



Japanese Technology since 1912


JESX

Data Book 60Hz



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SPECIFICATIONS

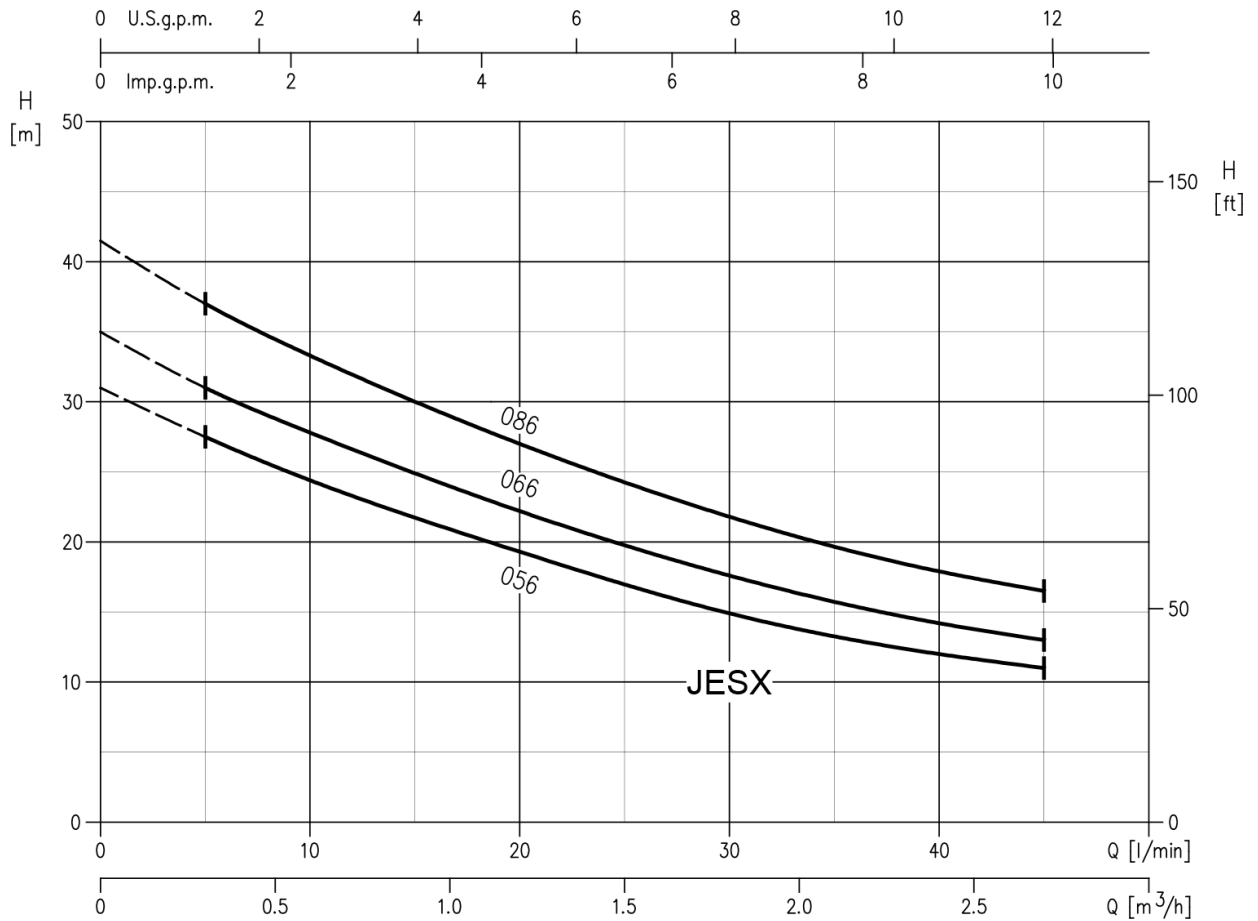
60Hz

Rev. B

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
	Shaft seal	Ceramic/Carbon/NBR
	Casing cover	AISI 304
	Shaft	AISI 303 (Wet extension)
	Bracket	Aluminium
	Ejector	PPE+PS glass fibre reinforced
	Diffuser	PPE+PS glass fibre reinforced
Applicable standard of test		ISO 9906:2012 - Grade 3B

MOTOR		
Type	Electric - TEFC	
	Single Phase	Three Phase
Efficiency Level (Rif.1781/2019)	IE2	IE3
No. of Poles	2	
Rotation speed [min ⁻¹]	≈ 3450	
Insulation Class	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]	60
Voltage	[V]	110-115V ±6% 220-230V ±6%
		220/380 -6% +10%
Capacitor	Built in	-
Over load protection	Built in	Provided by the user
Casing material	Aluminium	
Base material / Motor support	Aluminium	
Dimensions of cable entry	PG11 - (see DIMENSIONS TABLE page 400)	

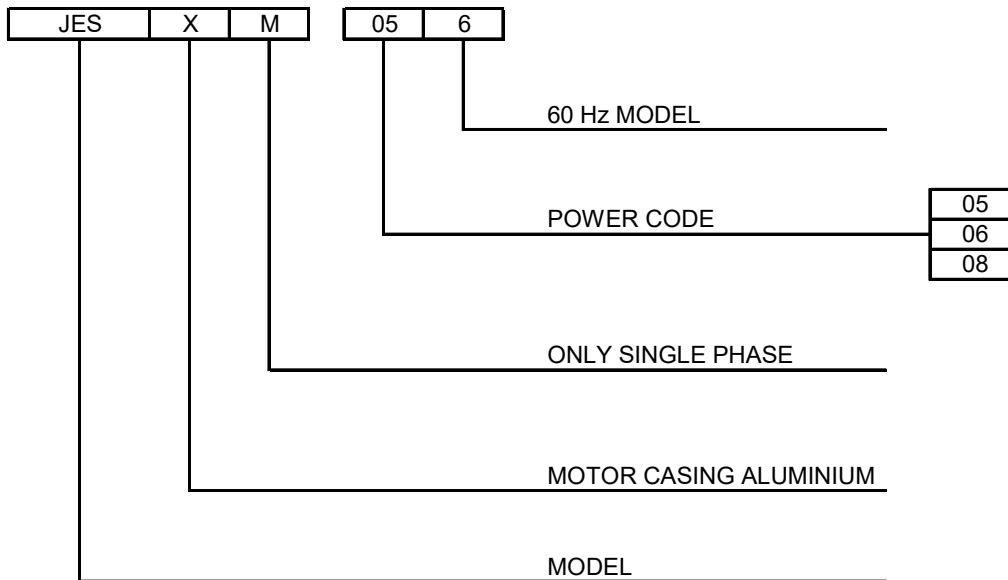
PERFORMANCE RANGE



SELECTION CHART

Pump type		Q=Capacity						
		l/min. 0	5	10	20	30	40	45
Single-phase	Three-phase	m³/h 0	0,3	0,6	1,2	1,8	2,4	2,7
H=Total manometric head in meters								
JESXM 056	JESX 056	31	27,5	24,4	19,3	14,9	12	11
JESXM 066	JESX 066	35	31	27,8	22,2	17,6	14,2	13
JESXM 086	JESX 086	41,5	37	33,3	27	21,8	17,9	16,5

TYPE KEY



CURVES SPECIFICATIONS

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

Tolerances according to ISO 9906:2012 - 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 $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt)

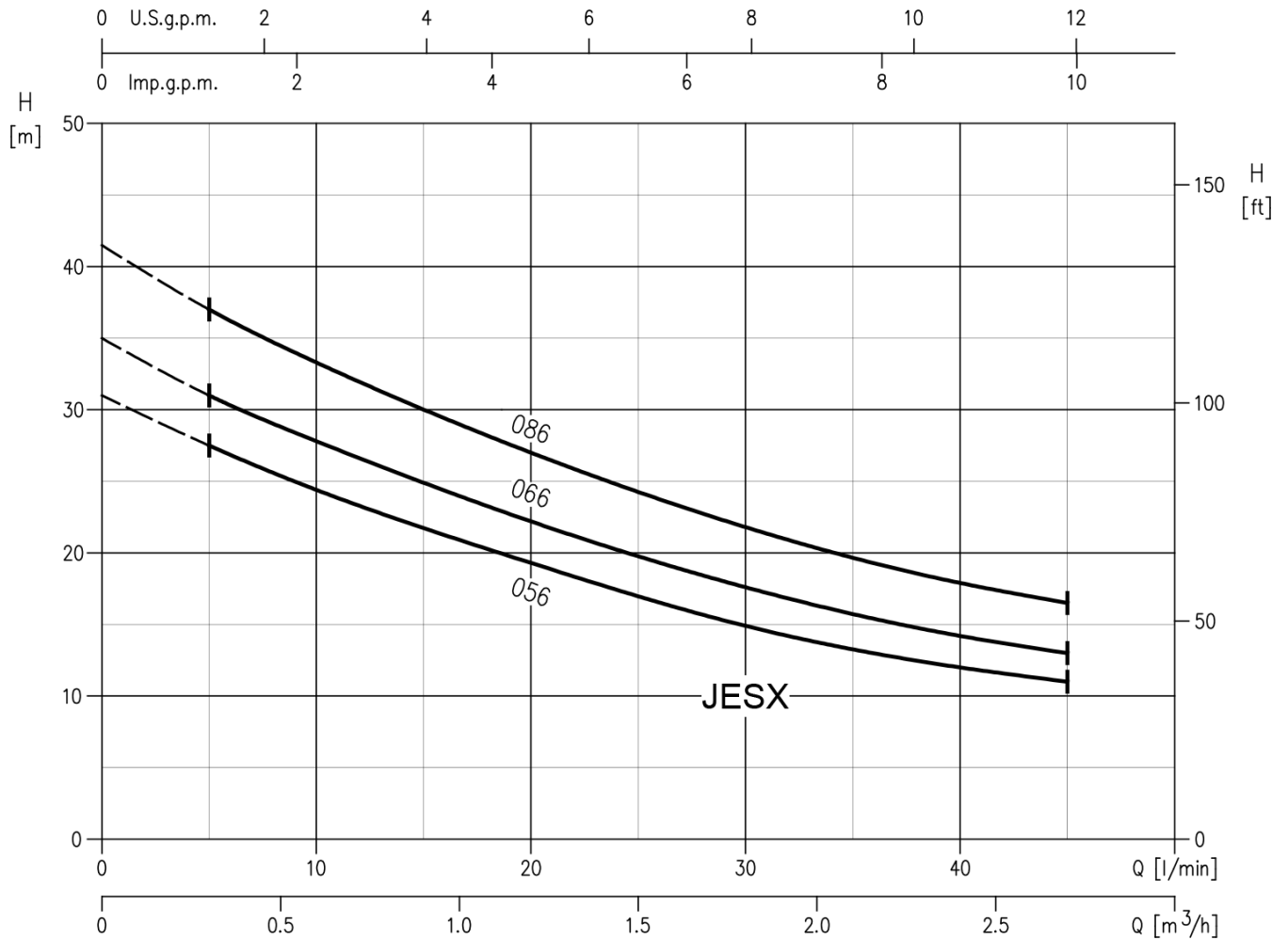
The continuous curves indicate the recommended working range. The dotted curve is only a guide.

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:

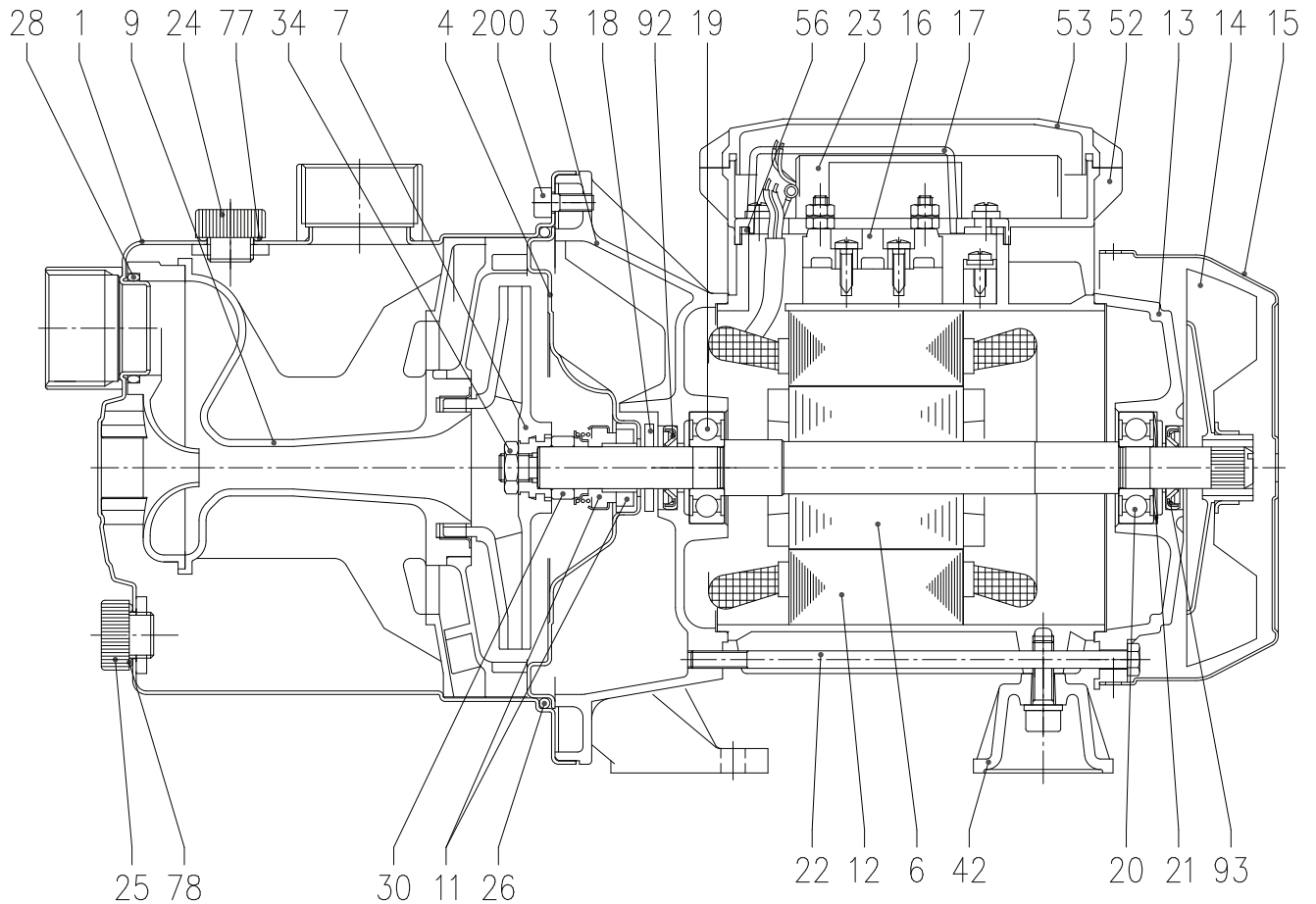
- Q = volume flow rate
- H = total head

JESX 056- Impeller diameter = 87 mm
JESX 066- Impeller diameter = 87 mm
JESX 086- Impeller diameter = 92.5 mm



Rotation speed $\approx 3450 \text{ min}^{-1}$
 Test standard: ISO 9906:2012 - Grade 3B

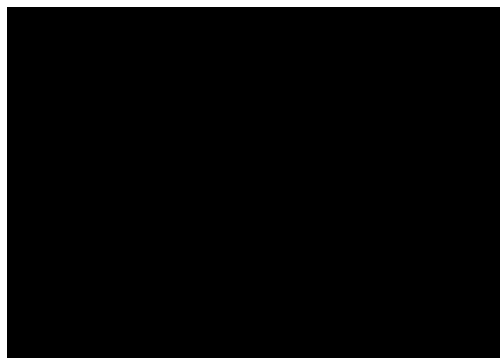
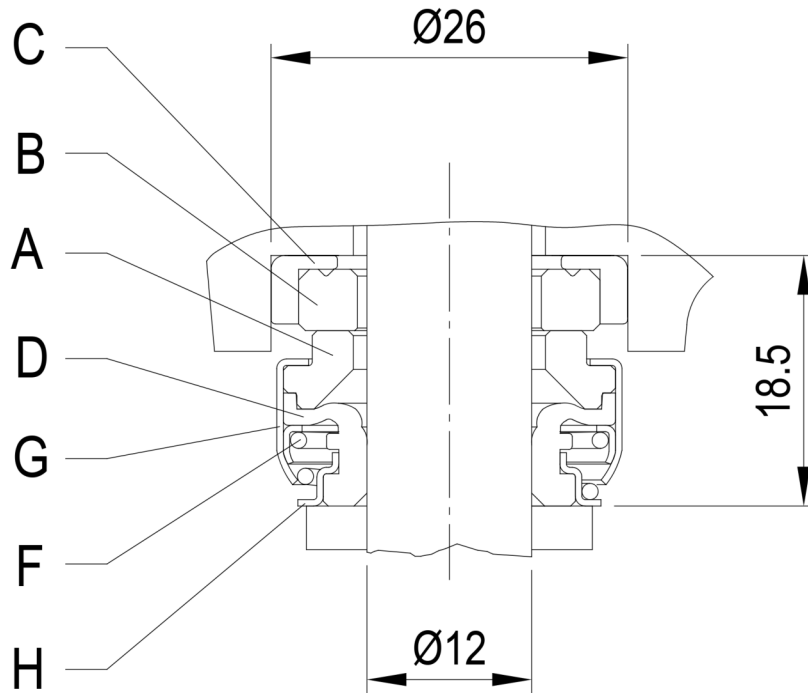
SECTIONAL VIEW



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 [4]	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
- [4] See **MECHANICAL SEAL** page 301

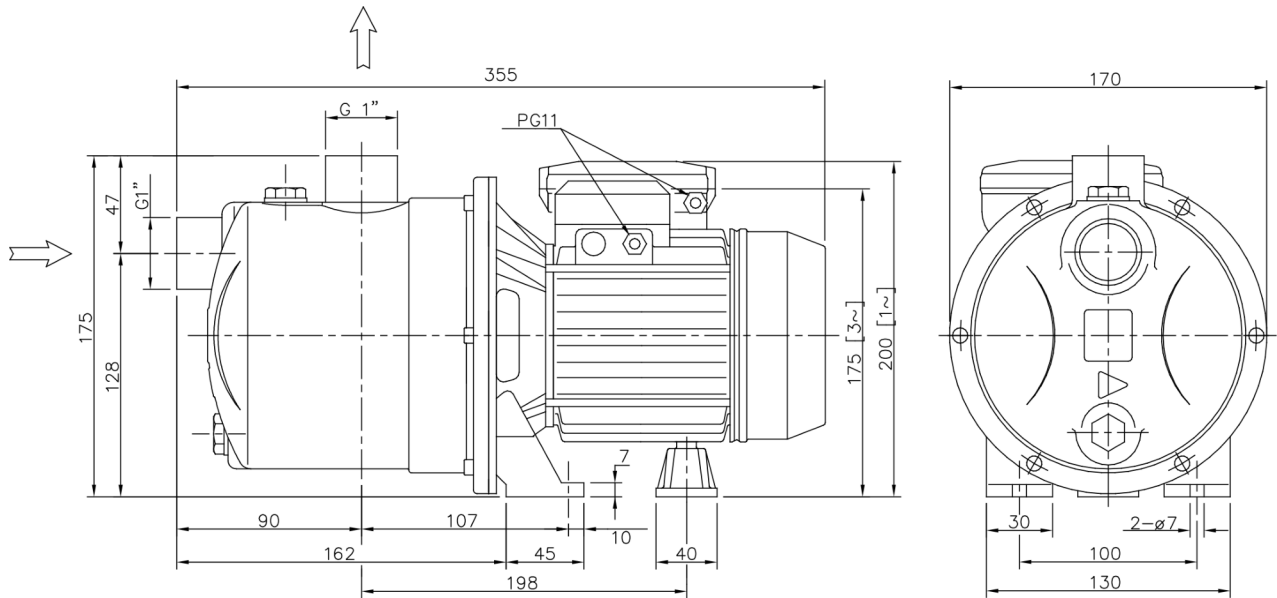
MECHANICAL SEAL



BEARINGS

Pump type		Ball Bearing	
Single Phase	Three Phase	Pump side	Fan side
JESXM 056	JESX 056	6201	6201
JESXM 066	JESX 066	6201	6201
JESXM 086	JESX 086	6201	6201

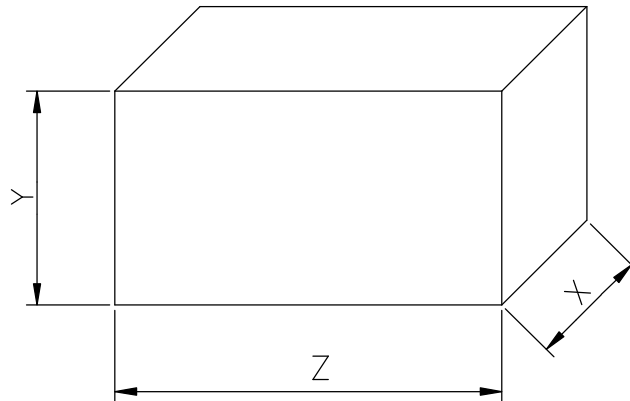
PUMP



Pump type	Weight [kgf]	
	[1~]	[3~]
JESX(M)		
056	5,5	5
066	5,8	5,1
086	6,3	6

[1~] Single Phase
 [3~] Three Phase

PACKING



Pump type		Packing [mm]				Weight [kgf]	
Single Phase	Three Phase	X	Y	[1~] Z	[3~] Z	[1~]	[3~]
JESXM 056	JESX 056	182	230	435	372	6,1	5,6
JESXM 066	JESX 066	182	230	435	372	6,5	5,8
JESXM 086	JESX 086	182	230	435	372	7	7

[1~] Single phase
[3~] Three phase

MOTOR DATA

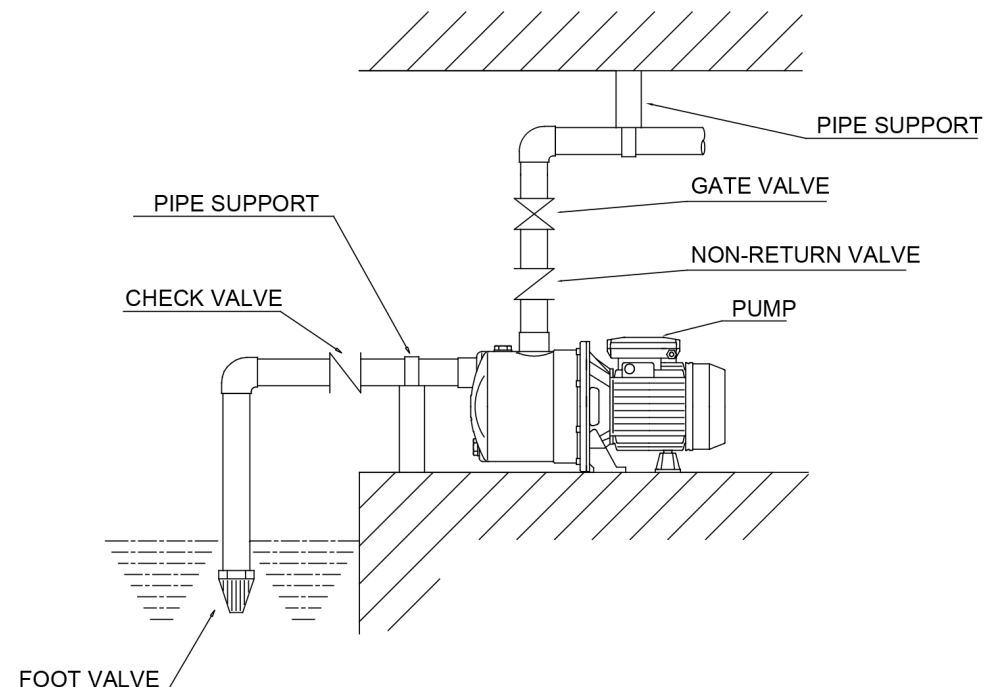
Pump type Single Phase	Power		Efficiency [IE2 / IE3]	Capacitor		Efficiency (% load) and power factor				Input [kW]	Full load current		Locked rotor current	
	[kW]	[HP]		[μF]	[V]	η %			cos-φ		[A]		[A]	
						50%	75%	100%			110 V	220 V	110 V	220 V
JESXM 056	0,3	0,4	IE2	8	450	63,1	69,6	68,6	0,93	0,46	-	2,3	-	8,1
JESXM 066	0,37	0,5	IE2	12,5	450	63,8	70,5	72,4	0,99	0,51	4,3	2,4	16,8	8,8
JESXM 086	0,37	0,5	IE2	12,5	450	63,8	70,5	72,4	0,99	0,51	4,9	2,4	19,6	8,8

Pump type Three Phase	Power		Efficiency [IE2/IE3]	Input [kW]	Full load current [A]		Locked rotor current [A]	
	[kW]	[HP]						
					220 V	380 V	220 V	380 V
JESX 056	0,37	0,5	IE2	0,37	1,3	0,7	5,5	3,2
JESX 066	0,44	0,6	IE2	0,4	1,4	0,8	7,6	4,4
JESX 086	0,6	0,8	IE3	0,47	1,6	0,9	9,4	5,4

If you use this pump on suction condition , it tends to breath the air from outside because the pressure in pump becomes vaccum 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.





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