



Electric high frequency internal vibrators

When constructing industrial floors, walls, columns, slabs, etc., **flexible and easy-to-use vibrating systems** are required.

In such cases high-frequency immersion vibrators are generally used, known as “poker” or “spud” or simply “vibrating needles”, which come into **direct contact with the concrete**; for this reason, we speak of internal direct vibration.

HOW THE VH VIBRATORS WORK:

An eccentric mass is housed inside the vibrating head (or needle) which is fixed to a shaft rotated by a three-phase asynchronous AC motor.

During rotation, the eccentricity of the mass generates rotational movements to the vibrating head (vibrations).

The **robustness** and the **constant rotation speed** are essential factors in the compaction of the concrete: drops in the centrifugal force heavily penalise the quality of the manufactured article.

The VH is a robust and reliable product, which is suitable for compacting concrete and is appropriate for continuous operation.

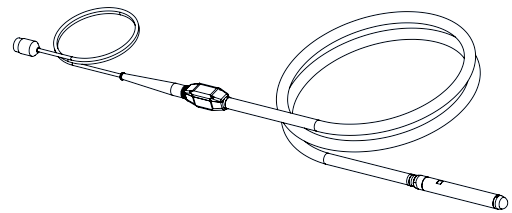
Important:

The VH have to be operated by electric and electronic converters that convert the 50/60 Hz mains frequency to 200 Hz, which is necessary in order for the vibrating head to reach a vibration speed of 12,000 vpm, as it is ideal for the proper compaction.



Benefits

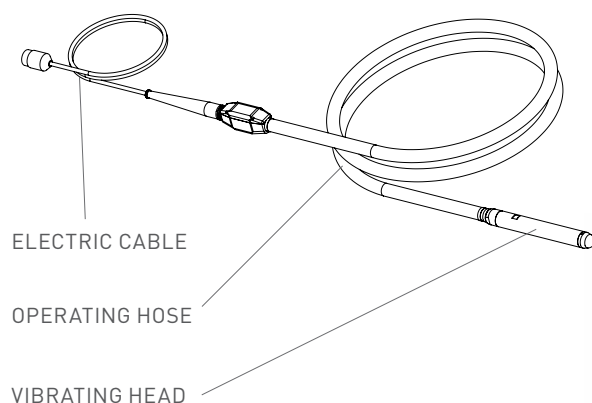
- No overheating
- Easy maintenance
- Long life of the vibration head
- Perfect water tightness



**MAXIMUM DURABILITY
HIGH PERFORMANCE**



VH - Electric high frequency internal vibrators



MODEL	HEAD DIAMETER	HEAD LENGTH	HEAD WEIGHT	TOTAL WEIGHT*	CF	RATED CURRENT **	RATED POWER [42V]	ACTION DIAMETER ***	AMPLITUDE	NOISE LEVEL	COMPACTION POWER***
	mm	mm	kg	kg	N	A	kW	cm	mm	dB A	m³/h
VHN 38	38	404	2.4	10.6	1,700	8	0.5	45	1.8	70	20
VHN 50	50	403	4.4	14.8	3,080	11	0.6	60	2	76	25
VHN 59	59	420	6.8	17.4	4,560	12	0.9	80	2.3	76	35
VHP 50	50	468	5.4	16.4	3,760	15	0.9	70	2.1	76	40
VHP 59	59	498	8.2	19.6	5,640	17	1.1	90	2.4	79	45
VHP 65	65	484	9.4	22.4	7,330	24	1.3	110	2.6	79	50

* Packaging included ** Refer to centrifugal force for amperage assessment *** Measurements vary according to concrete quality and thickness

VH - ELECTRIC HIGH FREQUENCY INTERNAL VIBRATORS

APPLICATION Concrete compaction

DESCRIPTION High frequency internal electric vibrators for concrete consolidation characterised by high performances, consistent speed and remarkable resistant to abrasion

FEATURES

DUTY CYCLE Continuous S1

INPUT 42V-3ph - 200Hz

NOMINAL FREQUENCY 12,000 rpm

INSULATION CLASS F (T° max = 155°C)

THERMAL SWITCHES Inside the stator. Max T°C = 150°C

WORKING TEMPERATURE From -20°C to +40°C

HEAD Equipped with ball bearings greased for life.
2 bearings (VHN 50 - VHN 59), 4 bearings (VHN 38 and complete VHP range)

Protection class IP68

Hardening treatment for VHN and chrome plating for VHP

SWITCH BOX Polyamide (nylon +30% fiber glass) with gasket, cable protection, yellow colour

IP66 protection

Designed for continuous use and resistant to wear and tear

OPERATING HOSE 5m SBR rubber hose with inner textile reinforcement

SUPPLY CABLE 10m neoprene electric cable H07RN-F with 3 pin plug (42V - 3 phase, IP44)

FINISHING Painted orange Ral 1007 (VHN), chromed (VHP)

CERTIFICATIONS Community Directives and subsequent modifications:
2006/42/EC - 2006/95/EC

Conformity verified according to the standard documents:
IEC 60745-1, IEC 60745-2-12, IEC 60034-1

OPTIONS Cast aluminium switch box

Rubber cap



Frequency and voltage converters

The internal vibrating needles need to be powered via a three-phase electric line at low voltage, therefore it is necessary to use a voltage and frequency converter.

The electromechanical rotary converters consist of a motor and a generator, which are coupled together. The motor converts the electrical energy into mechanical energy; the generator converts the mechanical energy into electrical energy, thus generating the required voltage and frequency (42 Volt - 200 Hz).

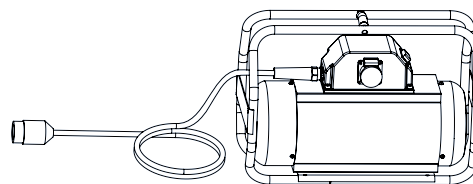
The converters of the CM range are designed to supply simultaneously and in a continuous cycle one or more high-frequency internal vibrators; they are reliable, durable and do not require maintenance.

The minimal design and the materials used **facilitate the external cleaning**, while the special internal air ducting system **avoids overheating**. The range offers several models, which are **capable of supplying from 1 to 4 immersion vibrators**.



Benefits

- No overheating
- No maintenance
- Optimal cooling
- Easy cleaning



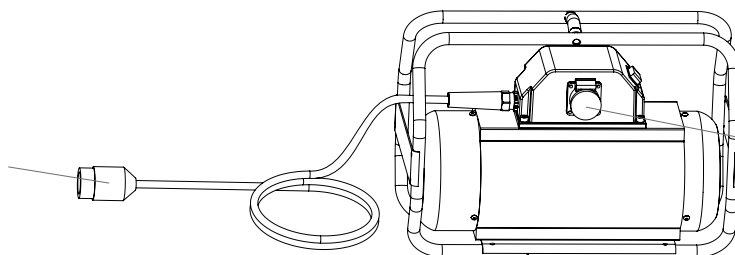
LONG LIFE
OPTIMUM COOLING



OLI

CM - Frequency and voltage converters

BLUE: single-phase
RED: three-phase



Sockets



CMM 15



CMM 25, CMT 25



CMT 35



CMT 55, CMT 85

MODEL	FRAME	OUTLETS	SUPPLY ELECTRIC CABLE	WEIGHT	INPUT			OUTPUT		
					VOLTAGE	CURRENT	POWER	VOLTAGE	CURRENT	POWER
	Type	n°	m	kg	V	A	kW	Frequency	A	kVA
CMM 15	Handle	1	3.5	25	230V, 1ph, 50Hz	6	1.1	42V ± 10% 3ph 200Hz	14	1
CMM 25	Frame	2	3.5	34		10	1.8		25	1.8
CMT 25	Frame	2	3.5	33	400V 3ph 50Hz	5	2.8		25	1.8
CMT 35	Wheeled	3	5.0	41		6	3.3		36	2.6
CMT 55	Wheeled	3	5.0	50		9	5		55	4
CMT 85	Wheeled	4	5.0	56		12	6.6		85	6.2

COMPATIBILITY TABLE (maximum number of vibrators that can be connected)

CMM 15	1x VHN 38	1x VHN 50	1x VHN 59	-	-	-
CMM 25	2x VHN 38	2x VHN 50	2x VHN 59	1x VHP 50	1x VHP 59	1x VHP 65
CMT 25	2x VHN 38	2x VHN 50	2x VHN 59	1x VHP 50	1x VHP 59	1x VHP 65
CMT 35	3x VHN 38	3x VHN 50	3x VHN 59	2x VHP 50	2x VHP 59	1x VHP 65
CMT 55	3x VHN 38	3x VHN 50	3x VHN 59	3x VHP 50	3x VHP 59	2x VHP 65
CMT 85	4x VHN 38	4x VHN 50	4x VHN 59	4x VHP 50	4x VHP 59	3x VHP 65

CM - FREQUENCY AND VOLTAGE CONVERTERS

APPLICATION	Concrete compaction
DESCRIPTION	Frequency and voltage converters equipped with permanent magnets, specifically designed to power high frequency concrete vibrators continuously

FEATURES

DUTY CYCLE	Continuous S1
INSULATION CLASS	F (T° Max = 155°C)
PROTECTION	Overload protection
WORKING TEMPERATURE	From -20°C to +40°C
CONNECTION BOX	Polyamide (nylon + 30% fibre glass), complete with switch and sockets (42V three phase, IP44 protection)
SUPPLY CABLE	Neoprene electric cable H07RN-F with plug
FINISHING	Powder coating (body orange Ral 1007; fan covers, wheels and frame black Ral 9007)
CERTIFICATIONS	Community Directives and subsequent modifications: 2006/42/EC - 2006/95/EC Conformity verified according to the standard documents IEC 60034-1, IEC 60745-1, UNI EN ISO 12100
MORE	Smooth and robust cast aluminium body Forced ventilation



High frequency internal vibrators with built-in converter

On construction sites, during the consolidation of the concrete, a light, flexible and easy-to-use tool is often required, which **can be connected directly to the common, single-phase power lines** (110/230 Volt, 50/60 Hz).

In order to solve this necessity, the **EW0** range has been developed: **high-frequency immersion vibrators equipped with an integrated electronic frequency converter** capable of transforming the single-phase input voltage (230 V, 50/60 Hz) into the three-phase voltage (230 V, 200 Hz) necessary to obtain 12,000 vpm.

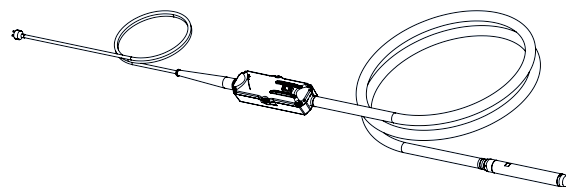
Compared to the common vibrating needles powered by electromechanical converters, the EW0 has several advantages:

- they are **light and flexible**;
- the constant output frequency maintains the maximum centrifugal force and thus a **high and constant performance**;
- there is **protection** against short circuits, excessive temperature, voltage and current above or below the nominal values.



Benefits

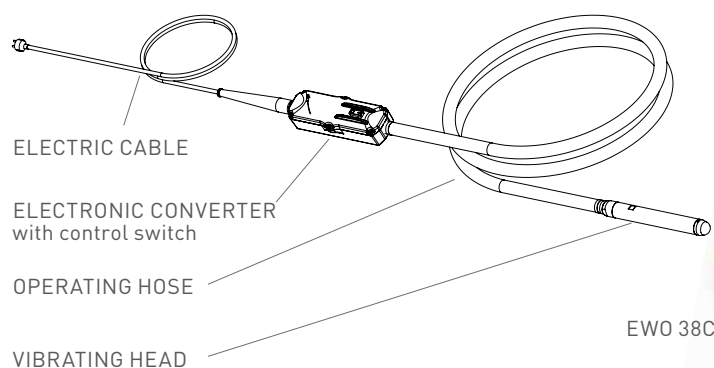
- Reliable
- Safe & easy to handle
- No overheating
- Easy maintenance



COMPACT SOLUTION



EWO – High frequency internal vibrators with built-in converter



EWO 50C
EWO 59C
EWO 65C

EWO 38C



MODEL	HEAD DIAMETER	HEAD LENGTH	HEAD WEIGHT	TOTAL WEIGHT*	CF	RATED CURRENT**	RATED POWER [42V]	ACTION DIAMETER***	AMPLITUDE	NOISE LEVEL	COMPACTION POWER***
	mm	mm	kg	kg	N	A	kW	cm	mm	DB A	m3/h
EWO 38C	38	404	2.4	14.5	1,700	1.5	0.5	45	1.8	70	20
EWO 50C	50	468	5.2	20	3,760	2.7	0.9	70	2.1	76	40
EWO 59C	59	499	8.2	22.8	5,640	3.0	1.1	90	2.4	79	45
EWO 65C	65	484	9.4	24.8	7,330	4.5	1.3	110	2.6	79	50

* Packaging included

** Refer to centrifugal force for amperage assessment

*** Measurements vary according to concrete quality and thickness

	Input Voltage	Input Frequency	Input Amperage
Converter	230V +10% -15% 1ph	50/60Hz ± 5%	5.5 A

EWO - HIGH FREQUENCY INTERNAL VIBRATORS WITH BUILT-IN CONVERTER

APPLICATION	Concrete compaction
DESCRIPTION	Equipped with compact electronic frequency converters integrated into the supply cable, characterised by high centrifugal forces, constant speeds and high wear resistance

FEATURES

DUTY CYCLE	Continuous S1
INPUT	230V + 10% - 15% 50/60 Hz - 1 ph
NOMINAL FREQUENCY	12.000 vpm
INSULATION CLASS	F (T° max = 155°C)
PROTECTION CLASS	Head protection IP68 Converter protection IP66 The inverter is protected against overload, overvoltage, excess temperature and short circuit. A LED light shows the presence of a fault
WORKING TEMPERATURE	From -20°C to +40°C
HEAD	Equipped with 4 ball bearings greased for life Hardening treatment (EWO 38C), chrome plating (EWO 50C, EWO 59C, EWO 65C)
SWITCH BUILT-IN	Complete with reinforced gasket
PROTECTION HOSE	5m SBR rubber hose with textile reinforcement
SUPPLY CABLE	10m neoprene electric cable H07RN-F with SCHUKO 220V 2P+1T 16A plug
CONVERTER	Sturdy cast aluminium box Ergonomic and lightweight (3 Kg)
INVERTER	Tropicalised and protected against vibration, moisture and shocks with a special resin
FINISHING	Painted orange RAL 1007 (EWO 38C) and chrome plating (EWO 50C - EWO 59C - EWO 65C)
CERTIFICATIONS	Community Directives and subsequent modifications: 2006/42/EC, 2014/30/EU, 2006/95/EC Conformity verified according to the standard documents IEC 60745-1, IEC 60745-2-12, UNI EN ISO 12100
OPTIONS	Rubber cap