



EBARA

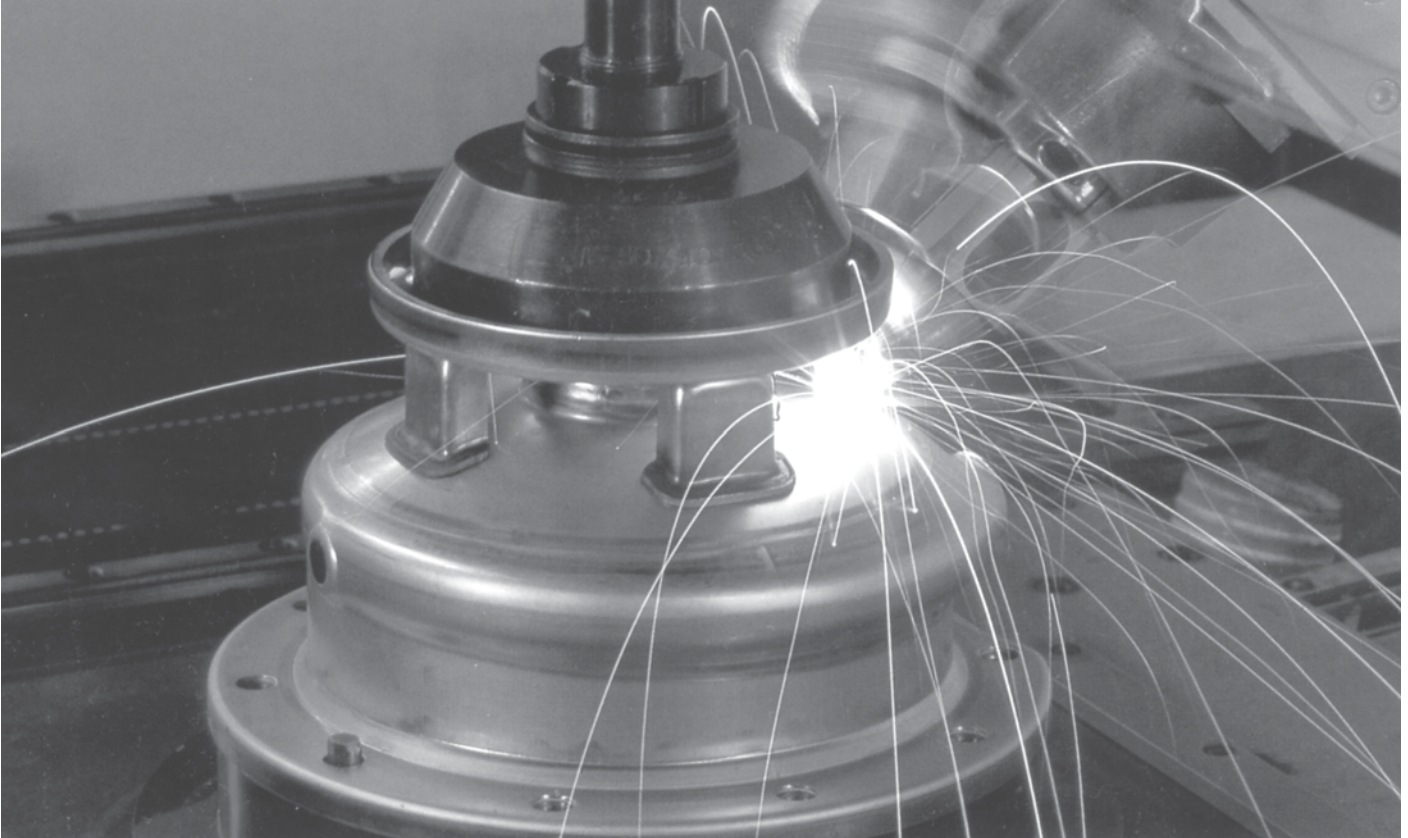
DW - DW VOX

SUBMERSIBLE SEWAGE PUMPS



DW - DW VOX

EBARA presents the **DW - DW VOX** Submersible Pump. The **ONLY** submersible pump for light screened Sewage and dirty water. The pump is manufactured entirely from a single sheet of 304 stainless steel using the EBARA pressing method. Comprising of a single channel impeller or "Vortex" style and incorporating a double mechanical seal. The volute of the **DW - DW VOX** is made as an integral part of the pump casing using the EBARA patented pressing technology.



APPLICATIONS

- Removal of treated liquid waste.
- Draining of building sites.
- Draining of sump pits.
- Emergency drainage pumps for flood protection.
- Tank emptying.
- General dirty water duties.

TECHNICAL CHARACTERISTICS

Completely pressed from 304 stainless steel.

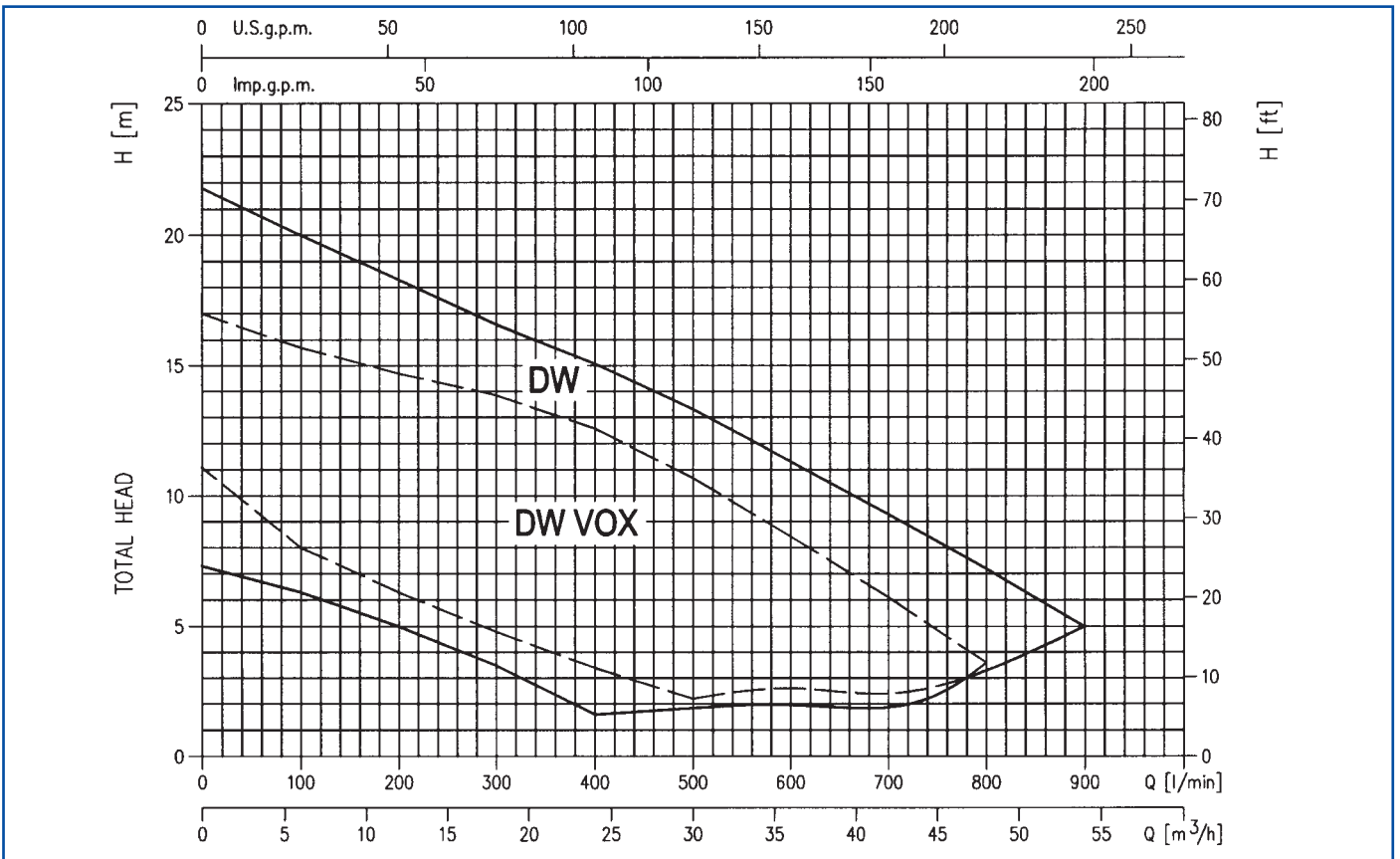
Pump body and spiral volute produced using EBARA patented technology.

DW = Single Channel Impeller.

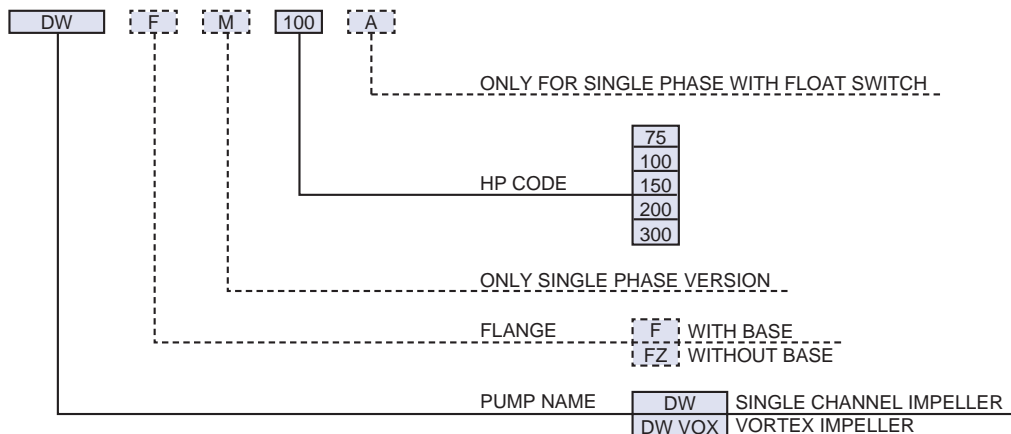
DW VOX = Open fronted impeller - "Vortex" style in recessed position.

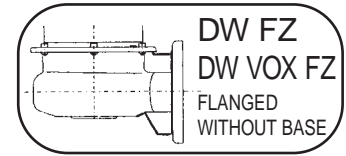
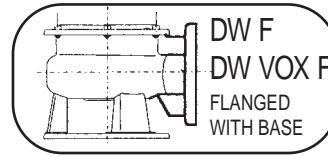
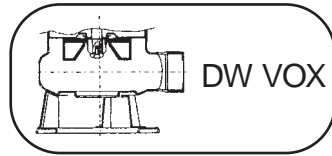
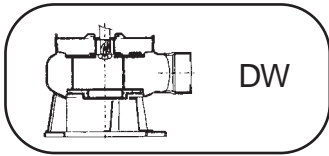
- Lifting handle provided as standard.
- Shaft extension made in 304 stainless steel.
- Double mechanical seal with oil chamber for lubrication.
- Mechanical seal components - graphite/ceramic and silicon carbide/silicon carbide.

SELECTION CHART



Pump type	kW	HP	Q = Capacity											
			l/min m³/h	0	100	200	300	400	500	600	700	800	900	
				0	6	12	18	24	30	36	42	48	54	
				H = Total manometric head in meters										
DW 75	0.55	0.75	11.1	8	6.3	4.8	3.4	2.2	–	–	–	–	–	
DW 100	0.75	1	13.3	10.6	8.7	7.1	5.5	4	2.6	–	–	–	–	
DW 150	1.1	1.5	15	13.1	11.3	9.5	7.7	5.9	4.2	2.4	–	–	–	
DW 200	1.5	2	18.2	16.6	15	13.3	11.4	9.5	7.5	5.4	3.3	–	–	
DW 300	2.2	3	21.8	20	18.3	16.6	15.1	13.3	11.3	9.3	7.2	5	–	
DW VOX 75	0.55	0.75	7.3	6.3	5	3.5	1.6	–	–	–	–	–	–	
DW VOX 100	0.75	1	9	7.9	6.7	5.3	3.7	1.9	–	–	–	–	–	
DW VOX 150	1.1	1.5	11.4	10.2	9	7.6	6.1	4.1	2.1	–	–	–	–	
DW VOX 200	1.5	2	13.8	12.5	11.2	9.8	8.3	6.4	4.2	1.6	–	–	–	
DW VOX 300	2.2	3	17	15.7	14.7	13.9	12.6	10.7	8.4	6.1	3.6	–	–	





SPECIFICATIONS

PUMP		
Liquid Handled	Type of liquid	Dirty water, sewage water
	Max temperature [°C]	40
	Max solids size [mm]	50 spherical
Maximum immersion [m]		10
Construction	Impeller	Single channel (DW) Vortex (DW VOX)
	Shaft seal type	Double mechanical seal
	Bearing	Sealed ball bearing
Pipe connection	Suction-Flange [mm]	50 Open
	Discharge-Flange	G 2
Material	Casing	AISI 304
	Impeller	AISI 304
	Casing cover	AISI 304
	Shaft seal	Pump side: SiC/SiC/NBR Motor side: Carbon/Ceramic/NBR
	Seal cover	AISI 304
	Shaft	AISI 303 (Part in contact with liquid)
	Lubricating liquid	White mineral oil: Esso Marcol 172 (385 cc)
Applicable standard of test		ISO 9906 grade 2

MOTOR		
Type	Submersible dry type	
	Single Phase	Three Phase
No. of Poles	2	
Rotation speed [min ⁻¹]	≈2800	
Insulation Class	F	
Protection degree	IP 68	
Power rating	[kW]	0.55 ÷ 1.1
	[HP]	0.75 ÷ 1.5
Frequency [Hz]	50	
Voltage [V]	230 ± 10%	400 ± 10%
Capacitor	Built in	–
Over load protection	Built in	Provided by the user
Float switch	Optional	–
Float switch cable	material	H07RN-F
	size	3G1
Casing material	AISI 304	
Base material/motor support	AISI 304	
Power cable	length [m]	10
	material	H07RN-F
	size	3G1 (up to 0.55 kW) 3G1.5 (from 0.75 to 1.1 kW)
Dimensions of cable entry	Cable Gland	

TECHNICAL DATA

DW

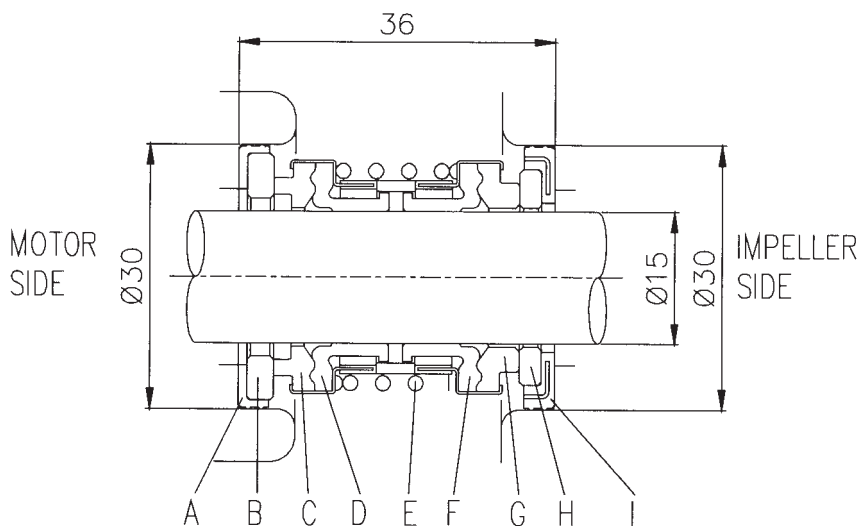
Type pumps		Power		Capacitor		Input power		Full load current		Locked rotor current	
Single Phase 230 V 50 Hz	Three Phase 400 V 50 Hz	[kW]	[HP]	Single Phase		[kW]		[A]		[A]	
				[μ F]	V _C [V]	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase
75 M	75	0.55	0.75	20	450	0.9	0.85	3.9	1.5	17	8.5
100 M	100	0.75	1	25	450	1.28	1.19	5.9	2.1	26	14.2
150 M	150	1.1	1.5	31.5	450	1.57	1.55	7.3	2.8	35	24.2
-	200	1.5	2	-	-	-	2.08	-	3.6	-	30
-	300	2.2	3	-	-	-	2.9	-	5.0	-	45

DW VOX

Type pumps		Power		Capacitor		Input power		Full load current		Locked rotor current	
Single Phase 230 V 50 Hz	Three Phase 400 V 50 Hz	[kW]	[HP]	Single Phase		[kW]		[A]		[A]	
				[μ F]	V _C [V]	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase
75 M	75	0.55	0.75	20	450	0.88	0.80	3.9	1.4	17	8.5
100 M	100	0.75	1	25	450	1.25	1.18	5.8	2.1	26	14.2
150 M	150	1.1	1.5	31.5	450	1.58	1.57	7.3	2.8	35	24.2
-	200	1.5	2	-	-	-	1.92	-	3.3	-	30
-	300	2.2	3	-	-	-	2.4	-	4.4	-	45

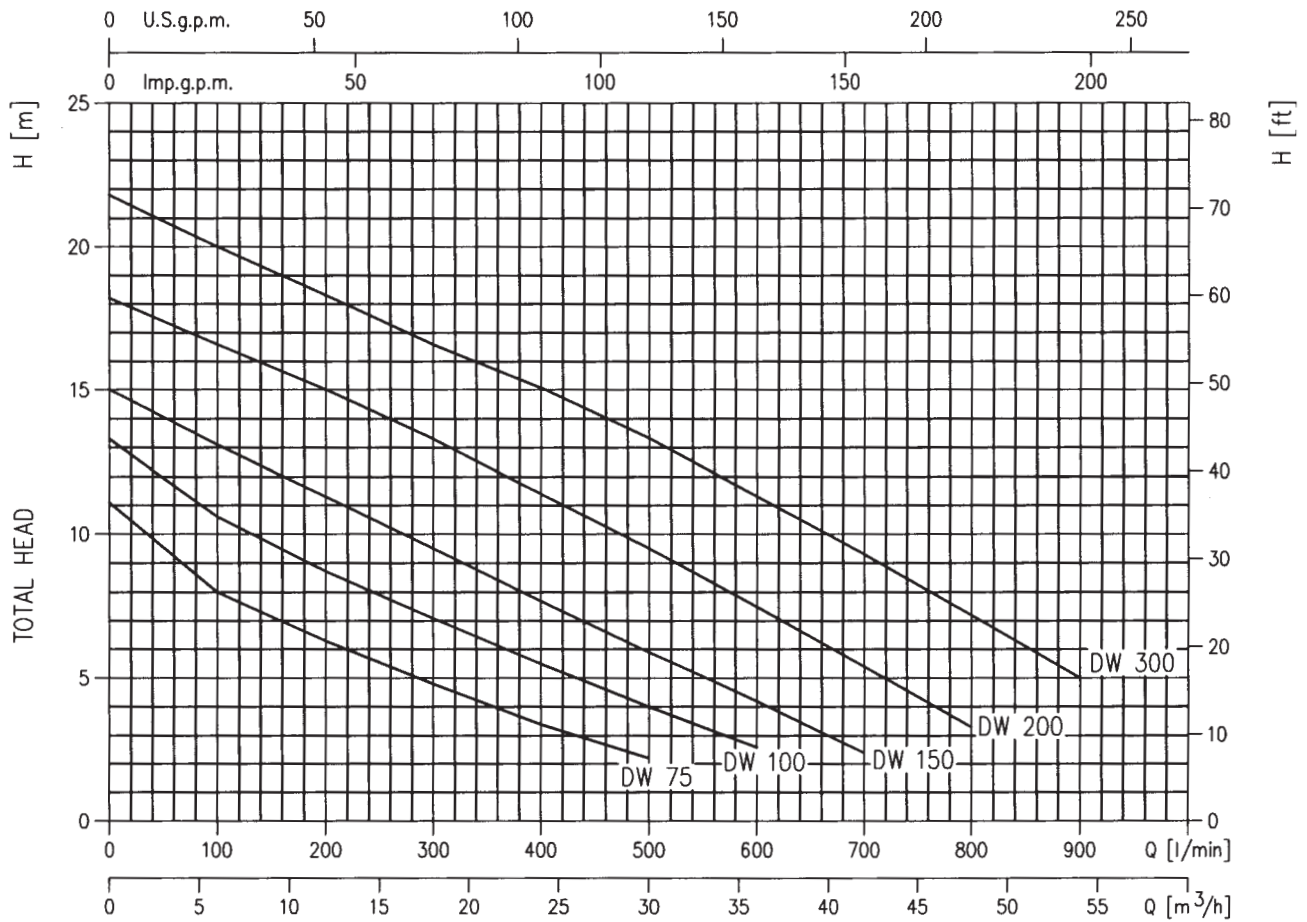
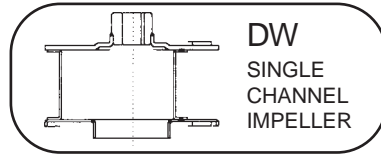
DW - DW VOX

Type pumps		Ball Bearing	
Single Phase 230 V 50 Hz	Three Phase 400 V 50 Hz	Pump side	Cover side
75 M	75	6303 ZZ	6203 ZZ
100 M	100	6303 ZZ	6203 ZZ
150 M	150	6303 ZZ	6203 ZZ
-	200	6303 ZZ	6203 ZZ
-	300	6303 ZZ	6203 ZZ



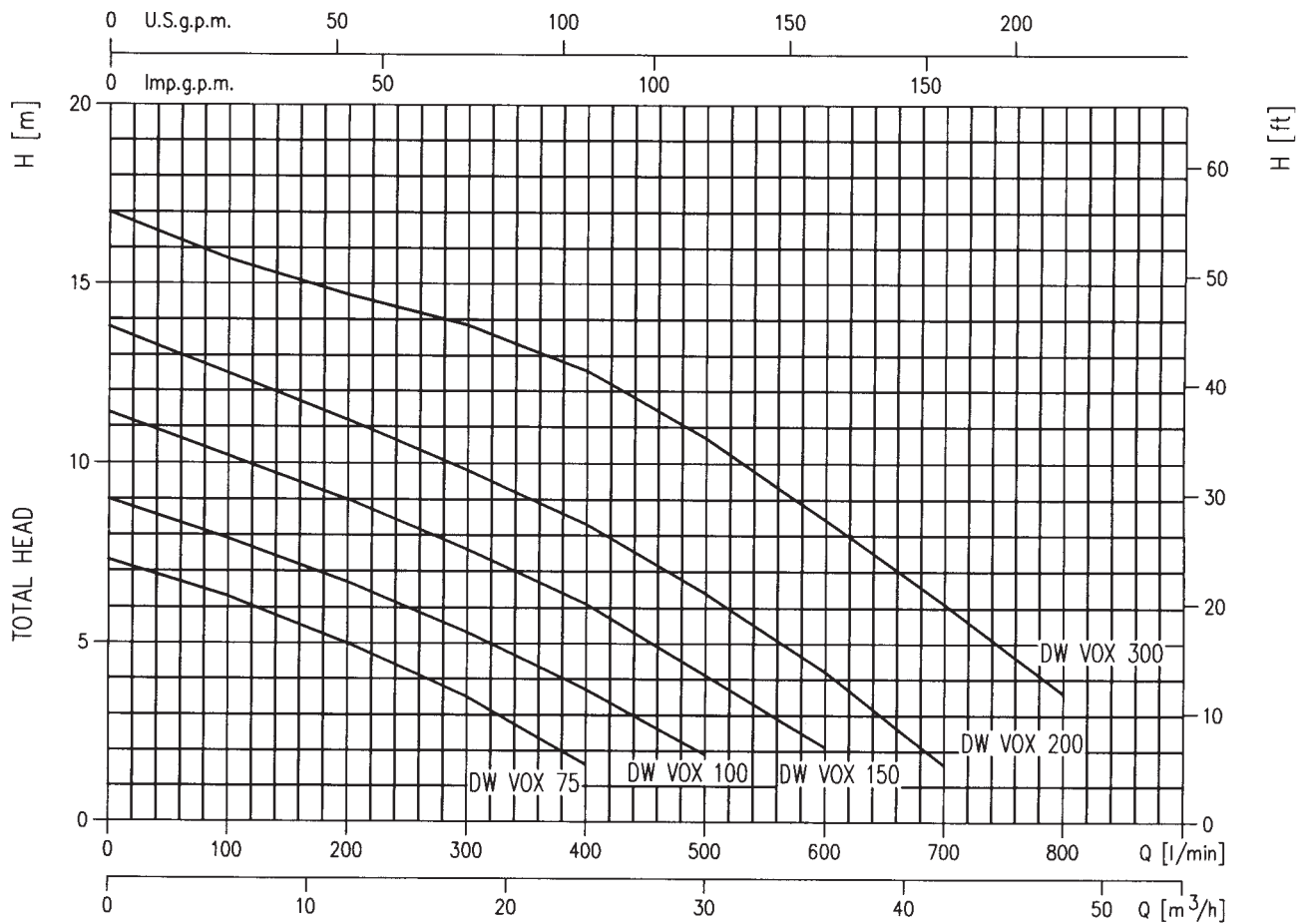
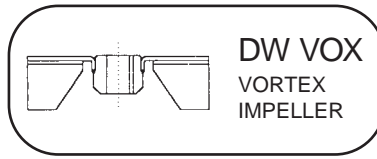
Ref	Part Name	Material
A	Rubber seat	NBR
B	Stationary ring	Ceramic
C	Rotary ring	Carbon
D	Rotary seal	NBR
E	Coil spring	AISI 304
F	Rotary seal	NBR
G	Rotary ring	Silicon Carbide
H	Stationary ring	Silicon Carbide
I	Rubber seat	NBR

DW PERFORMANCE CHART



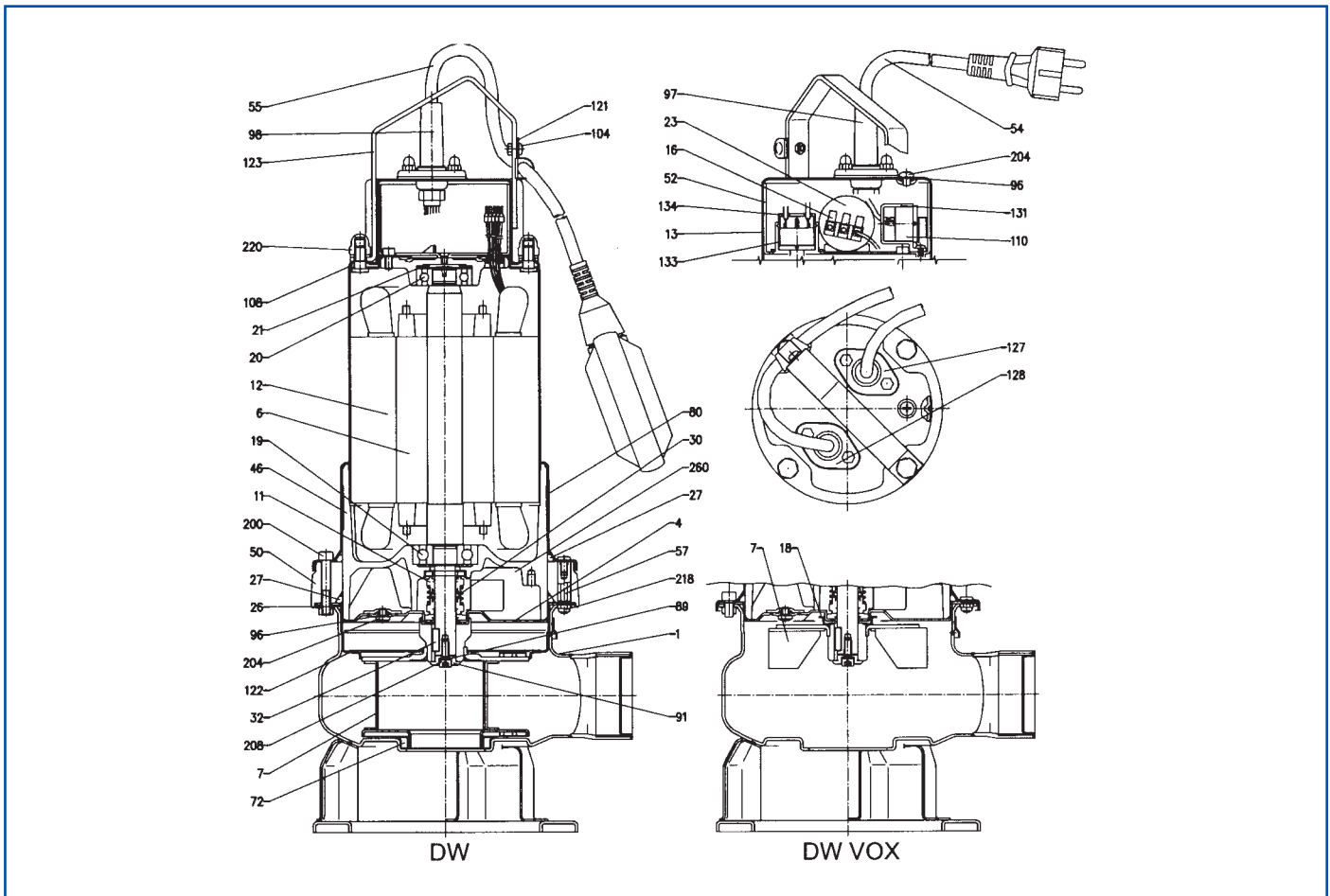
R.P.M.: $\approx 2800 \text{ min}^{-1}$
 Test fluid: clean water at 20°C
 Applicable standard of test: ISO 9906 grade 2

DW VOX PERFORMANCE CHART



R.P.M.: $\approx 2800 \text{ min}^{-1}$
 Test fluid: clean water at 20°C
 Applicable standard of test: ISO 9906 grade 2

SECTIONAL VIEW



N°	Part name	Material	Q.ty
1	Casing	AISI 304	1
4	Casing cover	AISI 304	1
6	Shaft with rotor	AISI 304	1
7	Impeller	AISI 304	1
11	Mechanical seal	SiC/SiC/NBR	1
11	Mechanical seal	Carbon/Ceramic/NBR	1
12	Motor frame with stator	–	1
13	Motor cover	AISI 304	1
16	Terminal	–	1
18	Mechanical seal protection [4]	AISI 304	1
19	Lower side ball bearing	–	1
20	Upper side ball bearing	–	1
21	Adjusting ring	Steel C70	1
23	Capacitor [1]	–	1
26	O ring	NBR	1
27	O ring	NBR	1
27	O ring [6]	NBR	1
30	Mechanical seal spacer	Brass	1
32	Key	AISI 304	1
46	Bearing housing	G20	1
50	Spacer [6]	G20	1
52	Terminal insulating box	Nylon	1
54	Power cable	–	1
55	Float switch [2]	–	1

N°	Part name	Material	Q.ty
57	Spacer [6]	AISI 304	4
72	Casing ring [5]	NBR	1
89	Washer	AISI 304	1
91	Washer	AISI 304	1
96	O ring	NBR	3
97	Power cable entry	NBR	1
98	Floating sw cable entry [2]	NBR	1
104	Cable entry for support [2]	NBR	1
108	Cover packing	NBR	1
110	Protector [1]	–	2
121	Support for float switch [2]	AISI 304	1
122	Impeller protection ring [7]	AISI 304	1
123	Handle	AISI 304	1
127	Power cable connector	AISI 304	1
128	Floating sw. cable connector [2]	AISI 304	1
131	Support for protector [3]	Nylon	1
133	Support for probe [3]	Aluminium	1
134	Cover for support probe [3]	Nylon	1
200	Screw	Stainless steel A2 UNI 7323	6
204	Screw	Stainless steel A2 UNI 7323	3
208	Screw	Stainless steel A2 UNI 7323	1
218	Nut	Stainless steel A2 UNI 7323	4
220	Nut	Stainless steel A2 UNI 7323	4
260	Lubricating liquid	White mineral oil	385 cc

[1] Only for single phase

[2] Only for single phase with float switch

[3] Only for single phase DW 150

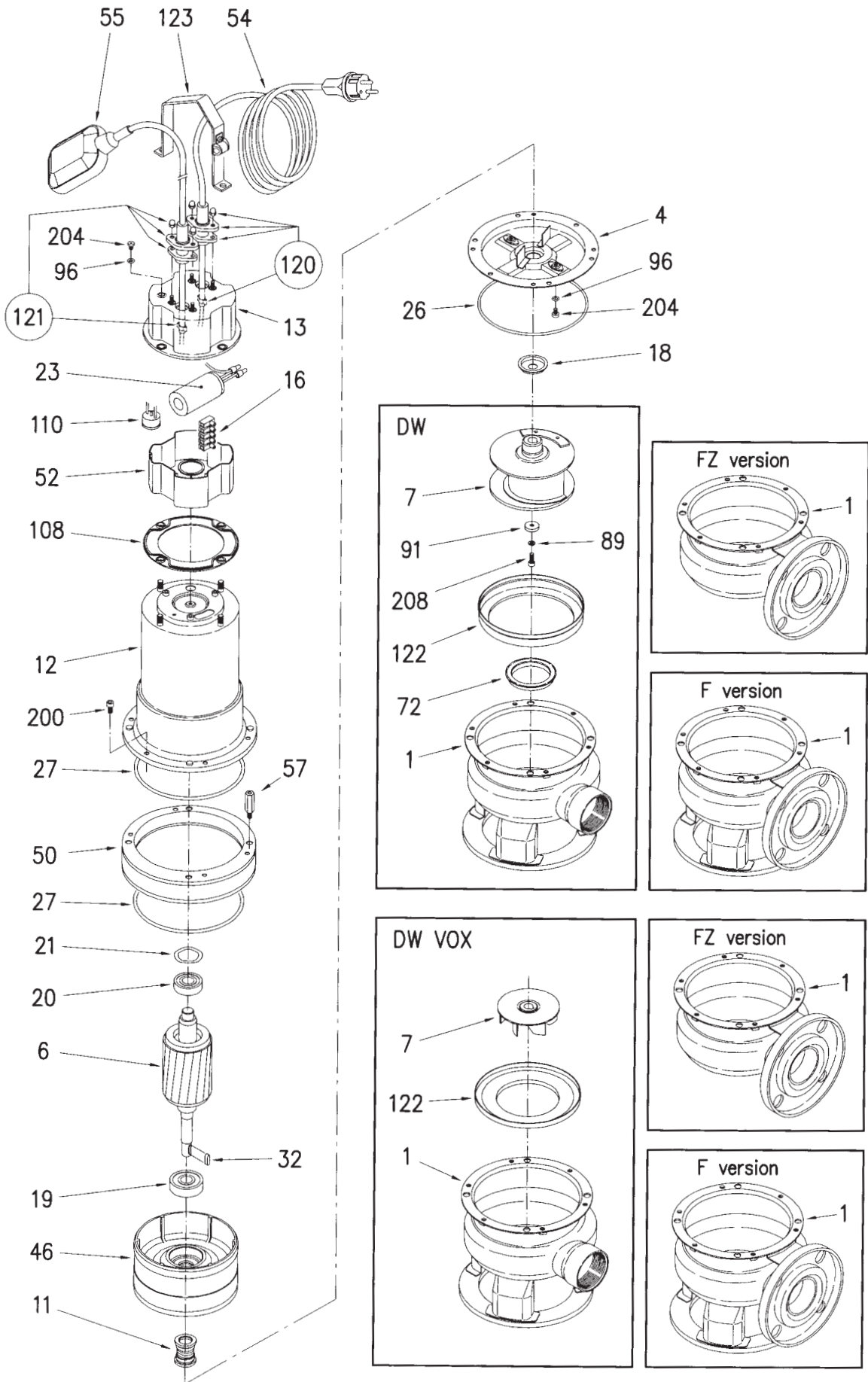
[4] Except for DW-DW VOX 300

[5] Only for DW

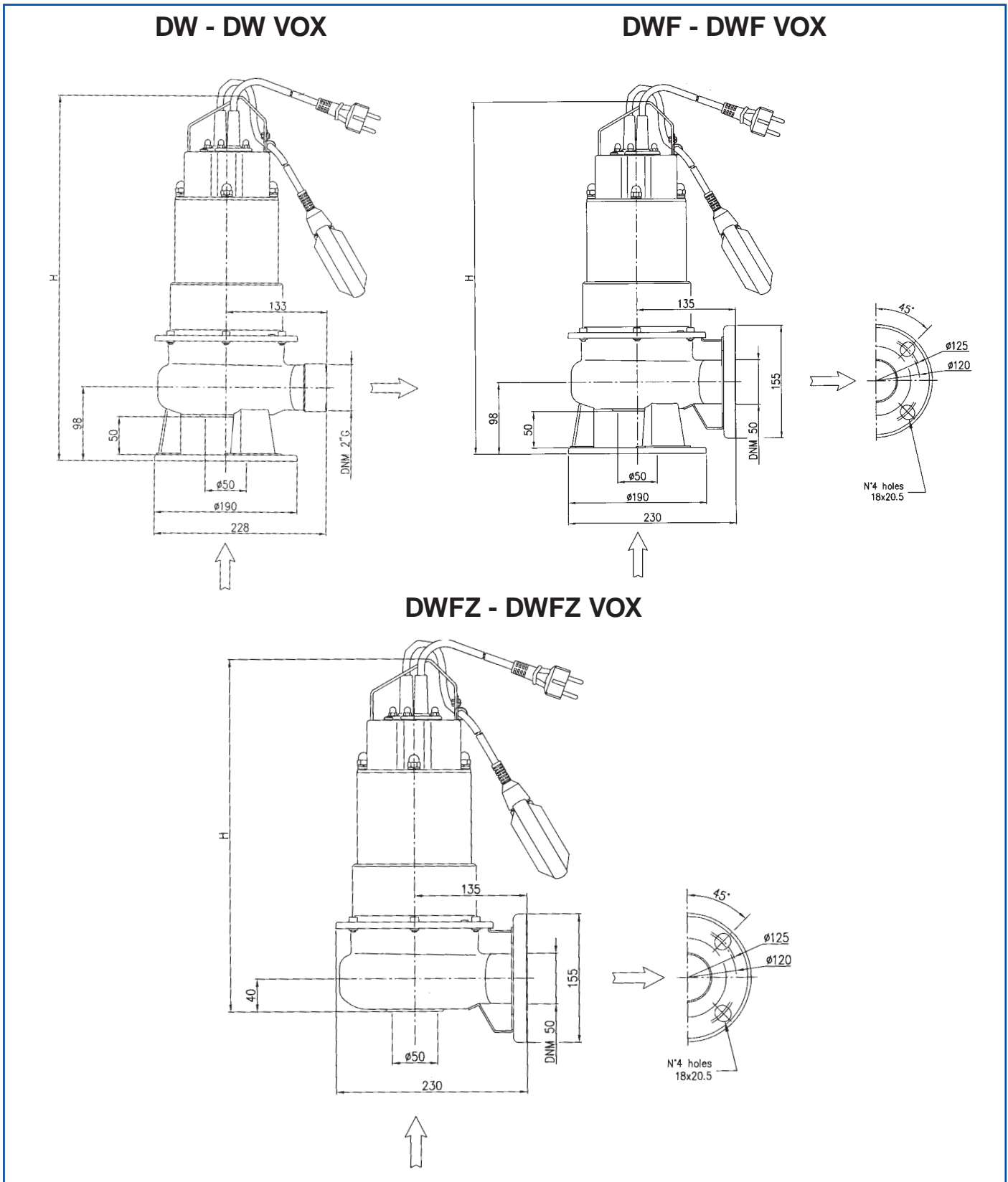
[6] Only for DW-DW VOX 300

[7] Except for DW VOX 150,200 and 300

PART LIST



DW - DWF - DWFZ DIMENSIONS

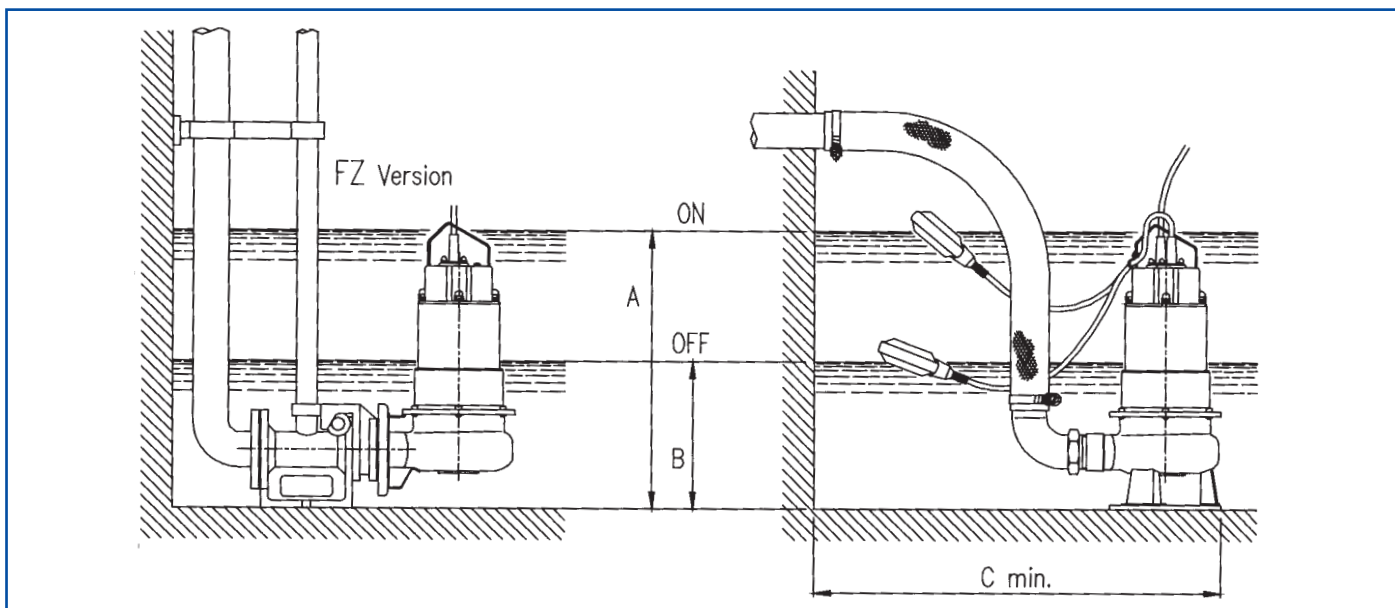


Pump type	H [mm]
DW 75 (VOX)	485
DW 100 (VOX)	515
DW 150 (VOX)	515
DW 200 (VOX)	515
DW 300 (VOX)	545

Pump type	H [mm]
DWF 75 (VOX)	485
DWF 100 (VOX)	515
DWF 150 (VOX)	515
DWF 200 (VOX)	515
DWF 300 (VOX)	545

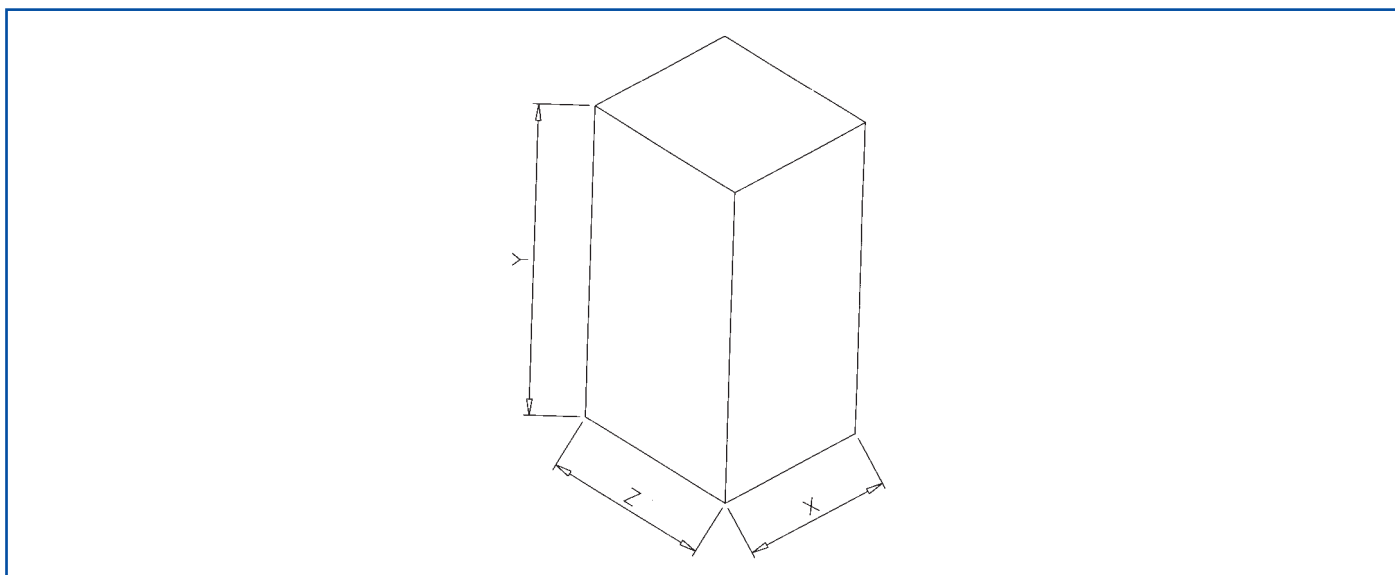
Pump type	H [mm]
DWFZ 75 (VOX)	427
DWFZ 100 (VOX)	457
DWFZ 150 (VOX)	457
DWFZ 200 (VOX)	457
DWFZ 300 (VOX)	487

INSTALLATION



Dimensions [mm]	
A	600
B	250
C	500

PACKING AND WEIGHT



Type pumps		Packing [mm]			Pump weight [Kg]	
Single Phase	Three Phase	Z	X	Y	Single Phase	Three Phase
DW 75 M	DW 75	290	260	550	16	16
DW 100 M	DW 100	290	260	550	18	18
DW 150 M	DW 150	290	260	550	20	20
–	DW 200	290	260	550	–	20
–	DW 300	290	260	550	–	26
DW VOX 75 M	DW VOX 75	290	260	550	16	16
DW VOX 100 M	DW VOX 100	290	260	550	18	18
DW VOX 150 M	DW VOX 150	290	260	550	20	20
–	DW VOX 200	290	260	550	–	20
–	DW VOX 300	290	260	550	–	26



Filiali EBARA in Italia Italian Branches

EBARA BARI

Via Po, 3
70026 MODUGNO (BA)
Tel. 080/5320531 - Fax: 080/5320478

EBARA CAGLIARI

Via del Fangario, 29 - 09122 CAGLIARI
Tel. 070/274281 - Fax: 070/253643

EBARA FIRENZE

Via del Pesco, 15 Loc. La Querce
59100 PRATO
Tel. 0574/514175 - Fax: 0574/700126

EBARA MILANO

Via Magenta, 77 - 20017 RHO (MI)
Tel. 02/93507358/59 - Fax: 02/93507361

EBARA PALERMO

Via Don L. Sturzo, 181/183
ZONA INDUSTRIALE - 90044 CARINI (PA)
Tel. 091/8680840 - Fax: 091/8669790

EBARA PESCARA

Via Aterno, 61 - Z. Ind.le e Com.le
66100 SAMBUCETO - S.GIOVANNI TEATINO (CH)
Tel. 085/4465145 - Fax: 085/4465171

EBARA ROMA

Via degli Agrostemmi snc, Loc. Santa Palomba
00134 ROMA
Tel. 06/79341516 - Fax: 06/79341628

Agenzie Agencies

NAPOLI

DIVIERRE
Tel. 081 2583654 - Fax 081 2508617

PADOVA

NEGRISOLO GIANNI
Tel. 049 9900296 - Fax 049 9903539

PORDENONE

FOR-TEC
Tel. 0434 957878 - Fax 0434 560343

GENOVA

VOLPARA FABRIZIO
Tel. 010 7727084 - Fax 010 7729018



EBARA PUMPS EUROPE S.p.A.

Via Pacinotti, 32
36040 BRENDOLO (VI) ITALY
Phone: +39 0444.706.811 - Fax: +39 0444.706.950
Plants: Cles, Brendola
e-mail: marketing@ebaraeurope.com
www.ebaraeurope.com

EBARA PUMPS UK LIMITED

Unit 7 - Zodiac Business Park
High Road - Cowley
Uxbridge
Middlesex - UB8 2GU, United Kingdom
Phone: +44 1895.439.027
Fax: +44 1895.439.028

EBARA ESPAÑA BOMBAS S.A.

C/Cormoranes 6y8. Poligono La Estación,
28320 PINTO (MADRID), Spain
Phone: +34 916.923.630
Fax: +34 916.910.818

EBARA FRANCE

Maille Nord 2
6/10 Avenue Montaigne
93160 NOISY LE GRAND, France
Phone: +33 155.851.616
Fax: +33 155.851.639

EBARA PUMPEN

Philipp-Reis - Str. 15
63128 DIETZENBACH, Germany
Phone: +49 6074.827.90
Fax: +49 6074.827.942

EBARA Pompy Polska Sp. z o.o.

ul. Minska 63
03-828 Warszawa, Poland
Phone: +48 22.330.81.18
Fax: +48 22.330.81.19