SPCO®

makes life easier



Sewage Pumps

50Hz

Approvals



CB TEST CERTIFICATE

Ref. Certificate No.
CH-5875

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

Issued by: Electrosuisse

Product: Submersible pumps

Applicant: Swiss Pump Company AG, Moosweg 36, CH-3645 Gwatt (Thun), Switzerland

Manufacturer: Swiss Pump Company AG, Moosweg 36, CH-3645 Gwatt (Thun), Switzerland

Factory: Swiss Pump Company AG, Moosweg 36, CH-3645 Gwatt (Thun), Switzerland

Rating and principal characteristics: 220-240V~, 50/60Hz; 3 x 230V~, 50/60Hz; 3 x 400V~, 50/60Hz; 3 x 460V~, 50/60Hz; Power range: 0.37-30kW; class I; IP68

Trade mark (if any): Swiss Pump Company AG (SPCO)

Model/Type reference: UG, QF, Sewage (0.37-30kW) see appendix type list in test report

Additional information: —

Sample of product tested to be in conformity with IEC: 60335-1(ed.4)/am1/am2; 60335-2-41(ed.3)/am1/am2

National differences: EU Group Differences; EU Special National Conditions; EU A-Deviations

Test Report Ref. No.: 08-HG-0258.01 + .02 + .03 + .06

This CB Test Certificate is issued by the National Certification Body:

Electrosuisse
Lupmenstrasse 1,
CH-8320 Fehraltorf

Signed by: Erich Dorst
2010-07-27

electrosuisse

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CE

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STRONG Series • LIGHTWEIGHT SUMP PUMP

Feature

- Utility submersible pump
- For clean water and sea water
- New design
- Manual-automatic water Level Switch
- With thermal protection switch to protect the motor effectively
- The base of Strong-100 is designed for sucking the residual water lowest 2mm off the ground
- The new A type manual-automatic water Level Switch can be used matching with Strong-100 and Strong-400
- Automatic (A) : When the indicator is in the "A" position, the built-in
- Manual (B) : If need to start the pump, locate the switch knob to the indicator M position
- Different voltages and frequency of motors can be manufactured according to requirement



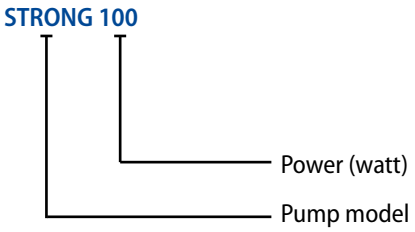
Max flow: 20 m3/h

Max head: 10 m

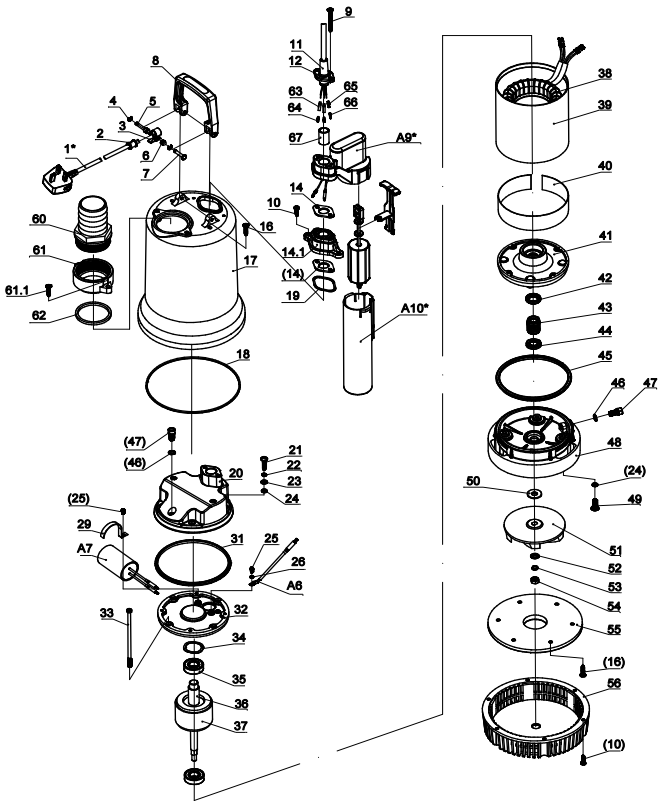
Applications

- Sea water use; mariculture fishery place and marine equipment
- Suitable for circulating water in ponds and gardens
- Commercial parking lots, road shops, swimming pools, water reservoir and depression drainage
- Water discharge in civil engineering and construction
- STRONG-100 is a suction type of low water level ,suitable for drainage of household roof, garage, wine cellar, basement and etc.

Definition of models



Material and Parts

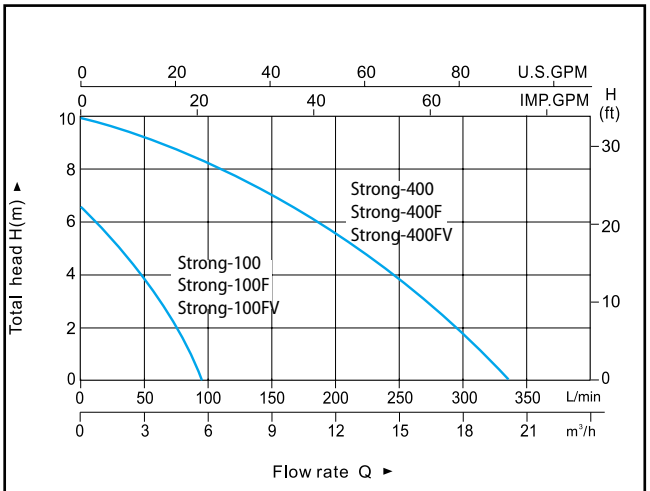


Item	Description
1*	Cable
2	Cable sleeve
3	Cable clamp
4	Retaining ring
5	Clamp shaft
6	Nut
7	Handle Pin
8*	Handle
9	Screw
10	Screw
11	Rubber seal
12	cable sealing gland
14	Gasket
14*	Gland cover
16	Screw
17	Pump housing
18	Gasket
19	Gasket
20	Head cover
21	Screw
22	Spring washer
23	Flat washer
24	O-ring
25	Screw
26	Spring washer
A6	Earth wire set
29	Capacitor set

Item	Description
7A	Capacitor set
31	O-ring
32	Motor upper cover
33	Screw
34	Wave washer
35	Bearing
36	Motor shaft
37*	Rotor
38*	Stator
39	Motor casing
40	Stator locating ring
41	Oi1 chamber
42*	Mechanical seal
43	Mechanical seal
44*	Mechanical seal
45	O-ring
46	Washer
47	Screw
48	Diffuser
49	Screw
50	Washer
51*	Impeller
52	Flat washer
53	Spring washer
54	Nut
55	Diffuser base
56	Base

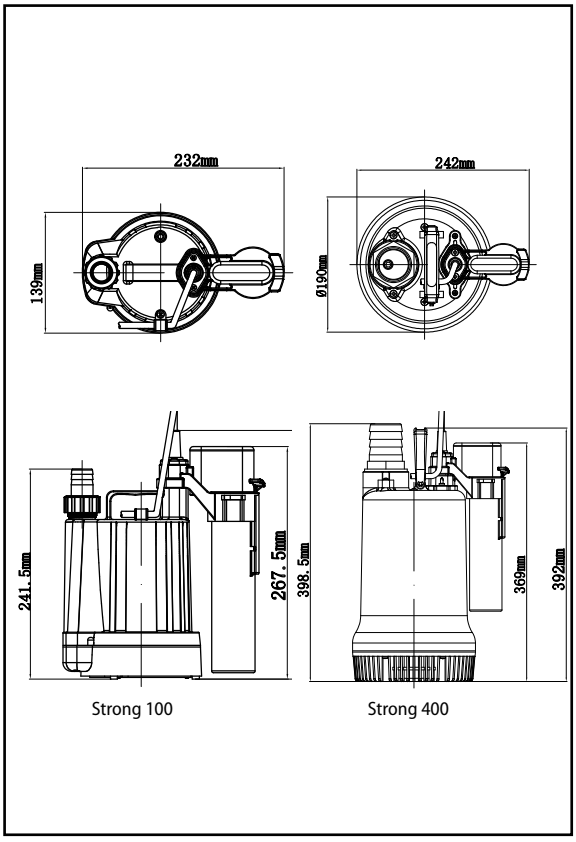
Item	Description
A9	Floater switch
A10	Floater Kit
60	2" Outlet coupling
61	Outlet
61	Screw
62	O-ring
63	Female terminal sleeve
64	Female terminal
65	Male terminal sleeve
66	Male terminal
67	Heat shrink tube

Performance Curves



Model	Power P2(Watt)	Max.Flow (L/min)	Max.Head (m)	Outlet
Strong-100	100	95	6.5	3/4", 1"
Strong-100F	100	95	6.5	3/4", 1"
Strong-100FV	100	95	6.5	3/4", 1"
Strong-400	400	330	10	2"
Strong-400F	400	330	10	2"
Strong-400FV	400	330	10	2"

Dimensions



NX Series • LIGHTWEIGHT SUMP PUMP

Applications

- Draining wells.
- Garages.
- Cellars or places subject to flood.
- Garden irrigation.



Features

- Two-Pole induction motor.
- Insulation class: F
- Protection: IPX8
- With capacitor and thermal overload protection

Max flow: 9 m3/h

Max head: 8 m

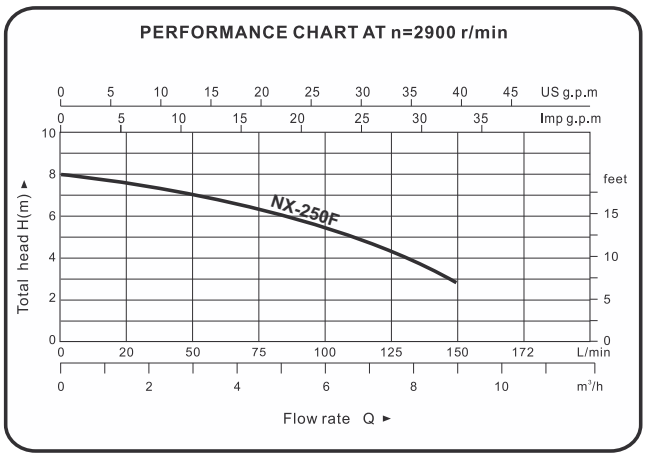
Max. Depth: 5m

Max. fluid temperature 40 °C

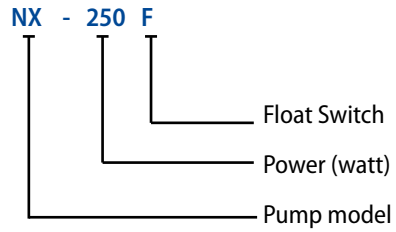
Max. passage of solid body 20 mm

Continuius duty

Performance curve



Definiton of Model



Material

Part	Material
Pump body	AISI 304
Impeller	Plastic or Stainless steel
Motor shaft	Stainless steel
Mechanical seal	Silicon/ Carbide

Data chart

Model	Power (kW)	Max.Flow (m3/h)	Max.Head (m)	Solid Passage (mm)	Outlet (Inch)	Cable (m)	Weight (kg)
NX-250 F	0.25	9	7.5	10	1 1/4“	5	10

F: MEANS WITH FLOAT SWITCH

HS -03 Submersible pump

Features

Stainless Steel Series electric submersible pumps

Compact design with Top Discharge Outlet reduces space usage for installation in small manholes, for use in domestic, installations and small featured works.

Two different types of lever sensors:

- Mechanical activated float switch with cable extender (A)
- Vertical Mechanical activated Float Switch with casement (S)

Top discharged cools and removes heat from the motor through the outlet.

It allows these pumps to be used even when only partially submerged.

Every model undergoes hydrostatic testing for leakage from the casing and mechanical seals.



Minimum suction devices Impeller

Max flow: 9.5 m3/h

Max head: 9 m

Applications

- Domestic drainage
- Grey water drainage.
- Koi pond
- Light waste water discharge.
- Hydro-sanitary
- Emergencies flooding pumping in homes
- Fountain and landscape
- Drainage pumping.
- Livestocks

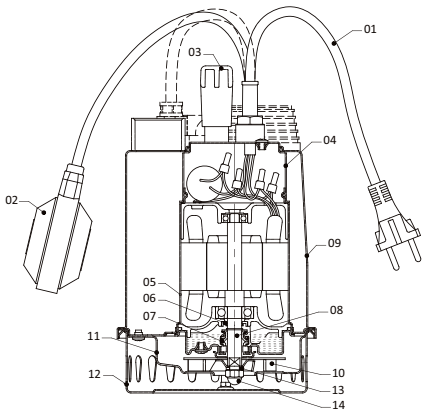
Materials

No	Part	Material
1	Cable	H07RN-F
2	Float switch	Plastic
3	Handle	NY66+G30
4	Motor Cover	AISI 304
5	Motor housing	AISI 304
6	Oil seal	NBR
7	Mechanical Seal	Carbon Graphite Ceramic / NBR/ 304
8	Shaft	AISI 410
9	Pump housing	AISI 304
10	Impeller	AISI 304
11	Pump casing	AISI 304
12	Strainer	AISI 304
13	Spring washer	AISI 304
14	Hex domed nuts	AISI 304

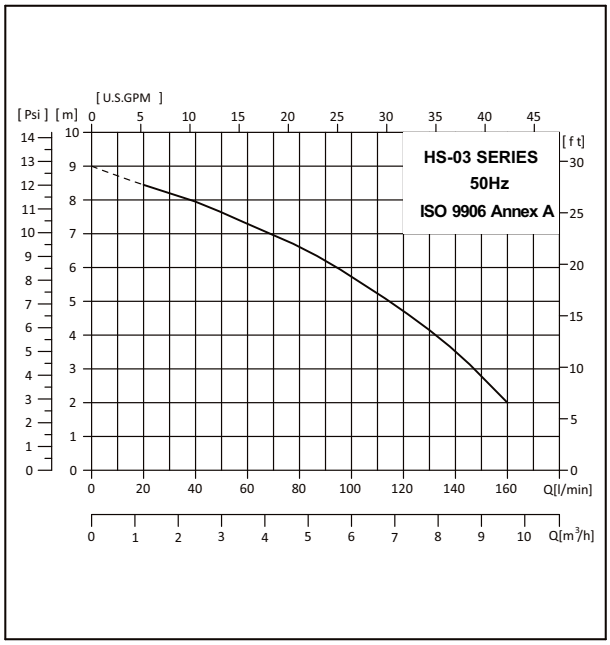
Definition of models

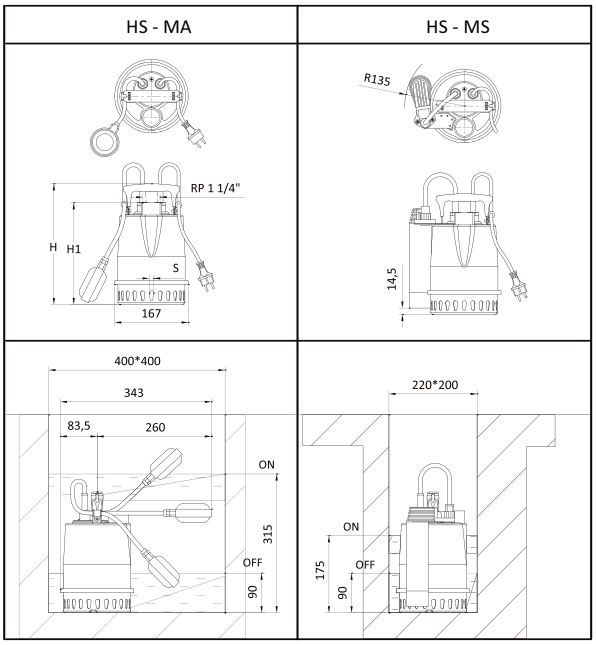
HS - 07 M A - 32

- 32 — Discharge size
- A — Float switch / S = Vertical level switch
- M — Single Phase / T = Three Phase
- 07 — Power (HP)
- HS — Series name



Technical data





Y= apacity						
l/min	0	20	40	80	120	160
m^3/ h	0	1.2	2.4	4.8	7.2	9.6
H=Total manometric head						
meters	9.0	8.4	8.0	6.5	4.6	2.0

Model	Dimensions			Pallet dimension	Units/ Pallet
	H	H1	S	L x W x H (cm)	
HS-03M-32	274	231	10	110 x 110 x 210	144
HS-03MA-32					
HS-03MS-32					
HS-03T-32					

Model	Phase	Voltage	Power		Head Rated	Head Max.	Flow Rated		Flow Max.		Ampere	Connection	Solid Passage	Weight(Kg)
	ø	V	HP	kW	M	M	L/min	m^3/h	L/min	m^3/h	FLA (A)	Outlet	(mm)	Cable 10M
HS-03M-32	1	220-240	0.33	0.25	6	9	90	5.4	160	9.6	2.1/1.9	1-1/4"	10	5.4
HS-03MA-32														5.7
HS-03MS-32														5.8

Model	Phase	Voltage	Power		Head Rated	Head Max.	Flow Rated		Flow Max.		Ampere	Connection	Solid Passage	Weight(Kg)
	ø	V	HP	kW	M	M	L/min	m^3/h	L/min	m^3/h	FLA (A)	Outlet	(mm)	Cable 10M
HS-03T-32	3	220-240	0.33	0.25	6	9	90	5.4	160	9.6	1.5/1.3	1-1/4"	10	5.4

Model	Phase	Voltage	Power		Head Max.	Head Max.	Flow Rated		Flow Max.		Ampere	Connection	Solid Passage	Weight(Kg)
	ø	V	HP	kW	M	M	L/min	m^3/h	L/min	m^3/h	FLA (A)	Outlet	(mm)	Cable 10M
HS-03T-32	3	380-415	0.33	0.25	6	9	90	5.4	160	9.6	0.9/0.7	1-1/4"	10	5.4

HS Series •Submersible Drainage Pumps

Applications

Emptying of septic tanks and residential sumps



Open Impeller

Max flow: 25 m3/h

Max head: 20m

Definition of Model

HS - 07

- Power (HP)
- Series name

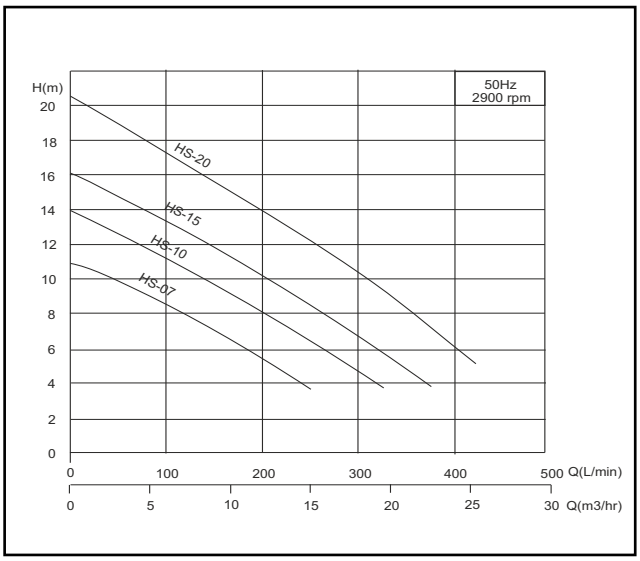
Materials

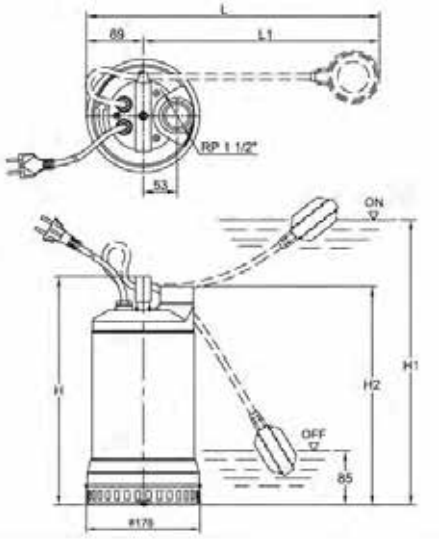
Part	Material
Cable	H07RN-F
Handle	AISI304+Nylon
Motor Cover	AISI 304
Motor Casing	AISI 304
Fixing Ring	AISI 304
Pump Body	AISI 304
Mechanical Seal	Sic/Sic/NBR
Impeller	AISI 304
Key	AISI 304
Pump Casing	AISI 304
Oil Seal	NBR
Shaft	AISI 304
V-type axial oil seal	NBR
Suction Flange	AISI 304

Specifications

Liquid Temperature		0~50˚C
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	Class F
	Protection	IP 68
Pump Part	Protection device	Thermal Protector(Single phase)
	Bearing	Double shielded Ball Bearing
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Open Impeller

Performance Curves





Type	Output		Discharge	Rated		Maximum		Cable	Free Passage
	HP	KW	Inch	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	M	mm
HS-07	0.75	0.55	RP 1.5″	8.6	100	10.9	250	10	8
HS-10	1	0.75	RP 1.5″	11.2	100	14	325	10	8
HS-15	1.5	1.1	RP 1.5″	11.9	150	16.1	375	10	8
HS-20	2	1.5	RP 1.5″	15.6	150	20.6	420	10	8

Dimensions

Single-Phase

Type	H	H1	H2	L	L1
HS-07	357	437	341	459	370
HS-10	407	497	391	514	425
HS-15	407	497	391	514	425

Three-Phase

Type	H	H2	Weight
HS-07	357	341	12
HS-10	357	341	12
HS-15	407	391	15
HS-20	407	391	17

NS Series • SUBMERSIBLE STANDING PUMP

Applications

- Aquariums.
- Mine enterprises.
- Watering flower and flush.
- Garden irrigation.



NS-450AF NS-450

Features

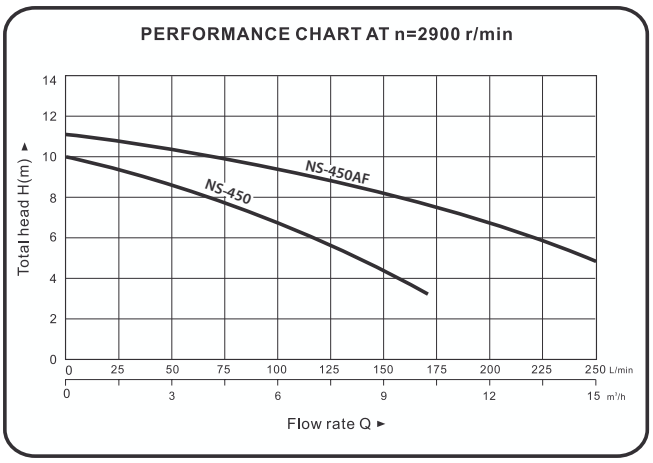
- Two-Pole induction motor.
- Insulation class: F
- Protection: IP68
- Single phase motor with built-in thermal overload protection

Max flow: 15 m3/h

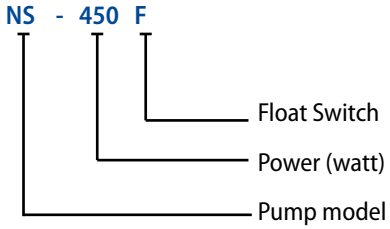
Max head: 11 m

Max. Depth: 5m
Max. liquid temperature : 40 °C
Max. ambient temperature: 40 °C
Continuous duty

Performance curve



Definiton of Model



Material

Part	Material
Pump body	NBR
Impeller	Rubber
Motor shaft	Stainless steel
Mechanical seal	Ceramic/ Graphite

Data chart

Model	Power [kW]	Max. Flow [m³/h]	Max. Head [m]	Max. Dia. of Particle [mm]	DIA OF PIPE	Cable [m]	Weight [kg]	Packing [mm]
NS-450	0.45	10	10	2	1″	6	9.5	230x230x350
NS-450AF	0.45	15	11	2	2″	6	11	230x230x350

NE-X Series • LIGHTWEIGHT SUBMERSIBLE RESIDUE DEWATERING PUMP

Feature

- Submersible single-phase portable residue dewatering pump
- Rubber lined base plate protects the floor surface from scratching
- The wear parts are made of abrasion-resistant materials
- Discharge direction is selectable between vertical and horizontal
- Removal of residual water down to 3mm



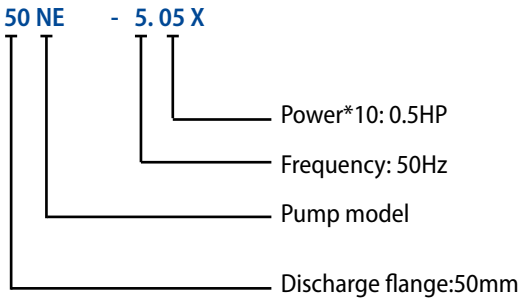
Max flow: 8.4m3/h

Max head: 14m

Applications

- Residential, commercial, industrial dewatering and site drainage
- Construction sites and civil engineering projects
- Basement, parking lots, removing residue water

Definiton of Model



Specifications

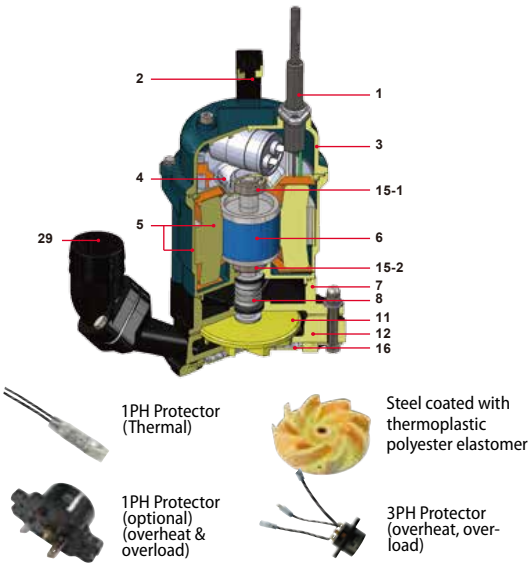
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Type
	Insulation	Class B
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open

Data chart

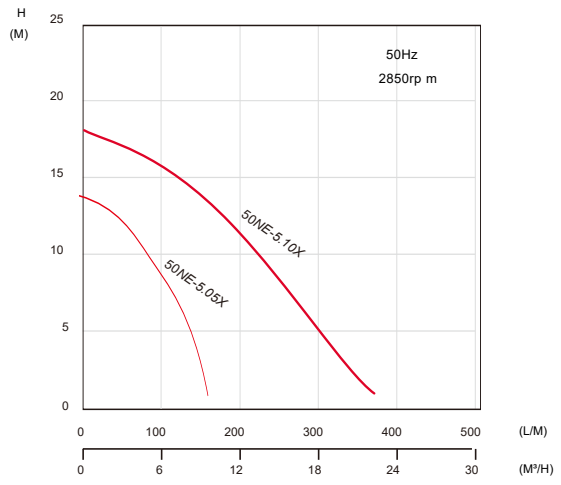
Model	Output		Discharge	FLA		Rated		Maximum		Free passage	Weight (W/O Cable)	
	HP	kW	Inch	1 Ø 230V	3 Ø 400V	Head M	Cap LPM	Head M	Cap LPM	mm	1 Ø-Kg	3 Ø-Kg
50NE-5.05X	0.5	0.37	2"	3A	0.9A	10	75	14	140	--	11.3	11.3
50NE-5.10X	1	0.75	2"	5.8A	1.9A	12	190	18	375	--	13.9	13.9

Material and Parts

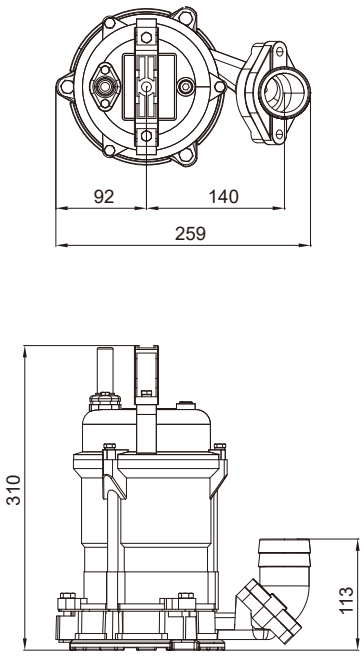
No	Part	Material
1	Cable	H07RN-F /SJTOW/STOW
2	Handle	Nylon 6
3	Motor Cover	ADC 12
4	Bracket	Steel
5	Motor Housing + Stator	ADC12+Steel
6	Shaft with Rotor	AISI 410
7	Oil Chamber	Cast Iron
8	Mech. Seal	Upper : CA/CE
		Lower : SIC/SIC
11	Impeller	Hytrel
12	Pump Casing	EN-GJL-200
15-1	Upper Bearing	NTN/TPI
15-2	Lower Bearing	NTN/TPI
16	Strainer	Steel+Rubber
29	Plastic Hosetail	PP



Performance Curves



Dimensions



Pumping water down to minimum level of 3mm

NE Series • Light Weight Submersible Drainage Pump

Feature

- High abrasive resistance resin Vortex impeller
- Double mechanical seal / Designed Agitator
- Auto reset thermal protector / Non air locking
- Auto version for small pit usage



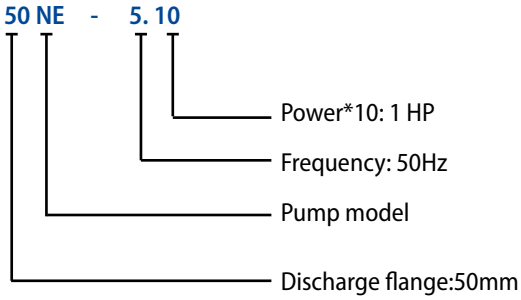
Max flow: 40m3/h

Max head: 22m

Applications

- Residential, commercial, industrial dewatering and site drainage
- Decorative waterfalls and fountains.
- Raw water supply from lakes or rivers.
- Sediment removal from small sumps or basins
- Suitable to use in snoring mode

Definiton of Model



Specifications

Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Type
	Insulation	0.5~1HP:Class B ; 2HP:Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open

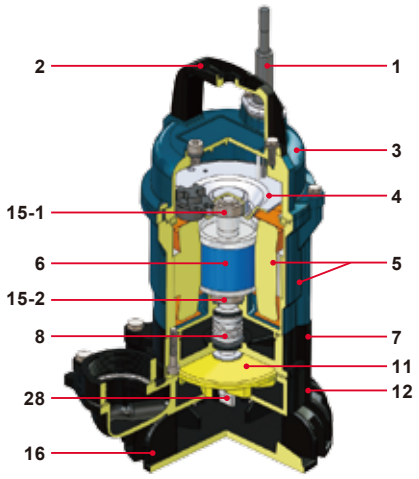
Data chart

Model	Output		Discharge	FLA		Rated		Maximum		Free passage	Weight (W/O Cable)	
	HP	kW	Inch	1 Ø 230V	3 Ø 400V	Head M	Cap LPM	Head M	Cap LPM	mm	1 Ø-Kg	3 Ø-Kg
50NE-5.05	0.5	0.37	2"	3A	1.1A	9.6	110	12	240	6	11.3	11.3
50(80)NE-5.10	1	0.75	2"(3")	5.8A	1.9A	12	190	18	375	6	13.9	13.9
80NE-5.10L	1	0.75	3"	5.8A	1.9A	6	290	10	560	6	17.8	17.8
50(80)NE-5.20C	2	1.5	2"(3")	9.5A	2.9A	13	250	19	500	6	18	18
50(80)NE-5.20	2	1.5	2"(3")	13A	3.7A	16	315	21.5	658	6	18.1	18.1

» All single-phase and three-phase pumps can be equipped with float switch upon request.
» C identify ECO, Lower input ; L: Identify Larger flow which has bigger Impeller size and pump casing

Material and Parts

No	Part	Material
1	Cable	H07RN-F /SJTOW/STOW
2	Handle	Nylon 6
3	Motor Cover	ADC 12
4	Bracket	Steel
5	Motor Housing + Stator	ADC12+Steel
6	Shaft with Rotor	AISI 410
7	Oil Chamber	0.5~1HP:Cast Iron
		2HP:AlSi7Mg
8	Mech. Seal	Upper : CA/CE
		Lower : SIC/SIC
11	Impeller	Hytrel
12	Pump Casing	EN-GJL-200
15-1	Upper Bearing	NTN/TPI
15-2	Lower Bearing	NTN/TPI
16	Strainer	PVC
28	Agitator	SMF5030





1PH Protector (Thermal)



Optional Suction Plate

transfer to residue dewatering pump/ available for 0.5HP and 1HP

» Removal of residual water down to 3mm



1PH Protector (optional) (overheat & overload)



Agitator

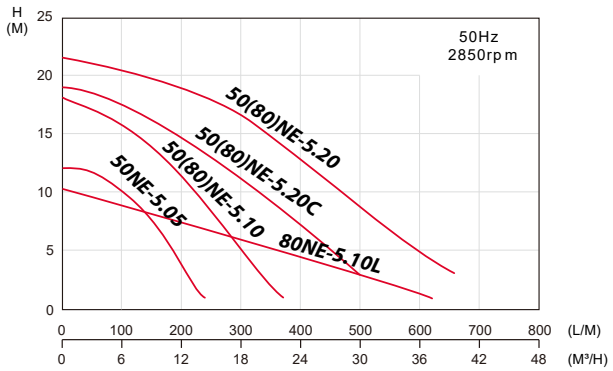


3PH Protector (overheat, over-load)

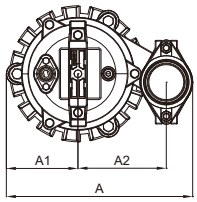


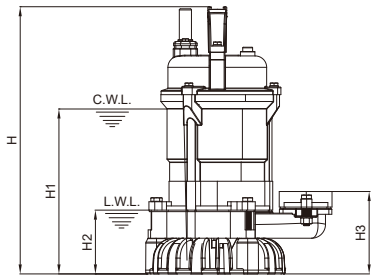
Steel coated with thermoplastic polyester elastomer

Performance Curves



Dimensions





50NE-5.05

Model	A	A1	A2	H	H1	H2	H3
50NE-5.05	243	94	117	352	200	84	110
50(80)NE-5.10	279	94	133	377	225	84	121
80NE-5.10L	284	94	138	426	294	112	149
50(80)NE-520C	313	107	155	464	308	94	130
50(80)NE-5.20	313	107	155	464	308	94	130

NEBL Series • LIGHTWEIGHT SUBMERSIBLE DEWATERING PUMP FOR SLUDGE / SOLIDS HANDLING

Feature

- High abrasive resistance to liquids containing sand and gravel
- Free passage to 38mm in diameter
- Lightweight
- Pump body is highly resistant to impact
- Quick & easy replacement of wear components
- Air vent mechanism built-in allowing water to cool the motor when pumping
- Efficient circumferential cooling for continuos duty



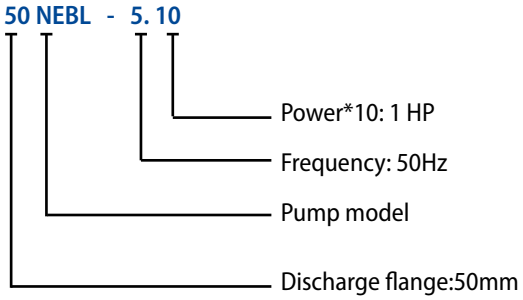
Max flow: 24m3/h

Max head: 12m

Applications

- Construction and industrial sites
- Tunneling, public works, floods
- Emergency situation

Definiton of Model



Specifications

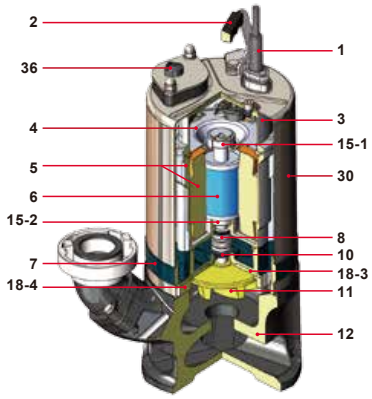
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Type
	Insulation	Class B
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open

Data chart

Model	Output		Discharge	FLA		Rated		Maximum		Free passage	Weight (W/O Cable)	
	HP	kW	Inch	1 Ø 230V	3 Ø 400V	Head M	Cap LPM	Head M	Cap LPM	mm	1 Ø-Kg	3 Ø-Kg
50NEBL-5.10	1	0.75	2"	5.8A	2A	8	170	12	380	38	14	14

Material and Parts

No	Part	Material
1	Cable	H07RN-F /SJTOW/STOW
2	Handle	Steel + NBR
3	Motor Cover	ADC 12
4	Upper Bearing Bracket	Steel
5	Motor Housing + Stator	ADC12+Steel
6	Shaft with Rotor	AISI 410
7	Oil Chamber	Cast Iron
8	Mech. Seal	CA/CE + SIC/SIC
10	Lip Seal	NBR
11	Impeller	Hytrel
12	Pump Casing	Hytrel
15-1	Upper Bearing	NTN/TPI
15-2	Lower Bearing	NTN/TPI
18-3	Wearing Plate	PA 66 Plastic
18-4	Volute Liner	NBR
30	Outer casing	AISI 304
36	Air Exhauste	NBR / AISI 304



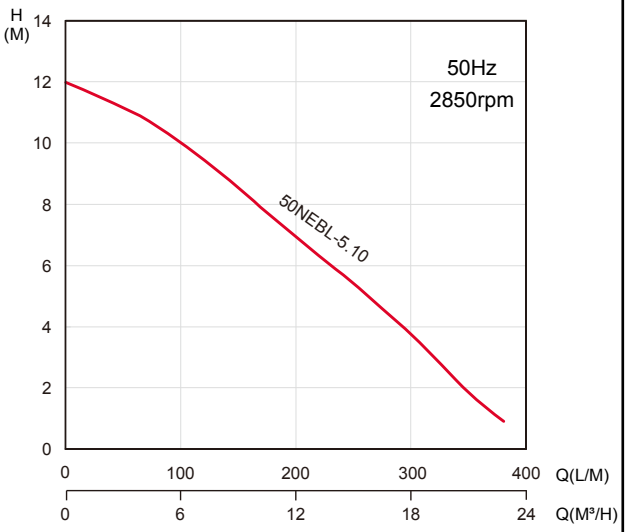

1PH Protector (Thermal)


1PH Protector (optional) (overheat & overload)

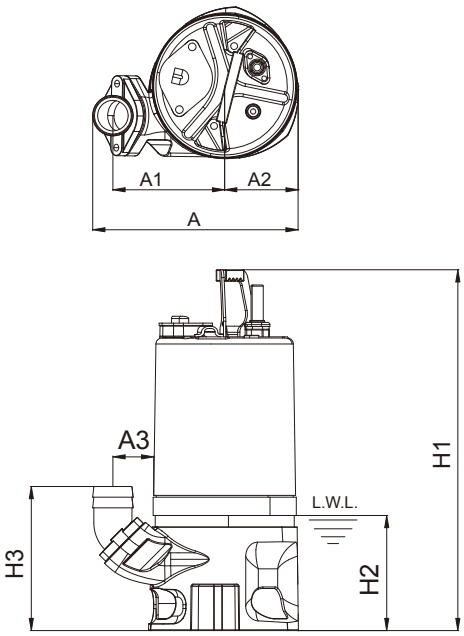

Steel coated with thermoplastic polyester elastomer


3PH Protector (overheat, over-load)

Performance Curves



Dimensions



Model	A	A1	H	H1
50NEBL-5.10	188	52	345	53

NEB/NEBS(SS304) /NEBI(SS316) Series
Submersible Dewatering Pumps

Feature

- High resistance to abrasive liquids
- Loss wax casting AISI 304 & AISI 316 for NEBS and NEBI
- Viton gasket, O-rings, and Lip seal for NEBI (AISI 316)
- Compact & Lightweight design
- Efficient circumferential cooling for continuos duty
- Low suction device with non-returm flap valve, capable to keep the water within pump and pipe without much flowback



Max flow: 30m3/h

Max head: 19m

Applications

- Site drainage, mining, tunneling, public works,floods
- Cement industry, river intake, civil engineering projects
- Version "S" in AISI 304 and "I" in AISI 316 are suitable for chemical liquids in drainage and general pumping applications

Definiton of Model

50 NEB (S/I) - 5.05

- Power*10: 0.5HP
- Frequency: 50Hz
- Pump model
- Letter S,I for material
- Discharge flange:50mm

Specifications

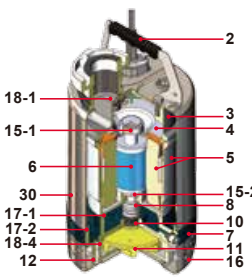
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	Class B (0.5-1HP). Class F (2HP)
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open

Data chart

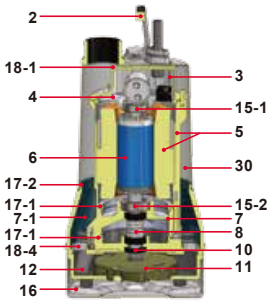
Model	Output		Discharge	FLA		Rated		Maximum		Free passage	Weight (W/O Cable)	
	HP	kW	Inch	1 Ø 230V	3 Ø 400V	Head M	Cap LPM	Head M	Cap LPM	mm	1 Ø-Kg	3 Ø-Kg
50NEB-5.05	0.5	0.37	2"	3A	0.9A	8	125	10.5	225	6	11.3	11.3
50NEBS(I)-5.05	0.5	0.37	2"	3A	0.9A	8	125	10.5	225	6	14.1(13.8)	14.1(13.8)
50NEB-5.10	1	0.75	2"	6A	1.9A	10	225	16.5	345	6	13.7	13.7
50NEBS(I)-5.10	1	0.75	2"	6A	1.9A	10	205	15.5	330	6	17.2(16.7)	17.2(16.7)
50(80)NEB-5.20	2	1.5	2"(3")	12A	3.5A	11	275	19.5	470	6	21.1	21.1
50(80)NEBS-5.20	2	1.5	2"(3")	12A	3.5A	11	215	18	470	6	25	25

Material and Parts

No	Part	Material			
		NEB(0.5~1HP)	NEB(2HP)	NEBS	NEBI
2	Handle	Steel+NBR	Steel+NBR	AISI 304+NBR	AISI 316+NBR
3	Motor Cover	ADC 12	ADC 12	AISI 304	AISI 316
4	Bracket	Steel	Steel	EN-GJL-200	EN-GJL-200
5	Motor Housing + Stator	ADC12+Steel	ADC12+Steel	AISI 304	AISI 316
6	Shaft with Rotor	AISI 410	AISI 410	AISI 304	AISI 316
7	Oil Chamber	ADC 12	AlSi7Mg	AISI 304	AISI 316
7-1	Oil Chamber	-	AlSi7Mg	-	-
8	Mech. Seal	CA/CE+SIC/SIC			
10	LIP seal	NBR	NBR	NBR	VITON
11	Impeller	Hytrel	Hytrel	AISI 304	AISI 316
12	Pump Casing	EN-GJL-200	EN-GJL-200	AISI 304	AISI 316
15-1	Upper Bearing	NTN/TPI			
15-2	Lower Bearing	NTN/TPI			
16	Strainer	AISI 304	AISI 304	AISI 304	AISI 316
17-1	O-ring	NBR	NBR	NBR	VITON
17-2	O-ring	NBR	NBR	NBR	VITON
18-1	Gasket	NBR	NBR	EPDM	Viton
18-4	Volute Liner	NBR	NBR	EPDM	EPDM
30	Pump Housing	AISI 304	AISI 304	AISI 304	AISI 316



50NEB(S,I)-5.05~10



50NEB-5.20


1PH Protector (Thermal)


1PH Protector (optional) (overheat & overload)

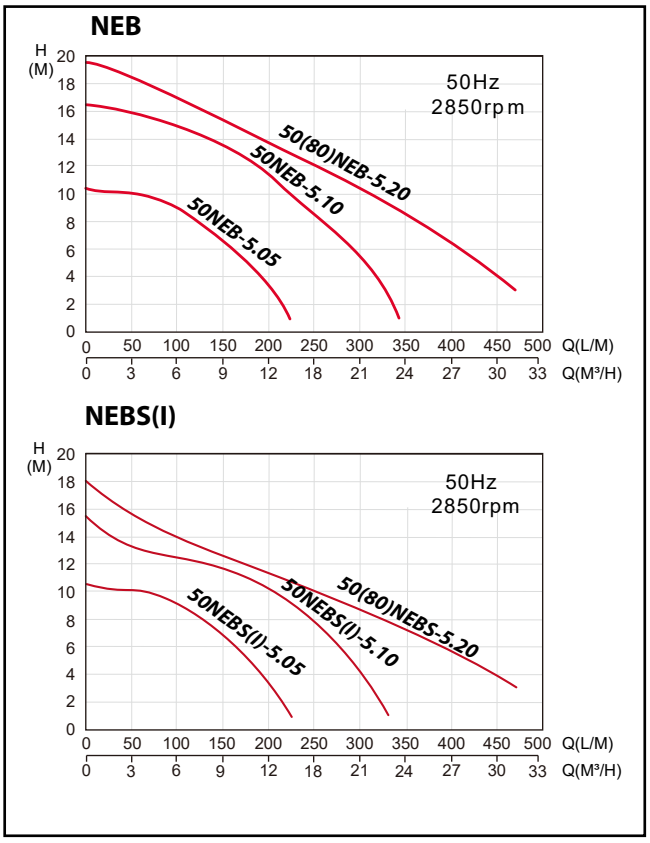

3PH Protector (overheat, over-load)


Steel coated with thermoplastic polyester elastomer

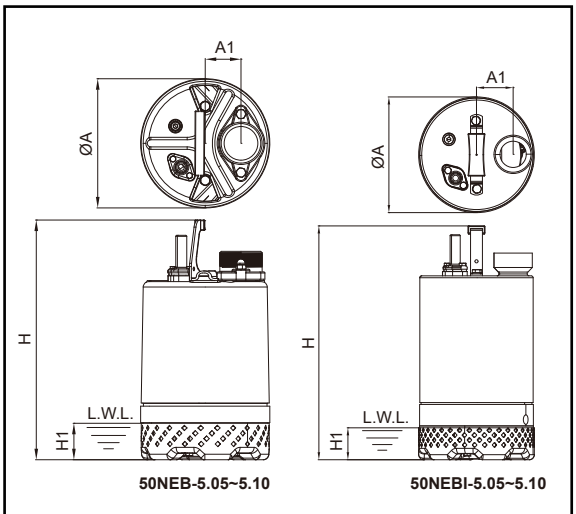

Loss Wax Stainless Steel AISI 304 & 316 NEBS(I) Impeller


Viton gasket, O-rings, and Lip seal for NEBI (AISI 316)

Performance Curves



Dimensions



50NEB-5.05~5.10 50NEBI-5.05~5.10

Model	A	A1	H	H1
50NEB-5.05	188	52	345	53
50NEBS(I)-5.05	188(184)	52	345	52
50NEB-5.10	188	52	370	53
50NEBS(I)-5.10	188(184)	52	370	52
50(80)NEB-5.20	225	52	474	81
50(80)NEBS-5.20	225	52	455	81

NEBR/NEBRS(SS304) /NEBRI(SS316) Series
LIGHTWEIGHT SUBMERSIBLE RESIDUE DEWATERING PUMP

Feature

- High resistance to abrasive liquids
- Loss wax casting AISI 304 & AISI 316 for NEBRS and NEBRI
- Viton gasket, O-rings, and Lip seal for NEBRI (AISI 316)
- Compact & Lightweight design
- Efficient circumferential cooling for continuos duty
- Puddle or residue drainage down to 3mm



Max flow: 20m3/h

Max head: 16m

Applications

- Site drainage, mining, tunneling, public works,floods
- Cement industry, river intake, civil engineering projects
- Basement, parking lots, removing residue water (EUBR/ NEBRS/NEBRI
- Version "S" in AISI 304 and "I" in AISI 316 are suitable for chemical liquids in drainage and general pumping applications

Definiton of Model

50NEBR(S/I)- 5.05

- Power*10: 0.5HP
- Frequency: 50Hz
- Pump model
- Letter S,I for material
- Discharge flange:50mm

Specifications

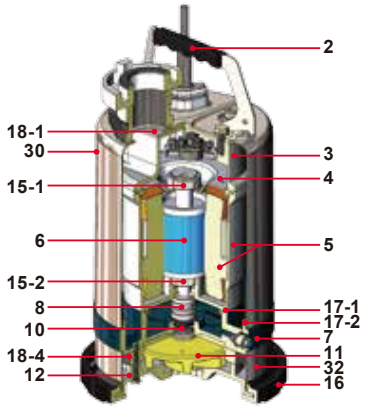
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	Class B
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open

Data chart

Model	Output		Discharge	FLA		Rated		Maximum		Free passage	Weight (W/O Cable)
	HP	kW	Inch	1 Ø 230V	3 Ø 400V	Head M	Cap LPM	Head M	Cap LPM	mm	Kg
50NEBR-5.05	0.5	0.37	2"	3A	0.9A	8	115	11	205	2	12
50NEBRS(I)-5.05	0.5	0.37	2"	3A	0.9A	8	130	11.5	230	2	14.6(13.8)
50NEBR-5.10	1	0.75	2"	6A	1.9A	10	225	17	320	2	14.5
50NEBRS(I)-5.10	1	0.75	2"	6A	1.9A	10	220	16	330	2	17.8(16.5)

Material and Parts

No	Part	Materials		
		NEBR	NEBRS	NEBRI
2	Handle	Steel+NBR	AISI 304+NBR	AISI 316+NBR
3	Motor Cover	ADC 12	AISI 304	AISI 316
4	Bracket	Steel	EN-GJL-200	EN-GJL-200
5	Motor Housing + Stator	ADC12+Steel	AISI 304	AISI 316
6	Shaft with Rotor	AISI 410	AISI 304	AISI 316
7	Oil Chamber	ADC 12	AISI 304	AISI 316
8	Mech. Seal	CA/CE+SIC/SIC		
10	Lip seal	NBR	NBR	VITON
11	Impeller	Hytrel	AISI 304	AISI 316
12	Pump Casing	EN-GJL-200	AISI 304	AISI 316
15-1	Upper Bearing	NTN/TPI		
15-2	Lower Bearing	NTN/TPI		
16	Strainer	NBR	EPDM	EPDM
17-1	O-ring	NBR	NBR	VITON
17-2	O-ring	NBR	NBR	VITON
18-1	Gasket	NBR	NBR	VITON




1PH Protector (Thermal)


Steel coated with thermoplastic polyester elastomer

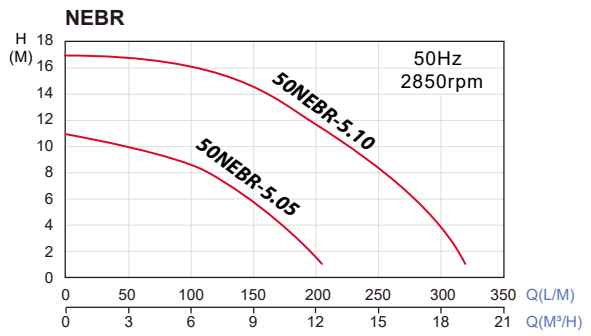

1PH Protector (optional) (overheat & overload)

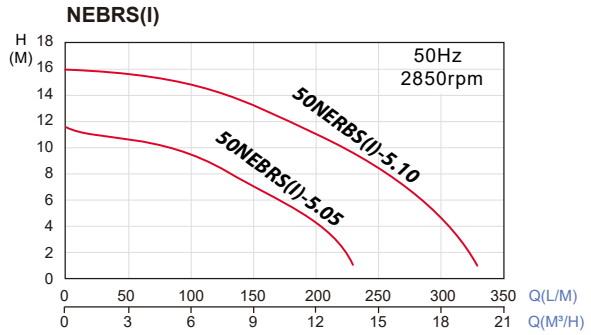

Loss Wax Stainless Steel AISI 304 & 316 NEBS(I) Impeller


3PH Protector (overheat, over-load)

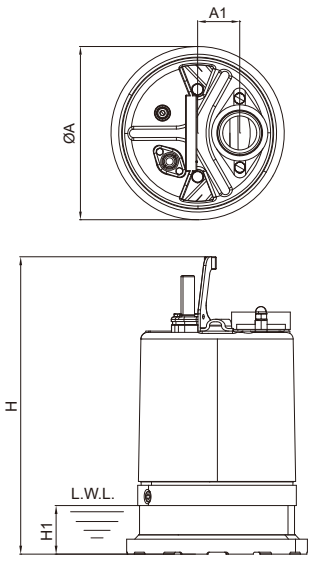

Viton gasket, O-rings, and Lip seal for NEBI (AISI 316)

Performance Curves





Dimensions



50NEBR-5.05~5.10

Model	A	A1	H	H1
50NEBR-5.05	214	52	374	52
50NEBRS(I)-5.05	184	52	345	52(50)
50NEBR-5.10	214	52	372	52
50NEBRS(I)-5.10	184	52	370	52(50)

NEB-H Series • SUBMERSIBLE DEWATERING PUMP

Feature

- Circumferential cooling for continuous duty.
- Dry motor design with thermal auto-cut protectors.
- Good protection of motor from over-heating and water invasion through cable
- Ni Chrome Steel impeller for abrasive liquids
- It can be used on land by replacing the strainer and base plate with a check valve.
- Double Mechanical seal and oil seal to ensure long life operation





High Efficiency
Closed Impeller



Chromium nickel mater
Excellent against corro
Expelling solid design
on the back of the impe

Applications

- Agriculture industry: irrigation and underground water
- Aquaculture industry: drainage and water supply of fresh water
- Extraction of water from rivers, lakes and reservoirs.

Max flow: 100 m3/h

Max head: 32 m

Definiton of Model

50 NEB-H 5.05

- Power*10: 0.5HP
- Frequency: 50Hz
- Pump model
- Discharge flange:50mm

Specifications

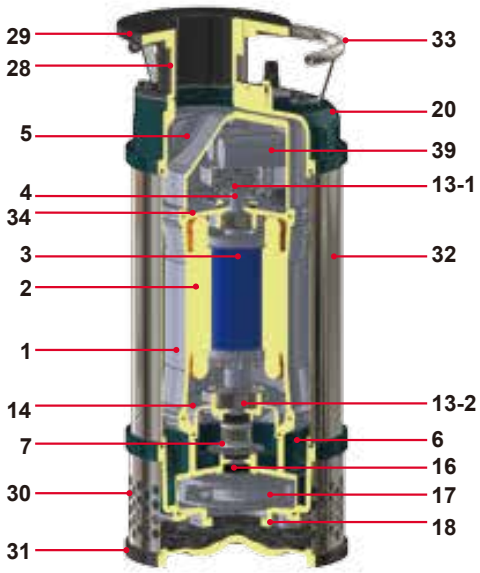
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Closed Type

Data chart

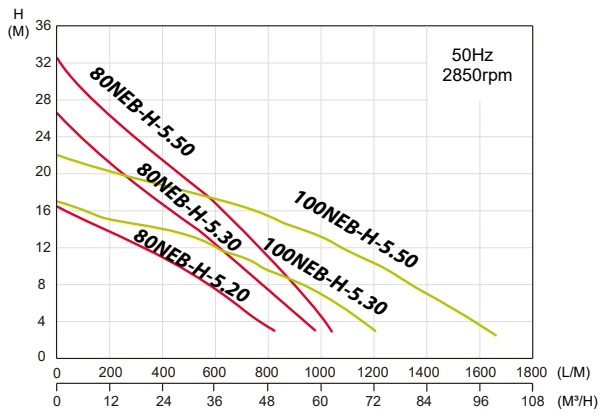
Type	Output		Discharge	F.L.A		Rated		Maximum		Free Passage	Weight	
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	1Ø(Kg)	3Ø(Kg)
80NEB-H-5.20	2	1.5	3"	11	3.8	9.5	500	16.4	820	10	45.2	44.2
80NEB-H-5.30	3	2.2	3"	15	5.7	14.5	500	26.5	980	10	46.6	45.6
100NEB-H-5.30	3	2.2	4"	15	5.7	9.5	800	17	1200	10	46.6	45.6
80NEB-H-5.50	5	3.7	3"	-	7.9	21.5	400	32.4	1040	10	-	48.2
100NEB-H-5.50	5	3.7	4"	-	7.9	12.5	1000	22	1680	10	-	48.2

Material and Parts

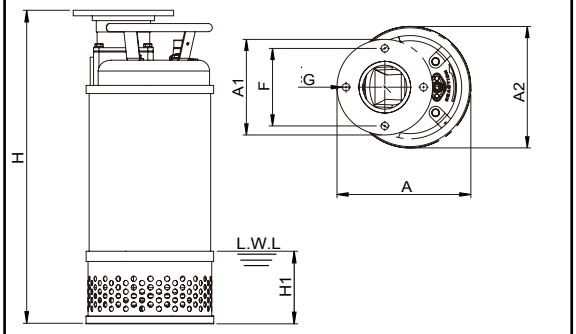
No	Part	Material
1	Motor Housing	EN-GJL-200
2	Stator	
3&4	Shaft with Rotor	SUS 304
5	Motor Cover	EN-GJL-200
6	Pump Casing	EN-GJL-200
7	Mech. Seal	Upper: CA/CE
	(EKK Burgmann)	Lower: SIC/SIC
13-1	Upper Bearing	NTN/TPI
13-2	Lower Bearing	NTN/TPI
14	Bottom Bearing Bracket	EN-GJL-200
16	Shaft Sleeve	SUS 304
17	Impeller	Ni Chrome Steel
18	Inlet Plate	EN-GJL-200
20	Upper Cover	EN-GJL-200
28	Discharge	EN-GJL-200
29	Flange	EN-GJL-200
30	Strainer	SUS 304
31	Base Plate	EN-GJL-200
32	Outer Case	SUS 304
33	Handle	SC+PVC
34	Bracket	EN-GJL-200
39	Start & Run Capacitor	



Performance Curves



Dimensions



Model	A	A1	A2	H	H1	F	G
80NEB-H-5.20S	247	160	235	568	209	125	14.5
80NEB-H-5.20T	247	160	235	523	187	125	14.5
80NEB-H-5.30S	260	185	235	568	209	150	14.5
80NEB-H-5.30T	260	185	235	526	187	150	14.5
100NEB-H-5.30S	260	185	235	568	209	150	14.5
100NEB-H-5.30T	260	185	235	523	187	150	14.5
80(100)NEB-H-5.50	260	185	235	548	187	150	14.5

» S: single-phase and T: three-phase pumps

NEB-M Series • LIGHTWEIGHT SUBMERSIBLE DEWATERING PUMP (2~7.5HP)

Feature

- Semi-open impeller made of High Chrome Steel
- High resistance to abrasive liquids
- Stainless steel outer casing & strainer
- Double mechanical seal in CA/CE+SIC/SIC
- Heat Treated Stainless Steel Shaft in AISI 410
- Efficient circumferential cooling for continuous duty
- Robust construction with Aluminium material, 14~17% lighter than
- Cast Iron dewatering pump



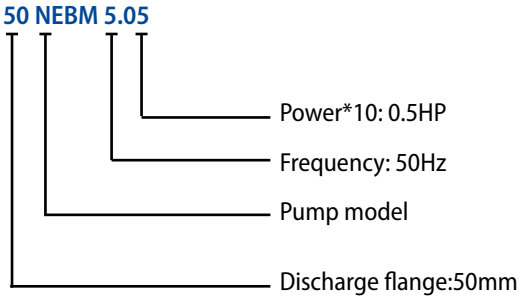
Max flow: 100 m3/h

Max head: 32 m

Applications

- Site drainage, mining, tunneling, public works, floods
- Cement industry, river intake, civil engineering projects

Definiton of Model



Specifications

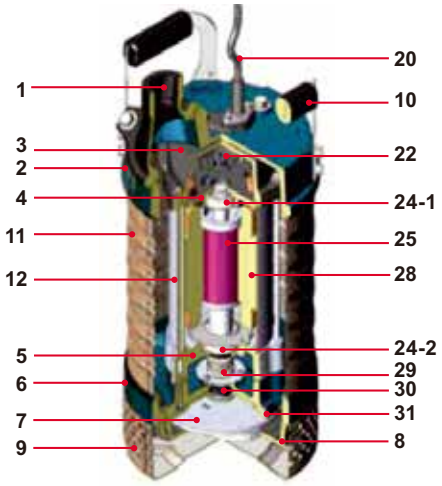
Liquid Temperature		0~40°C (32~104°F)
Submersible depth		20M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Type
	Insulation	Class F
	Protection	IP 68
Pump Part	Protector	Auto cut
	Bearing	Ball Bearing
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open Impeller

Data chart

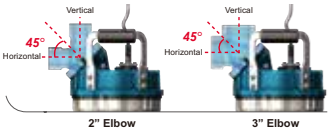
Type	Output		Discharge	F.L.A		Rated		Maximum		Free Passage	Weight	
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	1Ø Kg	3Ø Kg
50NEB-M-5.20	2	1.5	2"	12.5	-	15	270	23	500	9	27.5	-
80NEB-M-5.20	2	1.5	3"	12.5	-	10	400	17	690	9	27.5	-
50NEB-M-5.20	2	1.5	2"	-	3.5	13	220	21	450	9	--	26.4
80NEB-M-5.20	2	1.5	3"	-	3.5	9	400	16	630	9	--	25.9
50NEB-M-5.30	3	2.2	2"	-	5.2	15	330	26	550	9	--	29.8
80NEB-M-5.30	3	2.2	3"	-	5.2	10	500	23	700	9	--	30
80NEB-M-5.50	5	3.7	3"	-	9.5	19	600	30	900	10	--	35.6
100NEB-M-5.50	5	3.7	4"	-	9.5	12.5	800	18.5	1400	10	--	34.9
80NEB-M-5.75	7.5	5.5	3"	-	12.5	25	680	33	1200	10	--	51.6
100NEB-M-5.75	7.5	5.5	4"	-	12.5	16	1060	23	1900	10	--	51.4

Material and Parts

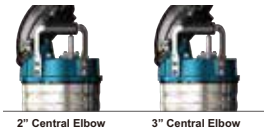
No	Part	Material
1	Discharge	AISI7Mg
2	Upper cover	AISI7Mg
3	Motor Cover	AISI7Mg
4	Upper bearing bracket	EN-GJL-200
5	Lower bearing bracket	AISI7Mg
6	Seal bracket	AISI7Mg
7	Impeller	High chrome steel
8	Pump casing	EN-GJL-200
9	Strainer	AISI 304
10	Handle	Steel/NBR
11	Outer casing	AISI 304
12	Motor frame	AISI 304
20	Power cable	H07RN-F
22	Protector	KLIXON
24-1	Upper bearing	NTN/TPI
24-2	Lower bearing	NTN/TPI
25	Rotor and shaft	AISI 410
28	Stator	
29	Mechanical seal	Upper: CA/CE
		Lower:SIC/SIC
30	Lip seal	NBR
31	Wearing plate	Nylon PA66



Discharge Elbow

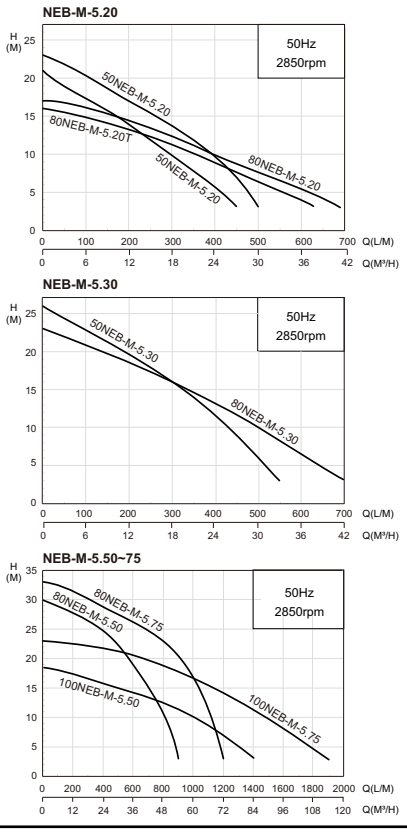


Standard Discharge Elbow

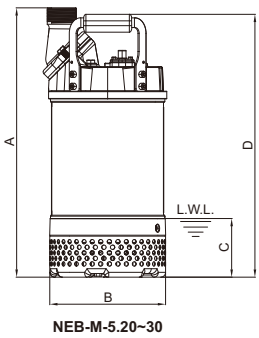


Optional Central Elbow

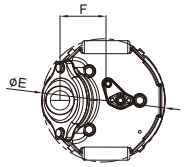
Performance Curves



Dimensions



NEB-M-5.20~30



Model	A	B	C	D	E	F
50NEB-M-5.20	559	240	122	545	256	96
80NEB-M-5.20	555	240	122	545	274	107
50NEB-M-5.30	588	240	122	577	256	96
80NEB-M-5.30	587	240	122	577	274	107
80NEB-M-5.50	596	240	131	586	277	106
100NEB-M-5.50	586	240	131	586	288	106
80NEB-M-5.75	644	284	133	632	303	123
100NEB-M-5.75	633	284	133	632	320	127

NEB-M Series • LIGHTWEIGHT SUBMERSIBLE DEWATERING PUMP (10~20 HP)

Feature

- Closed impeller design made of High Chrome Steel
- High resistance to abrasive liquids
- Stainless Steel outer casing & strainer
- EKK Eagle Burgmann double mechanical seal CA/CE & SIC/SIC
- Heat Treated Stainless Steel Shaft in AISI 410/420
- Efficient circumferential cooling for continuous duty





Expelling solid design on the back of the impelle



High Chrome Steel Closed Impeller

Max flow: 150 m3/h

Max head: 55m

Applications

- Site drainage, mining, tunneling, public works, floods
- Cement industry, river intake, civil engineering projects

Definiton of Model

100 NEBM 5.100

- Power*10: 10HP
- Frequency: 50Hz
- Pump model
- Discharge flange:100mm

Specifications

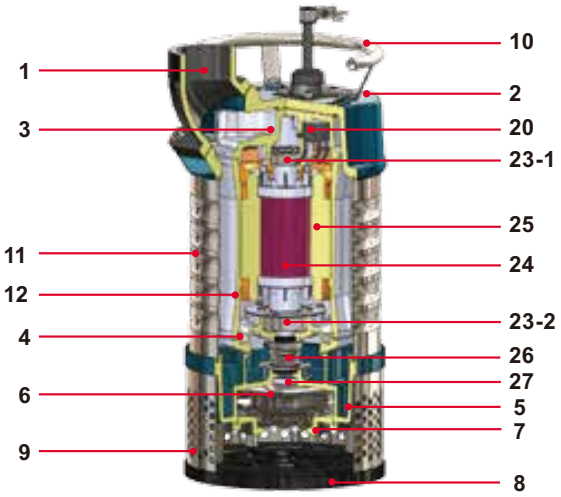
Liquid Temperature		0~40°C (32~104°F)
Submersible depth		20M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Type
	Insulation	10HP:Class F; 15~20HP: ClassH
	Protection	IP 68
Pump Part	Protector	Auto cut
	Bearing	Ball Bearing
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Closed Impeller

Data chart

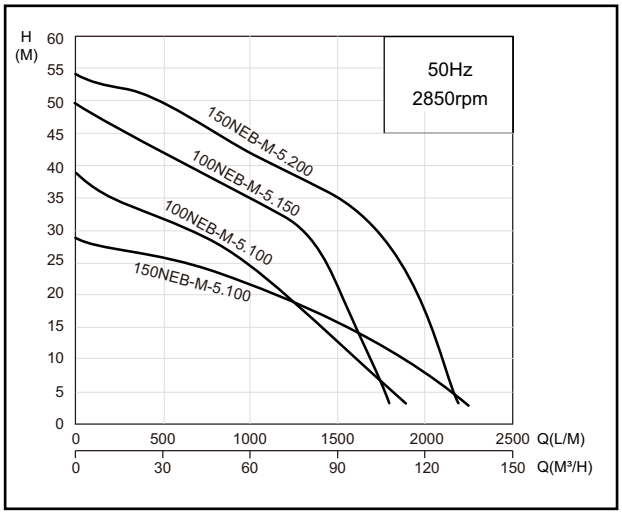
Type	Output		Discharge	F.L.A		Rated		Maximum		Free Passage	Weight	
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	1Ø Kg	3Ø Kg
100NEB-M-5.100	10	7.5	4"	-	16	25	980	39	1900	10	--	69
150NEB-M-5.100	10	7.5	6"	-	16	15	1550	29	2250	10	--	70
100NEB-M-5.150	15	11	4"	-	22	35	1000	50	1800	10	--	104
150NEB-M-5.200	20	15	6"	-	27	35	1500	54	2200	10	--	112

Materials and Parts

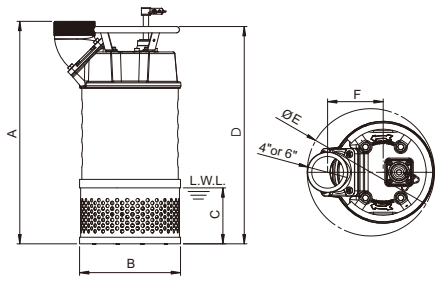
No	Part	Material
1	Discharge	AISI7Mg
2	Upper cover	AISI7Mg
3	Motor cover	AISI7Mg
4	Lower bearing bracket	EN-GJL-200
5	Pump casing	EN-GJL-200 (10HP); EN-GJS-700(10~20HP)
6	Impeller	High chrome steel
7	Suction plate	EN-GJS-700(10HP)
7-1	Seal housing	AISI7Mg/ NBR (15~20HP)
8	Base plate	AISI7Mg
9	Strainer	AISI 304
10	Handle	AISI 304
11	Outer casing	AISI 304
12	Motor frame	AISI7Mg
20	Protector	YAMADA
23-1	Upper bearing	NTN/TPI
23-2	Lower bearing	NTN/TPI
24	Rotor with shaft	AISI 410(10HP); AISI 420(15~20HP)
25	Stator	
26	Mechanical seal	Upper: CA/CE
.		Lower:SIC/SIC
27	Lip seal	NBR



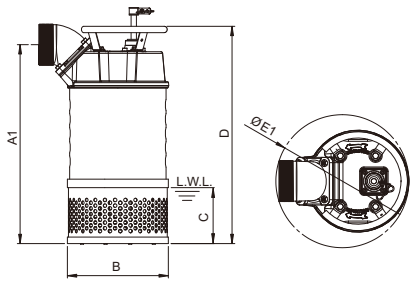
Performance curve



Dimensions



VERTICAL DISCHARGE MODE



HORIZONTAL DISCHARGE MODE

Type	A	A1	B	C	D	E	E1	F
100NEB-M-5.100	630	564	286	159	616	360	377	158
150NEB-M-5.100	637	579	286	159	616	390	389	173
100NEB-M-5.150	721	655	286	151	712	403	420	181
150NEB-M-5.200	730	671	286	151	712	423	435	201

NF Series •Submersible Effluent Pump

Feature

- Compact design
- Light weight
- With high efficiency impeller
- Reliable shaft sealing provided by EKK
- Eagle Burgmann double mechanical seal



50NF-5.05~10



Semi open Impeller

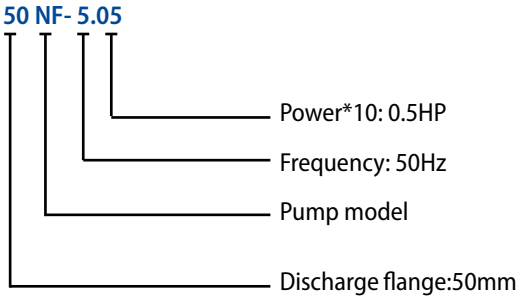
Max flow: 66 m3/h

Max head: 30m

Applications

- Light duty
- Basement drainage
- Rainwater effluent
- Accumulated water drainage

Definiton of Model



Specifications

Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	0.5-3HP Class B ,5-7.5HP Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open

Data chart

Model	Output		Discharge	FLA		Rated		Maximum		Free passage	Weight (W/O Cable)	
	HP	kW	Inch	1 Ø 230V	3 Ø 400V	Head M	Cap LPM	Head M	Cap LPM	mm	1 Ø-Kg	3 Ø-Kg
50NF-5.05	0.5	0.37	2"	4.1A	1.3A	6	150	9.5	260	5	11.7	11.4
50NF-5.10	1	0.75	2"	5.2A	2.1A	8	150	11	400	5	18.5	18.2
50(80)NF-5.20	2	1.5	2"(3")	11.3A	3.5A	10	400	15.5	650	5.5	35	34.9
50(80)NF-5.30	3	2.2	2"(3")	14A	5.2A	15	440	21	800	5.5	39.1	35.4
80(100)NF-5.50	5	3.7	3"(4")	--	8.2A	18	530	27	950	5.5	--	53.2
80(100)NF-5.75	7.5	5.5	3"(4")	--	11.5A	20	600	31	1000	5.5	--	59.2

» 50NF-5.05 : Thread Type

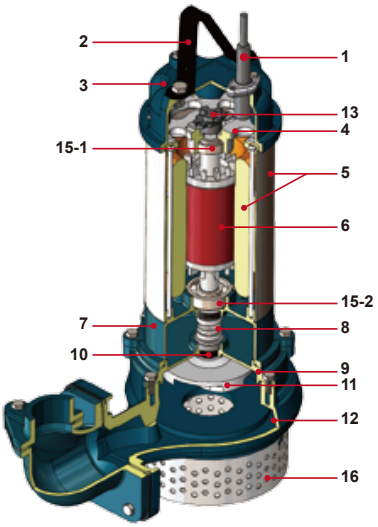
» 50NF-5.10 : Thread Type / Elbow Type is optional.(2" or 3"/ Fit with Q.D.C. QM-80)

» 50(80)NF-5.20~30: Elbow Type

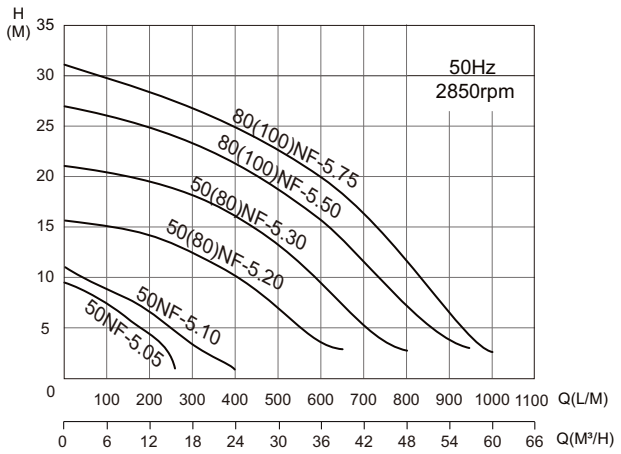
» 80(100)NF-5.50~75 : Elbow Type

Material and Parts

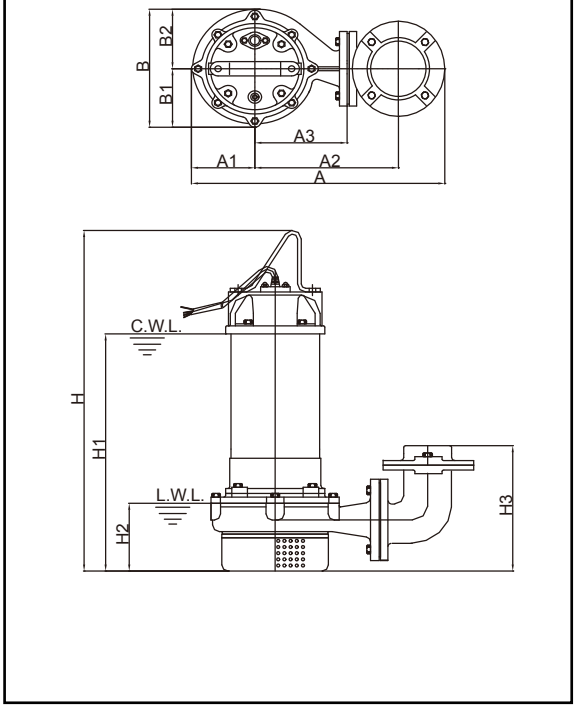
No	Part	Material
1	Cable	H07RN-F/SJTOW/STOW
2	Handle	Nylon 6 / ASTM A36
3	Motor Cover	Nylon 66 / EN-GJL-200
4	Bracket	EN-GJL-200
5	Motor Housing	AISI 304
6	Shaft with Rotor	AISI 410
7	Oil Chamber	EN-GJL-200
8	Double Mech.Seal	Upper : CA / CE
		Lower : CA / CE(0.5~3HP) SIC / SIC(5~7.5HP)
9	Seal Housing	EN-GJL-200
10	Oil Seal	NBR
11	Impeller	EN-GJL-200
12	Pump Casing	EN-GJL-200
13	Protector	KLIXON
15	Bearing	NTN/TPI
16	Strainer	AISI 304



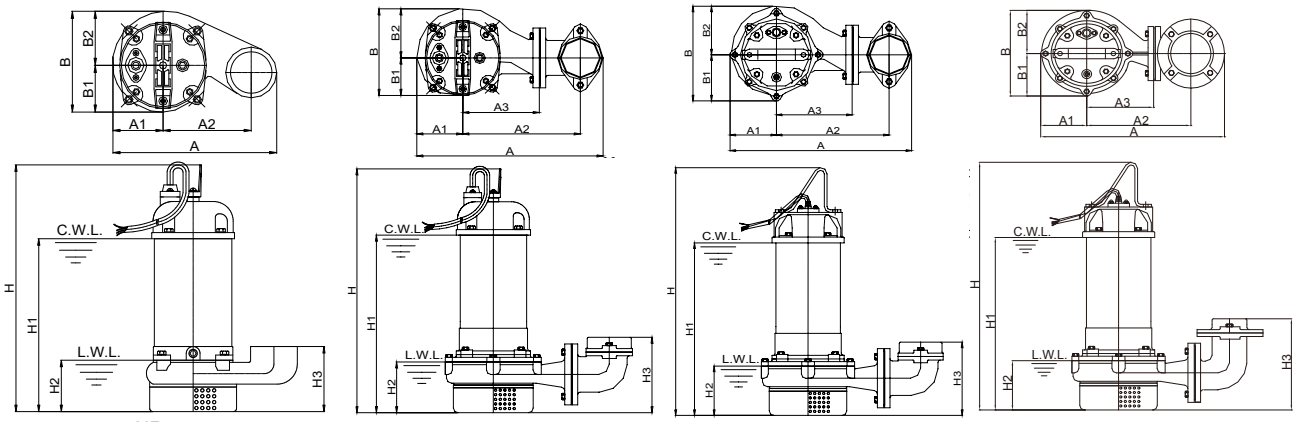
Performance Curves



Dimensions



Dimensions



50 NF 5.50 | 50(80) NF 5.10 | 80(50)5.20~5.30 | 80(100) NF 5.50~ 5.75

Type	A	A1	A2	A3	D	D1	D2	H	H1	H2	H3
50NF-5.05	229	70	123	NA	141	66	75	350	250	79	100
50NF-5.10	229	70	123	NA	141	66	75	380	285	79	100
*50(80)NF-5.10	325	80	192	110	165	75	90	398	273	97	147
50(80)NF-5.20	403	103	250	168	212	103	109	555	385	110	163
50(80)NF-5.30	403	103	250	168	212	103	109	S:595,T:575	S:425,T:405	110	163
80(100)NF-5.50	466	110	264	176	227	110	117	605	440	132	3":225,4":220
80(100)NF-5.75	466	110	264	176	227	110	117	645	480	132	3":225,4":220

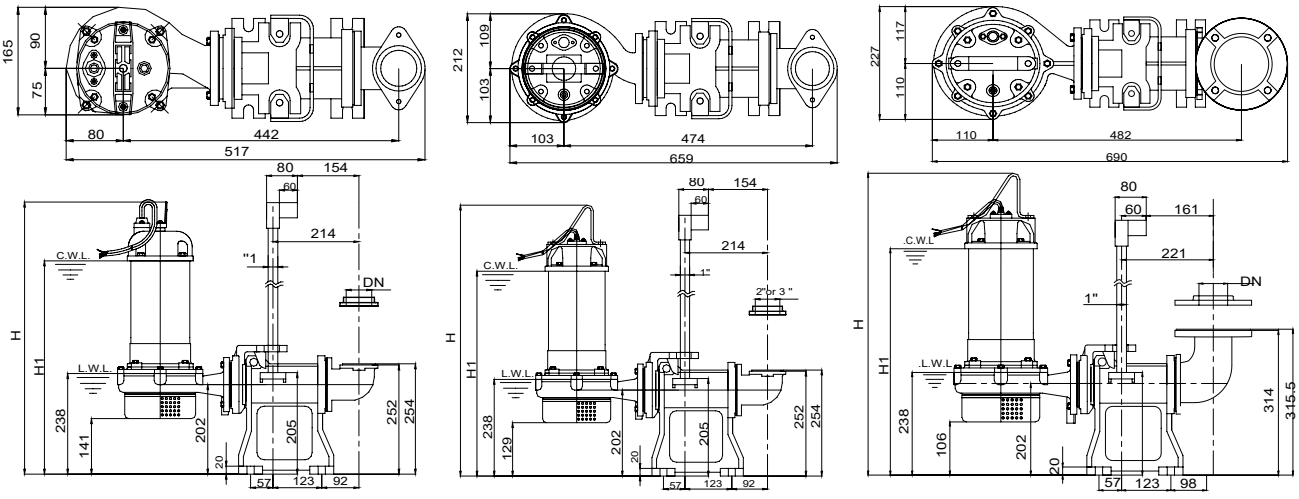
» S: Single Phase ; T: Three Phase

» *50(80)NF-5.10: Elbow Type

»Automatic models are available in single-phase versions(0.5~2HP) and in three-phase versions(0.5~2HP).

»Q.D.C.(Quick Discharge Connection) is available only for Elbow type.

Dimensions with QDC (Model QM)



50NF-5.10 (QM-80) | 80(50)NF-5.20~5.30 (QM-80) | 80(50)NF-5.50~5.75 (QM-100)

Output		Discharge		Dimensions(mm)	
HP	KW	Inch	mm	H	H1
1	0.75	2"(3")	50(80)	610	466
2	1.5	2"(3")	50(80)	695	525
3	2.2	2"(3")	50(80)	S:735 ; T:715	S:565 ; T:545
5	3.7	3"(4")	80(100)	765	587
7.5	5.5	3"(4")	80(100)	805	627

ERS Series •Submersible dewatering pump

Features

- Double mechanical seal SIC/SIC with SIC/SIC in oil bath
- Heavy duty with drainage mode or with agitator mode (optional)
- Overload Protector
- Top Discharge with semi-circumferential cooling for continuous duty



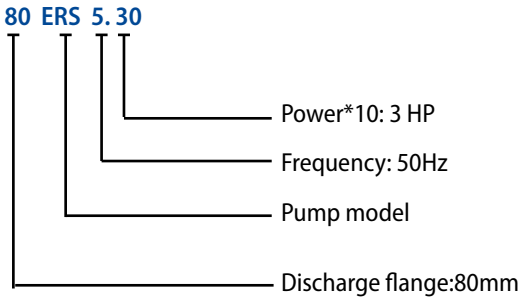
Applications

- Lime slurries
- Mill scale
- Coal runoff sumps
- Wash down sumps
- Quarries
- Mining
- Tunneling

Max flow: 360 m3/h

Max head: 35m

Definition of models

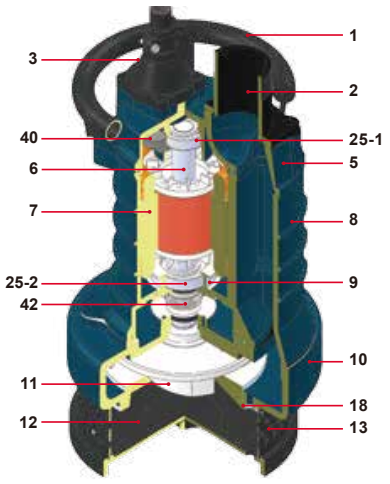


Specifications

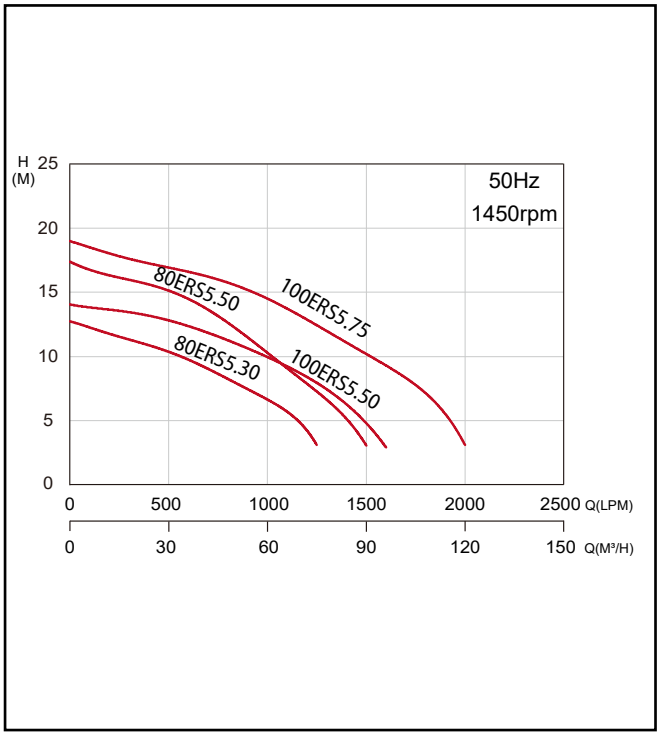
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		20M
Motor Part	Frequency	50Hz
	Pole	4 Pole
	Type	Dry Motor
	Insulation	Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open

Material and parts (3HP ~ 7.5HP)

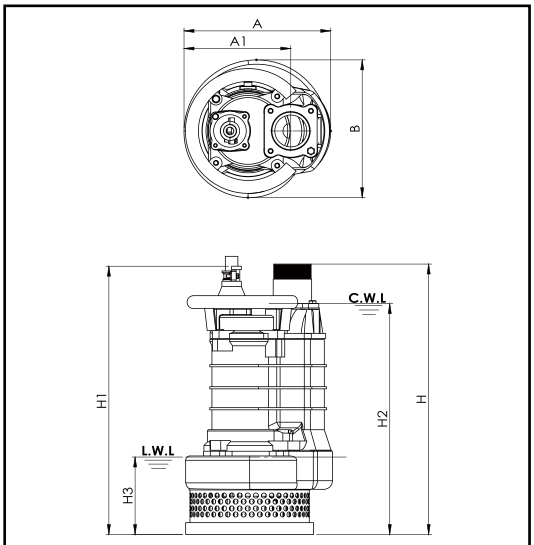
No	Part	Material
1	Handle	SC
2	Discharge	SC
3	Gland holder	EN-GJL-200
5	Top bracket	EN-GJL-200
6	Shaft with Rotor	AISI 420
7	Stator	--
8	Motor frame	EN-GJL-250
9	Bearing bracket	EN-GJL-200
10	Pump casing	EN-GJL-250
11	Impeller	High chrome steel
12	Baseplate	EN-GJL-200
13	Strainer	SC
18	Suction plate	High Chrome Steel
25-1	Upper bearing	NTN/TPI
25-2	Lower bearing	NTN/TPI
40	prortector	YAMADA
42	Mechanical seal	Upper:SIC/SIC ; Lower:SIC/SIC



Performance Curves



Dimensions



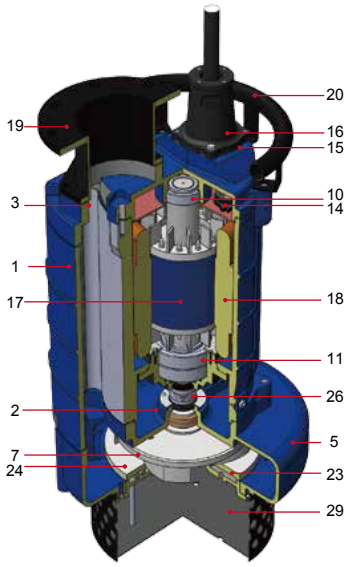
Model	A	A1	B	H	H1	H2	H3
50ERS-5.30	346	247	310	620	630	530	180
50ERS-5.50	365	275	352	699	694	607	180
100ERS-5.50	354	275	322	700	694	607	180
100ERS-5.75	365	275	352	699	694	607	180

Data chart

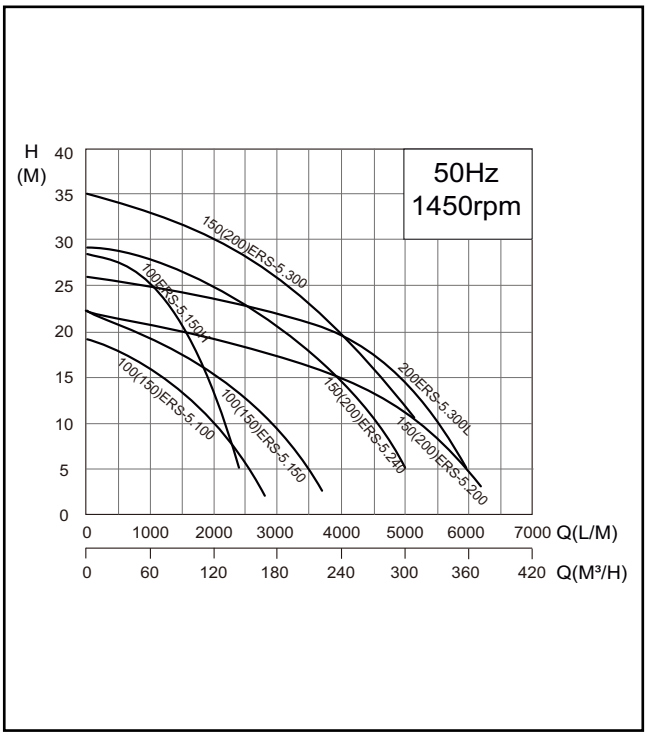
Type	Output		Discharge	F.L.A	Rated		Maximum		Free Passage	Weight
	HP	KW	Inch	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	Kg
80ERS5.30	3	2.2	3"	5.2	10	550	12.7	1250	12	78
80ERS5.50	5	3.7	3"	9	15	500	17.4	1500	12	104
100ERS5.50	5	3.7	4"	9	10	1000	14	1600	12	102
100ERS5.75	7.5	5.5	4"	12.4	15	900	19	2000	12	107

Material and parts (10HP ~ 30HP)

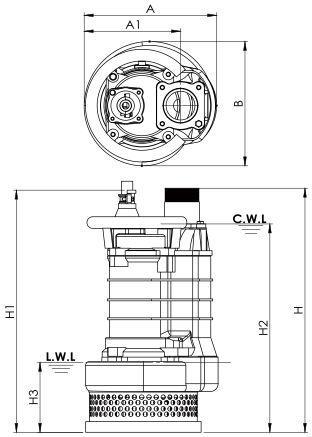
No	Part	Material
1	Motor frame	EN-GJL-200
2	Bearing bracket	EN-GJL-200
3	Top bracket	EN-GJL-200
5	Pump casing	EN-GJL-200
7	Impeller	High chrome steel
10	Upper bearing	NTN/TPI
11	Lower bearing	NTN/TPI
14	prortector	YAMADA
15	Gland holder	EN-GJL-200
16	Cable gland	NBR
17	Shaft with Rotor	10~15HP: AISI 410
		20~30HP: AISI 420
18	Stator	
19	Flange type discharge	SC
20	Handle	SC
23	Suction plate	10~20HP: High Chrome Steel
		30HP: EN-GJL-200
24	Wearing plate(30 HP only)	High Chrome Steel
26	Mechanical seal	Upper:CA/CE ; Lower:SIC/SIC
29	Strainer	SC



Performance Curves



Dimensions



Model	A	A1	B	H	H1	H2	H3
100(150)ERS-5.100	445	304	370	790	750	655	242
100ERS-5.150H	445	305	370	790	750	655	242
100(150)ERS-5.150	445	305	370	790	750	655	242
150(200)ERS-5.200	515	350	455	970	940	830	282
150(200)ERS-5.240	615	445	530	1154	1160	1025	345
150(200)ERS-5.300	615	445	530	1154	1160	1025	345
200ERS-5.300L	615	445	530	1154	1160	1025	345

Data chart

Model	Output		Discharge	FLA	Rated		Maximum		Free passage	Weight (W/O Cable)
	HP	kW	Inch	3 Ø 400V	Head M	Cap LPM	Head M	Cap LPM	mm	Kg
100(150)ERS-5.100	10	7.5	4"(6")	16A	13	1500	19	2800	20	150
100ERS-5.150H	15	11	4"	22A	25	1000	28.5	2400	20	170
100(150)ERS-5.150	15	11	4"(6")	22A	15	2000	22	3700	20	175
150(200)ERS-5.200	20	15	6"(8")	31.9A	15	4000	22	6200	25	250
150(200)ERS-5.240	24	18	6"(8")	35.5A	21	3000	29	5000	25	360
150(200)ERS-5.300	30	22	6"(8")	44.6A	20	3800	35	5200	25	390
200ERS-5.300L	30	22	8"	44.6A	15	4900	26	6000	25	400

ESA Series •Submersible slurry pumps

Feature

- Double mechanical seal SIC/SIC with SIC/SIC in oil bath
- Heavy-duty with agitator mode
- Protected with Yamada overload protector
- Top flange discharge with semi-circumferential cooling for continuous duty





HIGH CHROME STEEL
AGITATOR AND IMPELLER



SEMI-OPEN STYLE

Applications

Choice of industries that face the most difficult pumping applications

- Lime slurries
- Mill scale
- Coal runoff sumps
- Wash down sumps
- Quarries
- Mining

Max flow: 360 m3/h

Max head: 35m

Definiton of Model

100 ESA- 5.100

- Power*10: 10HP
- Frequency: 50Hz
- Pump model
- Discharge flange:100mm

Specifications

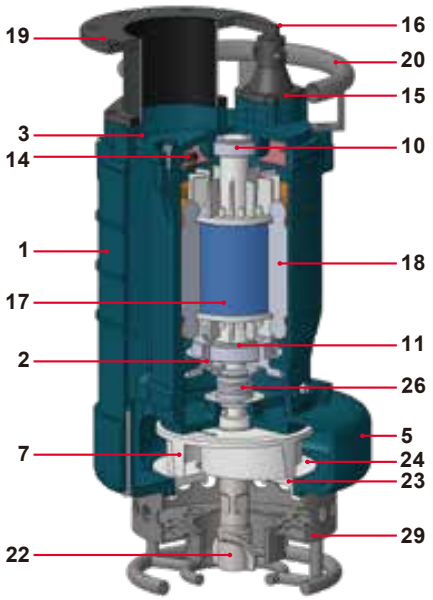
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		20M
Motor Part	Frequency	50Hz
	Pole	4 Pole
	Type	Dry Motor
	Insulation	Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open

Data chart

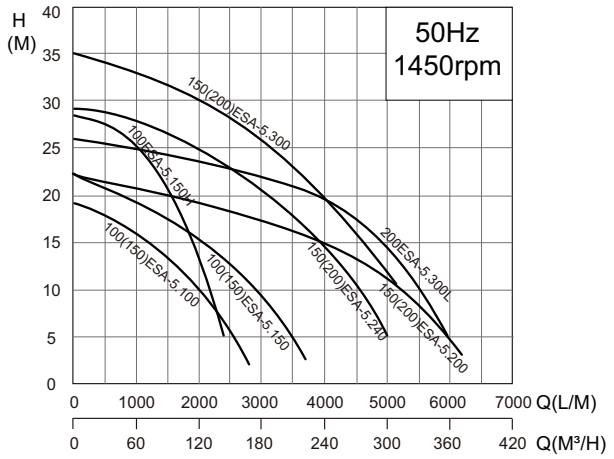
Type	Output		Discharge	F.L.A	Rated		Maximum		Free Passage	Weight
	HP	KW	Inch	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	Kg
100(150)ESA-5.100	10	7.5	4"(6")	15	13	1500	19	2800	20	150
100ESA-5.150H	15	11	4"	22	25	1000	28.5	2400	20	170
100(150)ESA-5.150	15	11	4"(6")	22	15	2000	22	3700	20	175
150(200)ESA-5.200	20	15	6"(8")	31.9	15	4000	22	6200	25	250
150(200)ESA-5.240	24	18	6"(8")	35.5	21	3000	29	5000	25	360
150(200)ESA-5.300	30	22	6"(8")	44.6	20	3800	35	5200	25	390
200ESA-5.300L	30	22	8"	44.6	15	4900	26	6000	25	400

Material and Parts

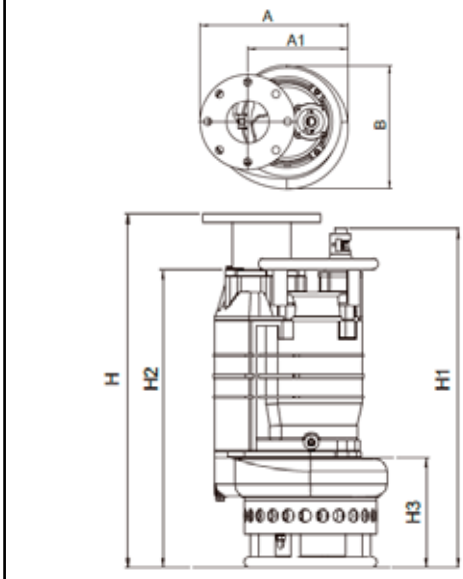
No	Part	Material
1	Motor frame	EN-GJL-200
2	Bearing bracket	EN-GJL-200
3	Top bracket	EN-GJL-200
5	Pump casing	EN-GJL-200
7	Impeller	High chrome steel
10	Upper bearing	NTN/TPI
11	Lower bearing	NTN/TPI
14	prortector	YAMADA
15	Gland holder	EN-GJL-200
16	Cable gland	NBR
17	Shaft with Rotor	10~15HP: AISI 410
		20~30HP: AISI 420
18	Stator	
19	Flange type discharge	SC
20	Handle	SC
23	Suction plate	10~20HP: High Chrome Steel
		30HP: EN-GJL-200
24	Wearing plate(30 HP only)	High Chrome Steel
26	Mechanical seal	Upper:CA/CE ; Lower:SIC/SIC
29	Strainer	SC



Performance Curves



Dimensions



Model	A	A1	B	H	H1	H2	H3
100(150)ESA-5.100	445	305	380	855	80	720	265
100(150)ESA-5.150	445	305	400	855	820	720	265
150(200)ESA-5.200	520	350	400	1000	950	860	313
150(200)ESA-5.240	585	440	425	1160	1145	1010	330
150(200)ESA-5.300	585	440	530	1160	1145	1010	330
200ESA-5.300L	585	440	530	1160	1145	1010	330

NW Series •Submersible Vortex Sewage pump

Features

- Vortex Impeller/Non-clogging
- Minimized abrasive wear
- Large impeller clearance
- Maintenance free
- Double Mech. Seal



Vortex Impeller

Applications

- Medium concentration wastewater
- Heavy duty

Max flow: 78m3/h

Max head: 29m

Definition of models

50 NW- 5.05

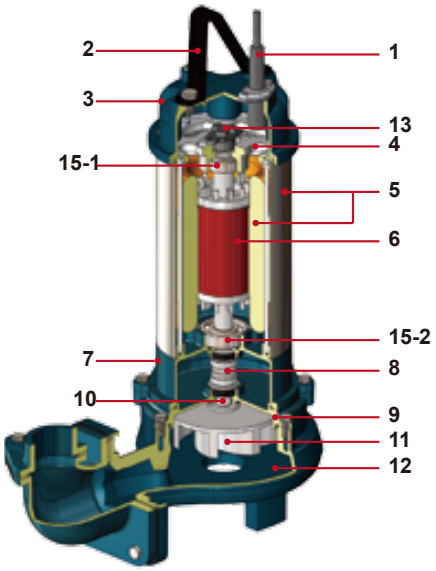
- Power*10: 0.5HP
- Frequency: 50Hz
- Pump model
- Discharge flange:50mm

Specifications

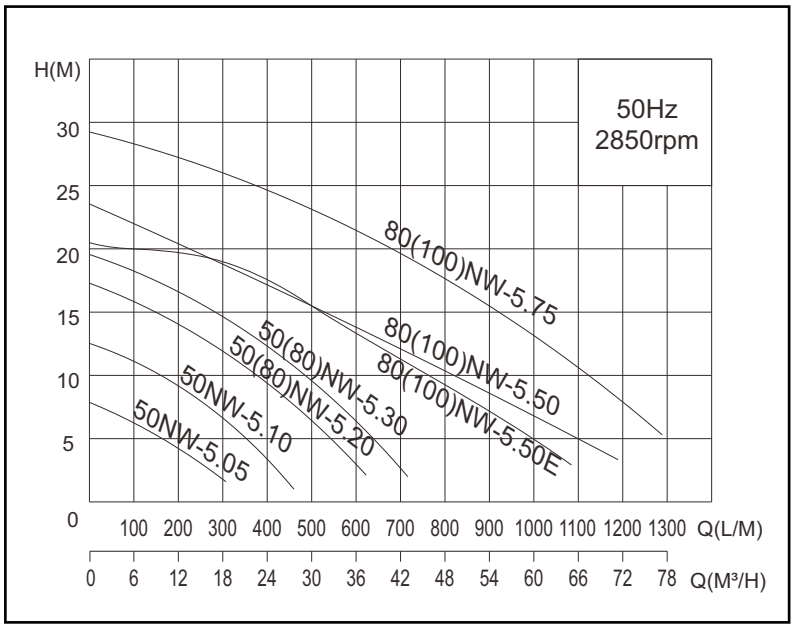
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	0.5-3HP Class B ,5-7.5HP Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Vortex

Materials and Parts

No	Part	Material
1	Cable	H07RN-F/SJTOW/STOW
2	Handle	Nylon 6(0.5~1HP) /ASTM A36(2~7.5HP)
3	Motor Cover	Nylon 66(0.5HP) / EN-GJL-200(2~7.5HP)
4	Bracket	EN-GJL-200
5	Motor Housing	AISI 304
6	Shaft with Rotor	AISI 410
7	Oil Chamber	EN-GJL-200
8	Double Mech.Seal	Upper : CA / CE Lower : SIC / SIC
9	Seal Housing	Nylon(0.5HP) / EN-GJL-200(1~7.5HP)
10	Oil Seal	NBR
11	Impeller	EN-GJL-200
12	Pump Casing	EN-GJL-200
13	Protector	KLIXON
15-1	Upper Bearing	NTN/TPI
15-2	Lower Bearing	NTN/TPI



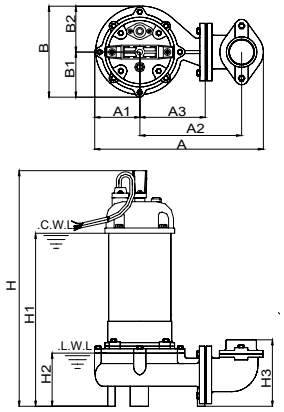
Performance Curves



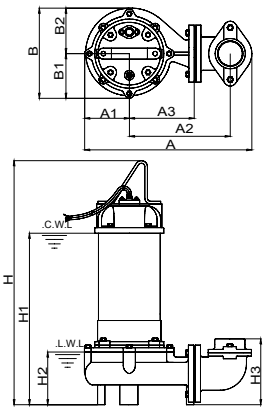
Type	Output		Discharge	F.L.A		Rated		Maximum		Free Passage	Weight	
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	1Ø(Kg)	3Ø(Kg)
50NW-5.05	0.5	0.37	2"	4	1.2	6	180	9	320	35	12.7	12.4
50NW-5.10	1	0.75	2"	5	2.1	9	220	12.5	450	35	17.5	17.2
50(80)NW-5.20	2	1.5	2"(3")	11.8	3.6	10	430	19	650	45	34	33.9
50(80)NW-5.30	3	2.2	2"(3")	15	4.5	13	410	20	750	45	38.1	34.4
80(100)NW-5.50E	5	3.7	3"(4")	-	7.2	16	460	20.5	1050	45	--	43.1
80(100)NW-5.50	5	3.7	3"(4")	-	8.2	14	630	24	1200	45	--	53.2
80(100)NW-5.75	7.5	5.5	3"(4")	-	11.5	19	690	29.5	1300	45	--	59.2

» 80(100)NW-5.50E is economical type which with smaller size motor frame to make it as 5HP.

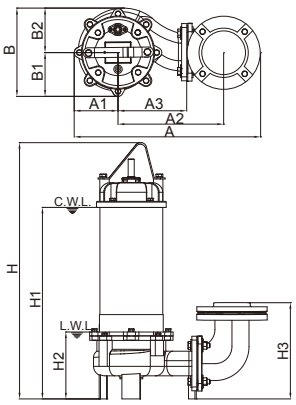
Dimensions



50 NW 5.05~5.10



50(80) NW 5.20~ 5.30



80(100) NW 5.50~ 5.75

Type	A	A1	A2	A3	D	D1	D2	H	H1	H2	H3
50NW-5.05	228	73	155	NA	150	69	81	412	297	117	138
50NW-5.10	228	73	155	NA	150	69	81	487	345	117	138
*50(80)NW-5.10	312	82	183	101	163	76	87	494	351	124	156
50(80)NW-5.20	390	103	235	151	210	105	105	532	400	150	152
50(80)NW-5.30	390	103	235	151	210	105	105	S:572;T:552	S:440;T:420	150	152
80(100)NW-5.50E	440	105	240	150	180	85	95	622	450	155	227
80(100)NW-5.50	470	110	257	170	218	98	120	633	468	160	3":239; 4":234
80(100)NW-5.75	470	110	257	170	218	98	120	673	508	160	3":239; 4":234

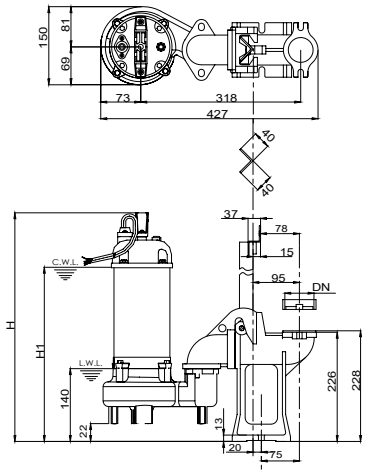
» S: Single Phase ; T: Three Phase

» *50(80)NF-5.10: Elbow Type

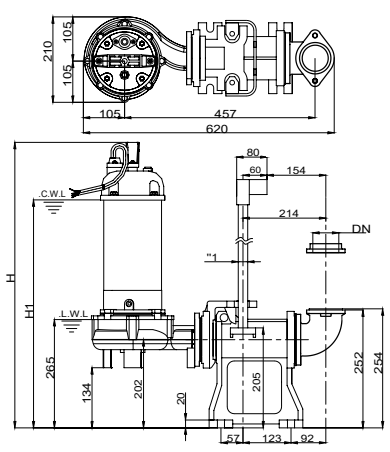
»Automatic models are available in single-phase versions(0.5~2HP) and in three-phase versions(0.5~2HP).

» 80(100)NW-5.50E is economical type with smaller size motor frame to make it as 5HP

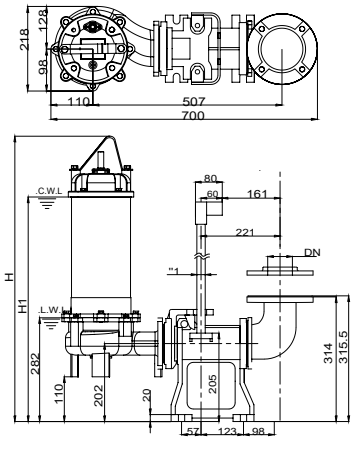
Dimensions with QDC



50NW-5.05~5.10 (QS:50)



50(80) NW 5.20~ 5.30 (QM:80)



80(100) NW 5.50~ 5.75 (QM-100)

Type	Output		Discharge		Dimensions(mm)	
	HP	kW	Inch	mm	H	H1
NW with QS	0.5	0.37	2"	50	434	319
	1	0.75	2"	50	504	367
NW with QM	1	0.75	2"(3")	50(80)	625	482
	2	1.5	2"(3")	50(80)	715	545
	3	2.2	2"(3")	50(80)	S:755; T:735	S:585; T:565
	5(E)	3.7	3"(4")	80(100)	737	565
	5	3.7	3"(4")	80(100)	775	597
	7.5	5.5	3"(4")	80(100)	815	637

NAK Series •Submersible Dredging Pumps

Features

- Vortex impeller with agitator
- Non-Colg operation
- Double mechanical seals in Si. Ca
- Reliable shaft sealing
- Automatic operation (Optional)





Impeller with powerful agitator

Applications

Dredging

Light slurry

Max flow: 78m3/h

Max head: 29m

Definition of models

50 NAK- 5.05

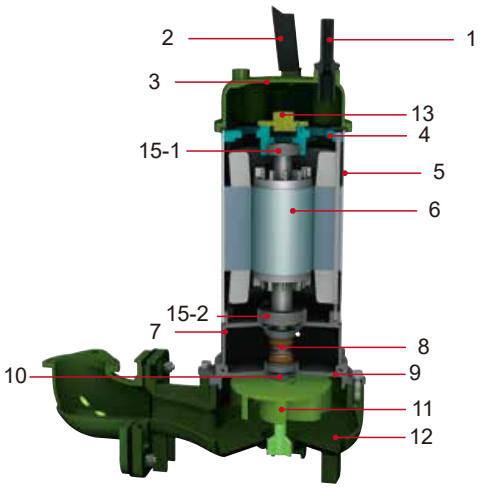
- Power*10: 0.5HP
- Frequency: 50Hz
- Pump model
- Discharge flange:50mm

Specifications

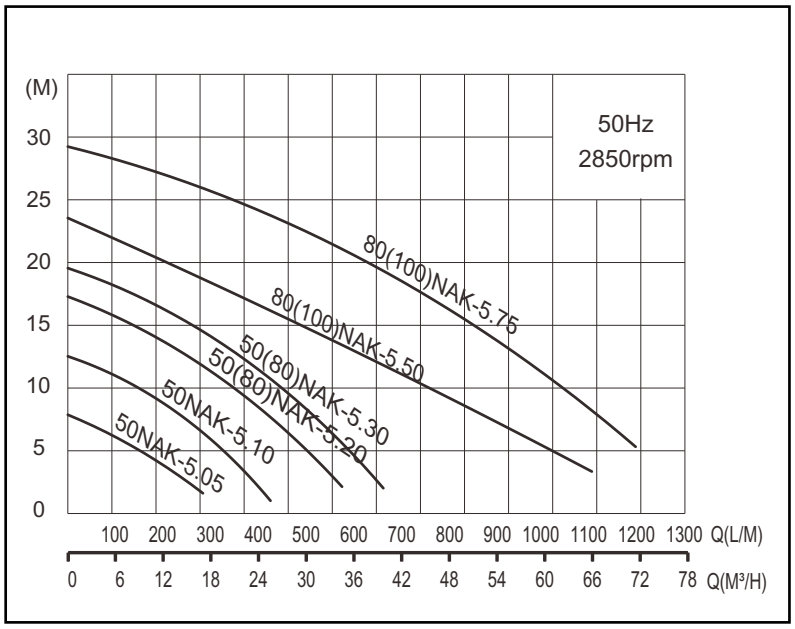
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	0.5-3HP Class B ,5-7.5HP Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open

Materials and Parts

No	Part	Material
1	Cable	H07RN-F /SJTOW/STOW
2	Handle	Nylon 6/SS41
3	Motor Cover	Nylon 66/FC 200
4	Bracket	FC 200
5	Motor Housing	SUS 304
6	Shaft with Rotor	SUS 410
7	Oil Chamber	FC 200
8	Double Mech.Seal	Upper : CA / CE Lower : SIC / SIC
9	Seal Housing	Nylon / FC 200
10	Oil Seal	NBR
11	Impeller with Agitator	Impeller : FC 200
		Agitator : SUS 316
12	Pump Casing	FC 200
13	Protector	KLIXON
15-1	Upper Bearing	TPI
15-2	Lower Bearing	TPI



Performance Curves



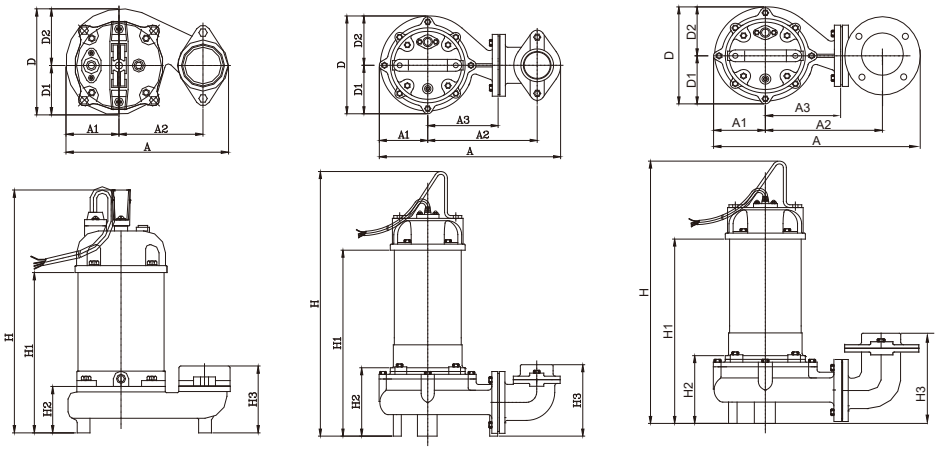
Type	Output		Discharge	F.L.A		Rated		Maximum		Free Passage	Weight	
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	1Ø(Kg)	3Ø (Kg)
50NAK-5.05	0.5	0.37	2"	4	1.2	6	180	8	320	10	12.9	12.6
50NAK-5.10	1	0.75	2"	5	2.1	9	220	12.5	450	10	17.7	17.4
50(80)NAK-5.20	2	1.5	2"(3")	11.8	3.6	10	430	19	650	15	34.2	34.1
50(80)NAK-5.30	3	2.2	2"(3")	15	4.5	13	410	20	750	15	38.3	34.6
80(100)NAK-5.50	5	3.7	3"(4")	-	8.2	14	630	24	1200	12.5	-	53.6
80(100)NAK-5.75	7.5	5.5	3"(4")	-	11.5	19	690	29.5	1300	12.5	-	59.6

» 50NAK-5.05 : Flange Type

» 50NAK-5.10 : Flange Type / Elbow Type is optional. (2" or 3" /Fit with Q.D.C. QM-80)

» 50(80)NAK-5.20~30 : Elbow Type» 80(100)NAK-5.50~75 : Elbow Type

Dimensions

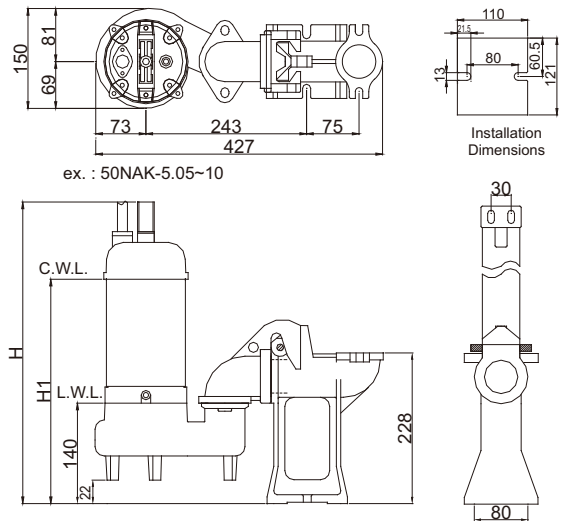


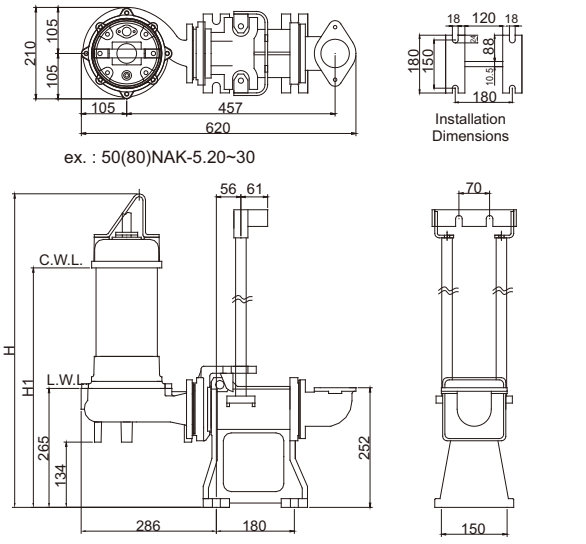
50NAK-5.05~10 50NAK-5.10~30 50NAK-5.50~5.75

Type	A	A1	A2	A3	D	D1	D2	H	H1	H2	H3
50NAK-5.05	228	73	155	NA	150	69	81	412	297	117	138
50NAK-5.10	228	73	155	NA	150	69	81	487	345	117	138
50(80)NAK-5.10	312	82	183	101	163	76	87	494	351	124	156
50(80)NAK-5.20	390	103	235	151	210	105	105	532	400	150	152
50(80)NAK-5.30	390	103	235	151	210	105	105	552	420	150	152
80(100)NAK-5.50	470	110	257	170	218	98	120	633	468	160	206
80(100)NAK-5.75	470	110	257	170	218	98	120	673	508	160	206

» Q.D.C. (Quick Discharge Connection) is applied to all models.

Dimensions with QDC





NAK with QS

Output		Discharge		Dimensions(mm)	
HP	kW	Inch	mm	H	H1
0.5	0.37	2”	50	434	319
1	0.75	2”	50	509	367

NAK with QM

Output		Discharge		Dimensions(mm)	
HP	kW	Inch	mm	H	H1
1	0.75	2"	50(80)	625	482
2	1.5	2”(3”)	50(80)	715	545
3	2.2	2”(3”)	50(80)	S:755;T:735	S:585;T:565
5	3.7	3”(4”)	80(100)	775	597
7.5	5.5	3”(4”)	80(100)	815	637

HT Series • SS304 Submersible Vortex Sewage Pumps

Applications

Emptying of septic tanks and residential sumps

Definition of Model

HT - 07

- 07 — Power (HP)
- HT — Series name

Materials

Part	Material
Cable	H07RN-F
Handle	AISI304+Nylon
Motor Cover	AISI 304
Motor Casing	AISI 304
Fixing Ring	AISI 304
Pump Body	AISI 304
Mechanical Seal	Sic/Sic/NBR
Impeller	AISI 304
Key	AISI 304
Pump Casing	AISI 304
Oil Seal	NBR
Shaft	AISI 304
V-type axial oil seal	NBR
Suction Flange	AISI 304





Vortex Impeller

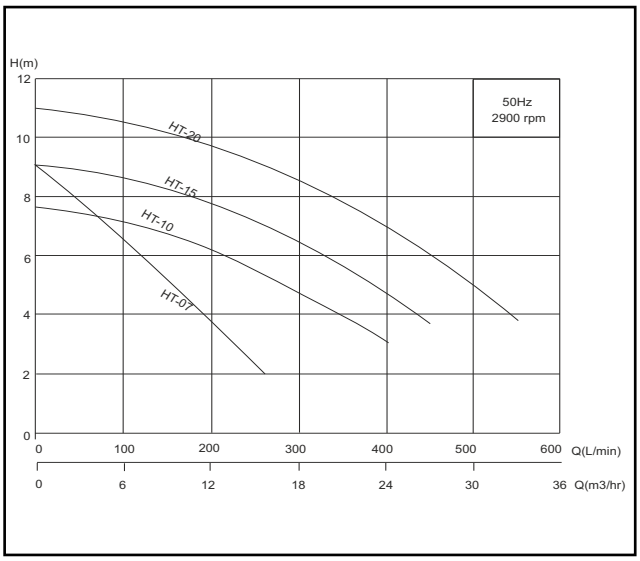
Max flow: 30 m3/h

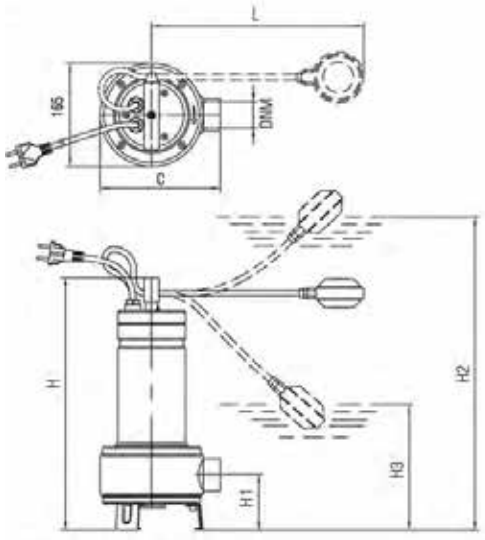
Max head: 11 m

Specifications

Liquid Temperature		0~35˚C
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	Class F
	Protection	IP 68
Pump Part	Protection device	Thermal Protector(Single phase)
	Bearing	Double shielded Ball Bearing
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Vortex Impeller

Performance Curves





Type	Output		Discharge	Rated		Maximum		Cable	Free Passage
	HP	KW	Inch	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	M	mm
HT-07	0.75	0.55	RP 1.5″	7.1	80	9.1	260	5	35
HT-10	1	0.75	RP 2″	7.1	100	7.7	400	10	50
HT-15	1.5	1.1	RP 2″	8.6	100	9.1	450	10	50
HT-20	2	1.5	RP 2″	10.2	150	11	550	10	50

Dimensions

Single-Phase

Type	H	H1	H2	H3	L1	C	DNM	Weight
HT-07	403	88	483	185	350	193	RP 1.5''	11
HT-10	486	111.5	566	268	350	198	RP2''	14
HT-15	486	111.5	566	268	350	198	RP2''	15

Three-Phase

Type	H	H1	C	DNM	Weight
HT-07	403	88	193	RP 1.5''	11
HT-10	436	111.5	198	RP2''	12
HT-15	486	111.5	198	RP2''	14
HT-20	486	111.5	198	RP2''	15

All technical information is subject to change without notice.

NWS Series •SS316 Submersible Vortex Sewage pump

Features

- Vortex Impeller design
- Large impeller clearance
- Viton gaskets, o-rings and lip seal are used throughout pump sealing
- Optional epoxy based nano-coating to extend pump life time
- Optional acid/alkali resistant cable sleeve
- Loss wax 316 stainless steel

Applications

- Drainage for typical, chemical, pharmaceutical industries
- Wastewater with corrosive contaminant
- Wastewater treatment plant





50(80)NWS-5.20~30



50NWS-5.05~10



Watertight Corrugated Cable Sleeve (optional) Acid/Alkali Resistant Plastic Composite Material

Definition of models

50NWS- 5.05

- Power*10: 0.5HP
- Frequency: 50Hz
- Pump model
- Discharge flange:50mm

Max flow: 80m3/h

Max head: 40m

Specifications

Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	0.5~1HP:Class B 2~15HP:Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Vortex



Vortex Impeller Stainless Steel AISI 316



Mechanical Seal (EKK Eagle Burgmann)



Long life Bearing



Gaskets, O-rings, Lip seal and Cable gland made in Viton material



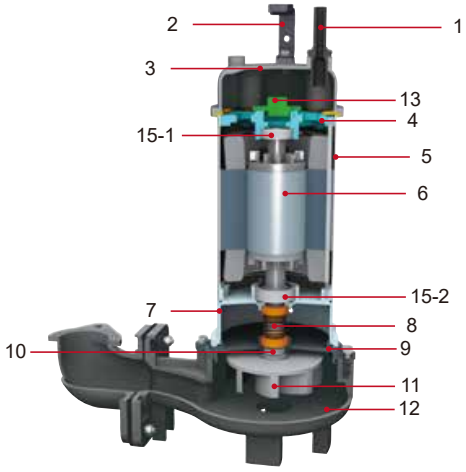
SQS(0.5HP~1HP) AISI 316



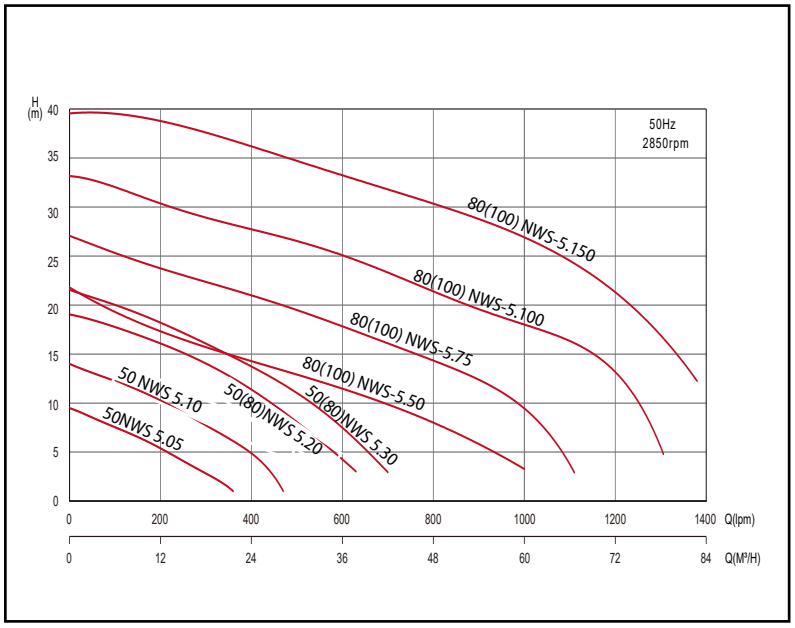
SQM(2HP~7.5HP) AISI 316

Materials and Parts

No	Part	Material
1	Cable	H07RN-F/SJTW/STOW
2	Handle	Nylon 6(0.5-1HP) AISI 316 (2-7.5HP)
3	Motor Cover	ÀISI 316
4	Bracket	EN-GJL-200
5	Motor Housing	ÀISI 316
6	Shaft with Rotor	ÀISI 316
7	Oil Chamber	EN-GJL-200(0.5-1HP) AISI 316(2-7.5HP)
8	Double Mech.Seal	Upper : CA / CE Lower : SIC / SIC
9	Seal Housing	ÀISI 316
10	Oil Seal	Viton
11	Impeller	ÀISI 316
12	Pump Casing	ÀISI 316
13	Protector	KLIXON
15-1	Upper Bearing	NTN/TPI
15-2	Lower Bearing	NTN/TPI



Performance Curves

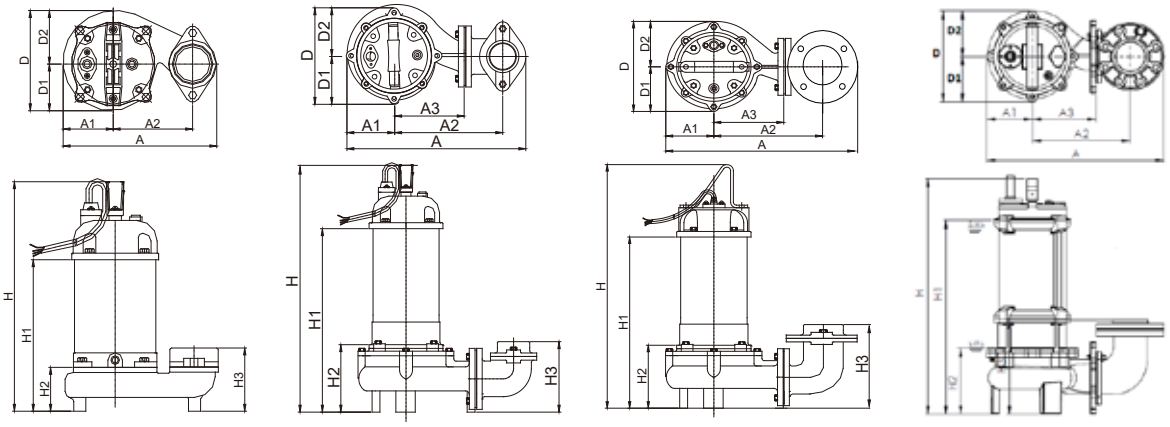


Type	Output		Discharge	F.L.A		Rated		Maximum		Free Passage	Weight	
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	1Ø(kg)	3Ø (kg)
50NWS-5.05	0.5	0.37	2"	3.5	1.4	5.4	200	9.5	360	35	13	12.4
50NWS-5.10	1	0.75	2"	6	2.5	9	250	14	470	35	15.4	15.7
50(80)NWS-5.20	2	1.5	2"(3")	10.5	4.5	12	375	19	630	45	31.2	29.7
50(80)NWS-5.30	3	2.2	2"(3")	12.6	5.7	14.7	360	21.5	700	45	32.8	31.3
80(100)NWS-5.50	5	3.7	3"(4")	-	7.2	13	500	22	1000	45	-	48
80(100)NWS-5.75	7.5	5.5	3"(4")	-	10.8	18	595	27	1110	45	-	53.8
80(100)NWS-5.100	10	7.5	3"(4")	-	15	25	600	33	1300	34	-	71.5
80(100)NWS-5.150	15	11	3"(4")	-	18	26.5	846	39.7	1352	25	-	81.5

Note: » 50NWS-5.05~10 : Flange Type

» 50(80)NWS-5.20~30; 80(100)NWS-5.50~75 : Elbow Type

Dimensions



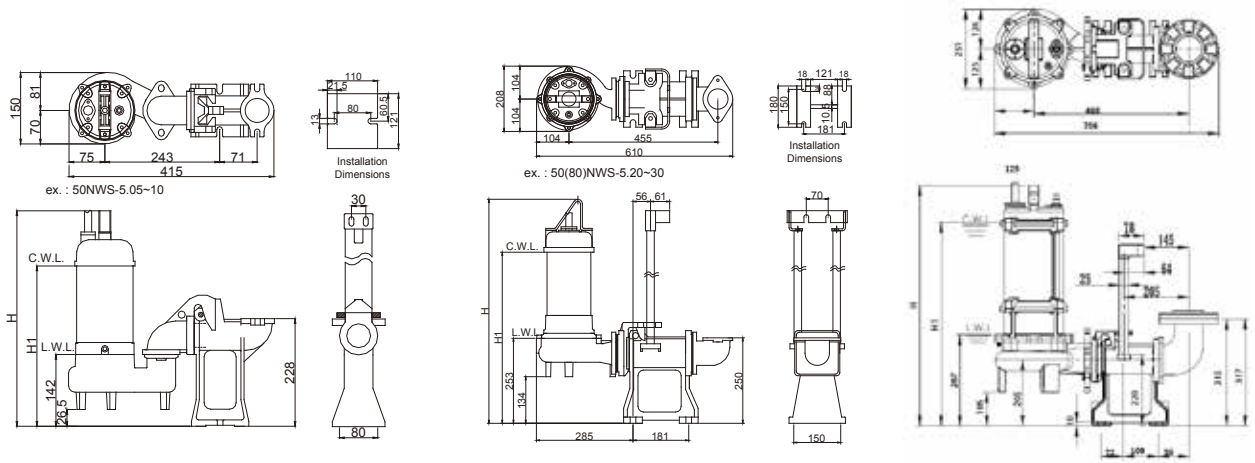
50NWS-5.05~5.10 | 50(80)NWS-5.20~5.30 | 80(100)NWS 5.50~5.75 | 80(100)NWS 5.100~150

Type	A	A1	A2	A3	D	D1	D2	H	H1	H2	H3
50NWS-5.05	228	75	120	NA	150	70	80	425	297	117	138
50NWS-5.10	228	75	120	NA	150	70	80	425	327	117	138
50(80)NWS-5.20	390	103	235	154	208	104	104	532	400	150	150
50(80)NWS-5.30	390	103	235	154	208	104	104	552	420	150	150
80(100)NWS-5.50	466	100	274	177	210	95	115	633	468	160	225
80(100)NWS-5.75	466	100	274	177	210	95	115	673	508	160	225
80(100)NWS-5.100	488	125	270	176	251	125	127	630	515	181	261
80(100)NWS-5.150	488	125	270	176	251	125	127	680	565	181	261

Note: » NWS-Series with SQS / SQM available on request

» Q.D.C. (Quick Discharge Connection) is applied to all models.

Dimensions with QDC (SQS/SQM)



50NWS 5.05~5.10: SQS | 50(80)NWS-5.20~5.30:SQM | 80(100)NWS 5.100~150: SQM

Output		Discharge		Dimensions(mm)	
HP	KW	Inch	mm	H	H1
0.5	0.37	2"	50	445	322
1	0.75	2"	50	475	352
2	1.5	2"(3")	50(80)	660	534
3	2.2	2"(3")	50(80)	S:710 ; T:690	S:574 ; T:554
5	3.7	3"(4")	80(100)	739	574
7.5	5.5	3"(4")	80(100)	779	614
10	7.5	3"(4")	80(100)	736	620
15	11	3"(4")	80(100)	786	670

NC Series •Submersible Cutter Sewage Pump

Features

• Tungsten inserts incorporated on the impeller blades to provide shredding action

• Reliable shaft sealing provided by double mechanical seal in Si.Ca

• Automatic operation (Optional)





Semi Open Impeller
(Tungesten Edge)

Applications

• Drainage of sewage from building and school basement etc.

• Septic tank and cesspit

• Wastewater treatment

• Ground water drainage

Definition of models

Max flow: 66m3/h

Max head: 30m

50 NC- 5.05

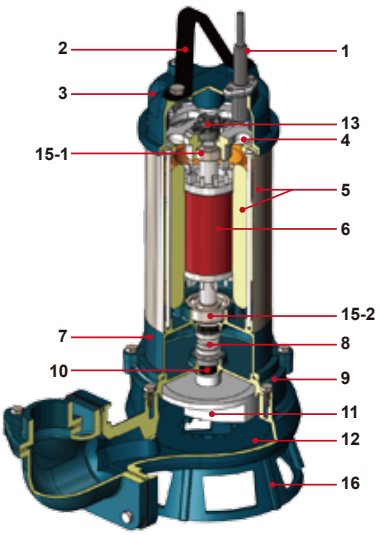
- Power*10: 0.5HP
- Frequency: 50Hz
- Pump model (Cutter type)
- Discharge flange:50mm

Specifications

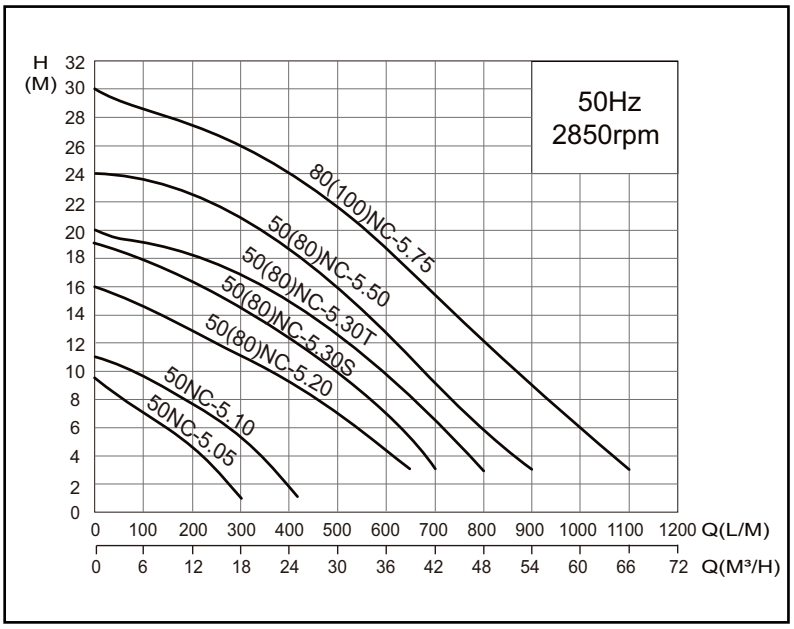
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	0.5-3HP Class B ,5-7.5HP Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open

Materials and Parts

No	Part	Material
1	Cable	H07RN-F /SJTOW/STOW
2	Handle	Nylon 6/ASTM A36
3	Motor Cover	Nylon 66/EN-GJL-200
4	Bracket	EN-GJL-200
5	Motor Housing	AISI 304
6	Shaft with Rotor	AISI 410
7	Oil Chamber	EN-GJL-200
8	Double Mech.Seal	Upper : CA / CE Lower : SIC / SIC
9	Seal Housing	Nylon / EN-GJL-200
10	Oil Seal	NBR
11	Impeller	EN-GJS-450+Tungsten edge
12	Pump Casing	EN-GJL-200
13	Protector	KLIXON
15-1	Upper Bearing	NTN/TPI
15-2	Lower Bearing	NTN/TPI
16	Bottom Base	EN-GJS-450



Performance Curves



Type	Output		Discharge	F.L.A		Rated		Maximum		Free Passage	Weight	
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	1Ø(Kg)	3Ø(Kg)
50NC-5.05	0.5	0.37	2″	4	1.2	6	150	9.5	300	19	12.8	12.5
50NC-5.10	1	0.75	2″	6	1.8	8	190	11	420	19	18.5	18.2
50(80)NC-5.20	2	1.5	2″(3″)	11.3	3.5	10	360	16	650	23	35.8	35.7
50(80)NC-5.30	3	2.2	2″(3″)	14.5	5.2	14	330(440)	19(20)	700(800)	23	39.9	36.2
80(100)NC-5.50	5	3.7	3″(4″)	-	8.2	15	530	24	900	28	--	52.2
80(100)NC-5.75	7.5	5.5	3″(4″)	-	11.5	21	525	30	1100	28	--	59.2

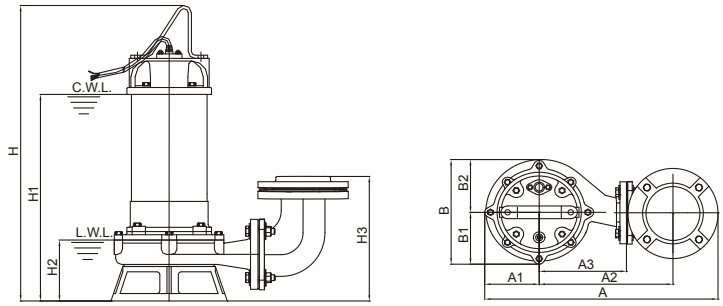
» 50NC-5.05 : Thread Type

» 50NC-5.10 : Thread Type / Elbow Type is optional.(2″ or 3″ /Fit with Q.D.C. QM-80)

»Q.D.C.(Quick Discharge Connection) is available only for Elbow type.

» 50(80)NC-5.20~30 : Elbow Type / 80(100)NC-5.50~75 : Elbow Type

Dimensions



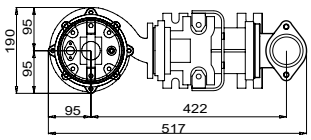
80(100) NC5.50~5.75

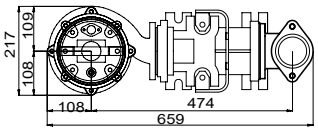
Type	A	A1	A2	A3	D	D1	D2	H	H1	H2	H3
50NC-5.05	253	95	158	NA	190	95	95	410	285	106	126
50NC-5.10	253	95	158	NA	190	95	95	480	333	106	126
*50(80)NC-5.10	265	95	199	115	190	95	95	402	290	104	164
50(80)NC-5.20	408	108	250	168	217	108	109	560	390	115	168
50(80)NC-5.30	408	108	250	168	217	108	109	580	410	115	168
80(100)NC-5.50	457	110	255	167	227	110	117	610	445	137	225
80(100)NC-5.75	457	110	255	167	227	110	117	650	485	137	225

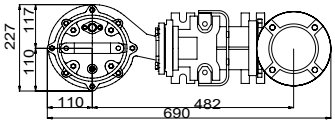
» (*) Is Elbow Type

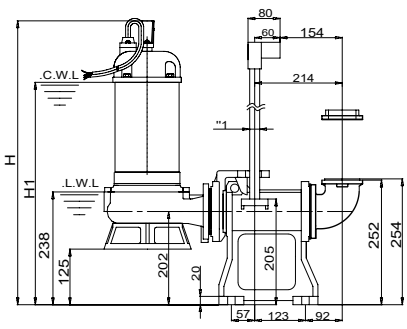
» Q.D.C. (Quick Discharge Connection) is available only for Elbow type.

Dimensions with QDC

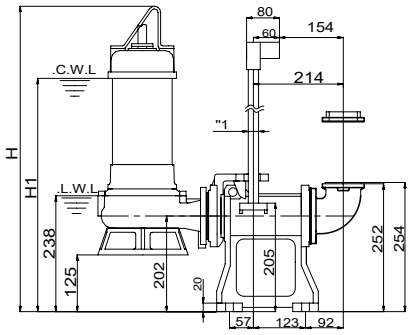




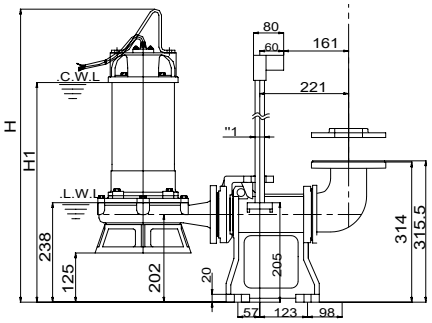




50 NC 5.10 (QM-80)



50(80) NC 5.20~ 5.30 (QM-80)



80(100) NC5.50~5.75 (QM-100)

Output		Discharge		Dimensions(mm)	
HP	KW	Inch	mm	H	H1
1	0.75	2"(3")	50(80)	610	466
2	1.5	2"(3")	50(80)	695	525
3	2.2	2"(3")	50(80)	S:735 ; T:715	S:565 ; T:545
5	3.7	3"(4")	80(100)	765	587
7.5	5.5	3"(4")	80(100)	805	627

GPK Series •Submersible Grinder Pumps

Feature

- Robust construction
- Superior Heat Dissipation
- Double mechanical seals in Sic / Sic
- Semi open impeller design prevents clogging by cutting up articles
- Radial cutter and cutter ring AISI 440C : corrosion resistant material, hardened to 55-60 HRC.
- Specially designed high torque startup by centrifugal switch built-in for single phase motor
- Direct connect to pipe with horizontal discharge with inner thread
- Built-in Run/Start Capacitor(1 Phase only)



Cutter
SUS 440C / HRC55~60



QDC:QG



32GPK-5.20





Semi-open Impeller

Max flow: 19m3/h

Max head: 45m

Applications

- Waste water treatment
- Sewage water
- Drainage of wastewater from individual residences,apartment buildings, recreational developments,motels.
- Transferring wastewater, Schools,and local parks
- To transfer various wastewater and sewage

Definiton of Model

50 GPK- 5.15

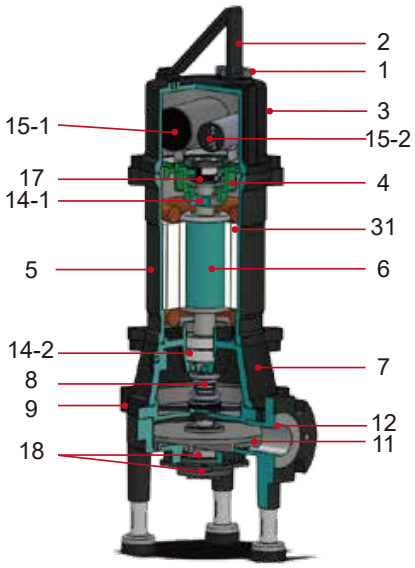
- Power*10: 1.5HP
- Frequency: 50Hz
- Pump model (Cutter type)
- Discharge flange:50mm

Specifications

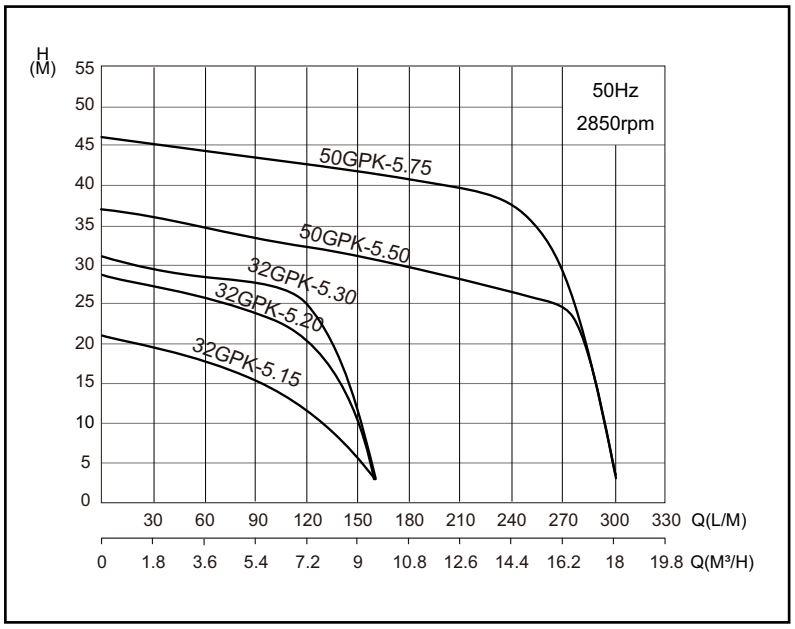
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	1.5~3HP:Class B ;5~7.5HP:Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi-Open

Materials and Parts

No	Part	Material
1	Cable	H07RN-F/SJTOW/STOW
2	Handle	ASTM A36
3	Motor Cover	EN-GJL-200
4	Bracket	EN-GJL-200
5	Motor Housing	EN-GJL-200
6	Shaft with Rotor	AISI 410
7	Oil Chamber	EN-GJL-200
8	Mech. Seal	Upper:CA/CE/NBR
		Lower:SIC/SIC/NBR
9	Seal Housing	EN-GJL-200
11	Impeller	EN-GJL-200
12	Pump Casing	EN-GJL-200
14-1	Upper Bearing	NTN/TPI
14-2	Lower Bearing	NTN/TPI
15-1	Run Capacitor	1 Phase only
15-2	Start Capacitor	1 Phase only
17	Centrifugal switch	1 Phase only
18	Cutter Set	AISI 440C



Performance Curves

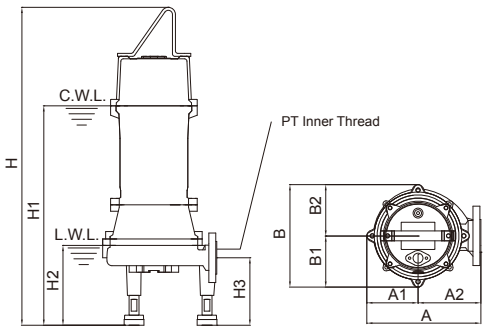


Model	Output		Discharge	F.L.A		Rated		Maximum		Cable	
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	1Ø-Kg	3Ø-Kg
32GPK-5.15	1.5	1.1	1-1/4""	9.4A	3.3A	15.5	90	21	160	29.4	29.4
32GPK-5.20	2	1.5	1-1/4""	11.5A	4.5A	23	100	28.5	160	32	32
32GPK-5.30	3	2.2	1-1/4""	-	4.7A	25	120	31	160	--	33.6
50GpK-5.50	5	3.7	2"	-	8.7A	26	250	37	300	--	41.2
50GPK-5.75	7.5	5.5	2"	-	12.5A	36	250	46	300	--	46.2

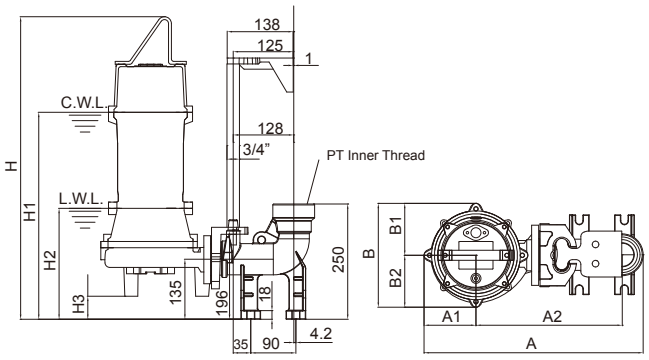
» QG Guide rail systems for easy-out/easy-in plumbing is optional for 1.5~7.5HP.

» All single-phase pumps can be equipped with float switch upon request.

Dimensions



32GPK-5.15~5.30



32GPK-5.15~5.30 + QG

Type	A	A1	A2	B	B1	H	H1	H2	H3
32GPK-5.15(QG)	230(445)	102	128(300)	206	103	640(630)	445(432)	160(150)	135(50)
32GPK-5.20(QG)	230(445)	102	128(300)	206	103	640(630)	445(432)	160(150)	135(50)
32GPK-5.30(QG)	230(445)	102	128(300)	206	103	640(630)	485(472)	160(150)	135(50)
50GPK-5.50(QG)	283(500)	119	164(337.3)	239	114	669(637)	509(477)	186(154)	151(29)
50GPK-5.75(QG)	283(500)	119	164(337.3)	239	114	709(677)	549(517)	186(154)	151(29)

» (QG) identifies GPK pump with QG Q.D.C.

» Q.D.C. (Quick Discharge Connection) is applied to all models.

HE Series •SOLID FULL-PASSAGE SEWAGE PUMP

Features

- Vortex impeller design
- 2″ discharge with PT inner thread
- 2″(50mm) solid free-passage
- EKK Eagle Burgmann double mechanical seal (CA/CE & SIC/SIC)
- Stainless steel motor housing



Max flow: 40m3/h

Max head:15m

Applications

- For heavy-duty applications with soiled biological wastewaters, sewage, rainwater
- For both domestic and professional use

Definition of models

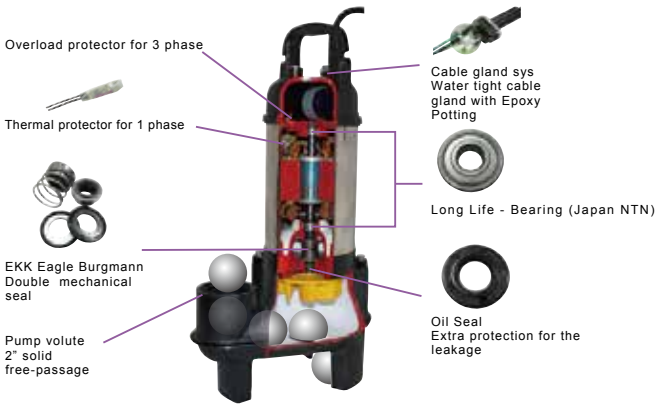
HE - 50 (Q)

- Pump with horizontal flanged outlet
- Power/100: 0.5HP
- Pump model

Specifications

Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	0.5~1HP:Class B;1.5~2HP:Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Vortex

Specifications





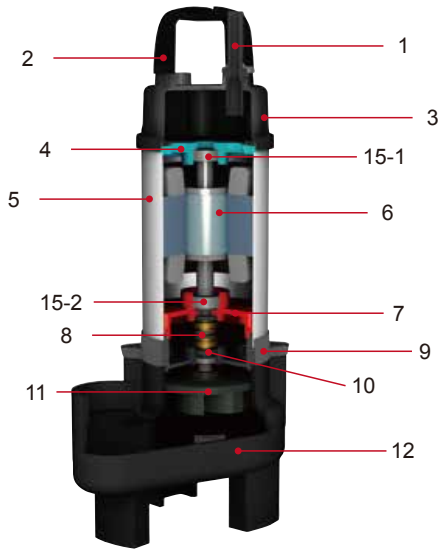
HE-50Q



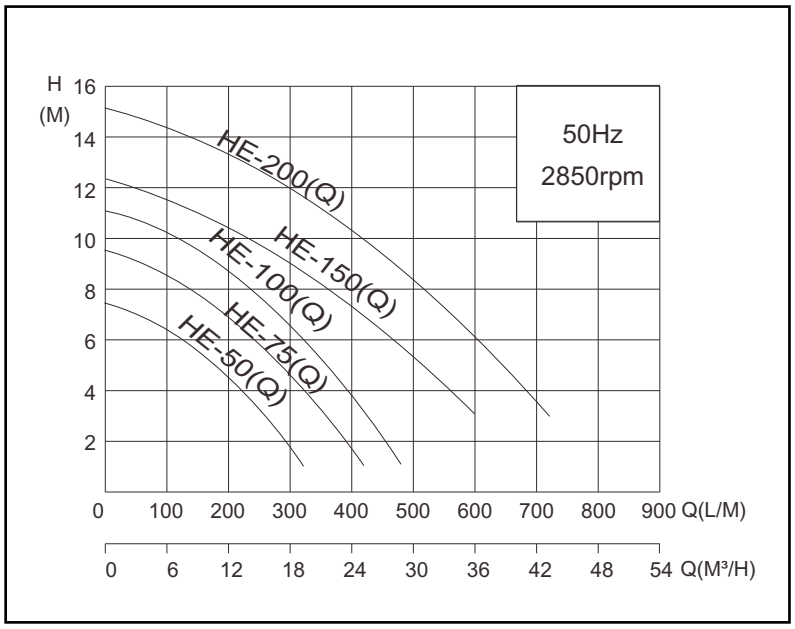
HE-50Q+QH coupling foot

Materials and Parts

No	Part	Material
1	Cable	H07RN-F/STOW/SJTOW
2	Handle	Nylon6
3	Motor Cover	PA66+30GF (0.5~1HP)
		EN-GJL-200 (1.5~2HP)
4	Bracket	EN-GJL-200
5	Motor Housing	AISI 304
6	Shaft with Rotor	AISI 410
7	Oil Chamber	EN-GJL-200
8	Double Mech.Seal	Upper : CA / CE
		Lower : SIC / SIC
9	Seal Housing	EN-GJL-200
10	Oil Seal	NBR
11	Impeller	EN-GJL-200
12	Pump Casing	EN-GJL-200
15-1	Upper Bearing	NTN/TPI
15-2	Lower Bearing	NTN/TPI

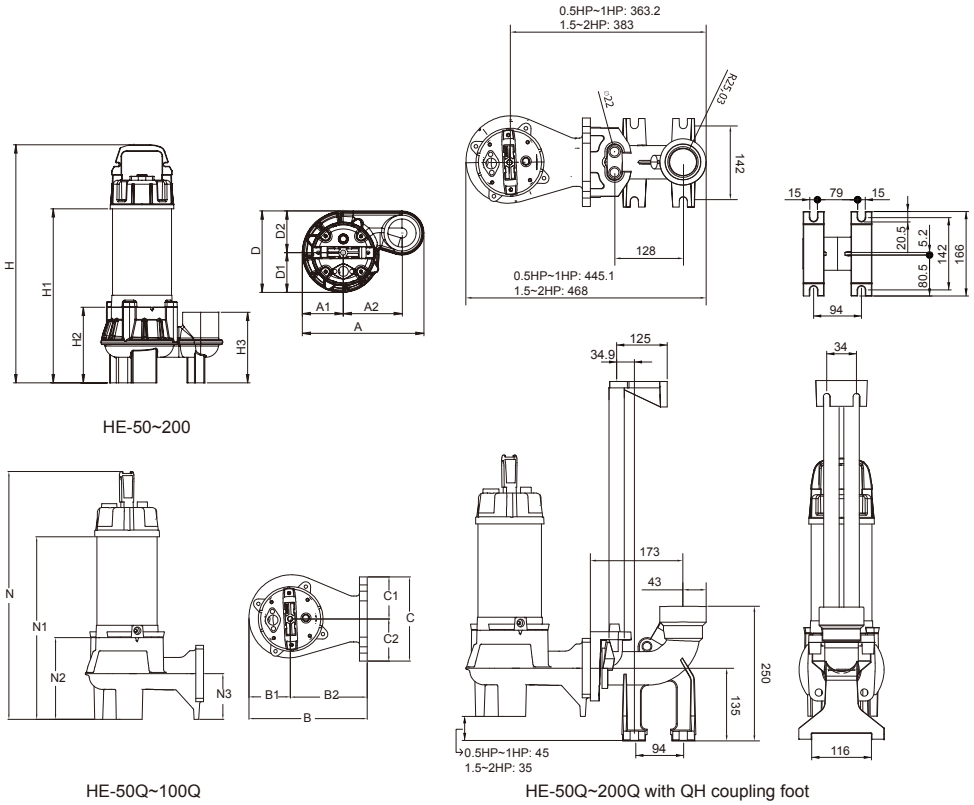


Performance Curves



Type	Output		Discharge	F.L.A		Rated		Maximum		Free Passage	Weight
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	Kg
HE-50(Q)	0.5	0.37	2″	4.2A	1.6A	4.5	240	8	330	50	12.9 (14.3)
HE-75(Q)	0.75	0.55	2″	5.5A	1.8A	6.4	240	10	390	50	13.9 (15.3)
HE-100(Q)	1	0.75	2″	7.2A	2.5A	7.7	300	11.3	500	50	15.4 (16.8)
HE-150(Q)	1.5	1.1	2″	9A	2.8A	8	390	12.5	580	50	24.2 (26.2)
HE-200(Q)	2	1.5	2″	12A	3.9A	10	420	15.5	660	50	25.2 (27.2)

Dimensions



Type	A	A1	A2	B	B1	B2	C	C1	C2	D	D1	D2	H	H1	H2	H3	N	N1	N2	N3
HE-50(Q)	244	82	118	231	81	150	165	82.5	82.5	164	80	84	466	336	151	141	470	342	161	90
HE-75(Q)	244	82	118	231	81	150	165	82.5	82.5	164	80	84	482	352	151	141	486	358	161	90
HE-100(Q)	244	82	118	231	81	150	165	82.5	82.5	164	80	84	496	366	151	141	500	372	161	90
HE-150(Q)	271	93	135	243	93	150	165	82.5	82.5	186	88	98	506	376	151	143	510	373	158	90
HE-200(Q)	271	93	135	243	93	150	165	82.5	82.5	186	88	98	520	396	151	143	530	393	158	90

» HE series standard version features a vertical, threaded outlet pump body.

» (Q) in the name-coding identifies the pump with horizontal flanged outlet.

» QH coupling foot is suitable for all HE pump with horiztontal volute.

» All single-phase pumps can be equipped with float switch upon request.

HE DN Series •SOLID FULL-PASSAGE SEWAGE PUMP

Features

- Vortex impeller design
- 2.5"& 3" (65mm&76mm) solid free-passage
- EKK Eagle Burgmann double mechanical seal I CA/CE & SIC/SIC
- Stainless steel motor housing
- Volute connection available in DIN PN10/16



Applications

- For heavy-duty applications with soiled biological wastewaters, sewage, rainwater
- For both domestic and professional use

Operating conditions

- Viscosity of treated fluid : 1 mm^2/s
- Density of treated fluid : 1 kg/dm3
- Max starts per hour : 20

Definition of models

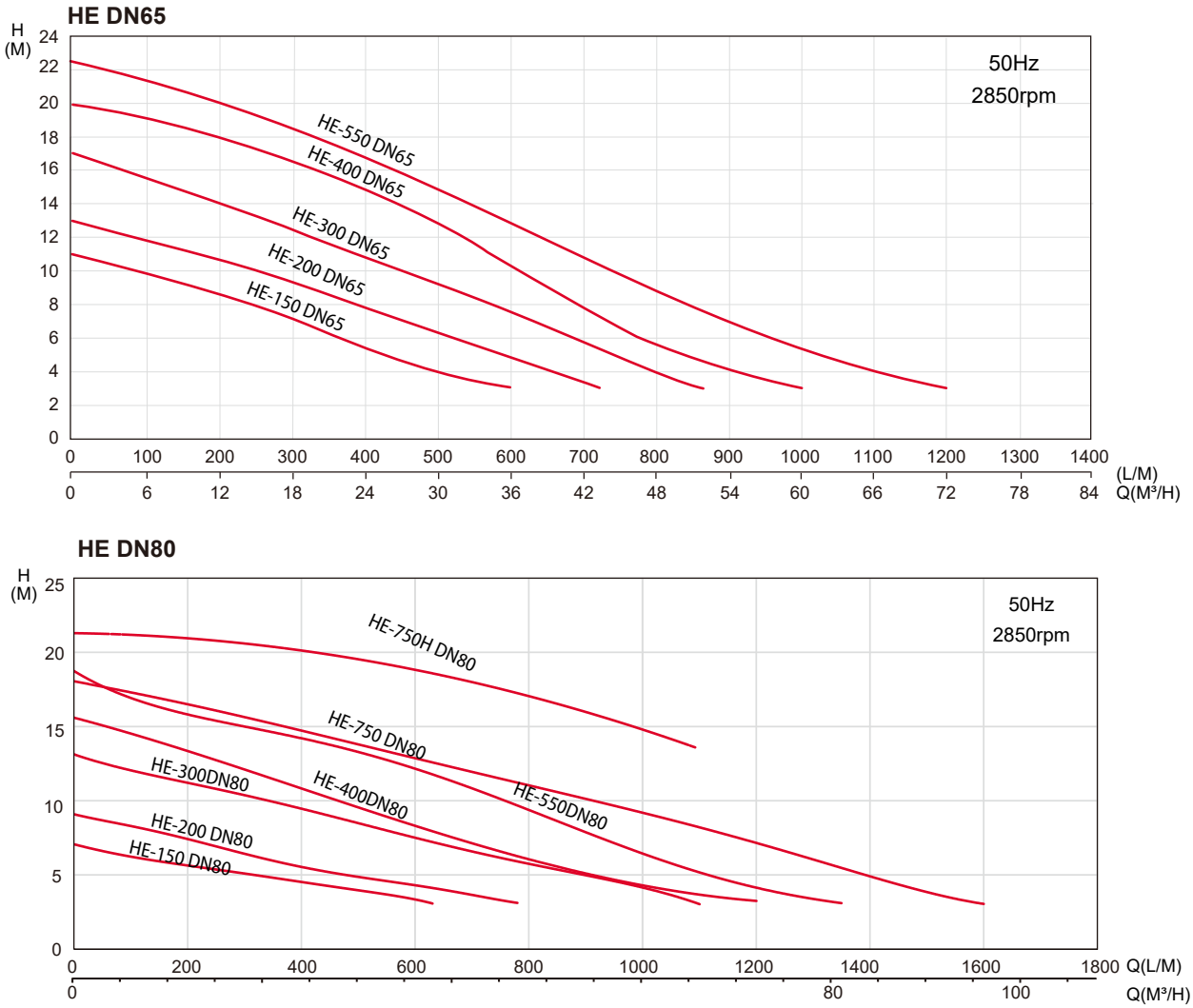
HE-150DN65

- DN refers to discharge connection
- Power/100: 1.5HP
- Pump model

Specifications

Liquid Temperature		0~40°C (32~104°F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Vortex

Performance Curves



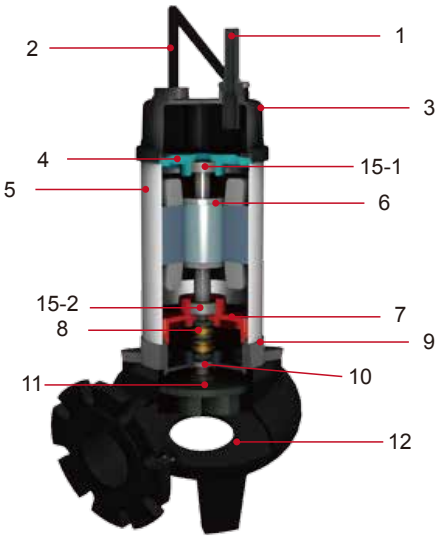
Type	Output		Discharge	F.L.A		Rated		Maximum		Free Passage	Weight		QDC
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	1ØKg	3Ø Kg	
HE-150 DN65	1.5	1.1	2.5"	10	3	6.6	330	11	600	65	26.3	26.3	QM-65
HE-200 DN65	2	1.5	2.5"	12	3.9	8.4	360	13	720	65	28.5	28.5	QM-65
HE-300 DN65	3	2.2	2.5"	--	6	12.6	300	17	870	65	--	29.6	QM-65
HE-400 DN65	5	3	2.5"	--	6.5	13	500	20	1000	65	--	37.3	QM-65
HE-550 DN65	4.5	4.1	2.5"	--	9.1	15	500	22.5	1200	65	--	39.3	QM-65
HE-150 DN80	1.5	1.1	3"	10	3	4.4	415	7	630	76	29.6	29.6	QD-80
HE-200 DN80	2	1.5	3"	12	3.9	5	460	9	780	76	31.8	31.8	QD-80
HE-300 DN80	3	2.2	3"	--	6	9.5	400	13	1100	76	--	32.9	QD-80
HE-400 DN80	4	3	3"	--	6.5	8	600	15.5	1200	76	--	49.9	QD-80
HE-550 DN80	5.5	4.1	3"	--	9.1	6	900	18.5	1350	76	--	51.9	QD-80
HE-750 DN80	7.5	5.5	3"	--	11	10	900	18	1600	76	--	65.5	QD-80
HE-750H DN80	7.5	5.5	3"	--	11.8	16	728	21	1095	76	--	65.5	QD-80

» All single-phase pumps can be equipped with float switch upon request

» Q.D.C. (Quick Discharge Connection) is applied to all models.

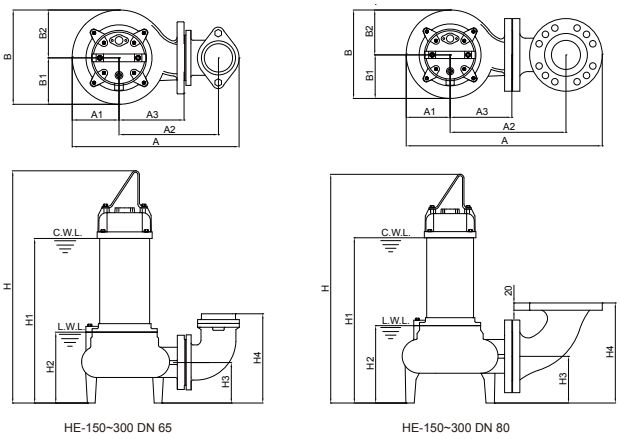
Materials

No	Part	Material
1	Cable	H07RN-F/SJTOW/STOW
2	Handle	ASTM A36
3	Motor Cover	EN-GJL-200
4	Bracket	EN-GJL-200
5	Motor Housing	AISI304
6	Shaft with Rotor	AISI410
7	Oil Chamber	EN-GJL-200
8	Double Mech.Seal	Upper : CA / CE
		Lower : SIC / SIC
9	Seal Housing	EN-GJL-200
10	Oil Seal	NBR
11	Impeller	EN-GJL-200
12	Pump Casing	EN-GJL-200
15-1	Upper Bearing	NTN/TPI
15-2	Lower Bearing	NTN/TPI



Note: Single lower bearing for 1.5HP/2HP; Double lower bearings for 3HP

Dimensions



HE-150~300 DN 65 HE-150~300 DN 80

Type	A	A1	A2	A3	B	B1	B2	H	H1	H2	H3	H4
HE-150 DN65	410	145	240	180	235	120	115	580	405	185	105	215
HE-200 DN65	410	145	240	180	235	120	115	600	425	185	105	215
HE-300 DN65	410	145	240	180	235	120	115	630	455	185	105	215
HE-400-DN65	399	123	229	191	247	122	125	633	477	185	105	215
HE-550DN65	399	123	229	191	247	122	125	657	490	185	105	215
HE-150 DN80	550	122	320	180	257	127	130	615	440	220	130	270
HE-200 DN80	550	122	320	180	257	127	130	635	460	220	130	270
HE-300 DN80	550	122	320	180	257	127	130	665	490	220	130	270
HE-400DN80	567	125	334	194	250	123	127	653	497	208	130	270
HE-550DN80	567	125	334	194	250	123	127	685	518	208	130	270
HE-750DN80	571	126	337	194	250	122	128	760	585	230	130	270
HE-750H DN80	571	126	337	194	250	122	128	760	585	230	130	270

MAM Series •Heavy Duty Submersible Pumps

Features

- Non-clog single channel impeller
- Robust construction
- Large solid passage
- Dry Tip (optional)





Enclosed Single Channel Impeller

Applications

- Sewage
- Waste water

Max flow: 360m3/h

Max head:40m

Definition of models

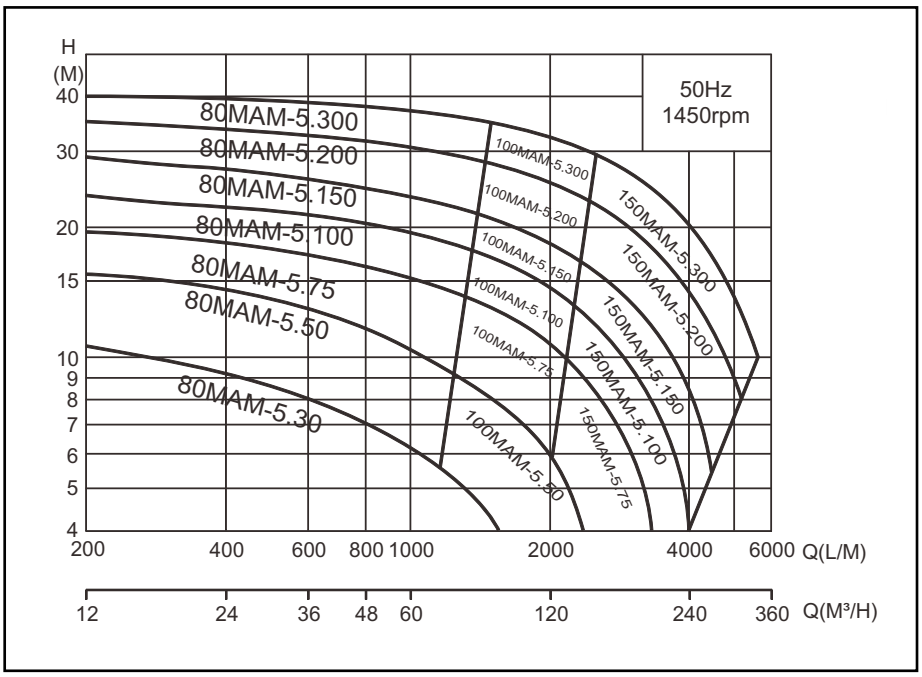
80 MAM 5.30

- Power*10: 3HP
- Frequency: 50Hz
- Pump model
- Discharge flange:80mm

Specifications

Liquid Temperature		0~40°C (32~104°F)
Submersible depth		8M
Motor Part	Frequency	50Hz
	Pole	4 Pole
	Type	Air-filled watertight
	Insulation	Class F
	Protection	IP 68
Pump Part	Protector	Built-in overload protector(3HP) Build-in thermal protector (5-30HP)
	Bearing	Ball Bearing
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Single Channel, Non-Clog

Performance Curves

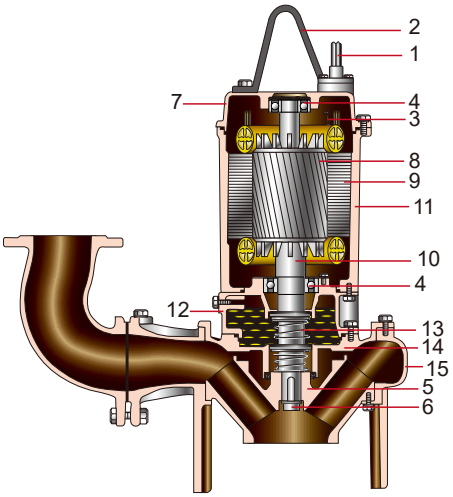


Data Chart

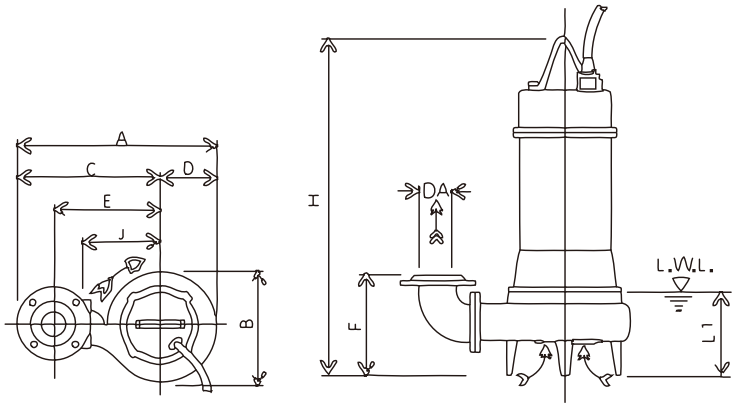
Type	Output		Discharge	F.L.A		Rated		Maximum		Cable	Free Passage	Weight
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	M	mm	Kg
80MAM-5.30	3	2.2	3"	-	5.2	11.2	200	4	1600	10	76	80
80MAM-5.50	5	3.7	3"	-	8.4	15.8	200	9.1	1338	10	76	87
80MAM-5.75	7.5	5.5	3"	-	12.6	19.3	300	12.8	1400	10	76	118
80MAM-5.100	10	7.5	3"	-	16.9	22.6	300	16	1449	10	76	123
80MAM-5.150	15	11	3"	-	23.8	28.5	300	22.7	1512	10	76	157
80MAM-5.200	20	15	3"	-	31	34	300	28.4	1557	10	76	163
80MAM-5.300	30	22	3"	-	42	39.5	300	34	1595	10	76	223
100MAM-5.50	5	3.7	4"	-	8.4	9.1	1338	4	2407	10	76	89
100MAM-5.75	7.5	5.5	4"	-	12.6	12.8	1400	9.3	2194	10	76	121
100MAM-5.100	10	7.5	4"	-	16.9	16	1449	12.6	2270	10	76	125
100MAM-5.150	15	11	4"	-	23.8	22.7	1512	18.3	2368	10	76	160
100MAM-5.200	20	15	4"	-	31	28.4	1557	23.7	2440	10	76	166
100MAM-5.300	30	22	4"	-	42	34	1595	28	2489	10	76	226
150MAM-5.75	7.5	5.5	6"	-	12.6	9.3	2194	4	3379	10	76	127
150MAM-5.100	10	7.5	6"	-	16.9	12.6	2270	4	3987	10	76	132
150MAM-5.150	15	11	6"	-	23.8	18.3	2368	5.5	4472	10	76	166
150MAM-5.200	20	15	6"	-	31	23.7	2440	8	5102	10	76	172
150MAM-5.300	30	22	6"	-	42	28	2489	10	5566	10	76	232

Materials and Parts

No	Part	Material
1	Submersible Cable	
2	Lifting Hanger	SS Steel
3	Thermal Protector	
4	Ball Bearing	
5	Impeller	EN-GJL-200
6	Impeller Bolt	AISI 304
7	Opposite Side Bracket	EN-GJL-200
8	Rotor	
9	Stator	
10	Shaft	AISI 403
11	Motor Frame	EN-GJL-200
12	Power Side Bracket	EN-GJL-200
13	Mechanical Seal	Upper : CA/CE
		Lower : SIC/SIC
14	Mechanical Seal Cover	EN-GJL-200
15	Pump Casing	EN-GJL-200

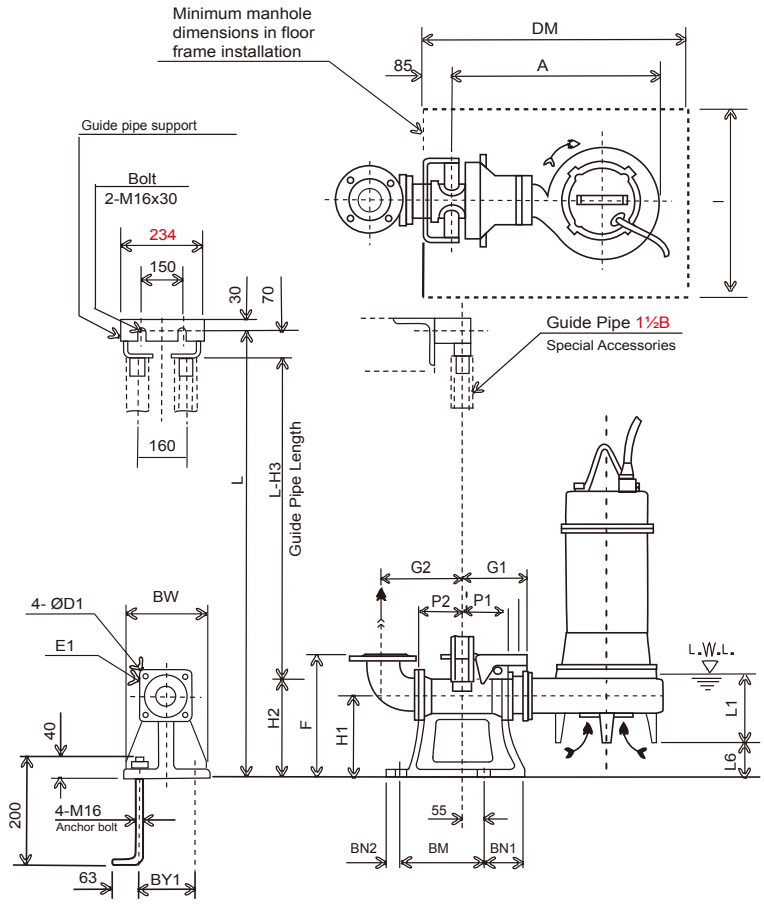


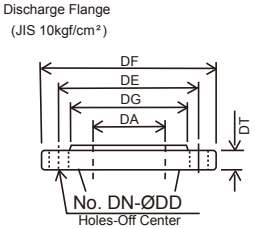
Dimensions



Type	A	B	C	D	E	F	H	J	L1
80MAM-5.30	534	320	378	157	285	298	668	210	279
80MAM-5.50	534	320	378	157	285	298	727	210	279
80MAM-5.75	640	381	453	188	360	334	824	255	310
80MAM-5.100	640	381	453	188	360	334	824	255	310
80MAM-5.150	734	455	513	221	420	350	938	315	329
80MAM-5.200	734	455	513	221	420	350	938	315	329
80MAM-5.300	777	497	533	245	440	363	1021	335	332
100MAM-5.50	577	320	420	157	315	313	727	210	279
100MAM-5.75	653	381	465	188	360	334	824	255	310
100MAM-5.100	653	381	465	188	360	334	824	255	310
100MAM-5.150	746	455	525	221	420	350	938	315	329
100MAM-5.200	746	455	525	221	420	350	938	315	329
100MAM-5.300	790	497	545	245	440	363	1021	335	332
150MAM-5.75	713	381	525	188	385	369	824	255	310
150MAM-5.100	713	381	525	188	385	369	824	255	310
150MAM-5.150	806	455	585	221	445	385	938	315	329
150MAM-5.200	806	455	585	221	445	385	938	315	329
150MAM-5.300	850	497	605	245	465	398	1021	335	332

Dimension with QDC



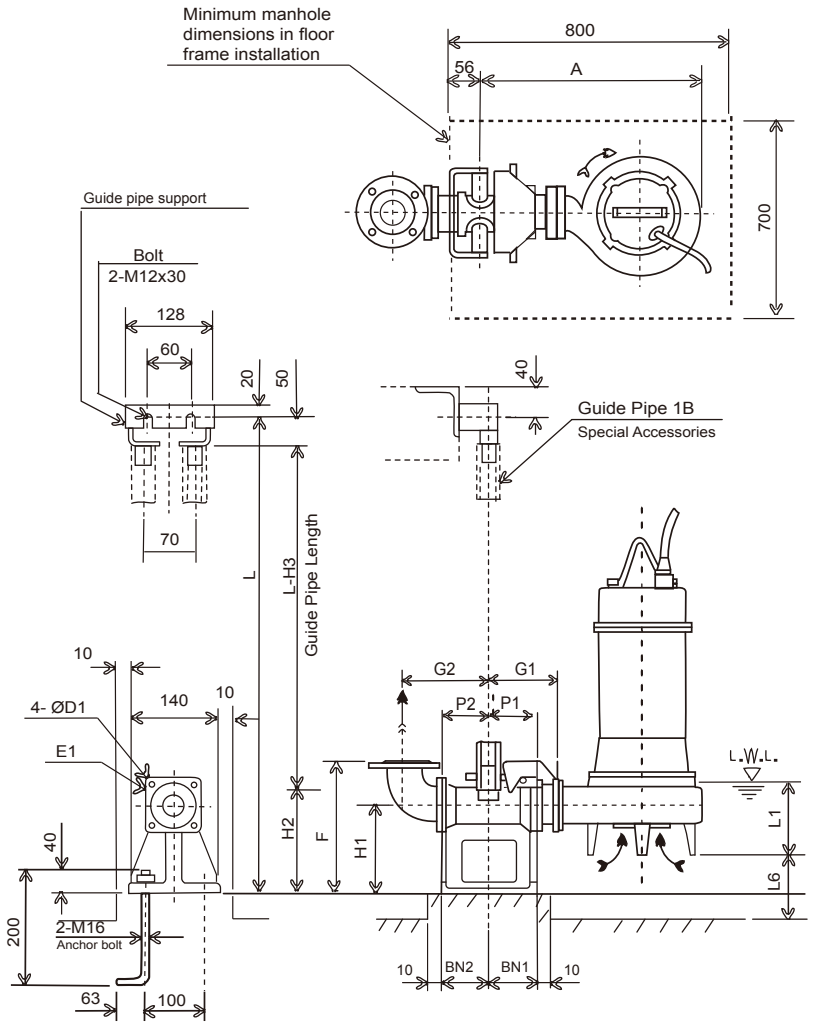


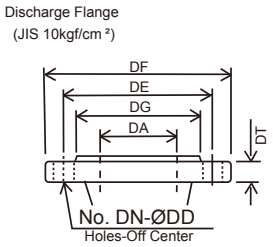
DA	DE	DF	DG	DT	DN	DD
80	150	185	126	18	8	15
100	175	210	151	20	8	15
150	240	280	212	22	8	19

Pump Model	A	P1	P2	G1	G2	F	H1	H2	H3	L1	L6	BN1	BN2	BM	BY1	BW	DM	I	D1	E1	QDC Model	Weight
80MAM-5.75	628	105	105	185	210	365	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46kg
80MAM-5.100	628	105	105	185	210	365	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46kg
80MAM-5.150	721	105	105	185	210	365	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46kg
80MAM-5.200	721	105	105	185	210	365	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46kg
80MAM-5.300	765	105	105	185	210	365	240	265	335	332	12	100	40	220	180	230	1000	700	19	175	LL100	46kg
100MAM-5.50	552	105	120	185	225	365	240	255	325	279	52	100	40	220	180	230	800	700	15	155	LL80	44kg
100MAM-5.75	628	105	105	185	210	365	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46kg
100MAM-5.100	628	105	105	185	210	365	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46kg
100MAM-5.150	721	105	105	185	210	365	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46kg
100MAM-5.200	721	105	105	185	210	365	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46kg
100MAM-5.300	765	105	105	185	210	365	240	265	335	332	12	100	40	220	180	230	1000	700	19	175	LL100	46kg
150MAM-5.75	628	105	105	185	235	400	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46kg
150MAM-5.100	628	105	105	185	235	400	240	265	335	310	31	100	40	220	180	230	800	700	19	175	LL100	46kg
150MAM-5.150	721	105	105	185	235	400	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46kg
150MAM-5.200	721	105	105	185	235	400	240	265	335	329	15	100	40	220	180	230	1000	700	19	175	LL100	46kg
150MAM-5.300	765	105	105	185	235	400	240	265	335	332	12	100	40	220	180	230	1000	700	19	175	LL100	46kg

» Q.D.C. (Quick Discharge Connection) is applied to all models.

Dimension with QDC





DA	DE	DF	DG	DT	DN	DD
80	150	185	126	18	8	15

Pump Model	A	P1	P2	G1	G2	F	H1	H2	H3	L1	L6	BN1	BN2	D1	E1	QDC Model	Weight
80MAM-5.30	492	75	90	125	165	285	175	230	280	279	7	75	90	15	155	LM80	17Kg
80MAM-5.50	492	75	90	125	165	285	175	230	280	279	7	75	90	15	155	LM80	17Kg

» Q.D.C. (Quick Discharge Connection) is applied to all models.

MAL Series •Heavy Duty Submersible Pumps

Features

- Semi-Open and non-clog Impeller
- Non-Clogging/Wide Rang
- Robust construction
- Superior heat Dissipation
- Built-in motor protection





Non-Clog Impeller

Max flow: 600m3/h

Max head:45m

Applications

- Sewage
- Strom water drainage
- Industrial Waste Water

Definition of models

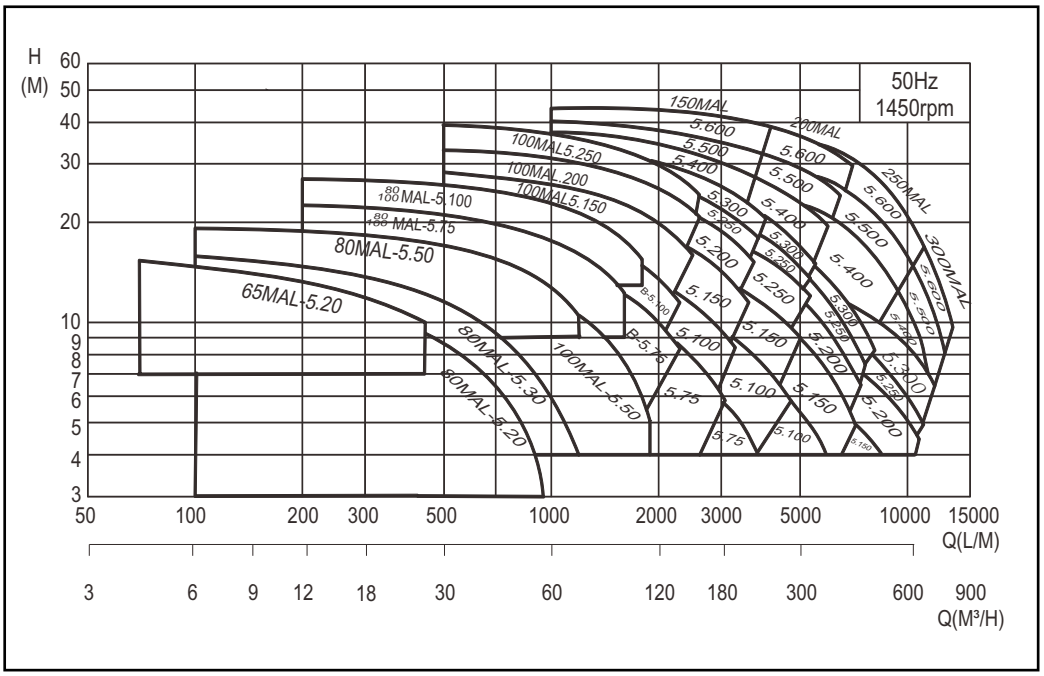
80 MAL 5.30

- Power*10: 3HP
- Frequency: 50Hz
- Pump model
- Discharge flange:80mm

Specifications

Liquid Temperature		0~40°C (32~104°F)
Submersible depth		8M
Motor Part	Frequency	50Hz
	Pole	4 Pole
	Type	Air-filled watertight
	Insulation	Class F
	Protection	IP 68
Pump Part	Protector	Built-in overload protector (up to 10HP) Build-in thermal protector (15-60HP) Leakage detector(40-60HP) 2-30HP optional
	Bearing	Ball Bearing
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Non-Clog

Performance Curves



Data Chart

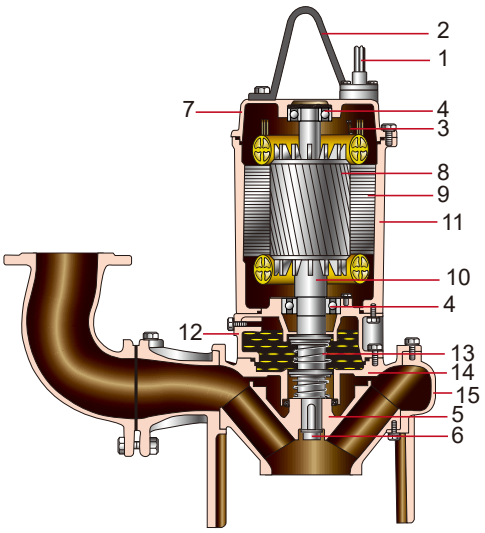
Type	Output		Discharge	F.L.A		Rated		Maximum		Cable	Free Passage	Weight
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	M	mm	Kg
65MAL-5.20	2	1.5	2.5″	-	3.9	15.5	70	9.9	450	10	40	52
80MAL-5.20	2	1.5	3″	-	3.9	12.2	200	3.3	950	10	50	55
80MAL-5.30	3	2.2	3″	-	5.2	15.8	100	4	1200	10	50	67
80MAL-5.50	5	3.7	3″	-	8.3	19.1	100	10.4	1200	10	46	75
80MALC-5.75	7.5	5.5	3″	-	11.3	22	200	12.3	1600	10	46	134
80MALC-5.100	10	7.5	3″	-	15.5	27.3	200	15.3	1800	10	46	148
100MAL-5.50	5	3.7	4″	-	8.3	14	500	5	1900	10	57	79
100MALC-5.75	7.5	5.5	4″	-	11.3	22	200	12.3	1600	10	46	134
100MALC-5.100	10	7.5	4″	-	15.5	27.3	200	15.3	1800	10	46	148
100MALB-5.75	7.5	5.5	4″	-	11.3	16.1	500	8.3	2290	10	57	123
100MALB-5.100	10	7.5	4″	-	15.5	20.8	500	11.5	2300	10	57	141
100MAL-5.150	15	11	4″	-	21.5	28.4	500	16	2500	10	57	180
100MAL-5.200	20	15	4″	-	28.5	33	500	20.6	2600	10	57	230
100MAL-5.250	25	18.5	4″	-	35	39	500	24	2600	10	57	285
150MAL-5.75	7.5	5.5	6″	-	11.3	11.2	1500	5.8	3050	10	68	146
150MAL-5.100	10	7.5	6″	-	15.5	15.2	1500	8.3	3300	10	68	158
150MAL-5.150	15	11	6″	-	21.5	20	1500	11.5	3600	10	68	199
150MAL-5.200	20	15	6″	-	28.5	25.8	1500	15.2	3700	10	68	237
150MAL-5.250	25	18.5	6″	-	35	28.3	1500	18	3800	10	68	300
150MAL-5.300	30	22	6″	-	42	33	1500	20.5	4000	10	68	325
150MAL-5.400	40	30	6″	-	58	35	1500	27.4	4000	10	68	355
150MAL-5.500	50	37	6″	-	72.5	38.6	1500	30.4	4100	10	68	418
150MAL-5.600	60	45	6″	-	87.5	44	1000	34.8	4300	10	68	456
200MAL-5.75	7.5	5.5	8″	-	11.3	6.5	2600	4	3800	10	73	160
200MAL-5.100	10	7.5	8″	-	15.5	9.6	2900	5.8	4700	10	73	176
200MAL-5.150	15	11	8″	-	21.5	13.2	3100	9	5000	10	73	212
200MAL-5.200	20	15	8″	-	28.5	17	3400	12	5300	10	73	260
200MAL-5.250	25	18.5	8″	-	35	19.4	3500	13.5	5300	10	73	305
200MAL-5.300	30	22	8″	-	42	23.2	3500	15	5500	10	73	330
200MAL-5.400	40	30	8″	-	58	27.4	4000	20.5	6200	10	73	355

Data Chart

Type	Output		Discharge	F.L.A		Rated		Maximum		Cable	Free Passage	Weight
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	M	mm	Kg
200MAL-5.500	50	37	8"	-	72.5	30.4	4100	23	6500	10	73	418
200MAL-5.600	60	45	8"	-	87.5	34.8	4300	26.5	7000	10	73	456
250MAL-5.100	10	7.5	10"	-	15.5	7.2	3800	4	5850	10	79	260
250MAL-5.150	15	11	10"	-	21.5	10.4	4600	4.8	7100	10	79	320
250MAL-5.200	20	15	10"	-	28.5	13	4500	6.4	7250	10	79	380
250MAL-5.250	25	18.5	10"	-	35	15.7	4500	7.3	7500	10	79	420
250MAL-5.300	30	22	10"	-	42	17.2	4500	8.2	8000	10	79	440
250MAL-5.400	40	30	10"	-	58	21	6300	12.2	9300	10	79	458
250MAL-5.500	50	37	10"	-	72.5	24.9	6800	15.8	10200	10	79	522
250MAL-5.600	60	45	10"	-	87.5	27.2	7500	18	10700	10	79	540
300MAL-5.150	15	11	12"	-	21.5	5.5	6000	4	8300	10	88	365
300MAL-5.200	20	15	12"	-	28.5	8	6000	4.4	10700	10	88	395
300MAL-5.250	25	18.5	12"	-	35	9.5	6300	4.8	11000	10	88	440
300MAL-5.300	30	22	12"	-	42	11.9	6500	6.4	12000	10	88	465
300MAL-5.400	40	30	12"	-	58	12.2	9300	7.8	10800	10	88	458
300MAL-5.500	50	37	12"	-	72.5	15.8	10200	7.7	12600	10	88	522
300MAL-5.600	60	45	12"	-	87.5	18	10700	9	13200	10	88	540

Materials

No	Part	Material
1	Submersible Cable	
2	Lifting Hanger	SS Steel
3	Protector	
4	Ball Bearing	
5	Impeller	EN-GJL-200
6	Impeller Bolt	AISI 304
7	Opposite Side Bracket	EN-GJL-150
8	Rotor	
9	Stator	
10	Shaft	AISI 403
11	Motor Frame	EN-GJL-150
12	Power Side Bracket	EN-GJL-150
13	Mechanical Seal	Upper : CA/CE
		Lower : SIC/SIC
14	Mechanical Seal Cover	EN-GJL-200
15	Pump Casing	EN-GJL-200

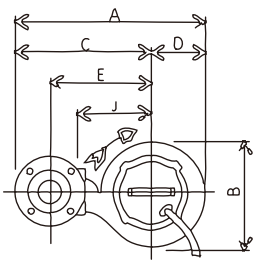


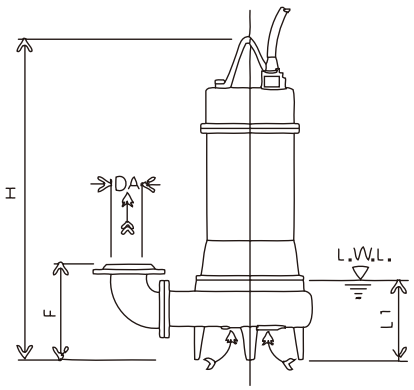
Dimensions

- L.W.L(Low Water Level)

Is limited to 10 minutes operation at low water level

- Is limited to 30 minutes operation with water level below top of motor



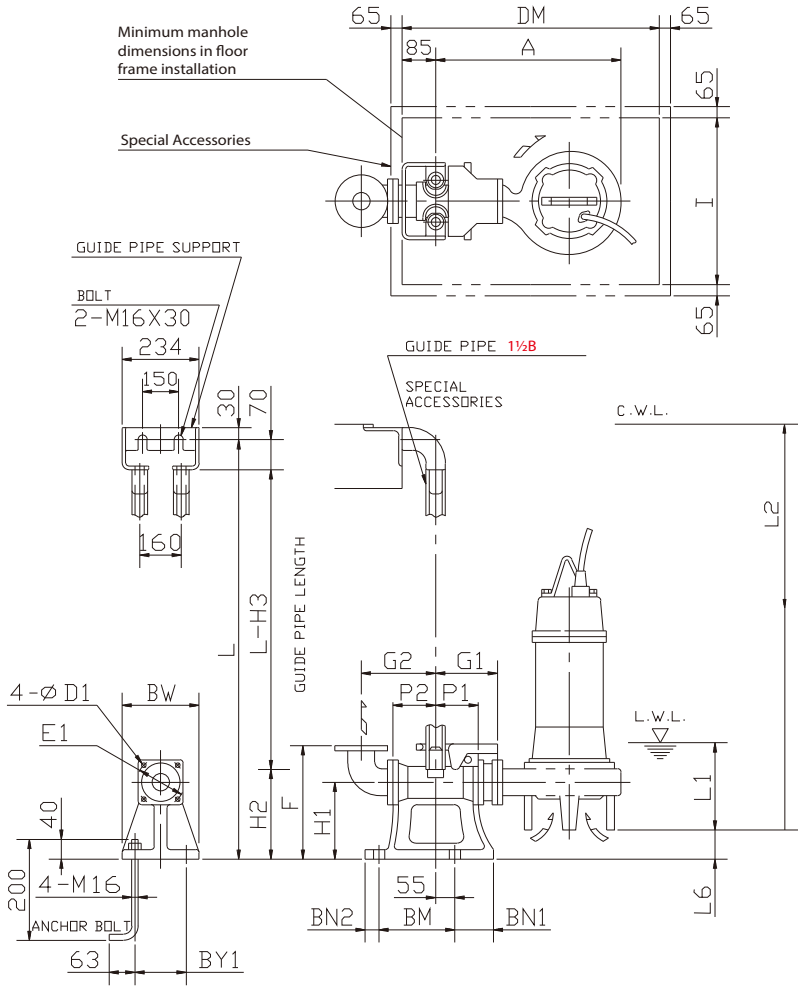


Dimensions

Type	A	B	C	D	E	F	H	J	L1
65MAL-5.20	497	291	353	144	265	200	576	200	140
80MAL-5.20	524	292	378	146	285	220	597	210	165
80MAL-5.30	542	308	388	154	295	220	654	220	165
80MAL-5.50	567	328	403	164	310	220	687	235	165
80MALC-5.75	618	379	428	190	335	307	753	260	205
80MALC-5.100	648	399	448	200	355	305	751	280	205
100MAL-5.50	614	335	445	169	340	250	706	235	185
100MALC-5.75	660	379	470	190	365	322	753	260	205
100MALC-5.100	690	399	490	200	385	320	751	280	205
100MALB-5.75	646	369	460	186	355	323	768	250	205
100MALB-5.100	673	385	480	193	375	323	760	270	205
100MAL-5.150	701	402	500	201	395	323	859	290	205
100MAL-5.200	741	441	520	221	415	330	954	310	205
100MAL-5.250	741	441	520	221	415	330	958	310	205
150MAL-5.75	750	398	550	200	410	381	799	280	245
150MAL-5.100	780	418	570	210	430	377	784	300	245
150MAL-5.150	810	438	590	220	450	377	883	320	245
150MAL-5.200	810	438	590	220	450	377	972	320	245
150MAL-5.250	848	476	610	238	470	381	979	340	245
150MAL-5.300	848	476	610	238	470	381	979	340	245
150MAL-5.400	912	520	650	262	510	468	1284	360	1080
150MAL-5.500	912	520	650	262	510	468	1434	360	1165
150MAL-5.600	912	520	650	262	510	468	1434	360	1165
200MAL-5.75	832	430	615	217	450	414	826	300	285
200MAL-5.100	863	453	635	228	470	410	809	320	285
200MAL-5.150	863	453	635	228	470	410	908	320	285
200MAL-5.200	896	479	655	241	490	411	995	340	285
200MAL-5.250	932	512	675	257	510	415	1001	360	285
200MAL-5.300	932	512	675	257	510	415	1001	360	285
200MAL-5.400	937	520	675	262	510	483	1284	360	1080
200MAL-5.500	937	520	675	262	510	483	1434	360	1165
200MAL-5.600	937	520	675	262	510	483	1434	360	1165
250MAL-5.100	969	525	700	269	500	622	904	370	400
250MAL-5.150	993	541	720	273	520	634	1000	390	400
250MAL-5.200	1007	549	730	277	530	646	1086	400	400
250MAL-5.250	1007	549	730	277	530	646	1089	400	400
250MAL-5.300	1007	549	730	277	530	646	1089	400	400
250MAL-5.400	1125	660	790	335	590	706	1336	460	1132
250MAL-5.500	1125	660	790	335	590	706	1505	460	1236
250MAL-5.600	1125	660	790	335	590	706	1505	460	1236
300MAL-5.150	1100	588	798	302	575	671	1050	420	450
300MAL-5.200	1100	588	798	302	575	671	1131	420	450
300MAL-5.250	1135	618	818	317	595	668	1131	440	450
300MAL-5.300	1135	618	818	317	595	668	1131	440	450
300MAL-5.400	1172	660	838	335	615	726	1336	460	1132
300MAL-5.500	1172	660	838	335	615	726	1505	460	1236
300MAL-5.600	1172	660	838	335	615	726	1505	460	1236

» Q.D.C. (Quick Discharge Connection) is applied to all models.

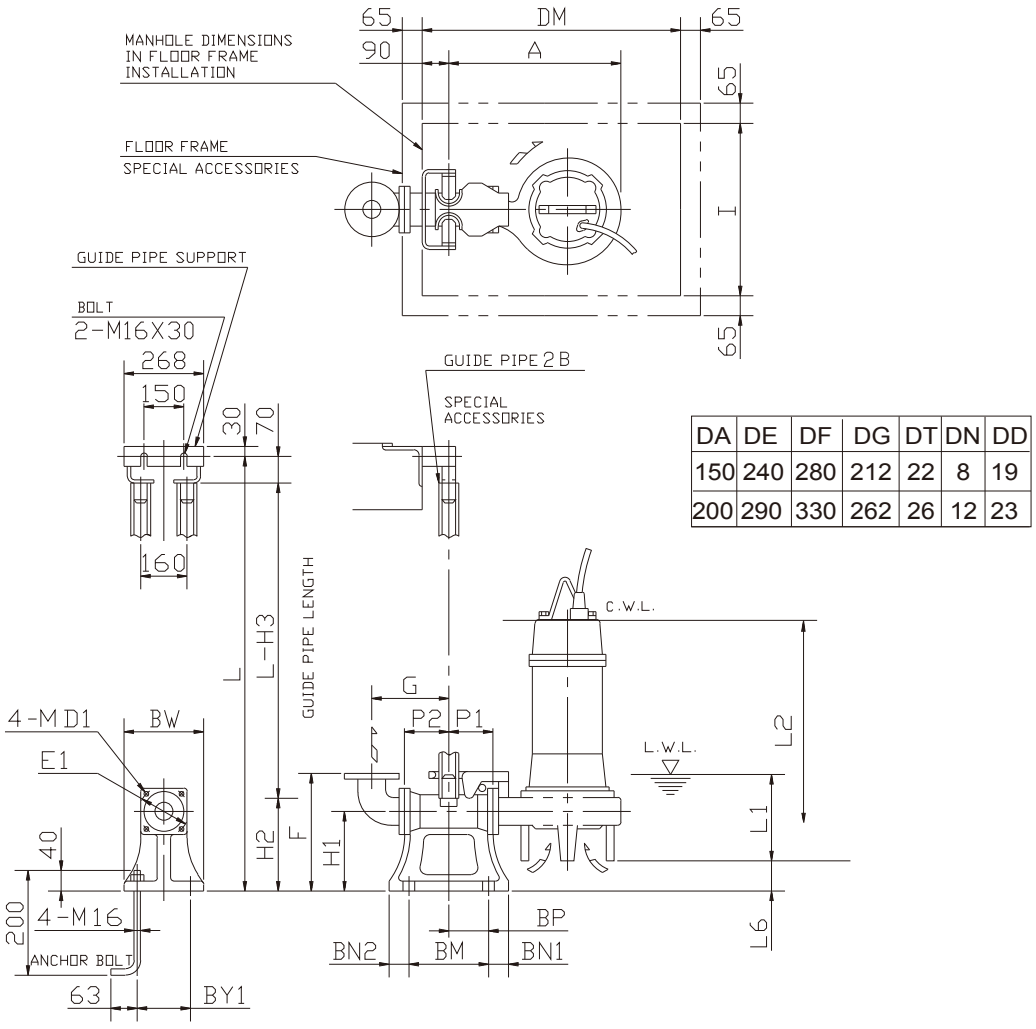
Dimension with QDC



UNIT:MM

Model	QDC Type	A	P1	P2	G1	G2	F	H1	H2	H3	L1	L2	L6	BN1	BN2	BM	BY1	BW	DM	I	D1	E1	KG
80MALC-5.75	LL80	635	105	120	185	195	350	240	255	325	205	653	43	100	40	220	180	230	800	700	15	155	44
80MALC-5.100	LL80	665	105	120	185	195	350	240	255	325	205	651	45	100	40	220	180	230	800	700	15	155	44
100MAL-5.50	LL100	589	105	105	185	210	365	240	265	335	185	606	115	100	40	220	180	230	800	700	19	175	46
100MALC-5.75	LL80	635	105	120	185	225	365	240	255	325	205	653	43	100	40	220	180	230	800	700	15	155	44
100MALC-5.100	LL80	665	105	120	185	225	365	240	255	325	205	651	45	100	40	220	180	230	800	700	15	155	44
100MALB-5.75	LL100	621	105	105	185	210	365	240	265	335	205	668	42	100	40	220	180	230	800	700	19	175	46
100MALB-5.100	LL100	648	105	105	185	210	365	240	265	335	205	660	42	100	40	220	180	230	800	700	19	175	46
100MAL-5.150	LL100	676	105	105	185	210	365	240	265	335	205	699	42	100	40	220	180	230	1000	700	19	175	46
100MAL-5.200	LL100	716	105	105	185	210	365	240	265	335	205	794	35	100	40	220	180	230	1000	700	19	175	46
100MAL-5.250	LL100	716	105	105	185	210	365	240	265	335	205	798	35	100	40	220	180	230	1000	700	19	175	46

Dimension with QDC

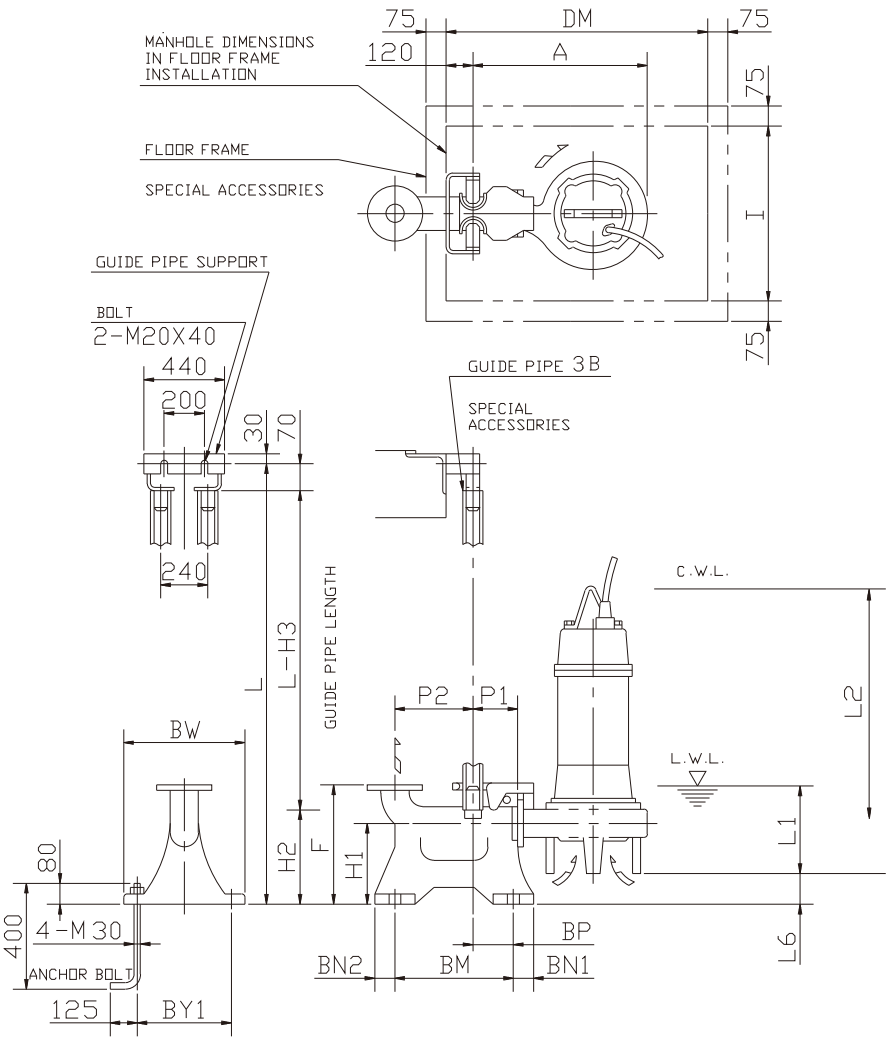


DA	DE	DF	DG	DT	DN	DD
150	240	280	212	22	8	19
200	290	330	262	26	12	23

UNIT:MM

MODEL	QDC Type	A	P1	P2	G	F	H1	H2	H3	L1	L2	L6	BN1	BN2	BM	BP	BY1	BW	DM	I	D1	E1	KG
150MAL-5.75	LL125	635	155	195	325	450	290	362	432	245	699	69	60	60	370	165	280	330	1000	700	16	210	65
150MAL-5.100	LL125	665	155	195	325	450	290	362	432	245	684	73	60	60	370	165	280	330	1000	700	16	210	65
150MAL-5.150	LL125	695	155	195	325	450	290	362	432	245	723	73	60	60	370	165	280	330	1000	700	16	210	65
150MAL-5.200	LL125	695	155	195	325	450	290	362	432	245	812	73	60	60	370	165	280	330	1000	700	16	210	65
150MAL-5.250	LL125	733	155	195	325	450	290	362	432	245	819	69	60	60	370	165	280	330	1000	700	16	210	65
150MAL-5.300	LL125	733	155	195	325	450	290	362	432	245	819	69	60	60	370	165	280	330	1000	700	16	210	65
150MAL-5.400	LI150	777	155	205	355	480	320	405	475	288	884	210	60	60	390	170	300	350	1100	800	16	250	80
150MAL-5.500	LI150	777	155	205	355	480	320	405	475	296	939	210	60	60	390	170	300	350	1100	800	16	250	80
150MAL-5.600	LI150	777	155	205	355	480	320	405	475	296	939	210	60	60	390	170	300	350	1100	800	16	250	80
200MAL-5.75	LL150	672	155	205	355	495	320	405	475	285	726	81	60	60	390	170	300	350	1100	800	16	250	80
200MAL-5.100	LL150	703	155	205	355	495	320	405	475	285	709	85	60	60	390	170	300	350	1100	800	16	250	80
200MAL-5.150	LL150	703	155	205	355	495	320	405	475	285	748	85	60	60	390	170	300	350	1100	800	16	250	80
200MAL-5.200	LL150	736	155	205	355	495	320	405	475	285	835	84	60	60	390	170	300	350	1100	800	16	250	80
200MAL-5.250	LL150	772	155	205	355	495	320	405	475	285	841	80	60	60	390	170	300	350	1100	800	16	250	80
200MAL-5.300	LL150	772	155	205	355	495	320	405	475	285	841	80	60	60	390	170	300	350	1100	800	16	250	80
200MAL-5.400	LL150	777	155	205	355	495	320	405	475	288	884	210	60	60	390	170	300	350	1100	800	16	250	80
200MAL-5.500	LL150	777	155	205	355	495	320	405	475	296	939	210	60	60	390	170	300	350	1100	800	16	250	80
200MAL-5.600	LL150	777	155	205	355	495	320	405	475	296	939	210	60	60	390	170	300	350	1100	800	16	250	80

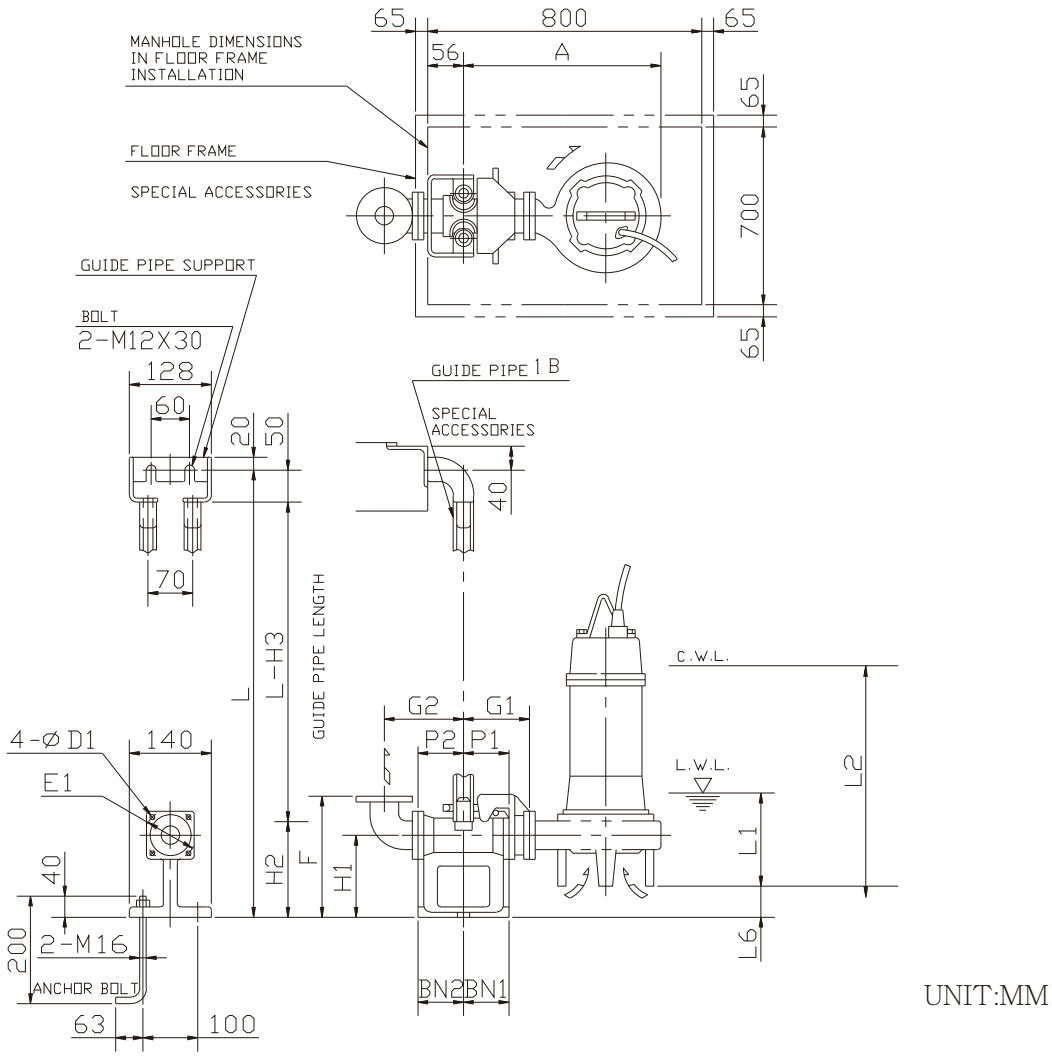
Dimension with QDC



UNIT:MM

MODEL	QDC Type	A	P1	P2	F	H1	H2	H3	L1	L2	L6	BN1	BN2	BM	BP	BY1	BW	DM	I	KG
250MAL-5.100	LL250	834	195	435	700	350	440	510	400	804	58	70	70	650	215	500	560	1200	900	150
250MAL-5.150	LL250	858	195	435	700	350	440	510	400	840	46	70	70	650	215	500	560	1200	900	150
250MAL-5.200	LL250	872	195	435	700	350	440	510	400	926	34	70	70	650	215	500	560	1200	900	150
250MAL-5.250	LL250	872	195	435	700	350	440	510	400	929	34	70	70	650	215	500	560	1200	900	150
250MAL-5.300	LL250	872	195	435	700	350	440	510	400	929	34	70	70	650	215	500	560	1200	900	150
250MAL-5.400	LL300	990	195	465	970	430	550	620	292	886	300	70	70	680	215	580	640	1200	900	200
250MAL-5.500	LL300	990	195	465	970	430	550	620	319	960	300	70	70	680	215	580	640	1200	900	200
250MAL-5.600	LL300	990	195	465	970	430	550	620	319	960	300	70	70	680	215	580	640	1200	900	200
300MAL-5.150	LL300	917	195	465	800	430	550	620	450	890	109	70	70	680	215	580	640	1200	900	200
300MAL-5.200	LL300	917	195	465	800	430	550	620	450	971	109	70	70	680	215	580	640	1200	900	200
300MAL-5.250	LL300	952	195	465	800	430	550	620	450	971	112	70	70	680	215	580	640	1200	900	200
300MAL-5.300	LL300	952	195	465	800	430	550	620	450	971	112	70	70	680	215	580	640	1200	900	200
300MAL-5.400	LL300	990	195	465	970	430	550	620	292	921	300	70	70	680	215	580	640	1200	900	200
300MAL-5.500	LL300	990	195	465	970	430	550	620	319	989	300	70	70	680	215	580	640	1200	900	200
300MAL-5.600	LL300	990	195	465	970	430	550	620	319	989	300	70	70	680	215	580	640	1200	900	200

Dimension with QDC



Model	QDC Type	A	P1	P2	G1	G2	F	H1	H2	H3	L1	L2	L6	BN1	BN2	D1	E1	KG
65MAL-5.20	LM65	464	75	95	120	160	250	145	190	240	140	476	50	75	95	12	140	14
80MAL-5.20	LM80	481	75	90	125	165	285	175	230	280	165	497	65	75	90	15	155	17
80MAL-5.30	LM80	499	75	90	125	165	285	175	230	280	165	554	65	75	90	15	155	17
80MAL-5.50	LM80	524	75	90	125	165	285	175	230	280	165	587	65	75	90	15	155	17

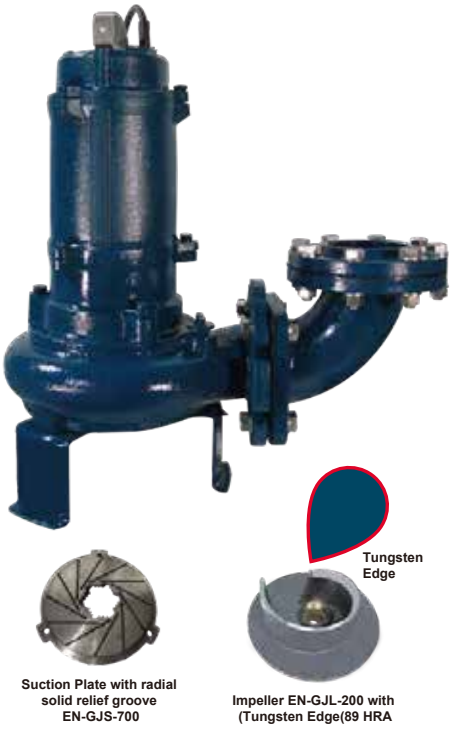
MAC Series • SUBMERSIBLE CUTTER PUMP

Feature

- Non clog operation with cutting action
- Robust construction
- EKK Eagle Burgmann double mechanical seal CA/CE & SIC/SIC
- Built-in motor protection
- Tungsten Edge hardness is 89HRA
- Volute 4 inch connection available in JIS 10K, ANSI 125/150 and DIN

PN10/16

- 3HP volute connection available for 3 inch in DIN PN10/16
- Adjustable clearance construction to maintain performance



Max flow: 150 m3/h

Max head: 25 m

Applications

- Sewage
- Wastewater
- Storm water drainage
- Commercial building

Definiton of Model

80 MAC 5.30

- Power*10: 3HP
- Frequency: 50Hz
- Pump model (Cutter type)
- Discharge flange:80mm

Specifications

Liquid Temperature		0~40°C (32~104°F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	4 Pole
	Type	Dry Type
	Insulation	Class F
	Protection	IP 68
Pump Part	Protector	Auto cut
	Bearing	Ball Bearing
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Semi open Channel Impeller

Data chart

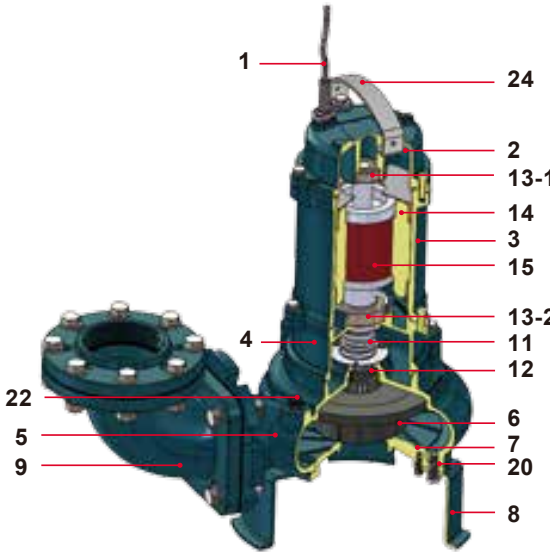
Type	Output		Discharge	F.L.A		Rated		MACximum		Free Passage	Weight		Q.D.C
	HP	KW	Inch	1Ø230V	3Ø 400V	Head(m)	CAP(LPM)	Head(m)	CAP(LPM)	mm	1Ø Kg	3Ø Kg	
80(100) MAC-5.30	3	2.2	3"(4")	-	5A	8	700	14	1400	56	--	75	QL-100
100MAC-5.50	5	3.7	4"	-	8.2A	11	800	16	1900	80	--	90	QL-100
100MAC-5.75	7.5	5.5	4"	-	12.1A	13	800	18	2300	68	--	140	QL-100
100MAC-5.100	10	7.5	4"	-	15.9A	16	850	23	2500	68	--	166	QL-100

*Quick Discharge Connectors (QDC) available

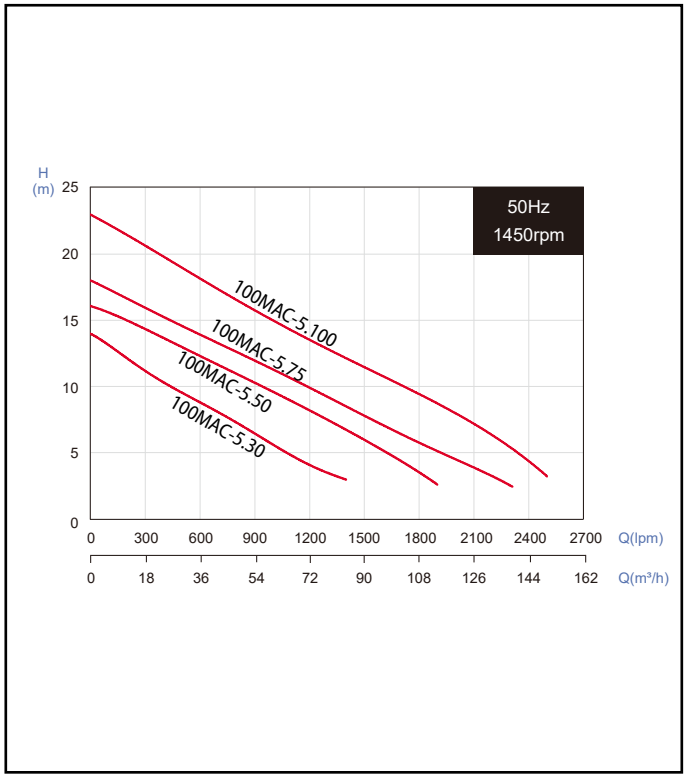
*Discharge elbow with screwed companion flange availabe

Materials

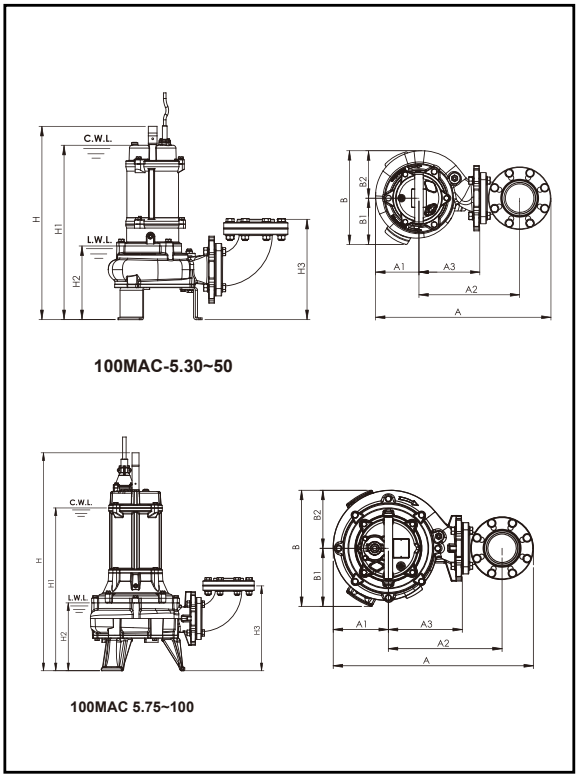
No	Part	Material
1	Cable	H07RN-F/STOW
2	Motor cover	EN-GJL-200
3	Motor housing	EN-GJL-200
4	Oil chamber	EN-GJL-200
5	Volute	EN-GJL-200
6	Impeller	EN-GJL-200
7	Suction Plate	EN-GJS-700
8	Pump feet	3~5HP: SC
		7.5~10HP: EN-GJL-200
9	Discharge Elbow	EN-GJL-200
11	Mechanical seal	Upper: CA/CE
		Lower:SIC/SIC
12	Lip seal	NBR
13-1	Upper bearing	NTN/TPI
13-2	Lower bearing	NTN/TPI
14	Stator	
15	Rotor with shaft	3HP: AISI 410
		5~10HP: AISI 420
20	Suction plate gasket	PE
22	Air release valve	PP
24	Handle	AISI 304



Performance Curves

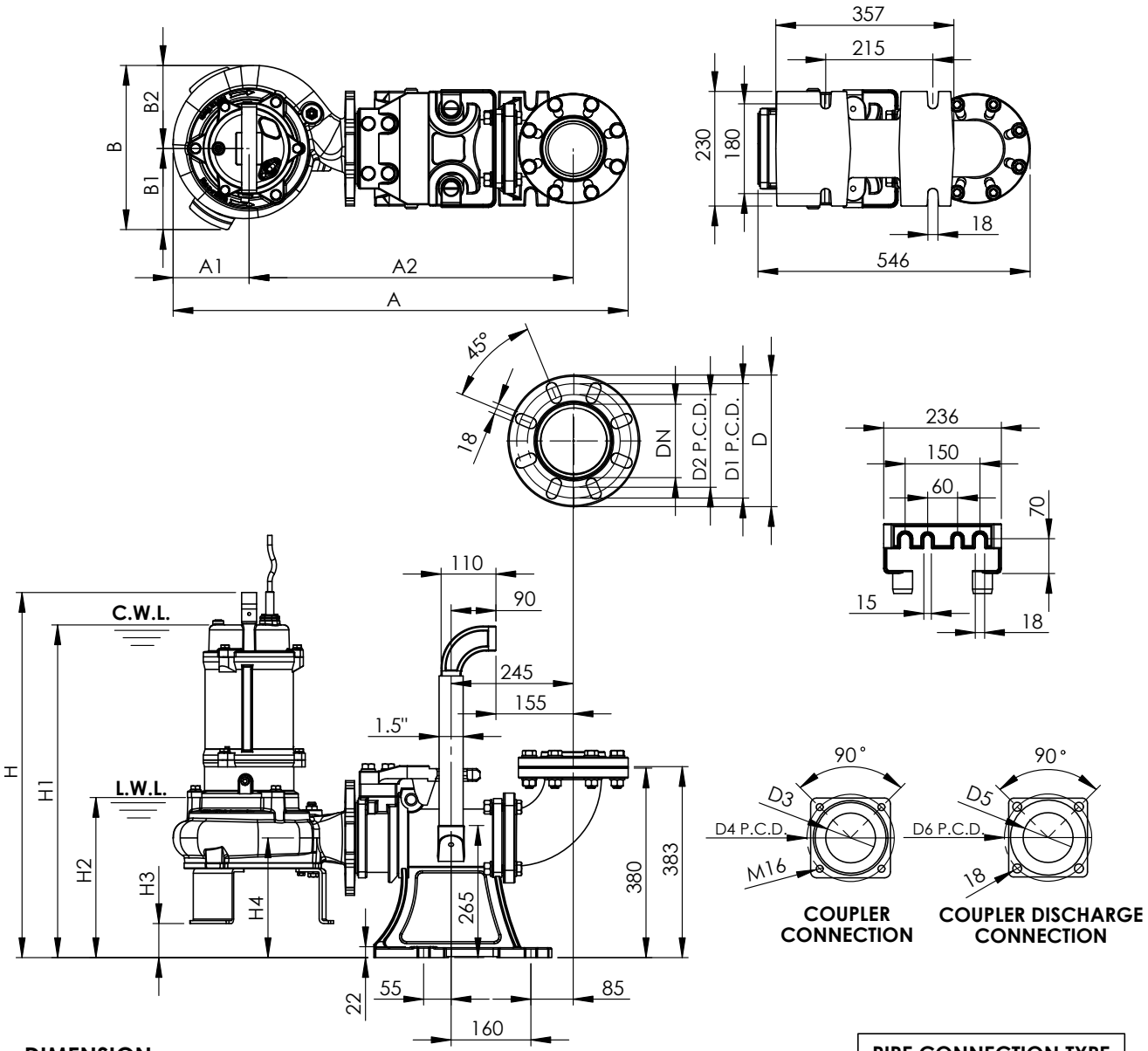


Dimensions



Type	A	A1	A2	A3	B	B1	B2	H	H1	H2	H3
80(100) MAC-5.30	615	152	352	212	330	163	167	664	597	253	345
100MAC-5.50	619	159	348	207	338	163	175	752	686	274	346
100MAC-5.75	705	195	400	260	410	205	205	935	700	292	365
100MAC-5.100	705	195	400	260	410	205	205	952	743	292	365

Dimensions with QDC (QL-100)

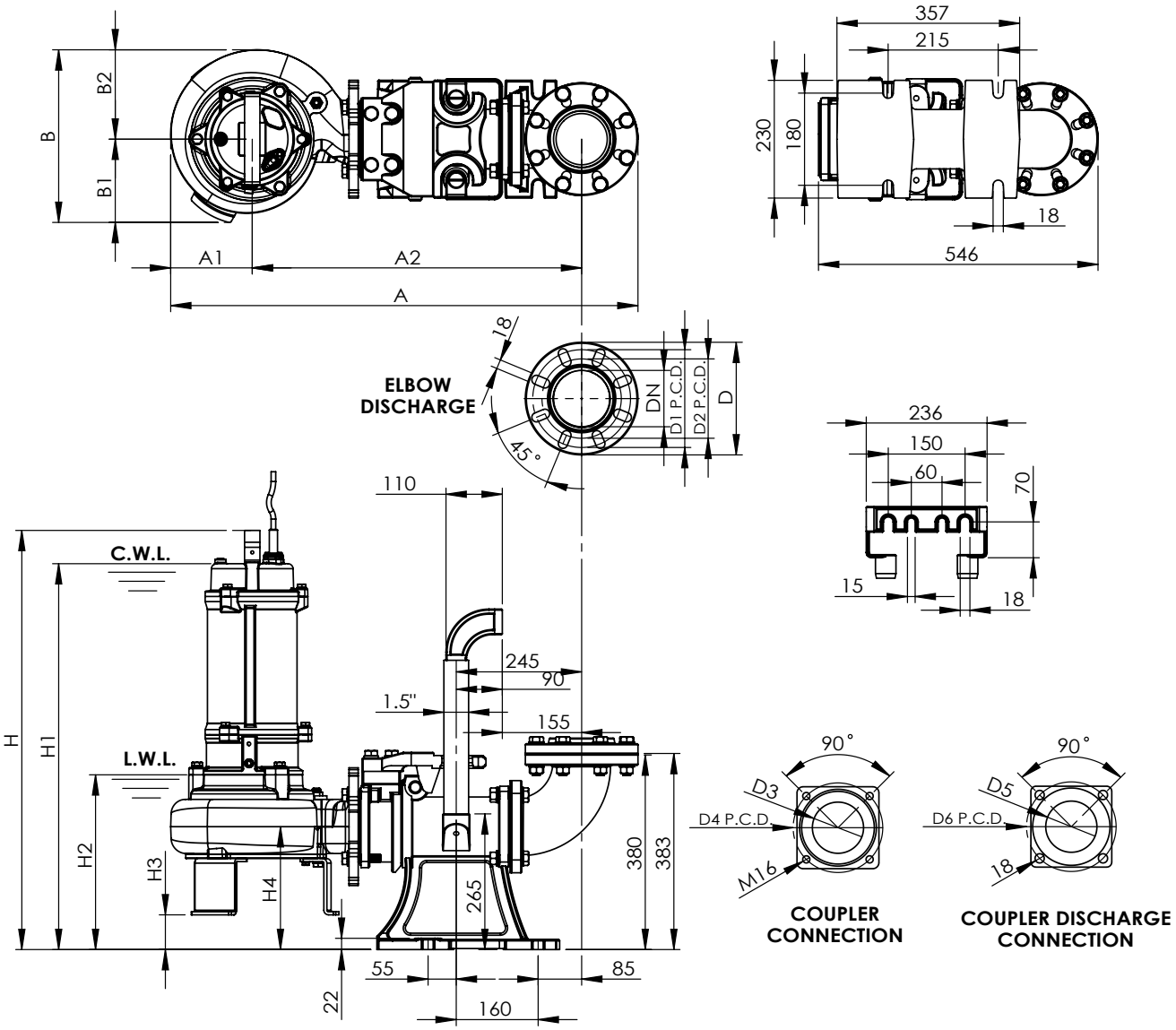


DIMENSION : mm
WEIGHT : kg

PIPE CONNECTION TYPE	
PT	NPT

MODEL	A	A1	A2	B	B1	B2	D	D1	D2	D3	D4	D5	D6	DN	H	H1	H2	H3	H4	WT	WT1
80MAC-5.30T	911	152	648	330	163	167	220	191	155	100	175	100	175	3"	733	665	321	68	240	75	45
100MAC-5.30T	911	152	648	330	163	167	220	191	155	100	175	100	175	4"	733	665	321	68	240	75	45

Dimensions with QDC (QL-100)

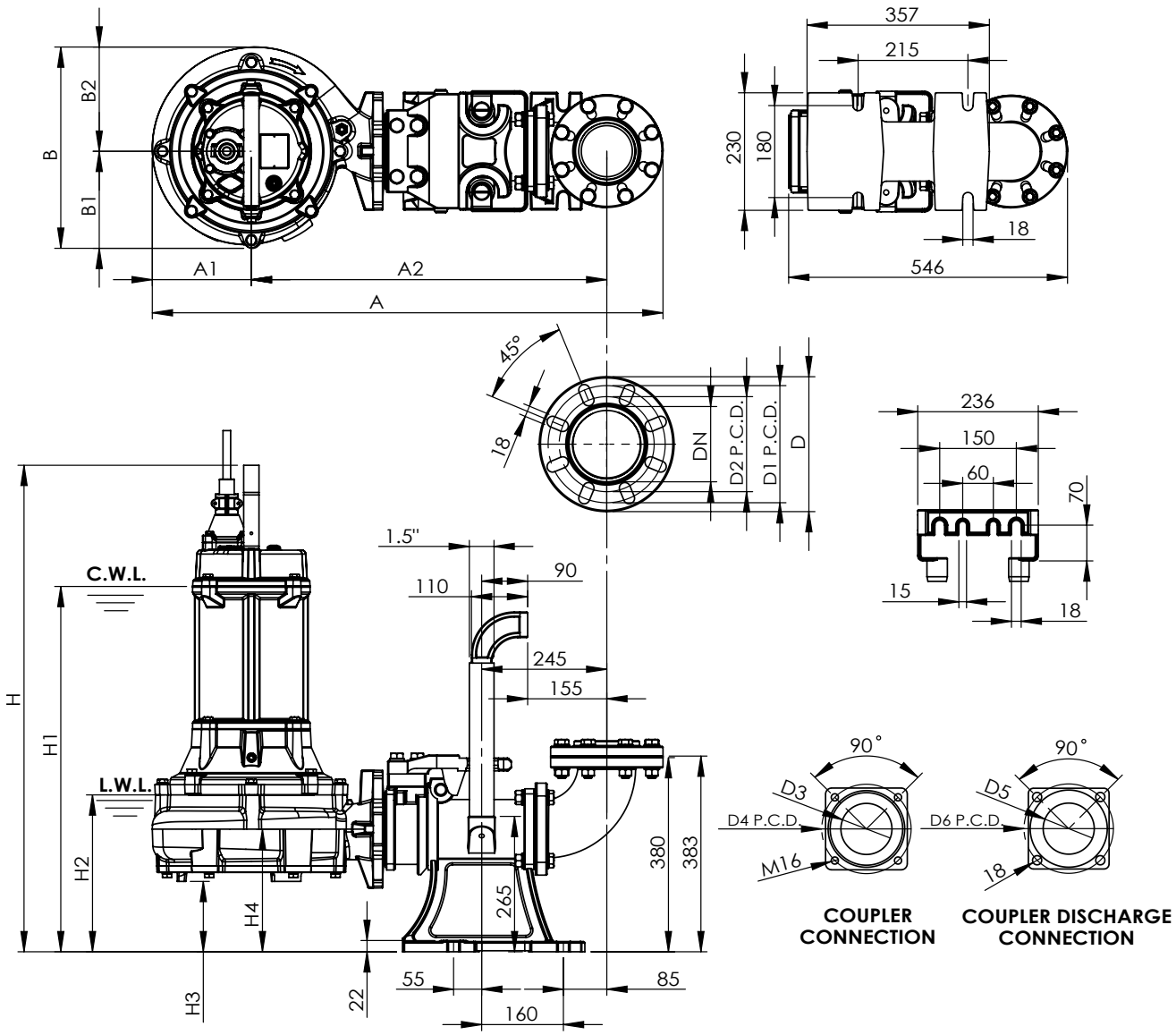


DIMENSION : mm
WEIGHT : kg

PIPE CONNECTION TYPE	
PT	NPT

MODEL	A	A1	A2	B	B1	B2	D	D1	D2	D3	D4	D5	D6	DN	H	H1	H2	H3	H4	WT	WT1
100MAC-5.50T	913	160	644	338	163	175	220	191	155	100	175	100	175	4"	820	754	342	68	240	90	45

Dimensions with QDC (QL-100)



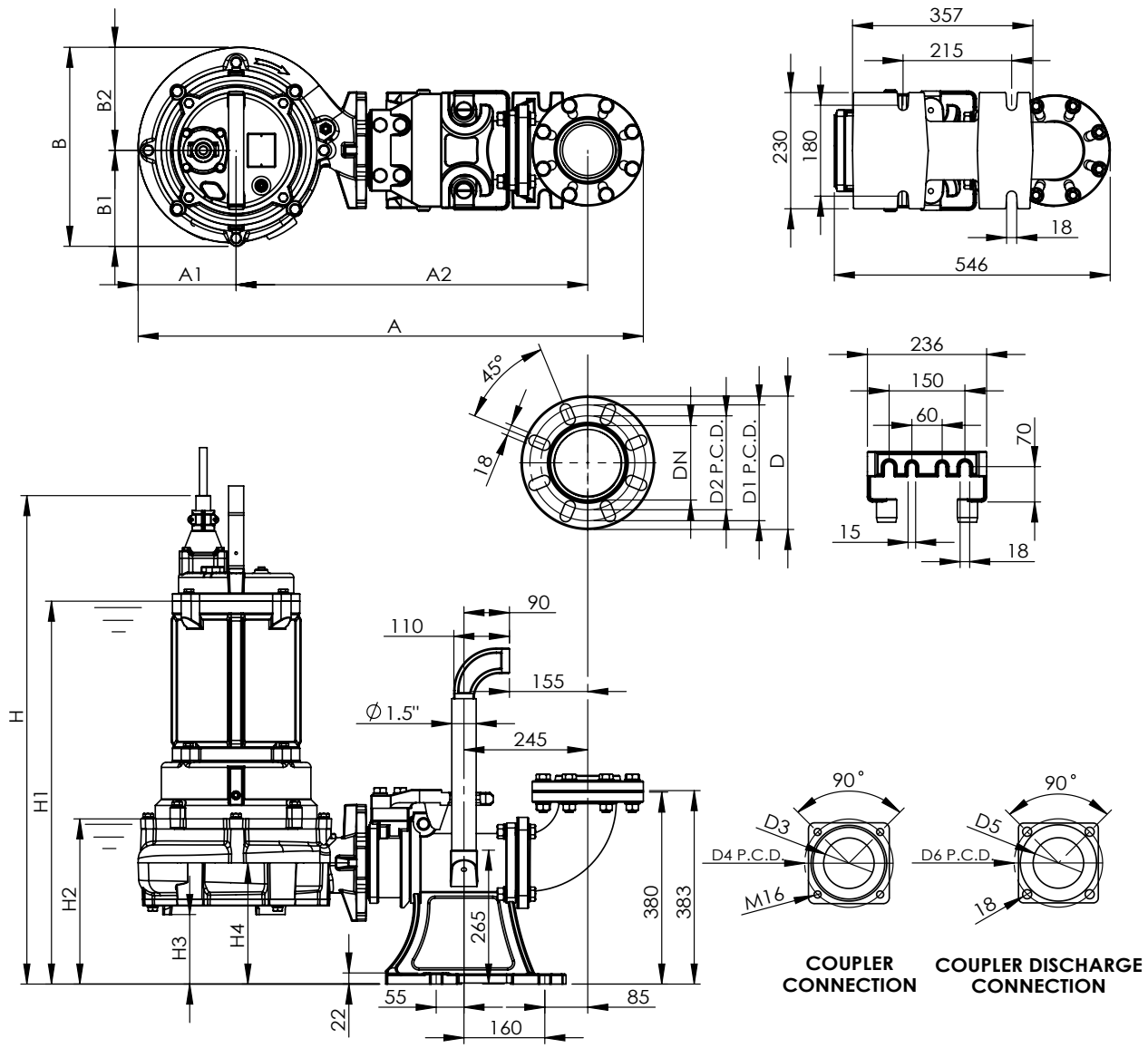
Remark: Remove pump feet for QDC installation

DIMENSION : mm
WEIGHT : kg

PIPE CONNECTION TYPE	
PT	NPT

MODEL	A	A1	A2	B	B1	B2	D	D1	D2	D3	D4	D5	D6	DN	H	H1	H2	H3	H4	WT	WT1
100MAC-5.75T	1000	195	697	394	190	205	220	191	155	100	175	100	175	4"	953	716	308	138	240	140	45

Dimensions with QDC (QL-100)



Remark: Remove pump feet for QDC installation

DIMENSION : mm
WEIGHT : kg

PIPE CONNECTION TYPE	
PT	NPT

MODEL	A	A1	A2	B	B1	B2	D	D1	D2	D3	D4	D5	D6	DN	H	H1	H2	H3	H4	WT	WT1
100MAC-5.100T	1000	195	697	394	205	220	220	191	155	100	175	100	175	4"	967	758	308	138	240	166	45

NJ Series •Submersible Jet Aerators

Features

- High oxygen transfer rate
- BOD easy to remove from wastewater treatment
- Mixing and stirring applications for uniform MLSS
- Provide coarse/gross bubbles



Max air volume: 120m3/h

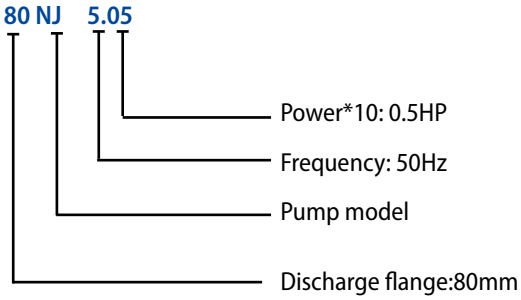
Depth: 6 m

OTR: 5 kg of Oxygen/h

Applications

- The wastewater treatment aeration and agitation

Definition of models



Specifications

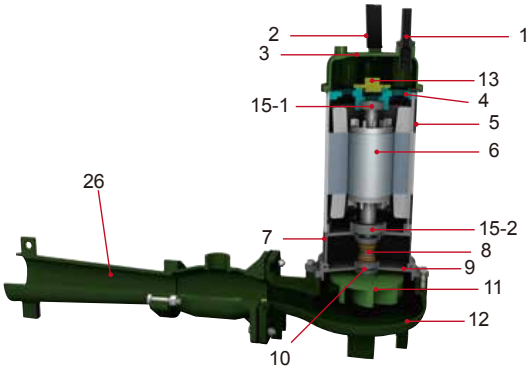
Liquid Temperature		0~40˚C (32~104˚F)
Submersible depth		10M
Motor Part	Frequency	50Hz
	Pole	2 Pole
	Type	Dry Motor
	Insulation	0.5~3HP:Class B; 5~7.5HP:Class F
	Protection	IP 68
Pump Part	Protector	Auto-cut
	Bearing	Ball Type
	Mechanical seal	Dual. Mechanical Seal
	Impeller	Vortex Impeller

Data chart

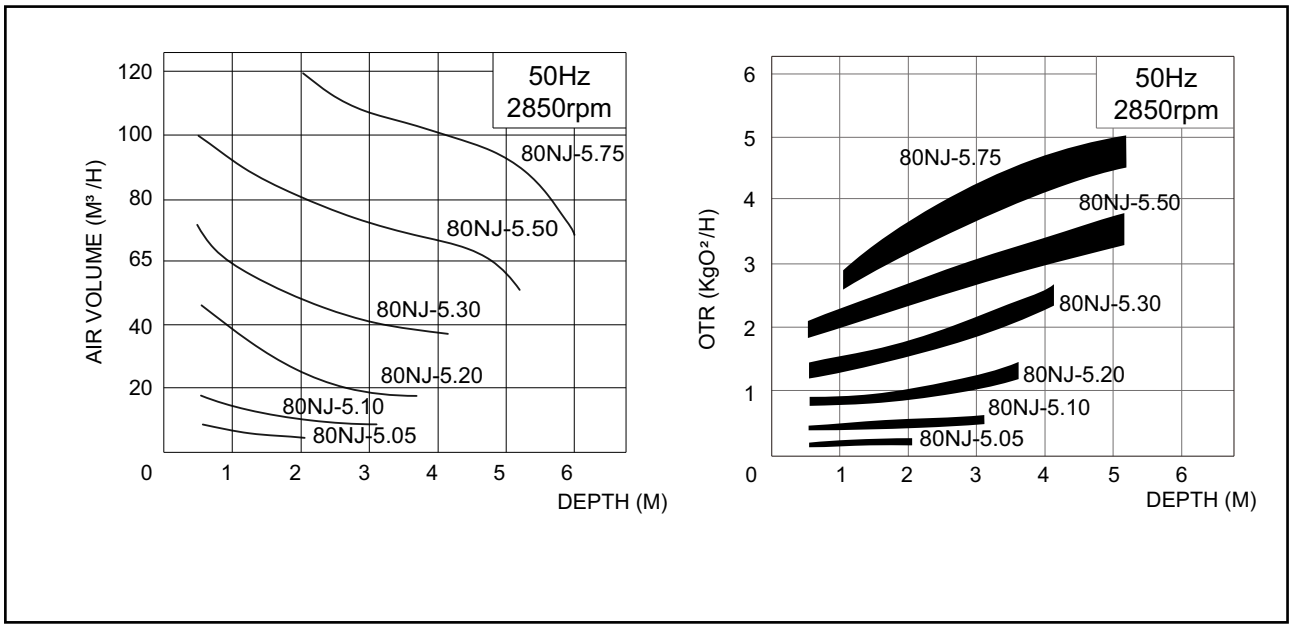
Type	Output		Discharge	F.L.A		Rated			Aeration Tank			Weight	
	HP	KW	Inch	1Ø230V	3Ø 400V	AIR(m3/h)	OTR(Kg-O2/H)	HR(m)	L(m)	W(m)	H(m)	1ØKg	3ØKg
80NJ-5.05	0.5	0.37	3"	4A	1.2A	5	0.12-0.23	1.5	2	1.8	2	21.7	21.4
80NJ-5.10	1	0.75	3"	5A	2.1A	10	0.3-0.5	2	3	2.5	3	26.5	26.2
80NJ-5.20	2	1.5	3"	11.8A	3.6A	22	0.9-1.1	2.5	4	3.5	3.5	37	36.3
80NJ-5.30	3	2.2	3"	15A	4.5A	40	1.9-2.2	3	5	4.5	4	41.1	37.4
80NJ-5.50	5	3.7	3"	--	8.2A	70	2.8-3.3	3.5	6	5	5	--	51.2
80NJ-5.75	7.5	5.5	3"	--	11.5A	100	4.2-4.8	4	7	6	6	--	57.2

Materials and Parts

No	Part	Material
1	Cable	H07RN-F /SJTOW/STOW
2	Handle	Nylon 6/ASTM A36
3	Motor Cover	Nylon 66/EN-GJL-200
4	Bracket	EN-GJL-200
5	Motor Housing + Stator	AISI 304
6	Shaft with Rotor	AISI 410
7	Oil Chamber	EN-GJL-200
8	Double Mech.Seal	Upper : CA / CE
		Lower : SIC / SIC
9	Seal Housing	EN-GJL-200
10	Oil Seal	NBR
11	Impeller	EN-GJL-200
12	Pump Casing	EN-GJL-200
13	Protector	KLIXON
26	Jet Aerator	EN-GJL-200
15-1	Upper Bearing	NTN/TPI
15-2	Lower Bearing	NTN/TPI



Performance Curves

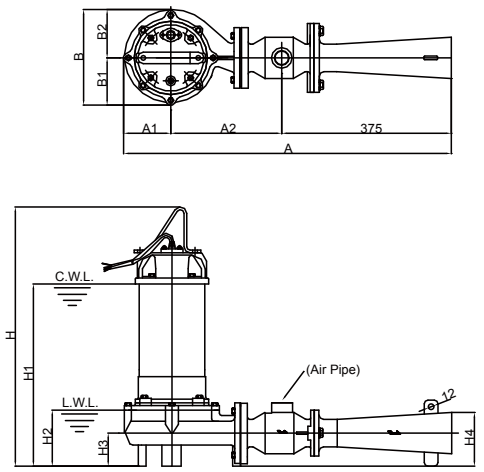


Data chart

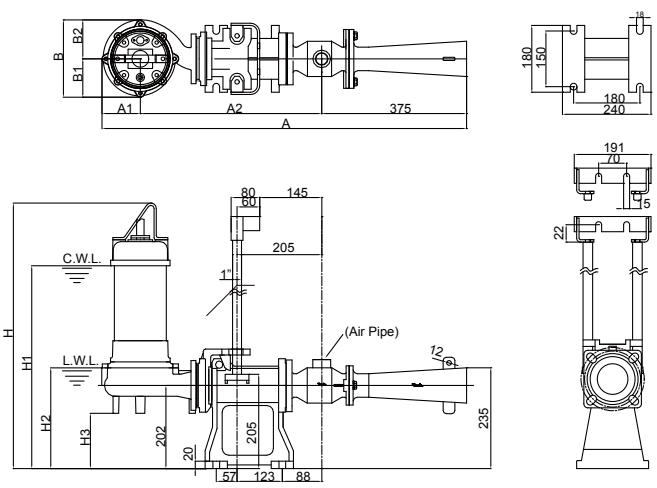
Type	Output		Discharge	F.L.A		Rated			Aeration Tank			Weight	
	HP	KW	Inch	1Ø230V	3Ø 400V	AIR(m3/h)	OTR(Kg-O2/H)	HR(m)	L(m)	W(m)	H(m)	1ØKg	3ØKg
80NJ-5.05	0.5	0.37	3″	4A	1.2A	5	0.12-0.23	1.5	2	1.8	2	21.7	21.4
80NJ-5.10	1	0.75	3″	5A	2.1A	10	0.3-0.5	2	3	2.5	3	26.5	26.2
80NJ-5.20	2	1.5	3″	11.8A	3.6A	22	0.9-1.1	2.5	4	3.5	3.5	37	36.3
80NJ-5.30	3	2.2	3″	15A	4.5A	40	1.9-2.2	3	5	4.5	4	41.1	37.4
80NJ-5.50	5	3.7	3″	--	8.2A	70	2.8-3.3	3.5	6	5	5	--	51.2
80NJ-5.75	7.5	5.5	3″	--	11.5A	100	4.2-4.8	4	7	6	6	--	57.2

Note: » Quick discharge connection(QM-80) Duck Foot is optional

Dimensions



80NJ-5.20~75



80NJ-5.20~75 + QM-80

Type	A	A1	A2	B	B1	B2	H	H1	H2	H3
80NJ-5.05(QM)	656(876)	82	199(419)	163	76	87	419(566)	304(451)	124(271)	70(147)
80NJ-5.10(QM)	656(876)	82	199(419)	163	76	87	494(625)	351(498)	124(271)	70(147)
80NJ-5.20(QM)	725(945)	103	247(467)	210	105	105	532(715)	400(545)	150(265)	71(134)
80NJ-5.30S(QM)	725(945)	103	247(467)	210	105	105	572(735)	440(585)	150(265)	71(134)
80NJ-5.30T(QM)	725(945)	103	247(467)	210	105	105	552(735)	420(565)	150(265)	71(134)
80NJ-5.50(QM)	758(978)	110	273(493)	218	98	120	633(775)	468(597)	160(282)	82(110)
80NJ-5.75(QM)	758(978)	110	273(493)	218	98	120	673(815)	508(637)	160(282)	82(110)

» (QM) identifies NJ pump with QM-80 Q.D.C.

» Q.D.C. (Quick Discharge Connection) is applied to all models.





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