ITT

CentriPro

Chieftain™ Series 400

4” Submersible Motor

Engineered for life

ITT

CentriPro

General Description

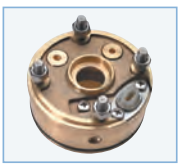
The CentriPro submersible motors are suitable for wells or applications which have an internal diameter of 4" or more. They are designed for use with submersible centrifugal and peripheral pumps having 4" NEMA coupling dimensions. The single phase versions are of PSC (Permanent Split Capacitor) design with the capacitor connected permanently and located in the corresponding control box. The stator windings are rewindable and along with the rotor and bearings are cooled and lubricated in a non-toxic FDA approved oil bath.

Features

- Powers: 0.37kW up to 4kW for single-phase;
  0.37kW up to 7.5kW for three-phase
- Frequency: 50Hz and 60Hz
- Standard voltages:
  Single-phase: 220-230V; 240V
  Three-phase: 380-400V 50Hz; 415V 50Hz
  440-460V 60Hz;other voltages upon request
- Rewindable stator construction
- Rotation:
  Single-phase: counter-clockwise facing the shaft end
  Three-phase: clockwise or counter clockwise
- Outer shell 304 stainless steel
- Upper support bracket of CTG4 type is made of cast iron EN-GJL-250 coated based on epoxidic resins
- Shaft is made entirely of AISI 431
- High starting torque
- Non-toxic FDA approved fluid
- Flange and shaft protrusion in compliance with NEMA standards 4"
- Triple seal system on rotor shaft: bi-directional mechanical seal, radial seal, and sand guard with laminar seal
- Tolerance in conformity to IEC EN 60034-1
- Can be used with variable frequency drive (VFD)
- All motors tested 100%

CTG4
Upper support in cast iron EN-GJL-250

CT4
Upper support in forged brass



CTN4
Upper support in in AISI 304SS investment cast stainless steel

Technical Features

The CTG4 Series has an outer shell of AISI 304 SS and the upper support bracket is of cast iron EN-GJL-250 coated based on epoxidic resins. Thermal expansion of the internal oil is controlled by a compensation diaphragm to keep internal and external pressures equal. Sealing at the rotor is by a multiple system which includes a bi-directional mechanical seal, radial seal, and sand guard with laminar seal.

The stator is removable for rewinding and magnet wire is of Class B rating. Rotors bars are cast aluminium up to 2.2kW and copper cage for higher kW. Bearings are sliding type over-sized to handle the pump axial loads. Motor is supplied with integral 3-core plus earth lead of 2m or 3m depending on the motor output power.

Option

- CT4, Upper support bracket in forged brass
- CTN4, Upper support bracket in AISI 304 SS investment cast stainless steel
- 2.2kW motor with an axial thrust of up to 6500N
- Version with plug-in connector

Specifications

Service: Continuous
Protection: IP 68
Insulation: Class B
Allowable Voltage Variation: -10% / +6% of rated
Thrusts: 3000N up to 2.2kW;
6500N from 3kW up to 7.5kW
Max Immersion Depth: 300 meters
Mounting: Vertical or horizontal (up to 3kW for 1-phase; up to 4kW for 3-phase)
Max Water Temperature: 35^{0}C

Product Identification

C T G 4 4 0 T

Phase
M - Single-phase
T - Three-phase

HP rating x 10

4" Submersible Motor's Upper Support (Material of Construction)
CTG4 - Cast iron EN-GJL-250
CT4 - Forged brass
CTN4 - AISI 304SS investment cast stainless steel

Engineered for life

4" Single-Phase 50Hz Performance Data - Motor Type CTG4-CT4-CTN4

Nominal Power		Tension	Nominal Current	Nominal Speed	Efficiency	Power Factor	Direct Starting		Capacitor		Axial Load	Max Water Temperature	Cable Size	Cable Length
kW	HP	V	A	1/min	%	-	Ca/Cn	Ia/In	μF	Vc	N	^{0}C	mm^2	m
0.37	0.5	220	4.3	2840	51	0.74	0.73	2.9	16	450	3000	35	4 x 1	2
		230	4.8	2840	51	0.74	0.73	2.9	16	450				
		240	4.6	2840	51	0.74	0.73	2.9	16	450				
0.55	0.75	220	5.1	2850	60	0.77	0.73	3.0	20	450	3000	35	4 x 1	2
		230	5.7	2850	60	0.77	0.73	3.0	20	450				
		240	5.5	2850	60	0.77	0.73	3.0	20	450				
0.75	1	220	6.2	2840	62	0.85	0.78	3.2	30	450	3000	35	4 x 1	2
		230	7.0	2840	62	0.85	0.78	3.2	30	450				
		240	6.7	2840	62	0.85	0.78	3.2	30	450				
1.1	1.5	220	9.1	2850	64	0.85	0.67	3.5	40	450	3000	35	4 x 1	2
		230	9.6	2850	64	0.85	0.67	3.5	40	450				
		240	9.2	2850	64	0.85	0.67	3.5	40	450				
1.5	2	220	11.1	2850	68	0.87	0.54	4.3	50	450	3000	35	4 x 1	2
		230	11.5	2850	68	0.87	0.54	4.3	50	450				
		240	11.0	2850	68	0.87	0.54	4.3	50	450				
2.2	3	220	15.4	2840	71	0.93	0.6	3.7	80	450	3000	35	4 x 1	3
		230	14.7	2840	71	0.93	0.6	3.7	70	450				
		240	14.1	2840	71	0.93	0.6	3.7	70	450				
2.2	3	220	15.4	2840	71	0.93	0.6	3.7	80	450	6500	35	4 x 1	3
		230	14.7	2840	71	0.93	0.6	3.7	70	450				
		240	14.1	2840	71	0.93	0.6	3.7	70	450				
3	4	220	20.0	2825	72	0.98	0.5	5.3	100	450	6500	35	4 x 1.5	3
		230	19.1	2825	72	0.98	0.5	5.3	100	450				
		240	18.3	2825	72	0.98	0.5	5.3	100	450				
4	5.5	220	25.0	2840	76	0.98	0.5	3.6	130	450	6500	35	4 x 2	3
		230	23.9	2850	76	0.98	0.5	3.6	130	450				
		240	22.9	2840	76	0.98	0.5	3.6	130	450				

4" Single-Phase 60Hz Performance Data - Motor Type CTG4-CT4-CTN4

Nominal Power		Tension	Nominal Current	Nominal Speed	Efficiency	Power Factor	Direct Starting		Capacitor		Service Factor	Axial Load	Max Water Temperature	Cable Size	Cable Length
kW	HP	V	A	1/min	%	-	Ca/Cn	Ia/In	μF	Vc		N	^{0}C	mm^2	m
0.37	0.5	110	6.7	3450	60	0.88	0.77	0.34	50	250	1.25	3000	35	4 x 1	2
		120	6.1	3450	60	0.88	0.77	0.34	40	250					
		220	3.1	3450	60	0.88	0.77	0.34	12.5	450					
		230	3.3	3450	60	0.82	0.77	3.4	12.5	450					
0.55	0.75	110	8.6	3450	65	0.92	0.62	3.6	70	250	1.25	3000	35	4 x 1	2
		120	7.9	3450	65	0.92	0.62	3.6	60	250					
		220	4.2	3450	67	0.95	0.62	3.6	16	450					
		230	4.6	3450	61	0.85	0.62	3.6	16	450					
0.75	1	110	11.7	3460	62	0.98	0.71	3.9	100	250	1.25	3000	35	4 x 1	2
		120	10.7	3460	62	0.98	0.71	3.9	90	250					
		220	5.6	3460	62	0.98	0.71	3.9	25	450					
		230	5.9	3460	62	0.89	0.71	3.9	25	450					
1.1	1.5	110	16.5	3450	67	0.93	0.58	4	120	250	1.15	3000	35	4 x 1	2
		120	15.2	3450	67	0.93	0.58	4	100	250					
		220	8	3450	67	0.93	0.58	4	30	450					
		230	8.4	3450	67	0.85	0.58	4	30	450					
1.5	2	110	20.7	3450	70	0.96	0.55	4	160	250	1.15	3000	35	4 x 1	2
		120	19	3450	70	0.96	0.55	4	140	250					
		220	10.1	3450	70	0.96	0.55	4	40	450					
		230	10.5	3450	70	0.89	0.55	4	40	450					
2.2	3	110	33	3430	73	0.98	0.6	3.5	240	250	1.15	3000	35	4 x 1.5	3
		120	30.3	3430	73	0.98	0.6	3.5	200	250					
		220	14	3430	73	0.98	0.6	3.5	60	450					
		230	15	3430	73	0.87	0.6	3.5	60	450					
2.2	3	110	33	3430	73	0.98	0.6	3.5	240	250	1.15	6500	35	4 x 1.5	3
		120	30.3	3430	73	0.98	0.6	3.5	200	250					
		220	14	3430	73	0.98	0.6	3.5	60	450					
		230	15	3430	73	0.87	0.6	3.5	60	450					
3	4	220	18.2	3430	73	0.98	0.5	4	80	450	1.15	6500	35	4 x 1.5	3
		230	18.5	3450	73	0.97	0.5	4	80	450					
4	5.5	220	27	3440	73	0.98	0.5	4	130	450	1.15	6500	35	4 x 2	3
		230	24.5	3450	73	0.97	0.5	4	130	450					

4” Three-Phase 50Hz Performance Data - Motor Type CTG4-CT4-CTN4

Nominal Power		Tension	Nominal Current	Nominal Speed	Efficiency	Power Factor	Direct Starting		Axial Load	Max Water Temperature	Cable Size	Cable Length
kW	HP	V	A	1/min	%	-	Ca/Cn	Ia/In	N	^{0}C	mm^2	m
0.37	0.5	230	1.9	2830	66	0.74	2.7	4.5	3000	35	4 x 1	2
		240	1.8	2830	66	0.74	2.7	4.5				
		380	1.2	2830	66	0.74	2.7	4.5				
		400	1.1	2830	66	0.74	2.7	4.5				
		415	1.1	2830	66	0.74	2.7	4.5				
0.55	0.75	230	2.6	2820	68	0.73	3.2	5	3000	35	4 x 1	2
		240	2.5	2820	68	0.73	3.2	5				
		380	1.6	2820	68	0.73	3.2	5				
		400	1.5	2820	68	0.73	3.2	5				
		415	1.5	2820	68	0.73	3.2	5				
0.75	1	230	3.4	2840	73	0.74	3.7	5.7	3000	35	4 x 1	2
		240	3.3	2840	73	0.74	3.7	5.7				
		380	2.1	2840	73	0.74	3.7	5.7				
		400	2	2840	73	0.74	3.7	5.7				
		415	1.9	2840	73	0.74	3.7	5.7				
1.1	1.5	230	4.7	2840	76	0.80	3.1	4.8	3000	35	4 x 1	2
		240	4.4	2840	76	0.80	3.1	4.8				
		380	2.8	2840	76	0.80	3.1	4.8				
		400	2.7	2840	76	0.80	3.1	4.8				
		415	2.4	2840	76	0.80	3.1	4.8				
1.5	2	230	5.7	2830	76	0.83	3.3	4.8	3000	35	4 x 1	2
		240	5.6	2830	76	0.83	3.3	4.8				
		380	3.5	2830	76	0.83	3.3	4.8				
		400	3.3	2830	76	0.83	3.3	4.8				
		415	3.2	2830	76	0.83	3.3	4.8				
2.2	3	230	10.4	2840	77	0.77	3.8	5.5	3000	35	4 x 1	3
		240	10	2840	77	0.77	3.8	5.5				
		380	6.3	2840	77	0.77	3.8	5.5				
		400	6	2840	77	0.77	3.8	5.5				
		415	5.8	2840	77	0.77	3.8	5.5				
2.2*	3*	230	10.4	2840	77	0.77	3.8	5.5	6500	35	4 x 1	3
		240	10	2840	77	0.77	3.8	5.5				
		380	6.3	2840	77	0.77	3.8	5.5				
		400	6	2840	77	0.77	3.8	5.5				
		415	5.8	2840	77	0.77	3.8	5.5				
3	4	230	12.7	2830	80	0.73	3.1	4.5	6500	35	4 x 1	3
		240	12.2	2830	80	0.73	3.1	4.5				
		380	7.7	2830	80	0.73	3.1	4.5				
		400	7.3	2830	80	0.73	3.1	4.5				
		415	7.1	2830	80	0.73	3.1	4.5				
4	5.5	230	16.3	2835	81	0.71	2.8	4.4	6500	35	4 x 1	3
		240	15.6	2835	81	0.71	2.8	4.4				
		380	9.9	2835	81	0.71	2.8	4.4				
		400	9.4	2835	81	0.71	2.8	4.4				
		415	9	2835	81	0.71	2.8	4.4				
5.5	7.5	230	21.8	2850	80	0.70	3.1	4.5	6500	35	4 x 1	3
		240	21.1	2850	80	0.70	3.1	4.5				
		380	13.3	2850	80	0.70	3.1	4.5				
		400	12.6	2850	80	0.70	3.1	4.5				
		415	12.2	2850	80	0.70	3.1	4.5				
7.5	10	230	29.2	2830	82	0.73	3.3	4.7	6500	35	4 x 1.5	3
		240	28.2	2830	82	0.73	3.3	4.7				
		380	17.8	2830	82	0.73	3.3	4.7				
		400	16.9	2830	82	0.73	3.3	4.7				
		415	16.3	2830	82	0.73	3.3	4.7				

4” Three-Phase 60Hz Performance Data - Motor Type CTG4-CT4-CTN4

Nominal Power		Tension	Nominal Current	Service Factor Current	Nominal Speed	Efficiency	Power Factor	Direct Starting		Service Factor	Axial Load	Max Water Temperature	Cable	
													Size	Length
kW	HP	V	A	A	1/min	%	-	Ca/Cn	Ia/In		N	^{0}C	mm^2	m
0.37	0.5	230	2.0	2.2	3440	63	0.80	3.2	5.0	1.25	3000	35	4 x 1	2
		440	1.0	1.1	3440	63	0.79	3.2	5.0					
		460	1.0	1.1	3440	63	0.80	3.2	5.0					
0.55	0.75	230	2.6	3.0	3440	69	0.80	3.4	5.3	1.25	3000	35	4 x 1	2
		440	1.4	1.5	3460	69	0.80	3.4	5.3					
		460	1.3	1.5	3440	69	0.80	3.4	5.3					
0.75	1	230	3.4	3.8	3450	70	0.81	3.5	5.4	1.25	3000	35	4 x 1	2
		440	1.8	2.0	3460	70	0.81	3.5	5.4					
		460	1.7	1.9	3450	70	0.81	3.5	5.4					
1.1	1.5	230	4.6	5.4	3440	76	0.82	3.2	5.2	1.15	3000	35	4 x 1	2
		440	2.4	2.8	3440	76	0.83	3.2	5.2					
		460	2.3	2.7	3440	76	0.82	3.2	5.2					
1.5	2	230	6.2	7.0	3440	78	0.81	3.5	5.6	1.15	3000	35	4 x 1	2
		440	3.2	3.7	3440	78	0.80	3.5	5.6					
		460	3.1	3.5	3440	78	0.81	3.5	5.6					
2.2	3	230	9.8	10.8	3440	79	0.75	3.7	5.8	1.15	3000	35	4 x 1	3
		440	5.1	5.7	3440	79	0.73	3.7	5.8					
		460	4.9	5.4	3440	79	0.75	3.7	5.8					
2.2	3	230	9.8	10.8	3440	79	0.75	3.7	5.8	1.15	6500	35	4 x 1	3
		440	5.1	5.7	3440	79	0.73	3.7	5.8					
		460	4.9	5.4	3440	79	0.75	3.7	5.8					
3	4	230	12.2	15.0	3450	84	0.73	3.3	5.7	1.15	6500	35	4 x 1	3
		440	6.4	7.9	3450	84	0.73	3.3	5.7					
		460	6.1	7.5	3450	84	0.73	3.3	5.7					
4	5.5	230	15.5	17.8	3450	87	0.76	3.2	5.7	1.15	6500	35	4 x 1	3
		440	8.1	9.3	3450	87	0.76	3.2	5.7					
		460	7.8	8.9	3450	87	0.76	3.2	5.7					
5.5	7.5	230	21.3	23.5	3450	85	0.77	3.1	5.3	1.15	6500	35	4 x 1	3
		440	11.1	12.3	3450	85	0.77	3.1	5.3					
		460	10.7	11.8	3450	85	0.77	3.1	5.3					
7.5	10	230	27.3	29.8	3450	87	0.80	3.1	5.7	1.15	6500	35	4 x 1.5	3
		440	14.3	15.6	3450	87	0.80	3.1	5.7					
		460	13.6	14.9	3450	87	0.80	3.1	5.7					

Application Information

1. Operation and Temperature

The submersible motors can operate continuously to supply nominal power provided they are powered by nominal voltage and frequency and the external water temperature outside the motor does not exceed 35^{0}C.
Variations in the power supply voltage must be contained to within -10% to +6% of the nominal value. The service factor is 1 for 50 Hz motors and 1.15 or 1.25 for 60 Hz, depending on motor power output.

2. Winding

The winding is asynchronous rewindable with rotor in short circuit, cooled by non-toxic oil, according to standards of F.D.A. (Food and Drug Administration - U.S.A.). Due to their constructive simplicity, along with some other technological innovations, these motors are long lasting reliable even under extreme conditions.
Single-phase motors are PSC type (permanent split capacitor) with capacitor permanently inserted.

3. Cooling

The class of the method used for cooling is IC40: machine with surface cooling using the surrounding flow, with free convection.

The cooling of the motor is provided by the flow of the external water. The efficiency of cooling depends on the temperature of the liquid and its velocity as it touches the external surface of the motor. In normal bore conditions of use at nominal power, standard-construction CentriPro™ motors have no particular cooling requirements to ensure that they operate at the correct temperature. The natural flow of the water created by the suction of the pump and partly by the convective movement caused by the heating of the external liquid around the motor, guarantee that it is cooled correctly.

For applications where the cooling flow cannot be ensured, a cooling shroud must be used to ensure the cooling water velocity is greater than 0.2m/sec.

Also ensure that the maximum cooling water velocity does not affect the pumps NPSHr.

4. Installation

Generally installations are vertical in bores, with adequate precautions these motors can also be installed horizontally. Refer to previous section with respect to cooling velocities. The mechanical support for the motors must be adequate considering the starting torque and operational forces. Supports should be only at the top and bottom motor end bells.
Additionally, the motor lead must always be submerged.

5. Power Supply Cable

The choice of the power supply cable for the connection of the motor to the control panel is extremely important and all local Standards and Regulations must be adhered to. The cable must fulfill three fundamental requirements:

1) The cable must be suitable for operation in wet submerged environments and its class of insulation must be above the nominal voltage for the system.
2) The capacity of the cable must be in excess of the nominal full load current of the motor.
3) Voltage drops from the point of supply must be contained within strict limits (max 5%). When choosing the cable, it is important to take into account the place of installation and the laying conditions as these are important for the specifications of the cable.
The following cable sizes are a general guide. Refer to Page 11.

6. Electrical Protection

Motors must be protected by overload devices, on all phases, meeting the following tripping standard and times:

EN 60947-4-1
Trip time <10 sec. at 5 x In
Maximum advised number of start-ups/hour:

- Single-phase motors
  0.37kW to 2.2kW - Max. No. of start-ups = 30
  3kW to 4kW - Max. No. of start-ups = 20

- Three-phase motors
  0.37kW to 3kW - Max. No. of start-ups = 30
  4kW to 7.5kW - Max. No. of start-ups = 20

CPC Series

CPC Series Electric Control Box for 4" Single Phase Motors 220/230-240 V

Type	Power		PSC SINGLE PHASE 220/230-240 V					
			Current Rating		Capacitor		Motor Protection	
			A		C µF 250 V		A Max	
without surge arrestor	KW	HP	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
CPC05	0.37	0.50	4.7	3.6	16.0	12.5	6.0	5.0
CPC07	0.55	0.75	5.6	4.9	20.0	16.0	8.0	6.0
CPC10	0.75	1.00	6.7	6.6	30.0	25.0	10.0	8.0
CPC15	1.10	1.50	9.5	9.7	40.0	30.0	13.0	12.0
CPC20	1.50	2.00	11.5	12.3	50.0	40.0	16.0	16.0

CPC/S Series

CPC/S Series Electric Control Box for 4" Single Phase Motors 220/230-240 V

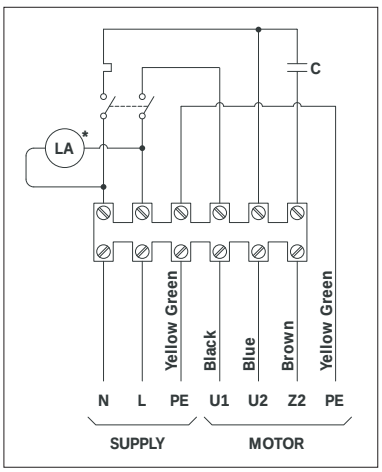
Type	Power		PSC SINGLE PHASE 220/230-240 V					
			Current Rating		Capacitor		Motor Protection	
			A		C µF 450 V		A Max	
with surge arrestor	KW	HP	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
CPC05/S	0.37	0.50	4.7	3.6	16.0	12.5	6.0	5.0
CPC07/S	0.55	0.75	5.6	4.9	20.0	16.0	8.0	6.0
CPC10/S	0.75	1.00	6.7	6.6	30.0	25.0	10.0	8.0
CPC15/S	1.10	1.50	9.5	9.7	40.0	30.0	13.0	12.0
CPC20/S	1.50	2.00	11.5	12.3	50.0	40.0	16.0	16.0
CPC30/S	2.20	3.00	15.7/15	16.5	80/70	60.0	20.0	20.0

CPC/L-HT Series

CPC/L-HT Series Electric Control Box for 4" Single Phase Motors 220/230-240 V

Type	Power		PSC SINGLE PHASE 220/230-240 V					
			Current Rating		Capacitor		Motor Protection	
			A		C µF 450 V		A Max	
with surge arrestor	KW	HP	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
CPC40/L-HT	3.00	4.00	19.1	17.6	100+100	80+100	25-40	25-40
CPC55/L-HT	4.00	5.50	23.9	23.2	130+100	130+100	25-40	25-40

Connection Drawing For The Single Phase Control Box 50/60Hz



Notes:

* - LA is not included on CPC models (optional)

* - LA is included on CPC/S and CPC/L-HT models

Single-Phase Motor Type CTG4-CT4-CTN4

Output		L	Weight		Axial Thrust	
kW	HP	mm	Kg	Lb	N	Lb
0.37	0.5	328	7.9	17.4	3000	675
0.55	0.75	358	9.1	20.1	3000	675
0.75	1	388	10.5	23.1	3000	675
1.1	1.5	428	12	26.4	3000	675
1.5	2	488	14.6	32.1	3000	675
2.2	3	508	18.1	39.8	3000	675
2.2	3	529	18.1	39.8	6500	1460
3	4	609	20.5	45.1	6500	1460
4	5.5	719	25	55	6500	1460

Three-Phase Motor Type CTG4-CT4-CTN4

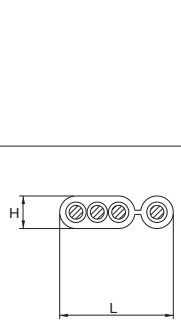
Output		L	Weight		Axial Thrust	
kW	HP	mm	Kg	Lb	N	Lb
0.37	0.5	308	7.1	15.6	3000	675
0.55	0.75	328	8	17.6	3000	675
0.75	1	358	9.2	20.2	3000	675
1.1	1.5	388	10.5	23.1	3000	675
1.5	2	428	12	26.4	3000	675
2.2	3	488	14.8	32.6	3000	675
2.2	3	509	14.8	32.6	6500	1460
3	4	529	16.3	35.9	6500	1460
4	5.5	609	20.1	44.2	6500	1460
5.5	7.5	719	25.7	56.5	6500	1460
7.5	10	799	30	66.0	6500	1460

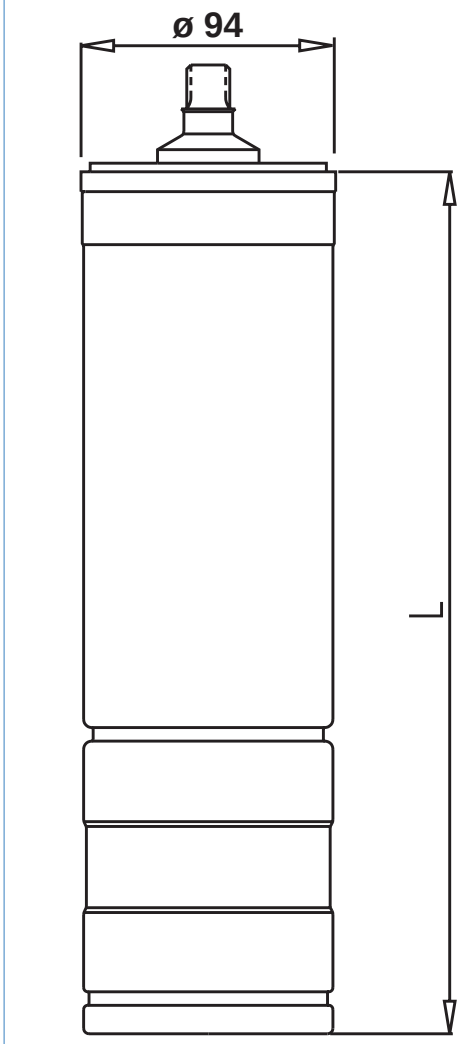
SHAFT AISI 431

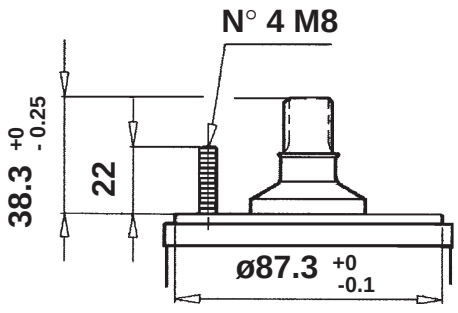
Spline shaft: 14 teeth. 24/48 pitch. 30-degree angle pressure. Tolerance class 5 - coupling ANSI B92.1.
In conformity with NEMA 4".

CABLE DIMENSIONS

Cable Cross-Section	External Dimensions	
mm2	L(mm)	H(mm)
3 X 1 + 1	15.9	5.15
3 X 1.5 + 1.5	16.5	5.15
3 X 2 + 2	18.7	5.5



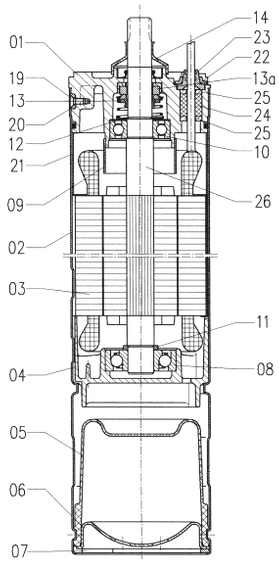




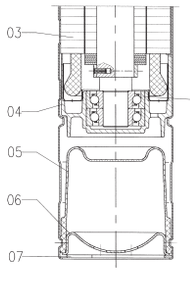
Ref	CTG4	CT4	CTN4	Component
01	GH	OT	304	Upper support
02	304	304	304	Tube
03	-	-	-	Stator with winding
04	AL	AL	AL	Lower support
05	NBR	NBR	NBR	Compensating diaphragm
06	304	304	304	Diaphragm cover
07	304	304	304	Seeger ring
08	AQ	AQ	AQ	Angular bearing
08a	AQ	AQ	AQ	Angular bearing
09	PC	PC	PC	Upper support protection
10	AQ	AQ	AQ	Ball bearing
11	AQ	AQ	AQ	Bearing spacer
12	AQ	AQ	AQ	Compensating ring
13	C-NBR	C-NBR	C-NBR	Rotating mechanical seal
13a	ALO-NBR	ALO-NBR	ALO-NBR	Fixed mechanical seal
14	EP	EP	EP	Sand guard
15	AQ	OT	304	Intake/outlet cap
16	PC	PC	PC	Washer
17	304	304	304	TC screw
18	NBR	NBR	NBR	OR ring
19	304	304	304	TS flat screw
20	304	304	304	Tube blocking washer
21	AQ	AQ	AQ	Upper support spacer
22	304	304	304	Cable clamp
23	PC	PC	PC	Half shell for cable clamp
24	NBR	NBR	NBR	Cable clamp ring
25	304	304	304	Gasket ring
26	431	431	431	Shaft with rotor
27	304	304	304	Hexagonal nut
28	304	304	304	Stud bolt
29	NBR	NBR	NBR	Oil seals
30	AQ	AQ	AQ	Spring

until 2.2 kW

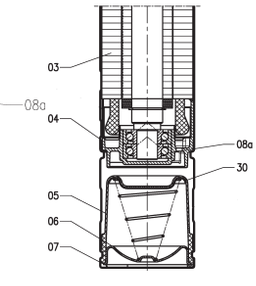
A–A



3 kW



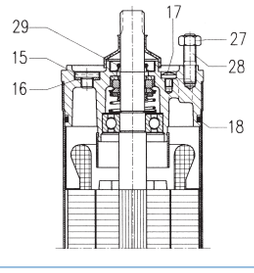
from 4 kW until 7.5 kW



MATERIAL

Stainless Steel AISI 304	304
Aluminium	AL
Rubber - NBR	NBR
Polycarbonates	PC
Brass	OT
Rubber - EPDM	EP
Alumina Oxide (Ceramic)	ALO
Stainless Steel AISI 431	431
Cast Iron EN-GJL-250	GH
Steel	AQ
Graphite	C

B–B



4" SUBMERSIBLE MOTOR - CABLE LENGTH

MOTOR TYPE	NOMINAL POWER kW	NOMINAL POWER HP		CABLE SECTION mm^2 4x1	4x1,5	4x2	4x2,5	4x4	4x6	4x10	4x16
				12	15.5	18.5	21	28	36	50	68
SINGLE PHASE 110 VOLT	0.37	0.5	MAX CABLE LENGTH FROM MOTOR TO CONTROL PANEL IN MT	9	13	19	23	37	56	91	143
	0.55	0.75		7	11	15	19	30	45	73	116
	0.75	1		-	8	12	14	23	35	57	89
	1.1	1.5		-	-	-	10	17	25	41	64
	1.5	2		-	-	-	10	16	23	38	60
	2.2	3		-	-	-	-	-	15	24	38
SINGLE PHASE 220 VOLT	0.37	0.5		33	49	67	84	135	202	330	520
	0.55	0.75		27	41	57	70	113	170	278	438
	0.75	1		22	33	46	57	92	138	227	356
	1.1	1.5		16	24	34	42	67	101	165	260
	1.5	2		13	20	28	35	56	84	137	215
	2.2	3		-	-	19	24	38	57	93	147
	3	4						30	45	73	116
	4	5.5							34	55	87
THREE PHASE 220 VOLT	0.37	0.5		103	154	212	264	423	634	-	-
	0.55	0.75		77	116	159	198	317	476	773	-
	0.75	1		60	90	124	154	247	370	602	-
	1.1	1.5		44	66	91	113	181	272	442	690
	1.5	2		34	51	70	87	139	208	338	529
	2.2	3		20	30	41	51	82	122	199	310
	3	4			24	33	41	66	99	162	252
	4	5.5				26	32	52	78	127	198
	5.5	7.5						39	58	94	147
	7.5	10							42	68	106
THREE PHASE 230 VOLT	0.37	0.5		113	169	233	289	464	696	-	-
	0.55	0.75		87	130	179	223	357	536	-	-
	0.75	1		65	97	133	165	265	398	647	-
	1.1	1.5		48	72	99	123	198	296	482	752
	1.5	2		37	55	76	95	152	228	371	580
	2.2	3		22	33	45	56	89	134	218	340
	3	4			27	37	46	73	110	178	278
	4	5.5				29	36	57	85	139	217
	5.5	7.5						43	64	104	162
	7.5	10							44	71	111
THREE PHASE 380VOLT	0.37	0.5		249	373	513	638	-	-	-	-
	0.55	0.75		233	349	481	598	-	-	-	-
	0.75	1		178	266	367	455	731	-	-	-
	1.1	1.5		129	193	265	330	529	793	-	-
	1.5	2		98	147	203	252	404	605	-	-
	2.2	3		59	89	122	152	244	365	594	-
	3	4		48	72	99	123	197	295	480	749
	4	5.5		36	53	73	91	146	219	356	556
	5.5	7.5			39	53	66	107	160	260	406
	7.5	10					51	82	122	199	311
THREE PHASE 440 VOLT	0.37	0.5		332	498	686	-	-	-	-	-
	0.55	0.75		227	341	469	583	-	-	-	-
	0.75	1		206	308	424	527	-	-	-	-
	1.1	1.5		139	209	288	357	573	-	-	-
	1.5	2		111	166	229	284	456	683	-	-
	2.2	3		70	104	144	179	287	430	699	-
	3	4		62	92	127	158	254	381	619	
	4	5.5		46	69	95	118	189	283	461	720
	5.5	7.5			53	73	91	146	218	355	555
	7.5	10				54	67	107	160	261	408

All specifications are subject to change without notice.

ITT

CentriPro

Note: The information provided on these pages is for guidance only. ITT accepts no responsibility for the misuse or misapplication of this information. All specifications are subject to change without notice.

CentriPro™

Australia
ITT Fluid Technology International (Australia) Pty Ltd
Unit 3/1 Federation Way
Chifley Business Park, Mentone, Vic 3194
Tel: 61-3-9551 7333
Fax: 61-3-9551 0321

China
Nanjing Goulds Pumps Ltd Liability Co
No. 73 Long Jin Road
Luhe, Nanjing 211500
Tel: 86-25-5775 8819
Fax: 86-25-5775 8621/8819

India
ITT India Liaison Office
F-18, 1 Floor,
Bali Nagar
New Delhi 110015
Fax: 91-11-2519 2213

Philippines
ITT Water Technology Int'l Inc
12 Ring Road, LISP II
Calamba
Laguna 4027
Tel: 63-49-545 6810
Fax: 63-49-545 6817

Singapore
ITT Fluid Technology Asia Pte Ltd
298 Tiong Bahru Road
#03/05 Central Plaza
Singapore 168730
Tel: 65-6276 3693
Fax: 65-6276 3685

ITT RCW 308.01 ed 11/06

Engineered for life