



First established in 1933, TOHO CHIKAKOKI Co., Ltd. was reorganized to its present corporate form in 1946. Since its foundation, the company has played a major role in Japan's civil engineering field as a manufacturer of drilling machines, micro-tunneling machines, grout pumps, mortar pumps and drilling equipment, and as a contractor for important drilling and grouting projects.

The machines introduced in this brochure were designed and developed using our vast experience in the Drilling Technology and Manufacturing fields, and are continuously improved thanks to the friendly and open opinions and suggestions of our discerning clients. We are confident that they offer unsurpassed excellence in terms of performance, safety and economy.

Our ultimate goal as a drilling machinery manufacturer is to develop machinery which satisfies every single need of our clients. To achieve this goal, we are determined to make whatever effort it takes-just as we have done for more than half a century.

If you would like to obtain more detailed information on our individual products, please feel free to contact our Tokyo Branch Office.

Yukinori Okamoto
President
TOHO CHIKAKOKI Co., Ltd.



HISTORY



August 1933	Founded as YAMATO KOHSAKUSHO.
May 1946	After World War II, the operation stopped in August of 1945. The west branch (located in Shimonoseki city) was reorganized and designated as the head office. The new organization started life as YAMATO KOHSAKUSHO Co., Ltd. under president, Kozaburo Okamoto.
January 1948	The company was renamed as TOHO CHIKAKOKI Co., Ltd., headquartered in Oaza Nishinabe-cho, Shimonoseki city.
March 1955	Completed was the drilling /grout engineering for Kamishiiba arch dam, which was the first large-scale construction in the boring industry after the war.
September 1961	As the first overseas mission after World War II, our engineers were sent to Borneo for the coal seam research.
October 1965	Anti-disaster engineering was completed along the Hijikawa River in Shikoku, in which construction had been started in 1961 as the first, large-diameter landslide countermeasure in the boring industry.
September 1981	Micro-tunneling method with "Type-TH" horizontal drilling machines was collectively referred to as the OK Mole construction method. We started selling the Type-TH as the base machine of micro-tunneling machine for sewer construction.
January 2003	Designated investigation agency in accordance with Soil Contamination Countermeasures Law.
November 2004	Development and validation of research equipment resistant to the extreme cold environment in Mongolia.
October 2005	Exhibitor "8th BICES" in Beijing.
November 2006	Exhibitor in "BAUMA CHINA 2006" in Shanghai.
November 2007	Exhibitor in "CONSTECH 2007" in Bangkok.
September 2011	Exhibitor in "MINING INDONESIA 2011" in Jakarta.
October 2014	Exhibitor in "MINING MYANMAR 2014" in Yangon.
April 2018	Tokyo sales office was renamed as "Tokyo branch office" and moved the office to a new office.

WORLD MAP



JAPAN



MANUFACTURING AND SALES DEPARTMENT



With Quality, Service, and Safety as the three tenets of our basic philosophy, manufacturing and sales department of TOHO CHIKAKOKI Co., Ltd. offers various machines which feature excellent performance, cost efficiency, and safety. Our offer is based on the precious feedback from our customers, and our long-term experience.

Product Line-up



Drilling Machine



Pump



Grout Mixer



Mud Screen



Mortar Plant

Quality Management



Manufacturing department of TOHO CHIKAKOKI CO., LTD is certified to international quality management systems "ISO9001".

We make efforts provide our customers with reliable products.

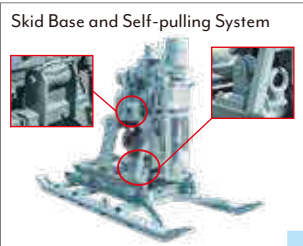
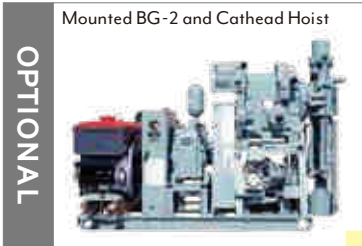


ENGINEERING DEPARTMENT



Engineering department of TOHO CHIKAKOKI Co., Ltd. continues to strive for better quality in the fields of survey, project, and engineering regarding the ground. We offer reliable information and stable engineering technology to our customers.

Spindle Type: **D** SERIES



DM-03 / D0-D

- Small size / Lightweight
- Easy to disassemble, transport, and reassemble
- Designed for safety
- Right and left side operation available

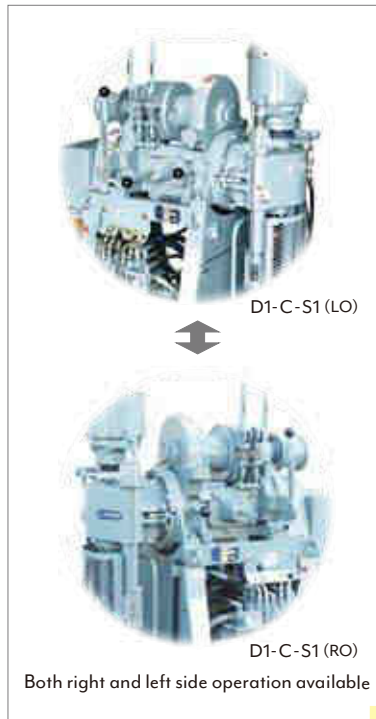
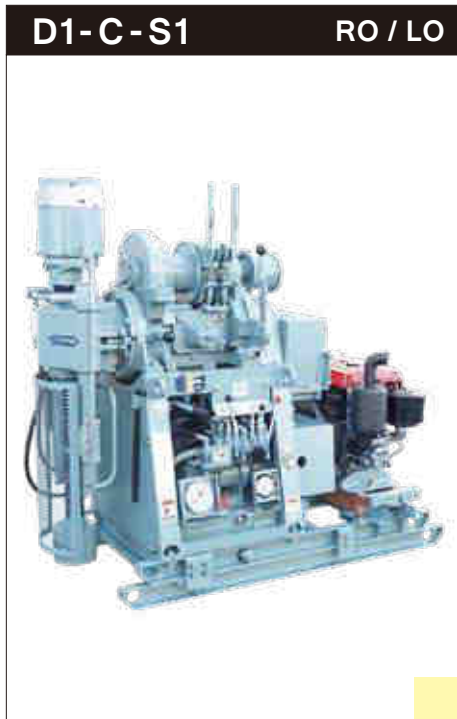
MODEL	DM-03 (RO/LO)		D0-D-P2-S0 (RO/LO)	Water Pump Built in Model (BG-3C)
	Wire Drum Hoist	Cathead Hoist		
I.D. of Spindle	47 mm		43 mm	
Spindle Speeds	65 :125 : 370 r.p.m.		(A) 60 :170 : 330 r.p.m. (B) 110 : 320 : 625 r.p.m.	
Torque (Max.)	0.54 kN·m {55 kgf·m}		(A) 0.59 kN·m {60 kgf·m} (B) 0.32 kN·m {33 kgf·m}	
Stroke of Spindle	400 (300) mm		500 (400) mm	
Thrust Force	8.4 kN {860 kgf}		17.6 kN {1800 kgf}	
Balance Force	13.8 kN {1410 kgf}		23.5 kN {2400 kgf}	
Power	3.7kW/4P or 5PS/1800 r.p.m.		3.7kW/4P or 5PS/1800 r.p.m. 5.5kW/4P or 7.5PS/1800 r.p.m.	
Dimensions (L × W × H)	1115 × 570 × 1060 mm (1115 × 570 × 960 mm)		1225 × 655 × 1285 mm (1225 × 655 × 1255) mm	1225 × 1110 × 1285 mm
Net Weight	240 (200) kg	220 (180) kg	350 (345) kg	435 kg

Spindle speed (A) is standard. Oil hydraulic chuck is standard equipment.

I.D. of spindle: 43mm is standard, 47mm is optional. Oil hydraulic slide base is optional equipment.

Drilling pump can be built in this machine.





MODEL	D1-C-S1 (RO/LO)		D2-KS58 (RO/LO)
I.D. of Spindle	48 mm	58 mm	58 mm
Spindle Speeds	(A) 65:130:240:370 r.p.m. (B) 85:170:320:500 r.p.m. (C) 160:310:590:900 r.p.m.	(A) 50:100:185:285 r.p.m. (B) 65:130:245:380 r.p.m.	(A) 60:120:230:360 r.p.m. (B) 100:190:360:560 r.p.m. (C) 130:260:500:770 r.p.m.
Torque	(A) 0.81 kN·m {83 kgf·m} (B) 0.62 kN·m {63 kgf·m} (C) 0.33 kN·m {34 kgf·m}	(A) 1.05 kN·m {107 kgf·m} (B) 0.81 kN·m {83 kgf·m}	(A) 0.88 kN·m {90 kgf·m} (B) 0.53 kN·m {54 kgf·m} (C) 0.40 kN·m {41 kgf·m}
Stroke of Spindle	500 mm		500 mm
Thrust Force	22.1 kN {2250 kgf}		22.1 kN {2250 kgf}
Balance Force	29.5 kN {3010 kgf}		29.5 kN {3010 kgf}
Slide System	Oil Hydraulic: Stroke 300 mm		Oil Hydraulic: Stroke 400 mm
Power	5.5kW/4P or 7.5PS/1800 r.p.m.		5.5kW/4P or 7.5PS/1800 r.p.m.
Dimensions (L × W × H)	1580 × 735 × 1390 mm	1580 × 735 × 1430 mm	1780 × 870 × 1620 mm
Net Weight	550 kg	565 kg	680 kg

Spindle speed (A) is standard. (B)(C) is optional.

Manual chuck is standard equipment.

Spindle speed (A) is standard. (B)(C) is optional.

Manual chuck is standard equipment.

D1-C-S1

- Standard equipment
 - └ Oil hydraulic chuck
 - └ Oil hydraulic slide base
- Right and left side operation available

D2-KS-58

- Standard equipment
 - └ Oil hydraulic chuck
 - └ Oil hydraulic slide base
- Low speed and high torque rotary spindle
- Right and left side operation available



USED FOR

- Geologic Survey
- Chemical Grouting
- Grouting
- Well Drilling
- Bore Piling
- Anchor Hole

Spindle Type: **D** SERIES

D2-K92

RO / LO



D3-92C

RO / LO



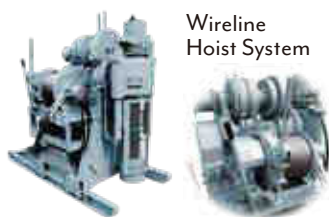
OPTIONAL

Crawler Mounted

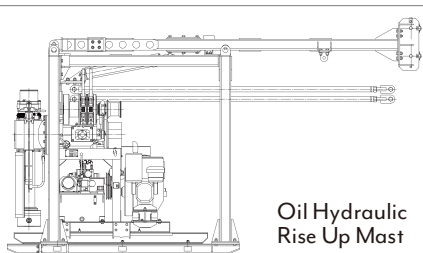


D3-92C (RO) x BG-10C (Oil Hydraulic Driven)

OPTIONAL



Wireline
Hoist System



Oil Hydraulic
Rise Up Mast

D2-K92

- Standard equipment
 - └ Oil hydraulic slide base
- Maximum 90mm (HQ size) rod available
- Low speed and high torque rotary spindle
- Right and left side operation available

D3-92C

- Standard equipment
 - └ Oil hydraulic slide base
- Long brake and hoist lever
- └ Easy hoisting operation
- Right and left side operation available

MODEL	D2-K92-P2 (RO/LO)	D2-K92-P3 (RO/LO)	D3-92C (RO/LO)
I.D. of Spindle	92 mm		92 mm
Spindle Speeds	(A) 60:180:355:65 (R) r.p.m. (B) 100:293:577:109 (R) r.p.m.	17:50:95:18 (R) r.p.m.	113:236:452:90 (R) r.p.m.
Torque	(A) 1.18 kN-m {120 kgf-m} (B) 0.7 kN-m {73 kgf-m}	3.09 kN-m {315 kgf-m}	0.93 kN-m {95 kgf-m}
Stroke of Spindle	500 mm		500 mm
Thrust Force	21.5 kN {2200 kgf}		41.6 kN {4240 kgf}
Balance Force	28.8 kN {2900 kgf}		55.5 kN {5660 kgf}
Slide System	Oil Hydraulic: Stroke 400 mm		Oil Hydraulic: Stroke 400 mm
Power	7.5kW/4P, 10PS/1800 r.p.m.	5.5kW/4P, 7.5PS/1800 r.p.m.	11kW/4P or 15PS/1800 r.p.m.
Dimensions (L x W x H)	1800 x 870 x 1620 mm	1835 x 870 x 1620 mm	1788 x 873 x 1753 mm
Net Weight	700 kg	820 kg	780 kg

Spindle speed (A) is standard.

Oil hydraulic chuck is optional equipment.

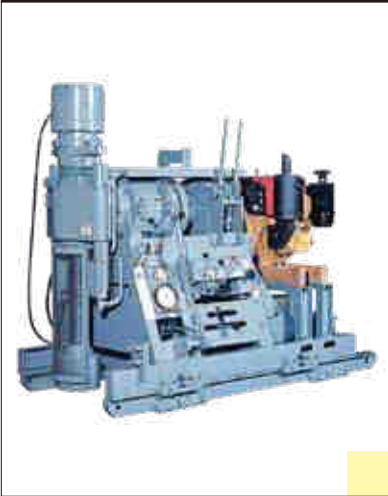
Oil hydraulic slide base is standard equipment.

USED FOR

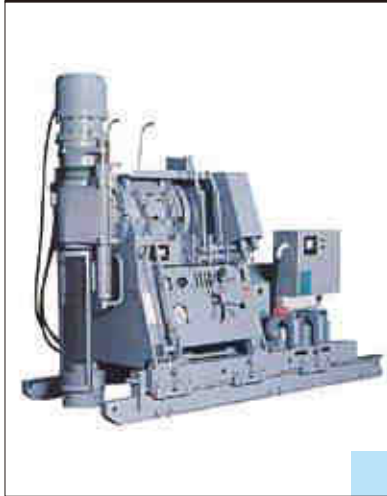
- Geologic Survey
- Chemical Grouting
- Grouting
- Well Drilling
- Bore Piling
- Anchor Hole



DH-2D



DH-3D (92) (150)

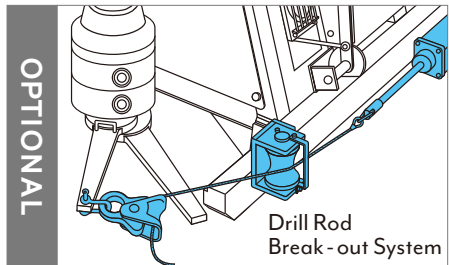


DH-4C (125) (150)



DH-2D / DH-3D / DH-4C

- Mid- to large-sized machine with ample thrust force, balance and torque
- Used for foundation pilings, landslide prevention pilings, and water well drilling
- Standard equipment
 - └ Oil hydraulic chuck



MODEL	DH-2D	DH-3D		DH-4C	
I.D. of Spindle	79 mm	92 mm	150 mm	125 mm	150 mm
Spindle Speeds	30:105:220:26 (R) r.p.m.	30:70:200:27(R) r.p.m.	20:47:130:18(R) r.p.m.	22:50:152:18(R) r.p.m.	28:66:185:22 (R) r.p.m.
Torque	3.43 kN-m {350 kgf-m}	4.77 kN-m {490 kgf-m}	7.16 kN-m {730 kgf-m}	8.03 kN-m {820 kgf-m}	8.73 kN-m {890 kgf-m}
Stroke of Spindle	500 mm	600 mm		600 mm	
Thrust Force	29.7 kN {3030 kgf}	51.8 kN {5290 kgf}	75.4 kN {7690 kgf}	90.5 kN {9230 kgf}	
Balance Force	39.6 kN {4040 kgf}	77.0 kN {7850 kgf}	100.5 kN {10260 kgf}	120.6 kN {12310 kgf}	
Slide System	Oil Hydraulic: Stroke 500 mm	Oil Hydraulic: Stroke 500 mm		Oil Hydraulic: Stroke 600 mm	
Power	11kW/4P or 15PS/1800 r.p.m.	15kW/4P or 20PS/1800 r.p.m.		18.5kW/4P or 25PS/1800 r.p.m.	
Dimensions (L x W x H)	2075 x 1055 x 1680 mm	2530 x 1250 x 2060 mm	2670 x 1500 x 2100 mm	2920 x 1390 x 2140 mm	2985 x 1390 x 2190 mm
Net Weight	1360 kg	2140 kg	2360 kg	3170 kg	3800 kg

Jack-up system and drill rod break-out system are optional equipment.

I.D. of spindle: 125mm is standard.

Outtrigger is optional equipment.



USED FOR

Geologic Survey

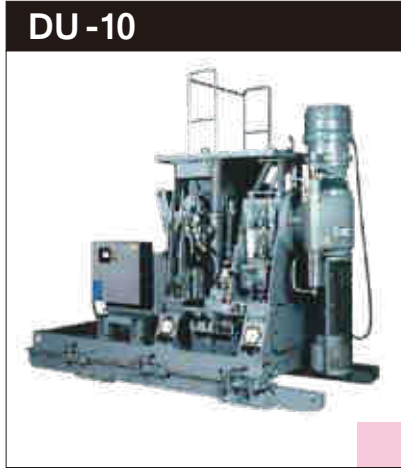
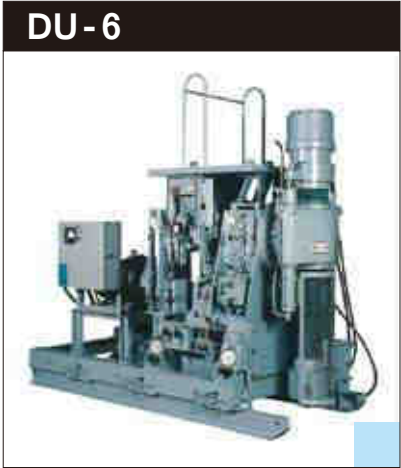
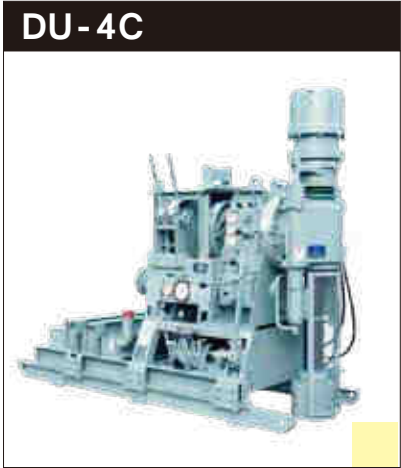
Bore Piling

Anchor Hole

Well Drilling

Spindle Type: **DU** SERIES

PRODUCTS CATALOG



DU-4C / DU-6 / DU-10

- Twin cylinder oil hydraulic feed type
- The hexagonal drive spindle
 - └ Suitable for large diameter drilling (Exc. DU-4C)
- 6 stages of forward movement and 2 stages of reverse movement
- Oil hydraulic brakes
 - └ Easy operation and large hoisting power (Exc. DU-4C)

OPTIONAL

Mast available as an optional extra.

MODEL	DU-4C	DU-6	DU-10
I.D. of Spindle	92 mm	105 mm	125 mm
Spindle Speeds	Low: 37:77:132:33(R) r.p.m. High: 220:462:792:195(R) r.p.m.	Low: 30:63:108:27(R) r.p.m. High: 180:376:646:159(R) r.p.m.	Low: 30:63:108:27(R) r.p.m. High: 180:376:646:159(R) r.p.m.
Torque	3.90 kN·m {398 kgf·m}	5.89 kN·m {601 kgf·m}	7.00 kN·m {714 kgf·m}
Stroke of Spindle	600 mm	600 mm	600 mm
Thrust Force	51.8 kN {5290 kgf}	75.4 {7690 kgf}	90.5 {9230 kgf}
Balance Force	77.0 kN {7850 kgf}	100.5 {10260 kgf}	120.6 {12310 kgf}
Slide System	Oil Hydraulic: Stroke 500 mm	Oil Hydraulic: Stroke 500 mm	Oil Hydraulic: Stroke 600 mm
Power	15kW/4P or 20PS/1800 r.p.m.	18.5 kW/4P or 25PS/1800 r.p.m.	22kW/4P or 30PS/1800 r.p.m.
Dimensions (L×W×H)	2490×1089×1942 mm	2650×1170×2085 mm	3025×1330×2325 mm
Net Weight	1770 kg	2470 kg	3500 kg

Oil hydraulic chuck is standard equipment.

USED FOR

Geologic Survey

Well Drilling

Deep Drilling

D0-D LH-S0 RO / LO



MODEL	D0-D LH-S0 (RO/LO)	D2-K-P3-LH92
I.D. of Spindle	43 mm	92 mm
Spindle Speeds	(A) 60:170:330 r.p.m. (B) 110:320:625 r.p.m.	14:40:80:15(R) r.p.m.
Torque	(A) 0.59 kN·m {60 kgf·m} (B) 0.32 kN·m {33 kgf·m}	3.90 kN·m {398 kgf·m}
Stroke of Spindle	500 mm	500 mm
Thrust Force	10.7 kN {1090 kgf}	22.1 kN {2250 kgf}
Balance Force	17.6 kN {1800 kgf}	29.5 kN {3010 kgf}
Power	3.7kW/4P or 5~7.5PS/1800 r.p.m. (5.5kW/4P, Including Pump)	5.5kW/4P or 7.5PS/1800 r.p.m.
Dimensions (L×W×H)	1420×675×1415 mm (1420×895×1415 mm)	2075×870×1685 mm
Net Weight	460 kg	950 kg

Spindle speed (A) is standard.

Oil hydraulic chuck is optional equipment.

Oil hydraulic slide base is standard equipment.

LH Series

- Drilling machine with the swivel head set up in a low position
- Quick and safe attachment/detachment of rods
- Suitable for chemical grouting
- Standard equipment
 - └ Oil hydraulic chuck

D2-K-P3-LH92



DW-2



MODEL	DW-2	DW-3
I.D. of Spindle	92 mm	92 mm
Spindle Speeds	30:70:220:26(R) r.p.m.	20:70:145:18(R) r.p.m.
Torque	3.50 kN·m {357 kgf·m}	5.25 kN·m {535 kgf·m}
Stroke of Spindle	600 mm	1000 mm
Thrust Force	36.3 kN {3700 kgf}	51.8 kN {5290 kgf}
Balance Force	53.9 kN {5500 kgf}	77.0 kN {7850 kgf}
Slide System	Oil Hydraulic: Stroke 500 mm	Oil Hydraulic: Stroke 500 mm
Power	11kW/4P or 15PS/1800 r.p.m.	11kW/4P or 15PS/1800 r.p.m.
Dimensions (L×W×H)	2210×1020×1525 mm	2270×1205×2145 mm
Net Weight	1850 kg	1980 kg

DW-3



DW-2 / DW-3

- Centralized operation levers
 - └ Easy operation
- Box-shape framework
- Parallel-winding drum
- Standard equipment
 - └ Oil hydraulic chuck

For Chemical Grouting METHOD

D2-JS-P3



D2-JS-P3-LH



CPW-5D



MODEL	D2-JS-P3	D2-JS-P3-LH
I.D. of Spindle	48 mm	48 mm
Spindle Speeds	55 : 155 : 310 r.p.m.	40 : 115 : 230 r.p.m.
Torque	0.95 kN·m {97 kgf·m}	1.31 kN·m {134 kgf·m}
Stroke of Spindle	500 mm	500 mm
Thrust Force	22.1 kN {2250 kgf}	22.1 kN {2250 kgf}
Balance Force	29.5 kN {3010 kgf}	29.5 kN {3010 kgf}
Power	5.5kW/4P or 7.5PS/1800 r.p.m.	5.5kW/4P or 7.5PS/1800 r.p.m.
Dimensions (L × W × H)	1430 × 800 × 1390 mm	1660 × 800 × 1320 mm
Net Weight	470 kg	600 kg

Manual chuck is optional equipment.

MODEL	CPW-5D
Type	Two Separately Ports, Four Ceramic Plungers, Single Acting
No. of Plunger	4
Discharge Volume	2~20 × 2 L/min
Discharge Pressure	3.4 MPa {35 kgf/cm ² }
Plunger Diameter	40 mm
Plunger Stroke	45 mm
Power	3.7kW/6P
Dimensions (L × W × H)	1225 × 575 × 800 mm
Net Weight	300 kg

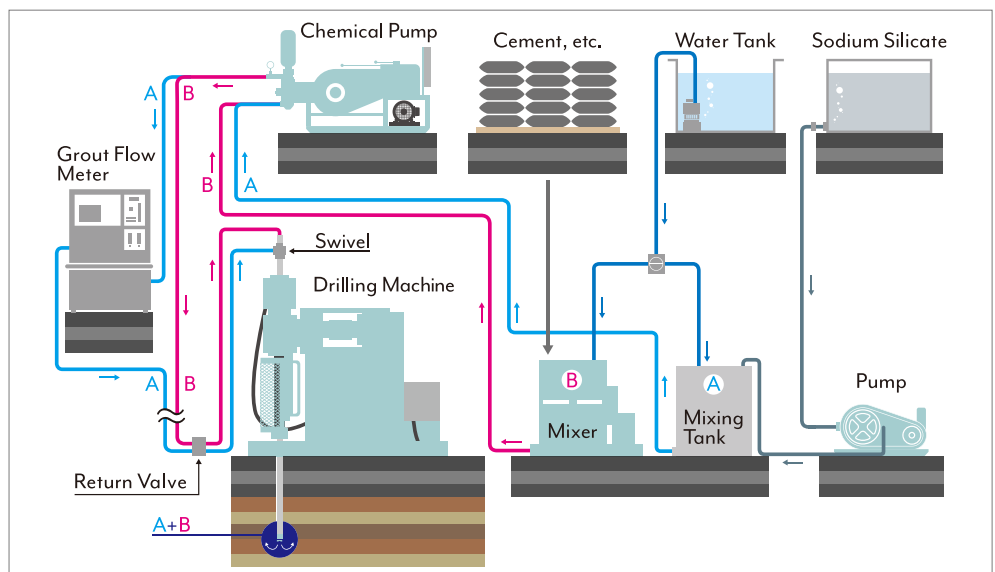
Net Weight: Setting with electric motor and control box.

D2-JS-P3

- Standard equipment
 - └ Oil hydraulic chuck
- Low speed and high torque rotary spindle

D2-JS-P3-LH

- Drilling machine with the swivel head set up in a low position
- Quick and safe attachment / detachment of rods
- Standard equipment
 - └ Oil hydraulic chuck



USED FOR

Chemical Grouting

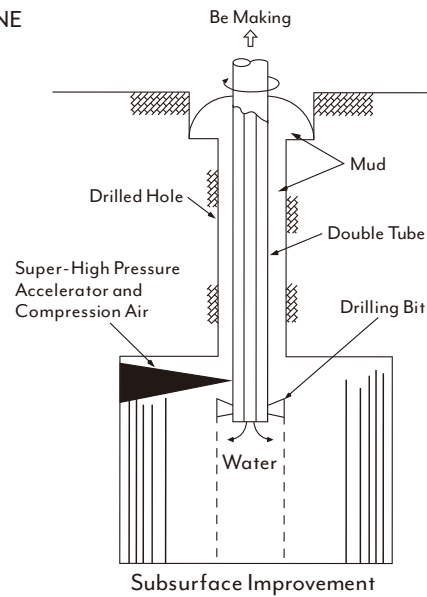


D2-K92-P2-JSG

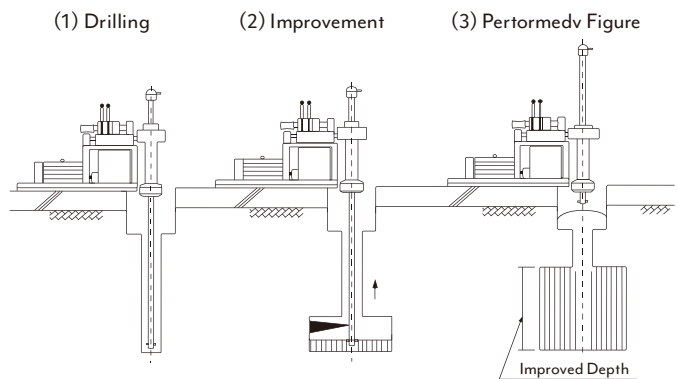


MODEL	D2-K92-P2-JSG
I.D. of Spindle	92 mm
Spindle Speeds	1st : 6~60 r.p.m. 2nd: 22~224 r.p.m. 3rd: 34~346 r.p.m. (R): 5~50 r.p.m.
Torque	1.20 kN·m {122 kgf·m}
Stroke of Spindle	500 mm
Auto Step Up	Step interval (Min): 25 mm
System	Wait Time: 0.1~999 sec
Thrust Force	20.2 kN {2060 kgf}
Balance Force	27.0 kN {2750 kgf}
Type of Hoist	Electric Hoist
Hoisting Force	1.0 kN {100 kgf}
Rope Speed	14 m/min
Slide System	Oil Hydraulic: stroke 400 mm
Power	For Spindle: 7.5 kW/4P Inverted Motor For Oil Pump: 2.2 kW/4P For Hoist: 0.4 kW/4P, 1/45 Gear Motor
Dimensions (L×W×H)	1900×1200×1650 mm
Net Weight	1000 kg

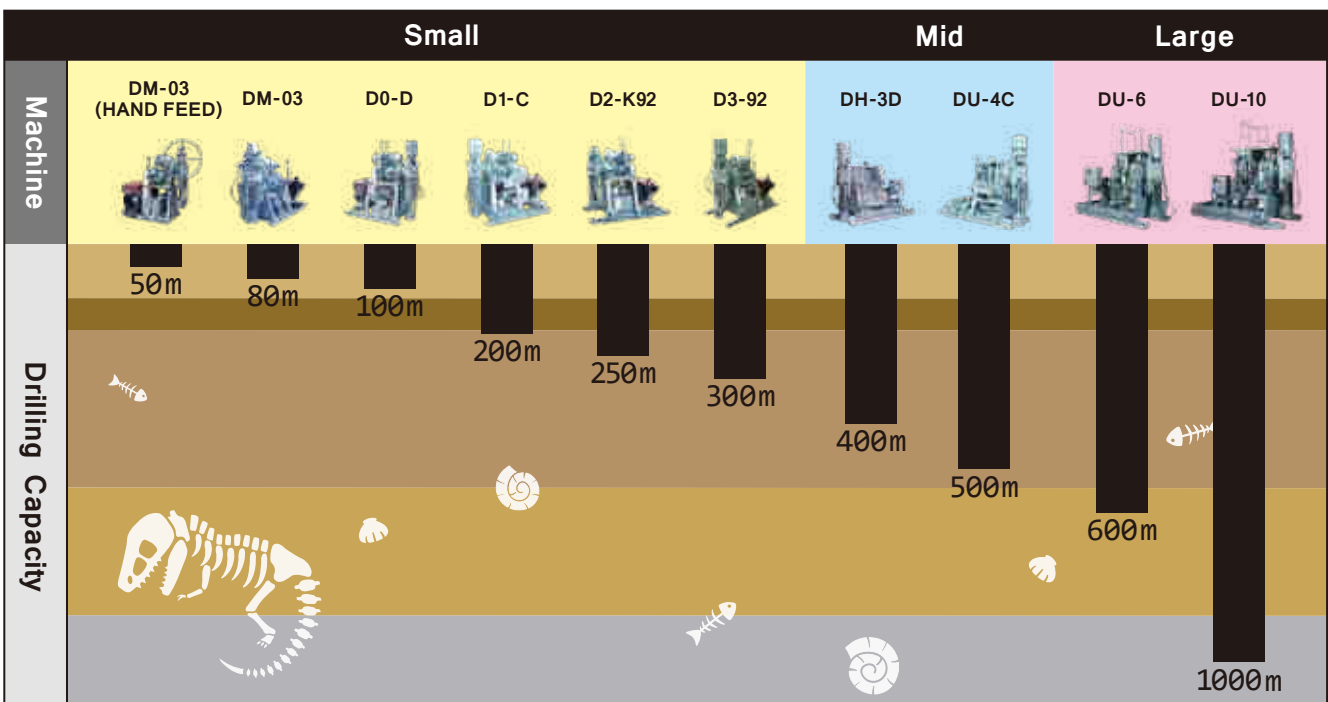
OUT LINE



Soil improvement with JSG (Jumbo Jet Special Grout) METHOD



Oil hydraulic chuck and Jack-up system are standard equipment.



K0-C



K1-B



MODEL	K0-C	K1-B
Drilling Angle	0 ~ 90°	0 ~ 48°
Diameter of Usable Pipe	Inner Pipe : 76.3 mm(Max) Outer Pipe: 139.8 mm(Max)	Inner Pipe : 89.1 mm(Max) Outer Pipe: 165 mm(Max)
Spindle Speeds	High Speed: 50Hz: 0~34 r.p.m. 60Hz: 0~40 r.p.m. Low Speed : 50Hz: 0~17 r.p.m. 60Hz: 0~20 r.p.m.	High Speed: 50Hz: 0~40 r.p.m. 60Hz: 0~48 r.p.m. Low Speed : 50Hz: 0~20 r.p.m. 60Hz: 0~24 r.p.m.
Torque (Max.)	High Speed: 2.15 kN·m {219 kgf·m} Low Speed : 4.3 kN·m {438 kgf·m}	High Speed: 3 kN·m {306 kgf·m} Low Speed : 6 kN·m {612 kgf·m}
Feed Speeds (Max.)	50Hz : 12 m/min 60Hz : 14 m/min	50Hz : 13.2 m/min 60Hz : 16 m/min
Feed Length	1400 mm	1400 mm
Spindle Stroke	150 mm	250 mm
Thrust Force	Inner Pipe : 12 kN {1224 kgf} Outer Pipe: 25 kN {2550 kgf}	Inner Pipe : 35 kN {3570 kgf} Outer Pipe: 65 kN {6630 kgf}
Balance Force	Inner Pipe : 17.5 kN {1785 kgf} Outer Pipe: 25 kN {2550 kgf}	Inner Pipe : 55 kN {5610 kgf} Outer Pipe: 65 kN {6630 kgf}
Power Unit	Unit: 15kW/4PS Oil Heater: 3kW Oil Cooler: 0.1kW	Oil Hydraulic Unit: 22kW/4P (for Feed) 3.7kW/4P (for Rotation)
Dimensions (L x W x H)	Machine: 2620 x 870 x 1130 mm Oil Hydraulic Unit: 1300 x 610 x 1250 mm	Machine: 2870 x 1445 x 1490 mm Oil Hydraulic Unit: 1800 x 750 x 1205 mm
Net Weight	Machine: 1020 kg Oil Hyd.Unit: 650 kg	Machine: 1920 kg Oil Hyd.Unit: 1230 kg

Other Type: Stroke of thrust head is 1900mm and 2400mm.

Oil hydraulic chuck is optional equipment.

K-0C / K1-B

- Suitable for water drainage against landslide / Anchor hole for retaining wall
- All oil hydraulic operation
- Double tube drilling
- Low speed and high torque rotary spindle

FEATURES

1

Double Tube Drilling Method

Makes it easy to drill into unstable stratum.

2

Original Drilling Method

Can increase drilling speed by using Double Tube Drilling System and Power Ring Bit System.

3

Speed Switching Valve

Makes it increase excavation efficiency.

4

Base For Incline Drilling Style

Smooth to adjust drilling angle.

Power Ring Bit System (Japanese Patent)



Rotary percussion drilling
Excellent in excavation efficiency

Speed Switching Valve K0-C



Easy to switch speed

Oil Hydraulic Holder K0-C



Chucking firmly

High Speed Inner Head



Diamond bit available

Base for Vertical Drilling Style K0-C



Wide range of drilling angle

Core Sampling



Core sampled by K1-B with high speed inner head



USED FOR

Water Drainage

Anchor Hole

Air Operated Drill Type: **AK** SERIES

AK-01



MODEL	AK-01
Drilling Angle	Free
Down The Hole Drill	φ 65 mm
Down The Hole Drill with Outer Casing	Drilling Diameter φ106 mm (Inside Diameter φ67 mm) Drill Rod φ 50 mm, Outer Casing φ 89.1 mm (φ106 mm Bit Dia.)
Spindle Speeds	0 ~ 30 r.p.m.
Torque (Max)	1.23 kN·m {125 kgf·m}
Drill Frame	Air Motor + Chain Drive
Thrust Force (Max)	7.84 kN {800 kgf}
Balance Force (Max)	7.84 kN {800 kgf}
Feed Length	1400 mm
Air Consumption	10 ~ 15 m³/min × 1 ~ 1.5 MPa
Dimensions (L × W × H)	2190 × 660 × 980 mm
Net Weight	Drive Unit: 230 kg
Disassembly	Drill Head: 65 kg Drill Frame: 125 kg Base: 40 kg
Operation Stand	65 kg

Feed length is 3500mm.

FEATURES

Air Drilling

Able to reduce running cost and time using air driving method.

Drill Head with Strong Air Motor

Drill head with reduction gear exerts great drilling torque.

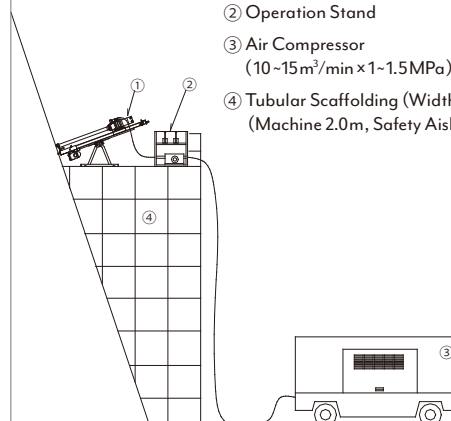
Double Tube Drilling

Makes it easy to drill into unstable stratum.

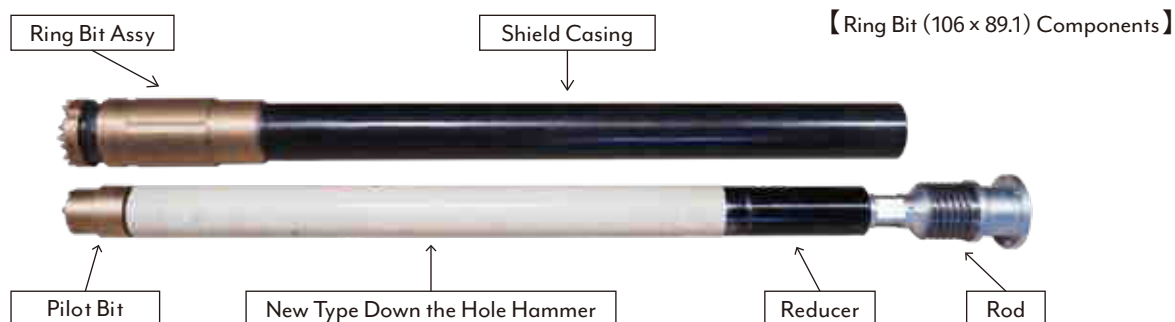
Air Kid (AK-01) LAYOUT

Machine and Tubular Scaffolding

- ① AK-01 Body
- ② Operation Stand
- ③ Air Compressor (10 ~ 15 m³/min × 1 ~ 1.5 MPa)
- ④ Tubular Scaffolding (Width 2.5m) (Machine 2.0m, Safety Aisle 0.5m)



Double Tube Type System



SETTING



Single Tube Type Method (Steep Slope Failure Prevention)



Double Tube Type Method (Rock Bolt)



USED FOR

Rock Bolt

BG-2

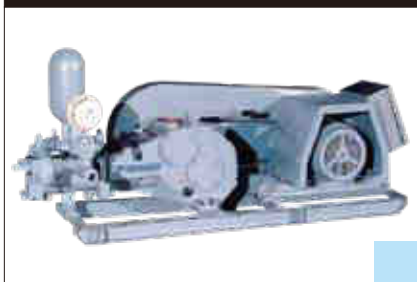
RO / LO


BG-3C

RO / LO


BG-4

RO / LO


BG-5C

BG-10C


MODEL	BG-2 (RO/LO)	BG-3C (RO/LO)	BG-4 (RO/LO)	BG-5C		BG-10C	
Type	Double Acting, Piston Type						
No. of Cylinder	1			1		2	
Discharge Volume	30 L/min	54 L/min	70 L/min	70 L/min	53 L/min	120 L/min	91 L/min
Discharge Pressure	1.0 MPa{10kgf·cm ² }	1.5 MPa{15kgf·cm ² }	1.5 MPa{15kgf·cm ² }	2.4 MPa{24kgf·cm ² }	3.1 MPa{32kgf·cm ² }	2.8 MPa{29kgf·cm ² }	3.7 MPa{38kgf·cm ² }
Piston Diameter	80 mm	70 mm	90 mm	*80 mm	70 mm	*80 mm	70 mm
Piston Stroke	20 mm	45 mm	45 mm	60 mm		60 mm	
Power	0.75kW/4P, 1PS	2.2kW/4P, 3PS	2.2kW/4P, 3PS	3.7kW/4P, 5PS		7.5kW/4P, 10PS	
Dimensions (L × W × H)	555 × 440 × 545 mm	678 × 450 × 569 mm	670 × 530 × 600 mm	1610 × 600 × 715 mm		1900 × 565 × 1015 mm	
Net Weight	48 kg	67 kg	85 kg	205 kg		370 kg	

Specifications: at 50Hz

* Standard Specifications: at 50Hz

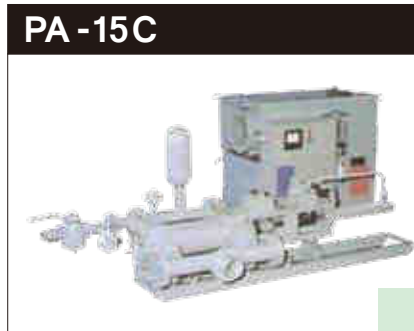
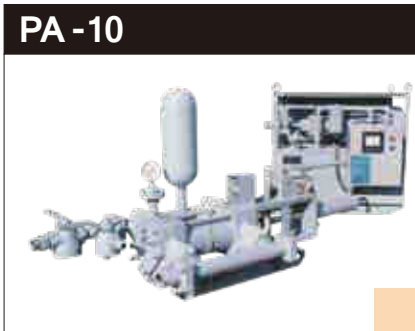
BG-15B

BG-30B

BG-40D


MODEL	BG-15B		BG-20B		BG-30B		BG-40D	
Type	Double Acting, Piston Type							
No. of Cylinder	2		2					
Discharge Volume	200 L/min	157 L/min	300 L/min	217 L/min	450 L/min	350 L/min	550 L/min	410 L/min
Discharge Pressure	2.5MPa{25kgf-cm ² }	3.1MPa{32kgf-cm ² }	2.3MPa{23kgf-cm ² }	3.1MPa{32kgf-cm ² }	2.3MPa{23kgf-cm ² }	2.8MPa{29kgf-cm ² }	2.4MPa{24kgf-cm ² }	3.2MPa{33kgf-cm ² }
Piston Diameter	*90 mm	80 mm	*105 mm	90 mm	*130 mm	115 mm	*150 mm	130 mm
Piston Stroke	85 mm		105 mm		130 mm		130 mm	
Power	11kW/4P, 15PS		15kW/4P, 20PS		22kW/4P, 30PS		30kW/4P, 40PS	
Dimensions (L × W × H)	2130 × 1020 × 1155 mm		2400 × 700 × 1215 mm		2800 × 970 × 1470 mm		3300 × 1000 × 1600 mm	
Net Weight	685 kg		860 kg		1240 kg		2050 kg	

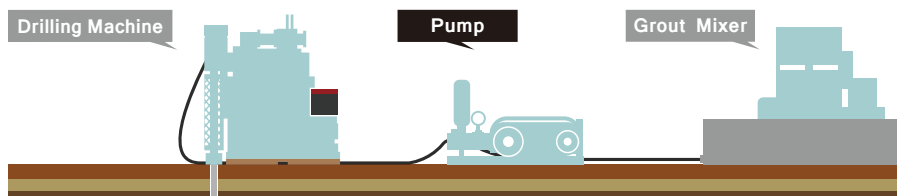
* Standard Specifications: at 50Hz



MODEL	PA-3	PA-3H	PA-5	PA-10	PA-15C
Type	Double Acting, Piston Type				
No. of Cylinder	1				
Discharge Volume	58 L/min	65 L/min	100 L/min	211 L/min	353 L/min
Discharge Pressure	1.4 MPa{14kgf·cm ² }	3.0 MPa{30kgf·cm ² }	2.0 MPa{20kgf·cm ² }	1.7 MPa{17kgf·cm ² }	1.3 MPa{13kgf·cm ² }
Piston Diameter	Oil: 50 mm Water: 90 mm	Oil: 50 mm Water: 90 mm	Oil: 50 mm Water: 105 mm	Oil: 70 mm Water: 130 mm	Oil: 60 mm Water: 150 mm
Piston Stroke	150 mm	150 mm	150 mm	200 mm	300 mm
Power	2.2kW/4P	5.5kW/4P	5.5kW/4P	7.5kW/4P	11kW/4P
Dimensions (L × W × H)	Pump: 945 × 360 × 460 mm Oil Unit: 625 × 450 × 600 mm	Pump: 945 × 370 × 460 mm Oil Unit: 625 × 450 × 600 mm	Pump: 950 × 360 × 520 mm Oil Unit: 640 × 450 × 675 mm	Pump: 1300 × 630 × 810 mm Oil Unit: 830 × 690 × 845 mm	Pump: 1820 × 780 × 815 mm Oil Unit: 1040 × 800 × 845 mm
Net Weight	Pump: 80 kg Oil Unit: 170 kg	Pump: 80 kg Oil Unit: 200 kg	Pump: 95 kg Oil Unit: 210 kg	Pump: 215 kg Oil Unit: 300 kg	Pump: 310 kg Oil Unit: 490 kg



MODEL	PA-30C	PA-30C : 3 Speed Oil Unit		
	Standard Oil Unit	Low	Middle	High
Type	Double Acting, Piston Type			
No. of Cylinder	1			
Discharge Volume	540 L/min	90 L/min	220 L/min	320 L/min
Discharge Pressure	1.5 MPa{15kgf·cm ² }	5.4 MPa{55kgf·cm ² }	3.5 MPa{36kgf·cm ² }	2.5 MPa{26kgf·cm ² }
Piston Diameter	Oil: 75 mm Water: 180 mm	Oil: 105 mm Water: 180 mm		
Piston Stroke	400 mm	400 mm		
Power	22 kW/4P	22kW/4P		
Dimensions (L × W × H)	Pump: 2230 × 1140 × 1040 mm Oil Unit: 1220 × 785 × 1160 mm	Pump: 2230 × 1140 × 1040 mm Oil Unit: 1420 × 1000 × 1400 mm		
Net Weight	Pump: 600 kg Oil Unit: 945 kg	Pump: 600 kg Oil Unit: 1140 kg		



Plunger Type: **CPW / CP** SERIES
Mortar Plant: **TMP** SERIES

CPW - 5D



CP-10D



CP - 20



MODEL	CPW-5D	CP-10D	CP-20
Type	Two Separately Ports, Four Ceramic Plungers, Single Acting	Triplex Plungers, Single Acting	
No. of Plunger	4	3	
Discharge Volume	2~20 × 2 L/min	120 L/min	211 L/min
Discharge Pressure	3.4 MPa{35kgf-cm ² }	8 MPa{80kgf-cm ² }	3.8 MPa{39kgf-cm ² }
Plunger Diameter	40 mm	60 mm	75 mm
Plunger Stroke	45 mm	60 mm	60 mm
Power	3.7kW/6P	11kW/4P	15kW/4P
Dimensions (L × W × H)	1225 × 575 × 800 mm	1545 × 625 × 1175 mm	1580 × 660 × 1290 mm
Net Weight	300 kg	320 kg	680 kg (Setting with Electric Motor)

Net Weight: Setting with electric motor and control box.

TMP - 1



MODEL	TMP-1	TMP-2
Usable Fluid	Cement Milk, Air Milk, Other	
Discharge Volume	50Hz: 47 L/min	60Hz: 58 L/min
Discharge Pressure	1.4 MPa{14kgf-cm ² }	
Pump	PA-3	
Mixer	MVM-5B	MVM-5DS
Power	2.2kW/4P + 2.2kW/6P	
Dimensions (L × W × H)	1800 × 1270 × 1570 mm	1500 × 1275 × 1765 mm
Net Weight	660 kg	

TMP - 2

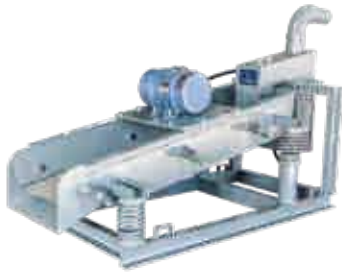


MODEL	TMP-3	TMP-4
Usable Fluid	Cement milk, Air milk, Other	
Discharge Volume	50Hz: 54 L/min	60Hz: 65 L/min
Discharge Pressure	3.0 MPa{30kgf-cm ² }	
Pump	PA-3H	
Mixer	MVM-5B	MVM-5DS
Power	5.5kW/4P + 2.2kW/6P	
Dimensions (L × W × H)	1800 × 1270 × 1570 mm	1500 × 1275 × 1765 mm
Net Weight	660 kg	

Setting with electric motor and control box.

MODEL	TMP-5	TMP-6
Usable Fluid	Cement Milk, Air Milk, Other	
Discharge Volume	50Hz: 175 L/min	60Hz: 211 L/min
Discharge Pressure	2.0 MPa{20kgf-cm ² }	
Pump	PA-10 (70)	
Mixer	MVM-5B	MVM-10B
Power	7.5kW/4P + 2.2kW/6P	7.5kW/4P + 3.7kW/6P
Dimensions (L × W × H)	2300 × 1590 × 1580 mm	2570 × 1780 × 1580 mm
Net Weight	1200 kg	1300 kg

TM - 400 B



MODEL	TM - 400B
Type	Single Screen Type
Disposable Capacity	400 L/min
Inlet Diameter	75 mm
Screen Area	0.3 m ²
Power	0.25kW/4P Vibration Motor
Dimensions (L x W x H)	1595 x 700 x 1020 mm
Net Weight	180 kg

Setting with electric motor and control box.

TM-1000



OPTIONAL

Horizontality



MODEL	TM-1000	TM-1000 (Horizontality)
Type	Single Screen Type	Single Screen Type
Disposable Capacity	1000 L/min	1000 L/min
Inlet Diameter	100 mm	100 mm
Amplitude of Vibration	3 mm	3 mm
Screen Area	0.8 m ²	0.8 m ²
Power	0.75kW/4P	0.75kW/4P
Dimensions (L x W x H)	2175 x 980 x 1455 mm	2182 x 980 x 1455 mm
Net Weight	310 kg	310 kg

Setting with electric motor and control box.

TM-1000W

LIQUID CYCLONE



MODEL	TM-1000W
Type	Double Screen Type
Disposable Capacity	1000 L/min
Inlet Diameter	100 mm
Screen Area	0.75 m ²
Power	0.25kW/200V
Dimensions (L x W x H)	2160 x 970 x 1680 mm
Net Weight	550 kg

Setting with electric motor and control box.

Liquid cyclone is optional equipment.

TM Series

- Suitable at the site used large amount of circulating mud water
- Small amount of screenings and waste mud
- Less disposal cost

MVM - 5DS



MVM - 5B



- Two vertically aligned tanks
- Only limited space required for installation
- Ideal for use in limited spaces, such as tunnel work
- Cement and bentonite available

MODEL	MVM-5DS	MVM-3S	MVM-5B	MVM-10B
Tank Capacity	250 × 2 L	100 × 2 L	250 × 2 L	350 × 2 L
Mixing Capacity	200 L	80 L	200 L	290 L
Speed of Blade	50Hz: 200 r.p.m. 60Hz: 240 r.p.m.	50Hz: 100 r.p.m. 60Hz: 120 r.p.m.	50Hz: 100 r.p.m. 60Hz: 120 r.p.m.	50Hz: 100 r.p.m. 60Hz: 120 r.p.m.
Power	2.2kW/6P	1.5kW/6P	2.2kW/6P	3.7kW/6P
Dimensions (L × W × H)	1200 × 700 × 1500 mm	1100 × 800 × 1255 mm	1640 × 930 × 1480 mm	1880 × 1050 × 1480 mm
Net Weight	305 kg	280 kg	360 kg	470 kg

Setting with electric motor and control box.

MPM - 5B Single Tank



MPM - 5B



- Single or dual-tank design
- Minimized waiting time by simultaneously and independently mixing and agitating in two separate tanks (Dual-tank)
- Ideal for applications requiring high-speed, large capacity injection of prepacked concrete
- Agitator must be used when it is used in conjunction with a grout pump
- Cement and bentonite available

MODEL	MPM-5B Single Tank	MPM-5B	MPM-10B Single Tank	MPM-10B
Tank Capacity	250 L	250 × 2 L	350 L	350 × 2 L
Mixing Capacity	200 L	200 × 2 L	300 L	300 × 2 L
Speed of Blade	50Hz: 170 r.p.m. 60Hz: 210 r.p.m.	50Hz: 170 r.p.m. 60Hz: 210 r.p.m.	50Hz: 170 r.p.m. 60Hz: 210 r.p.m.	50Hz: 170 r.p.m. 60Hz: 210 r.p.m.
Power	2.2kW/4P	2.2kW/4P	2.2kW/4P	3.7kW/4P
Dimensions (L × W × H)	1000 × 1080 × 1120 mm	1980 × 1000 × 1120 mm	1000 × 1080 × 1320 mm	1990 × 1000 × 1320 mm
Net Weight	220 kg	380 kg	240 kg	420 kg

Setting with electric motor and control box.

MS - 400B



MODEL	MS-400B Single Tank	MS-400B
Tank Capacity	420 L	420 × 2 L
Mixing Capacity	330 L	330 × 2 L
Speed of Blade	50Hz: 410 r.p.m. 60Hz: 500 r.p.m.	50Hz: 410 r.p.m. 60Hz: 500 r.p.m.
Power	5.5kW/4P	7.5kW/4P
Dimensions (L × W × H)	1370 × 1015 × 1530 mm	1700 × 1210 × 1530 mm
Net Weight	320 kg	610 kg

Setting with electric motor and control box.

- Single or dual-tank design
- High-speed mixing
- Agitator must be used when it is used in conjunction with a grout pump
- Cement, bentonite, mortar and air mortar available

MS -750B

MODEL	MS -600B	MS -750B	MS -1000B
Tank Capacity	600 × 2 L	750 × 2 L	1050 × 2 L
Mixing Capacity	480 × 2 L	600 × 2 L	850 × 2 L
Speed of Blade	50Hz: 410 r.p.m. 60Hz: 500 r.p.m.	50Hz: 410 r.p.m. 60Hz: 500 r.p.m.	50Hz: 255 r.p.m. 60Hz: 300 r.p.m.
Power	7.5kW/4P × 2	11kW/4P × 2	18.5kW/4P × 2
Dimensions (L × W × H)	2700 × 1700 × 1525 mm	2700 × 1700 × 1775 mm	3100 × 1800 × 2005 mm
Net Weight	1100 kg	1260 kg	1600 kg

Setting with electric motor and control box.

MS -650DS

MODEL	MS -250DS	MS -450DS	MS -650DS
Tank Capacity	250 L	450 L	650 L
Mixing Capacity	200 L	350 L	500 L
Speed of Blade	50Hz: 235 r.p.m. 60Hz: 280 r.p.m.	50Hz: 250 r.p.m. 60Hz: 300 r.p.m.	50Hz: 250 r.p.m. 60Hz: 300 r.p.m.
Power	2.2kW/6P	3.7kW/6P	7.5kW/6P
Dimensions (L × W × H)	1240 × 620 × 950 mm	1420 × 740 × 1150 mm	1600 × 840 × 1330 mm
Net Weight	320 kg	430 kg	590 kg

MODEL	MS -750DS	MS -1000DS	MS -1300DS
Tank Capacity	750 L	1000 L	1300 L
Mixing Capacity	600 L	750 L	1000 L
Speed of Blade	50Hz: 250 r.p.m. 60Hz: 300 r.p.m.	50Hz: 245 r.p.m. 60Hz: 295 r.p.m.	50Hz: 245 r.p.m. 60Hz: 295 r.p.m.
Power	7.5kW/6P	11kW/6P	18.5kW/6P
Dimensions (L × W × H)	1680 × 900 × 1380 mm	1780 × 960 × 1470 mm	1990 × 1060 × 1700 mm
Net Weight	620 kg	730 kg	970 kg

Setting with electric motor and control box.

Although MS-type mixer has the same horizontal alignment of two tanks and offers the same benefits as the MPM-type, the blade rotation speed is boosted to 410rpm (225r.p.m. for the MS-1000B) for more efficient mixing. Four mixer models are available according to tank capacity.

MSD -750

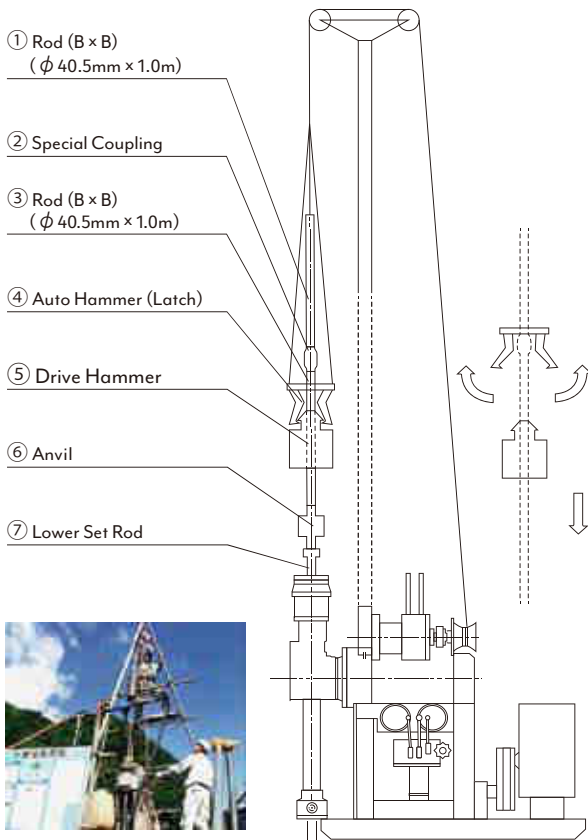
MODEL	MSD -750	MSD -1300
Tank Capacity	750 × 2 L	1300 × 2 L
Mixing Capacity	600 × 2 L	1000 × 2 L
Speed of Blade	400 r.p.m.	400 r.p.m.
Power	7.5kW/4P × 2	11kW/6P × 2
Dimensions (L × W × H)	2250 × 1450 × 1760 mm	2450 × 1650 × 2060 mm
Net Weight	1000 kg	1200 kg

Setting with electric motor and control box.

Colloidal Mixer

MODEL	MC -200
Type	Single Tank Type
Tank Capacity	250 L
Mixing Capacity	200 L
Revolving Speed	50Hz: 1430 r.p.m. 60Hz: 1740 r.p.m.
Discharge Port Diameter	50A
Power	11 kW/4P
Dimensions (L × W × H)	1740 × 1074 × 1370 mm
Net Weight	445 kg

EQUIPMENT for SEMI-AUTO STANDARD PENETRATION TEST (SPT)



- Safety Bar
- Special Coupling
- Catcher
- Anvil (Knocking Block)
- Drive Hammer 63.5kg
- SPT Sampler
- Lower Set Rod 40.5mm × 0.5m
- Rod 40.5mm × 1.0m



- Rod 40.5mm × 1.0m
- Catcher
- Drive Hammer 63.5kg
- Anvil (Knocking Block)
- Lower Set Rod 40.5mm



DRILLING TOOLS



Diamond Bit



Diamond Reamer



Metal Crown



Reducer



Rod Metal Crown



Wing Metal Crown



Rock Bit



Drill Collar



Drill Rod Coupling



Casing Crown



Shield High Crown



Casing Pipe



Shield Casing



Non Core Bit



Hydraulic Piston Sampler



Down The Hole Hammer

DRILLING TOOLS



Drill Rod (F.W)



Drill Rod Clamp



Lowering Iron



Head Pulley



Snatch Block



Bentonite



Chain Wrench



Rod Wrench



Pipe Wrench



Lightweight Rod Holder



Hoisting Swivel



Hoisting Water Swivel



Water Swivel



Water Shielding Material



Rope Type Water Gauge



Rod Recovery Tap / Core Tube Recovery Tap



We have parts stock available at all times.

Exhibition at ASIA



Myanmar



Vietnam



Philippines



Thailand



China



Indonesia



Safety and Operation Training

Safety Lecture



Machine Training





TOHO
DRILLING EQUIPMENT

PURSUING THE INFINITE POTENTIAL OF
RESOURCES HIDDEN UNDERGROUND

