

DWC

ENCLOSED IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

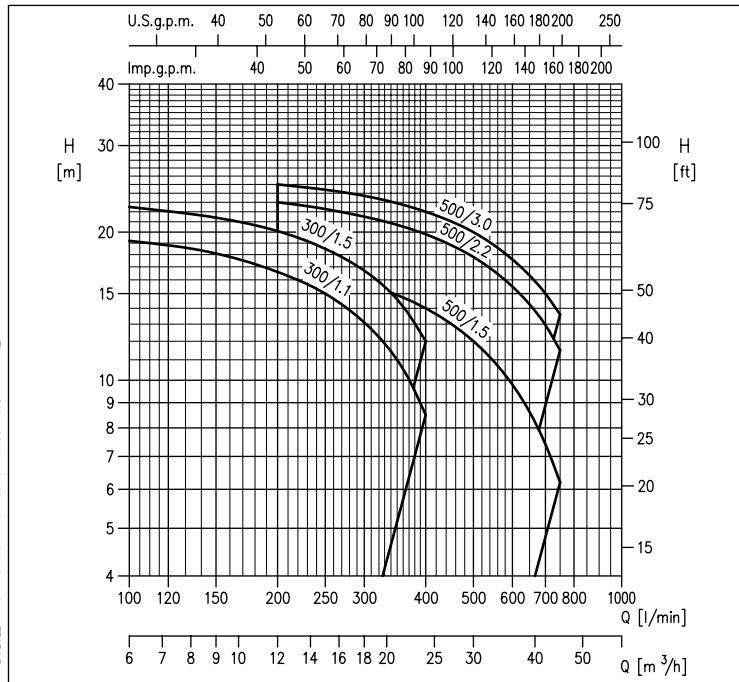


DWC-N

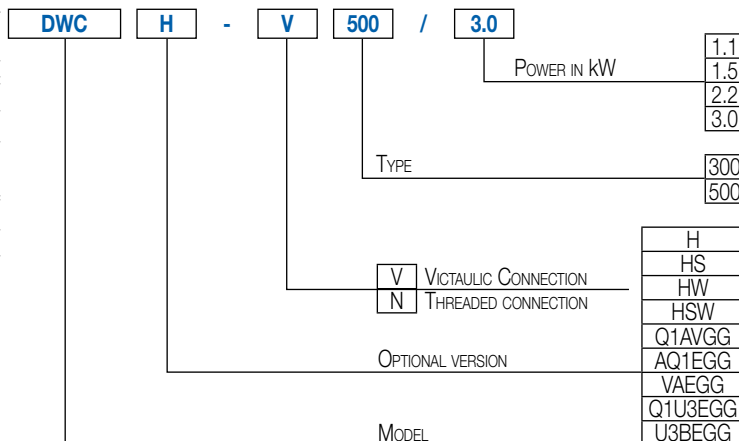


DWC-V

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



Enclosed impeller centrifugal electric pumps in AISI 304 stainless steel.

APPLICATIONS

- Cooling, air conditioning and heating systems
- Chiller
- Washing systems
- Industrial liquids

TECHNICAL DETAILS

- Available in two different versions: with threaded (DWC-N) and Victaulic connections (DWC-V)
- Insulation as per standard for the Victaulic version (DWC-V)

PUMP TECHNICAL DATA

- Maximum working pressure: 8 bar
- Maximum temperature of the liquid:
 - 15°C ÷ +90°C
 - 15°C ÷ +110°C for H-HS-HW-HSW versions
- Suction and discharge connection G2 for DWC-N
- Suction and discharge connection Ø2" (60.3 mm) for DWC-V
- For further information please see our Data Book on the web site www.ebaraeurope.com

MOTOR TECHNICAL DATA

- High efficiency IE2 motors starting from 0.75kW up to 5.5kW
IE3 starting from 0.75kW
- Self-ventilated 2 pole asynchronous motor
- Class of insulation F
- IP55 protection degree
- 230/400V ±10% 50Hz three phase voltage
- 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/EPDM (standard)
 - special versions: see p. 32

ACCESSORIES (On request)

Insulation casing for DWC pump casing for applications with refrigerant liquids or liquids with high thermal difference that may generate condensate.



DWC

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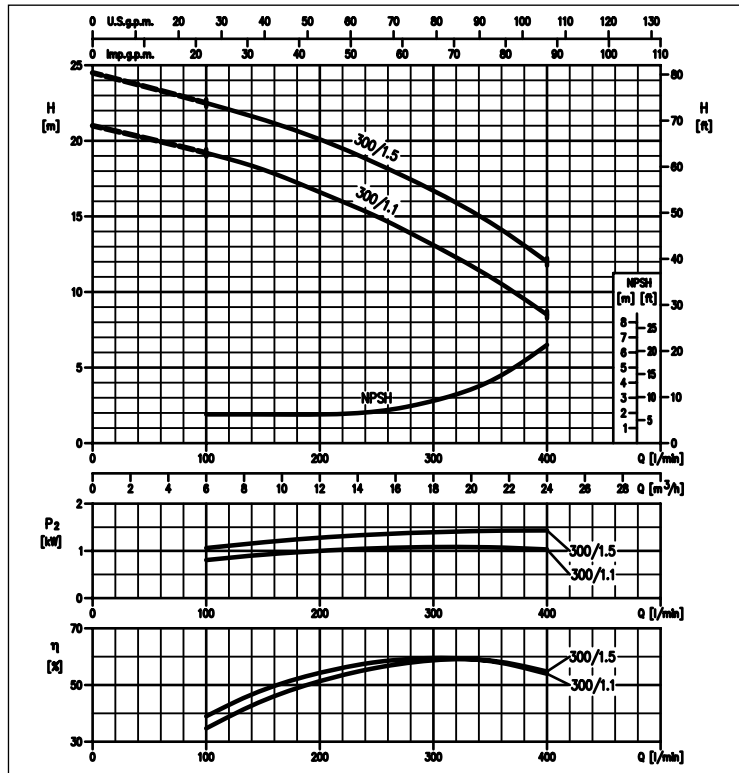
in AISI 304

PERFORMANCE CHART

Model Three phase 230/400V	P ₂		Q = Flow Rate												
	[HP]	[kW]	l/min	100	150	200	250	300	350	400	500	600	700	750	
			m ³ /h	6	9	12	15	18	21	24	30	36	42	45	
				H=Head [m]											
DWC 300/1.1	1.5	1.1	19.2	18.1	16.6	15.0	13.1	11.0	8.5	-	-	-	-	-	
DWC 300/1.5	2	1.5	22.5	21.4	20.1	18.5	16.7	14.6	12.0	-	-	-	-	-	
DWC 500/1.5	2	1.5	-	-	17.0	16.4	15.7	14.9	14.0	12.0	9.8	7.4	6.2	-	
DWC 500/2.2	3	2.2	-	-	23.0	22.3	21.5	20.7	19.8	17.8	15.5	13.0	11.5	-	
DWC 500/3.0	4	3	-	-	25.0	24.4	23.7	22.9	22.0	20.0	17.6	15.0	13.6	-	

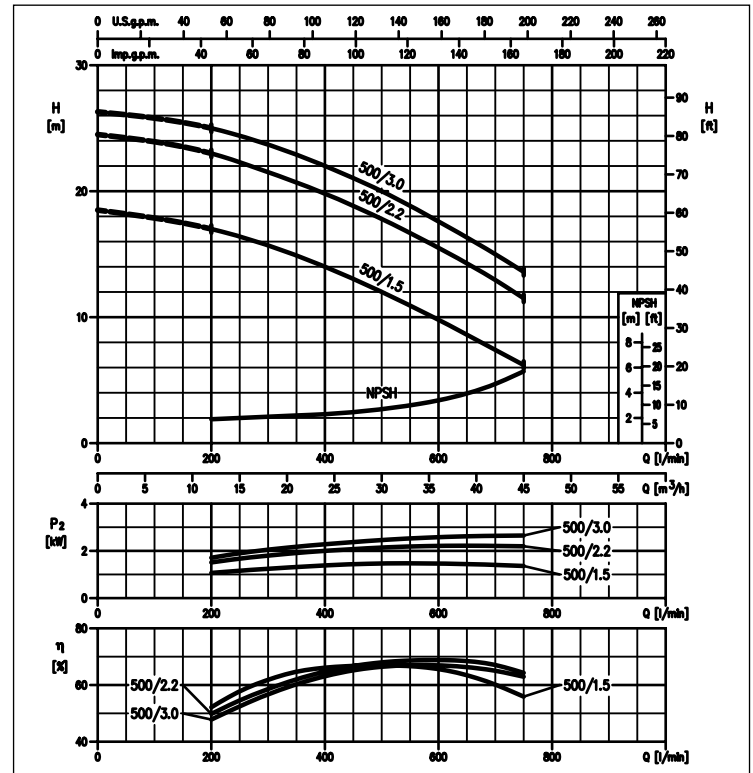
PERFORMANCE CURVES DWC 300 series

(according to ISO 9906 Attachment A)

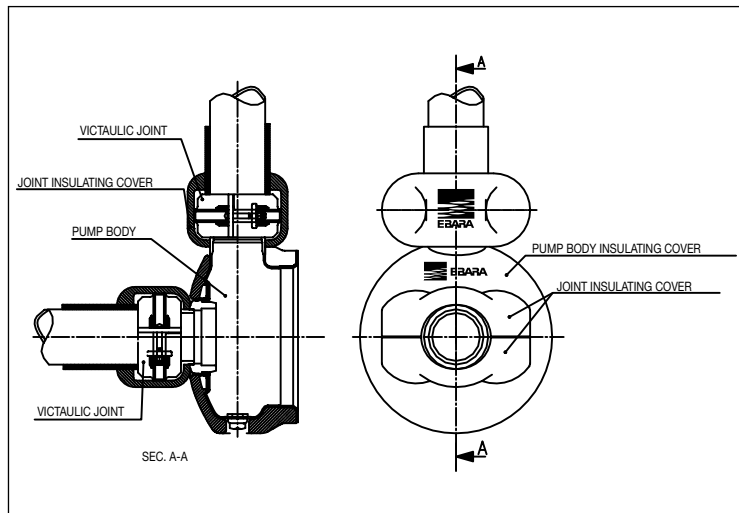


PERFORMANCE CURVES DWC 500 series

(according to ISO 9906 Attachment A)



THERMAL INSULATION



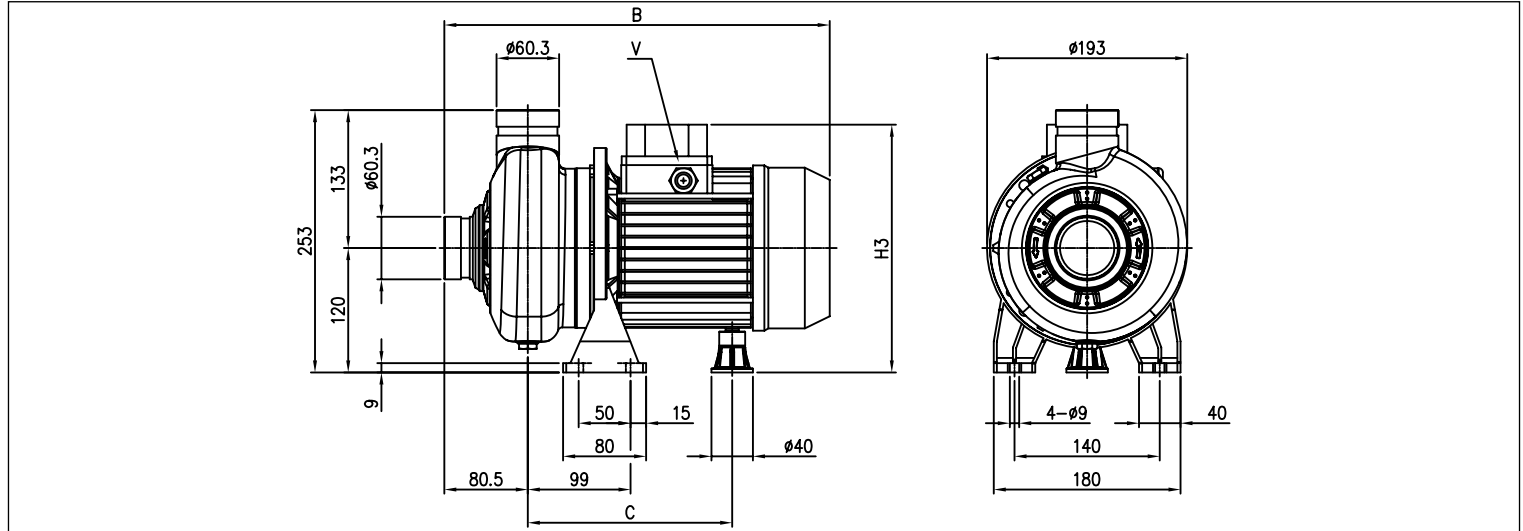
Model	Insulating cover pump casing	Insulating cover joint	Joint Victaulic
DWC-V 300/1.1	Standard	On request	On request
DWC-V 300/1.5			
DWC-V 500/1.5			
DWC-V 500/2.2			
DWC-V 500/3.0	On request	Not applicable	Not applicable
DWC-N 300/1.1			
DWC-N 300/1.5			
DWC-N 500/1.5			
DWC-N 500/2.2			
DWC-N 500/3.0			

DWC

ENCLOSED IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

DIMENSIONS DWC-V (MICAULIC CONNECTION)

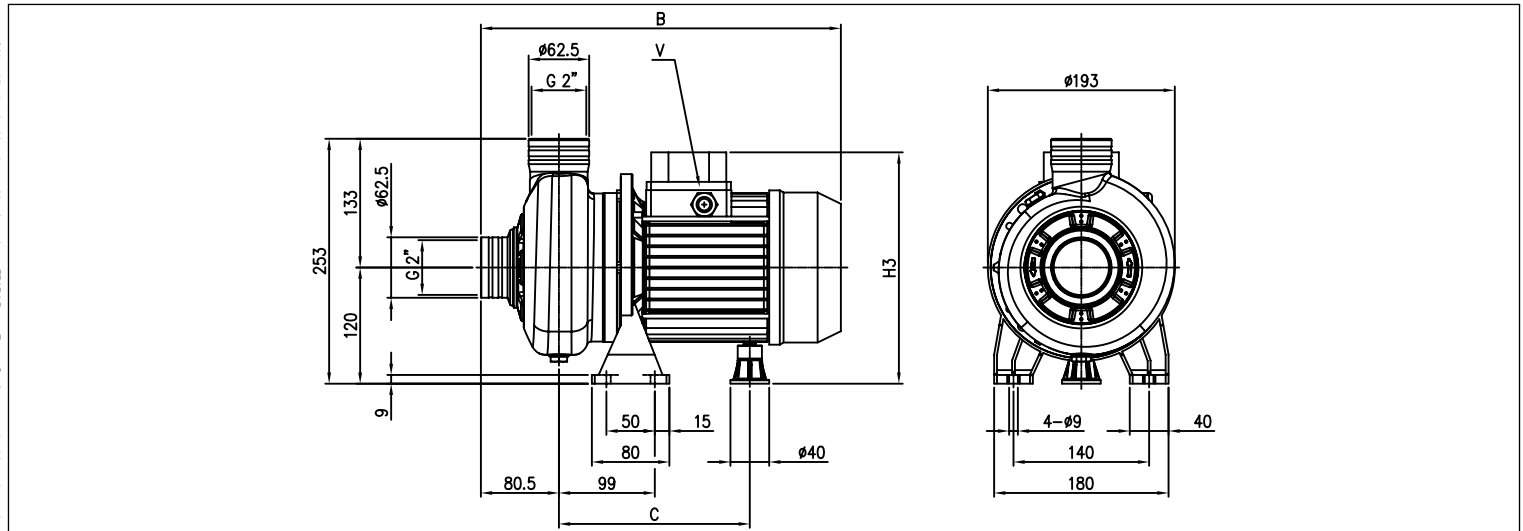


DIMENSIONAL TABLE

Model	Dimensions [mm]						Weight [kg]			
	B	B*	C	C*	H3	H3*	V	V*	*	
DWC-V 300/1.1	372	397	197	197	239	239	PG11	M20x1.5	14.5	15.4
DWC-V 300/1.5	385	397.5	197	197	239	239	PG11	M20x1.5	16.0	16.9
DWC-V 500/1.5	385	397.5	197	197	239	239	PG11	M20x1.5	17.0	17.9
DWC-V 500/2.2	418	396.5	230 ÷ 241	197	244	239	PG 13.5	M20x1.5	20.3	20.3
DWC-V 500/3.0	457	457	230 ÷ 241	230 ÷ 241	244	244	PG 13.5	M20x1.5	22.3	22.3

* Models with IE3 motor only

DIMENSIONS VIEW DWC-N (THREADED CONNECTION)



DIMENSIONAL TABLE

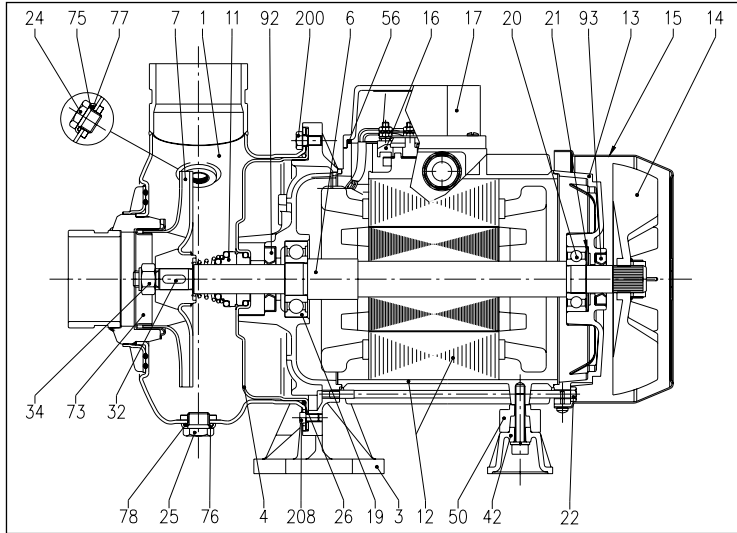
Model	Dimensions [mm]						Weight [kg]			
	B	B*	C	C*	H3	H3*	V	V*	*	
DWC-N 300/1.1	372	397	197	197	239	239	PG11	M20x1.5	14.5	15.4
DWC-N 300/1.5	385	397.5	197	197	239	239	PG11	M20x1.5	16.0	16.9
DWC-N 500/1.5	385	397.5	197	197	239	239	PG11	M20x1.5	16.5	17.4
DWC-N 500/2.2	418	396.5	230 ÷ 241	197	244	239	PG 13.5	M20x1.5	20.3	20.3
DWC-N 500/3.0	457	457	230 ÷ 241	230 ÷ 241	244	244	PG 13.5	M20x1.5	22.3	22.3

* Models with IE3 motor only

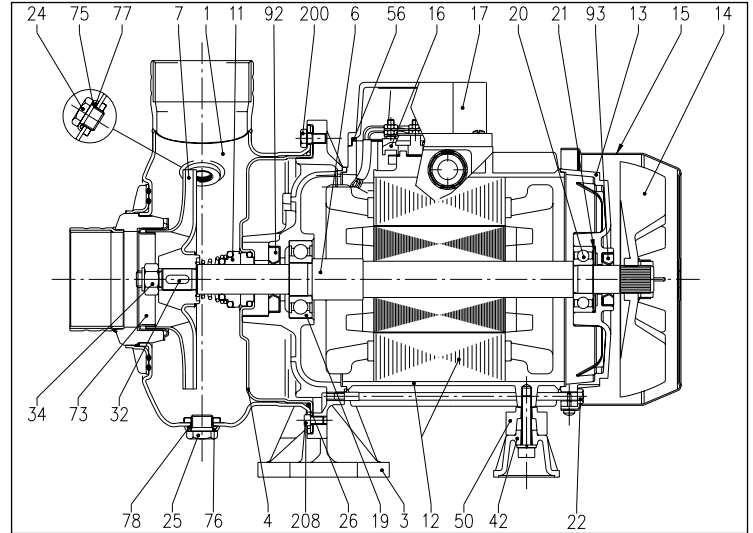
ENCLOSED IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

SECTIONAL VIEW DWC-V (MICAULIC CONNECTION)



SECTIONAL VIEW DWC-N (THREADED CONNECTION)



MATERIALS TABLE

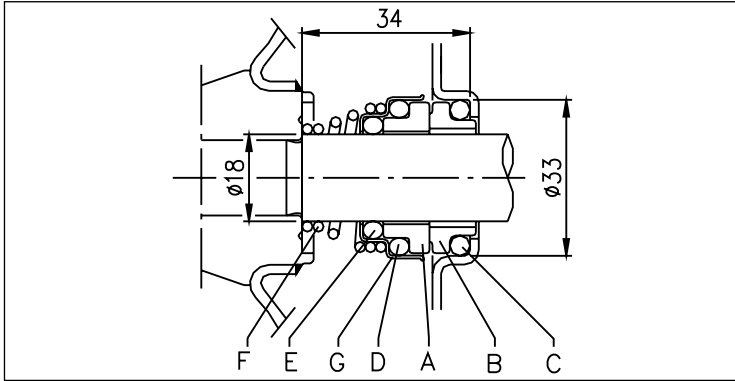
Ref.	Name	Materials	Ref.	Name	Materials
1	Pump casing	EN 1.4301 (AISI 304)	25	Plug	EN 1.4301 (AISI 304)
3	Motor bracket	Aluminium	26	O-Ring [1]	EPDM
4	Casing cover	EN 1.4301 (AISI 304)	32	Key	EN 1.4401 (AISI 316)
6	Shaft	EN 1.4301 (AISI 304) Part in contact with the liquid	34	Impeller nut	EN 1.4301 (AISI 304)
7	Impeller	EN 1.4301 (AISI 304)	42	Motor support	Aluminium / Galvanised steel
11	Mechanical seal	Ceramic/Carbon/EPDM	50	Spacer	-
12	Motor frame	-	56	Terminal box cover gasket	NBR
13	Motor cover	Aluminium	73	Casing ring	EN 1.4301 (AISI 304)
14	Fan	PA	75	Washer	EN 1.4301 (AISI 304)
15	Fan cover	Galvanised Fe P04	76	Washer	EN 1.4301 (AISI 304)
16	Terminal Box	-	77	O-Ring [1]	EPDM
17	Terminal box cover	Aluminium	78	O-Ring [1]	EPDM
19	Bearing (pump side)	-	92	Seal ring	-
20	Bearing (motor side)	-	93	Seal ring	-
21	Adjustment ring	Steel C70	200	Screw (pump body)	Stainless steel A2-70/1 class ISO 3506/1
22	Tie-rod	Galvanised Fe 42	208	Screw	Stainless steel A2-70/1 class ISO 3506/1
24	Plug	EN 1.4301 (AISI 304)			

[1]= 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	EPDM
D	O-Ring	EPDM
E	O-Ring	EPDM
F	Spring	AISI 316
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	AISI 316	AISI 316	AISI 316
G	Structure/frame	AISI 304	AISI 316	AISI 316	AISI 316

Ref.	Name	Materials				
		Q1AVGG Version	AQ1EGG Version	Materials 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 Three phase 230/400V	P ₁		Efficiency Three phase	Efficiency (%) Three phase			P ₁ Three phase [kW]	Absorbed Current [A]	
	[HP]	[kW]		50%	75%	100%		Three phase	
				n %			230V	400V	
DWC 300/1.1	1.5	1.1	IE2	79.7	82.5	83.0	1.80	5.5	3.2
	1.5	1.1	IE3	83.0	85.8	85.6	1.77	5.8	3.3
DWC 300/1.5	2	1.5	IE2	78.6	83.0	84.2	1.78	6.3	3.7
	2	1.5	IE3	82.7	86.1	87.0	1.72	6.6	3.8
DWC 500/1.5	2	1.5	IE2	78.6	83.0	84.2	1.78	6.3	3.7
	2	1.5	IE3	82.7	86.1	87.0	1.72	6.6	3.8
DWC 500/2.2	3	2.2	IE2	83.1	85.7	86.2	2.55	7.8	4.5
	3	2.2	IE3	86.2	87.0	86.0	2.55	8.2	4.7
DWC 500/3.0	4	3	IE2	85.0	86.7	86.3	3.48	10.6	6.1
	4	3	IE3	85.9	87.5	87.1	3.44	11.1	6.4

NOISE DATA TABLE

Model Three phase 230/400V	P ₂		L _{WA} - dB(A)*
	[HP]	[kW]	
DWC 300/1.1	1.5	1.1	<70
DWC 300/1.5	2	1.5	
DWC 500/1.5	2	1.5	<70
DWC 500/2.2	3	2.2	
DWC 500/3.0	4	3	

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