



## TECHNICAL DATA

### Operating range:

capacity up to 122 gpm; head up to 1028 ft (445 psi)

**Liquid quality requirements:** clean, free from solid or abrasive contaminants, non-viscous, non-aggressive, uncrystallised and chemically neutral.

**Liquid temperature range:** from 32°F to +104°F

**Maximum permitted amount of sand:** 120 g/m<sup>3</sup>.  
300 gr/m<sup>3</sup> (only for S75)

**Installation:** in 4" wells or larger, tanks and cisterns, vertical position.

**Starts/hour:** max 20.

**Cooling flow:** 9.84 ft/sec @ 95 °F

**Special executions on requests:** alternative voltages and/or frequencies.

On request, the single phase version can be supplied with **CONTROL BOX 4CBUS** for the increase of the starting torque.

## APPLICATIONS

Submersible electric pumps for 4" wells or larger, capable of generating a wide range of flows and heads.

These units have a very extensive range of applications

- Domestic and industrial water supply
- Acqueducts
- Fire-fighting systems
- Pressurizing water system
- Shower and running irrigation
- Several other industrial applications
- Farming and agriculture

## CONSTRUCTION FEATURES OF THE PUMP

Multistage centrifugal type with radial or semi-axial impellers. Pump and motor directly coupled with rigid coupling. Technopolymer impellers with stainless steel wearing parts, fitted on floating clearance rings made of synthetic low abrasion material, and technopolymer diffusers that impart significant wear resistance to the pump. Pump liner, shaft and coupling, strainer and cable sheath in stainless steel.

Base support and upper head in microcast AISI 304 stainless steel; check valve incorporated in the head.

## CONSTRUCTION FEATURES OF THE MOTOR

Submersible asynchronous two-pole motor with the parts in contact with water made of AISI 304 stainless steel.

Squirrel cage rotor mounted on self-centring thrust block designed to withstand significant axial loads. Cooling of the bearing assembly and the bushings is provided by water, thereby eliminating the risk of contamination. Canned-type stator installed inside an airtight casing made of stainless steel.

Capacitor and manual reset ampere protection in the control board supplied as standard with the single-phase version.

Overload protection to be provided by the user for the three-phase version.

**Flanging:** NEMA-4"

**Protection class:** IP 68

**Insulation class:** F

<b>Supply voltage:</b>	single-phase	115V / 60 Hz.
	single-phase	230 V / 60 Hz.
	three-phase	230 V / 60 Hz.
	three-phase	460 V / 60 Hz.

## SUPPLY

S4 submersible electric pumps in the three-phase version are supplied as a pump and motor kit.

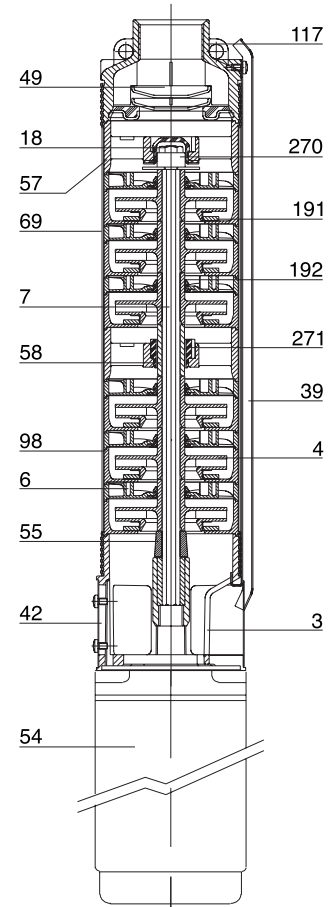
# S

## 4" SUBMERSIBLE PUMPS FOR DOMESTIC WATER SUPPLY

### MATERIALS

N.	PART*	MATERIALS
3	BASE SUPPORT	AISI 304 MICROCAST STAINLESS STEEL
4	IMPELLER	TECHNOPOLYMER A with thrust in STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
6	DIFFUSER	TECHNOPOLYMER A
7	SHAFT WITH COUPLING	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
18	LOCKING NUT	STAINLESS STEEL
39	CABLE SHEATH	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
42	STRAINER	STAINLESS STEEL
49	VALVE	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
54	MOTOR	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
55	SPACER	TECHNOPOLYMER A
57	SUPPORT	TECHNOPOLYMER A
58	INTERMEDIATE BUSHING	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
69	PUMP LINER	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
98	DIFFUSER BODY	TECHNOPOLYMER A
117	UPPER HEAD	AISI 304 MICROCAST STAINLESS STEEL
191	FRONT THRUST RING	ABRASION-PROOF SYNTHETIC MATERIAL
192	REAR THRUST RING	ABRASION-PROOF SYNTHETIC MATERIAL
270	UPPER SHAFT GUIDE BUSH	RUBBER
271	INTERMEDIATE SHAFT GUIDE BUSH	ABRASION-PROOF SYNTHETIC MATERIAL

\* In contact with the liquid.



## MOTOR OPTIONS

### TW & TWX

4" submersible asynchronous two-pole, two wire electric motor made entirely of AISI 304 stainless steel for the parts in contact with water. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Kingsbury self-centring thrust block designed to withstand significant axial loads. Stator housed in an airtight Resin filled AISI 304L stainless steel casing with internal sleeve and outer casing and flanges.

The 4TWX version entirely in AISI 316 stainless steel is available on request.

The capacitor is included in the motor stator, and the motor does not therefore require the use of a control box. Thermal protection included in the motor of 0,5 HP to 1,5 HP

### GG & GX

4" submersible asynchronous two-pole, three wire electric motor made entirely of AISI 304 stainless steel for the parts in contact with water. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Kingsbury self-centring thrust block designed to withstand significant axial loads. Stator housed in an airtight Resin filled AISI 304L stainless steel casing with internal sleeve and outer casing and flanges.

The 4GX version completely in AISI 316 stainless steel is available on request.

The cable connector is removable for the purpose of quick and easy maintenance. The motor is suitable for use with variable frequency drive (30 Hz - 60 Hz). For the 60 Hz single-phase version, the capacitor and manually resettable overload protection are in the electrical control box provided separately. Overload protection to be provided by the user for the three-phase version.

### OL & OLTW

4" rewindable submersible asynchronous two-pole electric motor made entirely of AISI 304 stainless steel for the parts in contact with water. Cooling and lubrication of ball bearings is assured by a special FDA approved coolant. Stator housed in a AISI 304L stainless steel casing fixed with steel pins to the upper support of the motor. The cable connector is removable for the purpose of quick and easy maintenance. The motor is suitable for use with variable frequency drive (30 Hz - 50/60 Hz).

For the single-phase version, the capacitor and manually resettable overload protection are in the electrical control box provided separately;

there is also a 4OLTW version with capacitor included in the motor.

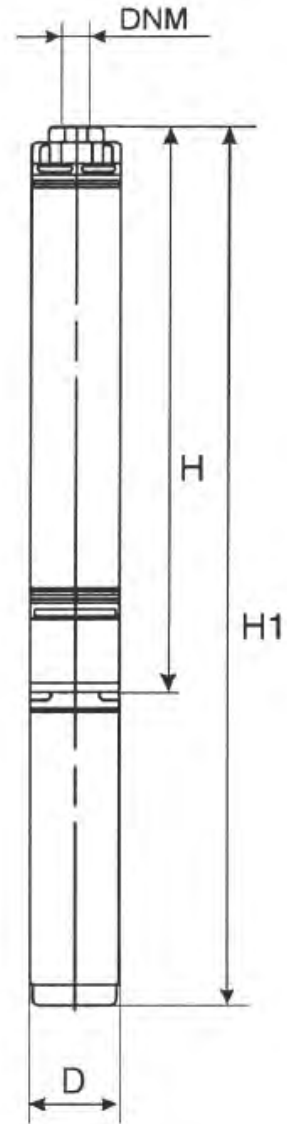
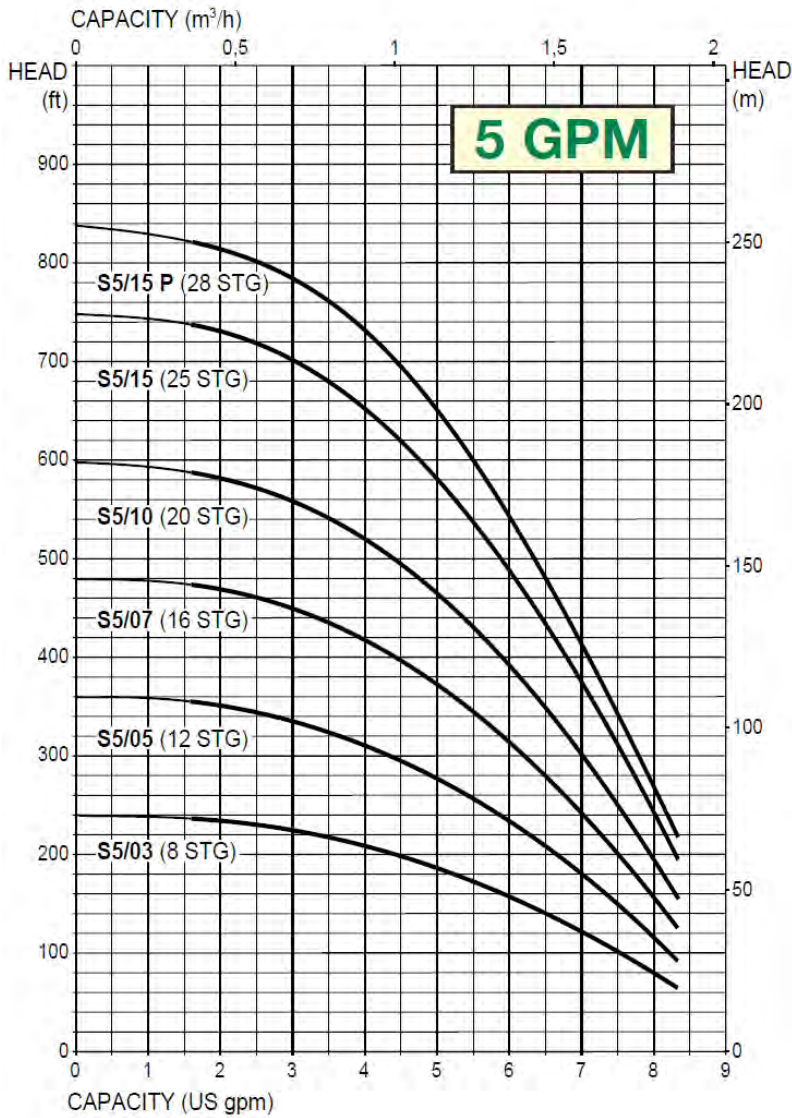
Overload protection to be provided by the user for the three-phase version.

**S46 PERFORMANCE CHART Tolerances according to ISO 2548 class C ann. B**

60 Hz 2 Poles		Q gpm	FLOW (USgpm)																		
Type	HP		0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	35	40	
S5/03	1/2	Head (Feet)	240	237	209	158	78														
S5/05	1/2		360	351	312	235	118														
S5/07	3/4		480	468	418	317	156														
S5/10	1.0		600	582	518	388	196														
S5/15	1.5		746	729	652	484	240														
S5/15P	1.5		838	814	734	541	269														
S8/03	1/2		148		143	137	112	104	75												
S8/05	1/2		207		200	192	176	152	99												
S8/07	3/4		297		286	268	246	214	142												
S8/10	1.0		382		371	352	319	278	187												
S8/15	1.5		528		516	486	418	377	260												
S8/20	2.0		676		658	623	564	484	332												
S8/30	3.0		910		887	841	764	660	444												
S12/05	1/2		240		226	212	192	170	140	116	84										
S12/07	3/4		322		302	282	258	228	197	158	118										
S12/10	1.0		423		411	384	352	306	263	214	161										
S12/15	1.5		592		562	528	480	422	351	288	217										
S12/20	2.0		741		718	678	618	540	450	364	264										
S12/30	3.0		1023		969	908	836	742	637	517	381										
S16/03	1/2		106			102	97	92	87	82	77	72	64	53							
S16/05	1/2	158			150	148	143	138	128	118	108	98	87								
S16/07	3/4	214			204	196	188	180	168	155	142	124	106								
S16/10	1.0	262			256	246	236	224	210	194	178	158	134								
S16/15	1.5	368			358	342	336	318	300	278	252	222	186								
S16/20	2.0	476			462	446	430	410	385	354	322	283	240								
S16/30	3.0	660			638	621	602	574	558	496	450	396	332								
S16/50	5.0	842			820	797	764	736	688	638	576	508	426								
S16/50P	5.0	1028			1000	975	894	894	839	374	698	608	520								
Type	HP	Q gpm	0	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100	110	120	
S25/05	1/2	Head (Feet)	118		115	108	99	86	69	50	27										
S25/07	3/4		150		148	138	124	108	88	63	37										
S25/10	1.0		205		202	188	172	152	122	88	54										
S25/15	1.5		264		256	244	223	195	158	117	67										
S25/20	2.0		354		344	324	296	258	210	152	86										
S25/30	3.0		472		462	436	394	343	278	200	117										
S25/50	5.0		621		598	568	520	456	372	267	150										
S25/50P	5.0		766		744	704	643	598	457	328	180										
S35/10	1.0		128				111	105	97	89	80	71	62	50	38	26					
s35/15	1.5		194				168	158	148	137	121	106	92	75	58	42					
S35/20	2.0		259				222	208	194	180	162	142	122	102	77	50					
S35/30	3.0		356				306	286	267	242	221	194	164	134	104	74					
S35/50	5.0		484				417	392	364	334	304	269	228	187	143	103					
S35/50P	5.0		584				499	473	438	403	364	320	275	226	174	126					
S35/75	7.5		745				637	601	562	517	466	410	350	284	218	160					
S35/75P	7.5		869				749	707	657	603	542	476	404	331	252	188					
S75/20	2.0		88						80	78	76	74	72	67	62	57	52	47	41	35	
S75/50	5.0		208							192	189	186	182	179	169	159	149	137	122	108	94
S75/75	7.5		321							302	298	292	286	279	265	249	232	212	191	168	144

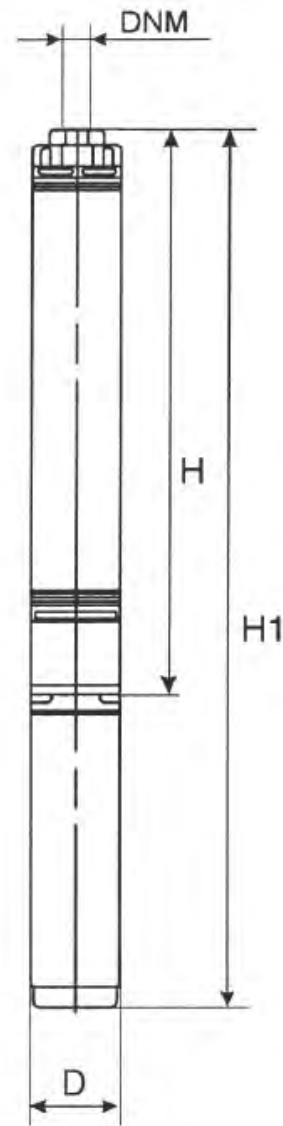
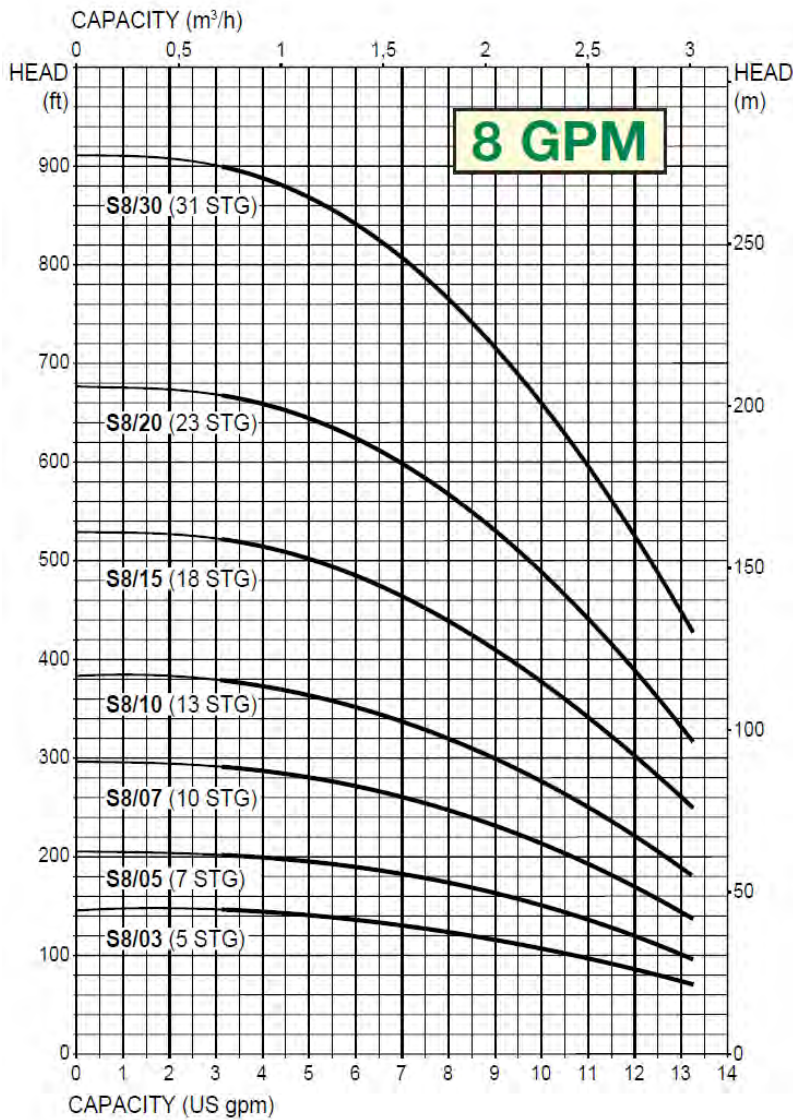
# S5

## 4" SUBMERSIBLE PUMPS FOR DOMESTIC WATER SUPPLY



The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equivalent to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

DIMMENSIONS, WEIGHT & ELECTRICAL DATA											
MODEL	ELECTRICAL DATA				DIMMENSIONAL DATA				WEIGHT (lbs)		
	STAGES	HP	KW	Service Factor	D (in)	H (in)	H1 (in)	DNM (in)	PUMP END ONLY	GG MOTOR ONLY	PUMP TOTAL
S 5/03 D 4	8	0.5	0.44	1.75	3.82	13.3	22.59	1" 1/4 NPT	7.93	14.76	22.69
S 5/05 D 4	12	0.5	0.59	1.6	3.82	16.5	25.79	1" 1/4 NPT	9.03	14.76	23.79
S 5/07 D 4	16	0.75	0.83	1.5	3.82	19.6	30.07	1" 1/4 NPT	10.13	17.62	27.75
S 5/10 D 4	20	1.0	1.0	1.4	3.82	22.8	34.06	1" 1/4 NPT	11.01	19.29	41.31
S 5/15 D 4	25	1.5	1.4	1.3	3.82	26.7	40.32	1" 1/4 NPT	12.34	24.23	36.57
S 5/15P D 4	28	1.5	1.8	1.25	3.82	29.1	42.72	1" 1/4 NPT	13.00	24.23	37.23



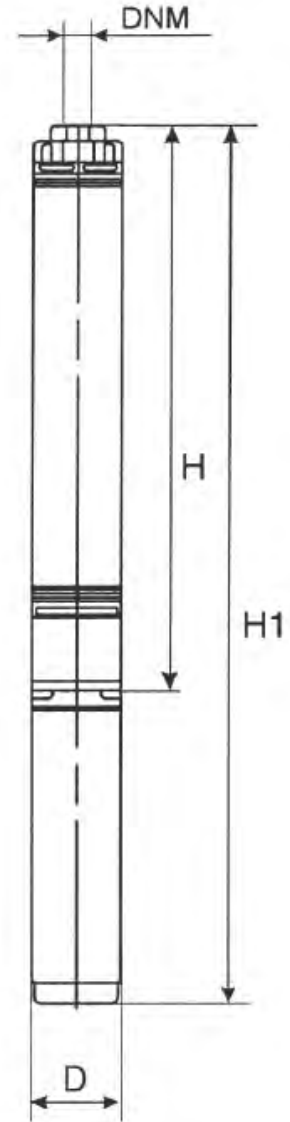
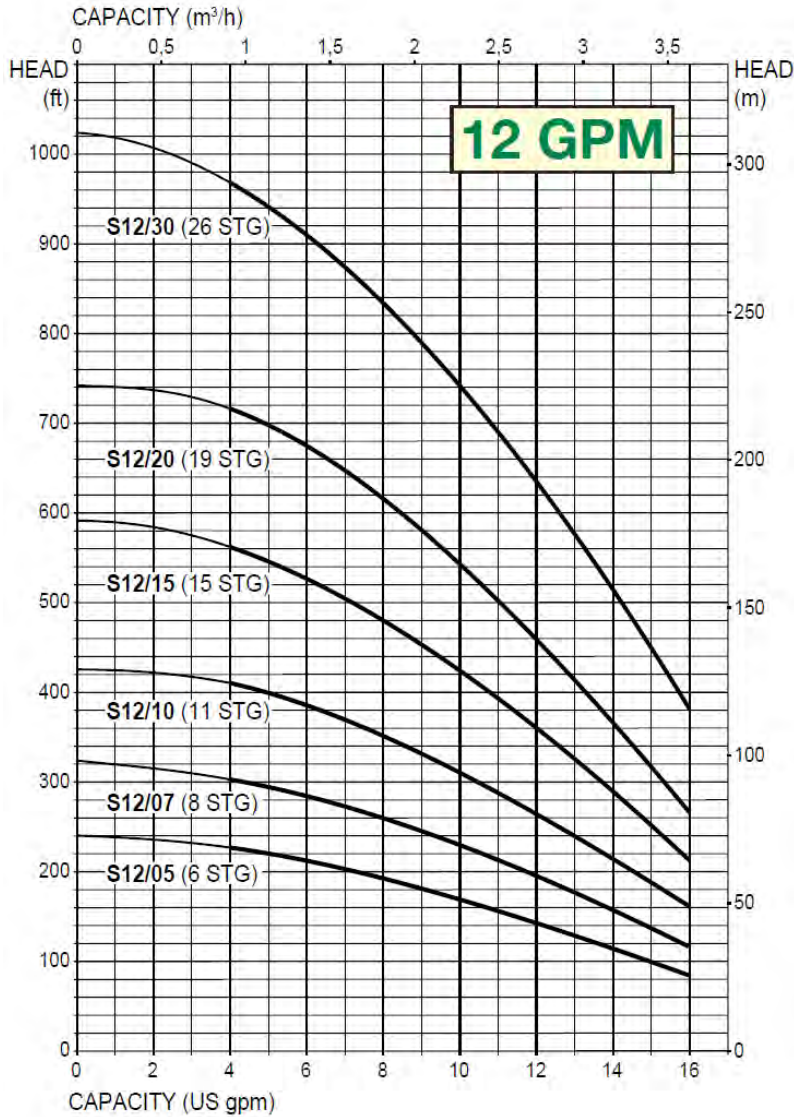
The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equivalent to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### DIMMENSIONS, WEIGHT & ELECTRICAL DATA

MODEL	ELECTRICAL DATA				DIMMENSIONAL DATA				WEIGHT (lbs)		
	STAGES	HP	KW	Service Factor	D (in)	H (in)	H1 (in)	DNM (in)	PUMP END ONLY	GG MOTOR ONLY	PUMP TOTAL
S 8/03 D 4	5	0.5	0.44	1.75	3.82	11.5	20.79	1" 1/4 NPT	7.05	14.76	21.81
S 8/05 D 4	7	0.5	0.59	1.6	3.82	13.2	22.49	1" 1/4 NPT	7.93	14.76	22.69
S 8/07 D 4	10	0.75	0.83	1.5	3.82	15.9	26.37	1" 1/4 NPT	8.81	17.62	26.43
S 8/10 D 4	13	1.0	1.0	1.4	3.82	18.6	29.86	1" 1/4 NPT	9.47	19.82	29.29
S 8/15 D 4	18	1.5	1.4	1.3	3.82	23.0	36.62	1" 1/4 NPT	11.01	24.23	35.24
S 8/20 D 4	23	2.0	1.8	1.25	3.82	27.4	42.79	1" 1/4 NPT	12.55	28.63	41.18
S 8/30 D 4	31	3.0	2.5	1.15	3.82	34.5	50.68	1" 1/4 NPT	15.20	30.84	46.04

# S 12

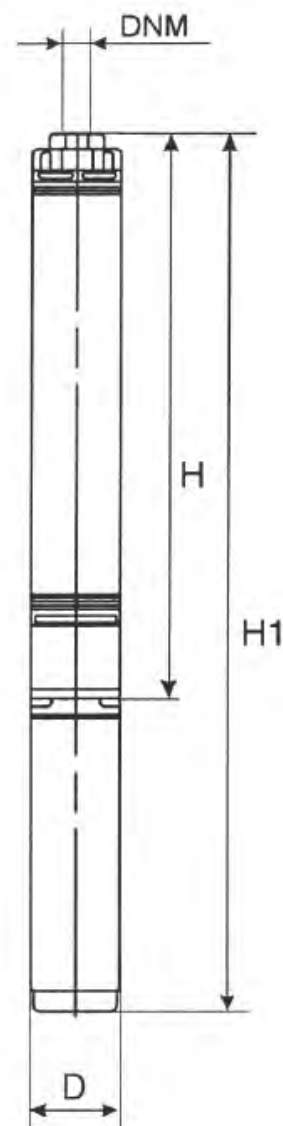
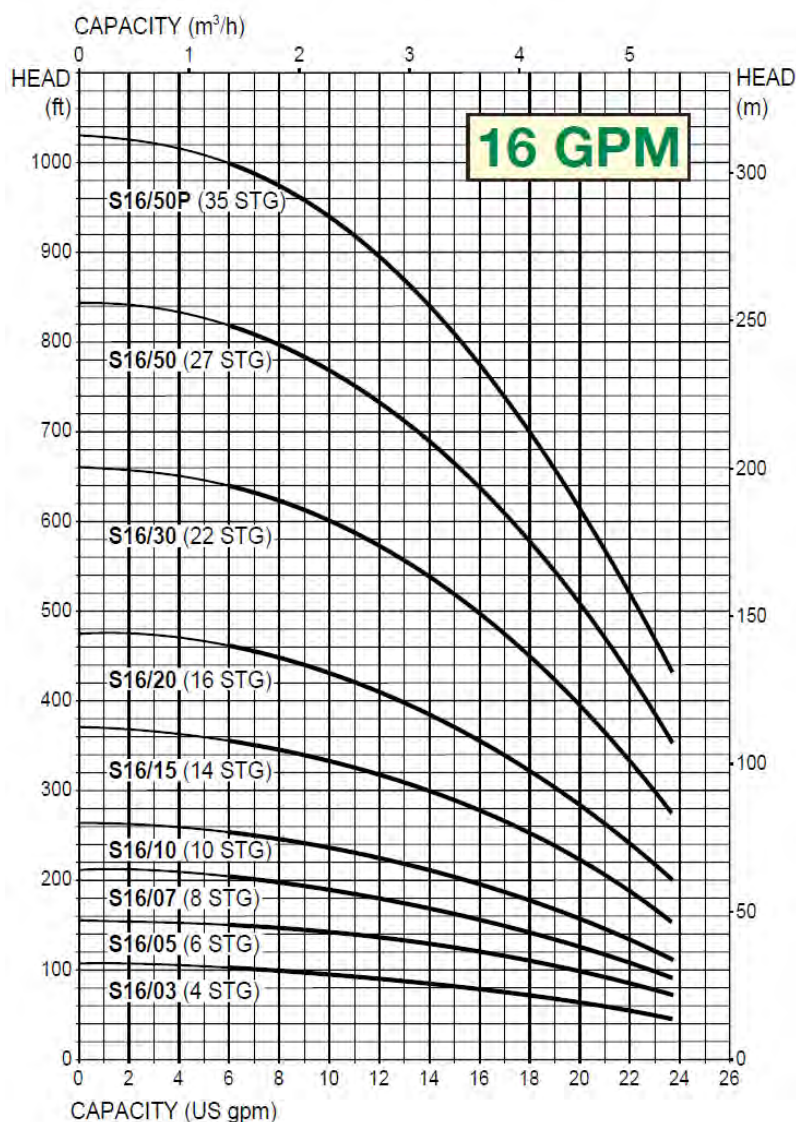
## 4" SUBMERSIBLE PUMPS FOR DOMESTIC WATER SUPPLY



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

### DIMMENSIONS, WEIGHT & ELECTRICAL DATA

MODEL	ELECTRICAL DATA				DIMENSIONAL DATA				WEIGHT (lbs)		
	STAGES	HP	KW	Service Factor	D (in)	H (in)	H1 (in)	DNM (in)	PUMP END ONLY	GG MOTOR ONLY	PUMP TOTAL
S 12/05 D 4	6	0.5	0.58	1.6	3.82	12.36	21.65	1" 1/4 NPT	7.05	14.76	21.81
S 12/07 D 4	8	0.75	0.83	1.5	3.82	14.10	24.57	1" 1/4 NPT	7.93	17.62	25.55
S 12/10 D 4	11	1.0	1.0	1.4	3.82	16.80	28.06	1" 1/4 NPT	8.81	19.82	28.63
S 12/15 D 4	15	1.5	1.4	1.3	3.82	20.30	33.92	1" 1/4 NPT	9.70	24.23	33.93
S 12/20 D 4	19	2.0	1.8	1.25	3.82	23.80	39.19	1" 1/4 NPT	10.01	28.63	38.64
S 12/30 D 4	26	3.0	2.5	1.15	3.82	30.10	46.28	1" 1/4 NPT	12.64	30.84	43.48



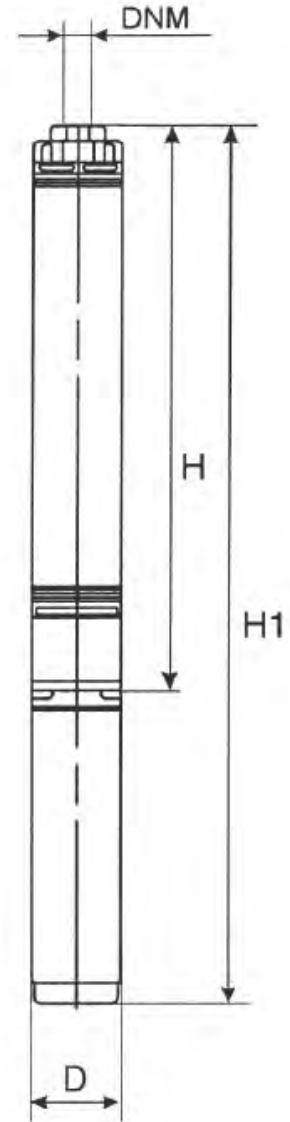
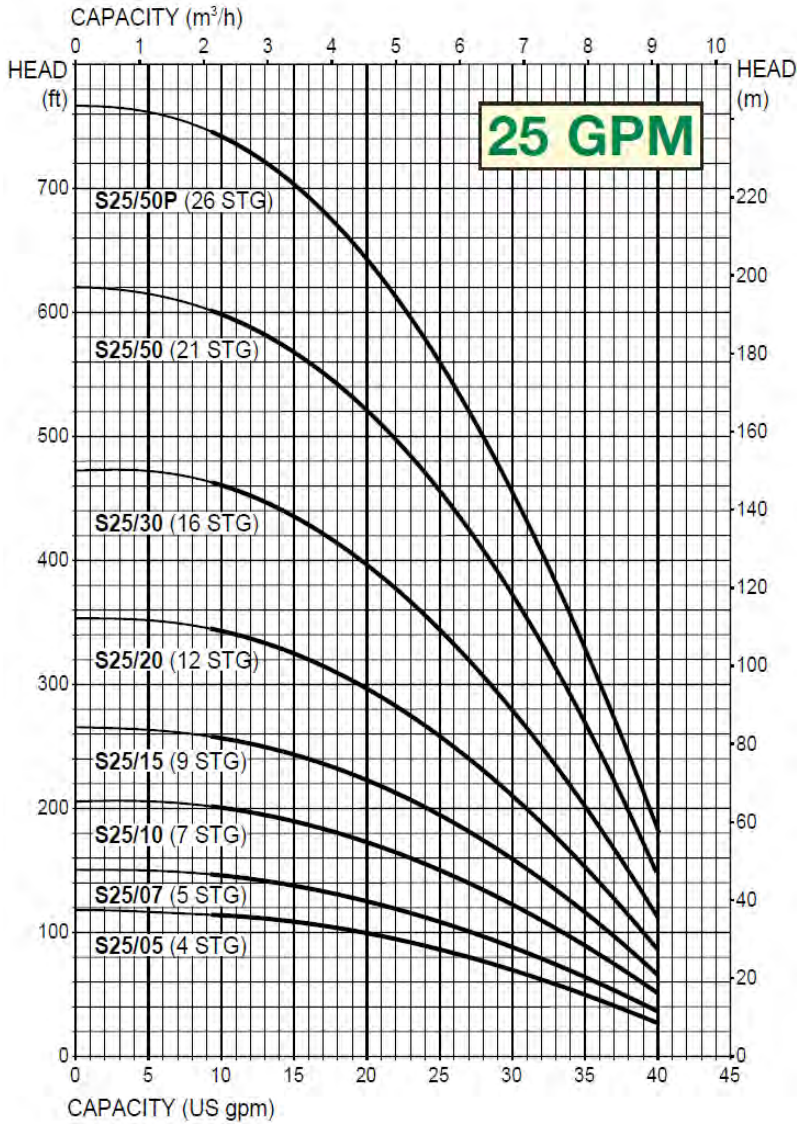
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### DIMMENSIONS, WEIGHT & ELECTRICAL DATA

MODEL	ELECTRICAL DATA				DIMMENSIONAL DATA				WEIGHT (lbs)		
	STAGES	HP	KW	Service Factor	D (in)	H (in)	H1 (in)	DNM (in)	PUMP END ONLY	MOTOR ONLY	PUMP TOTAL
S 16/03 D 4	4	0.5	0.44	1.75	3.82	12.2	21.49	1" 1/4 NPT	7.05	14.76	21.81
S 16/05 D 4	6	0.5	0.59	1.6	3.82	14.7	23.99	1" 1/4 NPT	8.15	14.76	22.91
S 16/07 D 4	8	0.75	0.83	1.5	3.82	17.3	27.77	1" 1/4 NPT	9.25	17.62	26.87
S 16/10 D 4	10	1.0	1	1.4	3.82	19.8	31.06	1" 1/4 NPT	10.13	19.82	29.95
S 16/15 D 4	14	1.5	1.4	1.3	3.82	25.0	38.62	1" 1/4 NPT	11.01	24.23	35.24
S 16/20 D 4	18	2.0	1.8	1.25	3.82	30.1	45.49	1" 1/4 NPT	13.00	28.63	41.63
S 16/30 D 4	25	3.0	2.5	1.15	3.82	39.0	55.18	1" 1/4 NPT	15.85	30.84	46.69
S 16/50 D 4	32	5.0	4.2	1.15	3.82	49.3	73.47	1" 1/4 NPT	17.82	50.66	68.48
S 16/50P D 4	39	5.0	4.2	1.15	3.82	58.2	82.37	1" 1/4 NPT	24.23	50.66	74.89

# S 25

## 4" SUBMERSIBLE PUMPS FOR DOMESTIC WATER SUPPLY

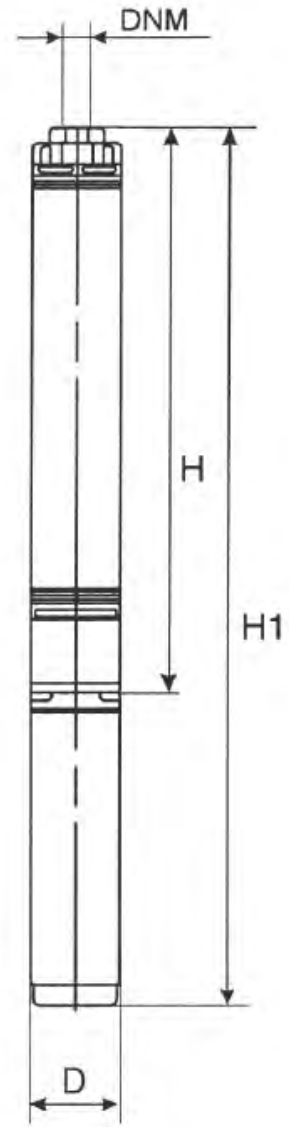
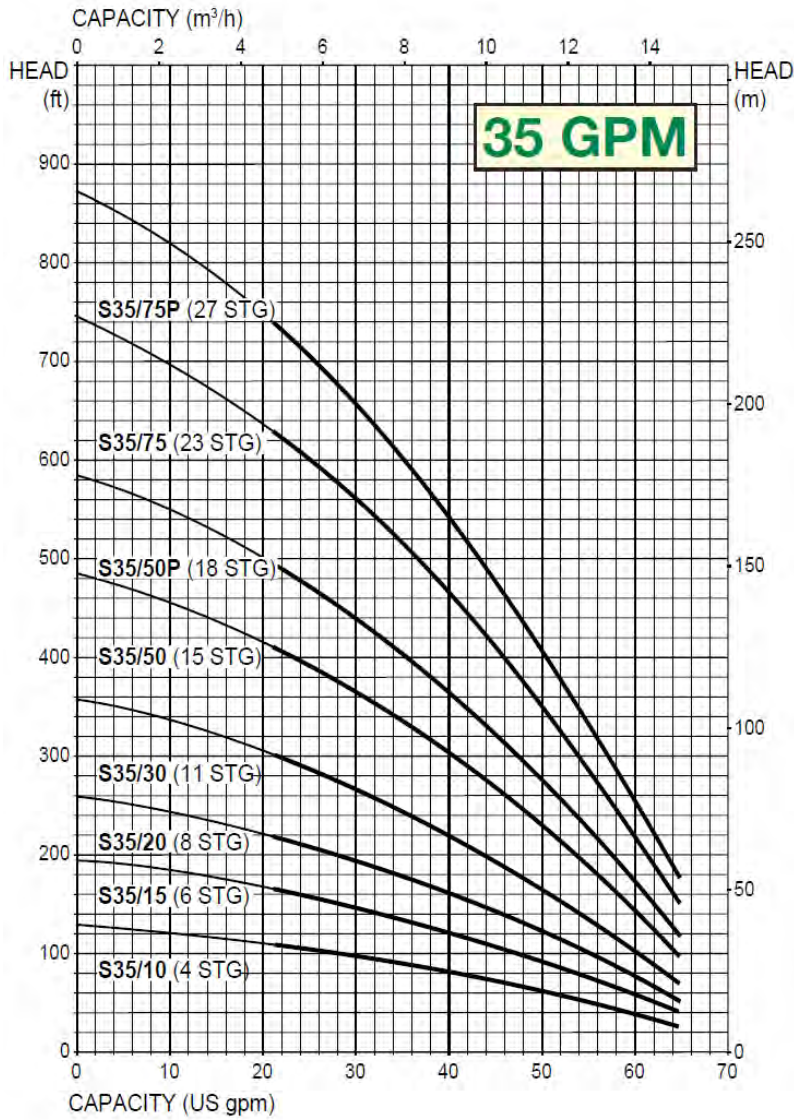


The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equivalent to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### DIMMENSIONS, WEIGHT & ELECTRICAL DATA

MODEL	ELECTRICAL DATA				DIMENSIONAL DATA				WEIGHT (lbs)		
	STAGES	HP	KW	Service Factor	D (in)	H (in)	H1 (in)	DNM (in)	PUMP END ONLY	GG MOTOR ONLY	PUMP TOTAL
S 25/05 D 4	4	0.5	0.59	1.6	3.82	12.2	21.49	1" 1/4 NPT	7.27	14.76	22.03
S 25/07 D 4	5	0.75	0.83	1.5	3.82	13.4	23.87	1" 1/4 NPT	7.70	17.62	25.32
S 25/10 D 4	7	1.0	1.0	1.4	3.82	16.0	27.26	1" 1/4 NPT	8.37	19.82	28.19
S 25/15 D 4	9	1.5	1.4	1.3	3.82	18.6	32.22	1" 1/4 NPT	9.25	24.23	33.48
S 25/20 D 4	12	2.0	1.8	1.25	3.82	22.4	37.79	1" 1/4 NPT	10.58	28.63	39.21
S 25/30 D 4	16	3.0	2.5	1.15	3.82	27.5	43.68	1" 1/4 NPT	12.33	30.84	43.17
S 25/50 D 4	21	5.0	4.2	1.15	3.82	33.9	58.07	1" 1/4 NPT	16.74	50.66	67.40
S 25/50P D 4	26	5.0	4.2	1.15	3.82	41.6	65.77	1" 1/4 NPT	18.74	50.66	69.4





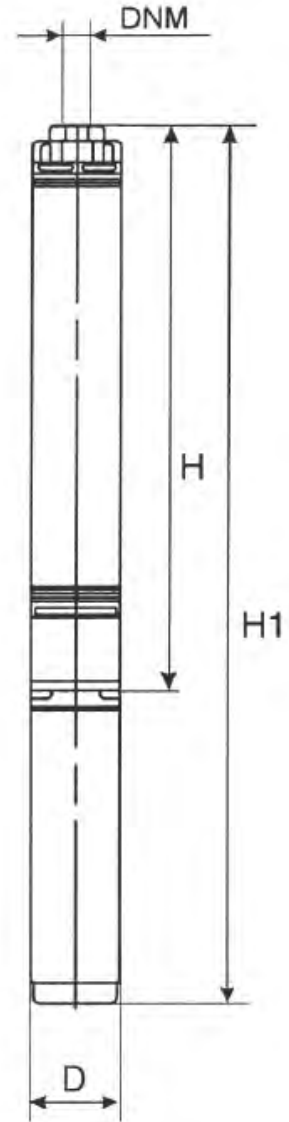
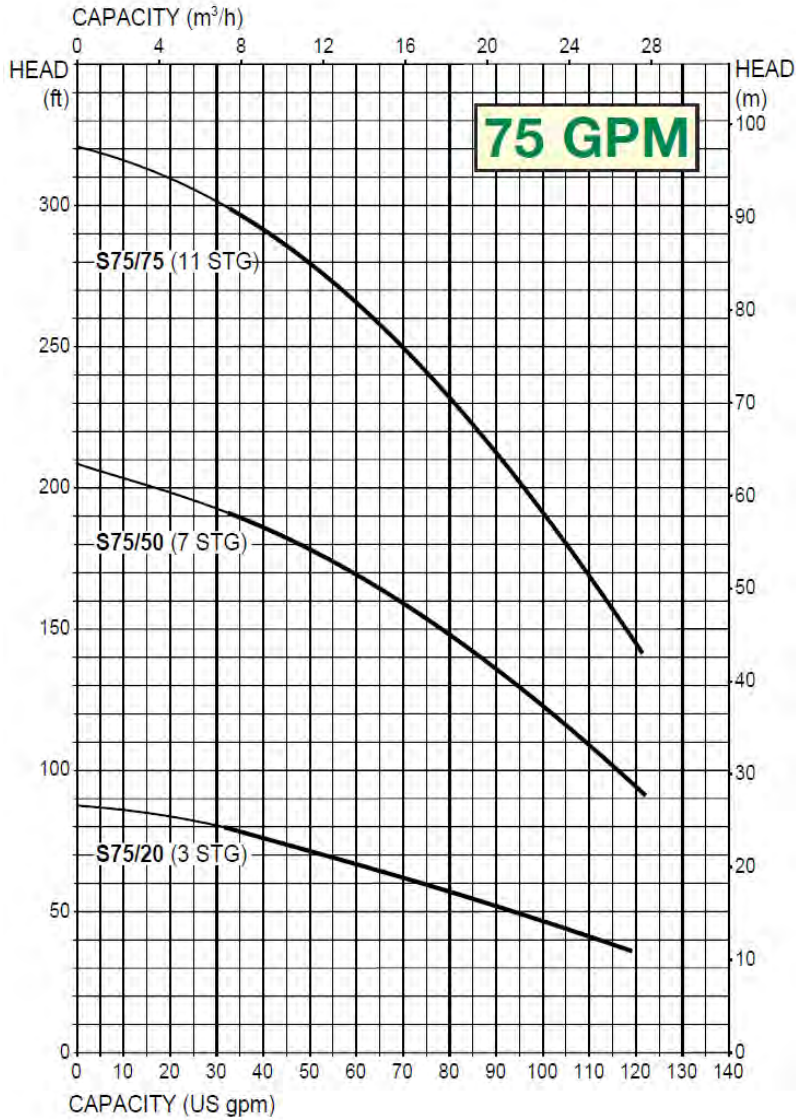
The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equivalent to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### DIMMENSIONS, WEIGHT & ELECTRICAL DATA

MODEL	ELECTRICAL DATA				DIMMENSIONAL DATA				WEIGHT (lbs)		
	STAGES	HP	KW	Service Factor	D (in)	H (in)	H1 (in)	DNM (in)	PUMP END ONLY	GG MOTOR ONLY	PUMP TOTAL
S 35/10 D 4	4	1.0	1	1.4	3.82	15.5	26.76	2" NPT	8.37	19.82	28.19
S 35/15 D 4	6	1.5	1.4	1.3	3.82	19.7	33.32	2" NPT	9.47	24.23	33.7
S 35/20 D 4	8	2.0	1.8	1.25	3.82	23.8	39.19	2" NPT	10.58	28.63	39.21
S 35/30 D 4	11	3.0	2.5	1.15	3.82	30.0	49.18	2" NPT	12.55	30.84	43.39
S 35/50 D 4	15	5.0	4.2	1.15	3.82	39.5	63.67	2" NPT	18.06	50.66	68.72
S 35/50P D 4	18	5.0	4.2	1.15	3.82	45.7	69.87	2" NPT	19.06	50.66	69.72
S 35/75 D 4	23	7.5	6.4	1.15	3.82	56.1	83.03	2" NPT	21.15	58.59	79.74
S 35/75P D 4	27	7.5	6.4	1.15	3.82	65.6	92.53	2" NPT	23.08	58.59	81.67

# S 75

4" SUBMERSIBLE PUMPS FOR DOMESTIC WATER SUPPLY



The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

## DIMENSIONS, WEIGHT & ELECTRICAL DATA

MODEL	ELECTRICAL DATA				DIMENSIONAL DATA				WEIGHT (lbs)		
	STAGES	HP	KW	Service Factor	D (in)	H (in)	H1 (in)	DNM (in)	PUMP END ONLY	MOTOR ONLY	PUMP TOTAL
S 75/20 D 4	3	2.0	1.8	1.25	3.82	15.3	30.69	2" NPT	10.58	28.63	39.21
S 75/50 D 4	7	5.0	4.2	1.15	3.82	26.0	50.17	2" NPT	18.06	50.66	68.72
S 75/75 D 4	11	7.5	6.4	1.15	3.82	38.0	64.93	2" NPT	20.70	58.59	79.29