

CONSTRUCTION EQUIPMENT



- **TAMPING RAMMER**
- COMPACTOR
- **VIBRATION ROLLER**
- **CUTTER & BLADE**
- CONCRETE VIBRATOR
- **SPECIAL CONSTRUCTION EQUIPMENT**

MIKASA researches, develops, and manufactures compact construction machinery, including our main product, the Tamping Rammer, in Japan, and sells our products worldwide.



We aim to contribute to people and societies around the world through interactive communication and creating bonds with our customers, "one and only" technology and productivity, development and design that are considerate of the earth's environment – and harmony among these principles.

MIKASA SANGYO Co.,Ltd.

Hironari Kyoya

Global Network

The MIKASA brand is widely recognized on a global basis. Our brand image established over many years of marketing activity is "reliable, trustworthy, high quality." Our solid partnership

with agencies and dealers in countries over the world, and the bond of our network, is our pride and is continuing to expand today.





Reliable Support Structure

MIKASA believes nothing is more important than faithfully responding to our customers. As such, it is also one of our strengths. We endeavor to communicate honestly with our customers and partners, and to reflect feedback in every process of our work cycle, from the designing stage to





backup services after products are sold. The Web search function for machinery parts, sales training programs, and service sessions are just some examples of feedback reflected.

Unique Technology and Productivity

MIKASA has worked diligently toward developing "one and only" innovative technologies that respond to changing times and diversifying needs. The new MTX-Series product line is the embodiment of our material and immaterial knowhow. The quality of 100% made-by-Japan products manufactured in ISO14001 certified factories, where there is no compromise in maintaining high levels of improvement, is the base of our reliability.







Environment-conscious

MIKASA recognizes a growing need for harmony with the earth's environment. We aim to contribute to society not only with design concepts that minimize the burden on people and the

earth, but also with the spirit of "Think, HARMONY" which takes into consideration what is best overall – for humans, machines and society.





Company History with continuous growth

1937	The first trading company "Mikasa Trade Shokai" is
	founded to import machine tools.

The company name is altered to "Mikasa Sangyo Co., Ltd."

1961 Tamping Rammer model MTR-60 is manufactured for the first time in Japan.

Mid 60' Export to each country becomes active.

1986 The first entry to BAUMA exhibition.

2002 Shanghai Mikasa sales company is founded in China.

2007 ISO 14001 certification is acquired. 70th Anniversary

2008 Mikasa new logo color.

2012 Mikasa Vietnam Co., Ltd. was established as local corporation (Manufacturing Base) in Vietnam.







Mikasa Vietnam Co., Ltd.



Tamping Rammer

- Outstanding body balance maximizes work efficiency and minimizes operator's fatigue
- Ergonomic, streamlined, eye appealing design
- Meticulous attention to safety and operator's comfort
- Fewer frequent maintenance cycles in routine operation!

DESIGN "Against predictability"

Three dimensional CAD aided design has let to a new worldwide industry first and unique design of reinforced plastic covers shrouding the upper structure of the MTX rammer to give it form, yet never interfering with functionality or the outstanding body balance.

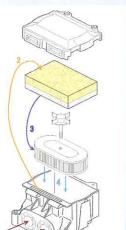
MTX-70

TECHNOLOGY Technological evolution reached new dimensions

Mikasa



is incorporated in the ergonomic design equipped with a line filter installed between the fuel tank and environmentally friendly diaphragm carburetor acting as a double-filter system.



Handle roll bar

A new more rigid material allows the rammer to be loaded into pick up trucks using the handle roll bar.



A completely redesigned large, twin cyclone air cleaner has 3 times the dust holding capacity (DHC) of previous designs and significantly will increase engine life.

Foot assembly

A patented process of forming a one piece pressed foot assembly has been improved and new longer durability is achieved for the foot even during the severe operation on previously compacted areas.



Original Hour Meter (hours of operation) and Tachometer (engine rpm) as standard



Throttle lever

The newly designed throttle lever interlocks with the fuel cock and engine stop switch, enabling operation idling and stopping by one lever operation.





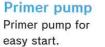
Handle

The new handle is an integrate design element of the HAV system and features a new safety pin design that prevents handle detachment in cause of major damage.



The engine side covers resist shock and guard the engine and protect the recoil starter.







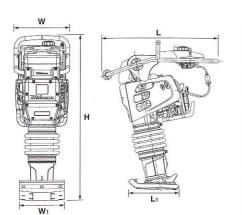




Tamping Rammer

MTX-60-70-80











MTX Line up

Engine	Honda:GX100 gasoline max.output 2.1kW (2.9PS)		Subaru:ER1 max.output 2.		Subaru:EH12 gasoline max.output 2,6kW (3.5PS)		
Model	Diaphargm Carb.	Float Carb.	Diaphargm Carb.	Float Carb.	Diaphargm Carb.	Float Carb.	
MTX-60	MTX-60E	MTX-60FE	MTX-60ER	MTX-60FER	-	=	
MTX-70	MTX-70E	MTX-70FE	MTX-70ER	MTX-70FER	-	S 	
MTX-80	-	Ε	MTX-80ER	MTX-80FER	-		
MTX-80	-	7 <u>—</u> 3	=	240	MTX-80E	MTX-80FE	

MTX / Specifications

model	weight	dimensions	plate size	jumping stroke	impact force	impact number per min.	fuel tank capacity (lits)
MTX-60	64kg	H: 1,025mm W: 350mm L: 713mm	W1:265mm L1:340mm	50-80mm	13.6kN (1,390kgf)	644-695	2.5
MTX-70	75kg	H: 1,027mm W: 350mm L: 788mm	W1:285mm L1:340mm	50-80mm	14.9kN (1,520kgf)	644-695	2.5
MTX-80	82kg (Subaru:ER12)	H: 1,027mm W: 350mm L: 788mm	W1:285mm L1:340mm	50-80mm	15.6kN (1,590kgf)	645-679	2.5
MTX-80	83kg (Subaru:EH12)	H: 1,027mm W: 365mm L: 788mm	W1:285mm L1:340mm	50-80mm	15.6kN (1,590kgf)	642-679	2.5





Tamping Rammer

MT-55·55L·65H·72FW·84F·76D MTR-40F







Fuel Tank Car



Mikasa Original Throttle level



3 Pre-cleane











model	weight	dimensions	plate size	jumping stroke	impact force	impact number per min.	fuel tank capacity (lits)	power source
MTR-40F	46kg	H: 1,110mm W: 350mm L: 620mm	W1:150mm L1:270mm	40-55mm	5.4kN (550kgf)	644-695	2.0	Subaru EH09-2I max.output 2.1kw(2.8PS) gasoline
MT-55	57kg	H: 1,030mm W: 350mm L: 680mm	W1:265mm L1:340mm	30-70mm	9.8kN (1,000gf)	644-695	2.0	Subaru EH09-2I max.output 2.1kw(2.8PS) gasoline
MT-55L	62kg	H: 1,025mm W: 350mm L: 715mm	W1:265mm L1:340mm	30-70mm	9.8kN (1,000gf)	644-695	2.0	Subaru EH09-2F max.output 2.1kw(2.8PS) gasoline
MT-65H	66kg	H: 1,070mm W: 370mm L: 730mm	W1:285mm L1:340mm	50-80mm	12.7kN (1,300kgf)	644-695	2.0	Honda GX100 max.output 2.1kW(2.9PS) gasoline
MT-72FW	74kg	H: 1,045mm W: 415mm L: 730mm	W1:285mm L1:340mm	50-75mm	13.7kN (1,400kgf)	642-679	2.5	Subaru EH12-20 max.output 2.6kW(3.5PS) gasoline
MT-72FWA	74kg	H: 1,025mm W: 415mm L: 713mm	W1:285mm L1:340mm	40-60mm	11.8kN (1,200kgf)	642-679	2.0	Subaru EH12-2E max.output 2.6kW(3.5PS) gasoline
MT-84F	84kg	H: 1,025mm W: 415mm L: 730mm	W1:285mm L1:340mm	50-80mm	15.7kN (1,600kgf)	660-698	2.5	Subaru EH12-20 max.output 2.6kW(3.5PS) gasoline
MT-76D	82kg	H: 1,010mm W: 410mm L: 740mm	W1:285mm L1:340mm	50-80mm	15.7kN (1,600kgf)	656-698	3.3	Yanmar L48N max. output 3.5kW(4.7PS)

Plate Compactor

MVC-40G·50GB·F60R/H·F70R/H F80R/H·88GE/GH·T90R/H·98D

Features

Environmentally friendly product design.

From the MVC-F60 to the MVC-98D, the series comprises a wide range of products to meet customers needs in a variety of sites.

■ The Mikasa VAS plate compactor range features handles with Mikasa's original vibration absorbing system.

water tank
removable without tools
self-contained water shut-off valve

MVC-F60R/H

Aluminum Die Casting Belt Cover high heat radiation in cover to increase durability of V-belt

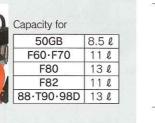
Cover See

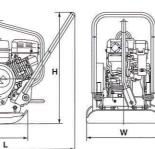
Guard frame protects engine and serves as lift bar

Self cleaning design minimizes sand and gravel build up









Reinforced dual plate structure at rear for extra strength. It gives high durability

MVC / Specifications

model	weight	dimensions	plate size	vibrating frequency	centrifugal force(max)	max.traveling speed(max)	limited gradeability(max)	power source
MVC-40G (Folding Handle)	46kg(47kg)	H: 920mm H1: 590mm L: 855mm	W: 290mm L1: 420mm	103Hz (6,200V.P.M)	7.2kN (730kgf)	25m/min	35%	Subaru EH09-2F gasoline max.output 2.1kw(2.8PS)
MVC-50GB (Folding Handle) <folding <br="" handle="">water tank></folding>	59kg (60kg) <67kg>	H: 920mm H1: 545mm L: 865mm <l:925mm></l:925mm>	W: 345mm L1: 460mm	97Hz (5,800V.P.M)	9.8kN (1,000kgf)	25m/min	35%	Subaru EX13D gasoline max.output 3.2kw(4.3PS)
MVC-F60R MVC-F60H	74kg 73kg	H: 860mm H1: 590mm L: 905mm	W: 350mm L1: 510mm	93Hz (5,600V.P.M)	10.1kN (1,030kgf)	25m/min	35%	Subaru EX13D gasoline max.output 3.2kW(4.3PS) Honda GX120 gasoline max.output 2.6kW(3.5PS)
MVC-F70R MVC-F70H	81kg	H: 860mm H1: 590mm L: 905mm	W: 420mm L1: 510mm	93Hz (5,600V.P.M)	12.0kN (1,220kgf)	25m/min	35%	Subaru EX17D gasoline max.output 4.2kW(5.7PS) Honda GX160 gasoline max.output 3.6kW(4.9PS)

Weight includes weight of machine, lubricants, 50% of fuel and 50% of water in case with water tank option. Features and specifications are subject to change without notification.

MVC-40G: Water tank is not available.



MVC / Specifications

model	weight		plate size	vibrating frequency	centrifugal force(max)	max.traveling speed(max)	limited gradeability(max)	power source
MVC-F80R MVC-F80H	87kg	H: 860mm H1: 570mm L: 915mm	W: 450mm L1: 570mm	93Hz (5,600V.P.M)	13.7kN (1,400kgf)	25m/min	35%	Subaru EX17D gasoline max.output 4.2kW(5.7PS) Honda GX160 gasoline max.output 3.6kW(4.9PS)
MVC-88GE MVC-88GH	96kg	H: 825mm H1: 560mm L: 1,100mm	W: 500mm L1: 525mm	100Hz (6,000V.P.M)	15.0kN (1,530kgf)	25m/min	35%	Subaru EX17D gasoline max.output 4.2kW(5.7PS) Honda GX160 gasoline max.output 3.6kW(4.9PS)
MVC-T90R MVC-T90H	102kg 101kg	H: 825mm H1: 598mm H1: 560mm L: 1,100mm	W: 525mm L1: 500mm	100Hz (6,000V.P.M)	15.0kN (1,530kgf)	25m/min	35%	Subaru EY20-3D gasoline max.output 3.7kW(5.0PS) Honda GX160 gasoline max.output 3.6kW(4.9PS)
MVC-98D	108kg	H: 825mm H1: 650mm L: 1.100mm	W: 500mm L1: 525mm	100Hz (6,000V.P.M)	15.0kN (1,530kgf)	25m/min	35%	Yanmar L48N diesel max.output 3.5kW(4.7PS)

Plate Compactor

MVC-90BG·110DA





Special Compactor for Pavement Compaction

MVB-85·MVC-90RB









MVC·MVB / Specifications

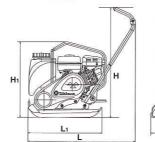
model	weight	dimensions	plate size	vibrating frequency	centrifugal force(max)	max. traveling speed(max)	limited gradeability (max)	power source
MVC-90BG	81kg	H: 720mm H1: 625mm L: 1,160mm	W: 500mm L1: 560mm	97Hz (5,800 V.P.M)	15.2kN (1,550kgf)	25m/min	35%	Subaru EH17-2D gasoline max.output 3.7kW(5.0PS)
MVC-110DA	125kg	H: 925mm H1: 535mm L: 1,130mm	W: 520mm L1: 670mm	97Hz (5,800 V.P.M)	21.6kN (2,200kgf)	25m/min	35%	Subaru DY27-2D diesel max.output 4.4kW(6.0PS)

model	weight	dimensions	roller size	vibrating frequency	centrifugal force(max)	power source
MVB-85	92kg	H: 918mm W: 376mm L: 890mm	(rubber roll) W: 320mm Dia: 73mm	93Hz (5,600 V.P.M)	10.1kN (1,030kgf)	Subaru EH12-2D gasoline max.output 2.6kW(3.5PS)
MVC-90RB	158kg	H: 826mm W: 642mm L: 1,060mm	(rubber roll) W: 556mm Dia: 86mm	97Hz (5,800 V.P.M)	15.2kN (1,550kgf)	Subaru EH17-2D gasoline max.output 3.7kW(5.0PS)

Weight includes weight of machine, lubricants, 50% of fuel and 50% of water in case with water tank option. Features and specifications are subject to change without notification. MVC-90BG.MVC-110DA: Water tank is not available.

VAS Series "Mikasa Original Vibration Absorbing System" Eliminates HAV(Hand Arm Vibration)







	HAV (Hand Arm Vibration) (m/sec2)
MVC-F60R VAS	3.2
MVC-F60H VAS	3.3
MVC-F80R VAS	3.5
MVC-F80H VAS	3.8
MVC-F82R VAS	3.5
MVC-F82H VAS	3.5
MVC-88GE VAS	1.7
MVC-88GH VAS	2.1
MVC-98D VAS	2.3

Remarks: HAV is measured in comply with EU Directive 2002/44/EC. Value is shown as 3 axis averaged. Test course is in comply with EN500-4.

Test course: Crushed gravel 3 axis Min. vibration level

MVC / Specifications

model	weight	dimensions	plate size	vibrating frequency	centrifugal force(max)	max. traveling speed(max)	limited gradeability (max)	power source
MVC-F60R VAS MVC-F60H VAS	79kg 78kg	H: 1,000mm H1: 590mm L: 930mm	W: 350mm L1: 570mm	93Hz (5,600 V.P.M)	10.1kN (1,030kgf)	25m/min	35%	Subaru EX13D gasoline max.output 3.2kW(4.3PS Honda GX120 gasoline max.output 2.6kW(3.5PS
MVC-F80R VAS MVC-F80H VAS	90kg	H: 1,000mm H1: 570mm L: 930mm	W: 450mm L1: 570mm	93Hz (5,600 V.P.M)	13.7kN (1,400kgf)	25m/min	35%	Subaru EX17D gasoline max.output 4.2kW(5.7PS) Honda GX160 gasoline max.output 3.6kW(4.9PS)
MVC-F82R VAS MVC-F82H VAS	90kg	H: 965mm H1: 570mm L: 970m	W: 450mm L1: 570mm	93Hz (5,600 V.P.M)	13.7kN (1,400kgf)	25m/min	35%	Subaru EX17D gasoline max.output 4.2kW(5.7PS Honda GX160 gasoline max.output 3.6kW(4.9PS
MVC-88GE VAS MVC-88GH VAS	99kg	H: 950mm H1: 560mm L: 1,050mm	W: 500mm L1: 525mm	100Hz (6,000 V.P.M)	15.0kN (1,530kgf)	25m/min	35%	Subaru EX17D gasoline max.output 4.2kW(5.7PS Honda GX160 gasoline max.output 3.6kW(4.9PS
MVC-98D VAS	111kg	H: 950mm H1: 650mm L: 1,050mm	W: 500mm L1: 525mm	100Hz (6,000 V.P.M)	15.0kN (1,530kgf)	25m/min	35%	Yanmar L48N diesel max.output 3.5kW(4.7PS)



Reversible Compactor

MVH-306DSC-PAS-406DSC-PAS



*Because compaction assist mechanism is equipped, the level of compaction is shown real-time by LED lamps. Operator is assisted by this visual compaction level indicator.

Compaction sensor (Compas) Features

Features

- ■Compaction sensor (Compas) can check the rigidity of the soil quantitatively by the acceleration sensor mounted on the vibrating part, and this makes compaction work more efficient.
- The number of compactions required to get the target soil hardness is clarified, thus the work time can be saved.



Green lamp flashing: Vibration is



- Only green and red lamps lighted:Bad
- ground or soft ground
 Only green and red lamps flashing:Failure such as disconnection



 Example of lighted LED lamps Red:Compaction limit

*Red lamp indicating compaction limit does not necessarily light up. Depending on the condition of the soil, the target ground hardness may be reached before the red lamp lights up.



Clayish soil

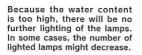




Bad ground or soft ground









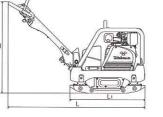
Compaction limit Red lamp:Lighted



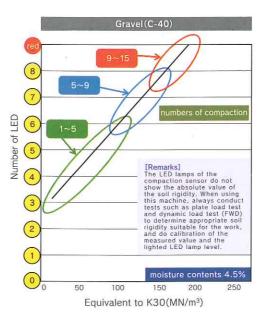
MVH-406DSC-PAS



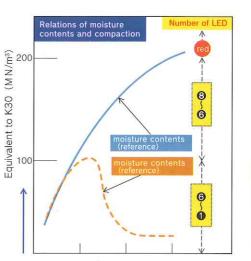








* product features MVH-306DSC-PAS





Relationship between soil rigidity and LED lamps

- •The number of lighted LED lamps is in proportional relation with the soil rigidity.

 •If water content is high, the
- soil rigidity might get low even when compactions are repeated, and with that, the number of lighted LED lamps will also decrease.

MVH / Specifications

model	weight	dimensions	plate size	vibrating frequency	centrifugal force(max)	max. traveling speed	limited gradeability (max)	power source
MVH-306DSC- PAS	330kg	H: 970mm L: 1,570mm	W: 445mm (595mm) (745mm) L1: 860mm	73Hz (4,400 V.P.M)	45.0kN (4,600kgf)	23m/min	35%	Yanmar L70N max. output 4.9kW(6.7PS) diesel engine electric start
MVH-406DSC- PAS	410kg	H: 930mm L: 1,610mm	W: 500mm (650mm) (800mm) L1: 900mm	73Hz (4,400 V.P.M)	50.0kN (5,100kgf)	23m/min	35%	Yanmar L100N max. output 7.4kW(10.0PS) diesel engine electric start

Reversible **Compactor**

MVH-R60·120GR/GH·150GR/GH/D 206GH/D/DS·306DS/DSC·406DS/DSC·502DSB

Features











Features

- Mikasa's reversible compactors range from light to
- Light weights models including the R60, the lightest compactor available anywhere, and the MVH-120, our best-selling compactor, are ideal for compacting trenches and finishing surfaces. (MVH-R60 through MVH-150)
- Models equipped with gasoline engines range from light to heavy duty. Choose Honda or Subaru engines. (MVH-R60 through MVH-406GH)

strenath

Heavy duty models are ideal for compacting foundations. (MVH-206 through MVH-502)



MVH / Specifications

model	weight	dimensions	plate size	vibrating frequency	centrifugal force(max)	max. traveling speed	limited gradeability (max)	power source
MVH-R60	68kg 69kg	H: 880mm L: 886mm	W: 350mm L1: 480mm	100Hz (6,000 V.P.M)	15.0kN (1,530kgf)	25m/min	35%	Honda GX120 gasoline max.output 2.6kW(3.5PS) Subaru EX13D gasoline max.output 3.2kW(4.3PS)
MVH-120GR MVH-120GH	118kg 116kg	H: 900mm L: 1,030mm	W: 400mm L1: 585mm	100Hz (6,000 V.P.M)	22.5kN (2,300kgf)	23m/min	35%	Subaru EH17-2D gasoline max.output 3.7kW(5.0PS) Honda GX160 gasoline max.output 3.6kW(4.9PS)
MVH-150GR MVH-150GH	164kg 150kg	H: 920mm L: 1,130mm	W: 430mm L1: 700mm	90Hz (5,400 V.P.M)	27.0kN (2,750kgf)	25m/min	35%	Subaru EH25-2D gasoline max.output 5.9kW(8.0PS) Honda GX200 gasoline max.output 4.1kW(5.6PS)
MVH-150D	150kg	H: 920mm L: 1,130mm	W: 430mm L1: 700mm	90Hz (5,400 V.P.M)	27.0kN (2,750kgf)	25m/min	35%	Subaru DY23-2D diesel max.output 3.7kW(5.0PS)
MVH-206GH	208kg	H: 1,100mm L: 1,380mm	W: 500mm L1: 720mm	87Hz (5,200 V.P.M)	35kN (3,570kgf)	23m/min	35%	Honda GX240 gasoline max.output 5.3kW(7.2PS)
MVH-206D(S)	224kg (238kg)	H: 1,100mm L: 1,380mm	W: 500mm L1: 720mm	87Hz (5,200 V.P.M)	35kN (3,570kgf)	23m/min	35%	Yanmar L70N diesel (electric start) max. output 4.9kW(6.7PS)

Weight includes weight of machine, lubricants, 50% of fuel and 50% of water in case with water tank option. Features and specifications are subject to change without notification.

MVH-306/406/502)





















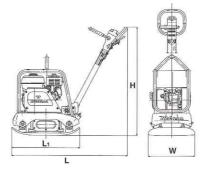
MVH-406DS/DSC



















MVH /	Specifications
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model	weight	dimensions	plate size	vibrating frequency	centrifugal force(max)	max. traveling speed	limited gradeability (max)	power source
MVH-306DS/ DSC	330kg	H: 970mm L: 1,570mm	W: 445mm (595mm) (745mm) L1: 860mm	73Hz (4,400 V.P.M)	45.0kN (4,600kgf)	23m/min	35%	Yanmar L70N diesel (electric start) max. output 4.9kW(6.7PS)
MVH-406DS/ DSC	410kg	H: 930mm L: 1,610mm	W: 500mm (650mm) (800mm) L1: 900mm	73Hz (4,400 V.P.M)	50.0kN (5,100kgf)	23m/min	35%	Yanmar L100N diesel (electric start) max. output 7.4kW(10.0PS)
MVH-502DSB	550kg	H: 950mm L: 1,680mm	W: 550mm (700mm) (850mm) L1: 900mm	67Hz (4,000 V.P.M)	61.7kN (6,300kgf)	23m/min	35%	Hazt 1D81S diesel (electric start) max. output 9.7kW(13.2PS)

Weight includes weight of machine, lubricants, 50% of fuel and 50% of water in case with water tank option.

Reversible Compactor

MVH-120GHVAS·150GHVAS/D/DVAS·207GH/D/DS 306DSC/GH·406DSC/GH·502DSB

Features

■ Models equipped with diesel engines are silent-type reversible compactors installed with sound absorbing materials in the guard frame. (MVH-150D through MVH-502DSB)

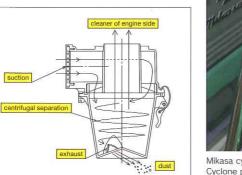
■ All models comply with the EU Noise Emission Directive 2005/88/EC (2004/14/EC)



Cyclone makes

·Approx. 4 times DHC (Dust Holding Capacity) against single cleaner

- ·Blow out coarse dust automatically with centrifugal effect (see fig)
- ·Reduce clogging at main cleaner
- ·Finally extend maintenance cycle dramatically !





Mikasa cyclone series(MVH-207 ~ 406 with Yanmar diesel engine) Cyclone pre-cleaner increase filterability dramatically! Most suitable for harsh environment



MVH / Specifications

model	weight	dimensions	plate size	vibrating frequency	centrifugal force(max)	max.traveling speed	limited gradeability (max)	power source
MVH-120GH VAS	118kg	H: 990mm L: 1,130mm	W: 400mm L1: 585mm	100Hz (6,000V.P.M)	22.5kN (2,300kgf)	23m/min	35%	Honda GX160 max.output 3.6kW(4.9PS)
MVH-150GH VAS	152kg	H: 920mm L: 1,130mm	W: 430mm L1: 700mm	90Hz (5,400V.P.M)	27.0kN (2,750kgf)	25m/min	35%	Honda GX200 max.output 4.1kW(5.6PS)
MVH-150D (MVH-150D VAS)	158kg (160kg)	H: 920mm L: 1,130mm	W: 430mm L1: 700mm	90Hz (5,400V.P.M)	27.0kN (2,750kgf)	25m/min	35%	Yanmar L48N (electric start) max.output 3.5kW(4.7PS)
MVH-207GH	214kg	H: 1,100mm L: 1,380mm	W: 600mm L1: 720mm	87Hz (5,200V.P.M)	35kN (3,570kgf)	22m/min	35%	Honda GX240 gasoline max. output 5.3kW(7.2PS)
MVH-207D(S)	230kg (244kg)	H: 1,100mm L: 1,380mm	W: 600mm L1: 720mm	84Hz (5,040V.P.M)	32.9kN (3,350kgf)	22m/min	35%	Yanmar L70N diesel (electric start) max. output 4.9kW(6.7PS)
MVH-306DSC	346kg	H: 970mm L: 1,570mm	W: 445mm (595mm) (745mm) L1: 860mm	73Hz (4,400V.P.M)	45.0kN (4,600kgf)	23m/min	35%	Yanmar L70N diesel (electric start) max. output 4.9kW(6.7PS)
MVH-306GH	308kg	H: 970mm L: 1,570mm	W: 445mm (595mm) (745mm) L1: 860mm	73Hz (4,400V.P.M)	45.0kN (4,600kgf)	23m/min	35%	Honda GX270 gasoline max.output 6.0kW(8.2PS)
MVH-406DSC	430kg	H: 930mm L: 1,610mm	W: 500mm (650mm) (800mm) L1: 900mm	73Hz (4,400V.P.M)	50.0kN (5,100kgf)	23m/min	35%	Yanmar L100N diesel (electric start) max. output 7.4kW(10.0PS
MVH-406GH	370kg	H: 930mm L: 1,610mm	W: 500mm (650mm) (800mm) L1: 900mm	77Hz (4,600V.P.M)	55.0kN (5,600kgf)	24m/min	35%	Honda GX390 gasoline max. output 8.2kW(11.1PS
MVH-502DSB	560kg	H: 950mm L: 1,680mm	W: 550mm (700mm) (850mm) L1: 900mm	67Hz (4,000V.P.M)	61.7kN (6,300kgf)	23m/min	35%	Hazt 1D81S diesel (electric start) max. output 9.7kW(13.2PS

Vibration Roller

MRH-600DSA·700DSA·700DSCA

Features

- Mikasa vibration rollers use hydraulic pump and hydraulic motor drive systems for precise navigation and easy maintenance.
- Standard equipment: Front safety bumpers, working of light, plastic water tank, center cover, dead-man safety lever, hydraulic oil and fuel gauge and double vibration system.(MRH-700)



Features









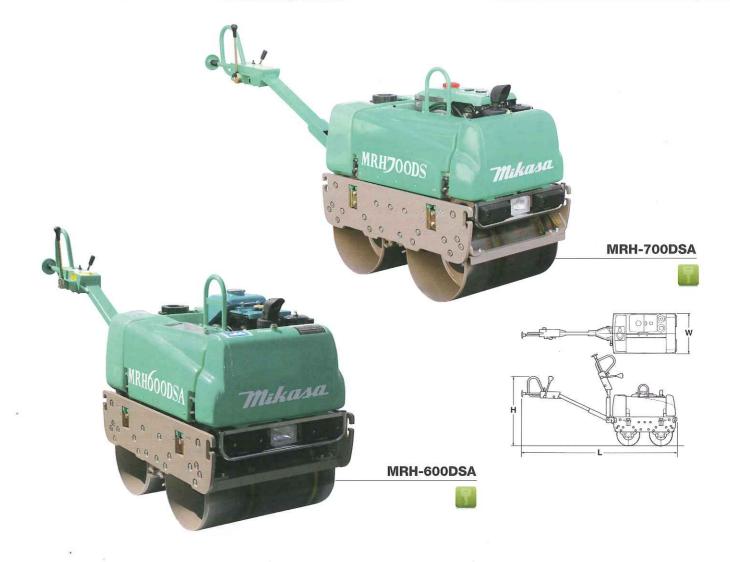
electromagnetic clutch for vibration switch

hydraulic oil level indicator



fuel gauge indicator



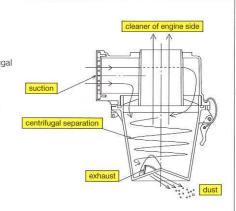


For only MRH-700DSCA (with Yanmar air cooled diesel engine)



Cyclone pre-cleaner increase filterability dramatically ! Most suitable for harsh environment

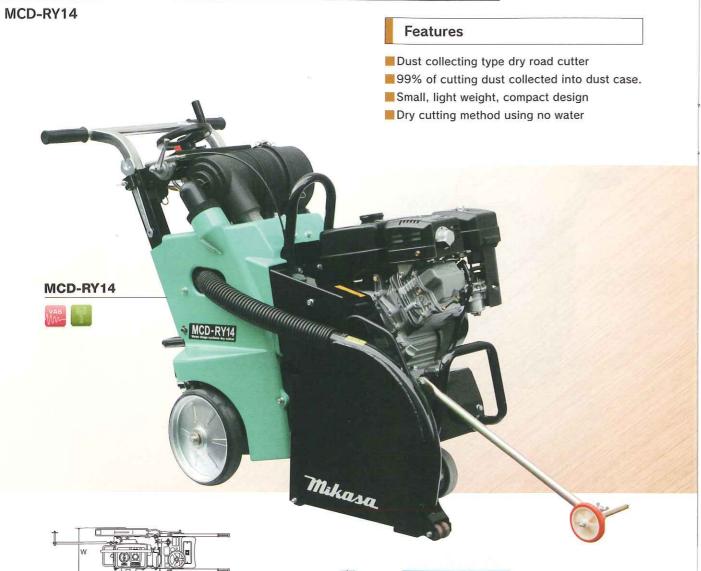
- -Approx. 4 times DHC (Dust Holding Capacity) against single cleaner
- ·Blow out coarse dust automatically with centrifugal effect (see fig)
- Reduce clogging at main cleaner
- ·Finally extend maintenance cycle dramatically !



MRH / Specifications

model	weight		drum size	vibrating frequency	centrifugal force	traveling speed	limited gradeability	water tank	power source	
MRH-600DSA (water cooled)	620kg	H: 1,130mm W: 692mm L: 2,620mm	dia: 355mm width: 650mm	55Hz (3,300V.P.M)	10.8kN (1,100kgf)	0-3km/h	35%	40ltrs	Kubota diesel EA330 electric start max.output 4.6kW(6.3PS)	
MRH-700DSA (water cooled)	730kg	H: 1,170mm W: 692mm L: 2,670mm	dia: 406mm width: 650mm		23.5kN (2,400kgf)		0-3km/h 35%	40ltrs	Yanmar diesel TF70V-EKMK electric start max.output 5.5kW(7.5PS)	
MRH-700DSCA (air cooled)	700kg	H: 1,170mm W: 692mm L: 2,670mm	dia: 406mm width: 650mm	55Hz (3,300V.P.M)	23.5kN (2,400kgf)	0-3km/h	35%	40ltrs	Yanmar diesel L100N electric start max.output 7.4kW(10.0PS	

Dust collecting type dry cutter





Dry

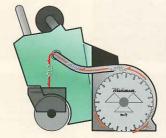
MD-DA: For Cutting Asphalt

Dry Blade(Asphalt only)(white)

model	blade size	thickness	arborsize	
12"MD-DA	12"	3.4mm	27mm	
14"MD-DA	14"	3.4mm	27mm	

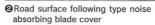
with dry cutting and dust suction system

Up-cut method is adopted for blade (special blade for dry asphalt) rotation to efficiently suck in and collect cutting dust into dust case.







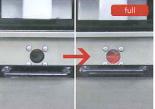






◆ Warning buzzer for dust collection bag full ※2





∂ Dust case level gauge ※ 2



One-touch parking brake



Anti-vibration handle



X 1 Cutting dust is collected into dust case.

X 2 Dust case full warning by LED lamp, buzzer and level gauge.

MCD / Specifications

model	weight	dimensions	blade size	cutting depth	arbor size	adjusting for cutting depth	cooling system	power source
MCD-RY14	142kg	H: 970mm W: 610mm L: 1,679mm	319mm(12") 370mm(14")	50mm(12") 100mm(14")	27mm	manual lifting screw system	centrifugal injection type	Subaru EX27DS gasoline max.output 6.6kw(9.0PS) electric start

Concrete Cutter

MCD-012A·L14·214V·218CEH



Features

- Mikasa concrete cutters cut to depths ranging from 70 mm to 170 mm.
- Attachable blade sizes span from 10" (254 mm) to 18" (457 mm).
- A variety of models are available to accommodate use at any job sites.
- Compact, light duty walk-behind models for easy loading and unloading.
- Semi-self-propelling, duty models are also

MCD-218CEH with hour & tacho meter

















double water pipe for cooling both sides

MCD / Specifications

model	weight	dimensions	blade size	cutting depth	arbor size	adjusting for cutting depth	cooling system	water tank capacity (lits)	power :	source
MCD-012	58kg	H: 746mm W: 435mm L: 761mm	254mm(10") ~ 305mm(12")	70mm ~ 100mm	27mm	manual lifting screw system	centrifugal injection type	14	Subaru EH17-2D max.output 3.7kw(5.0PS)	
MCD-L14	100kg	H: 747mm W: 527mm L: 1,650mm	254mm(10") ~ 356mm(14")	70mm ~ 120mm	27mm	manual lifting screw system	centrifugal injection type	26	Subaru EH25-2D max.output 5.9kw(8.0PS)	
MCD-214V	149kg	H: 981mm W: 585mm L: 1,990mm	254mm(10") ~ 356mm(14")	70mm ~ 120mm	27mm	manual lifting screw system	centrifugal injection type	45	Subaru E max.o 5.9kw(8	utput
MCD-218VDX MCD-218CEH	169kg 184kg	H: 981mm W: 585mm L: 1,990mm	254mm(10") ~ 457mm(18")	70mm ~ 170mm	27mm	manual lifting screw system	centrifugal injection type	45	MCD-218VDX Subaru EH34-2D max.output 8.1kw(11.0PS)	MCD-218CEH Honda GX390 max.output 8.2kw(11.1PS) electric start

Weight includes weight of machine, lubricants, 50% of fuel and 50% of water in case with water tank option. Features and specifications are subject to change without notification



Diamond Blade



Economy MW-HEL: For Cutting Asphalt and Concrete



Standard MW-RAC: For Cutting Asphalt and Concrete



Deluxe MW-DA: For Cutting Asphalt MW-DC: For Cutting Concrete

Economy Diamond Blade(black)

model	blade size	thickness	arborsize
12"MW-HEL	12"	3.0mm	27mm
14"MW-HEL	14"	3.0mm	27mm
16"MW-HEL	16"	3.0mm	27mm
18"MW-HEL	18"	3.0mm	27mm

Standard Diamond Blade(silver)

model	blade size	thickness	arborsize
12"MW-RAC	12"	3.0mm	27mm
14"MW-RAC	14"	3.0mm	27mm
16"MW-RAC	16"	3.0mm	27mm
18"MW-RAC	18"	3.0mm	27mm

Deluxe Diamond Blade(gold)

model	blade size	thickness	arborsize
12"MW-DA/DC	12"	3.0mm	27mm
14"MW-DA/DC	14"	3.0mm	27mm
16"MW-DA/DC	16"	3.0mm	27mm
18"MW-DA/DC	18"	3.0mm	27mm

Tach/Hour Meter

- ·Model "TP-22 TACH / HOUR METER" is MIKASA original tach / hour meter (Engine operating speed and integrating device) for gasoline engine.
- ·When engine operates, it shows rpm (engine revolution per minute), and when engine stop, it shows integrated time of engine. While engine stops, it continuously shows integrated time.
- ·Model "TP-22 TACH / HOUR METER" itself has two different way to use; as hand rpm measuring device by "Clip Cord", and as fixed maintenance / inspection device by "Curl Cord".





CURL CODE



High Cycle Concrete Frequency Vibrator

FX-30E-30RE-40G-40RG-50G-50RG-60E-60RE

Features

- The FX series vibrator equips a powerful and highly efficient motor that does maintain performance even on low-slump concrete.
- Vibration analysis reduces vibrations transmitted to the hand.
- Aluminum die-cast switch box is light and compact yet has excellent





FX / Specifications

model	vib.head dia. x length	rubber hose	voltage	cycle	input (KVA)	amplitude	vibration	cable length	weight(kg) 4m/6m
FX-30E	32 x 396mm	4 or 6m	48V	200/240Hz	0.33	1.8mm	200Hz/240Hz(12,000/14,400V.P.M)	15m	9.1/10.3
FX-40G	43 x 396mm	4 or 6m	48V	200/240Hz	0.49	1.5mm	200Hz/240Hz(12,000/14,400V.P.M)	15m	12.0/13.7
FX-50G	52 x 413mm	4 or 6m	48V	200/240Hz	0.79	1.9mm	200Hz/240Hz(12,000/14,400V.P.M)	15m	14.8/16.5
FX-60E	61 x 485mm	4 or 6m	48V	200/240Hz	1.5	2.0mm	200Hz/240Hz(12,000/14,400V.P.M)	15m	18.0/19.9

Features and specifications are subject to change without notification.

Frequency Generator









FG / Specifications

model	LxWxH (mm)	output(V)	output(A)	output(KVA)	cycle(Hz)	number of outlets	power source	weight(kg)
FG-200V	H: 448mm W: 394mm L: 475mm	48 three phase	22.9	1.9	240	2	Subaru EH12-2D max.output 2.6kW(3.5PS)	34
FG-300VR	H: 530mm W: 455mm L: 580mm	48 three phase	37.2	3.1	240	3	Subaru EH25-2D max.output 5.9kW(8.0PS)	53

Frequency & Voltage Converter





FC / Specifications

model	dimensions	input(V)	input(A)	input(KVA)	input(Hz)	output(V)	output(A)	output(KVA)	output(Hz)	number of outlets	weight(kg)
FC-401	H: 553mm W: 540mm L: 643mm	380 three phase	10.4	6.83	50/60	48	48	4	200-240	3	80

Frequency Inverter





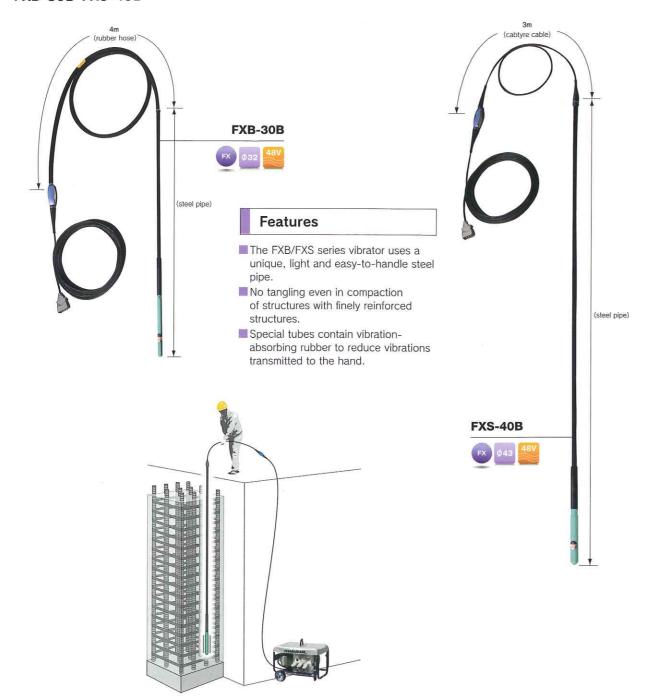
FU·FV / Specifications

model	dimensions	input(V)	input(A)	input(KVA)	input(Hz)	output(V)	output(A)	output(KVA)	output(Hz)	number of outlets	weight(kg)
FU-161	H: 248mm W: 240mm L: 324mm	100 single phase	20	2.0	50/60	48 three phase	19.2	1.6	240	2	8.4
FV-301	H: 248mm W: 325mm L: 324mm	200 three phase	12	4.1	50/60	48 three phase	36.0	3.0	100-240	3	11.5



High Cycle Internal Concrete Vibrator

FXB-30B·FXS-40B



FXB · FXS / Specifications

model	vib.head dia. x length	voltage	cycle	input (KVA)	amplitude	vibration	weight(kg)
FXB-30B	32 x 1,728mm	48V	200/240Hz	0.33	1.8mm	200Hz/240Hz(12,000/14,400V.P.M)	11.2
FXB-40B	43 x 1,792mm	48V	200/240Hz	0.49	1.5mm	200Hz/240Hz(12,000/14,400V.P.M)	15.1
FXS-30B	32 x 2,628mm	48V	200/240Hz	0.4	1.8mm	200Hz/240Hz(12,000/14,400V.P.M)	12.0
FXS-40B	43 x 3,412mm	48V	200/240Hz	0.6	1.5mm	200Hz/240Hz(12,000/14,400V.P.M)	16.8

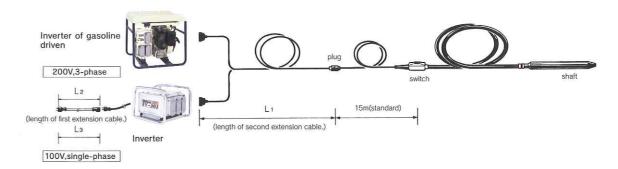
Features and specifications are subject to change without notification.

Utilization Guide for High Cycle Frequency Vibrator

Usable numbers of High Cycle Frequency Vibrators

				X/FXS/FI	D			FJ/FJH						
model	30E (RE)	40G (RG)	50G (RG)	60E (RE)	90	110	130	50	80C	150A	FJ300S	FJH550	FJH750	FJ750A
FU-161	4	3	2	1	i —	-	-	9	8	4	2	1	-	-
FV-301	10	6	3	2	1	1	1	16	15	7	4	2	1	1
FG-200V	6	4	2	1	_	_	_	11	10	5	2	1	1	1
FG-300VR	10	6	3	2	1	1	1	18	16	8	4	2	2	2
FC-401	13	8	5	2	2	1	1	23	21	11	5	3	2	2

Cabtype Cable Selection



The formura of extensionable length

The second extension cable (48V,3-phase)

L1: the length of extension cable (m) C :cross-section area of cabtyre cable (mm²)

A :amperege rating of the vibrator

cable length	len	length of the extensible cable(m)								
cable size (in mm²)	FX-30E (RE)	FX-40G (RG)	FX-50G (RG)	FX-60E (RE)						
3.5	80	50	30	-						
5.5	130	80	50	20						
8	200	120	80	35						
14	350	220	140	70						

model	length of extension cable	cabtype cable size
FX-50G(RG)	50m	5.5mm ²

The first(the side of electric source) extension cable

[200V·3-phase]

L2,3:length of extension cable (m) C :cross-section area of cabtyre cable (mm²)

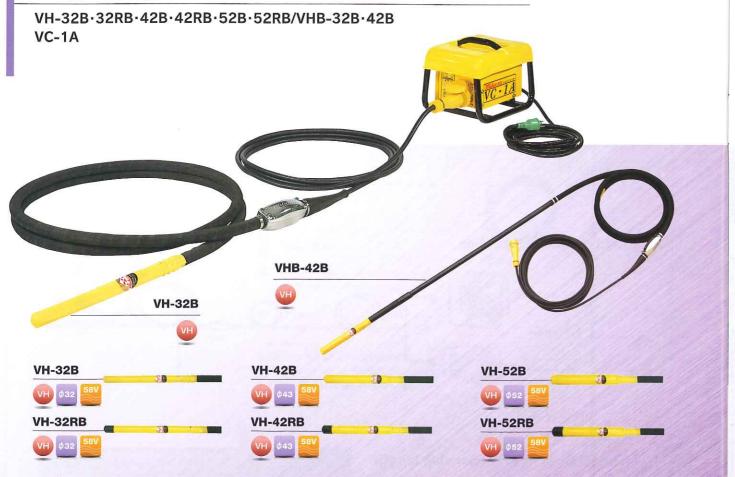
A :amperage rating of the inverter

[100V,single-phas]

Use the cable which allowable current is over the rated output.

cable size	allowable current of standard cable
1,25mm ²	12A
2.0mm ²	17A
3.5mm ²	23A
5.5mm ²	30A
8.0mm ²	40A

Micro-computer Controlled High Cycle Concrete Vibrator





model	vib.head dia. x length	rubber hose	voltage	cycle	input (KVA)	amplitude	vibration	cable length	weight(kg) 4m/6m
VH-32B	32 x 356mm	4 or 6m	58V	400Hz	0.3	1.7mm	200Hz(12,000V.P.M)	15m	8.9/10
VH-42B	43 x 327mm	4 or 6m	58V	400Hz	0.5	2.0mm	200Hz(12,000V.P.M)	15m	10.7/12.2
VH-52B	52 x 347mm	4 or 6m	58V	400Hz	0.7	2.3mm	200Hz(12,000V.P.M)	15m	12.1/13.6
VHB-32B	32 x 1,688mm	(e	58V	400Hz	0.3	1.7mm	200Hz(12,000V.P.M)	-	11
VHB-42B	42 x 1,723mm	12	58V	400Hz	0.5	2.0mm	200Hz(12,000V.P.M)	-	15.6

VC / Specifica	itions										
model	dimensions	input(V)	input(A)	input (KVA)	input(Hz)	output(V)	output(A)	output(KVA)	output(Hz)	number of outlets	weight(kg)
VC-1A	H: 220mm W: 221mm L: 300mm	100 single phase	10	1.0	50/60	58 three phase	7.0	0.7	400	1	5.1

Features and specifications are subject to change without notification.

SPECIFICATIONS

Portable Concrete Vibrator

MGX-23·28·32·38

Weight reduction and improvement of wear resistance were achieved by the use of aluminum die cast for the motor case. Also, double insulation motor that does not require grounding is used for excellent safety.

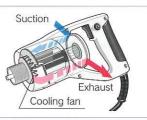


Front surface sealed motor

double insulation Water proof structure Anti-vibration rubb

MGX/MGZ motor

MGS/MGZ motor sucks in air from behind, cooloing inside by letting the air flow through a special path before the air is released to backward. Because there is no ventilation opening on the front cover where mortar tends to splash, entry of mortar can be prevented.



MGX / Specifications

model	vib.head dia. x length	inner shaft dia.	rubber casing dia.	amplitude	vibration	power (single phase)	weight (kg)
MGX-23	23 x 780mm	8mm	20mm	1.2mm	200Hz-258Hz(12,000-15,500V.P.M)	output:280W	4.2
MGX-28	28 x 780mm	8mm	24.6mm	1.8mm	200Hz-258Hz(12,000-15,500V.P.M)	output:280W	4.6
MGX-32	32 x 780mm	8mm	24.6mm	1.9mm	200Hz-258Hz(12,000-15,500V.P.M)	output:280W	4.8
MGX-38	38 x 780mm	8mm	24.6mm	2.0mm	200Hz-258Hz(12,000-15,500V.P.M)	output:280W	5.1

hose length	0.6m (STD)	1m	1.5m	2m
shaft length	780mm	1,180mm	1,680mm	2,180mm



Portable Concrete Vibrator

MGZ-28·32·L28·L32A



MGZ / Specifications

model	vib.head dia. x length	amplitude	vibration	power (single phase)	weight (kg)
MGZ-28	28 x 789mm	1.4mm	200Hz-258Hz(12,000-15,500V.P.M)	output:280W	5.1
MGZ-32	32 x 810mm	1.5mm	200Hz-258Hz(12,000-15,500V.P.M)	output:280W	5.4
MGZ-L28	28 x 1,024mm	2.1mm	200Hz-258Hz(12,000-15,500V.P.M)	output:280W	5.9
MGZ-L32A	32 x 1,030mm	2.1mm	200Hz-258Hz(12,000-15,500V.P.M)	output:280W	6.3



MGZ / Specifications

model	dimensions	vibration board size	vibration	power (single phase)	weight (kg)	
MGZ-K75	492mm x 140mm	75mm x 70mm	200Hz-258Hz(12,000-15,500V.P.M)	output:280W	5.4	
MGZ-F100A	395mm x 78mm	78mm x 100mm	166Hz-200Hz(10,000-12,000V.P.M)	output:280W	5	

model	model vib.head dia. x length		vibration	power (single phase)	weight (kg)	
MGZ-N410	28 x 1,155mm	L: 405 W: 300	200Hz-258Hz(12,000-15,500V.P.M)	output:280W	8.1	
MGZ-S1200	32 x 1,728mm	L: 1,219 W: 120	200Hz-258Hz(12,000-15,500V.P.M)	output:280W	7.6	

Features and specifications are subject to change without notification.

GH Concrete Vibrator

GH-28S·32S·38S·45S·62S·70S/GE-5LE





GH / Specifications

		flexible shaft dia.	rubber hose dia.	rubber hose	amplitude	vibration	shaft set weight (k	
GH-28S	28.5 x 477mm	9.5mm	31mm	4 or 6m	1.4mm	150-208Hz(9,000-12,500V.P.M)	4m 10.6 / 6m 14.7	
GH-32S	32 x 520mm	9.5mm	31mm	4 or 6m	1.8mm	150-208Hz(9,000-12,500V.P.M)	4m 11.2 / 6m 15.1	
GH-38S	38 x 480mm	9.5mm	31mm	4 or 6m	1.8mm	150-208Hz(9,000-12,500V.P.M)	4m 11.9 / 6m 15.7	
GH-45S	45 x 494mm	9.5mm	31mm	4 or 6m	2.0mm	150-208Hz(9,000-12,500V.P.M)	4m 13.3 / 6m 17.4	
GH-62S	62 x 479mm	12.7mm	32 mm	6m	2.4mm	150-208Hz(9,000-12,500V.P.M)	6m 23.5	
GH-70S	72 x 355mm	12.7mm	32 mm	6m	2.3mm	150-208Hz(9,000-12,500V.P.M)	6m 21.4	

External Vibrating Motor



FJH-550



model	output	voltage	ampere	frequency (Hz)	Centrifugal Force	pole no.	Vibration	weight(kg
FJ-300S	300W	48V	8.0A	200/240	0.8-2.9kN(78-300kgf) / 1.1-4.2kN(112-432kgf)	4	100/120Hz (6,000/7,200V.P.M)	8.8
FJ-750A	750W	48V	17.0A	200/240	3.1-11.5kN(315-1,170kgf) / 4.5-16.5kN(455-1,680kgf)	4	100/120Hz (6,000/7,200V.P.M)	23.5
FJH-550(S)	550W	48V	12.5A	200/240	2.1-7.8kN(210-800kgf) 2.9-11.3kN(300-1,150kgf)	4	100/120Hz (6,000/7,200V.P.M)	18 (18.8)
FJH-750(S)	750W	48V	17.0A	200/240	3.1-11.5kN(315-1,170kgf) / 4.5-16.5kN(455-1,680kgf)	4	100/120Hz (6,000/7,200V.P.M)	21.1(21.9)



Submersible Pump

WP-3LB / GE-5LE-5LD-5BE **GE-5LD** WP-3LB GE-5BE (turn-table type)

GE / Specifications

model	power source	weight(kg)			
GE-5LE	Subaru EX17D max. output 4.2kW (5.7PS)	28			
GE-5LD	Subaru DY23D max.output 3.7kW(5.0PS)	50			
GE-5BE	Subaru EX17D max. output 4.2kW (5.7PS)	30			

WP / Specifications

model	discharging port dia.	max. discharged height	capacity	r.p.m.	pump head weight	hose dia. X length	flexible shaft dia	total weight (kg)
WP-2L	50mm(2")	13m	500 liters/min	3,000-3,400	4.4kg	29mm x 5m	10mm x 5m	5m 16.1
	A WOOD FOR THE SECOND STREET OF THE SECOND STREET O	11803051		STREET, STREET, SCHOOL OF		29mm x 7m	10mm x 7m	7m 20
WP-3LB	76mm(3")	23m	1,200 liters/min	3.000-3.400	7kg	32.5mm x 5m	13mm x 5m	5m 22.1
WP-3LD	701111(3)	23111	1,200 illeis/illi1	3,000-3,400	7 kg	32.5mm x 7m	13mm x 7m	7m 26.2

Weight includes weigh of machine, lubricants, 50% of fuel and 50% of water in case with water tank option. Features and specifications are subject to change without notification.

Power Trowel

MPT-36B







MPT-36B



MPT / Specifications

model	model Weight dimensions		trowel diameter	blade dimension	trowel speed	power source		
MPT-36B	74kg	H: 810 W: 1,010 L: 1,610	910mm	L: 345mm W: 205mm	50-100 r.p.m	Subaru EX17D max.output 4.2kW(5.7PS)		

Weight includes weigh of machine, lubricants, 50% of fuel and 50% of water in case with water tank option Features and specifications are subject to change without notification.

Glossary

The Specifications in this catarogue is based on "MIKASA TECNICAL STANDARD".

"MIKASA TECNICAL STANDARD" is defined referring to ISO, EU Directive, JIS and other technical standard.

The Static weights of the unit should include the followings. - Lubricant, Hydraulic Oil of the machine at proper level Weights - Half of the Water tank content in case of using water tank

Dimensions Basically indicated in mm except for hose length.

It shows Maximum Output (kW) in catalogue of engine manufacturer.

Output of Power Source It does not always mean max. under operation of the machine.

Limited Gradeability

Maximum grade of the mounted engine which works without trouble.

High-intensity LED Light

MLP-1212







emergency.

of locations or settings on a daily basis or at the time of

Features

MLP-1212 is a safe and sturdy portable high intensity LED light designed to be used by wide range of users in all types

- By predicting the harsh work site condition, this product, designed and manufactured by the construction machine manufacturer with extensive worksite knowledge, is made highly durable enough for daily use by the professionals at work site.
- The stable base shape effectively prevents the light from tipping over, and during storage, up to three units can be stacked up.
- Two types of outlet cables that you tend to lose can be stored inside the unit.
- Regular check of level gauge will prevent accidental low battery power problem.
- Eight-step-lighting type level gauge (green·red) enables visual check of remaining battery power.
- ■Water proof and dust proof design of IP65 class allows the use of this product both indoor and outdoor.
- Can be stored safely for a long period of time because maintenance-free sealed battery is
- During charging process that has check & charge function, the eight-step LED scrolling occurs (at full charge, all eight steps are lighted.)

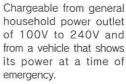


Highly durable LED lamp

(life of about 40,000

hours) gives long life to

this product.





By the check & charge function indicator, remaining battery power is shown

Assumed locations of use

- 1.As daily lighting of all locations, settings
- Factory and warehouse, dark area and construction site at night
- ·Festival and outdoor concert, for leisure (camp and open-air school)
- ·Road, railway, ship and night operation of service businesses.
- ·Lighting of work site for nighttime work of fire fighting and security service
- 2.As lighting at the time of emergency or for emergency use · Company · home · school · administrative office · hospital · station · airport · subway, etc.
- Nursing home and various care facilities
- · Disaster stock supply at disaster evacuation center
- ·Rescue site for all kinds of disaster

MLP-1212 / Specifications

model	weight	demensions (Height: 3 step adjustment)		Light flux (Lm)				Light head angle adjustment (degree)		Battery	Continuous use time(h) at full charge		Full	Allowable ambient	Charge method(V) (Cable included)		
model (kg)	(kg)	H (mm)	L (mm)	W (mm)	One surface	Both surfaces	One surface	Both surfaces	Front	Rear	(with warning indication)	One surface	Both surfaces	time(h) temperature f	temperature for use(degree)	General power outlet	Power from automobile
MLP-1212	12	1185 (560)	256	361	1200	2400	60	120	15	15/30	Completely sealed type	1.1	5.5	8~10	-20~40	100~240 (AC)	12/24 (DC)

Features and specifications are subject to change without notification.

