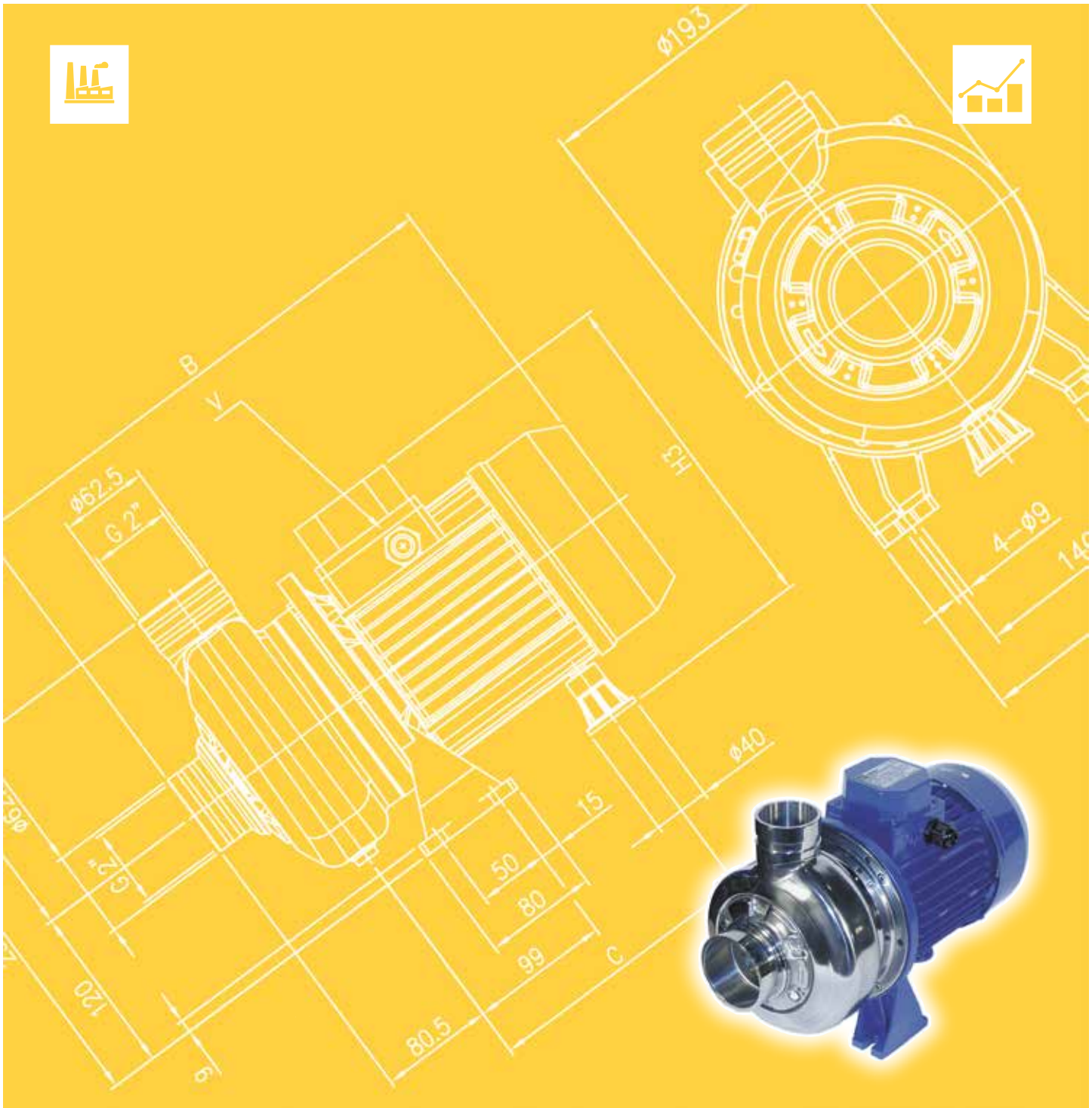
EBARA

Japanese Technology since 1912

DWC

Data Book 60Hz



SPECIFICATIONS 60Hz

Rev. E

PUMP			
Liquid Handled	Type of liquid		Moderate aggressive fluids, glycol solutions, liquids containing Impurities, liquids suitable for industrial washing equipments. Not suitable for clean water. For other industrial fluids please contact our Technical Customer Service.
	Temperature	[°C]	min. -15 max. +120 For full details see section “FLUID TEMPERATURE RANGE”
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 9006:2012 - Grade 3B

MOTOR		
Type		Electric - TEFC
		Three Phase
Efficiency Level		- from 2.2 kW up to 3 kW IE3* from 2.2 kW up to 3 kW (*only for 460 V)
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 ±10% (from 2.2 kW up to 3 kW) 220/380-460 ±10% (IE3* from 2.2 kW up to 3 kW)
Over load protection		User provide
Casing material		Aluminium
Base material/motor support		Aluminium
Dimensions of cable entry		PG13.5 - M20x1.5 (See DIMENSIONS TABLE page 400)

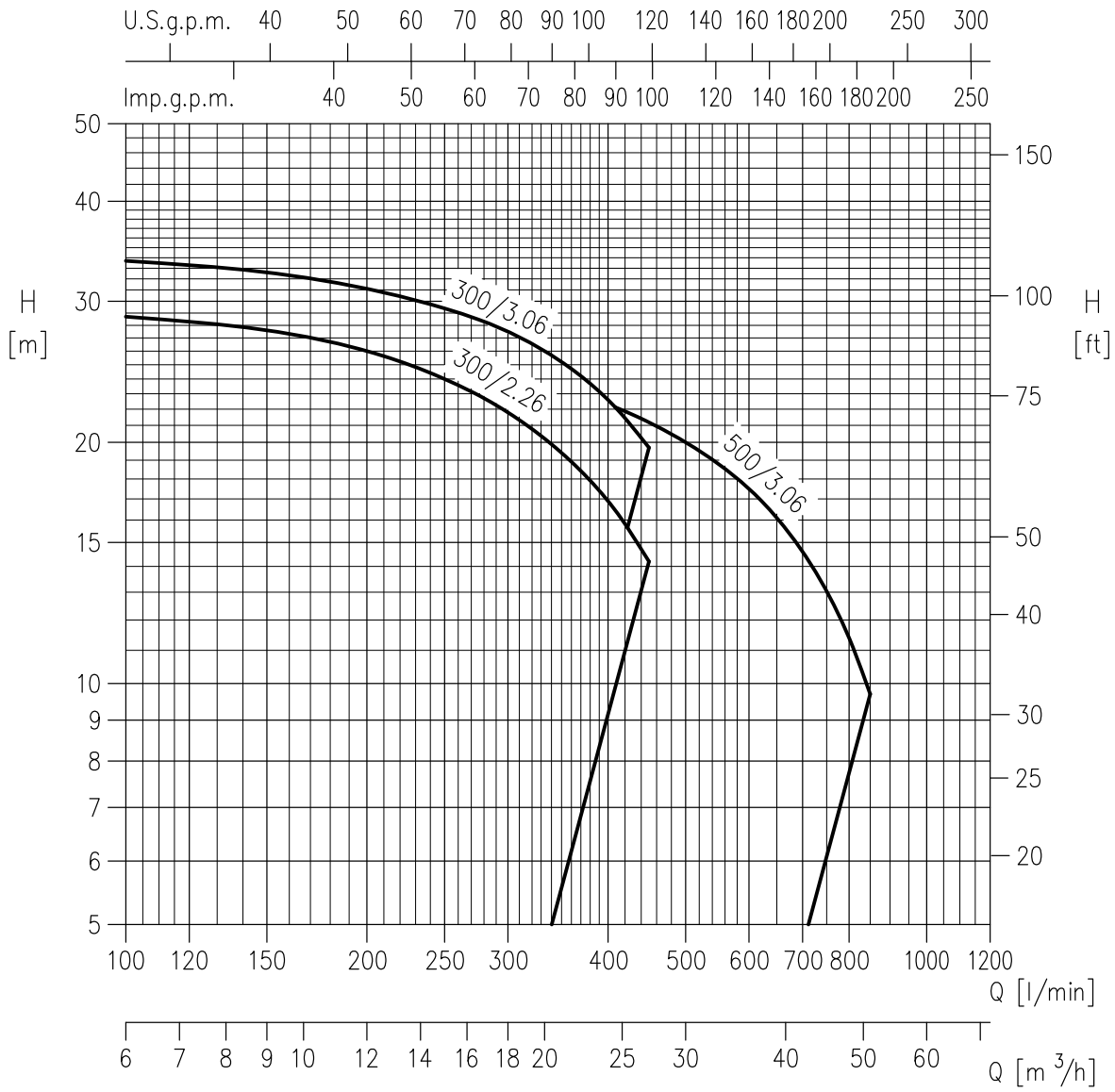
* only for 460 V

PERFORMANCE RANGE and SELECTION CHART

60Hz

Rev. E

PERFORMANCE RANGE



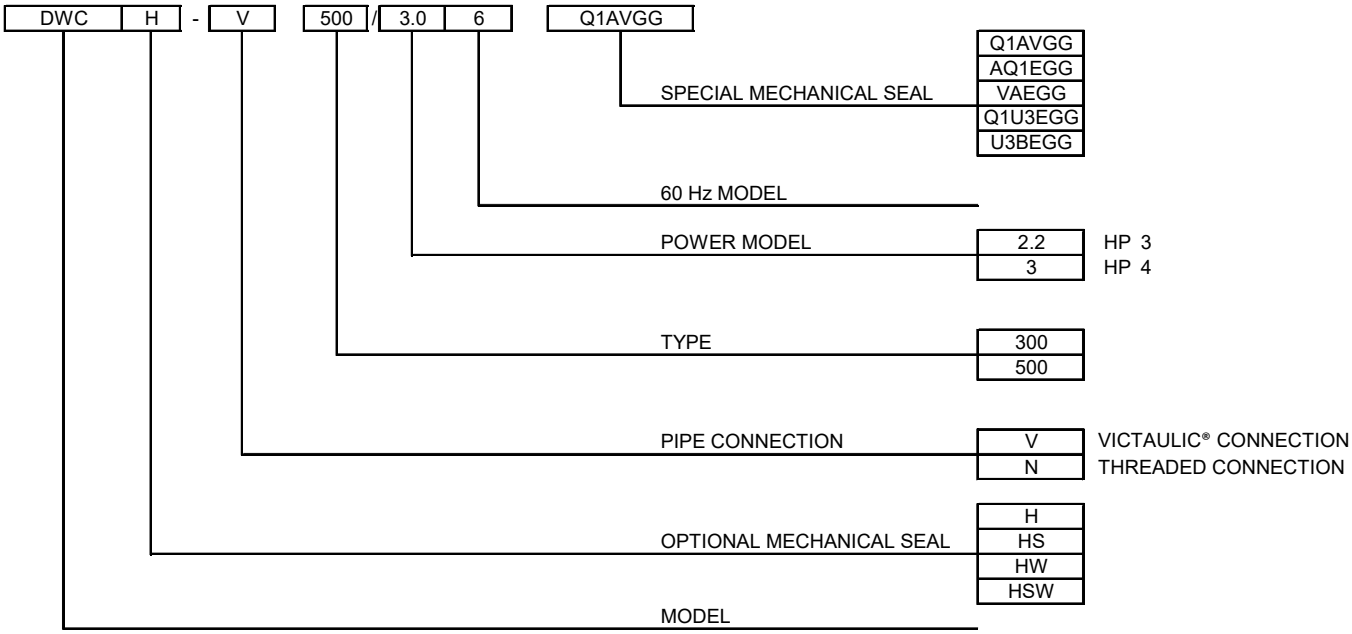
SELECTION CHART

Pump type	Power		Q=Capacity													
			l/min	0	100	150	200	250	300	350	400	450	500	600	700	800	850
	[kW]	[HP]	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	3.0	4		35.0	33.7	32.6	31.1	29.4	27.5	25.2	22.6	19.7	-	-	-		-
DWC 500/3.06	3.0	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 CURVES SPECIFICATIONS 60Hz

Rev. E

TYPE KEY



CURVES SPECIFICATIONS

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

Tolerances according to ISO 9006:2012 - Grade 3B
The curves refer to effective speed of asynchronous motors at 60 Hz, 2 poles.
Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of ν = 1 mm^2/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)
η	=	pump efficiency
NPSH	=	net positive suction head required by the pump

PERFORMANCE CURVES 60Hz

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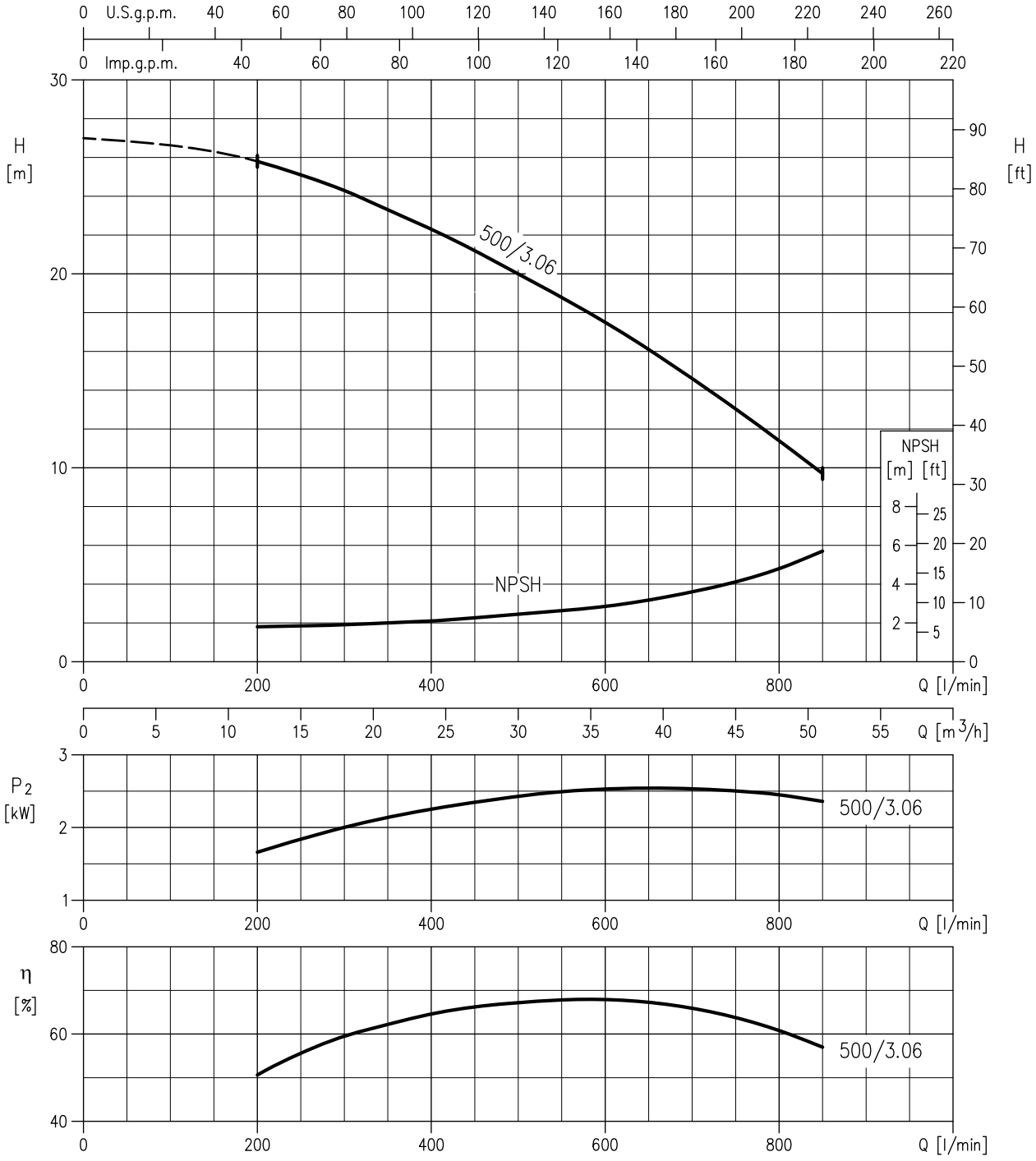
500/3.06 (3.0 kW) – Impeller diameter = 125 mm



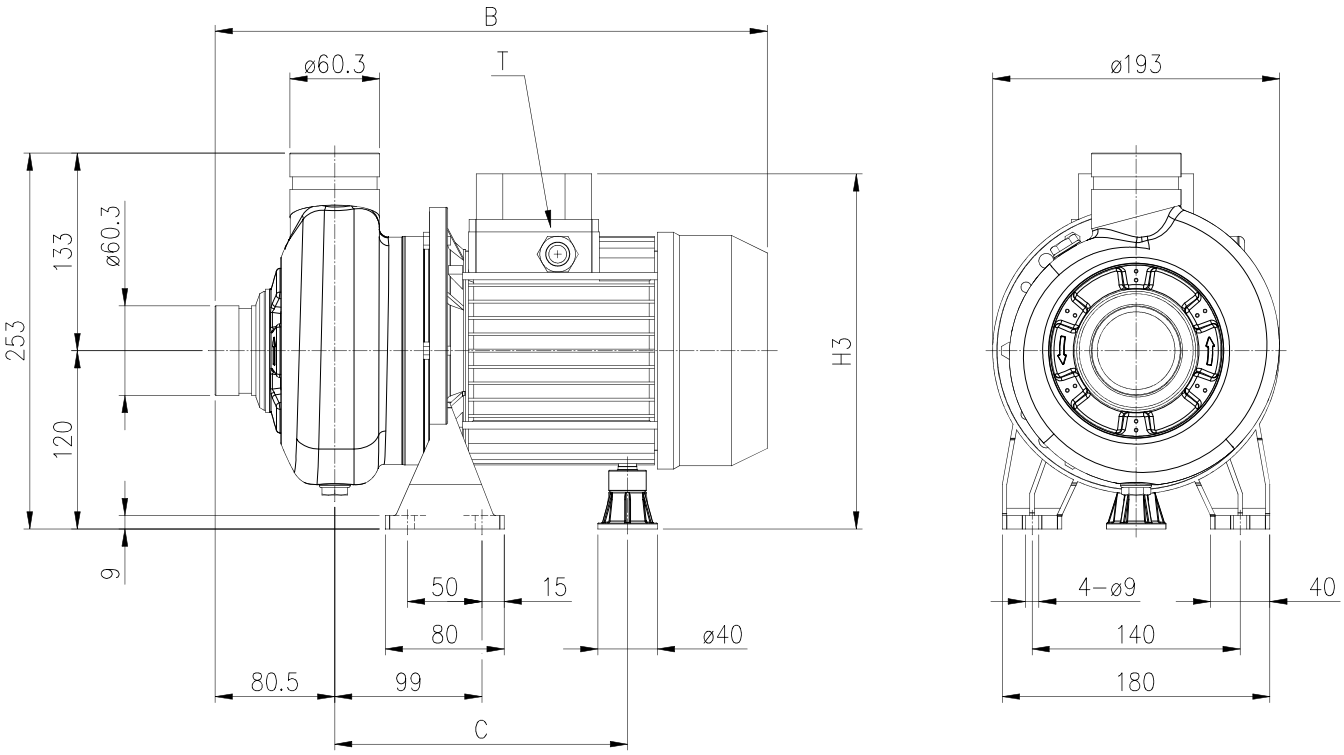
Rotation speed ≈ 3450 min^{-1}
Test standard: ISO 9006:2012 - Grade 3B

DIMENSIONS and WEIGHT

60Hz

Rev. E

DWC-V (VICTAULIC® CONNECTION)



Pump type	Dimensions [mm]								Weight [kgf]	
	B	(*)	C	(*)	H3	(*)	T	(*)		(*)
DWC-V 300/2.26	418	397	230 ÷ 241	230 ÷ 241	244	239	PG13.5	M20x1.5	20	20
DWC-V 300/3.06	457	457	230 ÷ 241	230 ÷ 241	244	244	PG13.5	M20x1.5	22	22
DWC-V 500/3.06	457	457	230 ÷ 241	230 ÷ 241	244	244	PG13.5	M20x1.5	22	22

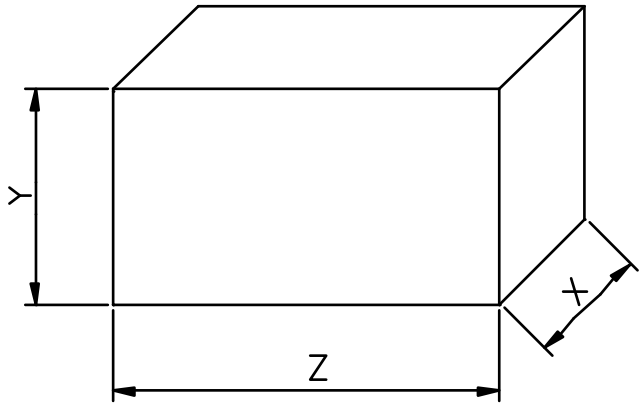
* only for IE3 motors

DIMENSIONS and WEIGHT

60Hz

Rev. E

PACKING



Pump type	Packing [mm]			Weight [kgf]	
	X	Y	Z		(*)
DWC 300/2.26	245	315	590	21	21
DWC 300/3.06	245	315	590	23	23
DWC 500/3.06	245	315	590	24	24

* only for IE3 motors

MOTOR DATA

Pump type Three Phase	Power		Efficiency	Efficiency (% load) Three phase (380 V) η %			Efficiency (% load) Three phase (460 V) η %			Input [kW]	Full load current [A]			Locked rotor current [A]		
	[kW]	[HP]	Three Phase	50%	75%	100%	50%	75%	100%	Three Phase	Three Phase 220 V	380 V	460 V	Three Phase 220 V	380 V	460 V
DWC 300/2.26	2,2	3,0	IE3*	86,5	86,8	86,2	86,9	87,8	87,4	2,48	7,5	4,3	4,1	55,7	32,2	38,9
DWC 300/3.06	3,0	4,0	IE3*	86,8	87,0	87,5	87,0	87,9	88,5	3,42	10,2	5,9	5,6	75,7	43,7	52,8
DWC 500/3.06	3,0	4,0	IE3*	86,8	87,0	87,5	87,0	87,9	88,5	3,42	10,2	5,9	5,6	75,7	43,7	52,8

* only for 460 V

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EBARA Pumps Europe S.p.A.
Via Torri di Confine 2/1 int. C
36053 Gambellara (Vicenza), Italy
Phone +39 0444 706811
ebarapumps.epe@ebara.com
www.ebaraeurope.com

EBARA Pumps Europe S.p.A. GERMANY
Elisabeth-Selbert-Straße 2
63110 Rodgau, Germany
Phone +49 (0) 6106-660 99-0
info.epde@ebara.com

EBARA Pumps South Africa (PTY) LTD
26 Kyalami Boulevard,
Kyalami Business Park, 1684, Midrand,
Gauteng, South Africa
Phone +27 11 466 1844
ebara.epsa@ebara.com

EBARA Pumps Europe S.p.A. UK
Unit A, Park 34
Collett Way - Didcot
Oxfordshire - OX11 7WB, United Kingdom
Phone +44 1895 439027
marketing.epuk@ebara.com

EBARA Pumps Europe S.p.A. FRANCE
122, Rue Pasteur
69780 Toussieu, France
Phone: +33 04 72 76 94 82
mktg.efr@ebara.com

EBARA Pumps East Africa
Delta Corner Tower 2, 13th Floor, Office 1308,
Chiromo Road, Westlands
P.O. Box 13796-00800, Nairobi
Phone: +254(0)722913119
info.epea@ebara.com

EBARA POMPY POLSKA Sp. z o.o.
ul. Działkowa 115 A
02-234 Warszawa, Poland
Phone +48 22 3909920
marketing.epl@ebara.com

EBARA Pumps RUS Ltd.
Prospekt Andropov 18, building 7, floor 11
115432 Moscow
Phone +7 499 6830133
mktg.epr@ebara.com