

Flowrox progressive cavity pumps

Flowrox progressive cavity (PC) pumps are ideal for challenging applications with high viscous, corrosive and other difficult or sensitive media. PC pumps are divided into three series. E-series is ideal for industrial and paste pumping applications. EL-series PC pumps excel in demanding wastewater and municipal waste applications. D-series progressive cavity pumps are designed especially for chemical and flocculant dosing applications.

Operating principle of the PC pump is based on the fact that the pumped medium continuously shifts spaces (progressing cavities) between the rotor and the stator, enabling nearly pulsation free pumping.



Features

- Evenwall® stator
- 2/3 rotor geometry
- Low pulsation flow
- No shearing or mixing of fluids

Ideal applications:

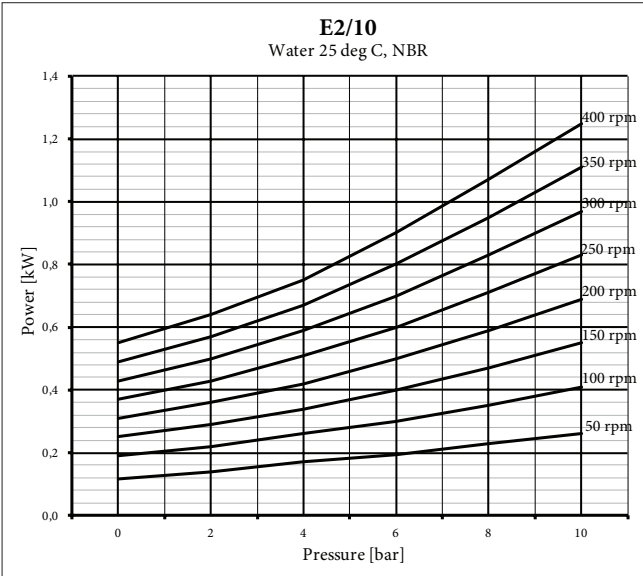
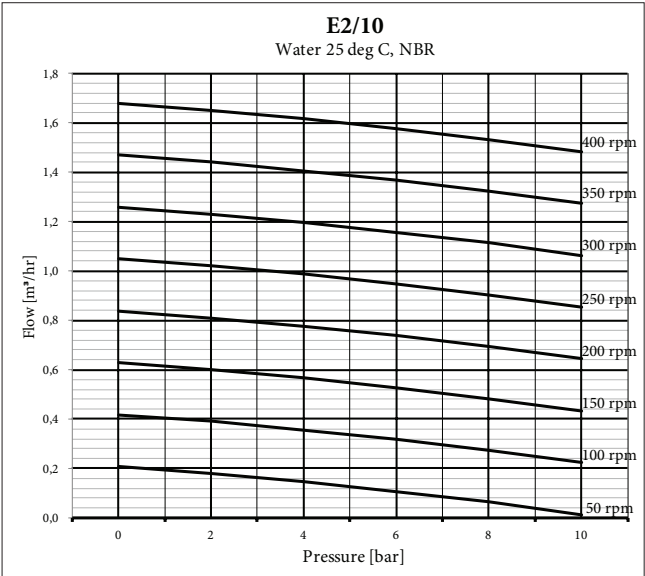
- Paper coating and paste pumping
- Sludge transfer
- Adhesives, pigments
- Filter feed

Benefits

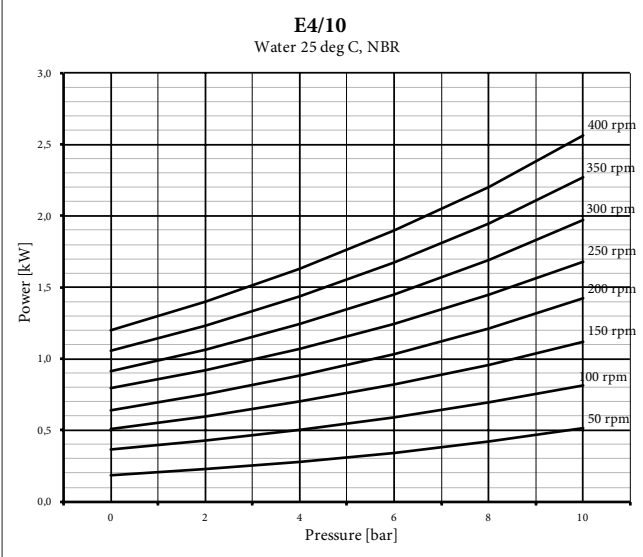
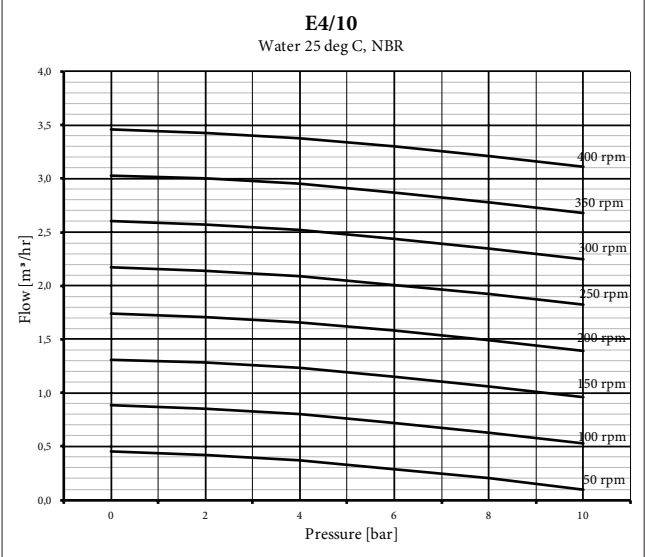
- Over 30% higher flow rate compared to a conventional PC pump with same rpm
- Save energy up to 15% compared to a conventional model
- Long rotor/stator lifetime

Technical Data	E-series PC pump								EL-series PC pump				D-series PC pump			
	E2/10	E4/10	E10/10	E20/10	E35/10	E70/10	E150/10	E250/10	EL50/6	EL100/6	EL200/6	EL330/6	D004/12	D01/12	D025/12	D075/12
Weight kg	110	135	180	270	350	630	1360	2300	325	543	1121	1913	14	14	15	17
Weight lb	242	297	397	595	771	1389	2998	5070	716	1197	2469	4217	31	31	33	37
Maximum flow m ³ /h	1,5	2,9	7,6	15,4	26,6	57,6	112,7	170,0	38,1	85,2	181,6	268,8	0,1	0,2	0,5	1,5
Maximum flow gpm	6.6	12.7	33.4	67.7	117,0	253.2	495.8	747.9	167.4	374.9	798.7	1181	0.4	0.8	2.2	6.6
Maximum pressure bar	10	10	10	10	10	10	10	10	6	6	6	6	12	12	12	12
Maximum pressure psi	150	150	150	150	150	150	150	150	87	87	87	87	174	174	174	174
Maximum viscosity	30000 cp												-	-	-	-
Motor power kW	1,5	3	3	7,5	11	30	75	90	11	15	30	55	0,37	0,37	0,55	1,1
Motor power hp	2	4	4	10	15	40	100	120	15	20	40	75	0.5	0.5	0.75	1.5

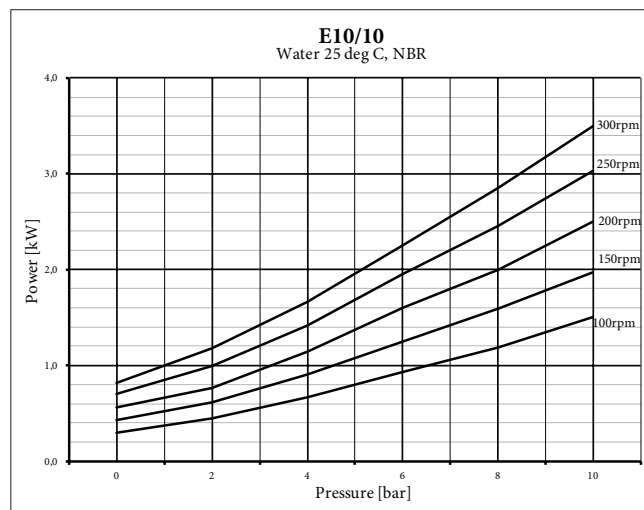
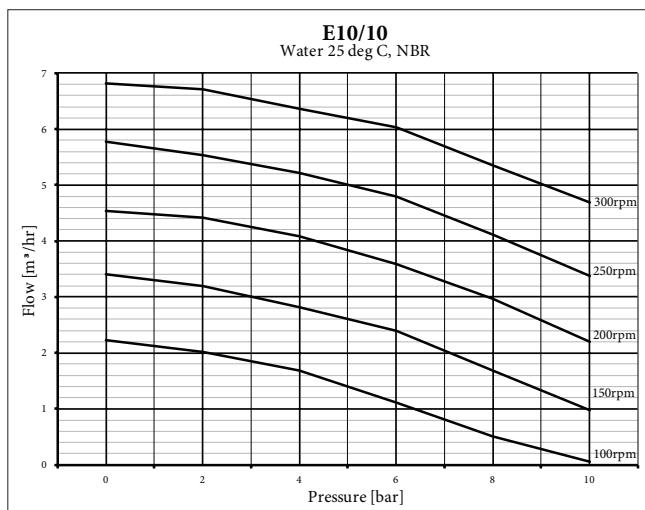
PC Pump E2/10



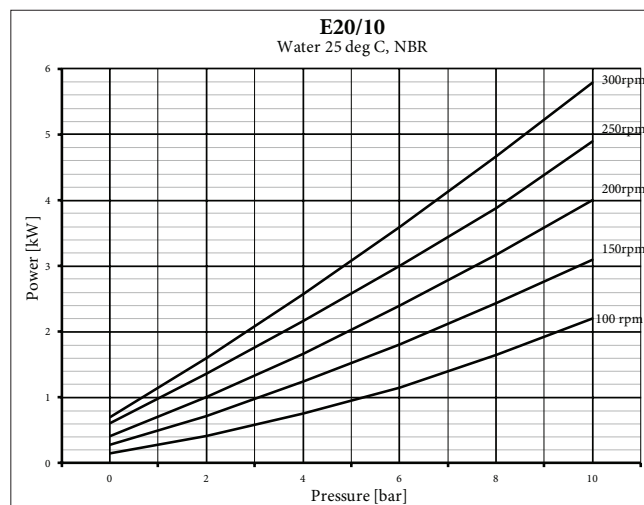
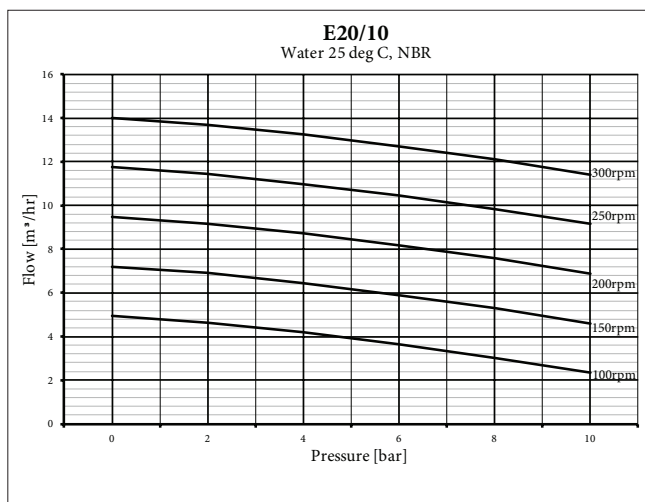
PC Pump E4/10



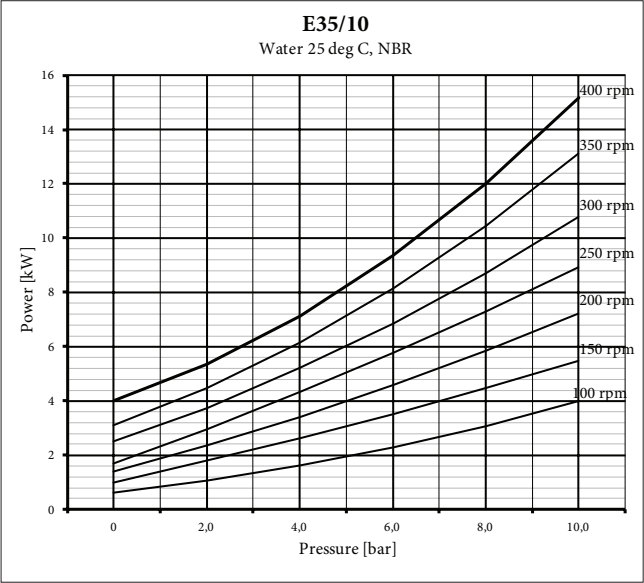
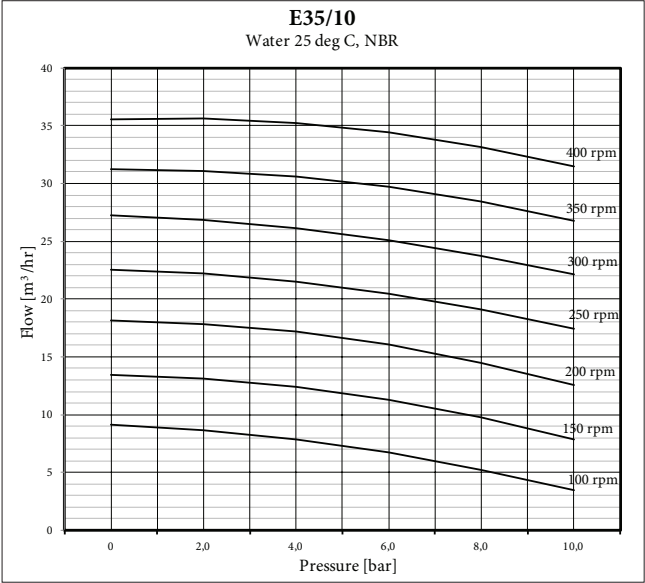
PC Pump E10/10



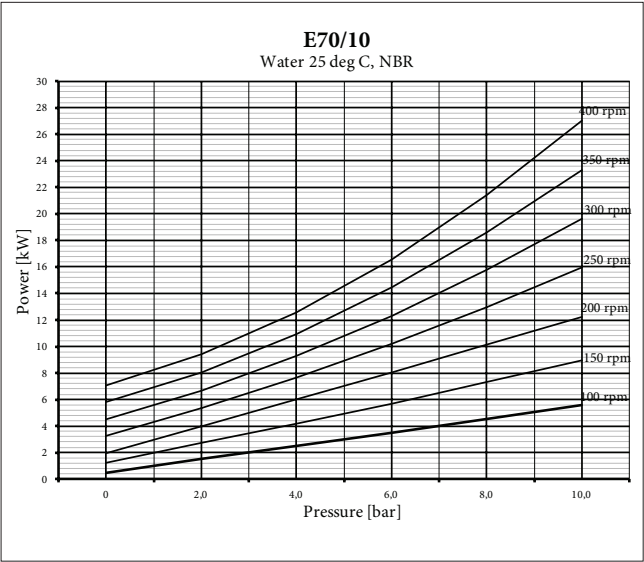
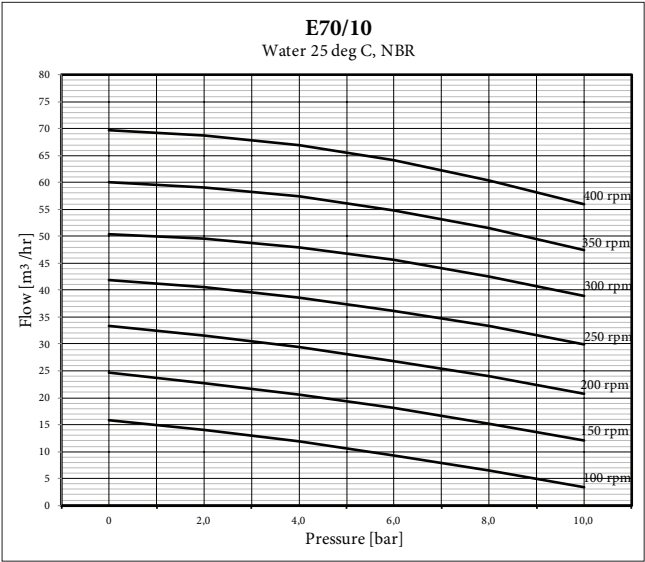
PC Pump E20/10



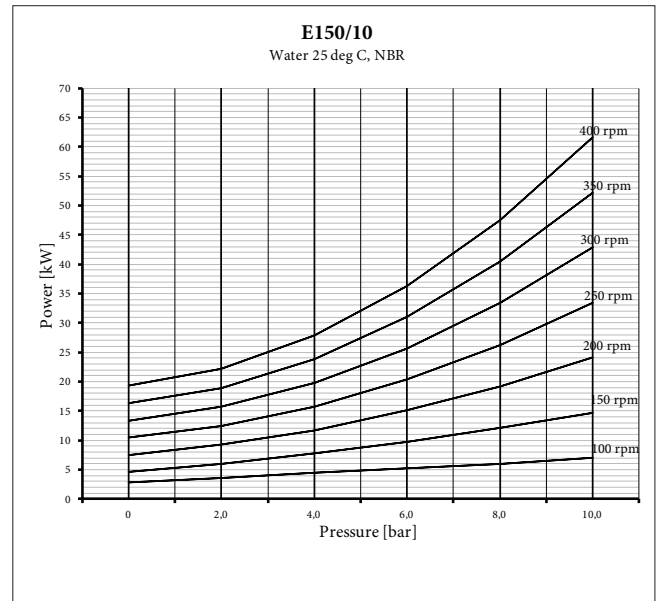
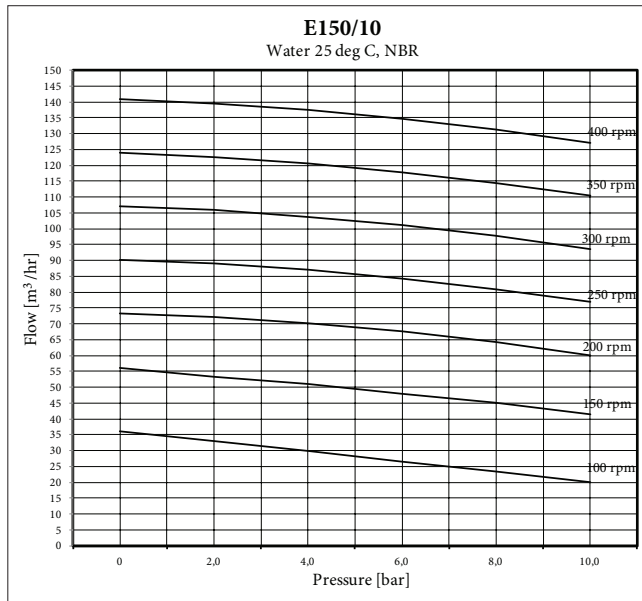
PC Pump E35/10



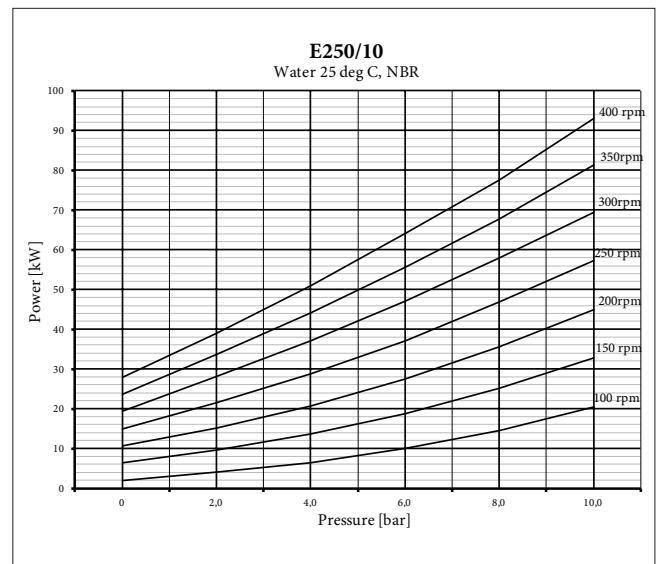
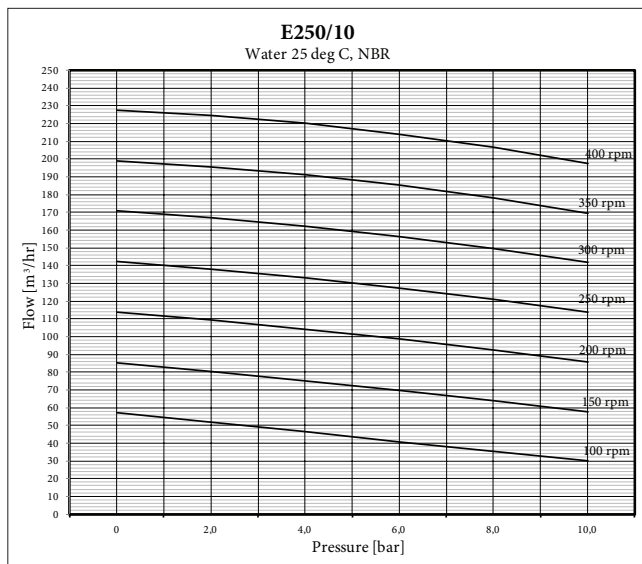
PC Pump E70/10



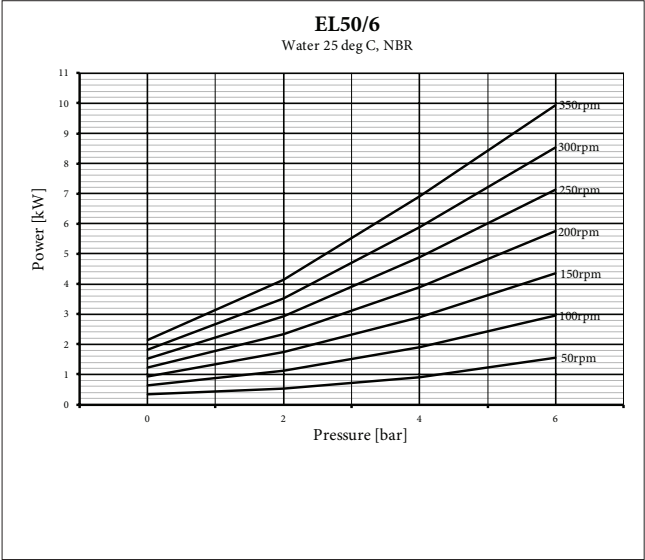
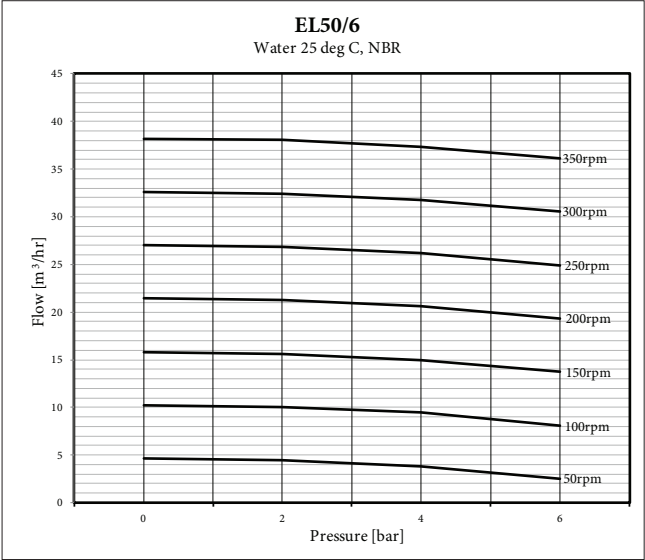
PC Pump E150/10



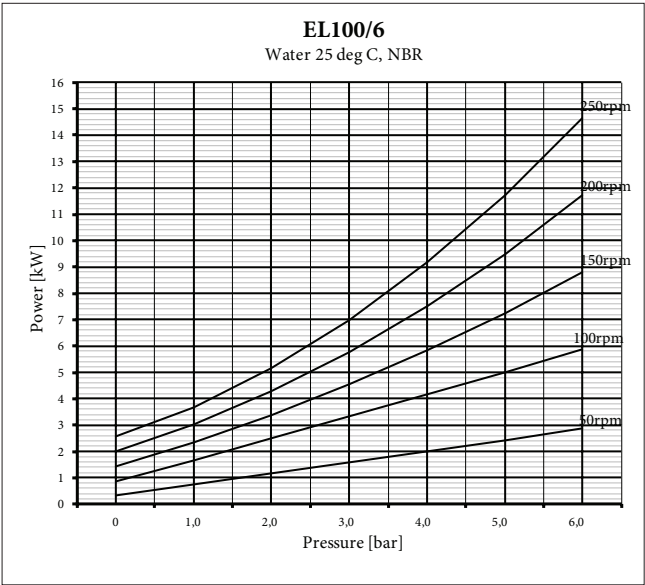
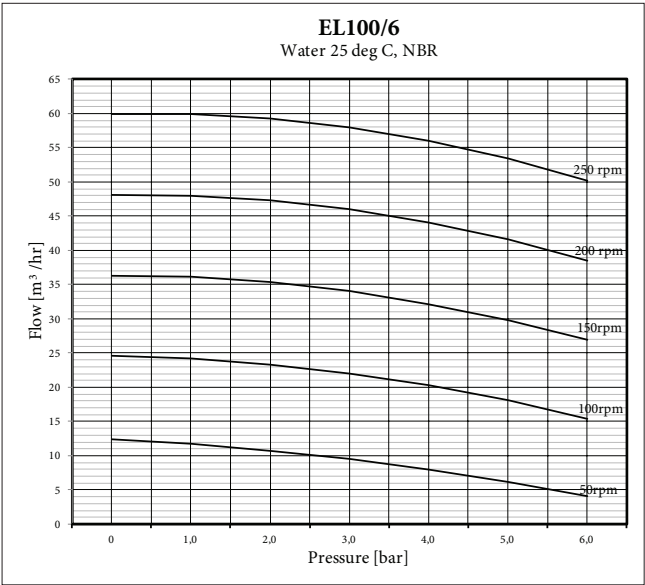
PC Pump E250/10



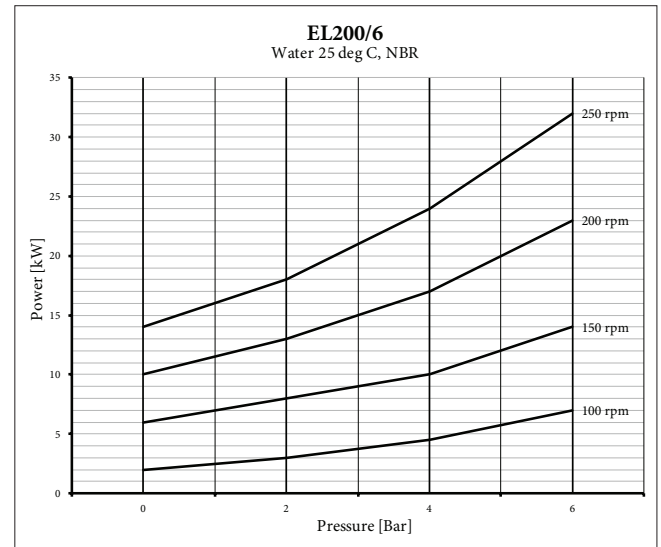
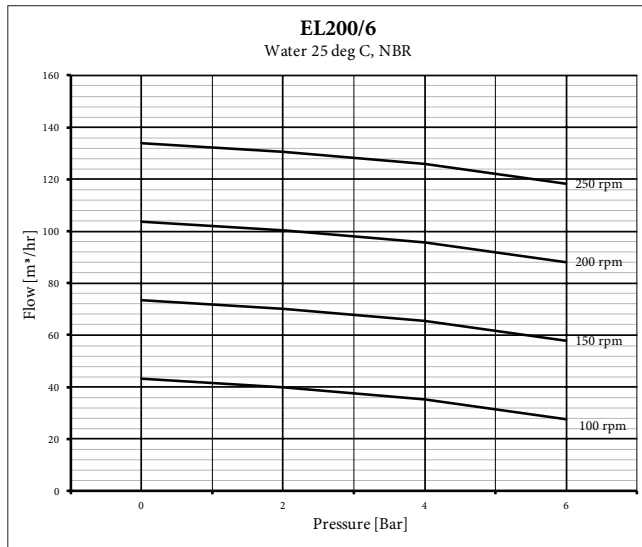
PC Pump EL50/6



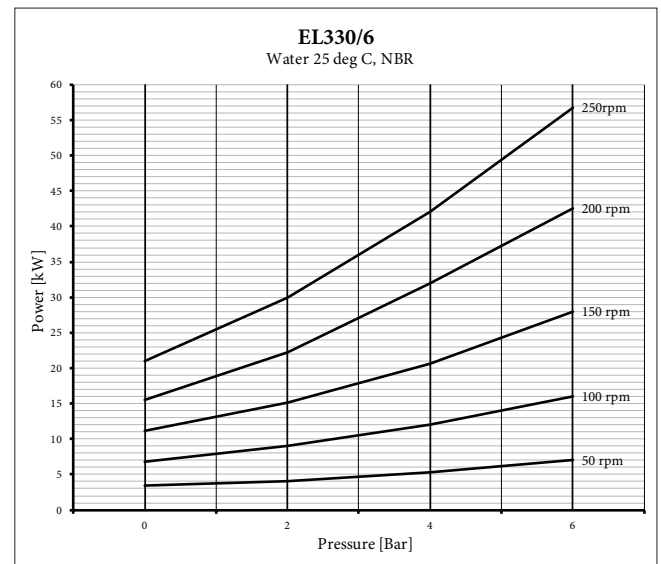
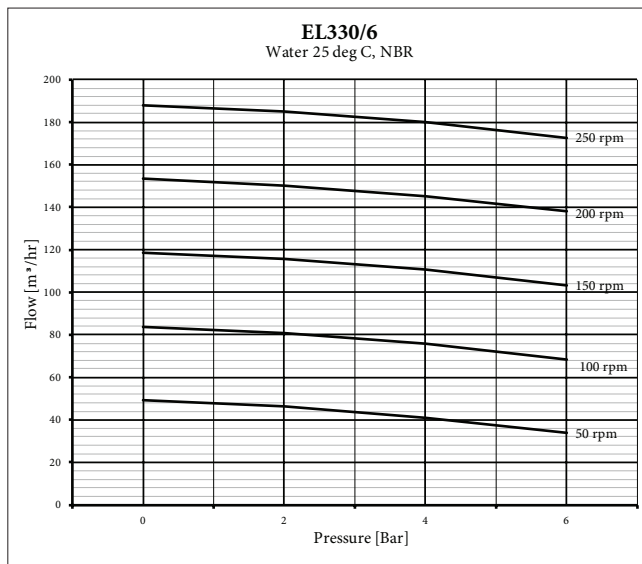
PC Pump EL100/6



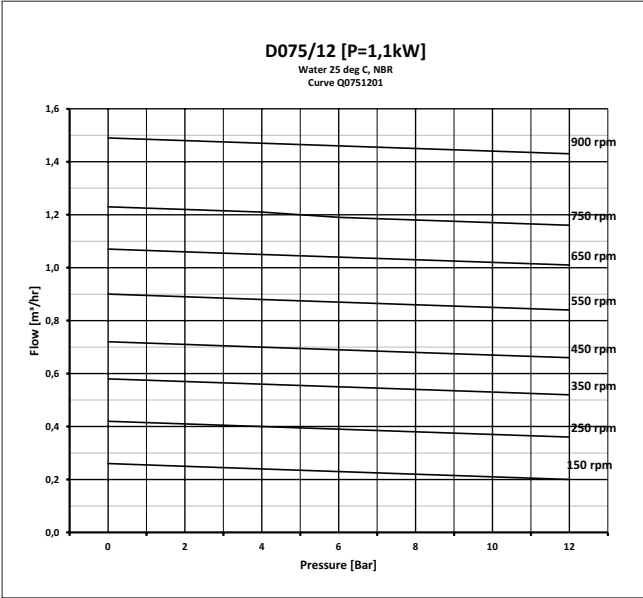
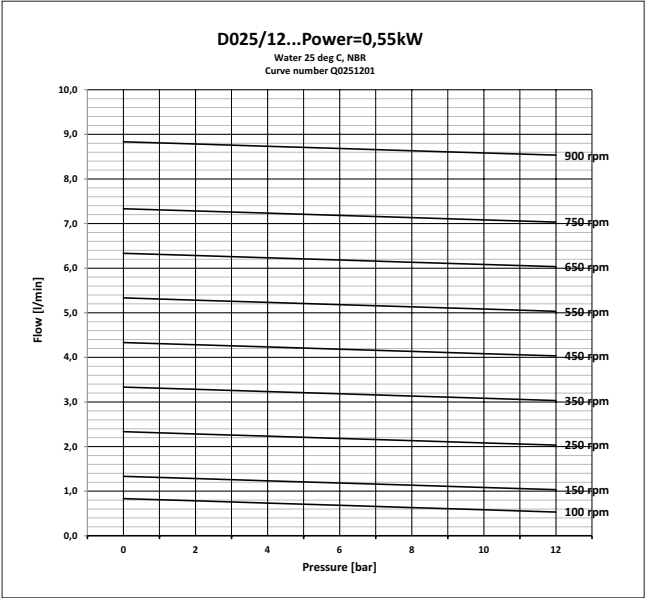
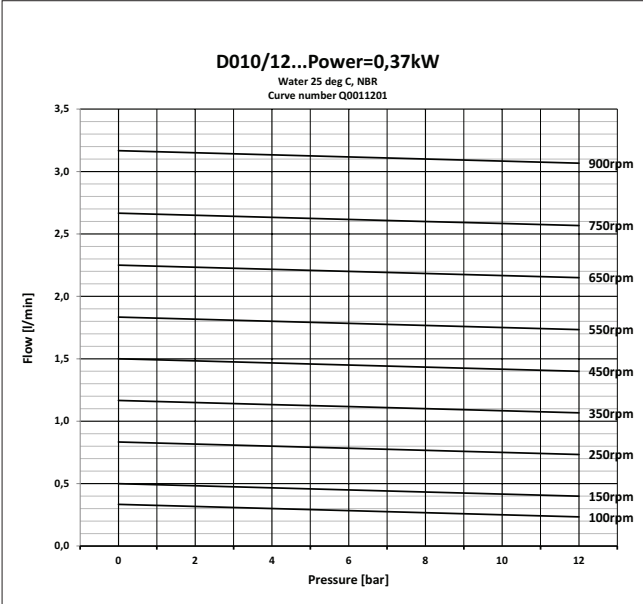
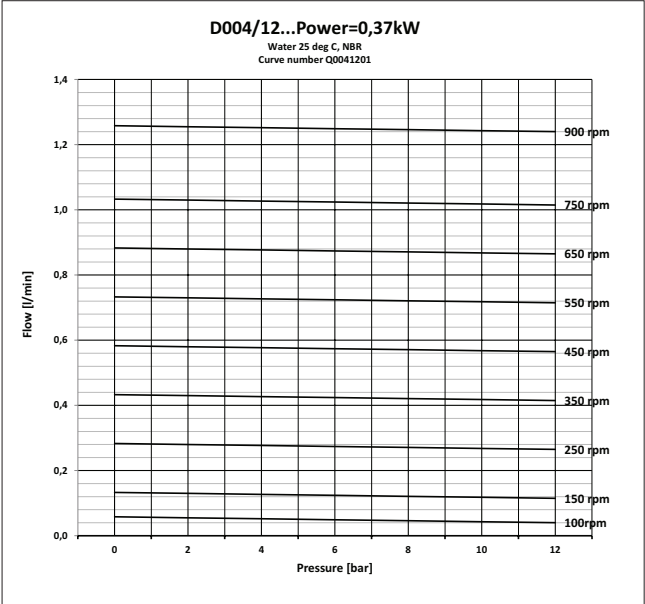
PC Pump EL200/6



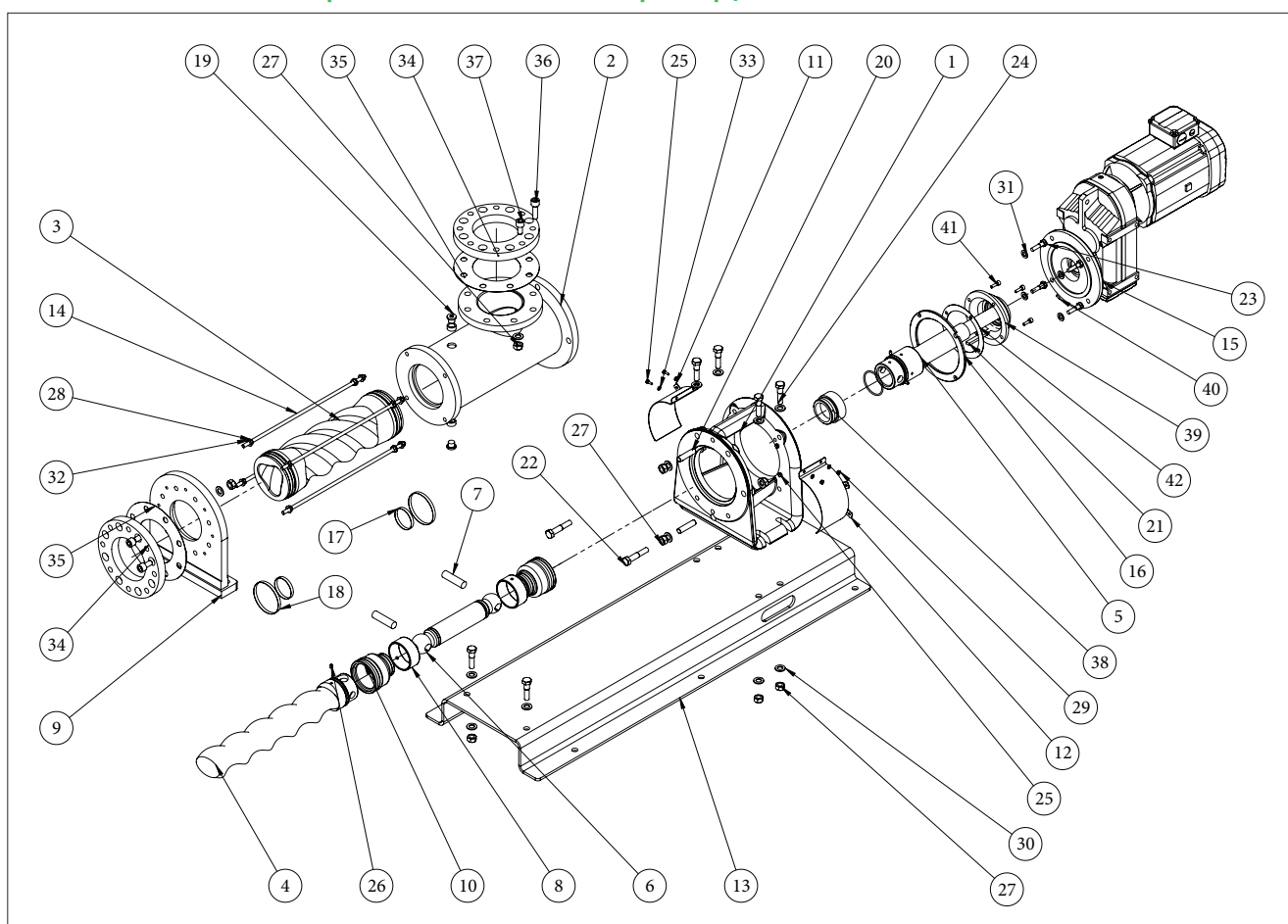
PC Pump EL330/6



PC Pump D004/12



Exploded view of PC pump, E- and EL-series

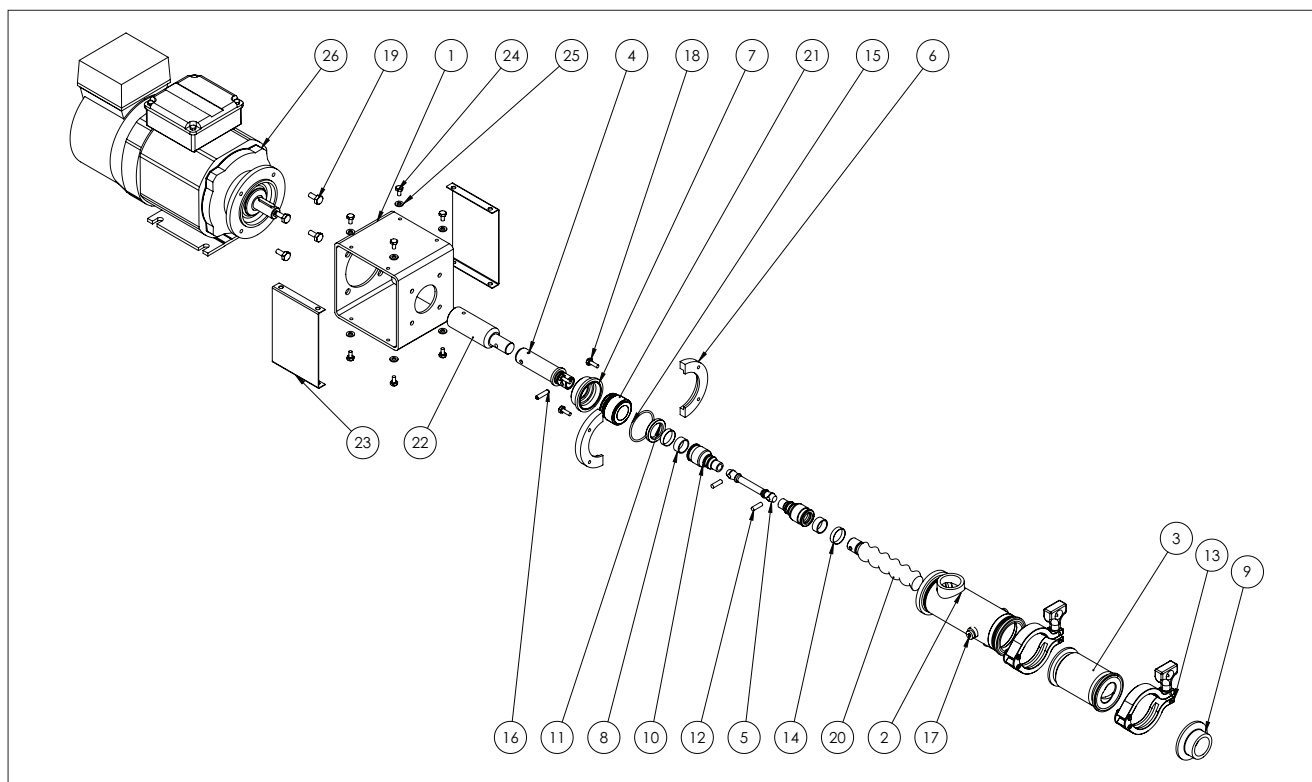


ITEM NO.	DESCRIPTION	QTY.
1	FRAME	1
2	SUCTION PIPE	1
3	STATOR	1
4	ROTOR	1
5	DRIVE SHAFT	1
6	ARTICULATED SHAFT	1
7	JOINT PIN	2
8	JOINT PIN	2
9	SUPPORT FLANGE	1
10	SHAFT RUBBER	2
11	FRAME COVER PLATE	1
12	FRAME COVER PLATE	1
13	PLATFORM	1
14	THREADED BAR	4
15	GEAR MOTOR	1
16	GUIDE RING	1
17	PREFORMED CLAMP	2
18	PREFORMED CLAMP	2
19	PLUG HEX SOCKET HEAD	2
20	THREADED STUD	2
21	KEY BAR	1

ITEM NO.	DESCRIPTION	QTY.
22	HEX SCREW	2
23	HEX SCREW	4
24	HEX SCREW	6
25	HEX SCREW	6
26	HEX SOCKET HEAD SCREW	6
27	HEX NUT	19
28	HX NUT	12
29	HEX NUT	2
30	WASHER	25
31	WASHER	4
32	WASHER	12
33	WASHER	8
34	PC ADAPTER FLANGE	2
35	SEAL	2
36	HEX SOCKET SCREW	9
37	HEX SOCKET SCREW	9
38	SEAL	1
39	MAIN SEAL	1
40	KEEN PIN	1
41	HEX SOCKET SCREW	4
42	SEAL	1

Parts and quantities may vary depending on the pump size and model.
Evenwall® stator, E-series part 34: ANSI 150 connections

Exploded view of PC pump, D-series



ITEM NO.	DESCRIPTION	QTY.
1	FRAME	1
2	SUCTION PIPE	1
3	STATOR	1
4	SHAFT	1
5	ARTICULATED SHAFT	1
6	FLANGE	2
7	BUSHING	1
8	BUSHING	2
9	FLANGE	1
10	SHAFT RUBBER	1
11	FLANGE	1
12	JOINT PIN	2
13	CLAMP CONNECTOR	2
14	PREFORMED CLAMP	2
15	GASKET RING	1
16	SPRING PIN	1
17	PLUG	3
18	HEX SCREW	4
19	HEX SCREW	4
20	ROTOR	1
21	MECHANICAL SEAL	1
22	COUPLING	1
23	GUARDS	2
24	HEX SCREW	8
25	WASHER	8
26	ELECTRIC MOTOR	1

Parts and quantities may vary depending on the pump size and model.

Technical specifications

Series:

E-series:	E2, E4, E10, E35, E70, E150, E250
EL-series:	EL50, EL100, EL200, EL330
D-series:	D004, D001, D025, D075

Drive unit:

Gear motor
Gear unit
Bare shaft

Auxiliaries:

Platform
Pressure transmitter
Inspection hatch

Connections:

DIN PN10, ANSI 150 (E- and EL-series)
Internal R1" thread connections (D-series)

Temperature range:

Minimum & maximum ambient
operating temperature: 0°C to 46°C /
32°F to 115°F

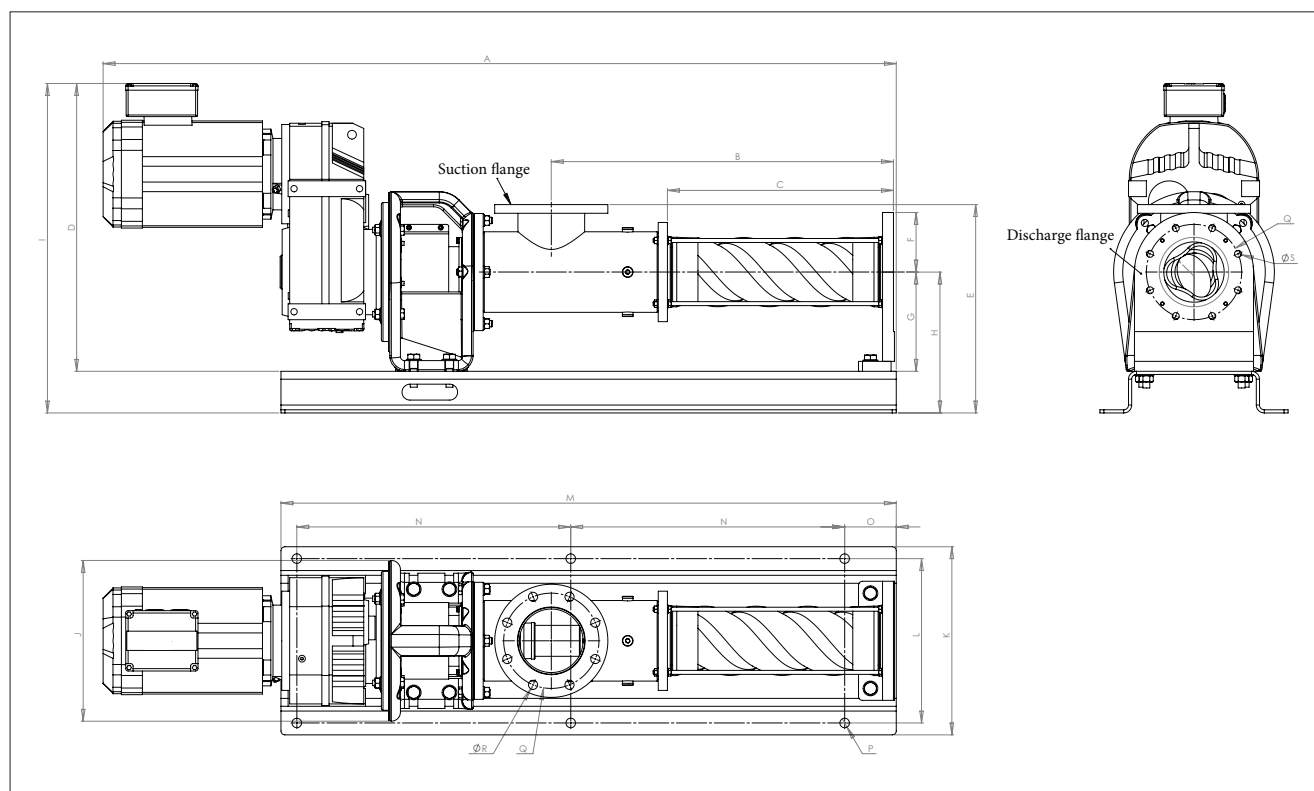
Construction materials, E- and EL-series:

Wetted components:	
Stator	NBR, EPDM Evenwall® stator, E-series
Rotor	Carbon steel, Stainless steel 2/3 rotor geometry
Rotor coating	Black nitrate Hard chromium Tungsten carbide
Suction pipe	Carbon steel Stainless steel
Seal	Gland packing 1-stage mechanical seal 2-stage mechanical seal
Non-wetted components	
Frame	Cast iron
Platform	Carbon steel

Construction materials, D-series:

Wetted components:	
Stator:	NBR
Rotor:	Carbon steel, Stainless steel 1/2 rotor geometry
Rotor coating:	Hard chromium Tungsten carbide
Suction pipe:	Stainless steel
Seal:	1-stage mechanical seal
Non-wetted components:	
Frame:	Cast iron

Dimensions PC-E pumps



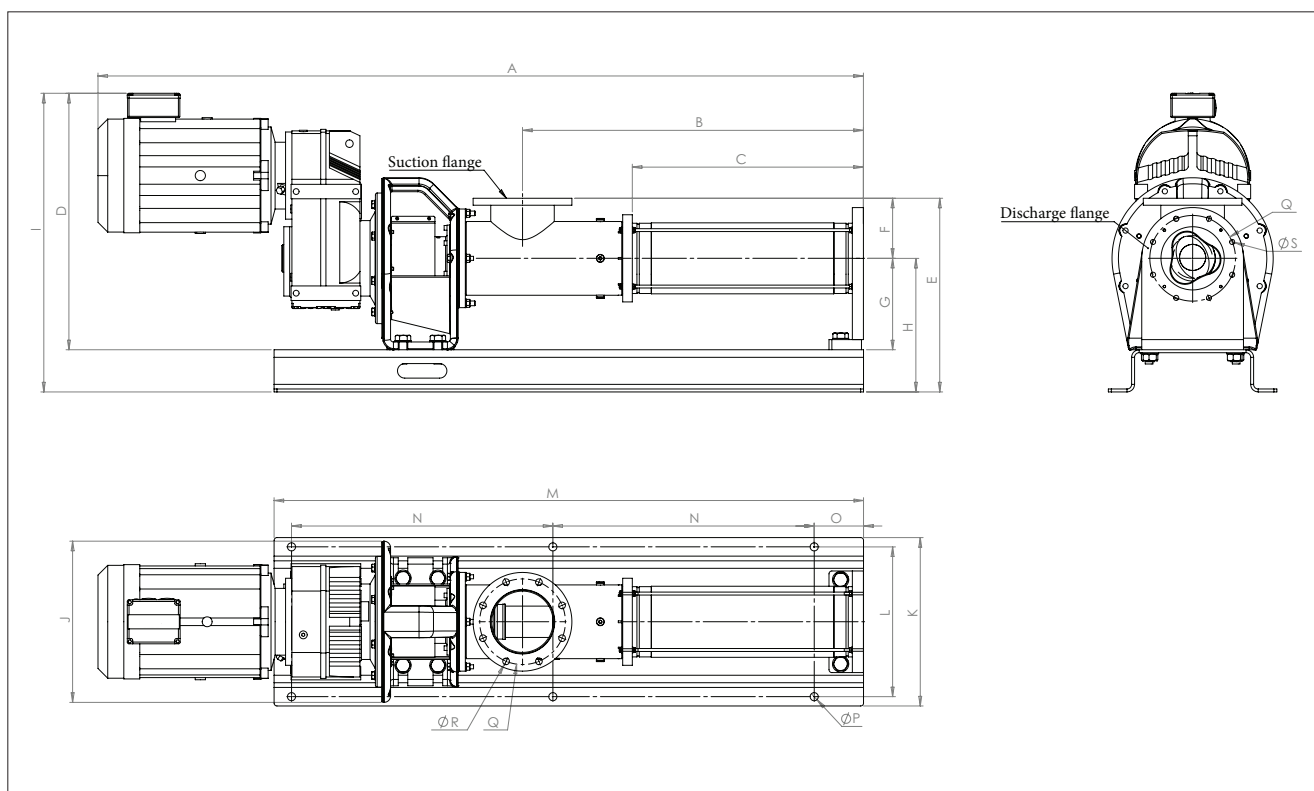
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Suction flange	Discharge flange
E2/10	1260	433	229	423	368	128	125	240	508	290	380	344	940	765	118	ø 18 x 4	125	ø 18 x 4	M16 x 4	DN50	DN50
E4/10	1273	433	381	444	368	128	125	240	509	290	380	344	940	765	118	ø 18 x 4	145	ø 18 x 4	M16 x 4	DN65	DN65
E10/10	1358	519	315	440	380	140	125	240	525	290	390	354	1060	440	130	ø 18 x 6	160	ø 18 x 8	M16 x 8	DN80	DN80
E20/10	1723	698	395	566	420	160	155	260	566	340	474	414	1300	560	135	ø 18 x 6	180	ø 18 x 8	M16 x 8	DN100	DN100
E35/10	1886	774	471	629	465	160	200	305	734	340	474	414	1400	645/530	185	ø 18 x 6	210	ø 18 x 8	M16 x 8	DN125	DN125
E70/10	2254	862	570	848	525	170	250	355	924	405	474	414	1550	690	130	ø 24 x 6	240	ø 23 x 8	M20 x 8	DN150	DN150
E150/10	2683	994	616	1095	667	207	315	460	1240	555	580	516	1850	810	170	ø 28 x 6	295	ø 23 x 8	M20 x 8	DN200	DN200
E250/10	2902	1128	675	1170	770	230	390	525	1320	665	646	588	2170	960	190	ø 28 x 6	350	ø 23 x 12	M20 x 12	DN250	DN250

Dimensions are in mm. Connections in drawing DIN PN 10.

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Suction flange	Discharge flange
E2/10	49.61	17.05	9.02	16.65	14.49	5.04	4.92	9.45	20.00	11.42	14.96	13.54	37.01	30.12	4.65	ø 0.71 x 4	4.92	ø 0.71 x 4	M16 x 4	2"	2"
E4/10	50.12	17.05	15.00	17.48	14.49	5.04	4.92	9.45	20.04	11.42	14.96	13.54	37.01	30.12	4.65	ø 0.71 x 4	5.71	ø 0.71 x 4	M16 x 4	2.5"	2.5"
E10/10	53.46	20.43	12.40	17.32	14.96	5.51	4.92	9.45	20.67	11.42	15.35	13.94	41.73	17.32	5.12	ø 0.71 x 6	6.30	ø 0.71 x 8	M16 x 8	3"	3"
E20/10	67.83	27.48	15.55	22.28	16.54	6.30	6.10	10.24	22.28	13.39	18.66	16.30	51.18	22.05	5.31	ø 0.70 x 6	7.09	ø 0.71 x 8	M16 x 8	4"	4"
E35/10	74.29	30.47	18.54	24.76	18.31	6.30	7.87	12.01	28.90	13.39	18.66	16.30	55.12	25.39 / 20.87	7.28	ø 0.70 x 6	8.27	ø 0.71 x 8	M16 x 8	5"	5"
E70/10	88.74	33.94	22.44	33.39	20.67	6.69	9.84	13.98	36.38	15.94	18.66	16.30	61.02	27.17	5.12	ø 0.94 x 6	9.45	ø 0.91 x 8	M20 x 8	6"	6"
E150/10	105.63	39.13	24.25	43.11	26.26	8.15	12.40	18.11	48.82	21.85	22.83	20.31	72.83	31.89	6.69	ø 1.10 x 6	11.61	ø 0.91 x 8	M20 x 8	8"	8"
E250/10	114.29	44.41	26.57	46.06	30.31	9.06	15.35	20.67	51.97	26.18	25.43	23.15	85.43	37.80	7.48	ø 1.10 x 6	13.78	ø 0.91 x 12	M20 x 12	10"	10"

Dimensions in inches.

Dimensions PC-EL pumps



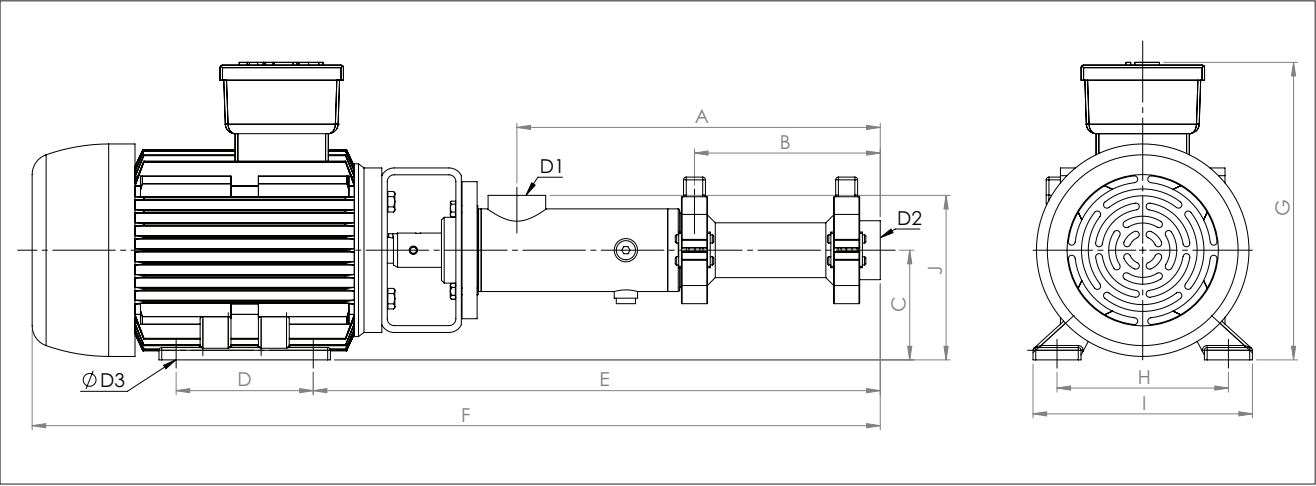
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Suction flange	Discharge flange
EL50/6	2005	893	590	629	465	153	208	305	734	300	474	414	1519	660	154	ø18	210	ø18 x 8	M16 x 8	DN125	DN125
EL100/6	2108	972	680	755	525	170	250	355	830	300	474	414	1660	745	123	ø24	240	ø23 x 8	M20 x 8	DN150	DN150
EL200/6	2636	1174	796	883	667	207	315	460	1029	350	580	516	2030	900	170	ø28	295	ø23 x 8	M20 x 8	DN200	DN200
EL330/6	3202	1428	975	1170	770	230	390	540	1320	400	680	605	2470	1110	190	ø28	350	ø23 x 12	M20 x 12	DN250	DN250

Dimensions are in mm. Connections in drawing DIN PN 10.

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Suction flange	Discharge flange
EL50/6	78.94	35.16	23.23	24.76	18.31	6.02	8.19	12.01	28.90	11.81	18.66	16.30	59.61	25.98	6.06	ø0.71	8.27	ø 0.71 x 8	M16 x 8	5"	5"
EL100/6	82.99	38.27	26.77	29.72	20.67	6.69	9.84	13.98	32.68	11.81	18.66	16.30	65.35	29.33	4.84	ø0.94	9.45	ø 0.91 x 8	M20 x 8	6"	6"
EL200/6	103.78	46.22	31.34	34.76	26.26	8.15	12.40	18.11	40.51	13.78	22.83	20.31	79.92	35.43	6.69	ø1.10	11.61	ø 0.91 x 8	M20 x 8	8"	8"
EL330/6	125.67	56.22	38.39	46.06	30.31	9.06	15.35	21.26	51.97	15.75	26.77	23.82	97.24	43.70	7.48	ø1.10	13.78	ø 0.91 x 12	M20 x 12	10"	10"

Dimensions in inches.

Dimensions PC-D pumps



Model	A	B	C	D	E	F	G	H	I	J	D1, D2	Ø D3
D004/12	215	85	80	100	364	569	218	125	160	120	G1"	Ø 10
D01/12	265	135	80	100	414	619	218	125	160	120	G1"	Ø 10
D025/12	255	125	80	100	404	609	218	125	160	120	G1"	Ø 10
D075/12	345	215	90	100	580	904	240	140	174	130	G1"	Ø 10

Dimensions are in mm. Dimensions can vary based on selected gear motor.

Model	A	B	C	D	E	F	G	H	I	J	D1, D2	Ø D3
D004/12	8.47	3.35	3.15	3.94	14.33	22.40	8.58	4.92	6.30	4.72	G1"	Ø 0.39
D01/12	10.43	5.31	3.15	3.94	16.30	24.37	8.58	4.92	6.30	4.72	G1"	Ø 0.39
D025/12	10.04	4.92	3.15	3.94	15.91	23.98	8.58	4.92	6.30	4.72	G1"	Ø 0.39
D075/12	13.58	8.46	3.54	3.94	22.83	35.59	9.45	5.51	6.85	5.12	G1"	Ø 0.39

Dimensions in inches. Dimensions can vary based on selected gear motor.

Valmet Flow Control Oy

Marssitie 1, 53600 Lappeenranta, Finland.

Tel. +358 10 417 5000.

www.valmet.com/flowcontrol

Subject to change without prior notice.

Neles, Neles Easyflow, Jamesbury, Stonel, Valvcon and Flowrox, and certain other trademarks, are either registered trademarks or trademarks of Valmet Oyj or its subsidiaries in the United States and/or in other countries.

