

hydroo[®]

SDROO SERIES
SX/SN

**Submersible
borehole pump
50Hz**





PRESENTATION

Hydroo Pump Industries SL is an enterprise specialised in the research, development and large-scale production of Stainless Steel centrifugal pumps. We have a vertical integration of the production processes, standing out stamping, welding and motor wiring in 6 value centers and production units. All of them with a high performance management on pump engineering and production quality.

HYDROO has set up a wide range of pumping solutions for many applications as building services, industry, irrigation and industrial process. Customers enjoy of the highest performance in booster sets and pressurization, fire-fighting sets, pumping of underground water, HVAC, drainage and sewage, utilities, desalination and OEM integrations. Versions in 50 Hz and 60 Hz are available, as well as any modification on materials, on request.

Global water challenges require excellence in pumping technologies

and close cooperation between pump designers, manufacturers and pump engineers. In order to better meet the customers' needs and requirements our company is facing an expansion of its operations worldwide, providing timely and effective services in more than 30 countries. With tight relationships in many regions, we're proud to introduce a new regional value center for Europe. We are based near Barcelona at the Girona industrial area. Hydroo is a trademark to forge excellent and successful business relationships with our value customers by means of an operative assembling unit and an application engineering unit. HYDROO trademark wants to symbolize the firm commitment for a high level service to our value partners.

At Hydroo we bet on a high level service to our value pump partners.

SX, SN

Stainless steel submersible borehole pump

Applications

Water supply
Irrigation
Sprinkling and irrigation

Description

Vertical multistage pump with water-filled or oil-filled NEMA standard submersible motors for 4"-6"-8" deep wells. Built-in non-return valve included. Most parts made of stamped and welded AISI304 Stainless Steel.

Performance range

Capacity: Q up to 260 m³/h

Head: H up to 381 m

Speed: n 2900 rpm or 3500 rpm

Power: P up to 110 kW

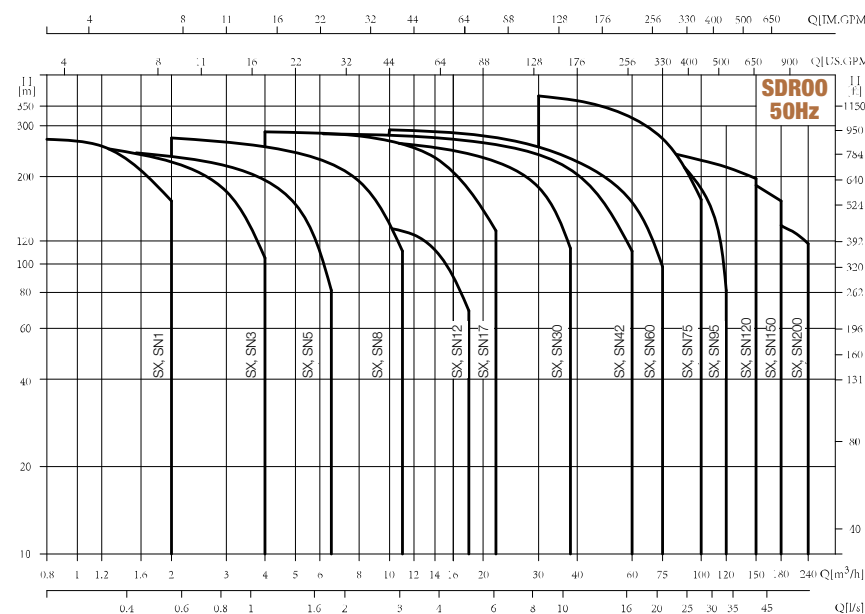
Standard material

Impeller, diffuser and shaft made in AISI304 SS. Also available, upon request, plastic made inner parts with floating impellers.

Pumps in 3"-4" with composite floating impellers available.



Performance scope



Typical applications

- Circulation or boosting for clean water, demineralized water.
- Water supply, irrigating system.
- Lowering ground water level.
- Boosting.
- Other industrial applications.

Operation conditions

- Solid grain-or-fiber-free dilute clean non-corrosive liquids.
- Maximum working pressure: 38 bar
- pH: 6.5-8.5

Curve conditions

- The curve tolerance complies with ISO9906 Annex A.
- All curves are based on the measured values of 50Hz: constant motor speed 2850r/min or 2900r/min.
- All measurements are carried out with gas-free water of temperature 20 °C. The curve is applicable to kinematical viscosity 1mm/s. In case density of the liquid conveyed by the pump is higher than that of water, it is necessary to use corresponding motor of higher output power.
- The thickened curve means the recommended performances scope.
- The performance curve includes loss caused by check valve etc.

Performance curve

- Q/H curve means flow and head under the rated speed.
- Power curve: P2 means input power of each grade, curves are shown for complete (1/1) and for reduced diameter (2/3) impellers.
- Efficiency curve: Eta means the stage efficiency of the pump.

NEMA Motor

- 4" Motor Stainless steel (there is bronze flange or ss flange)
Single phase: 0.37 kW~2.2 kW
Three phase: 0.37 kW~7.5 kW
- 6" Motor Cast iron (Standard), Stainless steel (If required, need to specify) Three phase: 4 kW~37 kW
- 8" Motor Cast iron (Standard), Stainless steel (If required, need to specify) Three phase: 5.5 kW~110 kW

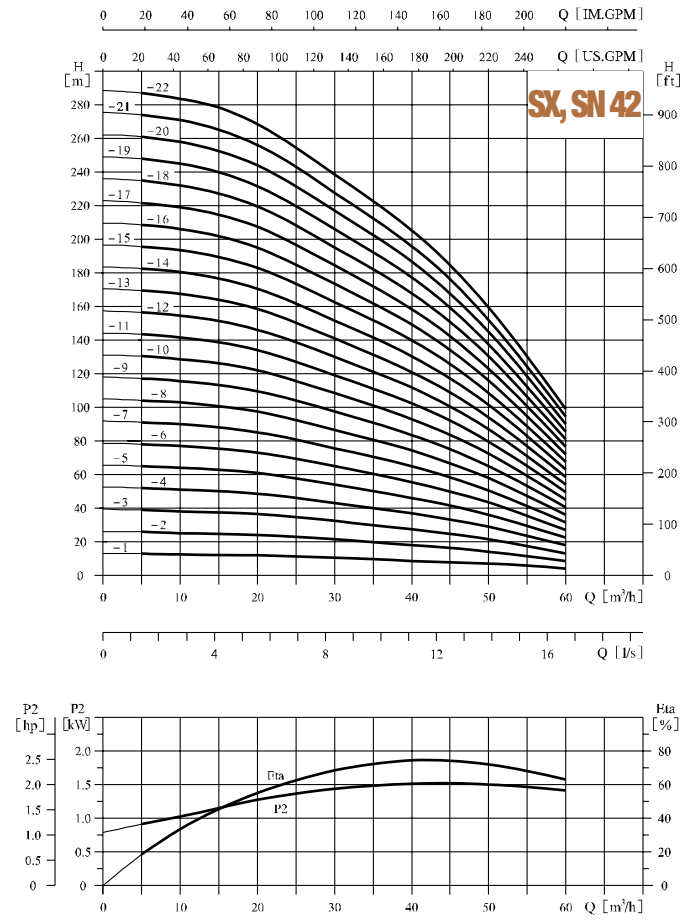
Product range

Description	SX, SN 1	SX, SN 3	SX, SN 5	SX, SN 8	SX, SN 12	SX, SN 17	SX, SN 30
Rate flow [m ³ /h]	1	3	5	8	12	17	30
Rate flow [l/s]	0.28	0.83	1.39	2.22	3.33	4.72	8.33
Flow range [m ³ /h]	0.2~2	0.8~4	1~6.5	2~11	3~18	4~22	5~38
Flow range [l/s]	0.06~0.56	0.22~1.1	0.28~1.8	0.56~3.1	0.83~5	1.11~6.1	1.39~10.6
Max. pressure [bar]	28	25	24	27	16	26	28
Motor power [kW]	0.37~2.2	0.37~3	0.37~4	0.75~7.5	1.5~7.5	0.55~15	1.1~22
Temp. [°C]	45	56	59	60	60	73	74
Pipe screw joint	Rp1¼	Rp1¼	Rp1½	Rp2	Rp2	Rp2½	Rp3

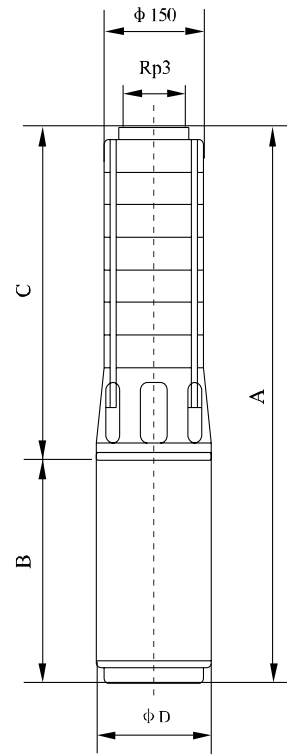
Description	SX, SN 42	SX, SN 60	SX, SN 75	SX, SN 95	SX, SN 120	SX, SN 150	SX, SN 200
Rate flow [m ³ /h]	42	60	75	95	120	150	200
Rate flow [l/s]	11.7	16.7	20.8	26.4	33.3	41.6	55.6
Flow range [m ³ /h]	5~60	10~75	30~100	40~120	60~150	80~180	100~240
Flow range [l/s]	1.39~16.7	2.8~20.8	8.3~27.8	11.1~33.3	16.5~41.6	22.2~50	27.8~66.7
Max. pressure [bar]	28	29	38	34	25	23	16
Motor power [kW]	1.1~37	2.2~37	7.5~75	9.2~75	11~110	9.2~110	30~110
Temp. [°C]	75	79	79	80	77	77	79
Pipe screw joint	Rp3	Rp4	Rp5	Rp5	Rp6	Rp6	Rp6

SX, SN 42

Performance curve ISO9906 Annex A 2850rpm



Installation sketch



Performance table

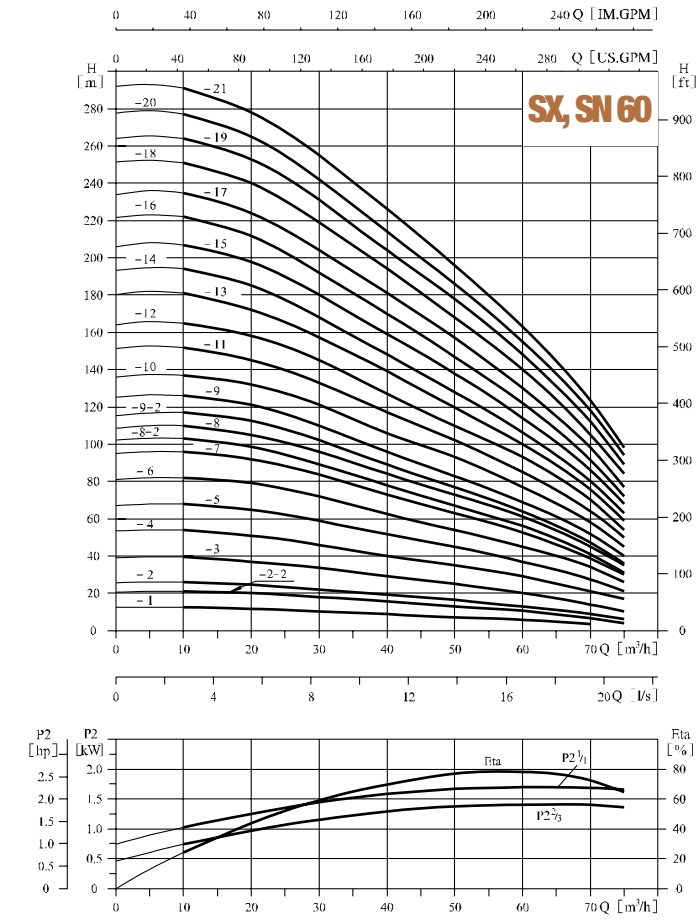
Model	Driving motor (kW)		Q (m³/h)	H (m)							
	(kW)	(hp)		5	10	20	30	40	42	50	60
SX, SN42-1	2.2	3	13	12.5	12	10.5	9	8.5	7	4	
SX, SN42-2	3.0	4	26	25.5	24	21.5	18.5	17	14.5	8.5	
SX, SN42-3	5.5	7.5	40	38.5	36	32.5	28	26.5	22	13	
SX, SN42-4	7.5	10	53	52	49	43	37	36	29	18	
SX, SN42-5	7.5	10	66	65	61	54	47	45	38	23	
SX, SN42-6	9.2	12.5	79	78	74	66	57	54	45	28	
SX, SN42-7	11	15	92	91	86	77	66	63	52	32	
SX, SN42-8	13	17.5	105	104	98	87	75	72	58	36	
SX, SN42-9	15	20	118	117	110	97	84	80	65	40	
SX, SN42-10	15	20	132	130	122	108	93	89	72	45	
SX, SN42-11	18.5	25	144	142	134	119	103	98	79	49	
SX, SN42-12	18.5	25	157	155	146	130	112	107	87	54	
SX, SN42-13	22	30	170	168	158	141	122	116	94	58	
SX, SN42-14	22	30	183	181	170	152	131	125	102	63	
SX, SN42-15	22	30	196	194	182	163	140	134	109	67	
SX, SN42-16	25	34	209	207	194	174	150	143	116	72	
SX, SN42-17	25	34	222	220	206	184	159	152	123	77	
SX, SN42-18	30	40	235	233	218	195	168	161	131	81	
SX, SN42-19	30	40	248	246	231	206	178	170	138	86	
SX, SN42-20	30	40	261	259	243	217	187	179	145	90	
SX, SN42-21	37	50	274	271	255	228	196	188	152	95	
SX, SN42-22	37	50	287	283	267	238	205	197	160	99	

Size and weight

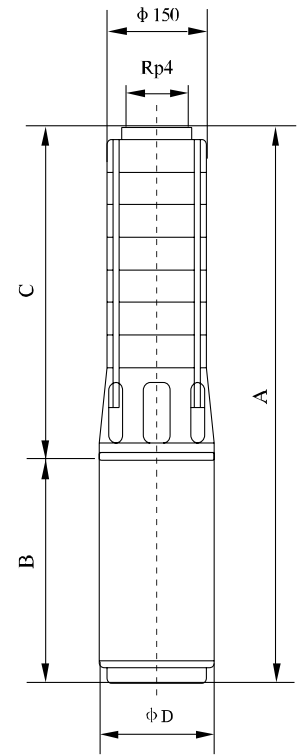
Model	Size (mm)				Weight (kg)
	A	B	C	ΦD	
SX, SN42-1	888	510	378	96	29
SX, SN42-2	1111	620	491	96	33
SX, SN42-3	1444	840	604	96/143	40/48
SX, SN42-4	1637	920	717	96/M3	47/58
SX, SN42-5	1750	920	830	96/143	49/60
SX, SN42-6	1856	897	959	143	73
SX, SN42-7	2014	942	1072	143	80
SX, SN42-8	2165	980	1165	143	89
SX, SN42-9	2328	1030	1298	143	97
SX, SN42-10	2441	1030	1411	143	100
SX, SN42-11	2614	1090	1524	143	109
SX, SN42-12	2727	1090	1637	143	111
SX, SN42-13	2910	1160	1750	143	127
SX, SN42-14	3023	1160	1863	143	129
SX, SN42-15	3136	1160	1976	143	131
SX, SN42-16	3331	1242	2089	143	145
SX, SN42-17	3444	1242	2202	143	147
SX, SN42-18	3697	1382	2315	143	162
SX, SN42-19	3810	1382	2428	143	164
SX, SN42-20	3923	1362	2541	143	167
SX, SN42-21	4224	1570	2654	143	192
SX, SN42-22	4337	1570	2767	143	194

SX, SN 60

Performance curve ISO9906 Annex A 2850rpm



Installation sketch



Performance table

Model	Driving motor (kW)		Q (m³/h)	H (m)							
	(kW)	(hp)		10	20	30	40	50	60	70	75
SX, SN60-1	2.2	3	12.5	12	10.5	8.5	7	6	4	—	
SX, SN60-2-2	3.0	4	21	20	18	15.5	13	10.5	6.5	4	
SX, SN60-2	4.0	5.5	26	24.5	22	19	16.5	12.5	9	6	
SX, SN60-3	5.5	7.5	40	37	34	29	25	20	14	10	
SX, SN60-4	7.5	10	54	51	46	40	35	29	21	17	
SX, SN60-5	9.2	12.5	68	65	59	51	45	37	28	21	
SX, SN60-6	11	15	82	79	72	62	54	45	34	26	
SX, SN60-7	13	17.5	96	92	84	73	63	53	39	30	
SX, SN60-8-2	13	17.5	103	99	89	78	67	56	41	31	
SX, SN60-8	15	20	110	105	96	84	73	61	45	35	
SX, SN60-9-2	15	20	117	112	102	89	77	64	47	36	
SX, SN60-9	18.5	25	124	121	110	96	85	69	52	40	
SX, SN60-10	18.5	25	137	132	121	106	93	77	58	45	
SX, SN60-11	22	30	152	145	133	117	102	85	64	50	
SX, SN60-12	22	30	165	158	145	127	110	93	70	54	
SX, SN60-13	22	30	181	172	157	139	120	100	75	59	
SX, SN60-14	25	34	194	185	168	148	128	106	80	63	
SX, SN60-15	25	34	207	198	180	159	138	114	85	66	
SX, SN60-16	30	40	222	212	192	170	147	122	91	72	
SX, SN60-17	30	40	235	224	204	181	157	130	98	77	
SX, SN60-18	30	40	251	240	219	194	166	140	105	84	
SX, SN60-19	37	50	264	253	231	204	178	148	112	89	
SX, SN60-20	37	50	277	265	242	214	186	155	118	94	
SX, SN60-21	37	50	291	278	255	226	196	163	123	98	

Size and weight

Model	Size (mm)				Weight (kg)
	A	B	C	ΦD	
SX, SN60-1	878	510	368	96	30
SX, SN60-2-2	1101	620	481	96	33
SX, SN60-2	1263	782	481	96/143	35/41
SX, SN60-3	1434	840	594	96/143	41/49
SX, SN60-4	1627	920	707	96/143	48/59
SX, SN60-5	1717	897	820	143	72
SX, SN60-6	1891	942	949	143	78
SX, SN60-7	2042	980	1062	143	87
SX, SN60-8-2	2155	980	1175	143	88
SX, SN60-8	2205	1030	1175	143	96
SX, SN60-9-2	2318	1030	1288	143	97
SX, SN60-9	2378	1090	1288	143	105
SX, SN60-10	2491	1090	1401	143	107
SX, SN60-11	2674	1160	1514	143	123
SX, SN60-12	2787	1160	1627	143	125
SX, SN60-13	2900	1160	1740	143	127
SX, SN60-14	3095	1242	1853	143	141
SX, SN60-15	3208	1242	1966	143	143
SX, SN60-16	3461	1382	2079	143	158
SX, SN60-17	3594	1382	2192	143	160
SX, SN60-18	3687	1382	2305	143	162
SX, SN60-19	3988	1570	2418	143	188
SX, SN60-20	4101	1570	2531	143	190
SX, SN60-21	4214	1570	2644	143	191

HY06

6" Rewindable oil Filled submersible Motors

Motors designed to work in 6" or wider wells. The use of very high quality Made in Italy materials and our strict tests together with consolidated know how ensure high mechanical resistance and high performing electric features.

All parts in contact with water are in AISI 304 stainless steel. The power cable with removable connector ensures perfect water-tightness. Designed to be easily repairable.

Product features

External Sleeve And Bottom:

Made in AISI 304 stainless steel. More specifically, the sleeve is in 304L (Low Carbon) to avoid possible corrosions on the welding.

Upper Support:

Cast iron with cataphoresis treatment. Sleeve clamping is ensured for the whole series by 8 inserts.

Mechanical Seal:

Graphite/ceramic in the standard version; SIC-SIC version available upon request.

Ball Bearings:

Duly oversized to ensure a long lasting motor.

Stator:

Specifically developed to achieve maximum electrical yield. Airtight sealed and immersed in selected mineral white and highly refined oil, suitable to be used in drinking water (F.D.A., Food and Drug Administration, approved).

Removable Power Cable-Connector:

It ensures perfect sealing in the most critical conditions and it aids maintenance operations. More specifically, the connector prevents oil from rising in the conductors up to the joint, thus enabling immersion at greater depths. The power cable complies with all major standards on the use in drinking water (KTW, ACS, WRAS).

Shaft:

Carbon-steel alloys in the rotor area, to foster electrical features. DUPLEX stainless steel projection. This steel combines excellent resistance to corrosion and high mechanical resistance, which is necessary where static torque becomes really important.

100% Tested:

All motors are tested at the end of the line. An extremely effective seal check is also carried out on all motors.

Three phase submersible motors 50Hz 400v oil filled

Type	Voltage [V]	P ₂ [Hp]	P ₂ [kW]	Ph	I _n [A]	I _{lavv} [A]	rpm	cos	[%]	Thrust load [N]	Length A [mm]	Weight [kg]	Cable section [mm ²]	Cable Length [m]
HY06-400T400 DOL HY06-400T400 DS	400 400/690	5,5	4	3	9,1	47	2840	0,86	74	10000	595	34	4 x 4	3
HY06-550T400 DOL HY06-550T400 DS	400 400/690	7,5	5,5	3	12,8	66	2840	0,84	74	10000	625	41	4 x 4	3
HY06-750T400 DOL HY06-750T400 DS	400 400/690	10	7,5	3	16,8	81	2850	0,83	78	10000	660	46	4 x 4	3
HY06-920T400 DOL HY06-920T400 DS	400 400/690	12,5	9,2	3	21,2	98	2880	0,77	81	10000	700	48	4 x 4	3
HY06-1100T400 DOL HY06-1100T400 DS	400 400/690	15	11	3	22,9	123	2850	0,82	85	10000	765	52	4 x 4	3
HY06-1300T400 DOL HY06-1300T400 DS	400 400/690	17,5	13	3	27,6	141	2860	0,80	84	10000	820	57	4 x 4	3
HY06-1500T400 DOL HY06-1500T400 DS	400 400/690	20	15	3	30,7	158	2840	0,86	82	10000	820	58	4 x 4	3
HY06-1850T400 DOL HY06-1850T400 DS	400 400/690	25	18,5	3	38,0	231	2850	0,84	84	20000	883	64	4 x 8	4
HY06-2200T400 DOL HY06-2200T400 DS	400 400/690	30	22	3	45,5	258	2850	0,83	84	20000	953	71	4 x 8	4
HY06-2600T400 DOL HY06-2600T400 DS	400 400/690	35	26	3	52,0	296	2850	0,85	85	20000	1018	79	4 x 8	4
HY06-3000T400 DOL HY06-3000T400 DS	400 400/690	40	30	3	61,5	348	2860	0,83	85	20000	1098	87	4 x 8	4
HY06-3700T400 DOL HY06-3700T400 DS	400 400/690	50	37	3	76,0	396	2840	0,84	84	20000	1233	99	4 x 8	4

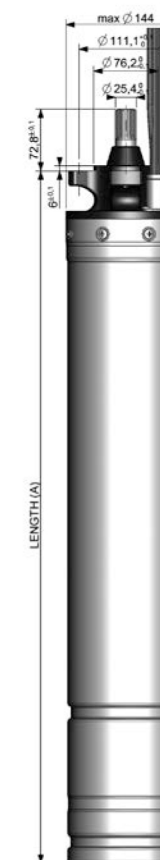


Technical Specifications

Motor/Pump Flange	6" Nema Standard
Degree of protection	IP 68
Insulation Class	F
Voltage tolerance	- 10% / + 10%
Pumped liquid temperature	0°C - 40°C 32°F - 104°F
Min. Cooling Flow	0,1 m/s 0,328 ft/s
Max. Starts / Hour	30
Mounting	Vertical And/Or Horizontal
Max. Immersion Depth	300M
Thrust Load	
From 5,5 HP to 20 HP	10.000N
From 25 HP to 50 HP	20.000N

Rewindable motor

Cables, Voltage, Thrust Loads [...]
Special Versions Available.



hydroo®

Be pumping partners

HYDROO
Pump Industries SL

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201841-CTL-SX&SN-EN
subject to amendments

