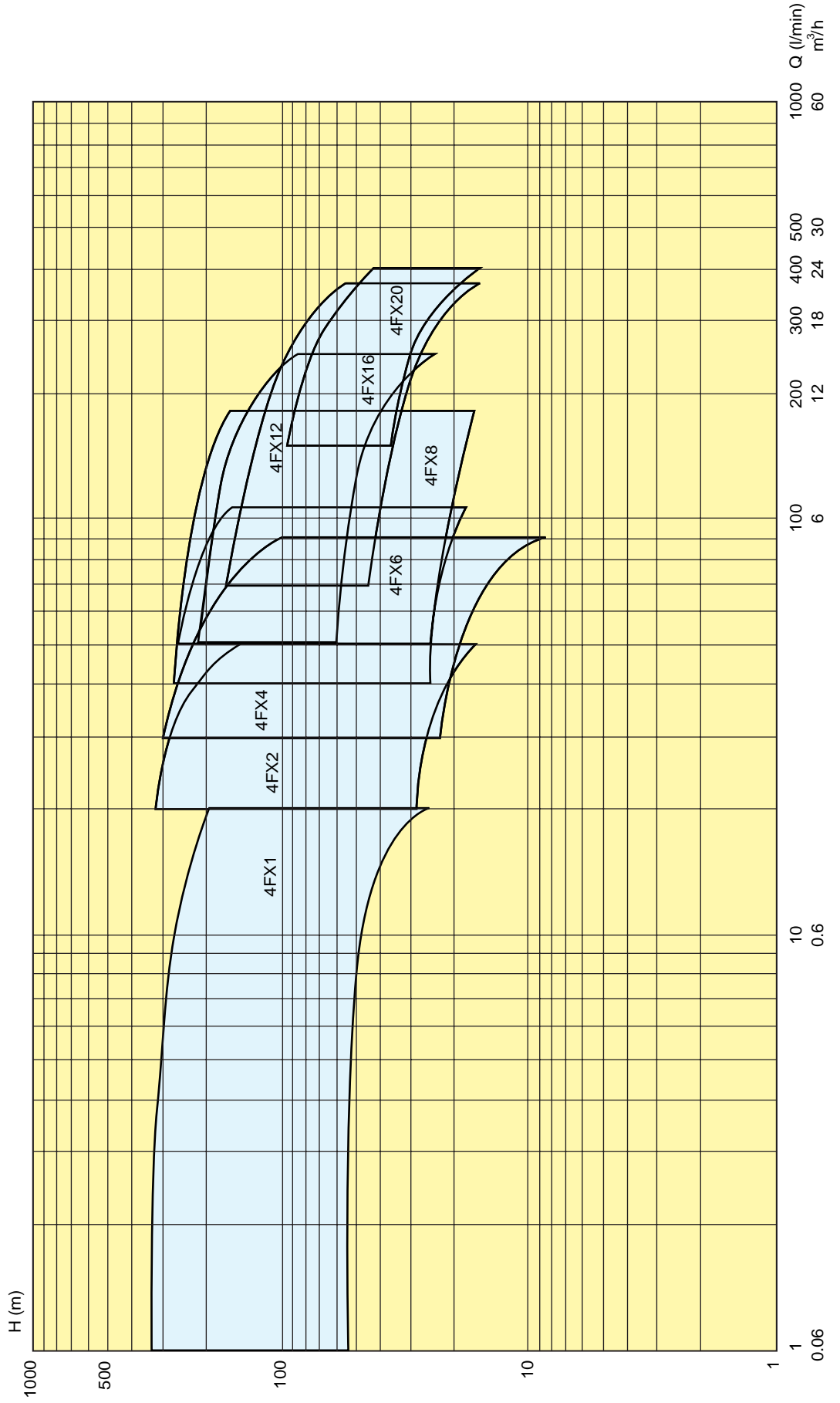


**OPERATING FEATURES AT 50 HZ**



An **ITT Industries** company



# **4FX** **SUBMERSIBLE PUMPS** **FOR DEEP WELLS**

50 Hz, 4"

**ITT Flygt**

An **ITT Industries** company

# 4FX SUBMERSIBLE PUMPS FOR DEEP WELLS

Almost maintenance-free and with a remarkable resistance to wear and abrasion, the 4" borehole pump, 4FX series, are designed for applications like:

- Municipal and industrial waterwork
- Irrigation
- Automatic pressure control
- Various industrial applications.

## PUMP COMPONENTS

- 1 Upper head AISI 303, precision casting
- 2 Valve plate AISI 304
- 3 Valve seat AISI 304
- 4 Valve packing, nitrile rubber, FDA approved
- 5 Valve check ring AISI 302
- 6 Upper bracket, glass-filled polycarbonate, FDA approved
- 7 Upper bearing polyurethane FDA approved
- 8 Snap ring AISI 301
- 9 Diffuser, glass-filled polycarbonate, FDA approved
- 10 Impeller, glass-filled polycarbonate, FDA approved
- 11 Diffuser housing AISI 304
- 12 SHIM 0.25 mm AISI 304
- 13 Shaft AISI 304
- 14 Outer casing AISI 304
- 15 Spacer AISI 304, sintered
- 16 Filter AISI 304
- 17 Lower adapter AISI 303, precision casting
- 18 Cable cover screw AISI 304
- 19 Coupling AISI 304, sintered
- 20 Outside cover

*Avoiding sand abrasion. With the floating impeller (A) the pressure keeps the face clearance ring (B) pressed against the stainless steel enclosure (C). Floating upwards, the impeller lets abrasive particles through without resistance, without causing wear.*

## Features

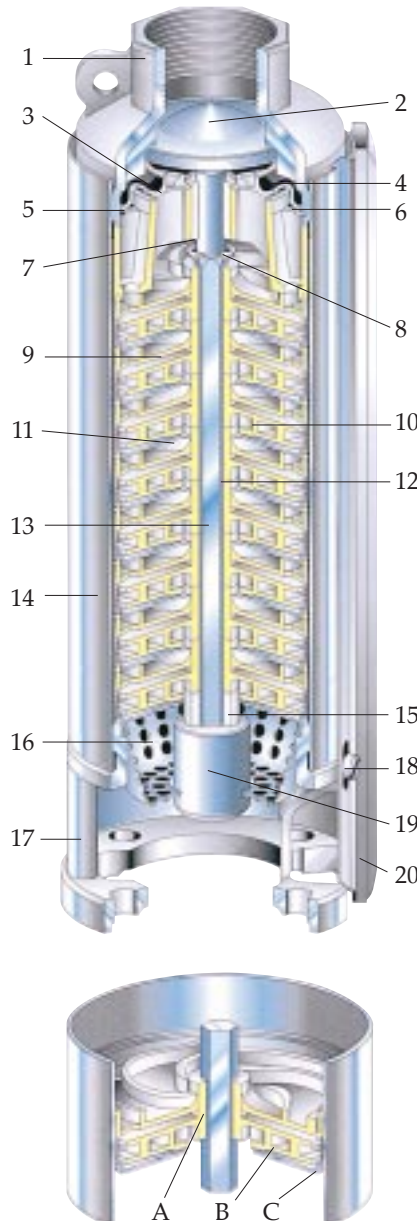
- Up to 340 m head.
- Up to 21 m<sup>3</sup>/h flow rate.
- Max quantity of suspended sand in water 0.1 kg/m<sup>3</sup>.
- Max overall dimensions (cable cover included) 98.5 mm.

## Construction, pump

- Impellers and diffusers of poly carbonate, reinforced with fiberglass, protected on the edge by wear rings in stainless steel
- Injection moulded thermoplastic process allows optimum thickness and shape for best hydraulic efficiency
- External casing threaded and screwed on the stator.
- Easy access for simple maintenance: the stator e.g can be removed from the external shell for rewind.

## Construction, motor

- Outer casing with precision roll-formed threading
- Non-toxic in coolant bath
- Generous space and positioning of inner parts for easy maintenance
- The stator can be loosened and withdrawn from the casing to be rewound
- Back in the casing, screwed into position, the stator will be perfectly centred
- Max depth of immersion 150 m
- Max number of starts 30 per hour
- Max liquid temperature: +40°C except OS4 750: +30°C



## MOTOR DATA

Motor type	Rated power 50 Hz	Rated current In (A)	Direct start	
			Cs/Cn	Is/In
OS4 050 T534/A	0.37	1.1	2.2	4
OS4 075 T534/A	0.55	1.65	2.9	4.2
OS4 100 T534/A	0.75	2.1	3.1	5
OS4 150 T534/A	1.1	3	3	4.9
OS4 200 T534/A	1.5	3.9	3.1	4.8
OS4 300 T534/A	2.2	5.2	3.1	5.3
OS4 400 T534/A	3	7	3.5	6.2
OS4 550 T534/A	4	9.2	3.1	5.2
OS4 750 T534/A	5.5	12.5	2.8	5.3

Motor type	Rated power 50 Hz	Capacitor 450 V μF	Rated current In (A)	Direct start	
				Cs/Cn	Is/In
OS4 033 M52/A	0.25	12.5	2.8	0.68	2.8
OS4 050 M52/A	0.37	16	3.6	0.7	2.9
OS4 075 M52/A	0.55	20	5	0.57	3.1
OS4 100 M52/A	0.75	30	6.3	0.6	3
OS4 150 M52/A	1.1	40	9.2	0.65	3.1
OS4 200 M52/A	1.5	50	11.5	0.56	3.4
OS4 300 M52/A	2.2	70	15.2	1	3.8

Cs/Cn Static torque/Rated torque

Is/In Static torque/Rated torque

Maximum temperature refers to motors that operate in a 6" deep where a flow of at least 16 cm/sec is ensured through an outer casing. Power supply variation 5%. Horizontal and vertical operation (with exception of OS4 - 3 kW, 4 kW, 5.5 kW)

## LOW DISCHARGE PUMPS

Pump type	No. of stages	Rating kW	1/min m <sup>3</sup> /h	5	10	15	20	25	30	40	50	60	80	90	110	133	Rated current 230 V	Rated current 400 V	Pump Length mm 230 V	Pump Length mm 400 V	Pump Weight kg 230 V	Pump Weight kg 400 V
				0.3	0.6	0.9	1.2	1.5	1.8	2.4	3	3.6	4.8	5.4	6.6	8						
Total Head (m)																						
4FX 1-10	10	0.25	55	52	46	38	26										2.8		692		11.1	
4FX 1-15	15	0.37	83	78	70	57	40										3.5	1.25	792	772	12.7	11.8
4FX 1-22	22	0.55	121	114	102	84	58										5	1.65	933	903	15.1	13.9
4FX 1-30	30	0.75	165	155	139	114	80										6.5	2.2	1120	1090	18.2	16.7
4FX 1-44	44	1.1	242	227	204	167	117										9.6	3.1	1383	1343	22.6	20.6
4FX 1-60	60	1.5	330	310	278	228	159										11.8	4	1698	1638	28.2	25.2
4FX 2-5	5	0.25	33				30	28	26	20	13						2.8		619		10.2	
4FX 2-7	7	0.37	47				42	40	36	29	19						3.5	1.25	674	654	11.6	10.7
4FX 2-10	10	0.55	67				60	56	52	41	27						5	1.65	756	726	13.4	12.2
4FX 2-14	14	0.75	93				83	79	73	57	37						6.5	2.2	856	826	15.5	14.1
4FX 2-20	20	1.1	133				119	113	104	82	53						9.6	3.1	1001	961	18.5	16.5
4FX 2-28	28	1.5	187				167	158	146	115	74						11.8	4	1230	1170	23.1	20.1
4FX 2-40	40	2.2	267				238	226	208	164	106						15.2	5.3	1440	1440	25.8	25.4
4FX 2-52	52	3.0	347				309	294	271	213	138							7		1855		36.8
4FX 4-4	4	0.37	27						24	23	21	19	13	9			3.5	1.25	638	618	11.1	10.2
4FX 4-7	7	0.55	47						42	40	37	33	22	15			5	1.65	733	703	13	11.8
4FX 4-9	9	0.75	60						54	51	47	42	28	19			6.5	2.2	806	776	14.9	13.4
4FX 4-14	14	1.1	94						84	80	74	66	44	30			9.6	3.1	954	914	17.8	15.7
4FX 4-19	19	1.5	127						114	108	100	89	60	40			11.8	4	1121	1061	21.7	18.6
4FX 4-27	27	2.2	181						162	154	142	127	85	57			15.2	5.3	1324	1324	23.8	23.4
4FX 4-35	35	3.0	228						204	194	179	160	107	72				7		1702		34.2
4FX 4-48	48	4.0	322						288	274	252	226	151	102				9		2053		40.4
4FX 6-5	5	0.55	30								26	25	22	21	17	12	5	1.65	764	734	13.4	12.2
4FX 6-7	7	0.75	43								36	35	31	29	24	16	6.5	2.2	856	826	15.5	14.1
4FX 6-10	10	1.1	61								52	49	44	41	34	23	9.6	3.1	989	949	18.3	16.3
4FX 6-14	14	1.5	85								72	69	62	58	48	32	11.8	4	1211	1151	22.8	19.8
4FX 6-21	21	2.2	128								108	104	93	87	71	48	15.2	5.3	1428	1428	25.2	24.8
4FX 6-29	29	3.0	317								268	257	230	215	177	120	-	7	-	1874	-	36.5
4FX 6-38	38	4.0	232								196	188	168	157	129	87	-	9	-	2223	-	42.4
4FX 6-52	52	5.5	317								268	257	230	215	177	120	-	12.8	-	2657	-	47.5

## HIGH DISCHARGE PUMPS

Pump type	Number of stages	Rating kW	1/min m <sup>3</sup> /h	60	80	100	120	140	160	200	250	300	367	400	Rated current 230 V	Rated current 400 V	Pump Length mm 230 V	Pump Length mm 400 V	Pump Weight kg 230 V	Pump Weight kg 400 V
				3.6	4.8	6	7.2	8.4	9.6	12	15	18	22	24						
Total Head (m)																				
4FX 8-4	4	0.75	26	24	23	22	20	18	16						6.5	2.2	765	735	14.5	13.1
4FX 8-6	6	1.1	39	36	34	33	31	28	24						9.6	3.1	867	827	16.9	14.9
4FX 8-8	8	1.5	52	48	46	44	41	37	32						11.8	4	989	929	20.5	17.4
4FX 8-13	13	2.2	84	77	74	71	67	60	51						15.2	5.3	1144	1144	21.8	21.8
4FX 8-17	17	3.0	110	101	97	93	87	78	67							7		1512		32.8
4FX 8-23	23	4.0	149	137	132	126	118	106	91							9		1760		37.6
4FX 8-32	32	5.5	207	191	183	175	164	147	127							12.8		2039		40.9
4FX 8-43	43	7.5	279	256	246	235	220	198	170							17.5		2430		46.8
4FX 12-7	7	1.5	43			37	35	33	30	25	17				11.8	4	1105	1045	21.2	18.1
4FX 12-10	10	2.2	61			53	50	47	43	36	24				15.2	5.3	1299	1299	23.6	23.2
4FX 12-14	14	3.0	86			74	70	66	61	50	34					7		1712		34.5
4FX 12-19	19	4.0	116			100	95	89	83	68	46					9		2042		40.1
4FX 12-26	26	5.5	159			137	130	122	113	94	63					12.8		2398		44.4
4FX 12-35	35	7.5	215			184	175	164	152	126	85					17.5		2915		51.2
4FX 16-8	8	2.2	47					37	36	32	27	23	16		15.2	5.3	1247	1247	23.1	22.7
4FX 16-11	11	3.0	65					51	49	44	38	31	22			7		1657		34
4FX 16-15	15	4.0	89					70	67	60	51	43	30			9		1998		39.7
4FX 16-20	20	5.5	118					94	89	80	69	57	41			12.8		2368		43.9
4FX 16-28	28	7.5	165					131	125	112	96	80	57			17.5		2962		51.5
4FX 20-8	8	2.2							36.5	34	30	26	21	16	15.2	5.3	1502	1502	21.2	20.8
4FX 20-11	11	3.0							50	46	41	35	29	22		7		1930		31.2
4FX 20-15	15	4.0							69	63	56	48	40	30		9		2296		35.5
4FX 20-20	20	5.5							92	84	74	64	53	42		12.8		2666		38.2

Weights are without supply cable.