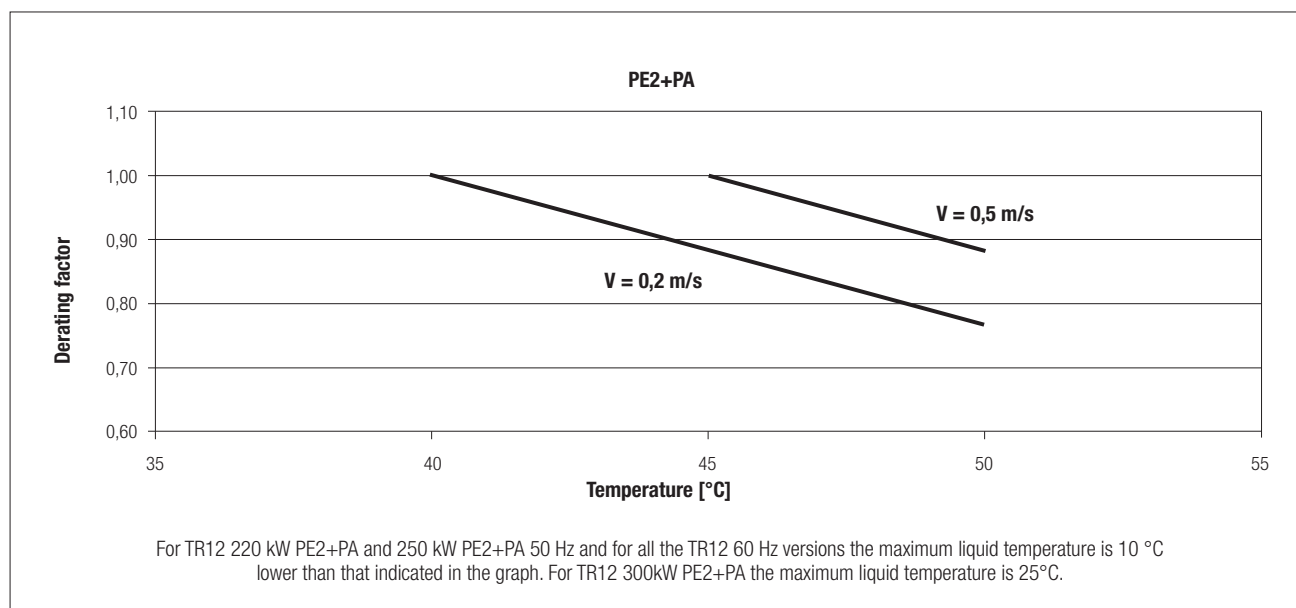
### DIMENSIONS - THREE-PHASE MOTORS - 2 poles

TYPE	P2		LENGTH mm	WEIGHT STD kg	WEIGHT 316 SS kg	WEIGHT 904 SS kg	AXIAL THRUST N
	hp	kW					
50 Hz	180	132	1660	515	527	527	70000
	200	147	1790	565	577	577	70000
	230	170	1880	605	617	617	70000
	260	190	1980	650	662	662	70000
	300	220	2110	700	712	712	70000
	340	250	2280	775	787	787	70000

### DIMENSIONS - THREE-PHASE MOTORS - 4 poles

TYPE	P2		LENGTH mm	WEIGHT STD kg	WEIGHT 316 SS kg	WEIGHT 904 SS kg	AXIAL THRUST N
	hp	kW					
50 Hz	100	75	1660	515	527	527	70000
	125	92	1790	565	577	577	70000
	150	110	1880	605	617	617	70000
	180	132	2110	700	712	712	70000
	200	147	2210	750	762	762	70000

### DOWNGRADING



### ELECTRICAL DATA - THREE-PHASE MOTORS - 2 poles - DOL

MODEL	P2 (HP)	P2 kW	POWER INPUT 50Hz	IN (A)	Is/In	N (min <sup>-1</sup> )	CABLE
							LC (m)
TR12180 - 132 KW	180	132	3 x 400 V ~	266	5,0	2930	8
TR12200 - 147 KW	200	147	3 x 400 V ~	290	6,2	2930	8
TR12230 - 170 KW	230	170	3 x 400 V ~	329	6,1	2920	8
TR12260 - 190 KW	260	190	3 x 400 V ~	371	6,2	2930	8
TR12300 - 220 KW	300	220	3 x 400 V ~	424	6,1	2920	8
TR12340 - 250 KW	340	250	3 x 400 V ~	481	5,9	2920	8

Supplied with 1 cable.

### ELECTRICAL DATA - THREE-PHASE MOTORS - 4 poles - STAR DELTA STARTING

MODEL	P2 (HP)	P2 kW	POWER INPUT 50Hz	IN (A)	Is/In	N (min <sup>-1</sup> )	CABLE
							LC (m)
TR12180 - 132 KW	180	132	3 x 400 V ~	266	5,0	2930	8
TR12200 - 147 KW	200	147	3 x 400 V ~	290	6,2	2930	8
TR12230 - 170 KW	230	170	3 x 400 V ~	329	6,1	2920	8
TR12260 - 190 KW	260	190	3 x 400 V ~	371	6,2	2930	8
TR12300 - 220 KW	300	220	3 x 400 V ~	424	6,1	2920	8
TR12340 - 250 KW	340	250	3 x 400 V ~	481	5,9	2920	8

Supplied with 2 cables



### TECHNICAL DATA

**Maximum immersion depth:** 300 m

**Flanges, thread:** 14"

**Maximum number of starts:** 5/h

**Protection class:** IP 68

**Cooling flow speed:** 0,5 m/s up to +45°C with rewindable in PE2+PA

**Single phase power input:** not available

**Three phase power input:** 3x400 V 50 Hz / 3x500V 50 Hz

**Power supply tolerance:** +6% / -14%

**Power cable length:** 8 m

**Possible type of installation:** vertical or horizontal up to 260 HP

**Special versions on request:** voltage and power cables of different length; for the direct start version only, provision for the PT100 or PTC temperature probe, available in AISI 316 stainless steel.

14" asynchronous two-pole submersible motor, designed for pressurization, lifting water from underground and use in irrigation systems in agriculture.

### CONSTRUCTION FEATURES OF THE MOTOR

Rewindable asynchronous two or four pole motor. Jacket in AISI 316 stainless steel. Cooling and lubrication of the thrust unit and bushings by a mixture of water and glycol. SiC/SiC mechanical seal. Rotor mounted on a self-centering Mitchell type thrust bearing unit capable of withstanding high axial loads. The stator is a rewindable type made with copper wire coated with PE2 + PA. Supplied with a single-pole cable directly connected to the winding and earthing cable. The cable is ACS and WRAS certified. Motor suitable for use with variable frequency drive (30 Hz - 50 Hz) in the version with PE2 + PA winding. Electrical protection must be guaranteed by the user. The motor is available with direct or star-delta starting. On request it can be supplied with a predisposition for the installation of the PT100 or PTC temperature sensor. Motor available as TR14N in AISI 316 stainless steel. To be combined with a pump body.

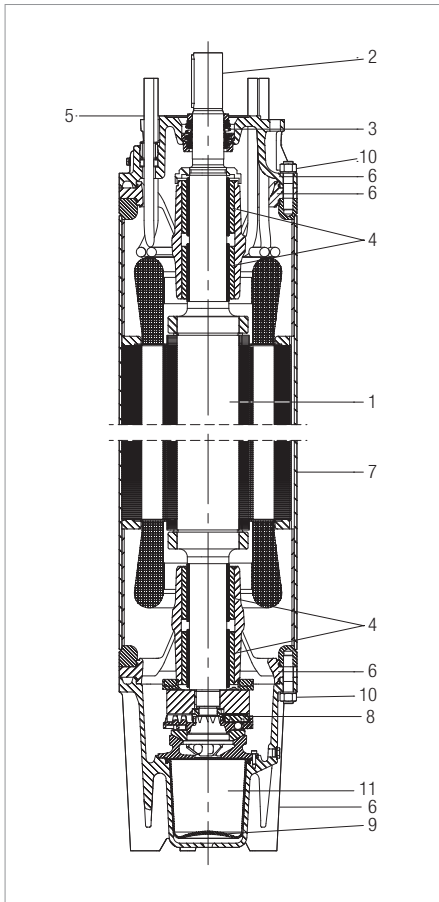


The stator is rewindable and made from PE2+PA coated copper wire.

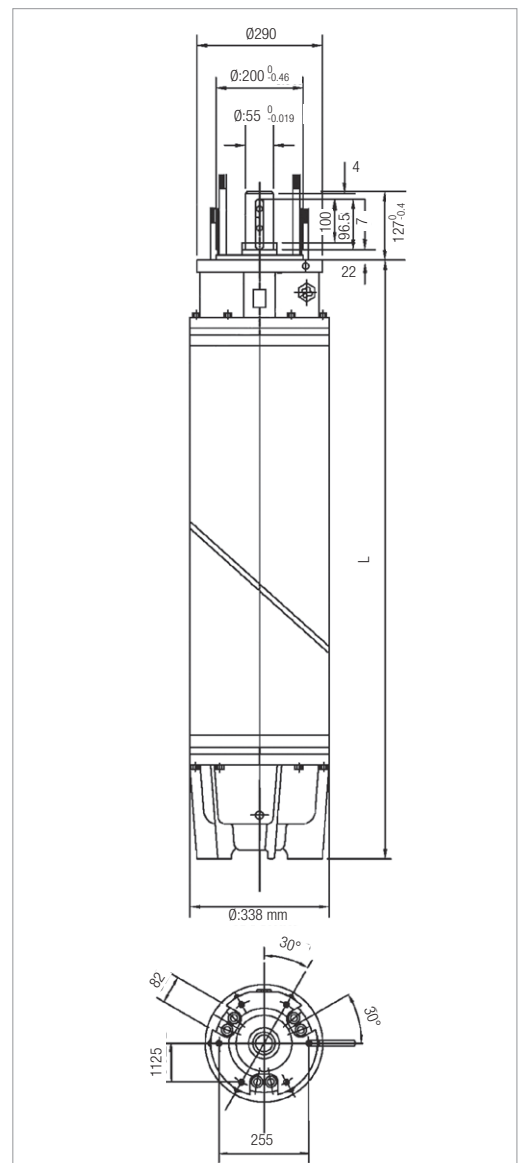


The rotor is mounted on a Mitchell type self-centering thrust block capable of withstanding high axial loads.

### MATERIALS



N.	PARTS	STD VERSION	316 SS VERSION
1	SHAFT	STAINLESS STEEL EN 1.4028 - AISI 420B	STAINLESS STEEL EN 1.4462- AISI 318LN
2	SHAFT END	STAINLESS STEEL EN 1.4028 - AISI 420B	STAINLESS STEEL EN 1.4462- AISI 318LN
3	MECHANICAL SEAL	SIC/SIC	SIC/SIC
4	BUSHINGS	NBR	NBR
5	CABLE	ROUND - 07V2B-F	ROUND - 07V2B-F
6	STRUCTURAL PARTS	CAST IRON EN 0.6025 + CATAPHORESIS COATING	STAINLESS STEEL EN 1.4401 - AISI 316
7	EXTERNAL SLEEVE	STAINLESS STEEL EN 1.4404 - AISI 316L	STAINLESS STEEL EN 1.4404 - AISI 316L
8	THRUST BEARING	STEEL - RUBBER	STEEL - RUBBER
9	DIAPHRAGM	EPDM	EPDM
10	BOLTS & SCREW	STEEL A2-70 - AISI 304	STEEL A4-70 - AISI 316
11	COOLING LIQUID	WATER + GLYCOL	WATER + GLYCOL



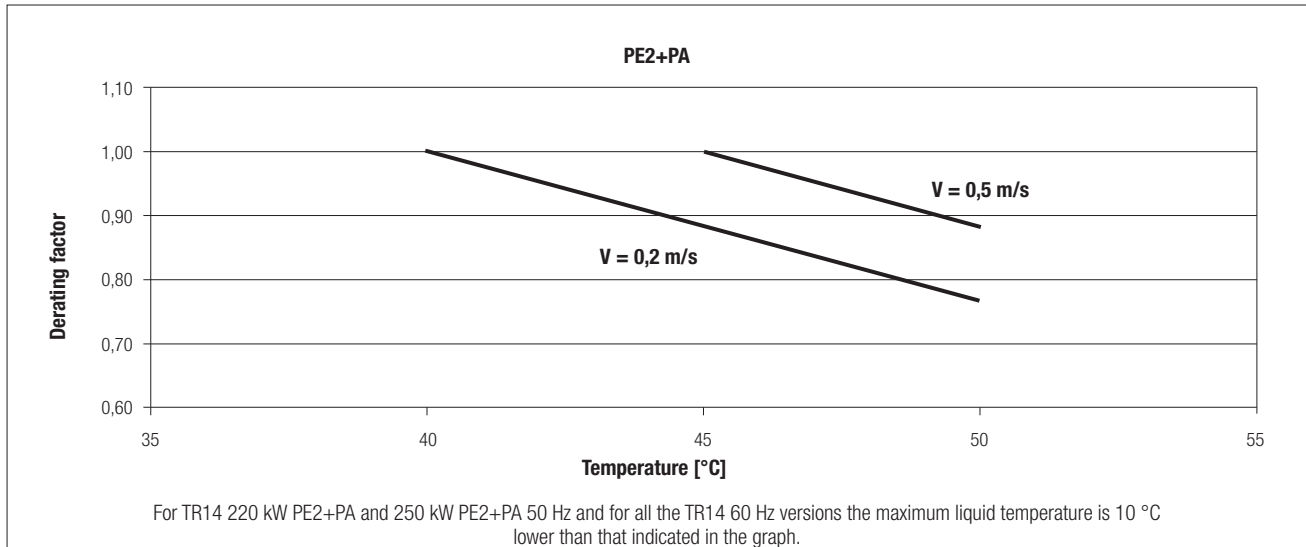
### DIMENSIONS - THREE-PHASE MOTORS - 2 poles

TYPE	P2		LENGTH mm	WEIGHT STD kg	WEIGHT VERSION AISI 316 kg	AXIAL THRUST N
	hp	kW				
50 Hz	300	220	1760	663	683	70000
	400	300	2020	845	865	70000
	350	260	1910	784	804	70000
	450	330	2160	906	926	70000
	500	370	2320	1010	1030	70000
	550	400	2460	1105	1125	70000

### DIMENSIONS - THREE-PHASE MOTORS - 4 poles

TYPE	P2		LENGTH mm	WEIGHT STD kg	WEIGHT VERSION AISI 316 kg	AXIAL THRUST N
	hp	kW				
50 Hz	230	170	1910	776	796	70000
	260	190	2020	855	875	70000
	300	220	2160	950	970	70000
	400	300	2460	1108	1128	70000
	350	260	2320	1065	1085	70000

### DOWNGRADING



### ELECTRICAL DATA - THREE-PHASE MOTORS - 2 poles

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>a</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR14 - 220 KW - 400 V - 2P	300	220	3 x 400 V ~	448	5,5	248307	2935	0,8	89	3x95 + 1x70	6x70 + 2x50	8
TR14 - 260 KW - 400 V - 2P	350	260	3 x 400 V ~	505	6	279899	2945	0,8	88	3x95 + 1x70	6x70 + 2x50	8
TR14 - 300 KW - 400 V - 2P	400	300	3 x 400 V ~	595	5,8	338027	2945	0,82	90	3x95 + 1x70	6x95 + 2x70	8
TR14 - 330 KW - 400 V - 2P	450	330	3 x 400 V ~	651	6	369841	2945	0,82	90	3x95 + 1x70	6x95 + 2x70	8
TR14 - 370 KW - 400 V - 2P	500	370	3 x 400 V ~	745	6,4	412291	2950	0,8	90	3x95 + 1x70	6x95 + 2x70	8
TR14 - 400 KW - 400 V - 2P	550	400	3 x 400 V ~	746	6,8	444486	2940	0,86	90	3x95 + 1x70	6x95 + 2x70	8

### ELECTRICAL DATA - THREE-PHASE MOTORS - 4 poles

MODEL	P2		POWER INPUT 50Hz	I <sub>n</sub> A	I <sub>a</sub> /I <sub>n</sub>	P1 W	N min <sup>-1</sup>	Cos φ	η %	CABLE		
	hp	kW								Ø DOL (mm <sup>2</sup> )	Ø Y/D (mm <sup>2</sup> )	LC m
TR14 - 170 KW - 400 V - 4P	230	170	3 x 400 V ~	350	4	191565	1455	0,79	89	3x70 + 1x50	6x70 + 2x50	8
TR14 - 190 KW - 400 V - 4P	260	190	3 x 400 V ~	387	4,2	214497	1455	0,8	89	3x70 + 1x50	6x70 + 2x50	8
TR14 - 220 KW - 400 V - 4P	300	220	3 x 400 V ~	441	4,1	247482	1455	0,81	89	3x95 + 1x70	6x70 + 2x50	8
TR14 - 260 KW - 400 V - 4P	350	260	3 x 400 V ~	537	4	293357	1450	0,83	89	3x95 + 1x70	6x95 + 2x70	8
TR14 - 300 KW - 400 V - 4P	400	300	3 x 400 V ~	604	3,8	338955	1455	0,81	89	3x95 + 1x70	6x95 + 2x70	8

**P2:** Nominal power  
**V:** Nominal voltage  
**I<sub>n</sub>:** Nominal current  
**I<sub>a</sub>/I<sub>n</sub>:** Starting current/Nominal current  
**P1:** Absorbed power

**N:** Rotations per minute - R.p.m  
**Cos φ:** Power factor  
**η:** Yield  
**Ø:** Cable cross section  
**LC:** Cable length

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