

Submersible Wastewater Pump Type ABS AS 0530 - 0841

Robust, reliable submersible pumps from 1 to 3 kW for pumping clear water, wastewater and sewage from buildings and sites in domestic and commercial areas.

Applications

AS submersible pumps have been designed for the economic and reliable pumping of wastewater and sewage, and can be used with automatic coupling system for fixed applications or as portable units.

- The 2" discharge version is especially suitable for pumping wastewater from underground garages.
- With vortex hydraulics the AS is particularly suitable for fluids containing fibrous or abrasive matter and for sewage.
- The Contrablock hydraulic system is suitable for larger proportions of solid or fibrous matter.
- Maximum allowable temperature of the medium is 40 °C, or short term to 60 °C (max. 5 minutes).

Construction

The water-pressure-tight, encapsulated fully flood-proof motor and the pump section form a compact, robust, unit construction.

Motor

Single-phase 220-240 V and three-phase 400 V, 50 Hz, 2-pole (2900 r/min) and 4-pole (1450 r/min). Insulation class F; protection type IP68. Ex protection to ATEX II 2G Ex h db IIB T4 Gb and FM international standards.

Consult Sulzer for Ex usage with frequency inverters.

Types of operation and frequency of starting: Pumps of the AS series have been designed for intermittent use only (S3, 25%) when dry-installed, and continuous use (S1) when submerged.

Bearings

The stainless steel motor shaft is supported in lubricated-for-life ball bearings.

Shaft sealing

Between motor and hydraulic section by means of a high quality sealing unit using a silicon carbide mechanical seal, independent of direction of rotation and resistant to temperature shock. Seal at motor side is by oil lubricated lip seal.



50Hz

Discharge

AS 0530: G 2" internal thread (DN 50).

AS 0630 to 0641: radial slot DN 65 flange.

AS 0830, 0831, 0840 & 0841: radial slot DN 80 flange.

Temperature monitoring

Thermal sensors in the stator to switch off the pump in the case of overheating and switch on automatically after cooling down (option on standard AS). Temperature and leakage relays are required (see accessories table).

Seal monitoring

DI system consisting of a sensor in the motor and seal chambers which signals an inspection alert if there is leakage at the shaft seals (not in seal chamber on Ex version). Temperature and leakage relays are required (see accessories table).

Hydraulics

AS 0530, 0630, 0631, 0830, 0831: vortex, open, recessed four-vane impeller.

AS 0641, 0840, 0841: Contrablock, open single-vane impeller with spiral bottom plate.

Identification Code

e.g. AS 0840 S 12/2 Ex

Hydraulics		Motor	
AS	Product range	S	Modular motor version
08	Discharge outlet DN (cm)	12	Motor power P ₂ kW x 10
40	Hydraulic type	2	Number of poles
		Ex	Explosive-proof

Materials

Description	Material
Motor housing	Cast iron EN-GJL-250
Rotor shaft	Stainless steel 1.4021 (AISI 420)
Volute	Cast iron EN-GJL-250
Impeller	Cast iron EN-GJL-250
Bottom plate	Cast iron EN-GJL-250
Fasteners	Stainless steel 1.4401 (AISI 316)

Features

- Hydraulic design with Contrablock system or vortex impellers.
- High reliability even under long term operating conditions.
- For wastewater and sewage containing solid or fibrous particles.
- In standard or Ex-versions.
- Option of automatic seal and temperature monitoring. Ex version has temperature monitoring as standard.
- Available for transportable or fixed installation.

Technical data

AS	Motor	Solids size (mm)	Discharge *	Rated voltage (V)	Motor power ** (kW)		Rated current (A)	Speed (r/min)	Weight*** (kg)
0530	S12/2W ⁽¹⁾	40	G 2"	220-240 1~	1.77	1.20	8.22	2900	34
	S12/2D	40	G 2"	400 3~	1.69	1.20	3.29	2900	34
	S17/2D	40	G 2"	400 3~	2.31	1.70	3.97	2900	34
	S26/2D	40	G 2"	400 3~	3.43	2.60	5.64	2900	40
0630	S10/4W ⁽¹⁾	60	DN 65	220-240 1~	1.69	1.00	7.49	1450	37
	S13/4D	60	DN 65	400 3~	1.93	1.30	3.60	1450	37
	S22/4D	60	DN 65	400 3~	2.88	2.20	5.15	1450	42
0631	S12/2W ⁽¹⁾	40	DN 65	220-240 1~	1.77	1.20	8.22	2900	38
	S12/2D	40	DN 65	400 3~	1.69	1.20	3.29	2900	38
	S17/2W ⁽¹⁾	40	DN 65	220-240 1~	2.36	1.65	10.60	2900	38
	S17/2D	40	DN 65	400 3~	2.31	1.70	3.97	2900	38
	S30/2D	40	DN 65	400 3~	3.74	3.00	6.23	2900	46
0641	S30/2D	45	DN 65	400 3~	3.74	3.00	6.23	2900	42
0830	S10/4W ⁽¹⁾	60	DN 80	220-240 1~	1.69	1.00	7.49	1450	40
	S13/4D	60	DN 80	400 3~	1.93	1.30	3.60	1450	40
	S22/4D	60	DN 80	400 3~	2.88	2.20	5.15	1450	42
0831	S22/4D	80	DN 80	400 3~	2.88	2.20	5.15	1450	55
0840	S12/2W ⁽¹⁾	30	DN 80	220-240 1~	1.77	1.20	8.22	2900	35
	S12/2D	30	DN 80	400 3~	1.69	1.20	3.29	2900	35
	S17/2D	30	DN 80	400 3~	2.31	1.70	3.97	2900	35
	S26/2D	30	DN 80	400 3~	3.43	2.60	5.64	2900	40
0841	S13/4D	80	DN 80	400 3~	1.93	1.30	3.60	1450	49
	S22/4D	80	DN 80	400 3~	2.88	2.20	5.15	1450	58

* G = internal thread, DN = flange

** P₁ = Power at mains; P₂ = Power at motor shaft.

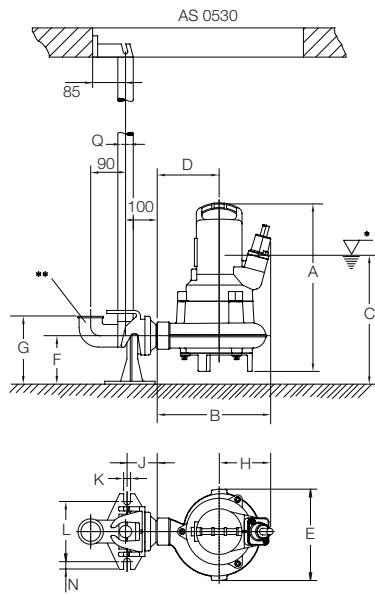
*** Weight with 10 m cable. Cable size: Standard = 4G1.5, Ex = 7G1.5

⁽¹⁾ Start and Run capacitor to the following specification required in control panel.
Start: 125-160µF. Run: 40µF (2x20µF) for S10/4W, 30µF for S12/2W & S17/2W.
The recommended start time for the motors is two seconds.

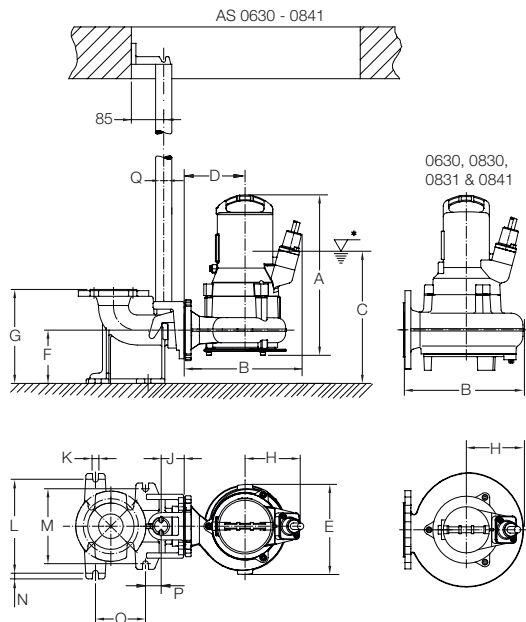
Dimensions (mm)

AS		A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q (in)
0530	S12/2 & 17/2 S26/2	432 444	293 293	331 331	160 160	236 236	125 125	175 175	133 133	100 100	18 18	155 155	- -	20 20	- -	- -	1 ¼"
0630	S10/4 & 13/4 S22/4	437 450	309 309	348 348	157 157	294 294	140 140	247 247	147 147	57 57	18 18	245 245	195 195	15 15	132 132	40 40	1 ¼"
0631	S12/2 & 17/2 S30/2	409 421	305 305	346 346	160 160	237 237	140 140	247 247	145 145	54 54	18 18	245 245	195 195	15 15	132 132	40 40	1 ¼"
0641	S30/2	428	308	346	160	237	140	247	148	54	18	245	195	15	132	40	1 ¼"
0830	S10/4 & 13/4 S22/4	437 450	307 307	408 408	160 160	294 294	200 200	342 342	147 147	88 88	18 18	275 275	195 195	20 20	182 182	25 25	2"
0831	S22/4	470	397	445	240	312	200	340	157	88	18	275	195	20	182	25	2"
0840	S12/2 & 17/2 S26/2	418 430	280 280	379 379	130 130	210 210	200 200	342 342	148 148	88 88	18 18	275 275	195 195	20 20	182 182	25 25	2"
0841	S13/4 S22/4	473 485	397 397	445 450	240 240	312 312	200 200	340 340	157 157	88 88	18 18	275 275	195 195	20 20	182 182	25 25	2"

AS 0530



AS 0630 and 0830

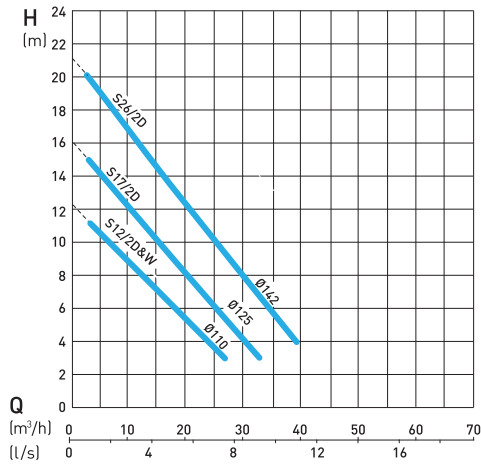


* Lowest switch-off level; minimum switch-on level must be at least 100 mm higher.

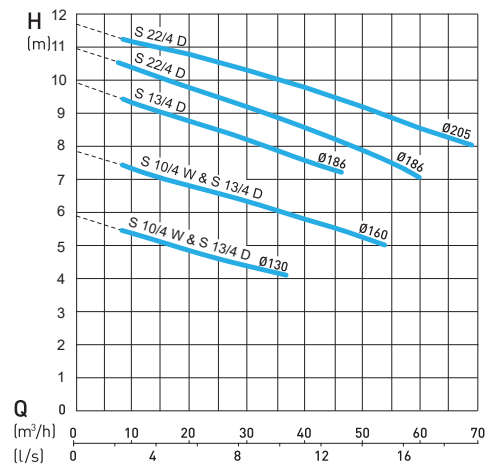
** Elbow not supplied.

Performance curves

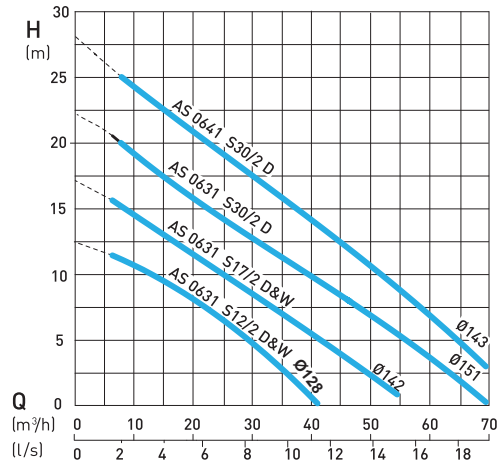
AS 0530



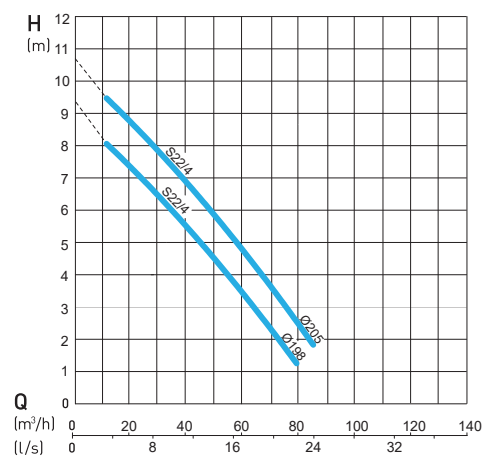
AS 0630 and 0830



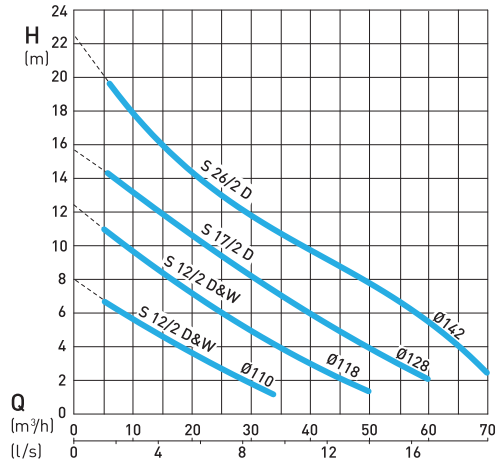
AS 0631 and 0641



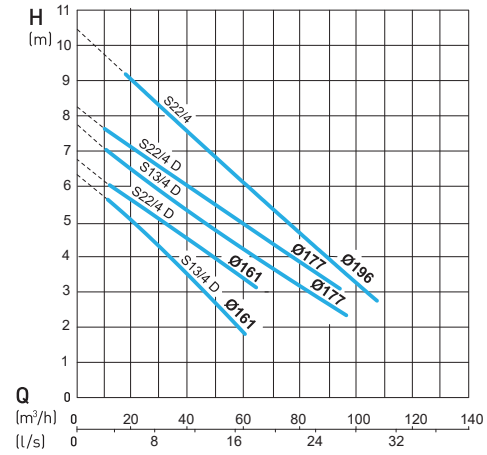
AS 0831



AS 0840



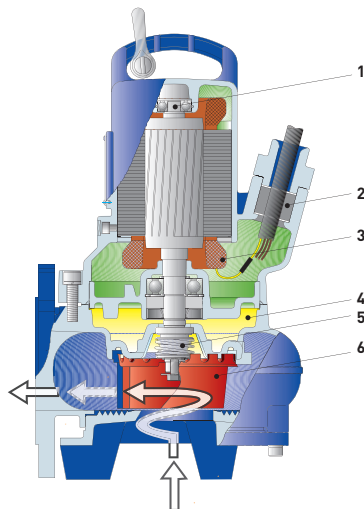
AS 0841



H = Total Head; Q = Discharge Volume. Curves to ISO 9906 (60 Hz available on request). N.B. please use the ABSEL program to validate pump selection.

Accessories

	Description	Size	Part no.	AS
Fixed installation with Sulzer Automatic Coupling System	Pedestal (cast iron EN-GJL-250) threaded (with fixing bolts and transition piece)	2" without bend DN 65: 90° cast bend	62320560	0530
	flange (with fixing bolts)	DN 80 without bend	62320673	0630 - 0641
	flange (with fixing bolts)	DN 80: 90° cast bend	62320557	0830/31/40/41
	flange (fixing bolts not included)	DN 80: 90° cast bend	62320649	0830/31/40/41
	flange (with plug/clamp connection and fixing bolts)	DN 80: 90° cast bend	62320650	0830/31/40/41
	Fasteners (galvanized steel) bolts and gasket (bracket to pump) anchor bolts (pedestal to base)		62610632 62610775	0830/31/40/41 0830/31/40/41
	Guide Rail (galvanized steel)	1¼" x 1 m	31380007	0530 - 0641
		1¼" x 2 m	31380008	
		1¼" x 3 m	31380009	
		1¼" x 4 m	31380010	
		1¼" x 5 m	31380011	
Fixed installation - dry well, (horizontal)	Chain Kit (stainless steel)	1.6 m	310101395001	0530 - 0841
		3.0 m	310101236003	
		4.0 m	310101236004	
	Working load limit (WLL) 320 kg	6.0 m	310101236006	
		7.0 m	310101236007	
Transportable installation	Pump Support Kit (EN-GJL-250) head and volute supports with fixing bolts and vibration damper		61825001 62665103	0831 & 0841 0630, 0830, 0840
	Skirtbase		61355013 61355012 61350526	0630 & 0830 0631 & 0641 0831 & 0841
		DN 80 to G 2½" DN 80 to G 2½"	31090131 62665074	0840
	Adaptor (galvanized steel)	DN 65 to DN 80	21405002	0630, 0631, 0641
General	Non-return Ball Valve (EN-GJL-250) internal thread internal thread with inspection hatch flange with inspection hatch and venting flange with inspection hatch	G 2"	61400527	0530
		G 2½"	61400543	0630 - 0641
		DN 80	61400534	0830/31/40/41
		DN 80	61400523	0830/31/40/41
	Gate Valve (brass) (EN-GJL-250)	G 2"	14040007	0530
		DN 80	61420500	0830, 0831, 0840 & 0841
	Leakage Relay Type ABS CA 461	110 - 230 VAC	16907010	0530 - 0841
		18 - 36 VDC, SELV	16907011	0530 - 0841
	Temperature and Leakage Relay Type ABS CA 462	110 - 230 VAC	16907006	0530 - 0841
		18 - 36 VDC, SELV	16907007	0530 - 0841



Design

1. Ball bearings; lubricated-for-life.
2. Watertight cable entry.
3. Motor with thermal sensor in air-filled motor housing.
4. Seal chamber with seal monitoring.
5. Sic/Sic mechanical seal.
6. Contrablock (featured) or vortex hydraulics.

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