



Japanese Technology since 1912

JESX

Data Book 50Hz



	Page
<b>- SPECIFICATIONS</b>	<b>200</b>
SELECTION CHART	201
TYPE KEY AND CURVE SPECIFICATIONS	202
PERFORMANCE CURVE JESX 5	203
PERFORMANCE CURVE JESX 6	204
PERFORMANCE CURVE JESX 8	205
<b>- CONSTRUCTIONS</b>	<b>300</b>
SECTIONAL VIEW	300
MECHANICAL SEAL	301
<b>- DIMENSIONS AND WEIGHT</b>	<b>400</b>
PUMP	400
PACKING	401
<b>- TECHNICAL DATA</b>	<b>500</b>
MOTOR DATA	500
NOISE DATA	500
<b>- INSTALLATION</b>	<b>600</b>

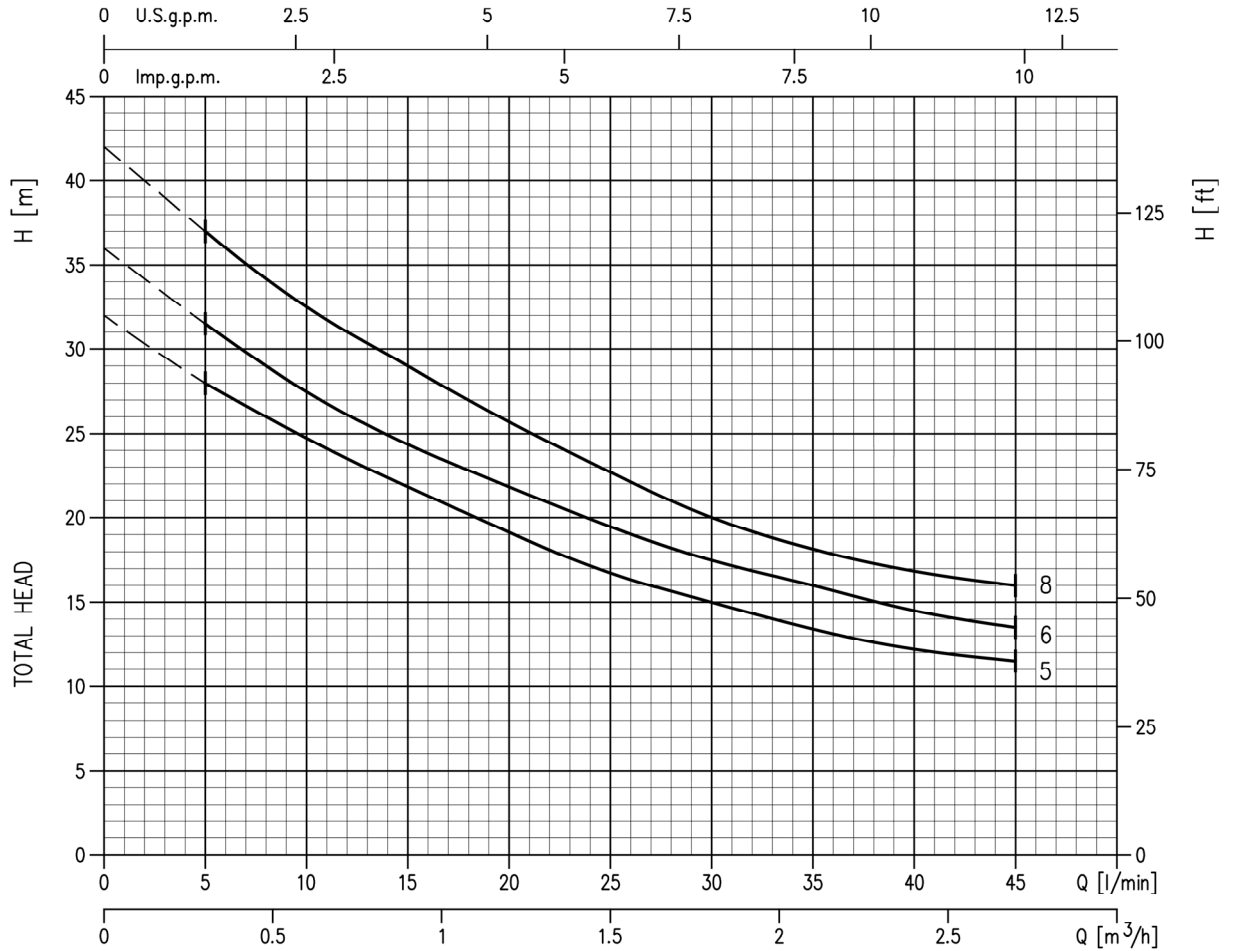
**SPECIFICATION**

50Hz

Rev.I

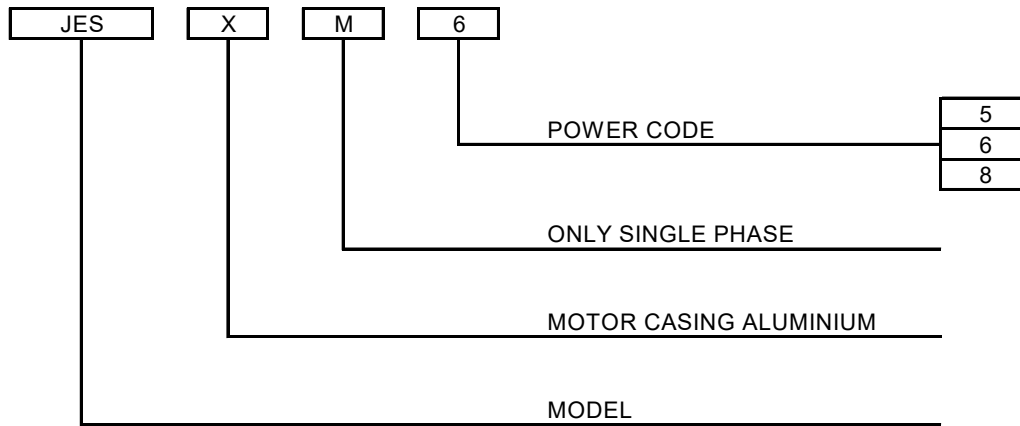
PUMP		
Liquid Handled	Type of liquid	Clean water
	Temperature [°C]	min. +5 max. +45
Maximum working pressure	[MPa]	0.6
Maximum suction depth	[m]	8
Construction	Impeller	Closed centrifugal type
	Shaft seal type	Mechanical seal
	Bearing	Sealed ball bearing
Pipe Connection	Suction [inch]	G 1" UNI ISO 228
	Discharge [inch]	G 1" UNI ISO 228
Material	Casing	AISI 304
	Impeller	PPE+PS glass fibre reinforced
	Casing cover	AISI 304
	Shaft seal	Ceramic/Carbon/NBR
	Shaft	AISI 303 (Wet extension)
	Stages	-
	Ejector	PPE+PS glass fibre reinforced
	Bracket	Aluminium
	Diffuser	PPE+PS glass fibre reinforced
Applicable standard of test		ISO 9906 – Annex A

MOTOR		
Type	Electric - TEFC	
	Single Phase	Three Phase
Efficiency level(Reg.1781/2019)	IE2	IE3
No. of Poles	2	
Rotation speed [min <sup>-1</sup> ]	≈ 2800	
Insulation Class	F	
Protection degree (CEI EN 60034-5)	IP 54 IP 55 (on request)	
Power rating	[kW]	0.37 ÷ 0.6
	[HP]	0.5 ÷ 0.8
Frequency [Hz]	50	
Voltage [V]	230 ±10%	230/400 ±10%
Capacitor	Built in	-
Over load protection	Built in	Provided by the user
Casing material	Aluminium	
Motor support	Aluminium	
Dimensions of cable entry	PG 11 (see dimensions page 400)	



Pump Type		Q=Capacity					
		l/min	0	5	20	40	45
Single Phase	Three Phase	m <sup>3</sup> /h	0	0.3	1.2	2.4	2.7
		H=Total manometric head in meters					
JESXM 5	JESX 5		32	28	19.5	12	11.5
JESXM 6	JESX 6		36	31.5	22	14.5	13.5
JESXM 8	JESX 8		42	37	26	17	16

**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 50 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.

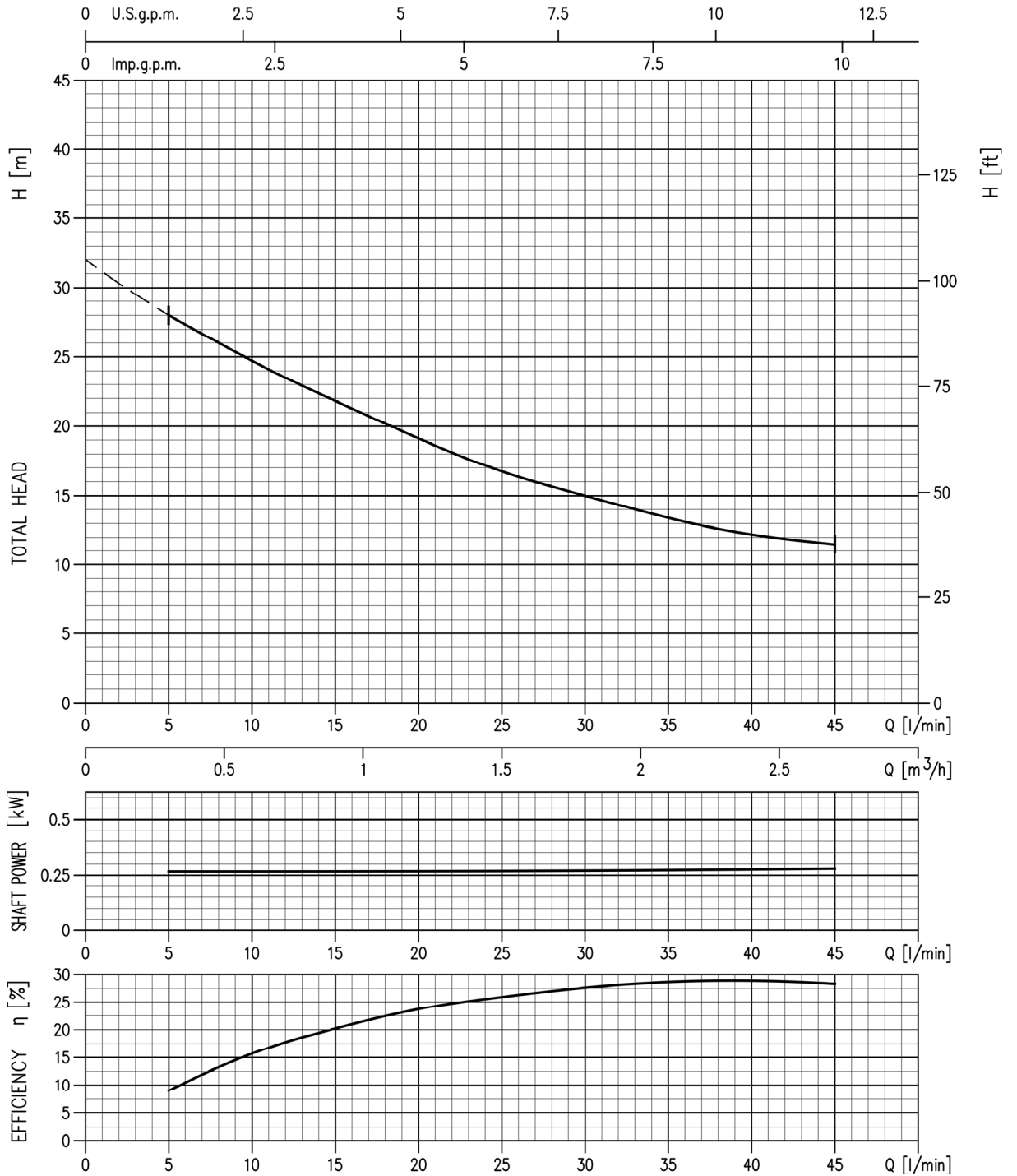
In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

Q = volume flow rate

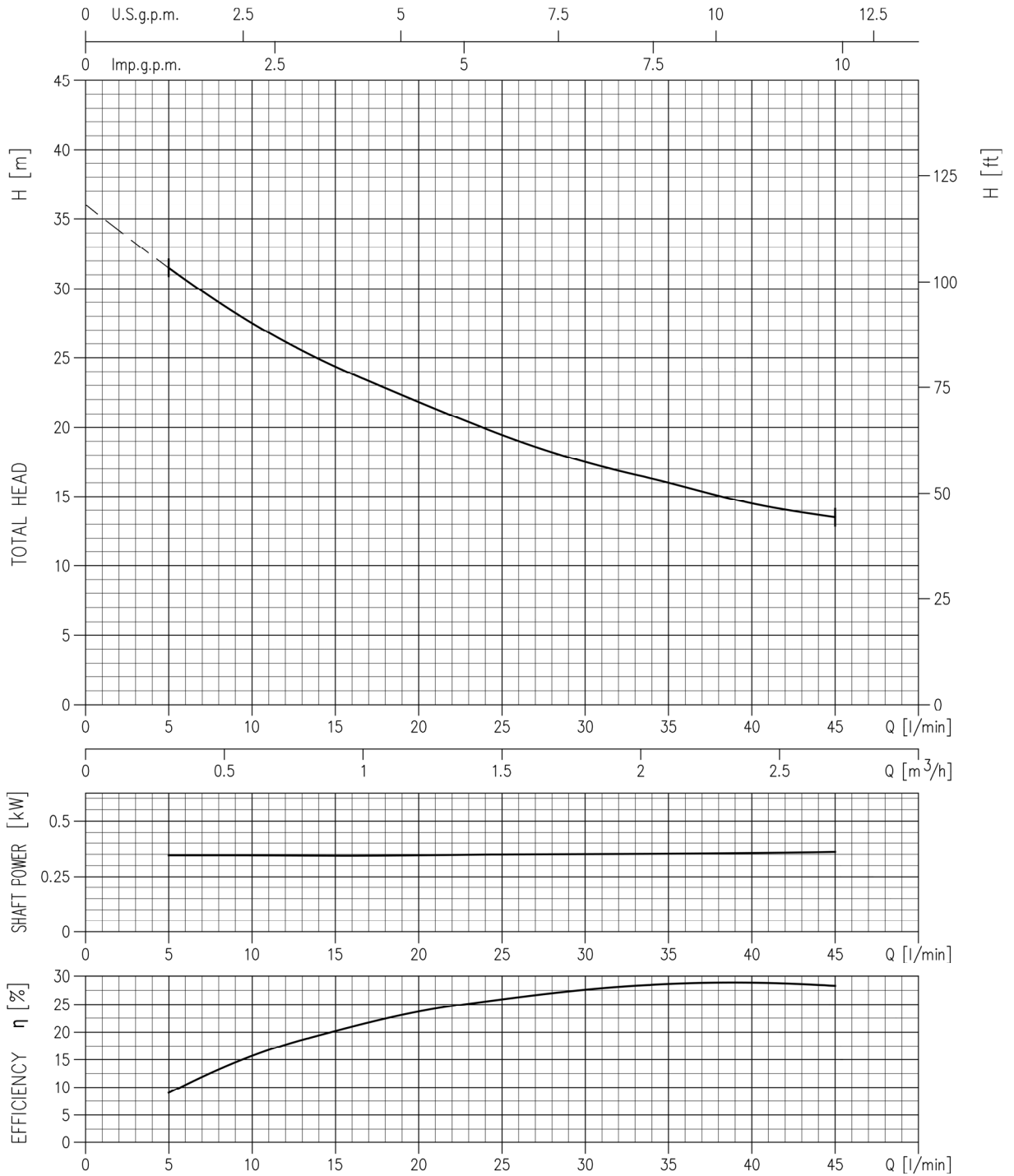
H = total head

JESX 5 - Impeller diameter = 104 mm



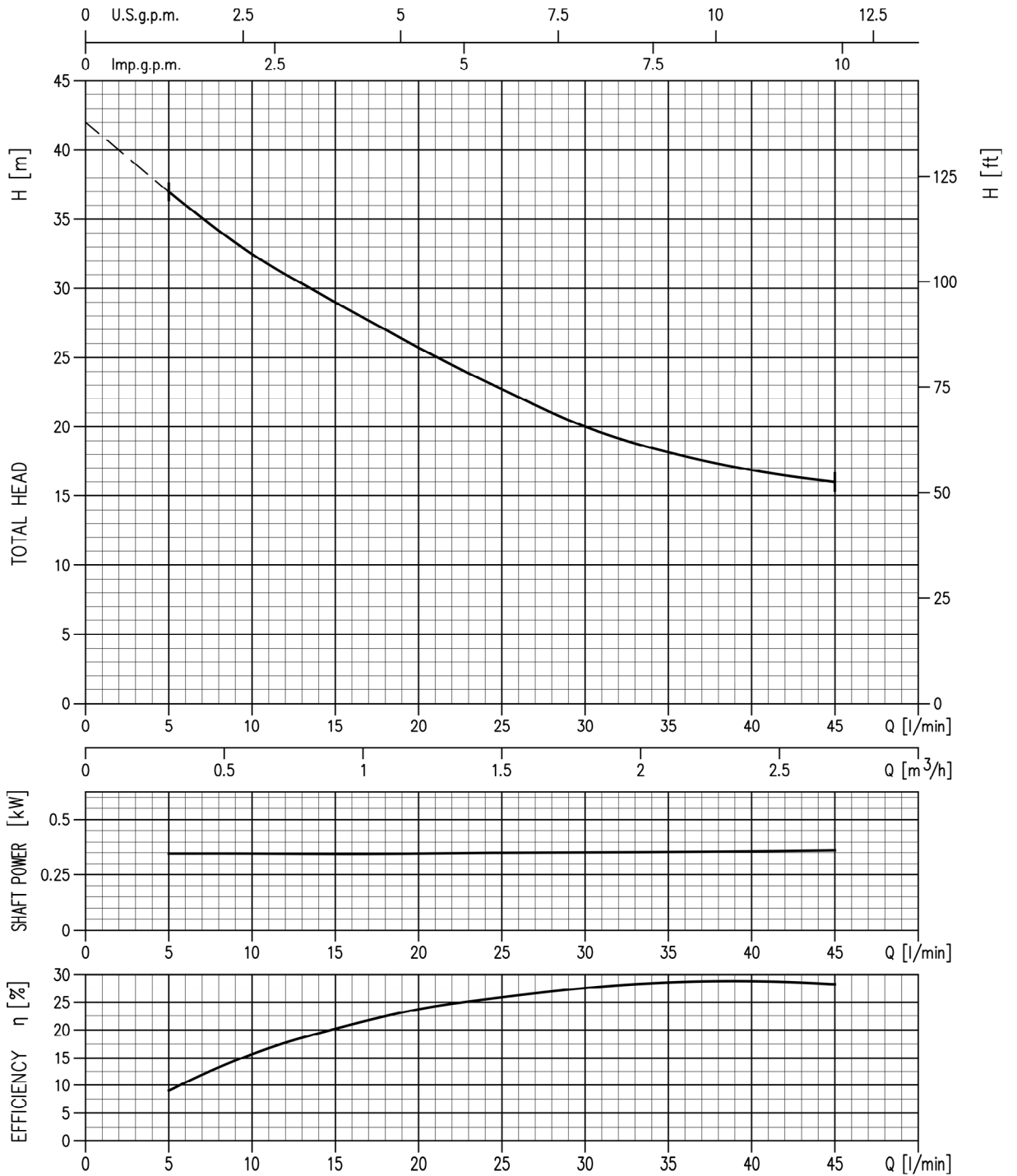
Rotation speed ≈ 2800 min<sup>-1</sup>  
 Test standard: ISO 9906 – Annex A

JESX 6 - Impeller diameter = 104 mm



Rotation speed ≈ 2800 min<sup>-1</sup>  
 Test standard: ISO 9906 – Annex A

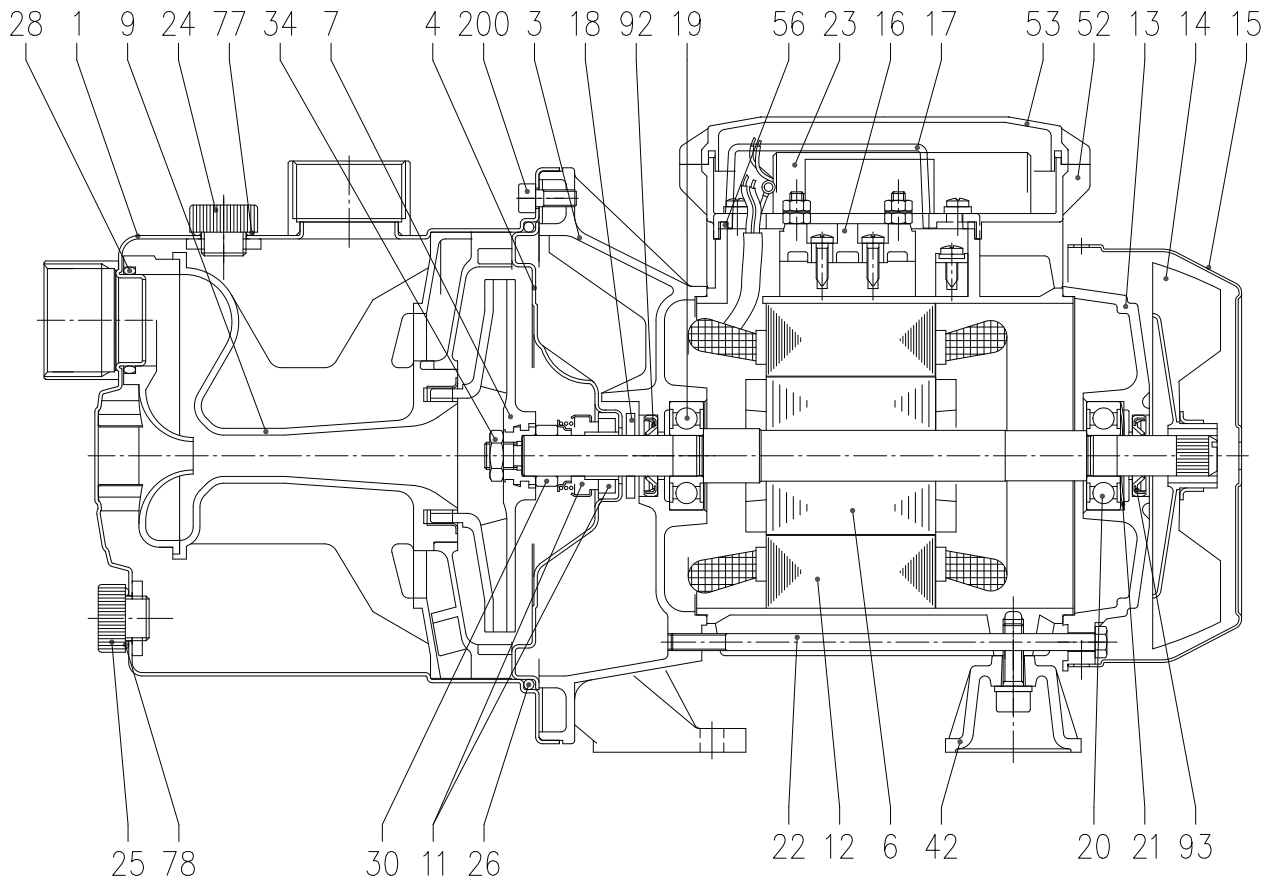
JESX 8 - Impeller diameter = 110 mm



Rotation speed ≈ 2800 min<sup>-1</sup>  
 Test standard: ISO 9906 – Annex A



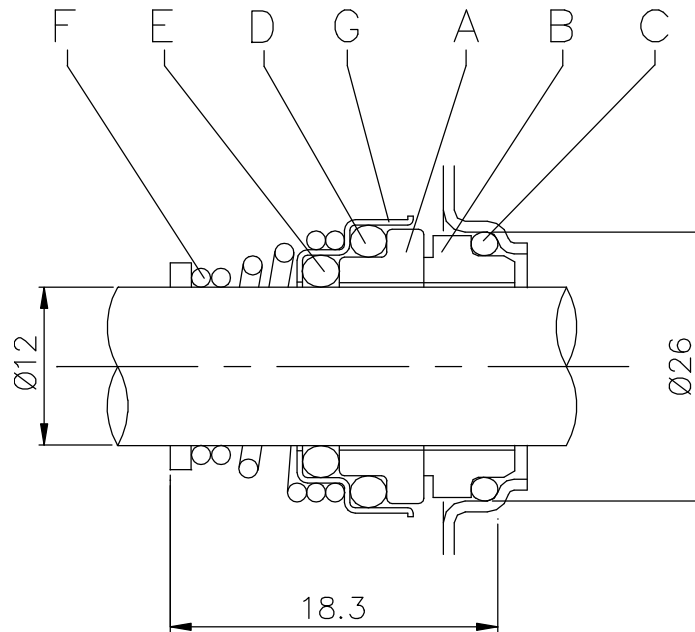
### SECTIONAL VIEW



N°	PART NAME	MATERIAL	Q. TY	N°	PART NAME	MATERIAL	Q. TY
1	Casing	AISI 304	1	22	Tie rod	Fe 42 Zincate	4
3	Motor bracket	Aluminium	1	23	Capacitor [1]	-	1
4	Casing cover	AISI 304	1	24	Priming plug	PA	1
6	Shaft with rotor	AISI 303 (Wet extension)	1	25	Drain plug	PA	1
7	Impeller	PPE+PS glass fibre reinforced	1	26	O-ring	NBR	1
9	Diffuser Venturi tube	PPE+PS glass fibre reinforced	1	28	O-ring	NBR	1
11	Mechanical seal	Carbon/Ceramic/NBR	1	30	Mechanical seal spacer	Brass	1
12	Motor frame with stator	-	1	34	Impeller nut (2)	AISI 304	1
13	Motor cover	Aluminium	1	42	Motor support	Aluminium	1
14	Fan	PA	1	52	Capacitor box [1]	ABS	1
15	Fan cover	Fe P04 Zincate	1	53	Capacitor box cover with gasket [1]	ABS+NBR	1
16	Terminal board	-	1	56	Box gasket	NBR	1
17	Terminal box cover [2]	Aluminium	1	77	O-ring	NBR	1
18	Splash ring	NBR	1	78	O-ring	NBR	1
19	Pump side ball bearing	-	1	92	Lip seal [3]	-	1
20	Fan side ball bearing	-	1	93	Lip seal [3]	-	1
21	Adjusting ring	Steel C70	1	200	Screw	Stainless steel A2 UNI7323	6

- [1] Only for single phase  
 [2] Only for three phase  
 [3] Only for IP55

MECHANICAL SEAL

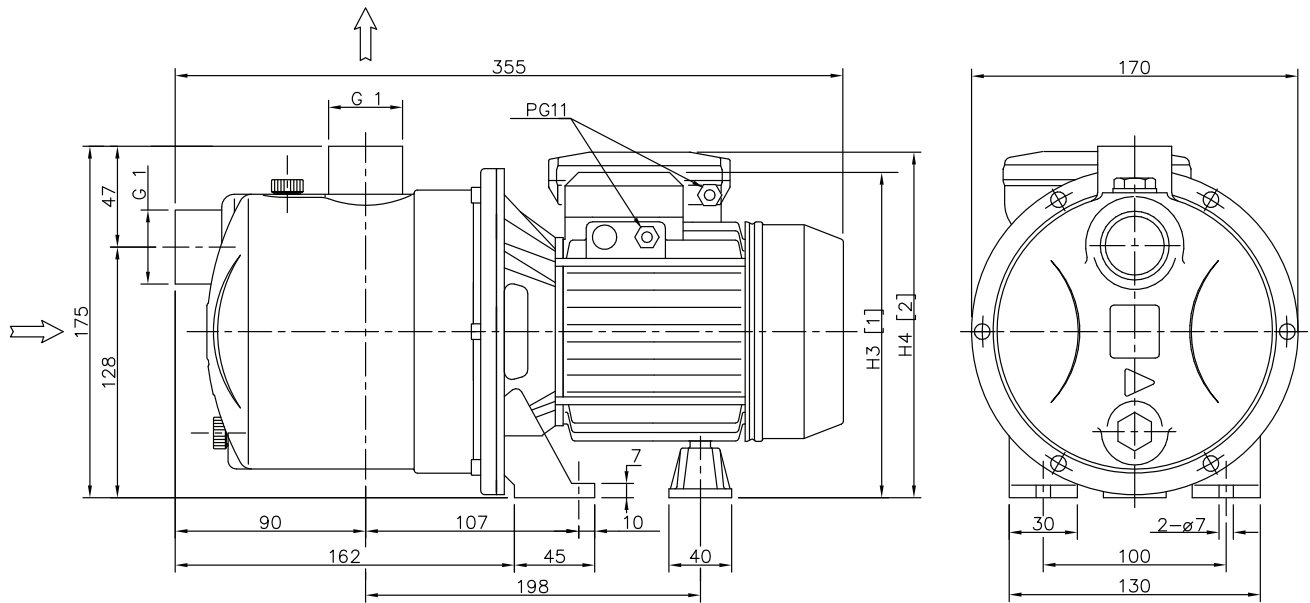


REF	PART NAME	MATERIAL Standard version (JESX)
A	Rotary seal ring	Ceramic
B	Stationary seal ring	Carbon graphite
C	O Ring	NBR
D	O Ring	NBR
E	O Ring	NBR
F	Self driving spring	AISI 316
G	Frame	AISI 304

BEARINGS

Pump type		Ball Bearing	
Single Phase	Three Phase	Pump side	Fan side
JESXM 5	JESX 5	6201	6201
JESXM 6	JESX 6	6201	6201
JESXM 8	JESX 8	6201	6201

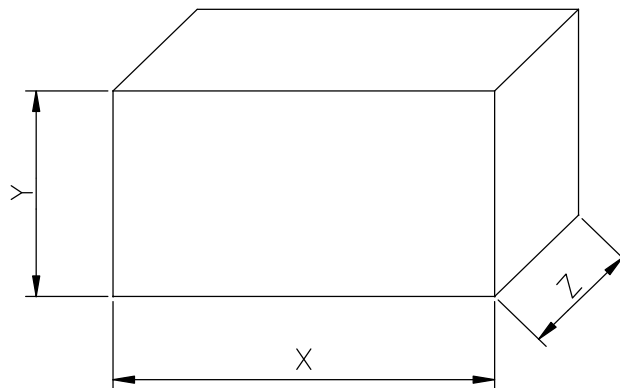
PUMP



Pump type	Dimensions [mm]		Weight [kgf]	
	H3	H4	[1~]	[3~]
JESX 5	175	200	6	5,2
JESX 6	175	200	6,5	5,5
JESX 8	175	200	7	6

[1] = Three phase  
 [2] = Single phase

**PACKING**



Pump type		Packing [mm]				Weight [kgf]	
Single Phase	Three Phase	X	Y	Z		[1~]	[3~]
JESXM 5	JESX 5	239	225	442	442	7	5,7
JESXM 6	JESX 6	239	225	442	442	7,5	6,2
JESXM 8	JESX 8	239	225	442	442	7,5	6,5

### MOTOR DATA

Pump type	Power		Efficiency	Capacitor		Efficiency (% load) and power factor				Input [kW]	Full load current		Locked rotor current	
	[kW]	[HP]		[μF]	[V]	η %			cos-φ		[A]		[A]	
						50%	75%	100%			110 V	230 V	110 V	230 V
JESXM 5	0,27	0,36	IE2	12,5	450	53,5	63,7	68,8	0,91	0,40	-	1,9	-	7,3
JESXM 6	0,37	0,5	IE2	12,5	450	60,0	67,6	69,8	0,92	0,55	-	2,6	-	9,6
JESXM 8	0,37	0,5	IE2	12,5	450	60,0	67,6	69,8	0,92	0,55	-	2,6	-	9,6

Pump type	Power		Efficiency	Input [kW]	Full load current [A]		Locked rotor current [A]	
	[kW]	[HP]			[A]		[A]	
					230 V	400 V	230 V	400 V
JESX 5	0,37	0,5	IE3	0,43	1,5	0,85	6,4	3,7
JESX 6	0,45	0,6	IE3	0,49	1,9	1,1	8,6	5,0
JESX 8	0,6	0,8	IE3	0,58	2,25	1,3	10,7	6,2

### NOISE DATA

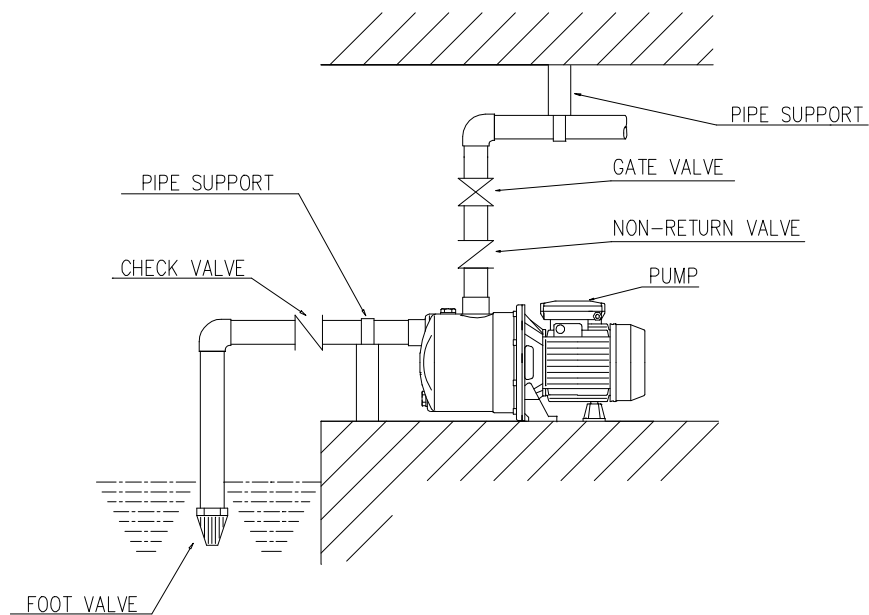
Pump type		L <sub>pA</sub> - dB(A) *
Single Phase	Three Phase	
JESXM 5	JESX 5	<70
JESXM 6	JESX 6	
JESXM 8	JESX 8	

\* Mean value of several measures at 1m distance around  
Tolerance ± 2.5 dB.

If you use this pump on suction condition, it tends to breath the air from outside because the pressure in pump becomes vacuum condition when it stopped. So water in the pump sometimes fall down to breath the air from pipe connection. If it is used to operate continuously under this condition, this is the cause of breakdown to overheat inside the pump.



So please install foot valve or check valve at suction pipe in order to prevent the pump from such a condition. And moreover will you please support the suction pipe and the delivery one to prevent the pump from leaning the weight of pipe.





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

**EBARA Pumps South Africa (PTY) LTD**  
26 Kyalami Boulevard,  
Kyalami Business Park, 1684, Midrand,  
Gauteng, South Africa  
Phone +27 11 466 1844  
ebaraeurope@ebaracom

**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@ebaracom

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

**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@ebaracom

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

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