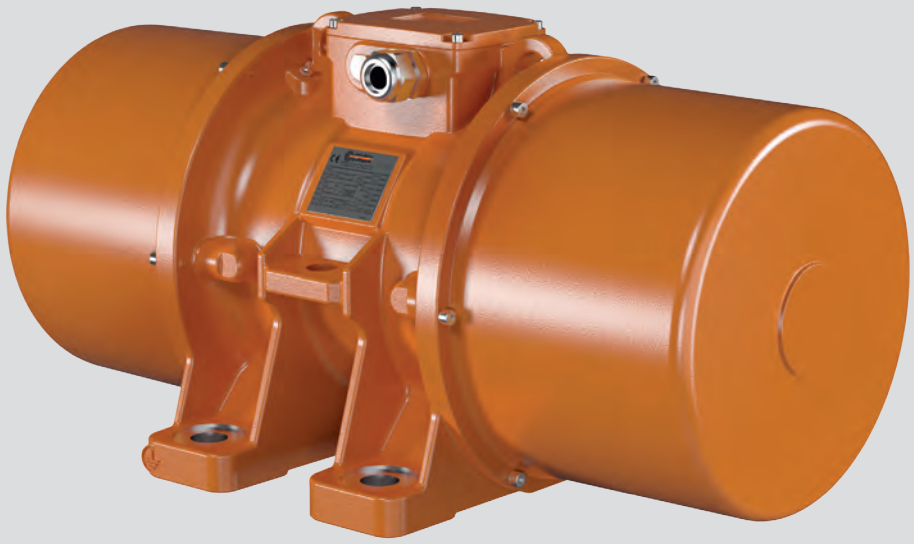
# MVLS



## Technical features

**Power supply**
Three phase tension from 200V to 690V at 50Hz or 60Hz; variable frequency from 20Hz to the nameplate frequency, at constant torque, with frequency inverter.

**Polarities**
8, 10 & 12 pole standard, 6 pole on request.

**Reference Regulations and Directives**
Low Voltage Directive 2006/95/CE;
EN/IEC 60034-1,
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 on the operating conditions. For detailed information, contact our technical assistance office.

**Centrifugal force**
Range extended to 9500 kgf. (93.7 kN), adjustable in continuous linear mode varying the position of eccentric weights.

**Mechanical protection**
IP66 according to IEC/EN 60529.

**Protection against mechanical impacts**
IK 08 according to IEC/EN 62262

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

**Tropicalisation**
Standard on all vibrators, with “drop by drop” trickle system.

**Ambient temperature**
From -20°C to +40°C; higher or lower temperatures are possible on request.

**Vibrator thermal protection**
With thermal detectors with thermistors PTC 130°C as standard on the whole MVLS range. Upon request different temperatures thermistors are available, as well as bimetallic thermal protection and anti-condensation heaters.

**Fixing of the vibrator**
In all positions and therefore without any restriction.

**Lubrication**
All vibrators are correctly lubricated at the factory and do not require further lubrication at their start-up.

**Terminal box**
Large terminal box to facilitate electrical connection.
Special shaped terminals allow for the power supply cable to be secured, whilst protecting it from loosening.

**Electric motor**
Three-phase asynchronous type. Designed for obtaining maximum torque values both at starting and when fully operational, to respond to the requirements of vibrating machines and particularly to those with dual mass for resonance systems.
Insulated windings by means of the “drop by drop” trickle system with class H resin. The rotor is die cast aluminum (squirrel cage).

**Casing**
In spheroidal cast iron.

**Bearing flange**
Carried out in spheroidal graphite cast iron or lamellar graphite cast iron. Relevant design was studied to convey the load to the casing in a uniform way.

**Bearings**
Custom made with special profile especially designed for Italvibras, suitable to withstand both high radial and axial loads.

**Motor shaft**
In treated steel alloy (isothermic hardening) resistant to stress.

**Eccentric weights**
They allow adjustment of the centrifugal force. It is achieved by means of a graduated scale expressing it as a percentage of the maximum centrifugal force.

The MVLS Series was specifically designed to supply high torque values and power for applications at low speed, from 900 down to 500 rpm. The MVLS range is therefore highly indicated for dual mass resonance vibrating machines besides being suitable for traditional brute force vibrating machines.

The range offers different values of centrifugal force at different speeds up to 8150kg (80kN).

**Weight covers**
Standard in aluminum alloy.

**Painting/Coating**
Electrostatic surface treatment based on polymerised epoxy polyester powder in oven at 200°C. Tested in salt spray for 500 hours.

**For further details please contact Italvibras Technical Assistance.**
**Technical features and models mentioned in this catalogue are indicative and not binding. Italvibras reserves the right to modify them without any obligation.**

## Certifications

In conformity with the applicable European Community Directives.

Certification for the European-Asiatic Customs Union
N° TC N RU Д-IT.АЛ33.B.02527

CAN/CSA Rules - C22.2, N° 100-95, Certificate N° LR 100948 Class 4211 01 - Motors and generators UL1004-1 Rotational electric machines - General requirements

Class II Div. 2, Groups FG (T3B)

MVLS-C version
Class I Div.2, Groups ABCD
CAN/CSA Rules - C22.2

# MVLS

## 8 poles - 750/900 rpm

### Three-phase

| DESCRIPTION | | | | MECHANICAL SPECIFICATIONS | | | | | | | | ELECTRICAL SPECIFICATIONS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Static moment* | | Centrifugal force | | | | Weight | | Max input power | | Max. current | | | Ia/In | |
| | | | | kgmm | | kg | | kN | | kg | | W | | A | | | | |
| Code | Type | SIZE | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | 400V 50Hz | 460V 60Hz | | 50Hz | 60Hz |
| 602531 | **MVLS 075/1500-S90** | 184 | • | 1659 | | **1043** | **1502** | **10,2** | **14,7** | 136 | | 820 | 1000 | 3,00 | 3,10 | | 6,40 | 5,50 |
| 602532 | **MVLS 075/2300-S90** | 215 | • | 2577 | | **1620** | **2333** | **15,9** | **22,9** | 180 | | 1640 | 1940 | 5,10 | 5,10 | | 4,10 | 4,30 |
| 602533 | **MVLS 075/3000-S90** | 256 | □ | 3452 | | **2171** | **3126** | **21,3** | **30,7** | 215 | | 3720 | 4500 | 7,30 | 7,50 | | 5,50 | 6.1 |
| 602534 | **MVLS 075/4200-S90** | 256 | □ | 4670 | | **2936** | **4229** | **28,8** | **41,5** | 230 | | 5600 | 6600 | 12,20 | 12,00 | | 5,70 | 6,20 |
| 602536 | **MVLS 075/7500-S90** | 286 | □ | 8310 | | **5225** | **7524** | **51,2** | **73,8** | 465 | | 7000 | 8550 | 13,40 | 14,30 | | 8,90 | 9,00 |

## 10 poles - 600/720 rpm

| DESCRIPTION | | | | MECHANICAL SPECIFICATIONS | | | | | | | | ELECTRICAL SPECIFICATIONS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Static moment* | | Centrifugal force | | | | Weight | | Max input power | | Max. current | | | Ia/In | |
| | | | | kgmm | | kg | | kN | | kg | | W | | A | | | | |
| Code | Type | SIZE | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | 400V 50Hz | 460V 60Hz | | 50Hz | 60Hz |
| 602965 | **MVLS 06/800-S90** | 184 | • | 1333 | | **536** | **772** | **5,3** | **7,6** | 142 | | 900 | 1000 | 3,40 | 3,40 | | 5,10 | 4,40 |
| 602958 | **MVLS 06/1500-S90** | 184 | • | 2595 | | **1044** | **1504** | **10,2** | **14,7** | 152 | | 900 | 1000 | 3,40 | 3,40 | | 5,10 | 4,40 |
| 602966 | **MVLS 06/1490-S90** | 215 | • | 2577 | | **1037** | **1493** | **10,2** | **14,6** | 180 | | 1850 | 2180 | 4,60 | 4,60 | | 4,10 | 3,50 |
| 602953 | **MVLS 06/2300-S90** | 215 | • | 4002 | | **1611** | **2319** | **15,8** | **22,7** | 194 | | 1850 | 2180 | 4,60 | 4,60 | | 4,10 | 3,50 |
| 602968 | **MVLS 06/2000-S90** | 256 | □ | 3450 | | **1388** | **1999** | **13,6** | **19,6** | 220 | | 2400 | 2930 | 5,80 | 6,10 | | 8,20 | 6,70 |
| 602967 | **MVLS 06/2700-S90** | 256 | □ | 4670 | | **1879** | **2706** | **18,4** | **26,5** | 230 | | 3800 | 4500 | 6,80 | 8,40 | | 10,3 | 7,30 |
| 602959 | **MVLS 06/3000-S90** | 256 | □ | 5158 | | **2076** | **2989** | **20,4** | **29,3** | 220 | | 2520 | 2930 | 6,00 | 6,10 | | 6,40 | 6,70 |
| 602952 | **MVLS 06/4200-S90** | 256 | □ | 7391 | | **2974** | **4283** | **29,2** | **42,0** | 297 | | 3875 | 4500 | 8,60 | 8,40 | | 7,00 | 7,30 |
| 602946 | **MVLS 06/6600-S90** | 286 | □ | 11475 | | **4618** | **6650** | **45,3** | **65,2** | 430 | | 5760 | 6680 | 11,2 | 11,2 | | 5,80 | 6,10 |
| 602960 | **MVLS 06/8100-S90** | 286 | □ | 14069 | | **5662** | **8153** | **55,5** | **80,0** | 485 | | 6910 | 8450 | 13,3 | 14,0 | | 7,00 | 5,70 |
| 602987 | **MVLS 06/9500-S90** | 286 | □ | 16495 | | **6638** | **9559** | **65,1** | **93,7** | 517 | | 7800 | - | 15,0 | - | | | - |

## 12 poles - 500/600 rpm

| DESCRIPTION | | | | MECHANICAL SPECIFICATIONS | | | | | | | | ELECTRICAL SPECIFICATIONS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Static moment* | | Centrifugal force | | | | Weight | | Max input power | | Max. current | | | Ia/In | |
| | | | | kgmm | | kg | | kN | | kg | | W | | A | | | | |
| Code | Type | SIZE | | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | 50Hz | 60Hz | 400V 50Hz | 460V 60Hz | | 50Hz | 60Hz |
| 602957 | **MVLS 05/1000-S90** | 184 | • | 2418 | | **676** | **973** | **6,6** | **9,5** | 145 | | 810 | 960 | 3,70 | 3,80 | | 3,30 | 3,30 |
| 602949 | **MVLS 05/1500-S90** | 215 | • | 3728 | | **1042** | **1500** | **10,2** | **14,7** | 185 | | 1140 | 1320 | 4,20 | 4,30 | | 4,10 | 3,40 |
| 602950 | **MVLS 05/2300-S90** | 256 | □ | 5743 | | **1605** | **2311** | **15,7** | **22,7** | 225 | | 1850 | 2270 | 6,40 | 6,50 | | 3,80 | 3,90 |
| 602951 | **MVLS 05/3000-S90** | 256 | □ | 7391 | | **2066** | **2974** | **20,3** | **29,2** | 290 | | 2625 | 3100 | 7,60 | 7,50 | | 7,90 | 8,10 |
| 602947 | **MVLS 05/4200-S90** | 286 | □ | 10332 | | **2887** | **4158** | **28,3** | **40,8** | 399 | | 3735 | 4500 | 8,30 | 8,60 | | 6,60 | 6,90 |
| 602948 | **MVLS 05/6600-S90** | 286 | □ | 16495 | | **4610** | **6638** | **45,2** | **65,1** | 513 | | 5960 | 6800 | 12,3 | 12,0 | | 5,70 | 6,30 |

* Working moment = 2 x static moment.  □ CSA certification on request, with feeding line included.

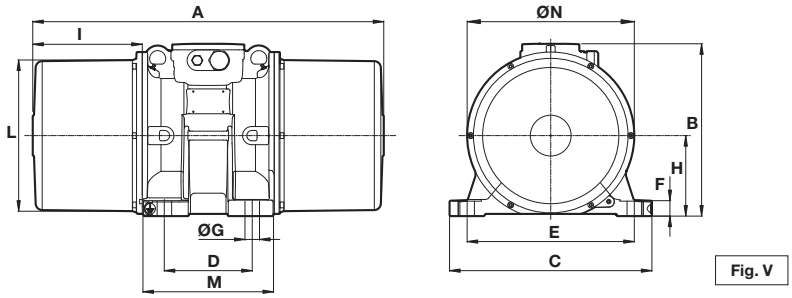



Fig. V

**DIMENSIONAL SPECIFICATIONS (mm)**

| Type | A | B | C | Holes D | Holes E | Holes ØG | Holes N° | F | H | I | L | M | ØN | Cable entry thread |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MVLS 075/1500-S90** | 660 | 316 | 340 | **160** | **280** | **27** | **4** | 25 | 150 | 210 | 273 | 236 | 316 | M25x1,5 |
| **MVLS 075/2300-S90** | 604 | 351 | 390 | **200** | **320** | **28** | **4** | 30 | 162 | 152 | 303 | 294 | 340 | M32x1,5 |
| **MVLS 075/3000-S90** | 798 | 404 | 460 | **200** | **380** | **33** | **4** | 35 | 183 | 249 | 344 | 294 | 380 | M32x1,5 |
| **MVLS 075/4200-S90** | 798 | 404 | 460 | **200** | **380** | **33** | **4** | 35 | 183 | 249 | 344 | 294 | 380 | M32x1,5 |
| **MVLS 075/7500-S90** | 892 | 503 | 528 | **200** | **440** | **33** | **4** | 35 | 238 | 282 | 428 | 308 | 460 | M32x1,5 |

**DIMENSIONAL SPECIFICATIONS (mm)**

| Type | A | B | C | Holes D | Holes E | Holes ØG | Holes N° | F | H | I | L | M | ØN | Cable entry thread |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MVLS 06/800-S90** | 660 | 316 | 340 | **160** | **280** | **27** | **4** | 25 | 150 | 210 | 273 | 236 | 316 | M25x1,5 |
| **MVLS 06/1500-S90** | 660 | 316 | 340 | **160** | **280** | **27** | **4** | 25 | 150 | 210 | 273 | 236 | 316 | M25x1,5 |
| **MVLS 06/1490-S90** | 710 | 351 | 390 | **200** | **320** | **28** | **4** | 30 | 162 | 205 | 303 | 294 | 340 | M32x1,5 |
| **MVLS 06/2300-S90** | 710 | 351 | 390 | **200** | **320** | **28** | **4** | 30 | 162 | 205 | 303 | 294 | 340 | M32x1,5 |
| **MVLS 06/2000-S90** | 798 | 404 | 460 | **200** | **380** | **33** | **4** | 35 | 183 | 249 | 344 | 294 | 380 | M32x1,5 |
| **MVLS 06/2700-S90** | 798 | 404 | 460 | **200** | **380** | **33** | **4** | 35 | 183 | 249 | 344 | 294 | 380 | M32x1,5 |
| **MVLS 06/3000-S90** | 798 | 404 | 460 | **200** | **380** | **33** | **4** | 35 | 183 | 249 | 344 | 294 | 380 | M32x1,5 |
| **MVLS 06/4200-S90** | 798 | 404 | 460 | **200** | **380** | **33** | **4** | 35 | 183 | 249 | 344 | 294 | 380 | M32x1,5 |
| **MVLS 06/6600-S90** | 892 | 503 | 528 | **200** | **440** | **33** | **4** | 35 | 238 | 282 | 428 | 308 | 460 | M32x1,5 |
| **MVLS 06/8100-S90** | 892 | 503 | 528 | **200** | **440** | **33** | **4** | 35 | 238 | 282 | 428 | 308 | 460 | M32x1,5 |
| **MVLS 06/9500-S90** | 892 | 503 | 528 | **200** | **440** | **33** | **4** | 35 | 238 | 282 | 428 | 308 | 460 | M32x1,5 |

**DIMENSIONAL SPECIFICATIONS (mm)**

| Type | A | B | C | Holes D | Holes E | Holes ØG | Holes N° | F | H | I | L | M | ØN | Cable entry thread |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MVLS 05/1000-S90** | 660 | 316 | 340 | **160** | **280** | **27** | **4** | 25 | 150 | 210 | 273 | 236 | 316 | M25x1,5 |
| **MVLS 05/1500-S90** | 710 | 351 | 390 | **200** | **320** | **28** | **4** | 30 | 162 | 205 | 303 | 294 | 340 | M32x1,5 |
| **MVLS 05/2300-S90** | 798 | 404 | 460 | **200** | **380** | **33** | **4** | 35 | 183 | 249 | 344 | 294 | 380 | M32x1,5 |
| **MVLS 05/3000-S90** | 798 | 404 | 460 | **200** | **380** | **33** | **4** | 35 | 183 | 249 | 344 | 294 | 380 | M32x1,5 |
| **MVLS 05/4200-S90** | 718 | 503 | 528 | **200** | **440** | **33** | **4** | 35 | 238 | 282 | 428 | 308 | 460 | M32x1,5 |
| **MVLS 05/6600-S90** | 892 | 503 | 528 | **200** | **440** | **33** | **4** | 35 | 238 | 306 | 428 | 308 | 460 | M32x1,5 |

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