



In addition to the operator of the vibrator,

assistant personnel for switch operation

and cable management were required.

«Features

Shoulder style

Integrated battery and inverter. Pad with high cushioning to reduce the load on workers.



Hand switch

Available to check the remaining battery level and to turn on/off the power supply.

Vibrator

25 to 30% lighter than the conventional type. Workabillity improved and centrifugal force increased by 10%.

Inverter

EXEN

Small and lightweight, combined weight of the inverter and the battery is 8.5kg. High airtightness, overcurrent protection function and overheat protection function are installed.



Large capacity power supply of 36V,21Ah.The operation time of the vibrator is 3hours(ECV40A).Built-in protection circuit to prevent overload, overdischarge and overcharge.



«Specifications

Model	Hose (dia.x length)	Output (W)	Voltage (V)	Current (A)	Frequency (Hz)	Head size (dia.x length)	Hose size (dia.x length)	Weight (kg)
ECV40A	1.5	250		8.0		ф43х273	ф33x1,500	4.3
F0\/F0A	1.5	400	25	40.0	200	↓ F 0007	ψ33Χ 1,300	5.5
ECV50A	3.0	400		12.0		ф52x287	ф33х3,000	6.6

	Input				Ou	tput			
Model	Capacity	Voltage	Current	Capacity	Voltage	Current	Frequency	External dimensions	Weight
	(W)	(V)	(A)	(W)	(V)	(A)	(Hz)	(mm)	(kg)
ECV-I5	500	36	14	450	25	12	400	164 x 90 x 55	1.1

Model	Capacity (Ah)	Voltage (V)	Operable time (w/ECV40A/ECV50A)	Charging time	External dimensions (mm)	Weight (kg)
BL36200	21	36	3Hour/2Hour	3Hour	500 x 250 x 115	7.4

^{*}Operable time is a calculated value based on battery capacity and crrent consumption. This will vary depending on the working environment.

Concrete placing work using cordless high-frequency vibrator

Improved safety by no using

You will choose to carry

this type of vibrator.

gasoline engine.

The integrated battery and inverter can be carried on the back without disturbing the movement of both hands of the worker.



In addition!

- Mobility increases by eliminating the need to handle ong cables.
- Improvement of workability improves work quality.
- These improvements reduce the time it takes to prepare and cleanup work.

HV Pendulum internal vibrator

«Features

World standard with High durability

The self-centering bearing provides high durability and stabilized vibration.

Reliability "Japan quality"

The heat treatment applied to the vibrator head increases its hardness and provides long life.

Excellent Usability

Two-layer mesh constituting the hose reduces breakdown during concrete placement.



Pendulum Vibrator

«Specifications

Model	Hose length	Frequency	Overall length	Head (Dia.×L)	Weight
	(m)	(Hz)	(mm)	(mm)	(kg)
HV28ZB			6,559	28x420	14.1 15.2
HV32ZB		158-200	6,562	32x423	
HV38ZB	6	150-200	6,585	38x440	15.2
HV45ZB			6,596	45x451	16.1
HV60ZB		150-200	6,593	60x448	19.1

EXEN HV Series Vibrator Cutaway View



HV Drive unit

«Features

Equipped with CC Robin and Honda engines

«Specifications

Model	Engine type	Output/revolution (kW/min-1)	Weight (kg)
HVE-RFA	Robin CC	0 E / 0 400	25
HVE-FSB	EY20-3D	2.5 / 3,400	22
HVE-RH	Handa OV100	2.8/3,400	25
HVE-HS	Honda GX160	2.0/3,400	22









Submersible pump





Performance curve

«Features

High durability

«Specifications

Equipped with specially designed "Mechanical oil seal" for maximum durability.

Durable cast iron impeller and aluminum alloy casting design body provides long life use.

Hose protection outliners in three places.



EFP80 Pump

Visible

«Beware of imitation!



Beware of imitation!

Revolution

capacity

Make sure that the view through the "VIEWER" has changed like below.







Not visible

High frequency internal vibrator



«Features

Improved working conditions

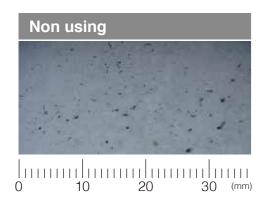
Reduction of vibration transmission to the hands and weight reduction increase working condition.

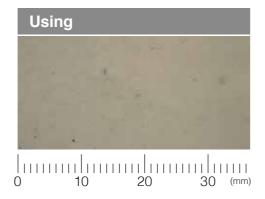
Improved quality of concrete products

High frequency vibration can create a robust, solid and smooth surface.

Various types of vibrators are available

According to various applications, a suitable model can be chosen.





«Specifications

Model	Output (W)	Voltage (V)	Current (A)	Frequency (Hz)	Head (mm)	Hose (mm)	Weight (kg)
HBM30ZX	130		3.5	200/240	31×376	28×6,000	9.6
HBM40VF	250	48	5.5		43×348	33×6,000	12.1
HBM50VF	400	48	9.0	200/240	52×397	26,46,000	16.1
HBM60ZX	500		13.0		61×415	36×6,000	17.5

^{*}Weight includes cabtyre cable

Multifunction vibrators

3 types of heads available



Vibrator for slab pouring

CSV ideal configuration (the short and light head) for slab pouring.



Vibrator with extension pipe

ZXLH (its 1m long extension pipe) is suitable for tall concrete structure.



Model	Output (W)	Voltage (V)	Current (A)	Frequency (Hz)	Head (mm)	Hose (mm)	Weight (kg)
CSV50	250		5.5		52×244	33×1,500	8.5
HBM30ZXLH	130	48	3.5	200/240	31×376	28×4.000	12.1
HBM40VFLH	250		5.5		43×360	20X4,000	13.9

^{*}Weight includs cabtyre cable.

^{*3} types of head shapes are available. (Detail see next page)



Usability

Quick mount design allows one bolt mounting/dismounting.

Resist to steam curing (totally sealed design)

Unnecessary to dismount during steam curing.

Resist long time operation

Special motor design allows long time operation.



«Specifications

Model	Output (W)	Voltage (V)	Current (A)	Frequency (Hz)	Vibration frequency (Hz)	Centrifugal force (kN)	Weight (kg)
HKM55LFA	550	40	12.5	100.040	E0 400	8.80	16.5
HKM75LFA	750	48	17.0	100-240	50-120	11.6	21.3



IP55 Water proof

«Features

Water proof

Aluminum die cast design provides IP55 water proof structure.

Durability

Solid frame and rubber vibration insulator improve the durability.

Reliability

HC series can provide stable output voltage which can provides maximum vibrator performance.

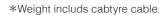








Model		Capacity (kW)	Voltage (V)	Current (A)	Frequency (Hz)	Outlet	Weight (kg)
HC111B	Input	1.3	100	13	50/60	4	0.0
HCITIB	Output	1.03	48	12.4	240	1	9.8
HC113B	Input	1.5	100	15	50/60		10.0
ПСТІЗВ	Output	1.3	48	15	240	2	10.0
LIC116D	Input	2.0	100	20	50/60	۷	10.1
HC116B	Output	1.6	48	19	240		10.1
HC230A	Input	3.8	200	11	50/60	0	1E E
	Output	3.0	48	36	100-240	3	15.5





Frequency adjustable

Adjustable frequency function of H series make precast concrete robust, solid, smooth surface.

Specially designed brush

Specially designed brush for EFC prevents premature damage of the machine.

Cooling device

HAG series combine special fan cooling system to make the machine last longer.





EFC4B





HAG122MH

HAG134MHA

«Specifications

Model		Capacity (kW)	Voltage (V)	Current (A)	Frequency (Hz)	Weight (kg)	Remark
H460(J)	Input	7.9	380	12	50	50	
11460(3)	Output	6.0	48	72	100-240	30	Output
EEC 4B	Motor	4.2	380	7.4	50	70	48V
EFC4B	Generator	4.0	48	48	200	70	
LIACONIT/ I)	Input	12	380	18.2	50	20	
H460NT(J)	Output	9.1	380	15	100-240	32	Output
H4150NT(J)	Input	28	380	42.5	50	20	380V
H4150N1(J)	Output	23	380	34.9	100-240	38	
HAG122MH	Output	2.2	48	26.5	240	36	
HAG IZZIVIH	Engine	Honda GX	(160T2 VXJE	Output(k	W) 3.6/2.9	Outlet 2nos.	Output
HAG134MHA	Output	3.4	48	40.9	240	40	48V
TIAG 134WITA	Engine	Honda G	(200T2 VXJE	Output(k	(W) 4.1/3.7	Outlet 3nos.	



«Features

No need cord and power supply

Easy operation at the construction site.

Lithium battery adoption

Powerful and long life. 20-30 minutes continuous use.

Comfortable operation

Compact, lightweight and ergonomic design absorb vibration for comfortable operation.

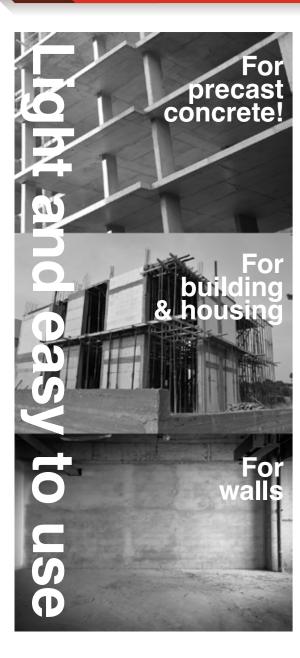








Model	Battery	Run time (approx.min)	Frequency (Hz)	Total length (mm)	Head (mm)	Weight (kg)
C25DS	DC18V 4.0Ah	30	200	767	25×447	4.1
C28D		25		795	25×475	4.2
C28DL		25	200	955	28×635	5.0
C28F 0.6m		20		1,089	28×186	4.2
CKCA		20	125	415	76×113	3.9



Durability

Durable aluminum die cast motor case allows using for last long.

Safety

Dual insulation structure allows safety use.

Comfortable

Double anti-vibration handles design for comfortable operation.



«Specifications

Model	Hose length (m)	Output (W)	Voltage (V)	Current (A)	Frequency (Hz)	Total length (mm)	Head (mm)	Vibrator assembly (mm)	Weight (kg)
	0.4	(V V)	(v)	(71)	1,074	(111111)	820	5.0	
	0.4					1,489		1,235	5.5
E23F	1.3		100	5.0		1,989	23×336	1,735	6.3
	1.8					2,489		2,235	7.1
	0.6	280	110	4.5	220-280	1,078	00.400	824	5.0
FOOED	1.0					1,482		1,228	5.6
E28FP	1.5		115	4.3		1,982	28×186	1,728	6.4
	2.0					2,482		2,228	7.2
	0.6		200 2.5	2.5		1,079	32×187	825	5.2
E32FP	1.0					1,483		1,229	5.9
LJZI F	1.5		220	2.3		1,983		1,729	6.7
	2.0				210-270	2,483		2,229	7.4
	0.6		230	2.2	210-210	1,079		825	5.6
E38FP	1.0					1,483	38×187	1,229	6.2
L301 F	1.5		240	2.1		1,983		1,729	7.0
	2.0					2,483		2,229	7.8



«Features

Surface finish (E32DH, E32DP, E32DPS, EKCA)

Extremely unique configuration vibrators provide smooth surface finish of concrete.

Easy operation

Simply insert along the wall of the concrete mold. (E32DH,E32DP,E32DPS) Simply push against the outside of the mold (EKCA)

Usability

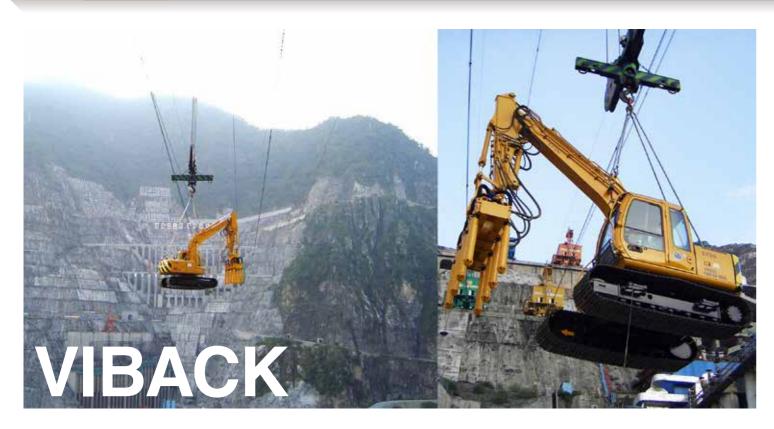
Hard shaft type vibrators (E-DS,E-D,E-DL) are easy to insert to the target point.

•									
Model	Output	Voltage	Current	Frequency	Total length	Head	Vibrator assembly	Weight	
	(W)		(A)	(Hz)	(mm)	(mm)	(mm)	(kg)	
E25DS		100	5.0	235-285	756	25×447	447	4.9	
E23D				233-263	865	23×556	556	4.9	
E28D		110	4.5	220-270	784	28×475	475	5.0	
E32D		115	4.3	200-250	807	32×498	498	5.6	
E23DL		110	4.0	235-285	1,009	23×700	700	5.2	
E28DL	280	200	2.5	220-270	1,015	28×706	706	5.8	
E32DL			000	0.0	200-250	1,036	28×727	727	6.3
E32DH		220	2.3	225-275	1,070	50×550	761	5.6	
E32DP		230	2.2	225-215	1,138	300×400	829	7.5	
E32DPS				205-280	1,739	120×1219	1,430	7.8	
EKCA		240	2.1	160-200	404	76×113	95	4.7	





Dam construction vibrator "VIBACK"





For compacting mass concrete

Front assembly is developed for compacting mass concrete for hydropower dam.

Our Front assembly called "Viback VB-AK series" have many delivery records in the world.

Reduce labor cost

Vibrator front assembly dedicates reducing labor cost.

It has 4-8 numbers of vibrators HIB150HDL, and is used by mounted on the excavator.

The HIB150HDL vibrators generates powerful vibration which places concrete of 25 cbm/h. (per one vibrator)

It reduces 35% labor cost compared with handheld vibrators.

High durability and easy maintenance

Heat-treated ductile cast iron tip provides excellent wear resistance.

Also, at the time of repair it is also possible to replace only the tip.



Front assembly VB-AK series

Model	Number of vibrator	Concrete compacting ability (m³./h)	Excavator class (t)	Oil flow for vibrator at 18MPa (L/min)	Rounding	Weight (kg)
VB-70AK4F	4	100	6-8	60	Not available	620
VB-70AK4R	6	100	0-0	00		780
VB-130AK6R	U	150	12-13	110	Available	1200
VB-130AK8R	8	200	12-13	145		1400



HIB-100



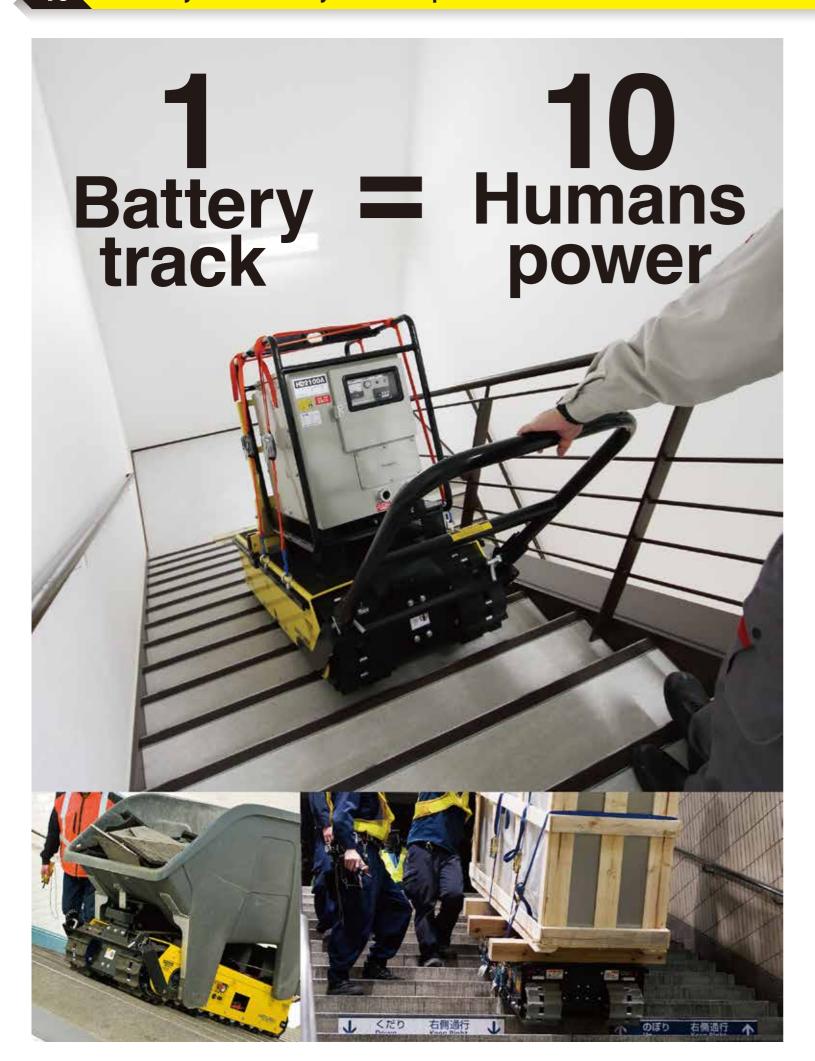








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Model	Frequency (Hz)	Centrifugal force (kN)	Normal pressure (MPa)	Oil flow ratey (L/min)	Head dia.xLength (mm)	Effective range (m)	Weight (kg)		
HIB150HDL	117-133	13.6-17.8	20.6	14-16	150x850	1	68		
Model	Output (W)	Voltage (V)	Current (A)	Frequency (Hz)	Centrifugal force (kN)	Length (mm)	Head dia.xlength (mm)	Effective range (mm)	Weight (kg)
HIB100A	1,500	200	7.5	120/125	8.83-9.56	924	101×664	0.8	41
Model		Capacity (KVA)	Voltage (V)	Current (A)	Frequency (Hz)	Weight (kg)	Number of vibrators (HIB100A)		
HD2100A	Input Output	13 10	200	38 29	50/60 125	173	4		
Model	Voltage (V)	Permissik	ole current o	of breaker	Weight (kg)	Number of vibrators (HIB100A)			
HIB-BSA	200	12			21	4			





Powerful carrying capacity

The loadable weight on the flat land is 1ton, and on the slope and stairs 500kg.

Labor cost

Reduce the number of workers.

Battery powered vehicle

Environmentally-friendly. No exhaust gas.



«OPTION & ACCESSORIES







«Specifications

				Brake	Load weight(kg)		Moving speed(m/min)		Operating	Max	
Model	Truck part size	Weight (kg)	Battery	function	Flat land	Slope stair	Max speed	Slow speed	time	gradability	
TT-47	1,207×762×364	345	24V	no 24V		272	13.4		3h	40°	
TT-66	1,651×762×549	443			1000	500	10.4	6.7	OH	40	
TT-66HS	1,001x702x049	477	477 (1	(12Vx2)	VAC	1000	300	50	0.7	1.5h	40° NOT USE
TT-72CHS	1,835×764×549	583		yes		725	50		1-2h	for staircase	

*Common spec

Controller (wired/wireless), battery level indication, hour meter, operation indication lamp, buzzer during operation, angle sensor.





Just push it

Just push the handle to sweep. No engine.

Wide product range to fit various conditions

Five kinds of sweepers provide good sweeping performance in various conditions.

Battery operated brush (ES-B770 only)

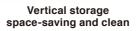
Due to adopting battery-powered brush, ES-B770 is much easier to push. Battery: 3 hours operating time. 12V 12Ah.

«Specifications

Model	ES-2RA	ES-390J	ES-550A	ES-770	ES-B770
Sweeping width (cm)	71.5	39	55	77	77
Sweeping performance (m³/h)	2,500	1,360	1,920	2,690	3,230
Dirt container capacity (L)	20	1.6	20	50	50
Weight (kg)	27	7.2	7.2	13	21









Sealing lip & filter keep the dust in the machine

Brush down holder



& side roller for easy sweeping along curbs and walls



Rush height adjustment
ensure optimal cleaning performance
on various types of surface







ES-390J

390J ES-390J BOX