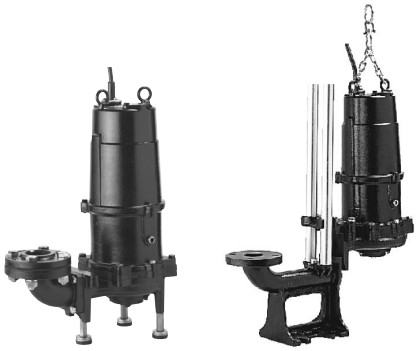
Series:	Discharge Bore:	Motor Output / Pole:
MG	32·50mm	1.0 - 3.7kW / 2-pole



The MG-series is a submersible grinder pump designed for handling raw sewage and other effluent drainage applications, where the pump or the discharge piping is subject to clogging from oversize material. The grinding mechanism cuts incoming solids into smaller pieces, which enables the pump to transfer sewage via a smaller diameter pipe.

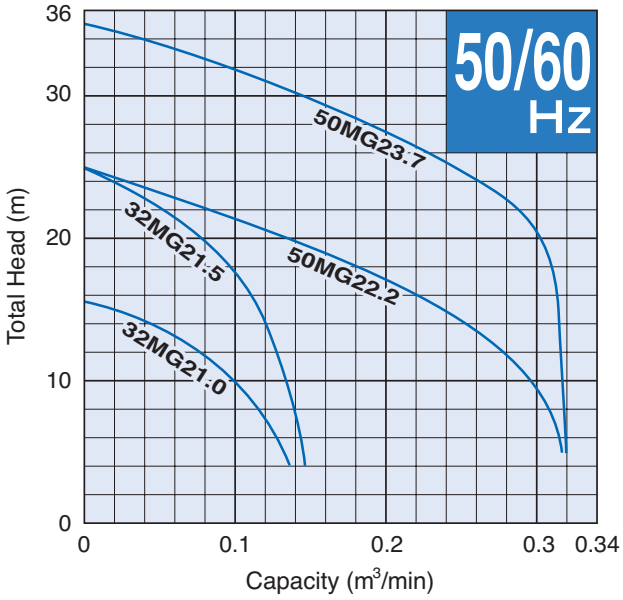
Guide Rail Fitting System

The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump. The models used in combination with the guide rail fitting system can be identified by the prefix "TOS".

Selection Table

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Types of Installation	
					Free Standing	Guide Rail Fitting
32MG21.0	32	1.0	3-phase	2	32MG21.0	TOS32MG21.0
32MG21.5	32	1.5	3-phase	2	32MG21.5	TOS32MG21.5
50MG22.2	50	2.2	3-phase	2	50MG22.2	TOS50MG22.2
50MG23.7	50	3.7	3-phase	2	50MG23.7	TOS50MG23.7

Performance Curves



SPECIFICATIONS	Model	32MG21.0	MG-series
			1.0kW, 3-phase

Type of Pump
Submersible cast iron pump with a grinding mechanism suitable for pumping sewage and wastewater

Type of Fluid
Sewage, wastewater, and water carrying solid matters

Temperature: 0 to 40°C

Discharge Bore & Connection
32mm, Threaded Oval Flange

Motor Output
1.0kW

Power Supply
Three-phase

Starting Method
Direct on Line

Motor
Continuous-duty rated, dry-type induction motor

Insulation Class: E (available in F on special request)
Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)
2-pole, 3000/3600min^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 2.9A	220V – 4.7A
400V – 2.8A	380V – 2.7A
415V – 2.7A	440V – 2.4A

Power Cable
Sheath: PVC
Standard Length: 6m
200 to 600V supply:
1 × 4 × 1.25mm^2, O.D. 11.1mm

Dry Weight (excluding cable)
Free Standing Type: 36kg
Guide Rail Fitting Type: 35kg

Impeller
Vortex impeller designed for "high-gap structure," dynamically balanced

Cable Entry with Anti-Wicking Block
Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.

Bearing
Permanently lubricated, deep-groove, double-shielded C3 ball bearings

Shaft
420 stainless steel

Shaft Seal (Mechanical Seal)
Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.

Upper Seal Face: Ceramic + Carbon
Lower Seal Face: SiC + SiC

Oil Seal (Lip Seal)
Used as a "Dust Seal", it protects the mechanical seal from abrasive particles.

OIL LIFTER
Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.

Type of Lubricating Oil & Volume
Turbine Oil (ISO VG32), 1050ml

Motor Protection Device
A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.

Optional Accessory

External Leakage Sensor (Electrode)

SPECIFICATIONS	Model	32MG21.5	MG-series
			1.5kW, 3-phase

Type of Pump
Submersible cast iron pump with a grinding mechanism suitable for pumping sewage and wastewater

Type of Fluid
Sewage, wastewater, and water carrying solid matters

Temperature: 0 to 40°C

Discharge Bore & Connection
32mm, Threaded Oval Flange

Motor Output
1.5kW

Power Supply
Three-phase

Starting Method
Direct on Line

Motor
Continuous-duty rated, dry-type induction motor

Insulation Class: F
Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)
2-pole, 3000/3600min^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 3.8A	220V – 6.6A
400V – 3.8A	380V – 3.8A
415V – 3.9A	440V – 3.3A

Power Cable
Sheath: PVC
Standard Length: 6m
200 to 600V supply:
1 × 4 × 1.25mm^2, O.D. 11.1mm

Dry Weight (excluding cable)
Free Standing Type: 36kg
Guide Rail Fitting Type: 35kg

Impeller
Vortex impeller designed for "high-gap structure," dynamically balanced

Cable Entry with Anti-Wicking Block
Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.

Bearing
Permanently lubricated, deep-groove, double-shielded C3 ball bearings

Shaft
420 stainless steel

Shaft Seal (Mechanical Seal)
Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.

Upper Seal Face: Ceramic + Carbon
Lower Seal Face: SiC + SiC

Oil Seal (Lip Seal)
Used as a "Dust Seal", it protects the mechanical seal from abrasive particles.

OIL LIFTER
Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.

Type of Lubricating Oil & Volume
Turbine Oil (ISO VG32), 1050ml

Motor Protection Device
A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.

Optional Accessory

External Leakage Sensor (Electrode)

SPECIFICATIONS	Model	50MG22.2	MG-series
			2.2kW, 3-phase

Type of Pump
Submersible cast iron pump with a grinding mechanism suitable for pumping sewage and wastewater

Type of Fluid
Sewage, wastewater, and water carrying solid matters

Temperature: 0 to 40°C

Discharge Bore & Connection
50mm, Threaded JIS 10kg/cm^2 Flange

Motor Output
2.2kW

Power Supply
Three-phase

Starting Method
Direct on Line

Motor
Continuous-duty rated, dry-type induction motor

Insulation Class: F
Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)
2-pole, 3000/3600min^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 5.3A	220V – 9.8A
400V – 5.0A	380V – 5.3A
415V – 5.0A	440V – 4.9A

Power Cable
Sheath: PVC
Standard Length: 6m
200 to 600V supply:
1 × 4 × 2.0mm^2, O.D. 11.8mm

Dry Weight (excluding cable)
Free Standing Type: 77kg
Guide Rail Fitting Type: 73kg

Impeller
Vortex impeller designed for "high-gap structure," dynamically balanced

Cable Entry with Anti-Wicking Block
Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.

Bearing
Permanently lubricated, deep-groove, double-shielded C3 ball bearings

Shaft
420 stainless steel

Shaft Seal (Mechanical Seal)
Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.

Upper Seal Face: Ceramic + Carbon
Lower Seal Face: SiC + SiC

Oil Seal (Lip Seal)
Used as a "Dust Seal", it protects the mechanical seal from abrasive particles.

OIL LIFTER
Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.

Type of Lubricating Oil & Volume
Turbine Oil (ISO VG32), 1350ml

Motor Protection Device
A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.

Optional Accessory

External Leakage Sensor (Electrode)

SPECIFICATIONS	Model	50MG23.7	MG-series
			3.7kW, 3-phase

Type of Pump
Submersible cast iron pump with a grinding mechanism suitable for pumping sewage and wastewater

Type of Fluid
Sewage, wastewater, and water carrying solid matters

Temperature: 0 to 40°C

Discharge Bore & Connection
50mm, Threaded JIS 10kg/cm^2 Flange

Motor Output
3.7kW

Power Supply
Three-phase

Starting Method
Direct on Line

Motor
Continuous-duty rated, dry-type induction motor

Insulation Class: F
Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)
2-pole, 3000/3600min^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 8.0A	220V – 13.8A
400V – 7.7A	380V – 7.9A
415V – 7.5A	440V – 6.9A

Power Cable
Sheath: PVC
Standard Length: 6m
380 to 600V supply:
1 × 4 × 2.0mm^2, O.D. 11.8mm
200 to 240V supply:
1 × 4 × 3.5mm^2, O.D. 13.9mm

Dry Weight (excluding cable)
Free Standing Type: 78kg
Guide Rail Fitting Type: 74kg

Impeller
Vortex impeller designed for "high-gap structure," dynamically balanced

Cable Entry with Anti-Wicking Block
Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.

Bearing
Permanently lubricated, deep-groove, double-shielded C3 ball bearings

Shaft
420 stainless steel

Shaft Seal (Mechanical Seal)
Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.

Upper Seal Face: SiC + SiC
Lower Seal Face: SiC + SiC

Oil Seal (Lip Seal)
Used as a "Dust Seal", it protects the mechanical seal from abrasive particles.

OIL LIFTER
Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.

Type of Lubricating Oil & Volume
Turbine Oil (ISO VG32), 1350ml

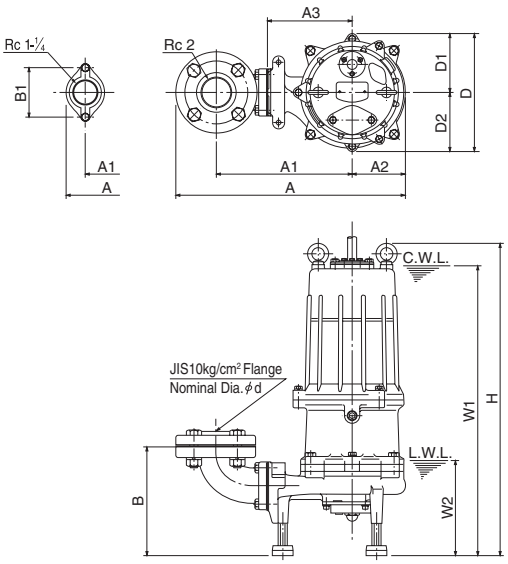
Motor Protection Device
A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.

Optional Accessory

External Leakage Sensor (Electrode)

DIMENSIONS | Model (TOS)32MG21.0 to (TOS)50MG23.7 | MG-series 32·50mm

Free Standing Type



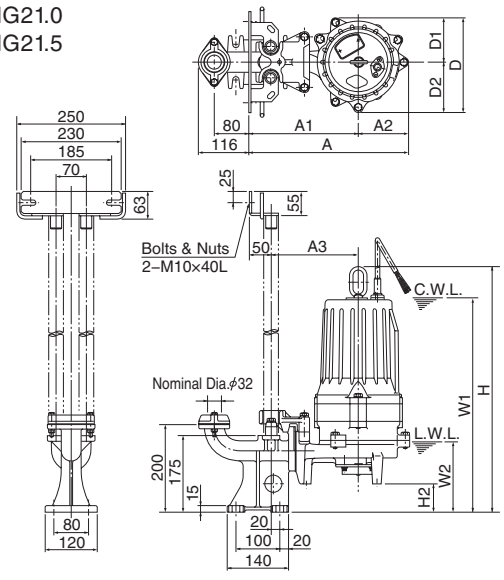
C. W. L.: Continuous Running Water Level
L. W. L.: Lowest Running Water Level

Unit: mm

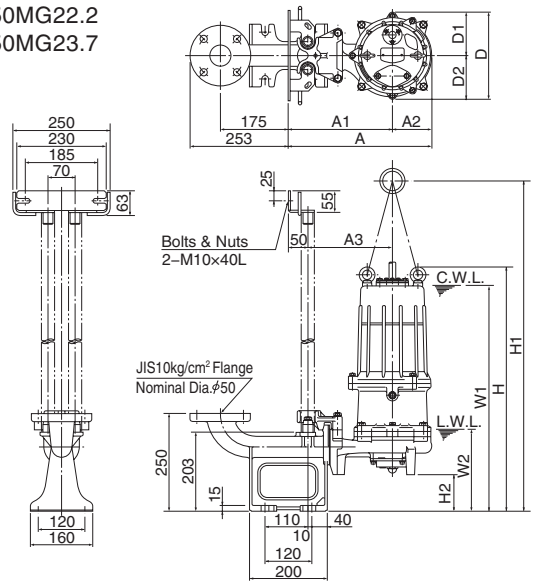
Model	d	A	A1	A2	A3	B	B1	D	D1	D2	W1	W2	H
32MG21.0	32	362	207	117	145	201	90	217	103	114	485	159	557
32MG21.5	32	360	207	117	145	201	90	217	103	114	485	160	558
50MG22.2	50	438	259	101	161	206	—	226	113	113	550	180	594
50MG23.7	50	438	259	101	161	206	—	226	113	113	550	180	594

Guide Rail Fitting Type: TOS Set

TOS32MG21.0
TOS32MG21.5



TOS50MG22.2
TOS50MG23.7



Unit: mm

Model	A	A1	A2	A3	D	D1	D2	W1	W2	H	H1	H2
TOS32MG21.0	367	250	117	200	217	103	114	490	162	560	—	64
TOS32MG21.5	367	250	117	200	217	103	114	490	160	562	—	65
TOS50MG22.2	367	266	101	216	226	113	113	580	210	627	749	94
TOS50MG23.7	367	266	101	216	226	113	113	580	210	627	749	94