



STAINLESS STEEL
GRAND SERIES

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DEEPWELL SUBMERSIBLE PUMPS STAINLESS STEEL - GRAND SERIES

C.R.I. Always equips itself in advance to face the exponentially growing technological challenges across the industry and to gain high level of customer satisfaction.

C.R.I. Introduced wide range of Stainless Steel-Grand Series Submersible Pumps to satisfy the increasing demand of both high flow and high head applications. These pumps are designed and developed using advanced technologies and integrated quality control programs backed by 50 years of profound experience which ensure low life cycle cost. These pumps are manufactured with highest levels of standardization and efficiency of use.

This Stainless Steel Grand series pumps are available in 8", 10", 12" & 14" Nominal Diameters with a maximum flow upto 810 m³/h and maximum head upto 486 meters. These pumps are offered with complete Stainless steel construction to suit customers specific applications and aggressive water handling.

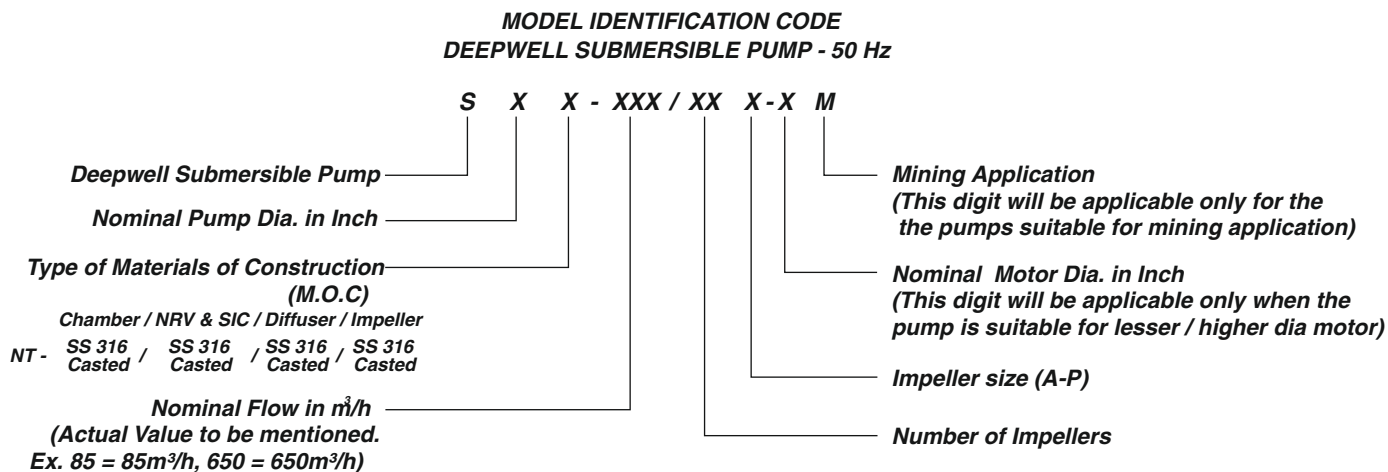
Features : | Best operating efficiency | Precise parts made up of SS 316 | Extremely hardwearing water lubricated bearings | Highly durable & hygienic | Can be easily dismantled and repaired | Can handle more upthrust loads | Good resistance to sand and salt.

Applications : | Irrigation | Civil Water Supply | Industrial & Rural Water Supply | Fire Fighting | Pressure Boosting Units | Sprinkler Systems | Mining | Oil & gas | De-watering | Food processing industries | Golf course | De-salination.



GENERAL INFORMATION

Model Identification Code



Pumped liquids

Clean, thin, non-aggressive, non explosive, clear, cold, fresh water without abrasives, solid particles or fibre having the following characteristics.

a)	Temperature	30° C (max.)
b)	Permissible amount of sand	70g/m ³ (max.)
c)	Chlorides	675 ppm (max.)
d)	Allowable solids	3000 ppm (max.)
e)	Specific gravity	1.004 (max.)
f)	Hardness (Drinking water)	300 (max.)
g)	Viscosity	1mm ² /sec
h)	Turbidity	50 ppm silica scale(max.)
i)	pH	6 to 10

Maximum Temperature of Pumped Liquid

Motor	Minimum cooling flow along the motor	Vertical installation	Horizontal installation minimum 30° angle
8"-14"	0.16 m/s	30° C	30° C

Maximum operating pressure	
8" Submersible pump	4.7Mpa (47 bar)
10" Submersible pump	4.9Mpa (49 bar)
12" Submersible pump	3.2Mpa (32 bar)
14" Submersible pump	2.0Mpa (20 bar)

Pump Operating Limitations					
Nominal diameter		8"(150mm)	10"(250mm)	12"(300mm)	14"(350mm)
Power Range in kW		4 - 110	13 - 185	45 - 250	75 - 300
Speed in rpm		2900	2900	2900	2900
Max. Discharge	m ³ /h	192	390	540	810
	lps	53	108	150	225
Max. Head	m	466	486	320	196
	ft	1529	1594	1050	643
Outlet Size (BSP)		5"	6"	7"	9"

STAINLESS STEEL GRAND SERIES

Materials of Construction

PART NAME	PART No.	NOMINAL DIA . 8"	NOMINAL DIA . 10"	NOMINAL DIA . 12"	NOMINAL DIA . 14"
CHECK VALVE HOUSING	21.00	SS 316 Casted	SS 316 Casted	SS 316 Casted	SS 316 Casted
CHECK VALVE DISC	21.06	SS 316 Casted	SS 316 Casted	SS 316 Casted	SS 316 Casted
DIFFUSER CHAMBER	18.00	SS 316 Casted	SS 316 Casted	SS 316 Casted	SS 316 Casted
IMPELLER	19.00	SS 316 Casted	SS 316 Casted	SS 316 Casted	SS 316 Casted
JOURNAL BEARING	18.07	VITON	VITON	PTFE	PTFE
BUSH	18.06	SS 316	SS 316	SS 316	SS 316
WEAR RING	17.01	POM	POM	POM	POM
SUCTION INTER CONNECTOR	17.00	SS 316 Casted	SS 316 Casted	SS 316 Casted	SS 316 Casted
INLET SCREEN	18.17	SS 316	SS 316	SS 316	SS 316
PUMP SHAFT	22.00	SS 329	SS 329	SS 329	SS 329
CABLE GUARD	17.04	SS	SS	SS	SS
COUPLING	22.01	SS 329	SS 329	SS 329	SS 329

Performance Curve Conditions

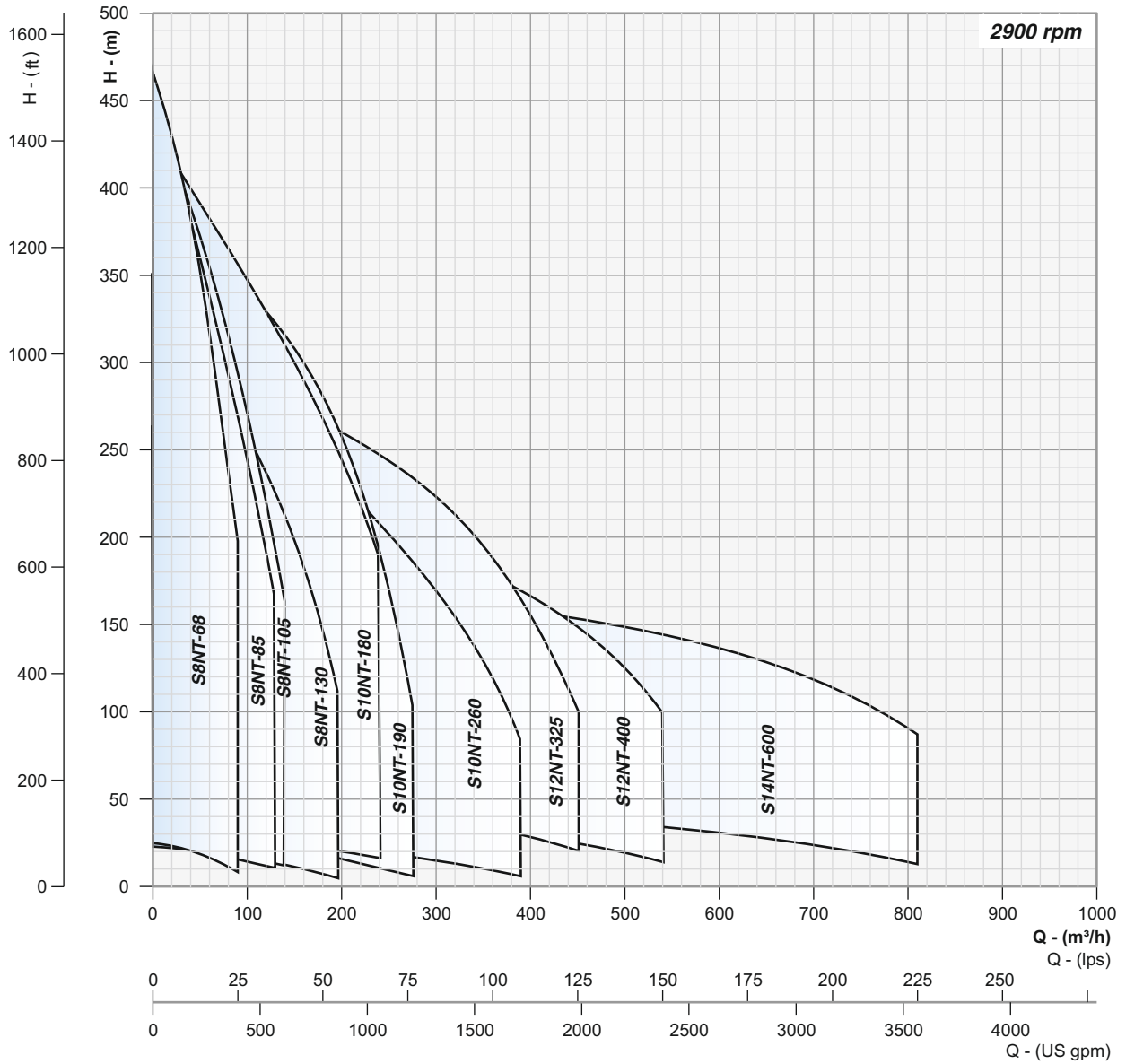
The conditions below apply to the curves shown on the following pages.

- a. The Performance curves show pump performance at rated speed, voltage.
- b. The measurements were made with cold water (20°C) at atmospheric pressure (1bar). When pumping liquids with a density higher than that of water, motors with correspondingly higher outputs must be used.
- c. Pipe friction losses have not been included in the performance curves and performance tables.
- d. Q/H : The curves are inclusive of suction inter-connector losses at the actual speed.
- e. "Y- Curve" indicates the NRV loss to be considered while selecting pump.
- f. Efficiency curve : " η %" shows pump stage efficiency.
- g. Curve tolerance according to ISO : 9906, Grade 3B.
- h. The performances are at rated voltage and are only Indicative. Actual discharge depends on availability of water in well, based on strength of water source, height of water column, submergence of pump, etc.,.
- i. The given performances are for specific materials of construction of pump.
- j. The outlet size of the pumps are as per BSP / GAS standard.

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

GENERAL INFORMATION

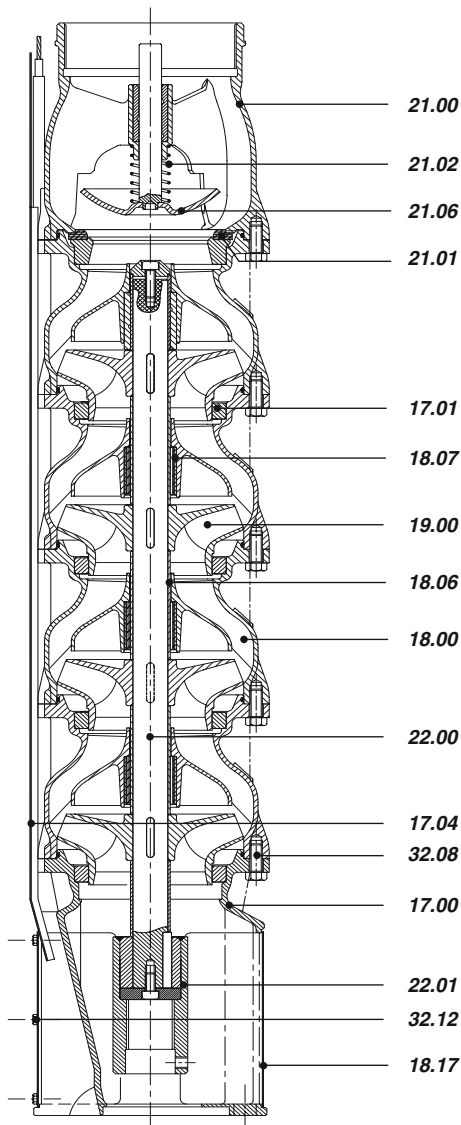
Group Performance Curves - 8", 10", 12" & 14"



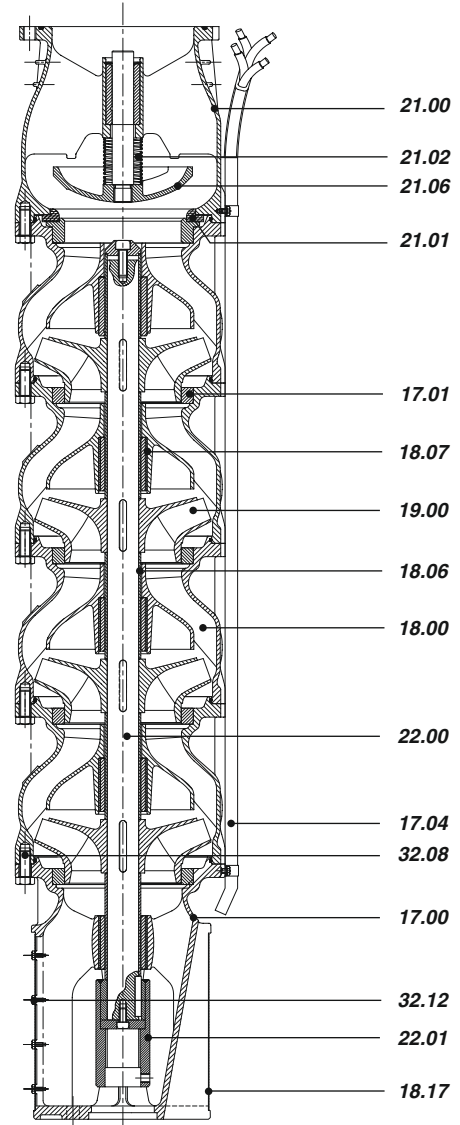
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Cross Sectional Drawing

8" (200mm)



10" (250mm)



Part No.	Part Name
17.00	Suction Inter Connector
17.01	Wear Ring
17.04	Cable Guard
18.00	Diffuser Chamber
18.06	Bush
18.07	Journal Bearing

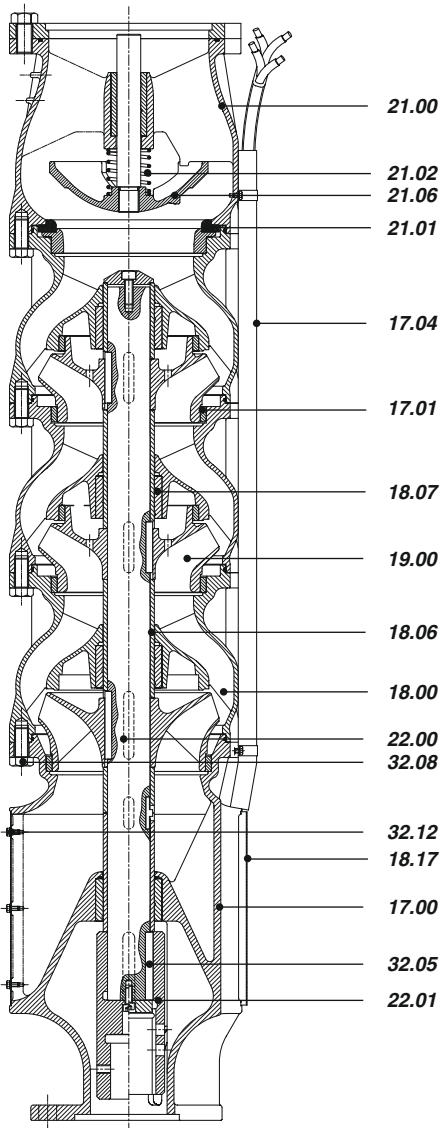
Part No.	Part Name
18.17	Inlet Screen
19.00	Impeller
21.00	Check Valve Housing
21.01	Check Valve Seat
21.02	Check Valve Spring
21.06	Check Valve Disc

Part No.	Part Name
22.00	Pump Shaft
22.01	Coupling
32.05	Coupling Key
32.08	Bolt
32.12	Screw

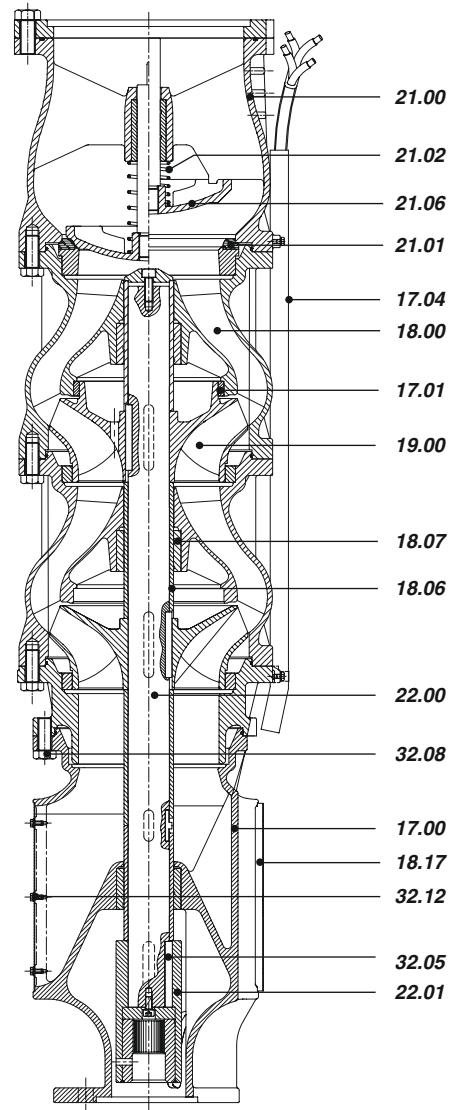
GENERAL INFORMATION

Cross Sectional Drawing

12" (300mm)



14" (350mm)



Part No.	Part Name
17.00	Suction Inter Connector
17.01	Wear Ring
17.04	Cable Guard
18.00	Diffuser Chamber
18.06	Bush
18.07	Journal Bearing

Part No.	Part Name
18.17	Inlet Screen
19.00	Impeller
21.00	Check Valve Housing
21.01	Check Valve Seat
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