

OPEN IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

Open impeller centrifugal electric pumps in AISI 304 stainless steel.

APPLICATIONS

- Washing vegetables, meat, fish, molluscs
- Industrial washing plants at cycle end
- Washing and surface finishing of metal pieces, boxes, washing bottles, vases, glass containers, crates, baskets
- Dishwashers, glasswashers, cupwashers for communities
- Painting booths
- Pumping, evacuation, transfer of liquids

TECHNICAL DETAILS

- Sturdy structure
- Small dimensions
- Silent

PUMP TECHNICAL DATA

- Maximum working pressure: 8 bar
- Maximum temperature of the liquid:
 - 5°C ÷ +90°C
 - 5°C ÷ +110° for H-HS-HW-HSW versions
- Maximum solids size for passage: 19 mm
- G2½ suction connection for DWO 300-400, G2 for the rest of the range
- G2 discharge connection

MOTOR TECHNICAL DATA

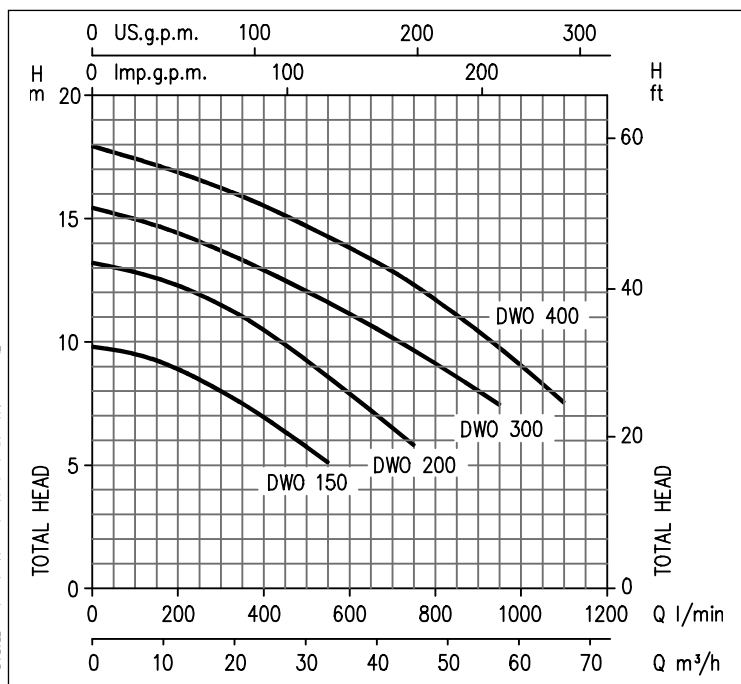
- IE3 high energy-efficiency motors starting from 0.75kW
- Self-ventilated 2 pole asynchronous motor
- Class of insulation F
- IP55 protection degree
- 230V ±10% 50Hz single phase voltage, 230/400V ±10% 50Hz three phase voltage
- Permanent capacitor inserted and thermo-amperometric protection with automatic rearm incorporated for the single phase motor
- Protection under user's responsibility for the three phase version

MATERIALS

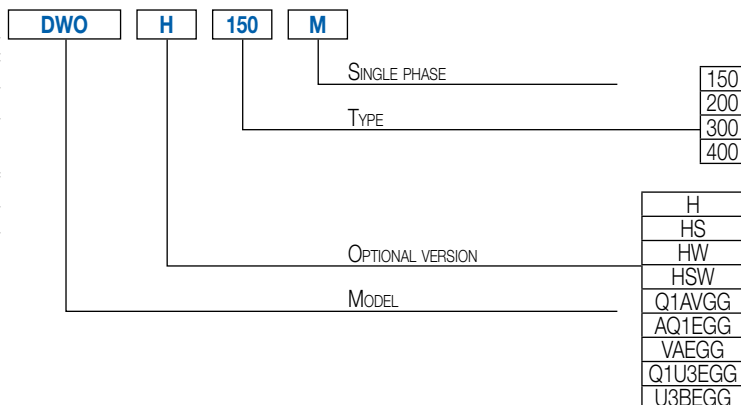
- Pump casing, casing cover, impeller and shaft (part in contact with the liquid) in AISI 304
- Bracket and motor frame in aluminium
- Mechanical seal in:
 - Ceramic/Carbon/NBR (standard)
 - special versions: see p. 27



PERFORMANCE CURVES (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



DWO

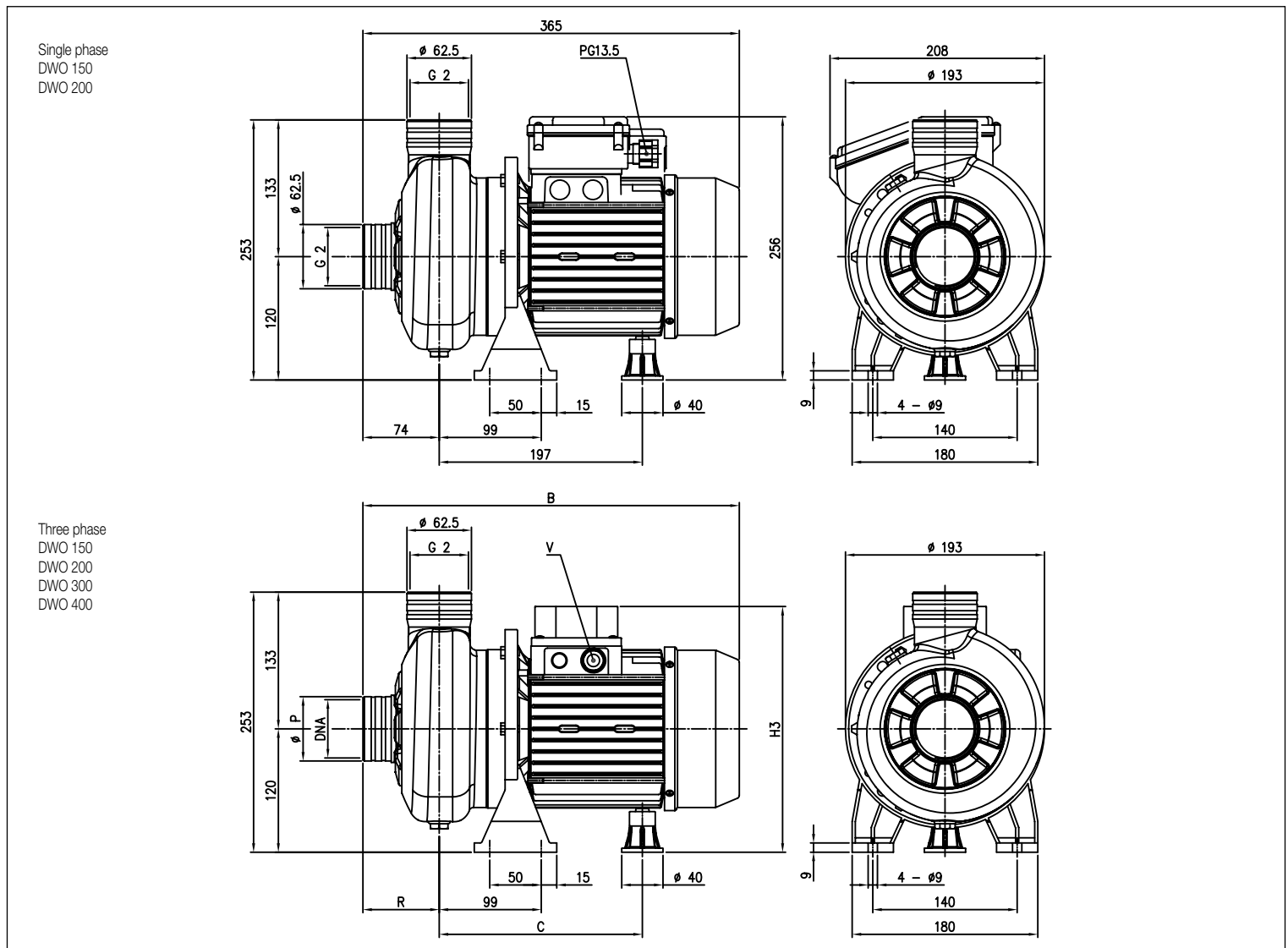
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PERFORMANCE CHART

Model		P.		Q = Flow Rate								
Single phase 230V	Three phase 230/400V	[HP]	[kW]	l/min			m ³ /h			H=Head [m]		
				100	200	300	400	550	750	950	1100	
DWO 150 M	DWO 150	1.5	1.1	9.5	8.9	7.9	6.9	5.1	-	-	-	
DWO 200 M	DWO 200	2	1.5	12.7	12.3	11.5	10.5	8.6	5.8	-	-	
-	DWO 300	3	2.2	15.0	14.5	13.8	12.9	11.7	9.7	7.5	-	
-	DWO 400	4	3	17.5	16.9	16.3	15.6	14.3	12.4	9.8	7.6	

DIMENSIONS



DIMENSIONAL TABLE

Modello	Dimensioni [mm]					V [1]	DNA [1]	Peso [kg]	
	B [1]	C [1]	H3 [1]	R [1]	P [1]			[2]	[1]
DWO 150	390	197	239	74	62,5	M20x1.5	G 2	14,4	15,4
DWO 200	390,5	197	239	74	62,5	M20x1.5	G 2	15,7	17,1
DWO 300	394,5	197	239	78	80	M20x1.5	G 2½	-	19,4
DWO 400	455	230/241	244	78	80	M20x1.5	G 2½	-	22,4

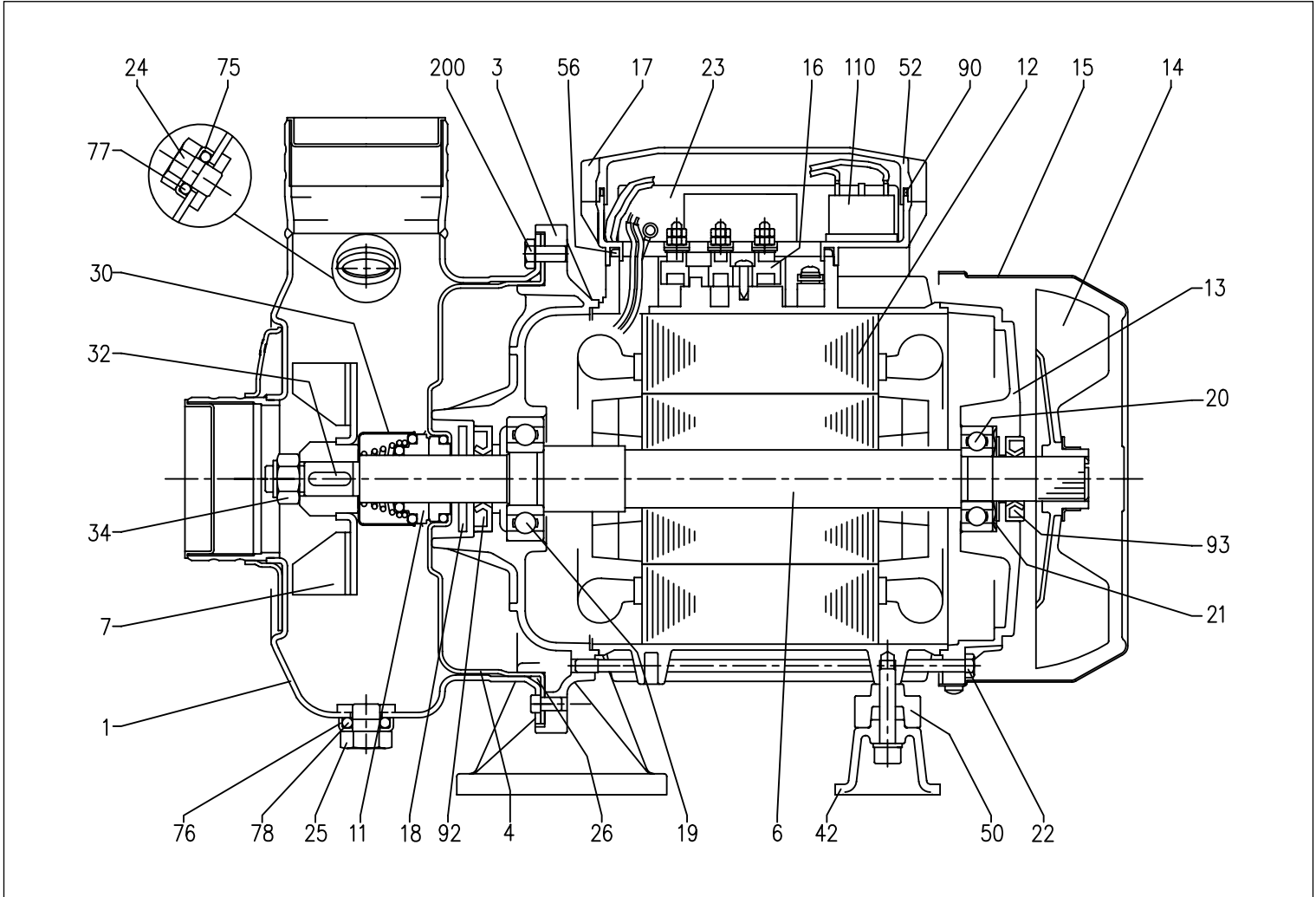
[1]= Three-phase only

[2]= Single phase only

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in AISI 304

SECTIONAL VIEW



MATERIALS TABLE

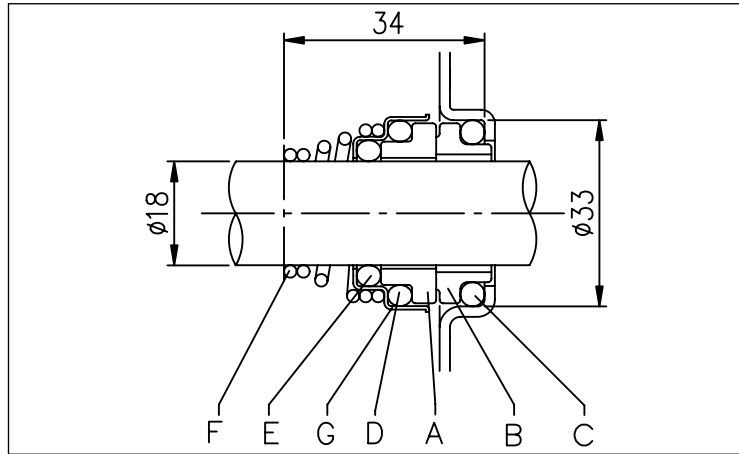
Ref.	Name	Materials	Ref.	Name	Materials
1	Pump casing	EN 1.4301 (AISI 304)	25	Plug	AISI 303
3	Motor bracket	Aluminium	26	O-Ring [3]	NBR
4	Casing cover	EN 1.4301 (AISI 304)	30	Splash washer	EN 1.4301 (AISI 304)
6	Shaft	EN 1.4301 (AISI 304) Part in contact with the liquid	32	Key	AISI 316
7	Impeller	EN 1.4301 (AISI 304)	34	Impeller nut	EN 1.4301 (AISI 304)
11	Mechanical seal	Ceramic/Carbon/NBR	42	Motor support	Aluminium
12	Motor frame	-	50	Spacer	-
13	Motor cover	Aluminium	52	Terminal box [2]	PP
14	Fan	PP	56	Terminal box cover gasket	NBR
15	Fan cover	Galvanised Fe P04	75	Washer	EN 1.4301 (AISI 304)
16	Terminal Box	-	76	Washer	EN 1.4301 (AISI 304)
17	Terminal Box cover [1]	Aluminium	77	O-Ring	NBR
18	Splash ring	NBR	78	O-Ring	NBR
19	Bearing (pump side)	-	90	Terminal box cover gasket [2]	NBR
20	Bearing (motor side)	-	92	Seal ring	-
21	Adjustment ring	Steel C70	93	Seal ring	-
22	Tie-rod	Galvanised Fe 42	110	Motor protector [2]	-
23	Capacitor [2]	-	200	Screw (pump body)	Stainless Steel A2 UNI7323
24	Plug	AISI 303			

[1]= Three-phase only [2]= Single phase only
[3]= FKM for H-HS-HW-HSW versions

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MECHANICAL SEAL standard



MATERIALS TABLE

Ref.	Name	Materials
A	Rotating part	Ceramic
B	Fixed part	Carbon
C	O-Ring	NBR
D	O-Ring	NBR
E	O-Ring	NBR
F	Spring	AISI 316 L
G	Structure/frame	AISI 304

SPECIAL MECHANICAL SEALS (on request)

Ref.	Name	Materials			
		H Version	HS Version	HW Version	HSW Version
A	Rotating part	Ceramic	Silicon Carbide	Tungsten Carbide	Silicon Carbide
B	Fixed part	Carbon	Silicon Carbide	Tungsten Carbide	Tungsten Carbide
C	O-Ring	FKM	FKM	FKM	FKM
D	O-Ring	FKM	FKM	FKM	FKM
E	O-Ring	FKM	FKM	FKM	FKM
F	Spring	AISI 316 L	AISI 316 L	AISI 316 L	AISI 316 L
G	Structure/frame	AISI 304	AISI 316	AISI 316	AISI 316

Ref.	Name	Materials				
		Q1AVGG Version	AQ1EGG Version	VAEGG Version	Q1U3EGG Version	U3BEGG Version
A	Rotating part	Silicon Carbide	Metallised carbon	Ceramic	Silicon Carbide	Tungsten Carbide
B	Fixed part	Metallised carbon	Silicon Carbide	Metallised carbon	Tungsten Carbide	Graphite
C	O-Ring	FKM	EPDM	EPDM	EPDM	EPDM
D	O-Ring	FKM	EPDM	EPDM	EPDM	EPDM
E	O-Ring	FKM	EPDM	EPDM	EPDM	EPDM
F	Spring	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316
G	Structure/frame	AISI 316	AISI 316	AISI 316	AISI 316	AISI 316

ELECTRIC DATA TABLE

Model		P ₂		Efficiency		Capacitor		Efficiency (%)			P ₁		Absorbed Current [A]		
Single phase 230V	Three phase 230/400V	[HP]	[kW]	Single phase	Three phase	Single phase μF	Three phase V _c	Three phase η %			Single phase [kW]	Three phase [kW]	Single phase 230V	Three phase 230V 400V	
								50%	75%	100%					
DWO 150 M	DWO 150	1,5	1,1	-	IE3	35	450	83,0	85,8	85,6	1,36	1,77	6,8	5,8	3,3
DWO 200 M	DWO 200	2	1,5	-	IE3	40	450	82,7	86,1	87,0	2,05	1,72	9,0	6,6	3,8
-	DWO 300	3	2,2	-	IE3	-	-	86,2	87,0	86,0	-	2,55	-	8,2	4,7
-	DWO 400	4	3	-	IE3	-	-	85,9	87,5	87,1	-	3,44	-	11,1	6,4

NOISE DATA TABLE

Model		P ₂		L _{pa} - dB(A)*
Single phase 230V	Three phase 230/400V	[HP]	[kW]	
DWO 150 M	DWO 150	1,5	1,1	<70
DWO 200 M	DWO 200	2	1,5	
-	DWO 300	3	2,2	
-	DWO 400	4	3	

* Mean value of several measurements made at 1 m distance around the pump.
Tolerance ± 2.5 dB.