



**EBARA**

	Page
<b>- SPECIFICATIONS</b>	<b>200</b>
SELECTION CHART	201
TYPE KEY AND CURVE SPECIFICATIONS	202
PERFORMANCE CURVE DWC 300	203
PERFORMANCE CURVE DWC 500	204
<b>- CONSTRUCTIONS</b>	<b>300</b>
SECTIONAL VIEW DRAWING	300
SECTIONAL VIEW TABLE	301
MECHANICAL SEAL	302
THERMAL INSULATION	303
<b>- DIMENSIONS AND WEIGHT</b>	<b>400</b>
DWC-V (VICTAULIC CONNECTION)	400
DWC-N (THREADED CONNECTION)	401
PACKING	402
<b>- TECHNICAL DATA</b>	<b>500</b>
MOTOR DATA	500

**SPECIFICATION**

60Hz

Rev. A

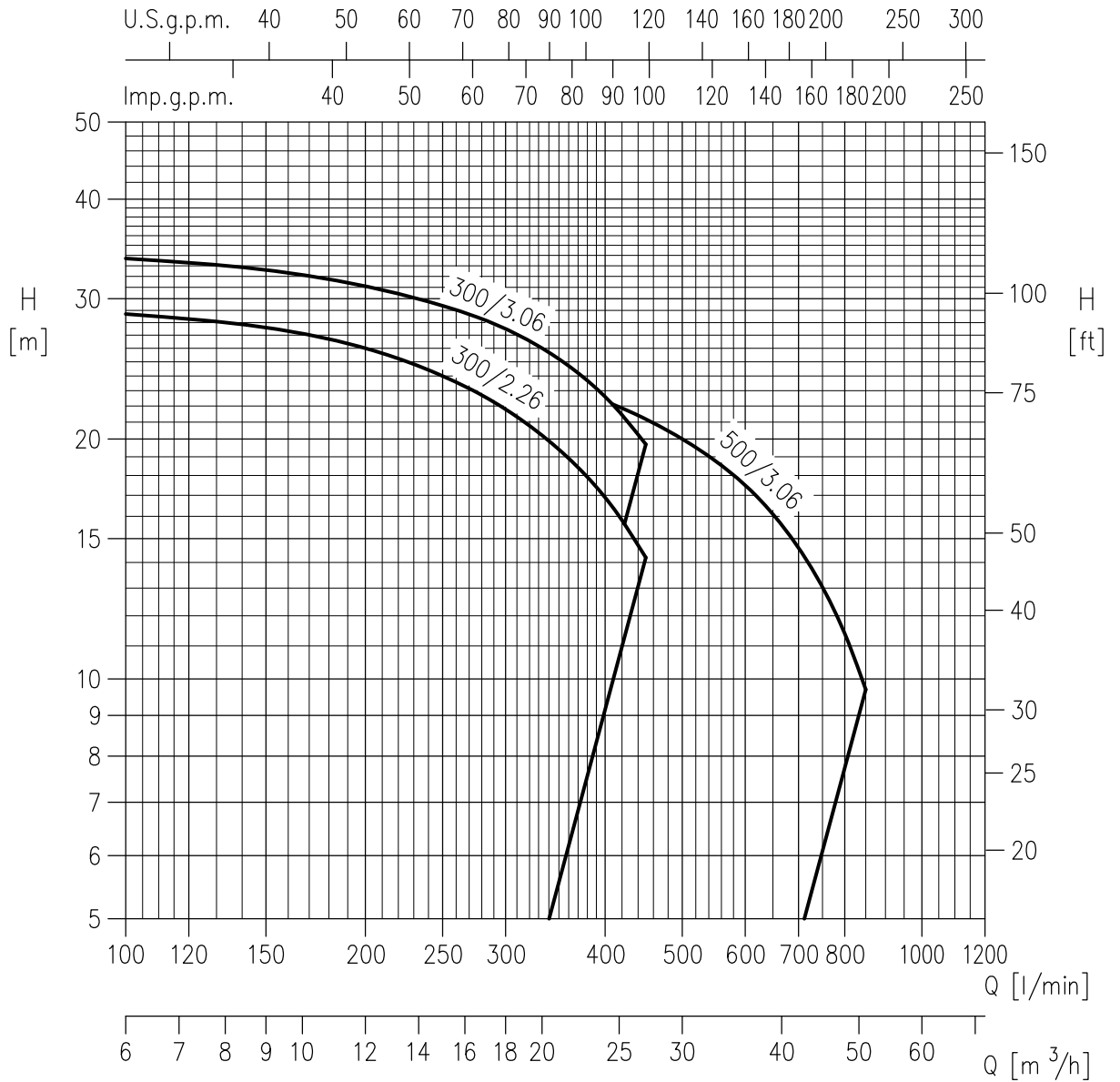
<b>PUMP</b>		
Liquid Handled	Type of liquid	Clean water, moderate aggressive fluids, glycol solutions, other industrial fluids after a check by our sales network
	Temperature [°C]	min. -15 max.+90
Maximum working pressure	[MPa]	0,8
Construction	Impeller	Closed centrifugal type
	Shaft seal type	Mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction	DWC-V Victaulic connection Ø 2" (60.3mm) DWC-N G 2
	Discharge	DWC-V Victaulic connection Ø 2" (60.3mm) DWC-N G 2
Material	Casing	EN 1.4301 (AISI 304)
	Impeller	EN 1.4301 (AISI 304)
	Casing cover	EN 1.4301 (AISI 304)
	Shaft seal	Ceramic/Carbon/EPDM
	Casing cover	EN 1.4301 (AISI 304)
	Shaft	EN 1.4301 (AISI 304) (wet extension)
	Bracket	Aluminium
Applicable standard of test		ISO 9906 – Annex A

<b>MOTOR</b>		
Type	Electric - TEFC Three Phase	
No. of Poles	2	
Rotation speed [min-1]	≈3450	
Insulation Class	F	
Protection degree	IP 55	
Power rating	[kW]	2.2 ÷ 3
	[HP]	3 ÷ 4
Frequency	[Hz]	60
Voltage	[V]	220/380-460 -6% +10%
Over load protection	User provide	
Casing material	Aluminium	
Base material/motor support	Aluminium	
Dimensions of cable entry	PG13.5 (See page 400)	

SELECTION CHART

60Hz

Rev. A



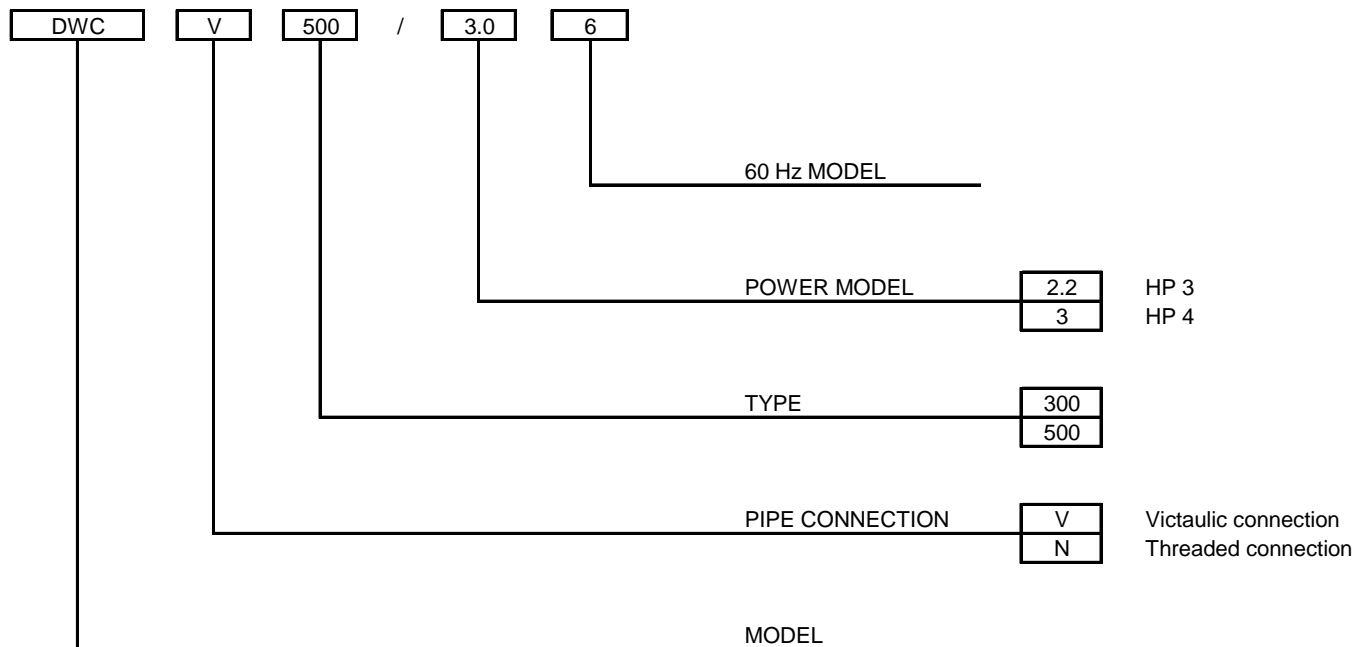
Pump type	Power		Q=Capacity														
	[kW]	[HP]	l/min	0	100	150	200	250	300	350	400	450	500	600	700	800	850
			m³/h	0	6	9	12	15	18	21	24	27	30	36	42	48	51
			H=Total head in meters														
DWC 300/2.26	2.2	3	30.0	28.7	27.6	26.0	24.0	21.8	19.4	16.9	14.2	-	-	-	-	-	-
DWC 300/3.06	3	4	35.0	33.7	32.6	31.1	29.4	27.5	25.2	22.6	19.7	-	-	-	-	-	-
DWC 500/3.06	3	4	27.0	-	-	25.8	25.1	24.3	23.3	22.3	21.2	20.0	17.5	14.6	11.4	9.7	-

## TYPE KEY AND CURVE SPECIFICATIONS

60Hz

Rev. A

### TYPE KEY



### PERFORMANCE CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906 Annex A

The curves refer to effective speed of asynchronous motors at 60 Hz

Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of  $\nu = 1 \text{ mm}^2/\text{s}$  (1 cSt)

The NPSH curve is an average curve obtained in the same conditions of performance curves.

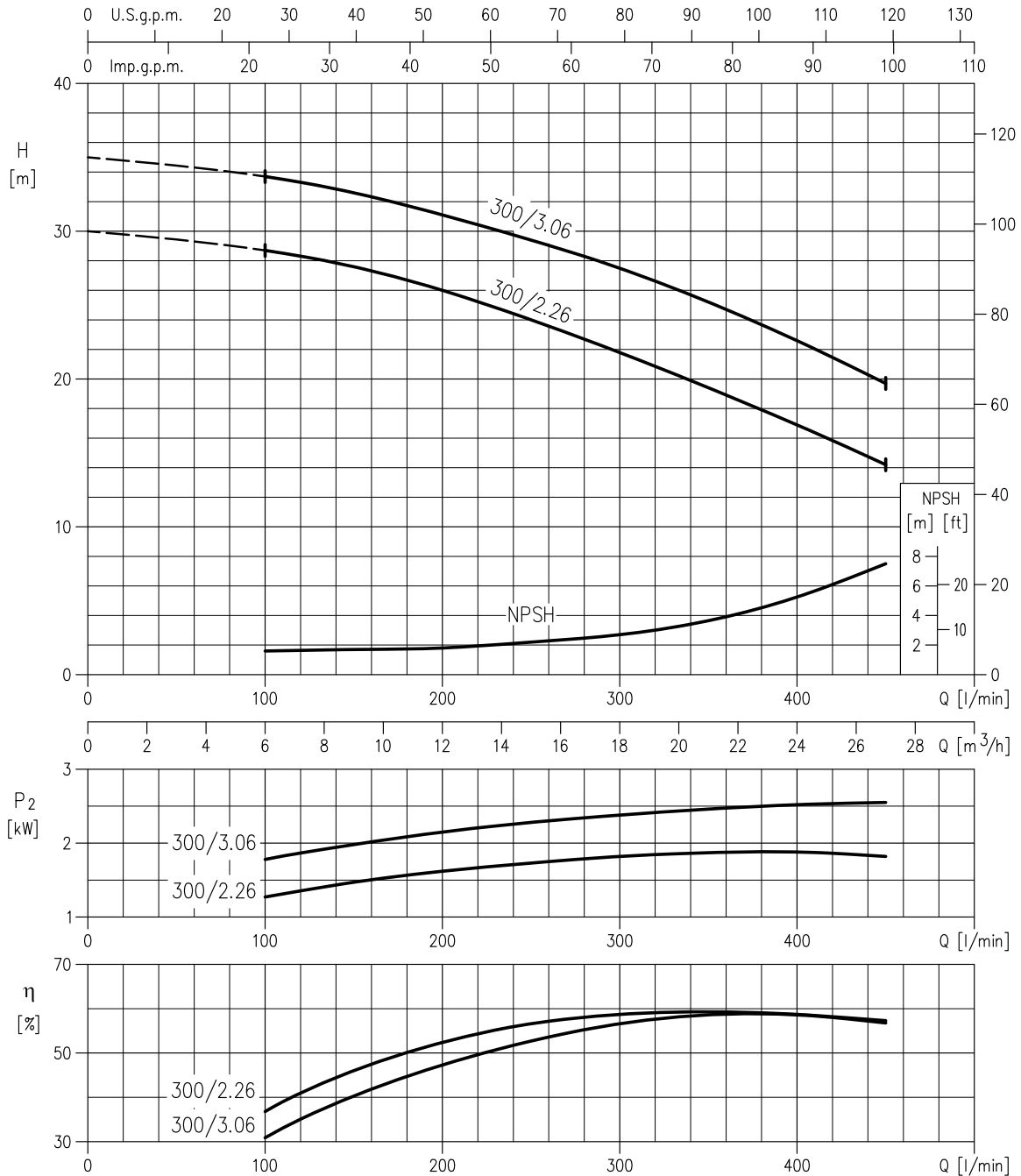
The continuous curves indicate the recommended working range. The dotted curve is only a guide.

In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

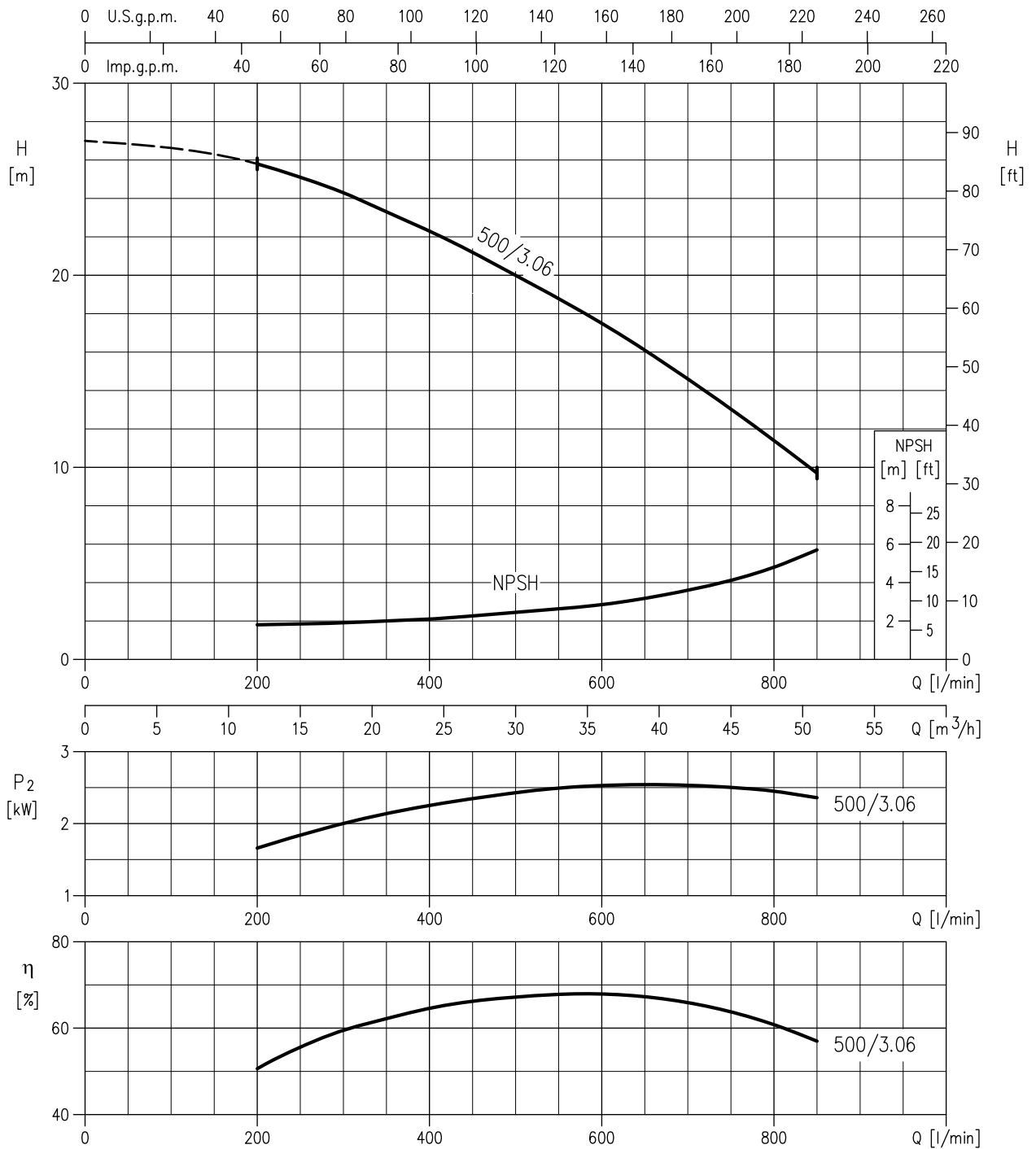
- Q = volume flow rate
- H = total head
- $P_2$  = pump power input (shaft power)
- $\eta$  = pump efficiency
- NPSH = net positive suction head required by the pump

300/2.26 (2.2 kW) – Impeller diameter = 133 mm  
 300/3.06 (3.0 kW) – Impeller diameter = 148 mm



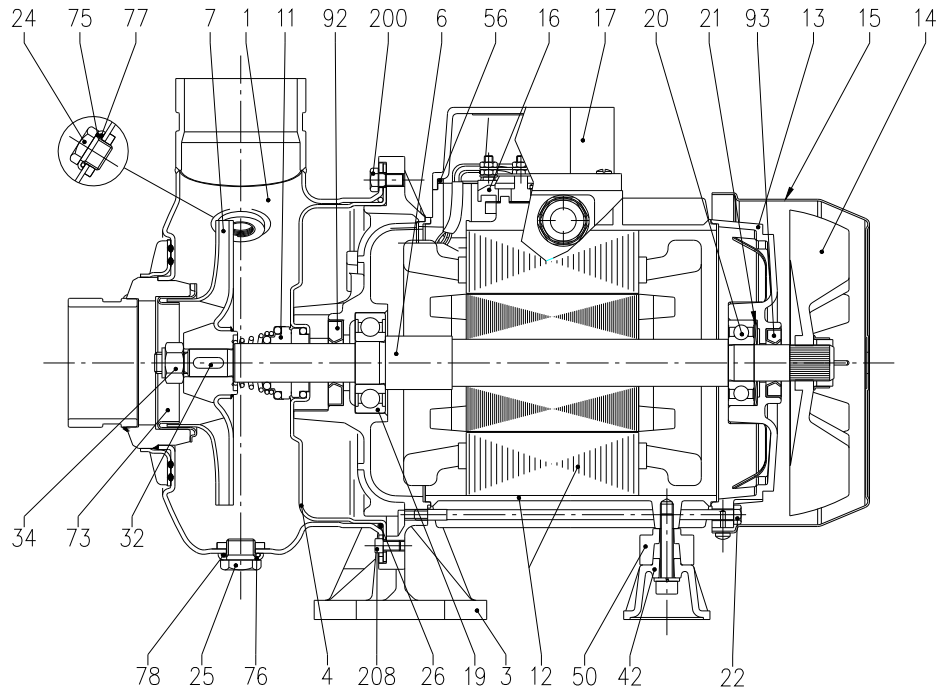
Rotation speed  $\approx 3450 \text{ min}^{-1}$   
 Test standard: ISO 9906 – Annex A

500/3.06 (3.0 kW) – Impeller diameter = 125 mm

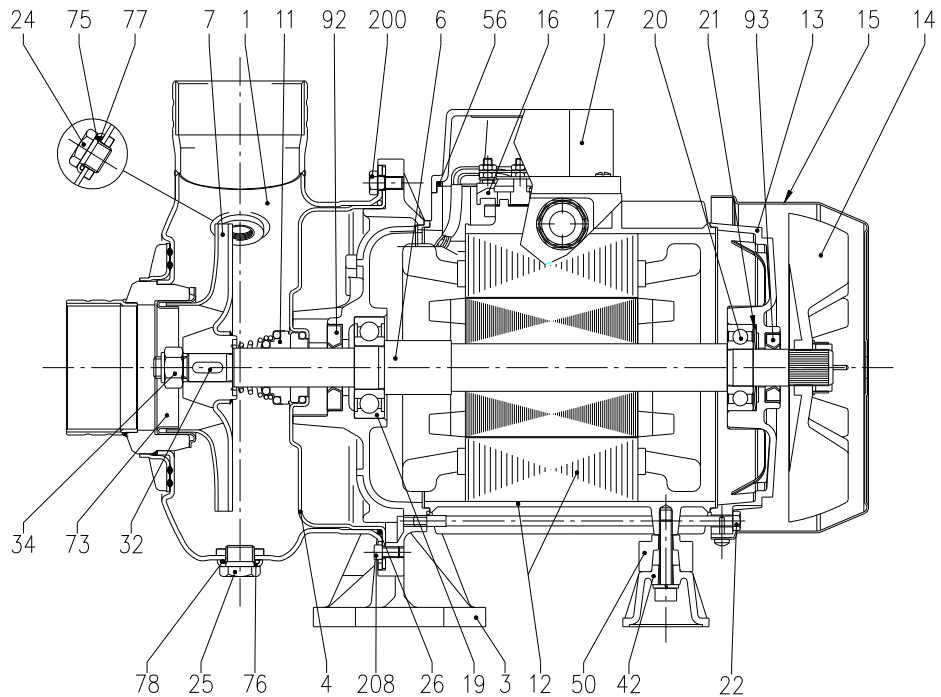


Rotation speed ≈ 3450 min<sup>-1</sup>  
 Test standard: ISO 9906 – Annex A

**SECTIONAL VIEW DRAWING  
DWC-V (Victaulic connection)**



**DWC-N (Threaded connection)**

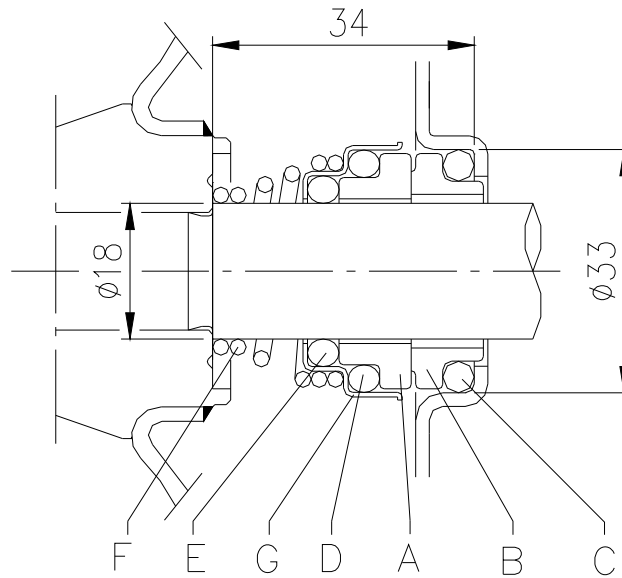




## SECTIONAL VIEW TABLE

N°	PART NAME	MATERIAL	DIMENSIONS	STANDARD	Q.TY
001	Casing	EN 1.4301 (AISI 304)			1
003	Motor bracket	Aluminium			1
004	Casing cover	EN 1.4301 (AISI 304)			1
006	Shaft with rotor	EN 1.4301(AISI 304) (Wet extension)			1
007	Impeller	EN 1.4301 (AISI 304)			1
011	Mechanical seal	Ceramic / Carbon / EPDM	See pag.302		1
012	Motor frame with stator	-			1
013	Motor cover	Aluminium			1
014	Fan	PA6			1
015	Fan cover	Fe P04 Zincate			1
016	Terminal board	-			1
017	Terminal board cover	Aluminium			1
019	Bearing	-	See table pag.302		1
020	Bearing	-	See table pag.302		1
021	Adjusting ring	Steel C70			1
022	Tie rod	Fe 42 Zincate		EBARA drawing	4
024	Priming plug	EN 1.4301 (AISI 304)	G 1/4"	EBARA drawing	1
025	Draing plug	EN 1.4301 (AISI 304)	G 1/4"	EBARA drawing	1
026	"O" ring	EPDM / FPM (H; HS and HW)	148,8x3,53	OR 4587	1
032	Key	EN 1.4401 (AISI 316)	5x5x16	UNI 6604	1
034	Impeller nut	EN 1.4301 (AISI 304)	M10x1.25	UNI 7474	1
042	Foot	Aluminium / Zincate steel		EBARA drawing	1
050	Spacer	-			1
056	Box gasket	NBR			1
073	Casing ring	EN 1.4301 (AISI 304)			1
075	Washer	EN 1.4301 (AISI 304)		EBARA drawing	1
076	Washer	EN 1.4301 (AISI 304)		EBARA drawing	1
077	O-ring	EPDM / FPM (H; HS and HW)	13,1x2,62	OR 117	1
078	O-ring	EPDM / FPM (H; HS and HW)	13,1x2,62	OR 117	1
092	Lip seal	-	18x40x7	DIN 3760 without spring	1
093	Lip seal	-	25x40x7	DIN 3760 without spring	1
200	Screw	Stainless steel A2-70 class ISO 3506/1	M 6x12	UNI 5739	6
208	Screw	Stainless steel A2-70 class ISO 3506/1	M 5x12	UNI 5931	4

MECHANICAL SEAL

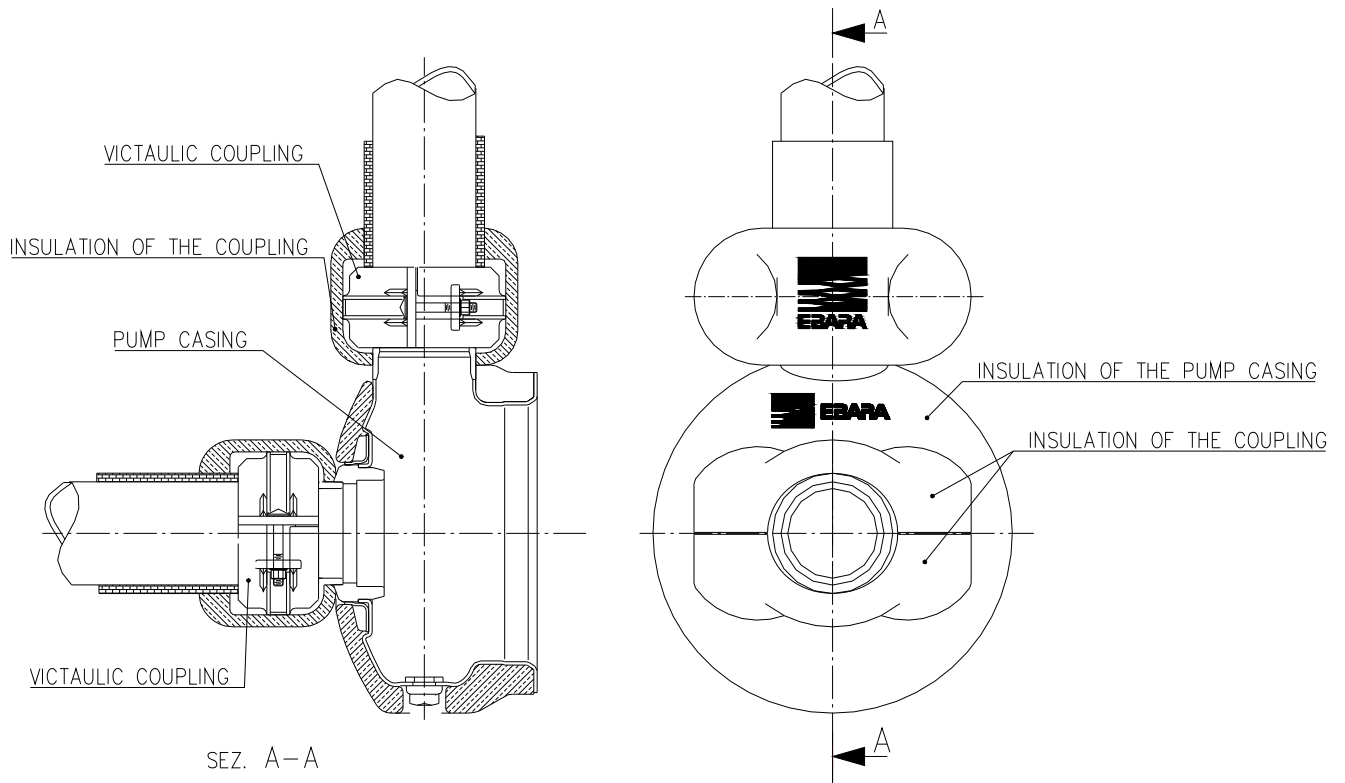


REF	PART NAME	MATERIAL			
		Standard	H version	HS version	HW version
A	Rotary seal ring	ceramic	ceramic	SiC	tungsten carbide
B	Stationary seal ring	carbon graphite	carbon graphite	SiC	tungsten carbide
C	O Ring	EPDM	FPM	FPM	FPM
D	O Ring	EPDM	FPM	FPM	FPM
E	O Ring	EPDM	FPM	FPM	FPM
F	Self driving spring	AISI 316	AISI 316	AISI 316	AISI 316
G	Frame	AISI 304	AISI 304	AISI 316	AISI 304

BEARINGS

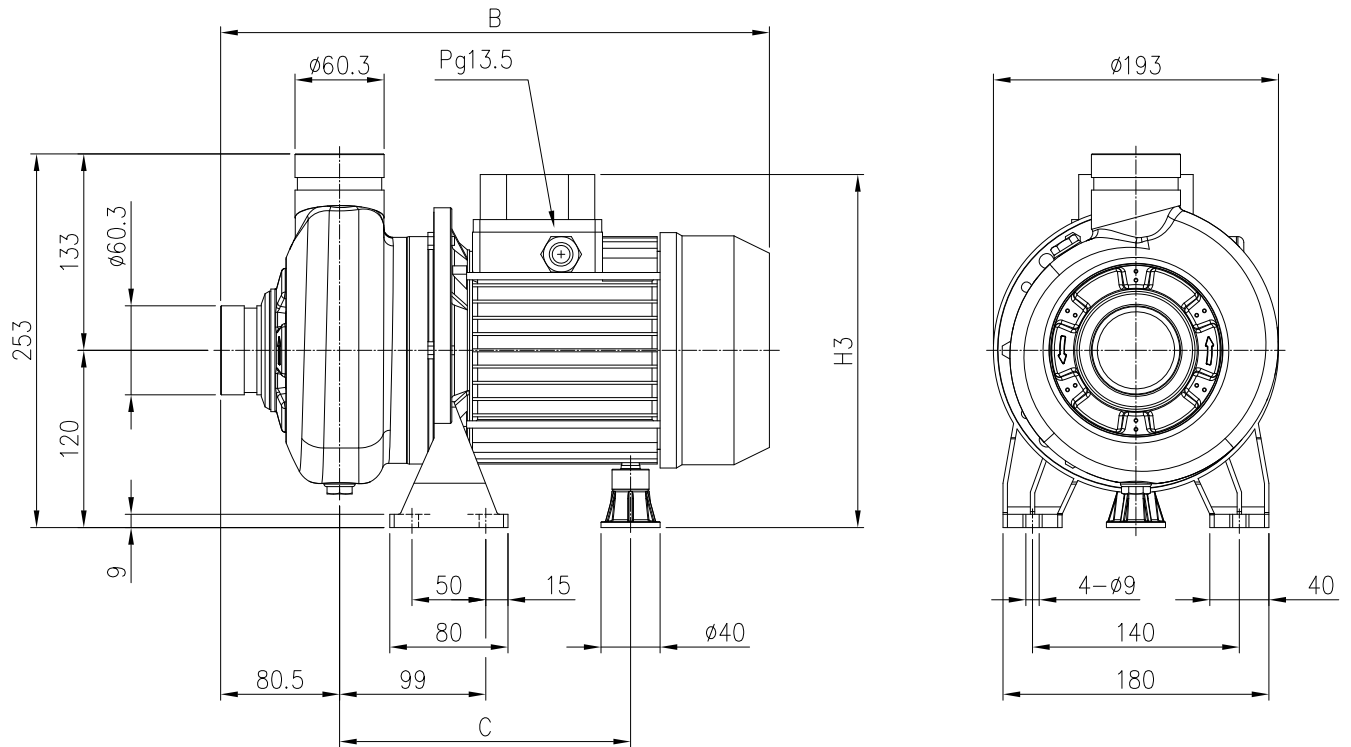
Pump type	Ball Bearing	
	Pump side	Fan side
DWC 300/2.26	6305 ZZ	6205 ZZ
DWC 300/3.06		
DWC 500/3.06		

THERMAL INSULATION



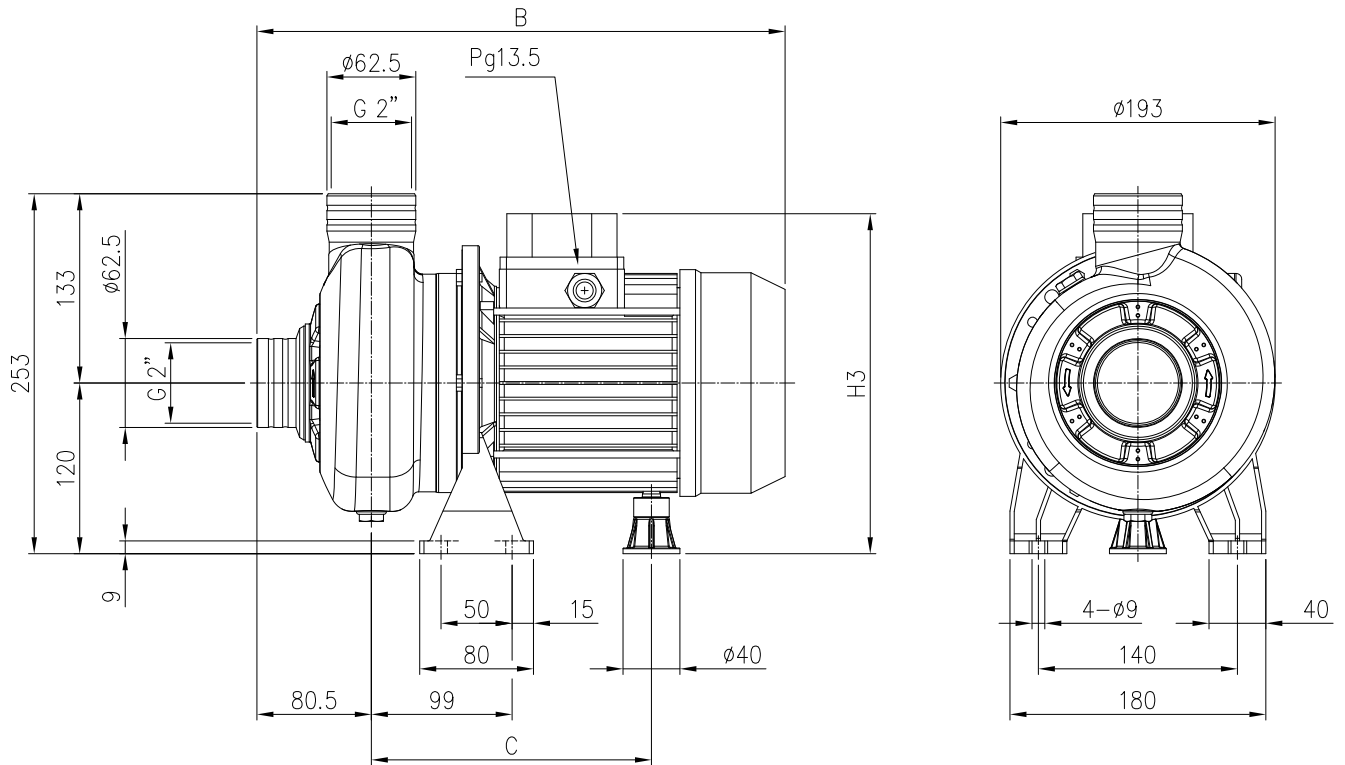
Pump type		INSULATION OF THE PUMP CASING	INSULATION OF THE COUPLING	VICTAULIC COUPLING
VICTAULIC CONNECTION	DWC-V 300/2.26	STANDARD	ON REQUEST	ON REQUEST
	DWC-V 300/3.06			
	DWC-V 500/3.06			
THREADED CONNECTION	DWC-N 300/2.26	ON REQUEST	NO NECESSARY	NO NECESSARY
	DWC-N 300/3.06			
	DWC-N 500/3.06			

DWC-V (VICTAULIC CONNECTION)



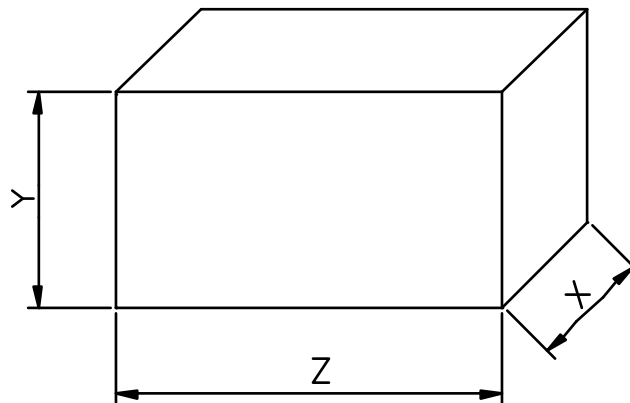
Pump type	Dimensions [mm]			Weight [kgf]
	B	C	H3	
DWC-V 300/2.26	418	230 ÷ 241	244	19.7
DWC-V 300/3.06	457	230 ÷ 241	244	21.5
DWC-V 500/3.06	457	230 ÷ 241	244	22.3

DWC-N (THREADED CONNECTION)



Pump type	Dimensions [mm]			Weight [kgf]
	B	C	H3	
DWC-N 300/2.26	418	230 ÷ 241	244	19.7
DWC-N 300/3.06	457	230 ÷ 241	244	21.5
DWC-N 500/3.06	457	230 ÷ 241	244	22.3

## PACKING



Pump type	Packing [mm]			Weight [kgf]
	X	Y	Z	
DWC 300/2.26	205	288	477	20.5
DWC 300/3.06	205	288	477	22.5
DWC 500/3.06	205	288	477	23.5

## MOTOR DATA

Pump type	Power		Efficiency (% load)			Efficiency (% load)			Input [kW] Three Phase	Full load current			Locked rotor current		
	[kW]	[HP]	Three phase (380 V)			Three phase (460 V)				[A]			[A]		
			η %			η %				Three Phase			Three Phase		
			50%	75%	100%	50%	75%	100%		220 V	380 V	460 V	220 V	380 V	460 V
DWC 300/2.26	2.2	3.0	80.5	83.3	83.5	77.3	82.4	84.1	2.90	7.0	4.1	4.1	61.5	35.5	43.0
DWC 300/3.06	3.0	4.0	84.0	85.9	85.2	80.2	83.5	84.6	3.90	10.5	6.1	5.6	92.1	53.2	57.0
DWC 500/3.06	3.0	4.0	84.0	85.9	85.2	80.2	83.5	84.6	3.90	10.5	6.1	5.6	92.1	53.2	57.0