

# Three Phase Synchronous Generators

160 - 900 FRAME SIZES  
INDUSTRIAL / MARINE APPLICATIONS



 **MarelliGenerators®**



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## THE COMPANY

Marelli Motori S.p.A. is an Italian manufacturer of electrical machines with a tradition dating back to 1891. Today Marelli Motori is recognized internationally as a leading supplier of generators and electric motors. MarelliGenerators is the company brand specifically designed to offer a complete selection of synchronous machines for low, medium and high voltage systems up to 15 kV. Fields of applications include conventional power, renewable energy and marine industry. A wide range of standard and customised solutions is provided for industrial gen-sets, cogeneration, telecommunication, UPS systems, offshore, Oil & Gas, shipboard power and hydropower plants.

## RELIABILITY

Long life endurance of electrical components and housing.  
Windings are impregnated with high quality processes and additional protection is used against tough environmental conditions.  
The design ensures reliability under difficult operating conditions.

## PERFORMANCE

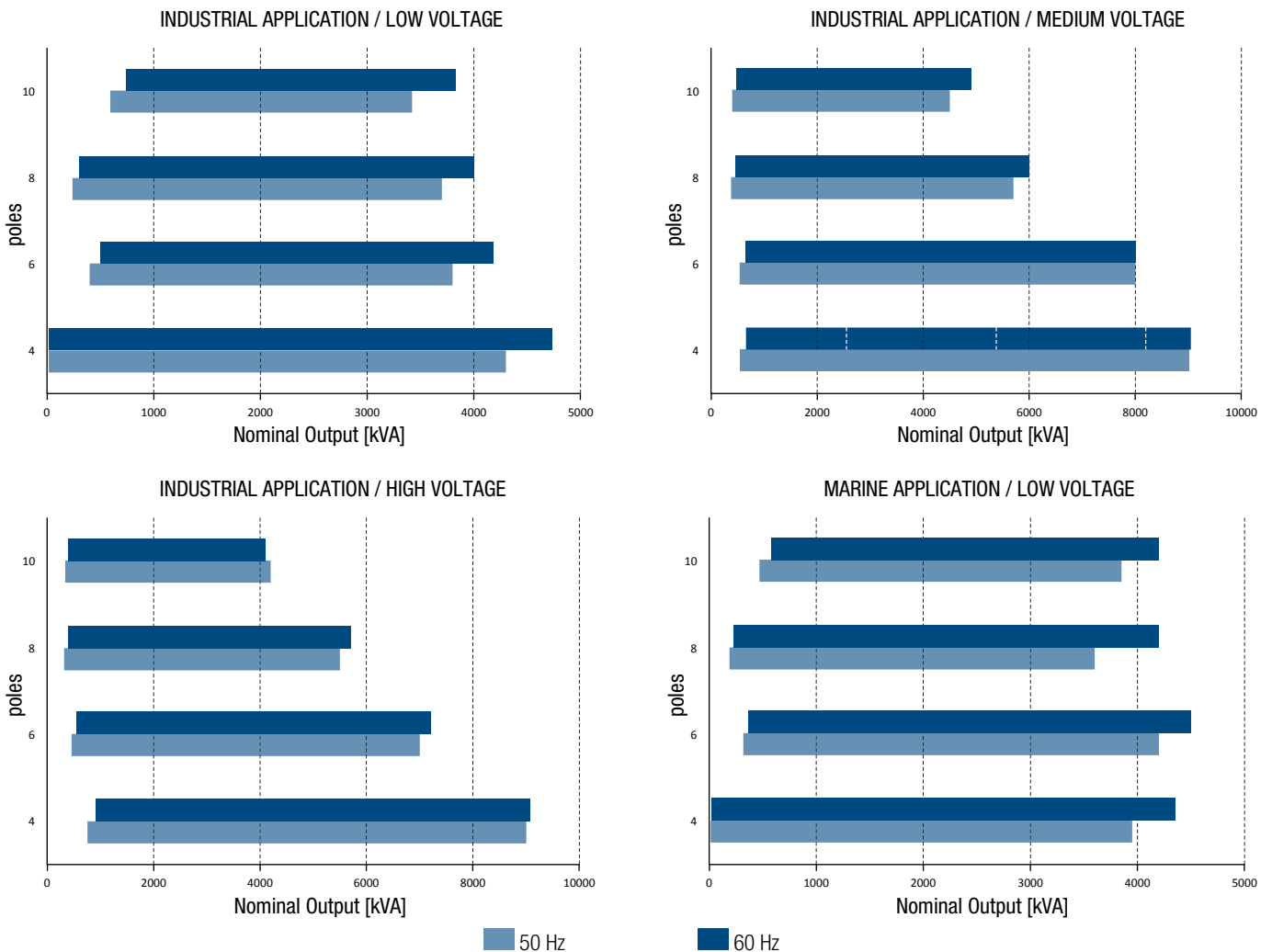
The latest technologies and the highest quality materials are used to guarantee the best performances for any kind of application

## KNOW HOW & CAPABILITIES

For special projects generators can be designed for specific application including:

- Nominal voltage from 380 to 15000 Volts.
- Polarities/speeds not mentioned in the following pages are available on request.
- Single and double bearing solutions.
- Ball, roller or sleeve bearings are available.
- Anti condensation heaters are available.
- Wide range of sensors to monitor stator winding and bearing temperatures.
- Degree of protection up to IP55.
- Auxiliary and neutral point terminal boxes.
- Vibration sensors.
- Neutral point current transformers (CT) are available (single core, double core or triple core).
- Multicore voltage transformers.

## POWER RANGE



## STANDARDS

All generators are designed in compliance with: EN 60034-1; BS 4999-5000; VDE 0530, NF 51-100; NF 51-111; OVE M-10; NEMA MG 1.22, and conform to EU rules and are CE marked. The marine ranges are type approved by DNV.

On request MarelliMotori is able to supply UL/CSA certified generators (for the US market and the Canadian market).

## VOLTAGE AND FREQUENCY

The generators in standard configuration can operate at 50 Hz and 60 Hz. Different voltages are available on request.

Frame Size	Connection	Voltage at 50 Hz [V]	Voltage at 60 Hz [V]
160 ÷ 355 MA (12 leads generators)	Series star	380 ÷ 440	380 ÷ 480
	Parallel star	190 ÷ 220	190 ÷ 240
	Series delta	220 ÷ 254	220 ÷ 277
355 MB (6 leads generator)	Star	380 ÷ 415	416 - 480
	Delta	230 ÷ 240	240 - 277
400 ÷ 630 (6 leads generators)	Star	380 ÷ 415	416 - 480
710* ÷ 900* (6 leads generators)	Star (50Hz)	690	Contact Marelli Motori
	Star (60Hz)	Contact Marelli Motori	690

\*: For available voltage when operating at different frequency contact Marelli Motori.

## AVAILABLE VOLTAGES

Special voltages are available on request in accordance with the table below. Please contact Marelli Motori for further informations.

Frame Size	120V ÷ 380V	480V ÷ 690V	690V ÷ 1000V	1000V ÷ 7200V	7200V ÷ 11000V	11000V ÷ 15000V
160	●	○	○	○	○	○
200 ÷ 315	●	●	○	○	○	○
355	○	●	●	○	○	○
400	○	●	●	●	○	○
450	○	●	●	●	●	○
500 ÷ 630	○	●	●	●	●	●
710 ÷ 900	○	○	●	●	●	●

● : Available voltage ○ : Not applicable (for further detail please contact Marelli Motori)

## INSULATION, IMPREGNATION AND PROTECTIVE TREATMENT OF WINDING

For low voltage class H. For medium and high voltage class F . Windings are impregnated with high quality materials and using the latest technologies including Vacuum Pressure Impregnation (VPI).

A further protective treatment is applied , making the generators suitable for tough environmental conditions. Special degrees of protection and tropicalization are available on request.

## WINDINGS

Generators up to frame 560 included for industrial application are constructed with 2/3 pitch winding to reduce the voltage harmonic content in applications with non-linear loads. The no-load voltage waveform is sinusoidal with Total Harmonic Distortion (THD) content less than 2%.

## RADIO INTERFERENCE

Marelli generators are equipped with Class B Group 1 radio interference filters as defined by EN55011.

## PROTECTION DEGREE

The standard protection degree is IP 23. Higher protection degrees are available on request for frame sizes 250 to 800 through the application of filter, air-to-air or air-to-water heat exchanger up to IP 55.

## VENTILATION AND DIRECTION OF ROTATION

Generators are axially self-cooled and can run in both directions of rotation.

Air inlet direction is:

- Frame size 160 : Radial
- Frame sizes 200 and higher: Axial + radial

## ROTOR BALANCING

Rotors are dynamically balanced with a half key applied to the shaft extension in accordance with IEC 60034-14 to vibration grade normal A in standard configuration. Generators can be supplied with special vibration levels on request.

## VIBRATION

Vibration level is in accordance with ISO 10816. Measurement, evaluation and limits of vibration severity are in accordance with IEC 60034-14.

## BEARINGS AND OVER SPEED

Oversized bearings. The permissible over speed is 1,5 times the rated speed (referred to 50 Hz).

Sleeve bearings from 400 to 900 frame sizes are available on request.

## TESTING CAPABILITY

Marelli Motori has a high capability test room with the possibility of testing generators in their original mounting (vertical and horizontal) and for all designed voltages (up to 15000 V) and power (up to 10 MVA).

Testing can be conducted at different frequency (50 Hz or 60 Hz) through a regenerative Active Front End System.

Testing is carried out in compliance with all major international standards (IEC, IEEE), customer specifications, marine/navy rules.

## OPERATING CONDITIONS

### Overloads

During continuous duty (S1), the following overloads are allowed :

- 10% for 1 hour
- 15% for 10 minutes
- 30% for 4 minutes
- 50% for 2 minutes

These overloads must be occasional and followed by one hour of running at normal load or less.

Stand-by ratings are based on continuous supply of loads for any utility power failure.

No overloads are allowed in stand-by duty.

### Single phase operation

Three phase (12-wire) wound generators can be reconnected and derated to 66% for single phase operation (with a zig-zag connection). Otherwise generators with dedicated (4-wire) single phase windings can be supplied on request.

The following derating factors must be applied to the corresponding configurations

Connection	Star series	Delta series	Star parallel	Zig - zag
K factor (L - L)	0,60	0,50	0,60	0,66
K factor (L - N)	0,33	-	0,33	0,33

### Parallel operation

All generators are provided with a amply sized damper cage and are suitable for parallel operation with other generators, when equipped with the paralleling unit. A power factor regulator is available on request.

### No-Load operation at reduced speed

All regulators work to reduce the excitation current in order to protect the excitation system when the generator is being used at reduced speed.

### Transient ratings

The voltage drop due to the application of full load at 0,8 power factor inductive on industrial 160 ÷ 400 frame size generators varies between 16% and 20% of the rated voltage: the output voltage recovers to within 3% of the rated value in less than 0,3 seconds.

### Altitude

The rated outputs refer to installation up to 1.000 m a.s.l. Above this level the following derating factors must be applied.

Altitude (m asl)	< 1.000	< 1.500	< 2.000	< 2.500	< 3.000
K Factor	1,00	0,96	0,93	0,90	0,86

### Ambient temperature

The rated outputs given in this catalogue are based on a maximum ambient temperature of 40 °C.

When operating at different ambient temperatures the output rating can be obtained by applying the factors as in the following table.

Ambient Temperature [°C]	30	35	40	45	50	55
K Factor	1,04	1,00	1,00	0,96	0,93	0,9

### Power factor

The nominal power factor is 0,8 lagging.

For different power factor values the following derating factors must be applied.

Power Factor	1	0,8	0,7	0,6	0,5	0,3	0
K Factor	1,00	1,00	0,93	0,88	0,84	0,82	0,80

### Special configurations

The following derating factors must be applied to the corresponding configurations

Special configuration	Air to air heat exchanger	Air to water heat exchanger <sup>1</sup>	Inlet filters	IP43 inlet and outlet filters	IP44 inlet and outlet filters
K Factor	0,70	0,90	0,92	0,85	0,80

<sup>1</sup>: for marine application refer to MJRM series

## EXCITATION SYSTEM

The generators are self-exciting, by means of a brushless type excitation system.

The voltage is maintained within  $\pm 0,5\%$  of the nominal value in steady state condition with a balanced and non distorting load.

### Auxiliary winding

The excitation system of generators from frame size 200 to 450 is fed by an auxiliary winding which gives a better response to the variation in loads and sustains the power supply in the case of a short-circuit. Auxiliary winding on the 160 frame is available on request.

### Permanent Magnet Generators (PMG)

The generators from frame size 225 mm and larger can be supplied with a Permanent Magnet Generator (PMG) if required, which gives an independent supply to the excitation system. PMG is advisable for use with generators in particular applications such as unbalanced loads and distorting loads.

### Manual voltage regulation

Available within  $\pm 5\%$  of the rated value by means of a potentiometer placed inside the voltage regulator. A remote voltage setting is possible by means of an external potentiometer, which can be supplied on request.

### Over-excitation protection

Generators from frame sizes 160 to 450 are equipped with adjustable over-excitation protection which will protect the alternator in the event of over excitation when combined with an external protection system.

## THREE PHASE SHORT CIRCUIT CURRENT

Generators with auxiliary windings or PMG ensure a three phase short-circuit current ( $I_{cc}$ ) higher than 3 times the rated current ( $I_n$ ):  $I_{cc} > 3 I_n$ .

Generators from 500 frame size are supplied with an over excitation device which ensures a three phase short circuit current higher than 3 times the rated current.

## AUTOMATIC VOLTAGE REGULATOR (AVR) SPECIFICATIONS

The generators are equipped with the following AVR set.

		ANALOGUE					DIGITAL		
		MARK V M16FA655A	MARK I M40FA640A	MGC I M40FA610A	MGC II M63FA310A	MARK X M40FA644A	MEC 100 series M71FA310A   M710FA320A		
Generator frame size	Standard	160 ÷ 250	315 ÷ 450	500 ÷ 560	630 ÷ 800	-	-		
	On request	-	160 ÷ 250 and 500 ÷ 630	-	-	225 ÷ 560	400 ÷ 900		
AVR supply		Auxiliary winding*, mains				PMG	Auxiliary winding, mains, PMG		
Voltage sensing		Single phase	Three phase	Single phase		Three phase			
Voltage remote control		Arrangement							
Radio interference suppressor		Internal					Arrangement for external filter		
Over-excitation device		-	Arrangement for VARICOMP						
Parallel operation with the mains		-	Arrangement for external device				Internal		
Parallel operation with similar generators		-	Arrangement				Internal		
Standard protections		Over-excitation		-		Over-excitation	Field over-current, Field over-voltage, Generator over/under voltage, Generator over-current, Loss of sensing		
Limiters		Under-frequency					Under-frequency, Over/under-excitation		
Functions		-	Auxiliary inputs				PC interface, Soft start, Auxiliary inputs, Contact inputs,	PC interface, Soft start, Auxiliary inputs, Contact inputs, DMS	

\*: Auxiliary winding on the 160 frame is available on request.

### Analogue AVR (MARK and MGC series)

The voltage regulators are the standard features for synchronous generators of MarelliMotori. These regulators are suitable for low and medium voltage machines. The regulators are fully insulated in order to maintain high reliability also with severe ambient conditions (high level of humidity, dust, salt atmosphere), and in case of high vibrations level. The regulators can work both for single and 3-phase operations.

### Digital AVR (MEC100 series)

MEC100 series regulators are microprocessor-based devices for the excitation control of MarelliMotori synchronous generators.

The full-function and full-protection control system ensures high performances with suitable accuracy in a wide range of applications.

A proprietary user-friendly software is provided with the equipment for commissioning and monitoring purposes.

The MEC100 series includes models with embedded optional features like the Diode Monitoring functions.

The MEC100 complies also with the DNV rules.

Other AVRs may be installed on request.

**SELECTION GUIDE - INDUSTRIAL APPLICATION / LOW VOLTAGE**

Type	Leads	400V / 50Hz						480V / 60Hz						Inertia B3 Approx. J [kg m²]	Weight B3 Approx. [kg]
		Power rating [kVA]						Power rating [kVA]							
		Temp. rise / Ambient temp. [°C]						Temp. rise / Ambient temp. [°C]							
		Continuous duty			Stand by			Continuous duty			Stand by				
125/40	105/40	80/40	163/27	150/40	Efficiency 4/4 pf = 0,8	125/40	105/40	80/40	163/27	150/40	Efficiency 4/4 pf = 0,8	125/40	105/40	80/40	
ΔT cl. H	ΔT cl. F	ΔT cl. B			[%]	ΔT cl. H	ΔT cl. F	ΔT cl. B			[%]				
<b>4 poles</b>		<b>400 V @ 50 Hz - 1500 rpm</b>						<b>480V @ 60Hz - 1800 rpm</b>						<b>IP23</b>	
MJB 160 XA4	12	14,0	13,0	11,2	15,0	14,0	85,0	17,0	15,0	13,6	18,0	17,0	85,8	0,098	109
MJB 160 SA4	12	17,0	16,0	13,6	19,0	18,0	85,6	21,0	20,0	16,8	24,0	23,0	86,4	0,109	129
MJB 160 SB4	12	20,0	18,0	16,0	22,0	21,0	87,4	25,0	23,0	20,0	27,0	26,0	88,2	0,124	140
MJB 160 SC4	12	23,0	21,0	18,4	25,0	24,0	87,5	30,0	27,0	24,0	33,0	32,0	88,3	0,135	150
MJB 160 MA4	12	28,0	26,0	22,4	31,0	30,0	88,2	34,0	31,0	27,2	38,0	36,0	89,2	0,160	178
MJB 160 MB4	12	32,0	29,0	25,6	35,0	34,0	88,3	40,0	37,0	32,0	44,0	42,0	89,1	0,170	188
MJB 200 SA4	12	42,0	38,0	33,6	46,0	44,0	88,5	51,0	47,0	40,8	56,0	54,0	89,5	0,275	219
MJB 200 SB4	12	50,0	45,0	40,0	55,0	53,0	88,7	60,0	55,0	48,0	66,0	64,0	89,3	0,301	225
MJB 200 MA4	12	62,0	57,0	49,6	68,0	66,0	90,1	76,0	70,0	60,8	84,0	81,0	90,7	0,361	264
MJB 200 MB4	12	75,0	69,0	60,0	82,0	80,0	90,5	90,0	82,0	72,0	115	95,0	90,9	0,426	305
MJB 225 SA4	12	85,0	78,0	68,0	93,5	90,1	91,0	108	98,7	86,1	118	114	91,5	0,63	345
MJB 225 SB4	12	92,0	84,4	73,6	101	97,5	91,5	114	104	90,9	125	120	92,0	0,70	350
MJB 225 MA4	12	105	96,2	84,0	116	111	91,8	131	120	105	144	139	92,6	0,79	390
MJB 225 LA4	12	132	121	106	145	140	92,2	158	145	127	174	168	93,0	0,92	420
MJB 250 MA4	12	165	150	132	180	175	92,9	205	190	164	225	215	93,6	1,4	530
MJB 250 MB4	12	185	170	150	205	195	93,0	230	215	184	255	245	93,6	1,7	590
MJB 250 LA4	12	220	200	175	240	235	93,2	270	250	216	295	285	93,9	1,9	660
MJB 250 LB4	12	250	230	200	275	265	93,4	300	275	240	330	320	93,9	2,1	710
MJB 315 SA4	12	300	275	240	330	320	93,1	370	340	296	405	390	93,8	3,7	830
MJB 315 SB4	12	350	320	280	385	370	93,4	425	390	340	470	450	94,0	4,2	920
MJB 315 MA4	12	410	375	330	450	435	93,7	500	460	400	550	530	94,2	4,8	1060
MJB 315 MB4	12	450	415	360	500	475	94,0	550	505	440	610	585	94,8	5,7	1200
MJB 355 SA4	12	510	470	410	560	540	94,0	625	575	500	690	665	94,5	8,0	1250
MJB 355 SB4	12	570	520	455	625	605	94,6	695	640	556	765	735	95,1	9,3	1550
MJB 355 MA4	12	680	625	545	750	720	94,7	825	760	660	910	875	95,1	11,7	1800
MJB 355 MB4	6	800	730	640	880	850	95,0	960	880	768	1055	1020	95,3	13,1	2050
MJB 400 MA4	6	930	850	745	1025	985	95,2	1175	1080	940	1295	1245	95,7	16,3	2250
MJB 400 MB4	6	1050	960	840	1155	1115	95,3	1320	1210	1056	1450	1400	95,7	17,0	2300
MJB 400 LA4	6	1150	1055	920	1265	1220	95,6	1420	1305	1136	1560	1505	96,0	19,3	2550
MJB 400 LB4	6	1300	1190	1040	1430	1380	95,8	1625	1490	1300	1790	1725	96,3	22,5	2800
MJB 450 MB4	6	1500	1375	1200	1650	1590	95,9	1800	1650	1440	1980	1910	96,3	29,0	3200
MJB 450 LA4	6	1650	1510	1320	1815	1750	96,0	1980	1815	1584	2180	2100	96,3	34,0	3600
MJB 450 LB4	6	1875	1720	1500	2065	1990	96,2	2250	2065	1800	2475	2385	96,4	38,0	4000
MJB 500 SC4	6	2000	1835	1600	2200	2120	96,1	2400	2200	1920	2640	2545	96,5	46,7	4000
MJB 500 MB4	6	2200	2020	1760	2420	2330	96,2	2640	2420	2112	2905	2800	96,5	52,5	4400
MJB 500 LA4	6	2500	2290	2000	2750	2650	96,4	3000	2750	2400	3300	3180	96,7	61,5	5100
MJB 560 MA4	6	2650	2430	2120	2915	2810	96,4	3050	2800	2440	3355	3235	96,5	83,0	5200
MJB 560 LA4	6	3200	2935	2560	3520	3390	96,5	3680	3375	2945	4050	3900	96,6	95,0	6300
MJB 630 MB4 <sup>1</sup>	6	3300	3025	2640	3565	3465	96,4	3795	3480	3040	4100	3985	96,7	140	7500
MJB 630 LA4 <sup>1</sup>	6	3600	3300	2880	3890	3780	96,5	4140	3795	3315	4470	4345	96,8	158	8000
MJB 710 SC4 <sup>2</sup>	6	4000	3670	3200	4320	4200	96,2	4400	4035	3520	4750	4620	96,5	on request	on request
MJB 710 MB4 <sup>2</sup>	6	4300	3940	3440	4645	4515	96,4	4730	4340	3785	5110	4965	96,7	on request	on request

<sup>1</sup>: 690 V recommended

<sup>2</sup>: 690 V only. For different voltage please contact MarelliMotori. These generators are dedicated for 50 Hz or 60 Hz. For available voltage and performance when operating at different frequency contact MarelliMotori. Ratings refer to following conditions: balanced non-deforming load, altitude 1000 m a.s.l., minimum power factor 0,8.



**SELECTION GUIDE - INDUSTRIAL APPLICATION / LOW VOLTAGE**

Type	Leads	400V / 50Hz				Efficiency 4/4 pf = 0,8 125/40 [%]	480V / 60Hz			Efficiency 4/4 pf = 0,8 125/40 [%]	Inertia B3 Approx. J [kg m <sup>2</sup> ]	Weight B3 Approx. [kg]
		Power rating [kVA]					Power rating [kVA]					
		Temp. rise / Ambient temp. [°C]					Temp. rise / Ambient temp. [°C]					
		Continuous duty					Continuous duty					
		125/40 ΔT cl. H	105/40 ΔT cl. F	80/40 ΔT cl. B		125/40 ΔT cl. H	105/40 ΔT cl. F	80/40 ΔT cl. B				
<b>6 poles</b>		<b>400 V @ 50 Hz - 1000 rpm</b>				<b>480 V @ 60 Hz - 1200 rpm</b>			<b>IP23</b>			
MJB 400 SA6	6	400	365	320	92,7	500	460	400	93,0	11,8	1450	
MJB 400 SB6	6	450	410	360	93,0	565	520	455	93,4	14,1	1600	
MJB 400 SC6	6	500	460	400	93,7	625	575	500	94,0	16,8	1800	
MJB 400 MA6	6	620	570	500	94,1	775	715	620	94,4	17,9	2000	
MJB 400 MB6	6	700	640	560	94,3	875	805	700	94,6	19,4	2260	
MJB 400 LA6	6	800	735	640	94,6	1000	920	800	94,9	20,9	2530	
MJB 400 LB6	6	970	890	780	94,8	1215	1120	975	95,1	24,2	2750	
MJB 450 MB6	6	1040	950	835	94,6	1300	1200	1040	95,5	49,9	3200	
MJB 450 LA6	6	1200	1100	960	95,2	1500	1380	1200	95,7	55,0	3600	
MJB 450 LB6	6	1360	1250	1090	95,4	1700	1560	1360	95,6	61,4	3900	
MJB 500 MA6	6	1400	1275	1120	95,1	1750	1600	1400	95,7	64,7	4150	
MJB 500 MB6	6	1540	1400	1235	95,2	1925	1770	1540	95,8	73,6	4600	
MJB 500 MC6	6	1600	1465	1280	95,2	2000	1840	1600	95,8	80,2	4900	
MJB 500 LA6	6	1680	1530	1345	95,4	2100	1930	1680	96,0	88,9	5300	
MJB 560 SC6	6	1870	1700	1500	95,9	2150	1980	1720	96,4	115	4900	
MJB 560 MA6	6	2080	1900	1665	96,0	2400	2200	1920	96,5	115	5400	
MJB 560 LA6	6	2360	2150	1890	96,2	2700	2480	2160	96,7	135	6500	
MJB 630 SD6	6	2450	2250	1960	95,7	2740	2520	2195	96,2	170	6900	
MJB 630 MA6	6	2750	2500	2200	95,7	3100	2850	2480	96,2	190	7900	
MJB 630 MC6	6	3000	2750	2400	96,0	3350	3100	2680	96,4	210	8100	
MJB 710 SC6 <sup>1</sup>	6	3500	3200	2800	96,0	3850	3550	3080	96,5	on request	on request	
MJB 710 MA6 <sup>1</sup>	6	3800	3500	3040	96,7	4180	3850	3345	96,7	on request	on request	
<b>8 poles</b>		<b>400 V @ 50 Hz - 750 rpm</b>				<b>480 V @ 60 Hz - 900 rpm</b>			<b>IP23</b>			
MJB 400 SA8	6	240	220	195	91,5	300	275	240	92,0	13,5	1450	
MJB 400 SB8	6	310	285	250	92,0	400	365	320	92,5	16,2	1600	
MJB 400 SC8	6	360	330	290	92,3	450	410	360	92,8	19,1	1800	
MJB 400 MA8	6	430	395	345	92,5	540	495	435	93,0	20,6	2000	
MJB 400 MB8	6	510	465	410	93,0	640	585	515	93,5	22,4	2260	
MJB 400 LA8	6	600	550	480	93,2	750	685	600	93,7	24,1	2530	
MJB 400 LB8	6	740	680	595	93,5	925	850	740	94,0	25,4	2750	
MJB 500 SA8	6	820	750	660	94,5	1025	940	820	95,1	55,1	3200	
MJB 500 SC8	6	1020	935	820	95,0	1275	1170	1020	95,5	74,2	3800	
MJB 500 MB8	6	1270	1165	1020	95,1	1590	1455	1275	95,6	82,2	4700	
MJB 500 LA8	6	1400	1275	1120	95,2	1680	1530	1345	95,9	95,0	5400	
MJB 560 SC8	6	1480	1350	1185	95,4	1775	1620	1420	95,8	115	5100	
MJB 560 MB8	6	1750	1600	1400	95,6	2075	1900	1660	95,9	130	5700	
MJB 560 LA8	6	2025	1850	1620	95,9	2400	2200	1920	96,1	155	6700	
MJB 630 MC8	6	2200	2000	1760	95,5	2350	2150	1880	96,2	195	8300	
MJB 630 LA8	6	2450	2250	1960	96,1	2820	2580	2260	96,5	240	9200	
MJB 710 SA8 <sup>1</sup>	6	2750	2500	2200	96,2	2850	2600	2280	96,5	on request	on request	
MJB 710 SC8 <sup>1</sup>	6	3100	2850	2480	96,5	3250	3000	2600	96,8	on request	on request	
MJB 710 MA8 <sup>1</sup>	6	3600	3300	2880	96,6	3750	3450	3000	96,9	on request	on request	
MJB 710 MB8 <sup>1</sup>	6	3700	3400	3000	96,7	4000	3750	3200	96,9	on request	on request	
<b>10 poles</b>		<b>400 V @ 50 Hz - 600 rpm</b>				<b>480 V @ 60 Hz - 720 rpm</b>			<b>IP23</b>			
MJB 500 SA10	6	595	550	480	93,9	740	680	595	94,4	63,8	3300	
MJB 500 SC10	6	745	685	600	94,2	935	860	750	94,7	81,6	3900	
MJB 500 MB10	6	870	800	700	94,7	1050	965	840	95,2	89,7	4800	
MJB 500 LA10	6	965	885	775	95,0	1210	1110	970	95,5	106	5600	
MJB 630 SC10	6	1200	1100	960	95,0	1380	1260	1105	95,5	180	7300	
MJB 630 MA10	6	1430	1320	1145	95,4	1650	1510	1320	95,9	200	8500	
MJB 630 MB10	6	1690	1550	1355	95,5	1945	1780	1560	96,0	230	8700	
MJB 630 LA10	6	1750	1600	1400	95,7	2010	1840	1610	96,2	260	9400	
MJB 710 SC10 <sup>1</sup>	6	2470	2270	1980	96,2	2770	2530	2220	96,4	on request	on request	
MJB 710 MA10 <sup>1</sup>	6	2960	2715	2370	96,4	3320	3050	2660	96,6	on request	on request	
MJB 710 MB10 <sup>1</sup>	6	3160	2900	2530	96,4	3550	3250	2840	96,6	on request	on request	
MJB 710 LB10 <sup>1</sup>	6	3420	3130	2740	96,6	3825	3510	3060	96,8	on request	on request	

<sup>1</sup>: 690 V recommended. These generators are dedicated for 50 Hz or 60 Hz. For available voltage and performance when operating at different frequency contact MarelliMotori.

Ratings refer to following conditions: balanced non-deforming load, altitude 1000 m a.s.l., minimum power factor 0,8.

**SELECTION GUIDE - INDUSTRIAL APPLICATION / MEDIUM VOLTAGE**

Type	Leads	3000V / 50Hz		6000V / 50Hz		4160V / 60Hz		6600V / 60Hz	
		Power rating [kVA]				Power rating [kVA]			
		Temp. rise / Ambient temp. [°C]				Temp. rise / Ambient temp. [°C]			
		Continuous duty				Continuous duty			
		105/40 ΔT cl. F	80/40 ΔT cl. B	105/40 ΔT cl. F	80/40 ΔT cl. B	105/40 ΔT cl. F	80/40 ΔT cl. B	105/40 ΔT cl. F	80/40 ΔT cl. B

**4 poles                      3000 V - 6000 V @ 50 Hz - 1500 rpm                      4160 V - 6600 V @ 60 Hz - 1800 rpm                      IP23**

MJH 400 MA4	6	600	520	550	480	700	610	660	575
MJH 400 LA4	6	840	730	740	650	960	840	900	785
MJH 400 LB4	6	1020	890	920	810	1180	1030	1120	975
MJH 450 MB4	6	1050	910	1000	870	1130	980	1100	960
MJH 450 LA4	6	1200	1040	1120	970	1250	1090	1200	1045
MJH 450 LB4	6	1300	1130	1250	1090	1400	1220	1330	1160
MJH 500 MA4	6	1450	1260	1350	1170	1660	1440	1500	1305
MJH 500 MB4	6	1700	1480	1500	1300	2000	1740	1650	1440
MJH 500 LA4	6	1850	1610	1750	1520	2150	1870	1900	1655
MJH 500 LB4	6	1950	1700	1900	1650	2250	1960	2200	1915
MJH 560 MA4	6	2300	2000	2250	1960	2450	2130	2500	2175
MJH 560 LA4	6	2550	2220	2450	2130	2800	2440	2750	2395
MJH 560 LB4	6	2800	2440	2750	2400	3050	2650	3000	2610
MJH 630 MB4	6	2900	2520	2900	2520	3150	2750	3150	2745
MJH 630 LA4	6	3200	2780	3200	2750	3500	2050	3500	3045
MJH 630 LB4	6	3600	3130	3550	3090	3700	3220	3700	3220
MJH 710 SC4	6	4200	3650	4200	3650	4500	3920	4500	3920
MJH 710 MB4	6	4800	4180	4800	4180	5000	4350	5000	4350
MJH 710 LA4	6	5500	4780	5500	4780	5800	5050	5800	5050
MJH 710 LB4	6	6000	5220	6000	5220	6600	5750	6600	5750
MJH 800	6	9000	7830	9000	7830	on request	on request	on request	on request

**6 poles                      3000 V - 6000 V @ 50 Hz - 1000 rpm                      4160 V - 6600 V @ 60 Hz - 1200 rpm                      IP23**

MJH 400 LA6	6	620	540	540	470	680	620	650	570
MJH 400 LB6	6	660	575	570	500	710	665	700	610
MJH 450 MB6	6	680	590	600	525	780	680	720	625
MJH 450 LA6	6	750	655	650	570	860	750	800	700
MJH 450 LB6	6	840	735	730	640	970	845	890	775
MJH 500 MA6	6	930	810	800	700	1070	935	970	845
MJH 500 MB6	6	1100	960	960	840	1270	1105	1160	1010
MJH 500 LA6	6	1240	1080	1100	960	1430	1245	1330	1160
MJH 560 SC6	6	1620	1410	1500	1305	1800	1570	1680	1465
MJH 560 MB6	6	1950	1700	1800	1570	2100	1830	2000	1740
MJH 560 LA6	6	2150	1875	2000	1740	2200	1915	2050	1785
MJH 630 MA6	6	2250	1960	2100	1830	2300	2005	2150	1875
MJH 630 LA6	6	2500	2175	2300	2005	2600	2265	2350	2045
MJH 630 LB6	6	2700	2350	2500	2175	2700	2350	2500	2175
MJH 710 SC6	6	3450	3005	3300	2875	3500	3045	3350	2915
MJH 710 MA6	6	4250	3700	4100	3570	4300	3745	4100	3570
MJH 710 MB6	6	4650	4050	4500	3915	4700	4090	4500	3915
MJH 710 LA6	6	4850	4220	4700	4090	4900	4265	4700	4090
MJH 710 LB6	6	5150	4485	5000	4350	5200	4525	5000	4350
MJH 800 MA6	6	6100	5310	6000	5220	6200	5395	6100	5310
MJH 800 MB6	6	6800	5920	6700	5830	6800	5920	6700	5830
MJH 800 LA6	6	7400	6440	7400	6440	7500	6525	7500	6525
MJH 800 LB6	6	8000	6960	8000	6960	8000	6960	8000	6960

Ratings refer to following conditions: balanced non-deforming load, altitude 1000 m a.s.l., minimum power factor 0,8.  
All generators are dedicated for 50 Hz or 60 Hz.

MJH 900	For available power and speed contact Marelli Motori
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**SELECTION GUIDE - INDUSTRIAL APPLICATION / MEDIUM VOLTAGE**

Type	Leads	3000V / 50Hz		6000V / 50Hz		4160V / 60Hz		6600V / 60Hz	
		Power rating [kVA]				Power rating [kVA]			
		Temp. rise / Ambient temp. [°C]				Temp. rise / Ambient temp. [°C]			
		Continuous duty				Continuous duty			
		105/40 ΔT cl. F	80/40 ΔT cl. B	105/40 ΔT cl. F	80/40 ΔT cl. B	105/40 ΔT cl. F	80/40 ΔT cl. B	105/40 ΔT cl. F	80/40 ΔT cl. B

**8 poles                      3000 V - 6000 V @ 50 Hz - 750 rpm                      4160 V - 6600 V @ 60 Hz - 900 rpm                      IP23**

MJH 400 LA8	6	440	385	380	335	510	445	470	410
MJH 400 LB8	6	510	445	440	385	585	510	540	470
MJH 500 MA8	6	780	680	680	595	900	785	820	715
MJH 500 MB8	6	920	805	790	690	1060	925	970	845
MJH 500 LA8	6	1050	915	920	805	1220	1065	1100	960
MJH 500 LB8	6	1150	1005	1050	915	1300	1135	1200	1045
MJH 560 MB8	6	1350	1175	1250	1090	1550	1350	1500	1305
MJH 560 LA8	6	1550	1350	1440	1255	1720	1500	1650	1440
MJH 630 MB8	6	1750	1525	1600	1395	1840	1600	1750	1525
MJH 630 LA8	6	1850	1610	1700	1480	1950	1700	1850	1610
MJH 630 LB8	6	2000	1740	1800	1570	2120	1850	2000	1740
MJH 710 SA8	6	2600	2265	2400	2090	2730	2380	2600	2260
MJH 710 SC8	6	3200	2785	3000	2610	3330	2900	3200	2780
MJH 710 MA8	6	3900	3395	3750	3265	4150	3620	4000	3480
MJH 710 MB8	6	4350	3785	4200	3655	4600	4000	4500	3910
MJH 710 LB8	6	4600	4005	4500	3915	4750	4140	4650	4050
MJH 800 MB8	6	4900	4265	4800	4180	5100	4440	5000	4350
MJH 800 LA8	6	5800	5050	5700	4960	6100	5300	6000	5200

**10 poles                      3000 V - 6000 V @ 50 Hz - 600 rpm                      4160 V - 6600 V @ 60 Hz - 720 rpm                      IP23**

MJH 500 SA10	6	460	400	400	350	530	460	470	410
MJH 500 MA10	6	560	490	480	420	650	570	580	500
MJH 500 MB10	6	660	575	570	500	760	660	690	600
MJH 500 LA10	6	730	640	650	570	850	740	760	660
MJH 630 SA10	6	950	830	900	780	1030	900	970	850
MJH 630 MA10	6	1100	960	1000	870	1200	1050	1130	980
MJH 630 MB10	6	1300	1130	1200	1050	1400	1220	1350	1170
MJH 630 LA10	6	1500	1300	1350	1170	1600	1400	1500	1300
MJH 630 LB10	6	1700	1480	1450	1260	1800	1570	1700	1480
MJH 710 SA10	6	2000	1740	1800	1570	2100	1830	1950	1700
MJH 710 MA10	6	2400	2090	2200	1920	2500	2170	2350	2050
MJH 710 LA10	6	2700	2350	2400	2100	2800	2440	2640	2300
MJH 710 LB10	6	3400	2960	3200	2780	3740	3250	3520	3060
MJH 800 SA10	6	3700	3220	3500	3050	4000	3480	3800	3300
MJH 800 MA10	6	4100	3570	3900	3400	4500	3900	4280	3730
MJH 800 LA10	6	4800	4180	4500	3920	5250	4570	4900	4260

Ratings refer to following conditions: balanced non-deforming load, altitude 1000 m a.s.l., minimum power factor 0,8.

All generators are dedicated for 50 Hz or 60 Hz.

MJH 900	For available power and speed contact Marelli Motori
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**SELECTION GUIDE - INDUSTRIAL APPLICATION / HIGH VOLTAGE**

Type	Leads	11000V / 50Hz		13800V / 60Hz	
		Power rating [kVA]		Power rating [kVA]	
		Temp. rise / Ambient temp. [°C]		Temp. rise / Ambient temp. [°C]	
		Continuous duty		Continuous duty	
		105/40	80/40	105/40	80/40
		ΔT cl. F	ΔT cl. B	ΔT cl. F	ΔT cl. B

**4 poles                      11000 V @ 50 Hz - 1500 rpm                      13800 V @ 60 Hz - 1800 rpm                      IP23**

MJH 450 LA4	6	900	780	-	-
MJH 500 MA4	6	1300	1130	1400	1220
MJH 500 LA4	6	1500	1300	1600	1395
MJH 560 MA4	6	1850	1610	2000	1740
MJH 560 LA4	6	2100	1830	2250	1960
MJH 630 SC4	6	2500	2175	2700	2350
MJH 630 MA4	6	2850	2480	3000	2610
MJH 630 LB4	6	3250	2830	3400	2960
MJH 710 SC4	6	3600	3130	4000	3480
MJH 710 MA4	6	4600	4000	5250	4570
MJH 710 LB4	6	5500	4780	5500	4785
MJH 800 MA4	6	9000	7830	on request	on request

**6 poles                      11000 V @ 50 Hz - 1000 rpm                      13800 V @ 60 Hz - 1200 rpm                      IP23**

MJH 450 LA6	6	560	490	-	-
MJH 450 LB6	6	620	540	-	-
MJH 500 MA6	6	680	600	820	720
MJH 500 MB6	6	820	715	980	860
MJH 500 LA6	6	950	830	1150	1000
MJH 560 MB6	6	1450	1270	1700	1480
MJH 560 LA6	6	1650	1440	1900	1650
MJH 630 MB6	6	1700	1480	1950	1700
MJH 630 MC6	6	2000	1740	2150	1875
MJH 710 SC6	6	2600	2270	2750	2400
MJH 710 MA6	6	3000	2610	3150	2750
MJH 710 MB6	6	3600	3130	3750	3260
MJH 710 LA6	6	4000	3480	4250	3700
MJH 710 LC6	6	4500	3920	4600	4000
MJH 800 MA6	6	5500	3490	5750	5000
MJH 800 MB6	6	6000	5220	6300	5480
MJH 800 LA6	6	6600	5740	6800	5920
MJH 800 LB6	6	7000	6100	7200	6260

Ratings refer to following conditions: balanced non-deforming load, altitude 1000 m a.s.l., minimum power factor 0,8.

All generators are dedicated for 50 Hz or 60 Hz.

MJH 900	For available power and speed contact Marelli Motori
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**SELECTION GUIDE - INDUSTRIAL APPLICATION / HIGH VOLTAGE**

Type	Leads	11000V / 50Hz		13800V / 60Hz	
		Power rating [kVA]		Power rating [kVA]	
		Temp. rise / Ambient temp. [°C]		Temp. rise / Ambient temp. [°C]	
		Continuous duty		Continuous duty	
		105/40	80/40	105/40	80/40
		ΔT cl. F	ΔT cl. B	ΔT cl. F	ΔT cl. B

**8 poles                      11000 V @ 50 Hz - 750 rpm                      13800 V @ 60 Hz - 900 rpm                      IP23**

MJH 500 SA8	6	480	420	570	500
MJH 500 MA8	6	580	500	690	605
MJH 500 MB8	6	680	600	820	715
MJH 500 LA8	6	780	680	930	810
MJH 560 MB8	6	1100	960	1200	1050
MJH 560 LA8	6	1250	1090	1300	1130
MJH 630 MC8	6	1350	1170	1450	1260
MJH 630 LA8	6	1500	1300	1600	1400
MJH 630 LB8	6	1650	1440	1750	1520
MJH 710 SA8	6	1900	1660	2000	1740
MJH 710 SC8	6	2400	2090	2500	2170
MJH 710 MA8	6	3000	2610	3150	2750
MJH 710 MB8	6	3500	3050	3900	3400
MJH 710 LB8	6	3700	3220	4100	3570
MJH 800 MB8	6	4000	3480	4300	3740
MJH 800 LA8	6	4400	3830	4700	4090
MJH 800 LB8	6	5500	4780	5700	4960

**10 poles                      11000 V @ 50 Hz - 600 rpm                      13800 V @ 60 Hz - 720 rpm                      IP23**

MJH 500 SA10	6	340	300	400	350
MJH 500 MA10	6	410	360	490	430
MJH 500 MB10	6	490	430	580	500
MJH 500 LA10	6	550	480	650	570
MJH 630 SA10	6	760	660	830	725
MJH 630 MA10	6	850	740	960	840
MJH 630 MB10	6	1050	910	1140	990
MJH 630 LA10	6	1130	980	1280	1110
MJH 630 LB10	6	1230	1070	1450	1260
MJH 710 SA10	6	1530	1330	1660	1440
MJH 710 MA10	6	1870	1630	2000	1740
MJH 710 LA10	6	2050	1780	2240	1950
MJH 710 LB10	6	2700	2350	2950	2570
MJH 800 SA10	6	3300	2870	3250	2830
MJH 800 MA10	6	3700	3220	3650	3180
MJH 800 LA10	6	4200	3650	4100	3570

Ratings refer to following conditions: balanced non-deforming load, altitude 1000 m a.s.l., minimum power factor 0,8.

All generators are dedicated for 50 Hz or 60 Hz.

MJH 900	For available power and speed contact Marelli Motori
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**SELECTION GUIDE - MARINE APPLICATION / LOW VOLTAGE**

Type	Leads	380V to 690V/ 50Hz			380V to 690V / 60Hz			Inertia B3 Approx. J [kg m²]	Weight B3 Approx. [kg]
		Power rating [kVA]		Efficiency 4/4	Power rating [kVA]		Efficiency 4/4		
		Temp. rise / Ambient temp. [°C]			Temp. rise / Ambient temp. [°C]				
		Continuous duty		pf = 0,8 95/50 [%]	Continuous duty		pf = 0,8 95/50 [%]		
95/50 ΔT cl. F	70/50 ΔT cl. B	95/50 ΔT cl. F	70/50 ΔT cl. B						
<b>4 poles</b>		<b>380 V to 690 V @ 50 Hz - 1500 rpm</b>			<b>380 V to 690 V @ 60 Hz - 1800 rpm</b>			<b>IP23</b>	
MJBM 160 SA4	12	14,8	12,7	80,9	17,6	15,1	81,4	0,11	120
MJBM 160 SB4	12	17,4	14,9	82,3	20,5	17,6	82,5	0,12	130
MJBM 160 SC4	12	20,1	17,3	83,9	24,1	20,7	83,9	0,14	140
MJBM 160 MA4	12	24,4	20,9	85,5	28,9	24,8	86,0	0,16	165
MJBM 160 MB4	12	27,9	23,9	86,1	33,5	28,7	86,7	0,17	175
MJBM 200 SA4	12	36,5	31,3	86,0	44,5	38,2	86,7	0,28	215
MJBM 200 SB4	12	42,0	36,1	87,2	52,0	44,6	87,3	0,30	220
MJBM 200 MA4	12	54,0	46,4	88,3	64,0	54,9	88,4	0,36	260
MJBM 200 MB4	12	63,0	54,1	89,5	76,0	65,2	89,6	0,43	300
MJBM 225 SA4	12	74,0	65,0	89,0	91,0	78,0	89,2	0,63	345
MJBM 225 SB4	12	80,0	70,0	89,4	99,0	85,0	89,5	0,70	350
MJBM 225 MA4	12	92,0	85,0	90,2	112	96,0	90,4	0,79	390
MJBM 225 LA4	12	115	105	91,2	136	117	91,3	0,92	420
MJBM 250 MA4	12	145	130	91,8	165	145	92,3	1,4	530
MJBM 250 MB4	12	160	140	92,1	190	165	92,5	1,7	590
MJBM 250 LA4	12	190	170	92,3	220	190	92,7	1,9	660
MJBM 250 LB4	12	220	195	92,6	245	215	92,8	2,1	710
MJBM 315 SA4	12	260	230	92,0	310	270	92,6	3,7	830
MJBM 315 SB4	12	305	270	92,5	355	305	93,2	4,2	920
MJBM 315 MA4	12	355	310	93,1	420	365	93,7	4,8	1060
MJBM 315 MB4	12	390	340	93,5	460	395	94,2	5,7	1200
MJBM 355 SA4	12	445	390	93,6	515	445	94,0	8,0	1250
MJBM 355 SB4	12	495	435	93,9	590	510	94,5	9,3	1550
MJBM 355 MA4	12	595	520	94,5	690	600	94,9	11,7	1800
MJBM 355 MB4	6	695	605	94,8	815	700	95,1	13,1	2050
MJBM 400 MA4	6	810	705	94,8	975	840	95,0	16,3	2250
MJBM 400 MB4	6	915	800	95,2	1090	940	95,4	17,0	2300
MJBM 400 LA4	6	1005	875	95,3	1205	1035	95,6	19,3	2550
MJBM 400 LB4	6	1135	990	95,6	1345	1155	95,8	22,5	2800
MJBM 400 LC4	6	1160	1010	95,8	1400	1220	96,0	23,7	3000
MJBM 450 MB4	6	1310	1140	95,6	1505	1310	96,4	29,0	3200
MJBM 450 LA4	6	1440	1255	96,6	1655	1440	96,8	34,0	3600
MJBM 450 LB4	6	1635	1425	96,8	1875	1630	97,0	38,0	4000
MJBM 500 SC4	6	1740	1515	95,7	2100	1830	95,9	46,7	4000
MJBM 500 MA4	6	1800	1570	95,7	2200	1910	96,0	50,5	4200
MJBM 500 MB4	6	1930	1680	95,9	2250	1960	96,1	52,5	4400
MJBM 500 MC4	6	2000	1740	96,0	2360	2060	96,2	54,3	4600
MJBM 500 LA4	6	2200	1915	96,1	2730	2380	96,3	61,5	5100
MJBM 500 LB4	6	2200	1915	96,2	2730	2380	96,4	63,5	5200
MJBM 560 MA4	6	2450	2135	96,3	2750	2390	96,5	83,0	5200
MJBM 560 LA4	6	2950	2570	96,5	3300	2875	96,6	95,0	6300
MJBM 630 SC4 <sup>1</sup>	6	2700	2350	96,4	3000	2610	96,5	117	6700
MJBM 630 MB4 <sup>1</sup>	6	3050	2655	96,5	3300	2875	96,6	140	7500
MJBM 630 LA4 <sup>1</sup>	6	3500	3045	96,6	3700	3220	96,7	158	8000
MJBM 710 SC4 <sup>2</sup>	6	3680	3205	96,3	4050	3520	96,4	on request	on request
MJBM 710 MB4 <sup>2</sup>	6	3950	3440	96,5	4350	3780	96,6	on request	on request
MJBM 800									

For available power and speed contact Marelli Motori

<sup>1</sup>: 690 V recommended.

<sup>2</sup>: 690 V only. For different voltage please contact MarelliMotori. These generators are dedicated for 50 Hz or 60 Hz. For available voltage and performance when operating at different frequency contact MarelliMotori. Ratings refer to following conditions: balanced non-deforming load, minimum power factor 0,8. For pitch winding details contact Marelli Motori.

MJBM 900	For available power and speed contact Marelli Motori
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**SELECTION GUIDE - MARINE APPLICATION / LOW VOLTAGE**

Type	Leads	380V to 690V / 50Hz			380V to 690V / 60Hz			Inertia B3 Approx. J [kg m.]	Weight B3 Approx. [kg]
		Power rating [kVA]		Efficiency 4/4 pf = 0,8 95/50 [%]	Power rating [kVA]		Efficiency 4/4 pf = 0,8 95/50 [%]		
		Temp. rise / Ambient temp. [°C]			Temp. rise / Ambient temp. [°C]				
		Continuous duty		Continuous duty					
		95/50 ΔT cl. F	70/50 ΔT cl. B		95/50 ΔT cl. F	70/50 ΔT cl. B			
<b>6 poles</b>		<b>380 V to 690 V @ 50 Hz - 1000 rpm</b>			<b>380 V to 690 V @ 60 Hz - 1200 rpm</b>			<b>IP23</b>	
MJBM 400 SA6	6	350	305	92,7	415	360	92,9	11,8	1450
MJBM 400 SB6	6	390	340	93,0	465	400	93,9	14,1	1600
MJBM 400 SC6	6	435	380	93,7	515	445	93,9	16,8	1800
MJBM 400 MA6	6	540	470	94,1	640	550	94,3	17,9	2000
MJBM 400 MB6	6	610	535	94,3	725	625	94,5	19,4	2260
MJBM 400 LA6	6	700	610	94,6	825	710	94,8	20,9	2530
MJBM 400 LB6	6	845	740	94,8	1000	860	95,0	24,2	2750
MJBM 450 MB6	6	890	775	94,6	1050	915	95,1	49,9	3200
MJBM 450 LA6	6	1040	905	95,2	1230	1075	95,7	55,0	3600
MJBM 450 LB6	6	1180	1030	95,4	1400	1220	95,9	61,4	3900
MJBM 500 SC6	6	1200	1045	95,0	1450	1265	95,5	64,7	3800
MJBM 500 MA6	6	1300	1135	95,2	1600	1395	95,1	64,7	4150
MJBM 500 MB6	6	1400	1220	95,2	1700	1480	95,2	73,6	4600
MJBM 500 MC6	6	1450	1265	95,3	1800	1570	95,2	80,2	4900
MJBM 500 LA6	6	1680	1465	95,4	2000	1740	95,4	88,9	5100
MJBM 560 MA6	6	1800	1570	96,0	2050	1785	96,0	115	5400
MJBM 560 LA6	6	2000	1740	96,2	2400	2090	96,2	135	6500
MJBM 630 SB6	6	2100	1830	95,6	2500	2175	96,2	170	7000
MJBM 630 SC6	6	2200	1915	95,7	2600	2265	96,3	180	7200
MJBM 630 MA6	6	2400	2090	95,7	2900	2525	96,3	190	7900
MJBM 630 MB6	6	2500	2175	95,8	3000	2610	96,4	200	8000
MJBM 630 LA6	6	2700	2350	96,5	3200	2785	96,8	230	8100
MJBM 630 LB6	6	2900	2525	96,6	3400	2960	96,8	245	8300
MJBM 710 SC6 <sup>1</sup>	6	3200	2785	96,0	3600	3135	96,3	on request	on request
MJBM 710 MA6 <sup>2</sup>	6	3750	3265	96,7	4000	3480	96,7	on request	on request
MJBM 710 LA6 <sup>2</sup>	6	3900	3395	96,8	4200	3655	96,8	on request	on request
MJBM 710 LB6 <sup>2</sup>	6	4200	3655	96,8	4500	3915	96,9	on request	on request
MJBM 800 __6 <sup>2</sup>	6	5800	5000	97,1	6200	5400	97,1	on request	on request
<b>8 poles</b>		<b>380 V to 690 V @ 50 Hz - 750 rpm</b>			<b>380 V to 690 V @ 60 Hz - 900 rpm</b>			<b>IP23</b>	
MJBM 400 SA8	6	210	185	91,6	250	220	91,9	13,5	1450
MJBM 400 SB8	6	270	235	92,1	330	290	92,4	16,2	1600
MJBM 400 SC8	6	315	275	92,4	370	325	92,7	19,1	1800
MJBM 400 MA8	6	375	330	92,6	450	395	92,9	20,6	2000
MJBM 400 MB8	6	450	395	93,1	520	455	93,4	22,4	2260
MJBM 400 LA8	6	520	455	93,3	620	540	93,6	24,1	2530
MJBM 400 LB8	6	650	570	93,6	760	665	93,9	25,4	2750
MJBM 500 SA8	6	830	725	94,6	950	830	95,0	55,1	3200
MJBM 500 SC8	6	1000	870	95,1	1150	1005	95,4	74,2	3800
MJBM 500 MB8	6	1100	960	95,2	1300	1135	95,5	82,2	4700
MJBM 500 LA8	6	1300	1135	95,3	1500	1305	95,8	95,0	5400
MJBM 560 MA8	6	1500	1305	95,6	1900	1655	95,6	130	5700
MJBM 560 LA8	6	1800	1570	95,9	2150	1875	95,9	155	6700
MJBM 630 SC8	6	1750	1525	95,4	2000	1740	96,2	170	7100
MJBM 630 MB8	6	2200	1915	95,9	2500	2175	96,5	195	8000
MJBM 630 LA8	6	2450	2135	96,1	2800	2440	96,6	240	9200
MJBM 630 LB8	6	2600	2265	96,2	3125	2720	96,7	270	9400
MJBM 710 SC8 <sup>1</sup>	6	2400	2090	96,4	2750	2395	96,7	on request	on request
MJBM 710 MA8 <sup>1</sup>	6	2850	2480	96,5	3300	2875	96,8	on request	on request
MJBM 710 MD8 <sup>1</sup>	6	3200	2785	96,6	3800	3310	96,9	on request	on request
MJBM 710 LB8 <sup>2</sup>	6	3600	3135	96,7	4200	3655	97,1	on request	on request
MJBM 800 __8 <sup>2</sup>	6	5400	4700	96,9	5700	5000	97,1	on request	on request
<b>10 poles</b>		<b>380 V to 690 V @ 50 Hz - 600 rpm</b>			<b>380 V to 690 V @ 60 Hz - 720 rpm</b>			<b>IP23</b>	
MJBM 500 SA10	6	520	455	94,0	645	565	94,5	63,8	3300
MJBM 500 SC10	6	650	570	94,3	810	705	94,7	81,6	3900
MJBM 500 MB10	6	760	665	94,8	910	795	95,2	89,7	4800
MJBM 500 LA10	6	840	735	95,1	1050	915	95,5	106	5600
MJBM 630 MB10	6	1400	1220	95,6	1600	1395	95,9	230	8700
MJBM 630 LB10	6	1800	1570	95,8	2200	1915	96,2	310	9700
MJBM 710 SC10 <sup>1</sup>	6	2150	1875	95,9	2500	2175	96,3	on request	on request
MJBM 710 MA10 <sup>1</sup>	6	2400	2090	95,9	2800	2440	96,3	on request	on request
MJBM 710 MB10 <sup>1</sup>	6	2850	2480	96,4	3300	2875	96,7	on request	on request
MJBM 710 LB10 <sup>1</sup>	6	3400	2960	96,4	3900	3395	96,7	on request	on request
MJBM 710 LC10 <sup>2</sup>	6	3850	3350	96,5	4200	3655	96,8	on request	on request
MJBM 800 __10 <sup>2</sup>	6	4800	4100	96,6	5200	4500	96,9	on request	on request

<sup>1</sup>: 690 V recommended. These generators are dedicated for 50 Hz or 60 Hz. For available voltage and performance when operating at different frequency contact MarelliMotori.

<sup>2</sup>: 690 V only. For different voltage please contact MarelliMotori. These generators are dedicated for 50 Hz or 60 Hz. For available voltage and performance when operating at different frequency contact MarelliMotori. Ratings refer to following conditions: balanced non-deforming load, minimum power factor 0,8. For pitch winding details contact Marelli Motori.

**SELECTION GUIDE - MARINE APPLICATION / LOW VOLTAGE / WITH EXCHANGER**

Type	Leads	380V to 690V / 50Hz		380V to 690V / 60Hz	
		Power rating [kVA]	Temp. rise / Ambient temp. [°C]	Power rating [kVA]	Temp. rise / Ambient temp. [°C]
		Water inlet temperature 36°C		Water inlet temperature 36°C	
		Continuous duty - Air to water exchanger		Continuous duty - Air to water exchanger	
		95/50	70/50	95/50	70/50
		ΔT cl. F	ΔT cl. B	ΔT cl. F	ΔT cl. B

**4 poles**
**380 V to 690 V @ 50 Hz - 1500 rpm**
**380 V to 690 V @ 60Hz - 1800 rpm**

MJRM 250 MA4	12	130	115	150	135
MJRM 250 MB4	12	145	130	170	150
MJRM 250 LA4	12	170	150	200	175
MJRM 250 LB4	12	200	175	220	200
MJRM 315 SA4	12	230	210	280	245
MJRM 315 SB4	12	270	230	320	280
MJRM 315 MA4	12	320	280	380	330
MJRM 315 MB4	12	350	300	410	360
MJRM 355 SA4	12	400	350	460	400
MJRM 355 SB4	12	450	400	530	460
MJRM 355 MA4	12	540	470	620	540
MJRM 355 MB4	6	630	550	730	640
MJRM 400 MB4	6	910	790	1040	900
MJRM 400 LA4	6	970	850	1120	975
MJRM 400 LB4	6	1120	975	1260	1100
MJRM 450 MB4	6	1210	1050	1700	1480
MJRM 450 LA4	6	1325	1150	1900	1660
MJRM 450 LB4	6	1510	1310	2025	1760
MJRM 500 SC4	6	1700	1480	2110	1840
MJRM 500 MA4	6	1740	1520	2260	1970
MJRM 500 MB4	6	1900	1660	2450	2135
MJRM 500 MC4	6	2100	1830	2550	2220
MJRM 500 LA4	6	2200	1920	2800	2440
MJRM 500 LB4	6	2200	1920	2800	2440
MJRM 560 MA4	6	2350	2050	2850	2480
MJRM 560 LA4	6	2650	2310	3060	2660
MJRM 630 SA4 <sup>1</sup>	6	2700	2350	3000	2610
MJRM 630 MA4 <sup>1</sup>	6	3000	2610	3300	2870
MJRM 630 LA4 <sup>1</sup>	6	3500	3050	3700	3220
MJRM 710 SC4 <sup>2</sup>	6	3600	3140	4000	3480
MJRM 710 MB4 <sup>2</sup>	6	3800	3310	4300	3750

**6 poles**
**380 V to 690 V @ 50 Hz - 1000 rpm**
**380 V to 690 V @ 60 Hz - 1200 rpm**

MJRM 400 SA6	6	320	280	370	325
MJRM 400 SB6	6	350	300	420	370
MJRM 400 SC6	6	390	340	460	405
MJRM 400 MA6	6	490	430	580	505
MJRM 400 MB6	6	550	480	650	570
MJRM 400 LA6	6	630	550	740	640
MJRM 400 LB6	6	760	660	900	780
MJRM 450 MB6	6	800	700	950	830
MJRM 450 LA6	6	940	820	1110	970
MJRM 450 LB6	6	1060	930	1260	1100
MJRM 500 SC6	6	1200	1050	1450	1260
MJRM 500 MA6	6	1300	1130	1600	1400
MJRM 500 MB6	6	1400	1220	1700	1480
MJRM 500 MC6	6	1450	1270	1800	1570
MJRM 500 LA6	6	1680	1470	2000	1740
MJRM 560 MA6	6	1800	1570	2050	1790
MJRM 560 LA6	6	2000	1740	2400	2090
MJRM 630 SB6	6	2100	1830	2500	2175
MJRM 630 SC6	6	2200	1920	2600	2260
MJRM 630 MA6	6	2400	2100	2900	2520
MJRM 630 MB6	6	2500	2180	3000	2610
MJRM 630 LA6	6	2700	2350	3200	2780
MJRM 630 LB6	6	2900	2530	3400	2960
MJRM 710 SC6 <sup>1</sup>	6	3200	2780	3600	3130
MJRM 710 MA6 <sup>2</sup>	6	3750	3260	4000	3480
MJRM 710 LA6 <sup>2</sup>	6	3900	3400	4200	3650
MJRM 710 LB6 <sup>2</sup>	6	4200	3650	4500	3920
MJRM 800 __ 6 <sup>2</sup>	6	5800	5000	6200	5400

<sup>1</sup>: 690 V recommended.

<sup>2</sup>: 690 V only. For different voltage please contact MarelliMotori. These generators are dedicated for 50 Hz or 60 Hz. For available voltage and performance when operating at different frequency contact MarelliMotori. Ratings refer to following conditions: balanced non-deforming load, minimum power factor 0,8. For pitch winding details contact Marelli Motori.

For MJRM generator series please consider additional derating factor: 38 °C water inlet temperature: 0,99;  
40 °C water inlet temperature: 0,98.



**SELECTION GUIDE - MARINE APPLICATION / LOW VOLTAGE / WITH EXCHANGER**

Type	Leads	380V to 690V / 50Hz		380V to 690V / 50Hz	
		Power rating [kVA]	Temp. rise / Ambient temp. [°C]	Power rating [kVA]	Temp. rise / Ambient temp. [°C]
		Water inlet temperature 36°C		Water inlet temperature 36°C	
		Continuous duty - Air to water exchanger		Continuous duty - Air to water exchanger	
		95/50	70/50	95/50	70/50
		ΔT cl. F	ΔT cl. B	ΔT cl. F	ΔT cl. B

**8 poles**
**380 V to 690 V @ 50 Hz - 750 rpm**
**380 V to 690 V @ 60 Hz - 900 rpm**

MJRM 400 SA8	6	190	170	230	200
MJRM 400 SB8	6	245	215	300	260
MJRM 400 SC8	6	285	250	330	290
MJRM 400 MA8	6	340	300	400	350
MJRM 400 MB8	6	400	350	470	410
MJRM 400 LA8	6	470	410	560	490
MJRM 400 LB8	6	590	515	690	600
MJRM 500 SA8	6	830	725	950	830
MJRM 500 SC8	6	1000	870	1150	1000
MJRM 500 MB8	6	1100	960	1300	1135
MJRM 500 LA8	6	1300	1130	1500	1300
MJRM 560 MA8	6	1500	1300	1900	1660
MJRM 560 LA8	6	1800	1570	2150	1875
MJRM 630 SC8	6	1750	1530	2000	1740
MJRM 630 MB8	6	2200	1920	2500	2175
MJRM 630 LA8	6	2450	2140	2800	2440
MJRM 630 LB8	6	2600	2260	3125	2720
MJRM 710 SC8 <sup>1</sup>	6	2400	2100	2750	2400
MJRM 710 MA8 <sup>1</sup>	6	2850	2480	3300	2870
MJRM 710 MD8 <sup>1</sup>	6	3200	2780	3800	3300
MJRM 710 LB8 <sup>2</sup>	6	3600	3130	4200	3650
MJRM 800 __8 <sup>2</sup>	6	5400	4700	5700	5000

**10 poles**
**380 V to 690 V @ 50 Hz - 600 rpm**
**380 V to 690 V @ 60 Hz - 720 rpm**

MJRM 500 SA10	6	470	410	580	500
MJRM 500 SC10	6	590	515	730	640
MJRM 500 MB10	6	680	600	820	710
MJRM 500 LA10	6	760	660	950	830
MJRM 630 MB10	6	1400	1220	1600	1400
MJRM 630 LB10	6	1800	1570	2200	1920
MJRM 710 SC10 <sup>1</sup>	6	2150	1875	2500	2180
MJRM 710 MA10 <sup>1</sup>	6	2400	2100	2800	2440
MJRM 710 MB10 <sup>1</sup>	6	2850	2480	3300	2880
MJRM 710 LB10 <sup>1</sup>	6	3400	2960	3900	3400
MJRM 710 LC10 <sup>2</sup>	6	3850	3350	4200	3660
MJRM 800 __10 <sup>2</sup>	6	4800	4100	5200	4500

<sup>1</sup>: 690 V recommended. These generators are dedicated for 50 Hz or 60 Hz. For available voltage and performance when operating at different frequency contact MarelliMotori.

Ratings refer to following conditions: balanced non-deforming load, minimum power factor 0,8. For pitch winding details contact Marelli Motori.

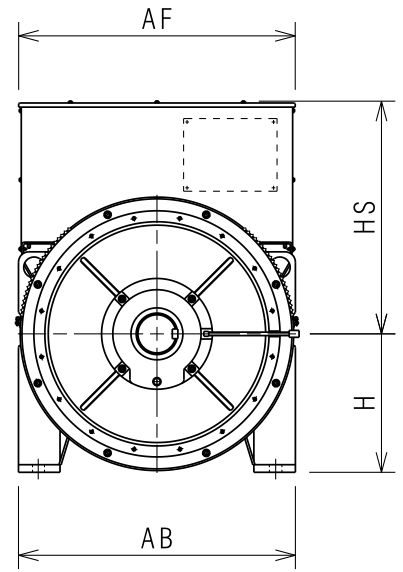
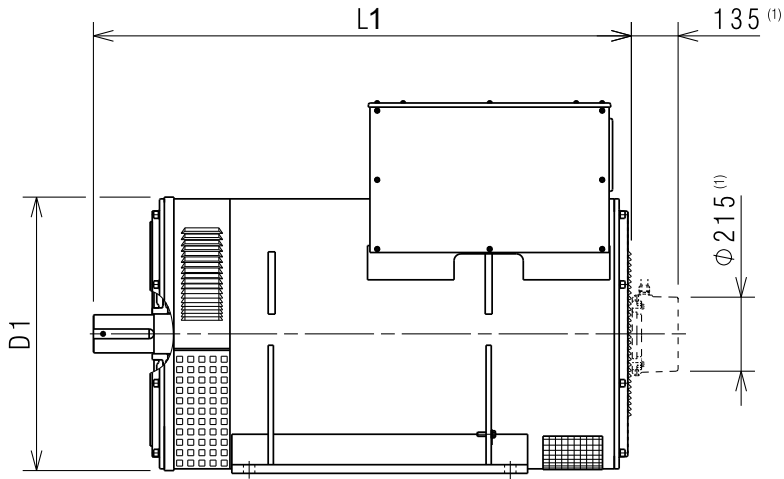
For MJRM generator series please consider additional derating factor: 38 °C water inlet temperature: 0,99;

40 °C water inlet temperature: 0,98.

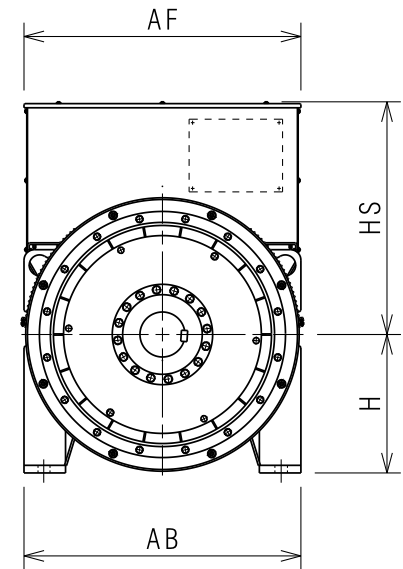
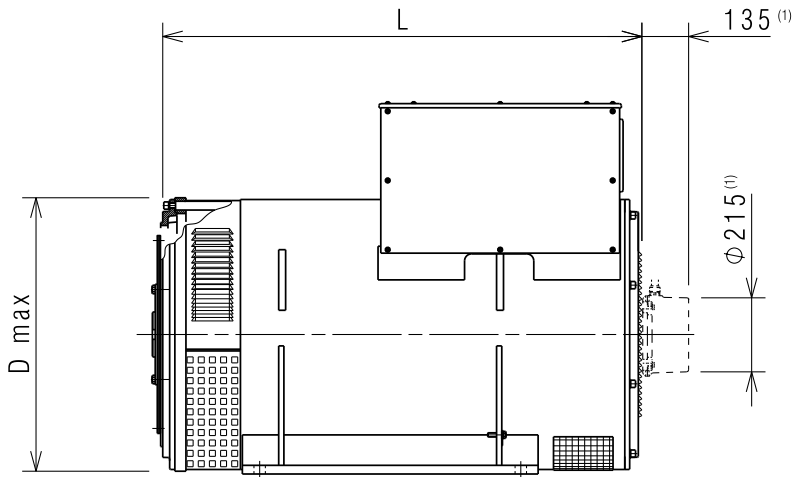
MJRM 900	For available power and speed contact Marelli Motori
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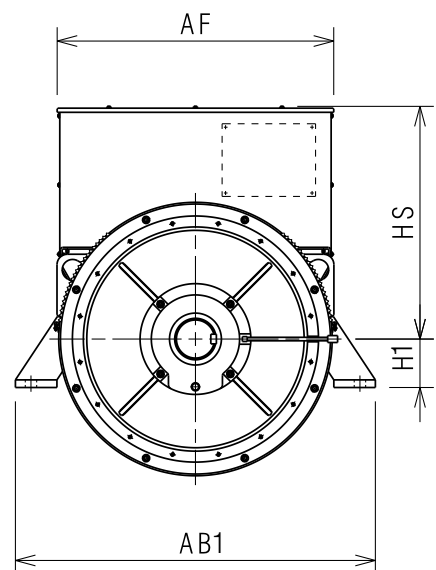
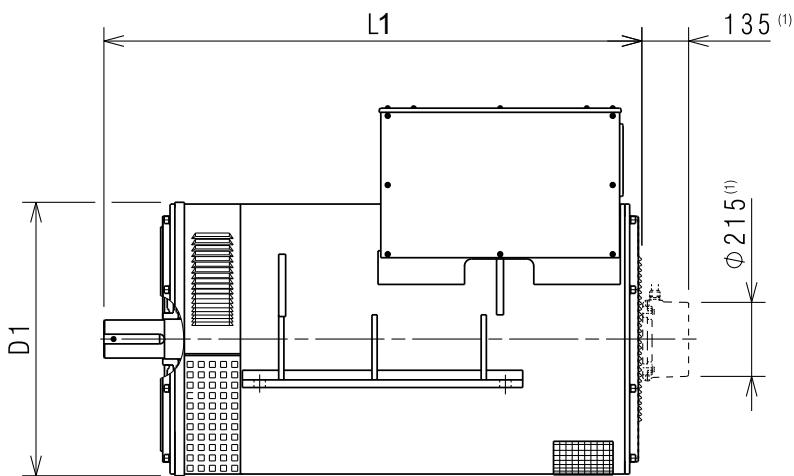
**B3 - DOUBLE BEARING**



**B2 - SINGLE BEARING**



**B20 - DOUBLE BEARING**



(1) Dimensions for optional PMG

## DIMENSIONS [mm]

Dimension	MJB 160						MJB 200			
	XA	SA	SB	SC	MA	MB	SA	SB	MA	MB
H	160						200			
HS	257						324			
AB	328						406			
AF	340						410			
L	471		501		571		615		710	
D max	451						552			
L1	551		581		651		665		760	
D1	354						432			

Dimension	MJB 225				MJB 250				MJB 315					
	SA	SB	MA	LA	MA	MB	LA	LB	SA	SB	MA	MB		
H	225				250				315					
HS	412				468				555					
AB	446				505				600					
AF	460				502				632					
L	745		790		845		858		998		945		1105	
D max	492				552				711					
L1	805		850		905		918		1050		1052		1212	
D1	492				532				624					

Dimension	MJB 355				MJB 400				MJB 450					
	SA	SB	MA	MB	SA	SB	MA	MB	LA	LB	MB	LA	LB	
H	355				400				450					
H1	Dimensions available on request													
HS	620				675				740					
AB	670				800				900					
AB1	Dimensions available on request													
AF	700				800				800					
L	1136		1366		1200		1400		1600		1517		1777	
D max	711				883									
L1	1298		1528		1370		1570		1770		1807		1987	
D1	690				780									

Dimension	MJB 500				MJB 560			MJB 630								
	SA	SC	MA	MB	LA	MA	LA	SA	SB	MA	MB	LA				
H	500				560			630								
H1	Dimensions available on request															
HS	867				870			948								
AB	1000				1100			1280								
AB1	Dimensions available on request															
AF	900				900			Dimensions available on request								
L	1720		1920		2020		2035						2135			
D max	970				1070											
L1	1970		2170		2270		2305		2405		2160		2360		2460	
D1	970				1070			1200								

Dimension	MJB 710					MJB 800				
	SA	SC	MA	MB	LA	MA	MB	LA	LB	
H	710					800				
H1	Dimensions available on request									
HS	1170					1500				
AB	1500					2100				
AB1	Dimensions available on request									
AF	Dimensions available on request					Dimension available on request				
L										
D max										
L1	2450		2650		2900		3100		3300	
D1	1413					-				

D (max) dimension shown refers to biggest adaptor/coupling

## COUPLING

Adaptor	Sizes [mm]																														
	160			200				225			250			315				355			400			450		500		560			
	5	4	3	4	3	2	1	4	3	2	3	2	1	3	2	1	1/2	0	1	1/2	0	1	1/2	0	00	0	00	0	00	00	00
6 1/2	●																														
7 1/2	●																														
8	●	●	●	●	●	●																									
10		●	●	●	●	●		●																							
11 1/2			○		○	●			○	●	○	●	●	●	●																
14							●						○				○	●	●	○	●	●	●	●	●	●	●	●	●	●	●
16																		●	●			●	●	●	●	●	●	●	●	●	●
18																			●			●			○	●	●	●	●	●	●
21																										●	●	●	●	●	○

● Available ○ Most common



**Manufacturing Plant  
Arzignano - Italy**



**Manufacturing Plant  
Shah Alam - Malaysia**



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