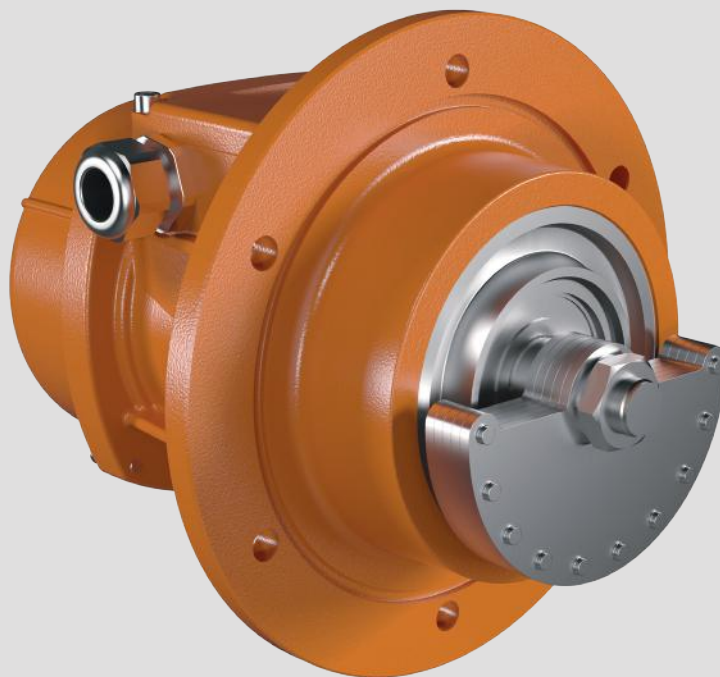




Technical features

Power supply

Three-phase voltage from 24V to 690V, 50Hz or 60Hz or single-phase 100-130V, 60Hz and 200-240V, 50Hz (single-phase types are supplied without capacitor); suitable for use with an inverter from 20Hz to the base frequency with constant torque load profile.

Polarity

2 or 4 poles, other polarities on request.

Conformity with Standards and Regulations

Low Voltage Directive 2006/95/EC; ATEX Directive 2014/34/UE; EN/IEC 60034-1, EN/IEC 60079-0, EN/IEC 60079-31, UL 1004-1, CSA C22.2 No.100, NEMA MG-1.

Functioning

Continual service (S1) at maximum declared centrifugal force and electric power. Intermittent services are also possible depending on the type of vibrator and the operating conditions. For detailed information, contact our technical assistance office.

Centrifugal force

Range extended up to 2615 Kgf. (25.7 KN), with centrifugal force adjustable by varying weights position.

Mechanical protection

IP 66 according to IEC/EN 60529. Mechanical protection is ensured in the mounting phase of the vibrator onto the vibrating machine.

machine, by introducing the special seal into the seat on the coupling flange.

Protection against mechanical impacts

IK 08 according to IEC/EN 62262.

Insulation class

Class F (155°C), class H (180°C) on request.

Tropicalization

Standard on all vibrators, with vacuum encapsulation up to size 30, with "drop by drop" trickle system for larger sizes.

Ambient temperature

From -20°C to +40°C. Versions for higher or lower temperatures are available on request.

Vibrator thermal protection

On demand with PTC rated thermistor heat detectors 130°C. Also on request thermistors with different temperatures and anti-condensation heaters.

Fixing of the vibrator

In all positions and therefore without restriction.

Lubrication

All vibrators are lubricated in the factory and do not require further lubrication at start-up.

Electrical connection box

The small size guarantees passage of tools used for fixing the vibrator to the vibrating machine. The electrical connection must

be carried out using the relative connectors inserted inside the connection box. Special shaped terminals allow to fix the power supply cable, protecting it from loosening.

Electric motor

Three-phase asynchronous type. Designed for maximum starting torques and torque curves specific to requirements of vibrating machines. Insulated windings through vacuum encapsulating up to size 30; using "drop by drop" trickle system with class H resin for larger sizes. The rotor is die cast aluminium.

Casing

In high-tensile aluminium alloy up to size 50, in spheroidal cast iron for size 70.

Bearing flange

Constructed in cast iron (spheroidal or grey) or in aluminium with steel bearing seat. The geometry of the flange transmits the load to the casing uniformly.

Bearings

The lower and upper bearings have been studied to support the relative load and therefore they have a particular geometry, especially designed and made for Italvibras.

Motor shaft

In treated steel alloy (Isothermic hardening) resistant to stress.

The new MTF (MTF-S02) series, made up of vertical vibrators with lateral flange and with weight protection covers fixed to the opposite part to the flange, adopts innovative technical solutions that increase performance and reliability.

Typically used in circular screens and in small and medium-size sieves, these vibrators are supplied with lamellar or clamped eccentric weights, which regulation is particularly easy.

The MTF series complies with the most recent IEC and EN international standards for use in atmospheres with potentially explosive powders. In particular, the MTF series can be used in areas 21 and 22.

Category: II2D

Level of protection:

Ex tD A21 T...°C IP66 (Ex tb IIIC T...°C Db)

Temperature class:

see tables

EC certificate:

LCIE 05 ATEX 6163 X

Zones of use:

21, 22

Eccentric weights

Allow greater adjustment of the centrifugal force, with phase shift of the lower weight assembly with respect to the upper group. This adjustment is eased by a graduated scale, which expresses the centrifugal force as a percentage of the maximum centrifugal force.

Weight covers

In aluminium alloy, on request stainless steel cover in AISI 304 is available.

Painting / Surface coating

Electrostatic surface treatment based on epoxy polyester powder polymerized in oven at 200°C. Tested in salt spray for 500 hours. On request also on MTF series other surface coatings may be available, see page 14.

For further details please contact sales offices at Italvibras.

The technical data and models listed in this catalogue are not binding. Italvibras reserves the right to modify them without prior notice.

Certifications



Compliance with the applicable European Union directives.



II2D (2014/34/UE)
Ex tD A21 T...°C IP66 (Ex tb IIIC T...°C Db)
EN 60079-0
EN 60079-31



Ex tD A21 T...°C IP66 (Ex tb IIIC T...°C Db)
IEC 60079-0
IEC 60079-31



Standard CAN/CSA – C22.2, N°.100-95,
Certificate n° LR 100948
Class 4211 01 – Motors e generators
UL 1004-1 – Rotating Electrical Machines –
General Requirements
Class II Div.2, Groups FG (T3B)



Version MTF-C available on request
Class I Div.2, Groups ABCD
Standard CAN/CSA – C22.2



Certification for Eurasian Customs Union
N° TC N RU Д-IT.АЛ33.В.02527
N° TC RU C-IT.ГБ08.В.02190



KOSHA Korea
Certificate n° 11-AVG BO-0359
Ex td A21 IP66

2 poles - 3.000/3.600 rpm

Three-phase

DESCRIPTION					MECHANICAL SPECIFICATIONS						ELECTRICAL SPECIFICATIONS					
Code	Type	SIZE	SP	II2D Temp. class	Centrifugal force (A/B)*				Weight		Max input power		Max. current		Ia/In	
					kg		kN		kg		W		A			
					50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	400V 50Hz	460V 60Hz	50Hz	60Hz
600375	MTF 3/65-S02	00	-	120°C	31/31	44/44	0,30/0,30	0,43/0,43	5,4	5,4	120	120	0,27	0,23	3,43	3,90
600369	MTF 3/200-S02	01	•	120°C	102/102	117/117	1,00/1,00	1,15/1,15	7,5	7,3	180	180	0,35	0,30	2,68	3,00
600370	MTF 3/300-S02	10	•	120°C	151/151	163/163	1,48/1,48	1,60/1,60	11,2	10,9	260	270	0,60	0,50	3,47	4,20
600378	MTF 3/500-S02	20	•	120°C	292/292	252/252	2,86/2,86	2,47/2,47	15,0	14,1	450	500	0,80	0,75	4,21	4,80
600456	MTF 3/700-S02	20	•	120°C	350/350	336/336	3,43/3,43	3,30/3,30	15,2	14,3	450	500	0,80	0,75	4,21	4,80
600380	MTF 3/800-S02	30	•	120°C	375/375	405/405	3,67/3,67	3,97/3,97	17,0	16,5	650	685	1,10	1,00	3,83	6,00
600285	MTF 3/1100-S90	40	•	120°C	553/553	530/530	5,42/5,42	5,20/5,20	26,0	25,0	940	1130	1,70	1,60	6,79	7,00

Single-phase

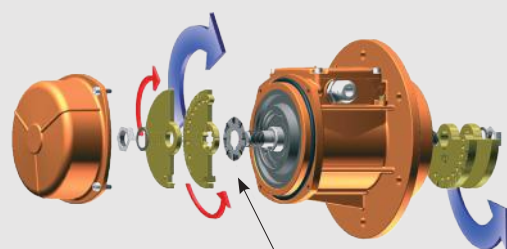
Code	Type	SIZE	SP	II2D Temp. class	Centrifugal force (A/B)*				Weight		Max input power		Max. current		Ia/In	
					kg		kN		kg		W		A			
					50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	400V 50Hz	460V 60Hz	50Hz	60Hz
600375	MTF 3/65-S02	00	-	120°C	31/31	44/44	0,30/0,30	0,43/0,43	5,4	5,4	110	110	0,56	1,52	2,24	2,24
600369	MTF 3/200-S02	01	-	120°C	102/102	117/117	1,00/1,00	1,15/1,15	7,5	7,3	165	165	0,75	1,52	1,67	2,24
600370	MTF 3/300-S02	10	-	120°C	151/151	163/163	1,48/1,48	1,60/1,60	11,2	10,9	280	280	1,25	2,40	2,48	3,52
600378	MTF 3/500-S02	20	-	120°C	292/292	252/252	2,86/2,86	2,47/2,47	15,0	14,1	500	500	2,30	4,50	3,35	4,22
600456	MTF 3/700-S02	20	-	120°C	350/350	336/336	3,43/3,43	3,30/3,30	15,2	14,3	500	500	2,30	4,50	3,35	4,22
600380	MTF 3/800-S02	30	-	120°C	375/375	405/405	3,67/3,67	3,97/3,97	17,0	16,5	700	750	3,25	7,00	4,00	4,14

* Listed as A/B: total centrifugal force is the sum of centrifugal force of top weights (A) and centrifugal force of bottom weights (B).

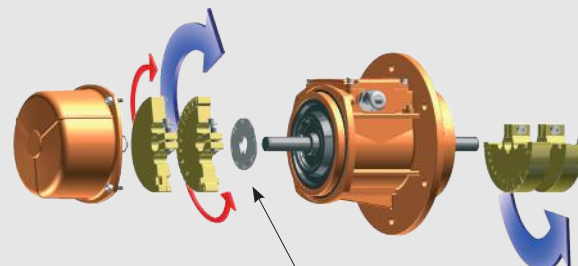
Ia/In = ratio between start-up current and maximum current.

Weight adjustment

Frontal fixing weights



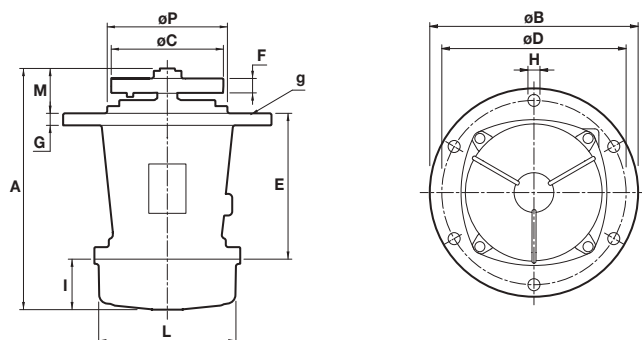
Clamp fixing weights



Graduated disks for upper and lower weight group phase shift

Regulation between upper and lower weight groups

Single weight phase shift

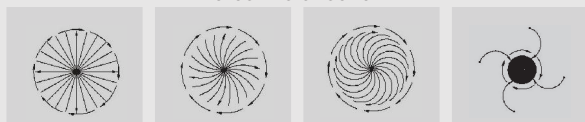


DIMENSIONAL SPECIFICATIONS (mm)

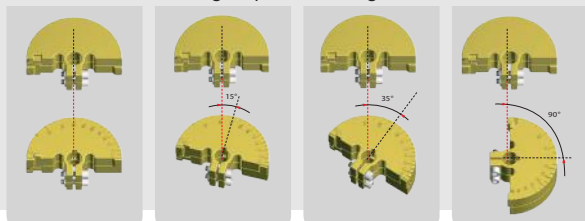
Type	Fig.	A	ØB	ØC	ØD	ØH	N°	E	F	G	I	L	M	ØP	Capacitor (µF)		Cable entry thread	Seal g
															220V 50Hz	115V 60Hz		
MTF 3/65-S02	G	191	130	86	109	8,5	4	129	8	10	40	106	22	-	-	-	M20x1,5	OR 3350
MTF 3/200-S02	G	226	211,5	93	188	12	4	144	20(50Hz) 16(60Hz)	10	58	103	23,5	-	-	-	M20x1,5	OR 4650
MTF 3/300-S02	G	247	215	114	187	12	4	179,5	16(50Hz) 12(60Hz)	13	54	127	13,5	-	-	-	M20x1,5	OR 4625
MTF 3/500-S02	G	279,5	245	132	205	12	6	124	20(50Hz) 12(60Hz)	12	65	145	90,5	162	-	-	M25x1,5	OR 4700
MTF 3/700-S02	G	279,5	245	132	205	12	6	124	24(50Hz) 16(60Hz)	12	65	145	90,5	162	-	-	M25x1,5	OR 4700
MTF 3/800-S02	G	301	260	154	230	15	6	182	16(50Hz) 12(60Hz)	15	63	170	56	150	-	-	M25x1,5	OR 4800
MTF 3/1100-S90	G	383	279	145	254	14	4	-	31(50Hz) 21(60Hz)	17,5	57,5	-	63	229	-	-	M25x1,5	-

Tipo	Fig.	A	ØB	ØC	ØD	ØH	N°	E	F	G	I	L	M	ØP	Capacitor (µF)		Cable entry thread	Seal g
															220V 50Hz	115V 60Hz		
MTF 3/65-S02	G	191	130	86	109	8,5	4	129	8	10	40	106	22	-	10	28	M20x1,5	OR 3350
MTF 3/200-S02	G	226	211,5	93	188	12	4	144	20(50Hz) 16(60Hz)	10	58	103	23,5	-	10	35	M20x1,5	OR 4650
MTF 3/300-S02	G	247	215	114	187	12	4	179,5	16(50Hz) 12(60Hz)	13	54	127	13,5	-	16	25	M20x1,5	OR 4625
MTF 3/500-S02	G	279,5	245	132	205	12	6	124	20(50Hz) 12(60Hz)	12	65	145	90,5	162	12,5	50	M25x1,5	OR 4700
MTF 3/700-S02	G	279,5	245	132	205	12	6	124	24(50Hz) 16(60Hz)	12	65	145	90,5	162	12,5	50	M25x1,5	OR 4700
MTF 3/800-S02	G	301	260	154	230	15	6	182	16(50Hz) 12(60Hz)	15	63	170	56	150	25	90	M25x1,5	OR 4800

Force line direction



Mass group relative regulation



MTF



4 poles - 1.500/1.800 rpm

Three-phase

DESCRIPTION					MECHANICAL SPECIFICATIONS						ELECTRICAL SPECIFICATIONS					
Code	Type	SIZE		 II2D Temp. class	Centrifugal force (A/B)*				Weight		Max input power		Max. current		Ia/In	
					kg	kN		kg	W	A	Ia	In				
					50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	400V 50Hz	460V 60Hz	50Hz	60Hz
601446	MTF 15/80-S02	01	-	120°C	40/40	37/37	0,39/0,39	0,36/0,36	6,8	6,5	85	95	0,21	0,20	1,78	1,95
601403	MTF 15/200-S02	10	•	120°C	106/74	107/107	1,04/0,72	1,05/1,05	14,0	13,2	170	170	0,41	0,40	2,34	2,75
601405	MTF 15/400-S02	20	•	120°C	205/142	205/205	2,01/1,39	2,01/2,01	20,6	19,8	300	350	0,60	0,60	3,33	3,50
601406	MTF 15/550-S02	20	•	120°C	276/205	295/295	2,70/2,01	2,70/2,70	22,0	20,6	300	350	0,60	0,60	3,33	3,50
601407	MTF 15/700-S02	30	•	120°C	360/263	380/380	3,53/2,58	3,73/3,73	26,0	24,5	525	665	0,92	0,98	3,48	3,43
601280	MTF 15/1100-S90	40	•	120°C	504/504	491/491	4,94/4,94	4,82/4,82	36,0	31,4	900	1050	1,45	1,50	4,10	4,20
601379	MTF 15/1710-S02-VRS	50	•	150°C	894/322	878/355	8,77/3,16	8,61/3,48	44,0	41,5	1100	1200	2,00	1,90	4,29	4,89
601380	MTF 15/2000-S02-VRS	50	•	170°C	1021/357	1017/390	10,0/3,50	9,98/3,83	48,0	45,5	1350	1450	2,50	2,30	4,30	4,90
601381	MTF 15/3810-S02-VRS	70	•	135°C	1908/707	1872/718	18,7/6,94	18,4/7,04	100,0	93,0	2200	2500	3,90	3,90	7,11	6,92

Single-phase

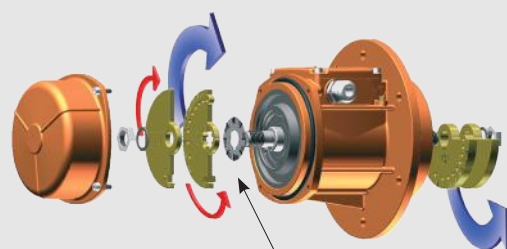
Code	Type	SIZE	SP	II2D Temp. class	Centrifugal force (A/B)*				Weight		Max input power		Max. current		Ia/In	
					50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	400V 50Hz	460V 60Hz	50Hz	60Hz
601446	MTF 15/80-S02	01	-	120°C	40/40	37/37	0,39/0,39	0,36/0,36	6,8	6,5	90	100	0,43	1,00	1,20	1,3
601403	MTF 15/200-S02	10	-	120°C	106/74	107/107	1,04/0,72	1,05/1,05	14,0	13,2	210	230	1,00	2,00	1,50	1,85
601405	MTF 15/400-S02	20	-	120°C	205/142	205/205	2,01/1,39	2,01/2,01	20,6	19,8	240	320	1,20	2,80	2,50	2,5
601406	MTF 15/550-S02	20	-	120°C	276/205	295/295	2,70/2,01	2,70/2,70	22,0	20,6	240	320	1,20	2,80	2,50	2,5
601407	MTF 15/700-S02	30	-	120°C	360/263	380/380	3,53/2,58	3,73/3,73	26,0	24,5	450	550	2,15	5,15	5,44	3,63

* Listed as A/B: total centrifugal force is the sum of centrifugal force of top weights (A) and centrifugal force of bottom weights (B).

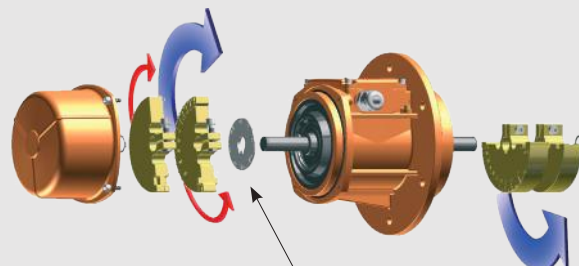
Ia/In = ratio between start-up current and maximum current.

Weight adjustment

Frontal fixing weights



Clamp fixing weights



Graduated disks for upper and lower weight group phase shift

Regulation between upper and lower weight groups

Single weight phase shift

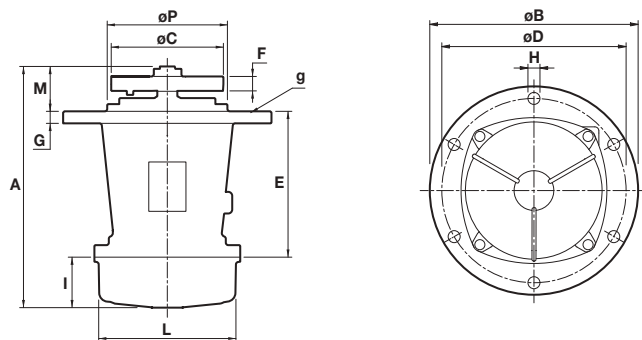


Fig. G

DIMENSIONAL SPECIFICATIONS (mm)

Type	Fig.	A	ØB	ØC	Holes			E	F	G	I	L	M	ØP	Capacitor (µF)		Cable entry thread	Seal g
					ØD	ØH	N°								220V 50Hz	115V 60Hz		
MTF 15/80-S02	G	241	211,5	93	188	12	4	144	32(50Hz) 20(60Hz)	10	65	103	32	-	-	-	M20x1,5	OR 4650
MTF 15/200-S02	G	292,5	215	114(50Hz) 108(60Hz)	187	12	4	179,5	48(50Hz) 40(60Hz)	13	77	127	36	-	-	-	M20x1,5	OR 4625
MTF 15/400-S02	G	335,5	245	130	205	12	6	124	59(50Hz) 42(60Hz)	12	93	145	118,5	162	-	-	M25x1,5	OR 4700
MTF 15/550-S02	G	376,5	245	130	205	12	6	124	79(50Hz) 59(60Hz)	12	114	145	138,5	162	-	-	M25x1,5	OR 4700
MTF 15/700-S02	G	380,5	260	154	230	15	6	182	59(50Hz) 46(60Hz)	15	106	170	92,5	150	-	-	M25x1,5	OR 4800
MTF 15/1100-S90	G	429	279	190	254	14	4	-	49	17,5	57,5	-	-	229	-	-	M25x1,5	-
MTF 15/1710-S02-VRS	G	488	350	190	290	17	6	232	84(50Hz) 57(60Hz)	25	134	209	122	172	-	-	M25x1,5	-
MTF 15/2000-S02-VRS	G	500(50Hz) 488(60Hz)	350	193	290	17	6	232	100(50Hz) 68(60Hz)	25	134	209	133(50Hz) 122(60Hz)	172	-	-	M25x1,5	-
MTF 15/3810-S02-VRS	G	614	410	250(50Hz) 244(60Hz)	350	22	6	310	78(50Hz) 57(60Hz)	27	178	280	126	234	-	-	M25x1,5	-

Type	Fig.	A	ØB	ØC	Holes			E	F	G	I	L	M	ØP	Capacitor (µF)		Cable entry thread	Seal g
					ØD	ØH	N°								220V 50Hz	115V 60Hz		
MTF 15/80-S02	G	241	211,5	93	188	12	4	144	32(50Hz) 20(60Hz)	10	65	103	32	-	3,15	25	M20x1,5	OR 4650
MTF 15/200-S02	G	292,5	215	114(50Hz) 108(60Hz)	187	12	4	179,5	48(50Hz) 40(60Hz)	13	77	127	36	-	5	25	M20x1,5	OR 4625
MTF 15/400-S02	G	335,5	245	130	205	12	6	124	59(50Hz) 42(60Hz)	12	93	145	118,5	162	32/12	35	M20x1,5	OR 4700
MTF 15/550-S02	G	376,5	245	130	205	12	6	124	79(50Hz) 59(60Hz)	12	114	145	138,5	162	32/12	40/35	M20x1,5	OR 4700
MTF 15/700-S02	G	380,5	260	154	230	15	6	182	59(50Hz) 46(60Hz)	15	106	170	92,5	150	96/16	180/40	M25x1,5	OR 4800

○ Start-up capacitor / Running capacitor.

