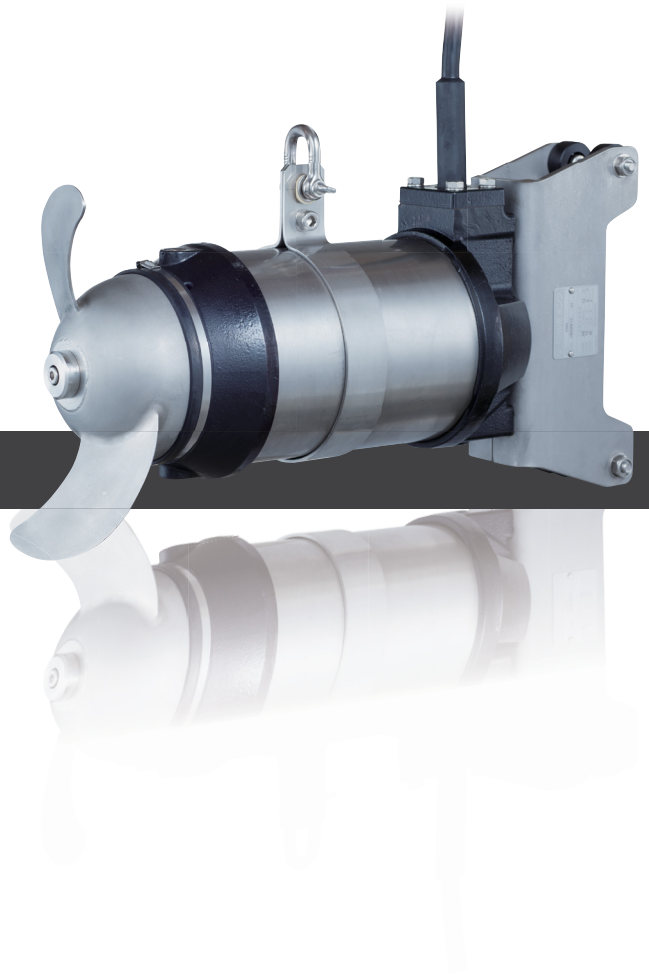


MR

SUBMERSIBLE MIXERS



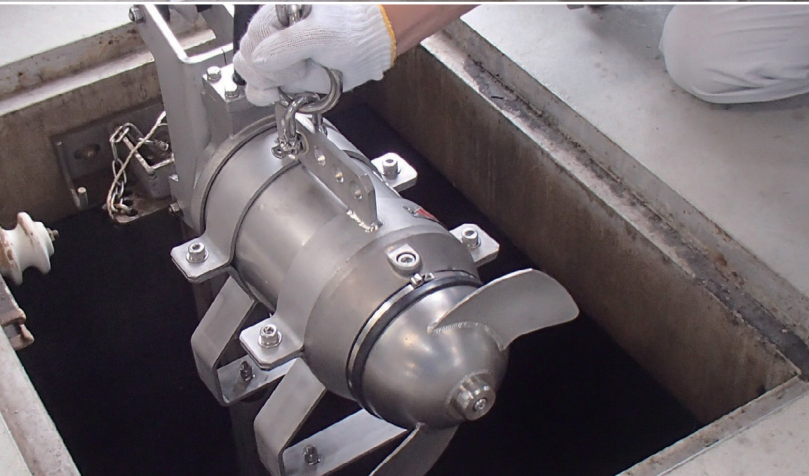
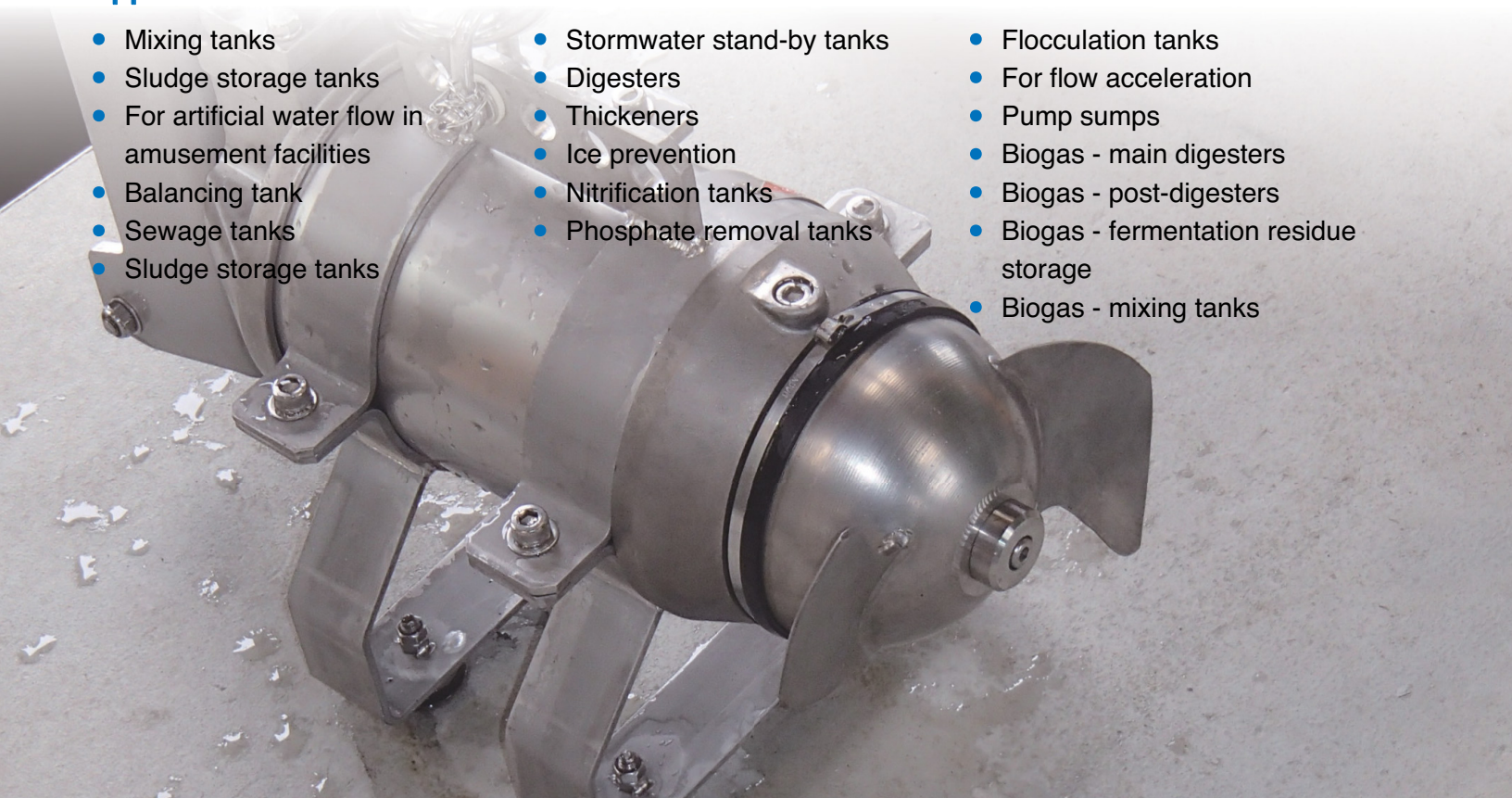
 **TSURUMI PUMP**
BUILT FOR WORK®

MR / MRL Submersible Mixers

- The highly-efficient shape of the propeller, which is directly connected with the submersible motor, provides a powerful jet of water.
- The oil chamber incorporates an electrode type leakage sensor to detect for water intrusion into the chamber. (2HP and above)
- Tsurumi submersible mixers are available in wide variations. Lineups include models without a guide ring to improve the mixing effect while increasing water flow, models with a guide ring that provides an excellent flow regulating effect, and low-water level models that are applicable with a minimum operating water level of 500mm. The cast iron type or stainless steel casting type can be selected according to field applications.
- The mixers can be used for either aerobic/aeration treatment that mixes water and air, or anaerobic treatment that does not mix air into the water.
- When used in combination with lifting equipment (optional), the mixer can be easily inspected and serviced without entering the tank.

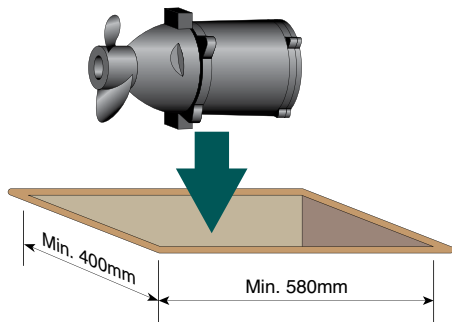
Applications

- Mixing tanks
- Sludge storage tanks
- For artificial water flow in amusement facilities
- Balancing tank
- Sewage tanks
- Sludge storage tanks
- Stormwater stand-by tanks
- Digesters
- Thickeners
- Ice prevention
- Nitrification tanks
- Phosphate removal tanks
- Flocculation tanks
- For flow acceleration
- Pump sumps
- Biogas - main digesters
- Biogas - post-digesters
- Biogas - fermentation residue storage
- Biogas - mixing tanks



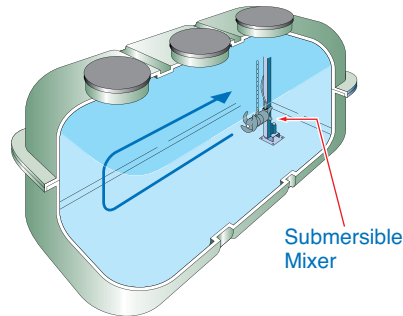
Tsurumi submersible mixers are available in wide variations that can be selected according to application.

Compact Design



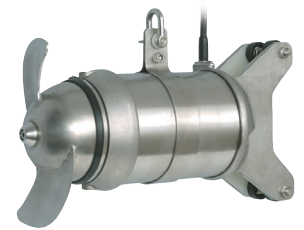
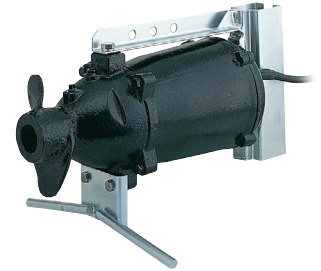
The compact type MR-series (0.75kW and below) is easy to handle and can be smoothly inserted through narrow openings (400 × 580mm) for installation in small treatment tanks.

Septic Tank/Johkasou of Factory Production Type



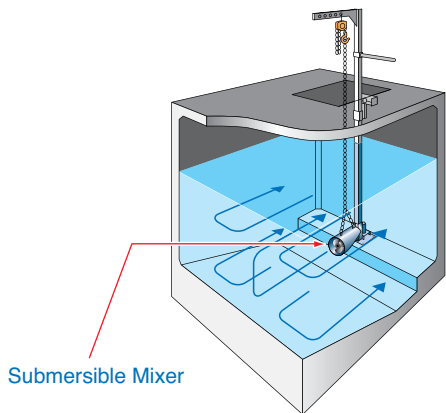
The MR-series is effective in equalizing water quality while preventing the sedimentation of solids. Also, when used in combination with an air diffuser, the MR-series effectively improves aerobic/aeration treatment efficiency and anaerobic mixing, as with an aerator.

Without/With Guide Ring Type



MR-series

Denitrifying Wastewater Treatment



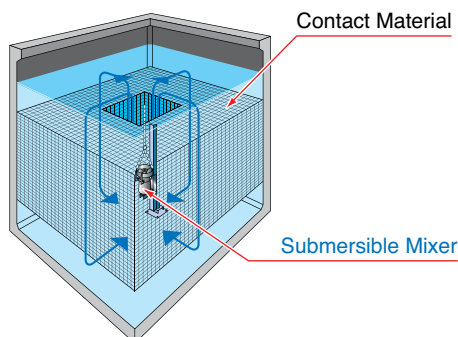
The MR/MRL-series are effective towards preventing the sedimentation of solids and equalizing water quality in flow rate regulating tanks and intermediate flow rate regulating tanks that do not need air (oxygen).

Low Water Level Type



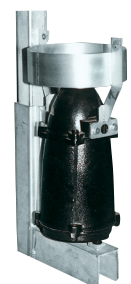
MRL-series

Contact Tank



The MRT-series is used to generate a circulating flow in denitrifying contact tanks, etc. The simple structure of the MRT-series is suitable for small-scale treatment facilities where maintenance/inspection space is limited.

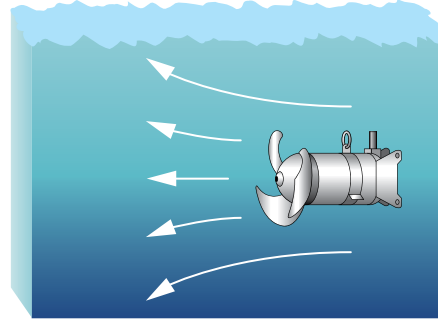
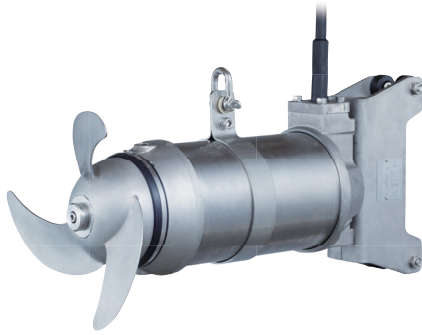
Vertical Top-discharge Type



MRT-series

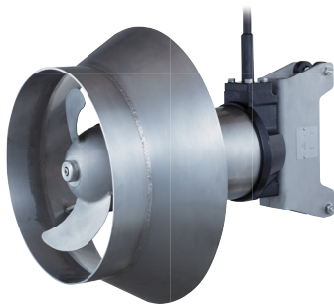
MR

Without Guide Ring Type

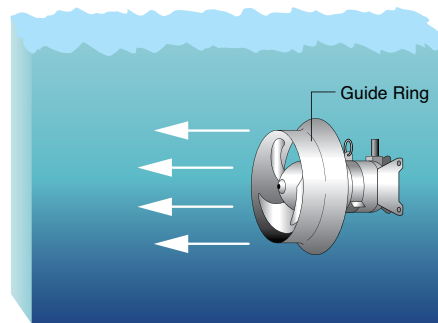


Model	Motor Output	Speed	Flowing Quantity	Agitation output under clear water	Reaction Force	Weight	Propeller Nominal Dia.
	HP	RPM	GPM	HP	N	lbs.	Inch
MR21NF250	0.33	1700	370	0.11	40	53	5 11/16
MR21NF400	0.54	1700	476	0.17	60	53	6 1/8
MR21NF750	1	1690	845	0.24	110	53	7 5/16
MR2521EC/CR	1	1126	1162	0.91	160	62	9 7/16
MR31NF/R1.5	2	1085	2457	1.6	260	79	11 13/16
MR32NF/R1.5	2	1085	2536	1.7	285	79	11 13/16
MR31NF/R2.8	3.75	1090	3144	2.8	430	101	11 13/16
MR32NF/R2.8	3.75	1090	3461	3.5	535	101	11 13/16
MR41NF/R3.0	4	870	3725	3.5	485	247/270	15 3/4
MR42NF/R3.0	4	870	4332	3.7	665	247/270	15 3/4
MR41NF/R4.0	5.36	840	4914	5.0	795	247/270	15 3/4

With Guide Ring Type

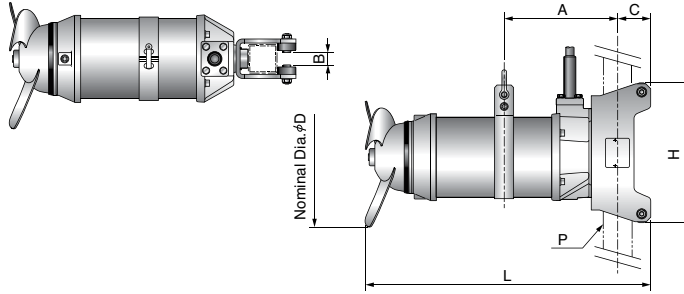


Cast Iron Type



Model	Motor Output	Speed	Flowing Quantity	Agitation output under clear water	Reaction Force	Weight	Propeller Nominal Dia.
	HP	RPM	GPM	HP	N	lbs.	Inch
MR31GF/R1.5	2	1085	2034	1.5	245	110	11 13/16
MR32GF/R1.5	2	1085	2113	1.6	272	110	11 13/16
MR31GF/R2.8	3.75	1090	2747	2.7	420	134	11 13/16
MR32GF/R2.8	3.75	1090	2985	3.1	525	134	11 13/16
MR41GF/R3.0	4	1085	870	3.2	345	276/298	15 3/4
MR42GF/R3.0	4	1085	870	3.6	530	276/298	15 3/4
MR41GF/R4.0	5.36	1090	870	4.6	630	276/298	15 3/4

Dimensions

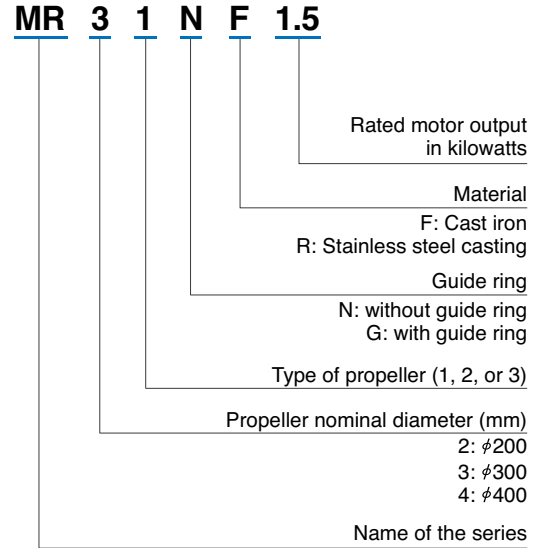


Unit: mm

Model	D1	L	H	A	B	C	P
MR21NF250	155/145	473	247	205	20	30	50
MR21NF400	185/155	473	247	205	20	30	50
MR21NF750	190/185	473	247	205	20	30	50
MR2521EC/CR	270/240	470	258	177	21	67	50
MR31NF/NR1.5	300	556	294	210	26	70	60
MR32NF/NR1.5	300	557	294	210	26	70	60
MR31NF/NR2.8	300	600	294	240	26	70	60
MR32NF/NR2.8	300	608/600	294	240	26	70	60
MR41NF/NR3.0	400	668	300	285	26	70	60
MR42NF/NR3.0	400	668	300	285	26	70	60
MR41NF/NR4.0	400	682	300	285	26	70	60

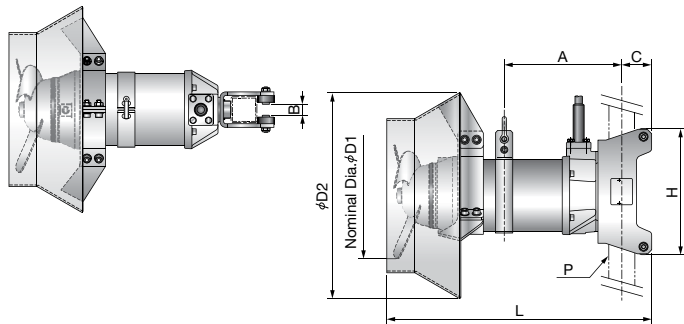
* Dimension "A" is a reference value.

Model Number Designation



Model MR2521EC/CR

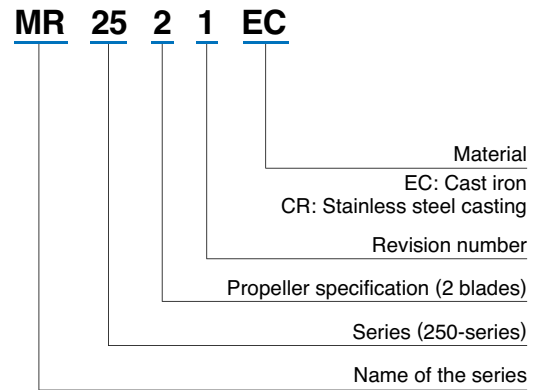
Dimensions



Unit: mm

Model	D1	D2	L	H	A	B	C
MR31GF/GR1.5	300	479	576	294	255	26	70
MR32GF/GR1.5	300	479	576	294	255	26	70
MR31GF/GR2.8	300	479	616	294	275	26	70
MR32GF/GR2.8	300	479	616	294	275	26	70
MR41GF/GR3.0	400	572	691	300	300	26	70
MR42GF/GR3.0	400	572	691	300	300	26	70
MR41GF/GR4.0	400	572	691	300	300	26	70

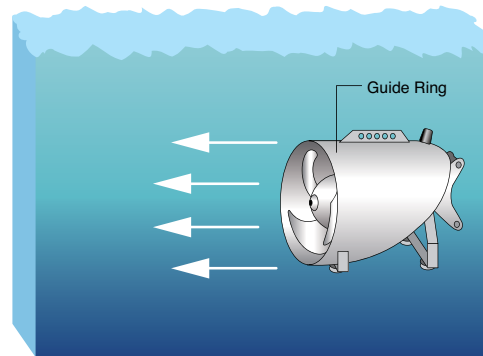
* Dimension "A" is a reference value.



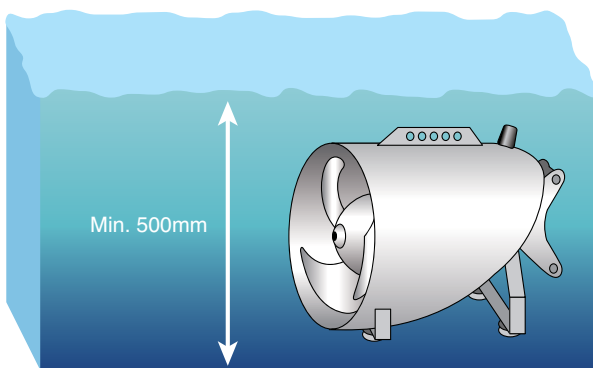
MRL (Low Water Level Type)



Cast Iron Type



Model	Motor Output	Speed	Flowing Quantity GPM	Agitation output under clear water	Reaction Force	Weight	Propeller Nominal Dia. Inch
	HP	RPM		HP	N	lbs.	
MRL21GF250	0.33	1700	349	0.08	37	60	5 11/16
MRL21GF400	0.54	1700	449	0.13	55	60	6 1/8
MRL21GF750	1	1690	798	0.3	101	60	7 5/16
MRL2541EC/CR	1	1126	1110	0.9	150	86	9 7/16
MRL31GF/R1.5	2	1085	2034	1.5	160	110	11 13/16
MRL32GF/R1.5	2	1085	2113	1.6	180	110	11 13/16
MRL31GF/R2.8	3.75	1090	2747	2.7	275	134	11 13/16
MRL32GF/R2.8	3.75	1090	2985	3.1	310	134	11 13/16

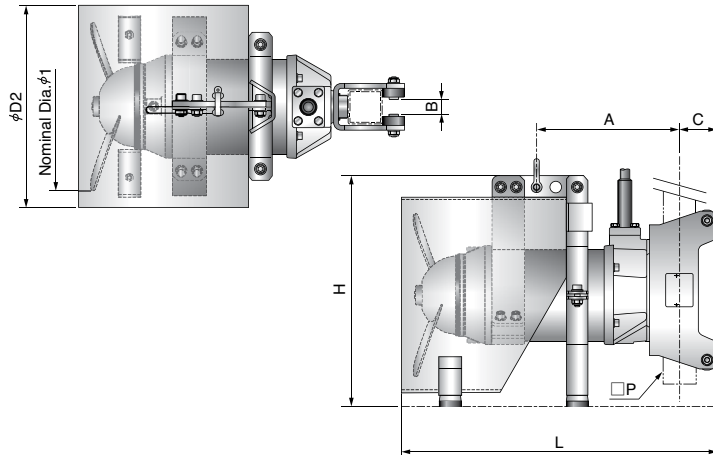


Applicable with a minimum operating water level of 500mm.



The mixer body has rubber feet, enabling installation at the bottom of a tank.

Dimensions



Unit: mm

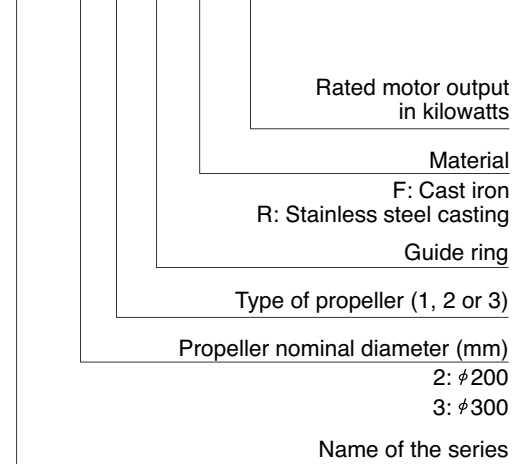
Model	D1	D2	L	H	A	B	C	P
MRL21GF250	155/145	289	498	294	230	20	30	50
MRL21GF400	185/155	289	498	294	230	20	30	50
MRL21GF750	190/185	289	498	294	230	20	30	50
MRL2541EC/CR	270/240	319	495	393	208	21	67	50
MRL31GF/GR1.5	300	355.6	576	421	260	26	70	60
MRL32GF/GR1.5	300	355.6	576	421	260	26	70	60
MRL33GF/GR1.5	300	355.6	576	421	260	26	70	60
MRL31GF/GR2.8	300	355.6	626	421	270	26	70	60
MRL32GF/GR2.8	300	355.6	626	421	270	26	70	60
MRL33GF/GR2.8	300	355.6	626	421	270	26	70	60

* Dimension "A" is a reference value.

Model Number Designation

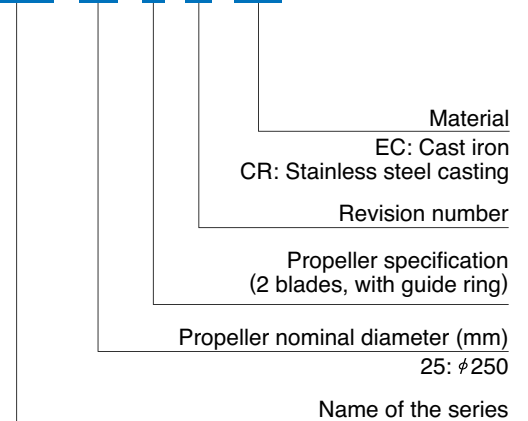
MRL200/300-series

MRL 3 1 G F 1.5



MRL250-series

MRL 25 4 1 EC



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