



Pump • Fire Fighting Units • Booster Set

# ECO SNM CLOSED COUPLED CENTRIFUGAL PUMPS



ECO SNM Rev.05.03.2024



## Handled Liquids

Clean or slightly contaminated low viscosity liquids without solid & fibrous particles.

## Technical Data

Discharge Flange \_\_\_\_\_ DN 32.....DN 200 mm

Capacity \_\_\_\_\_ up to 900 m<sup>3</sup>/h(\*)

Head \_\_\_\_\_ up to 100 m(\*)

Speed \_\_\_\_\_ up to 3600 rpm(\*)

Design Temperature \_\_\_\_\_ -10 °C' to +140 °C(\*\*)

Casing Pressure (Pmax) \_\_\_\_\_ 10 bar (16 bar)(\*\*)

(Pmax: Suction Pressure + Shut off Head)

(\*) Contact company for higher capacity and head values.

(\*\*) The Material of pump differs according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

## Design Features

•Horizontal / Vertical closed-coupled, volute casing, single stage, end suction centrifugal pump with closed impeller.

•Volute casing dimensions comply with EN 733.

•Complies EU547/2012 regulations.

•Suction and discharge flanges conform to EN 1092-2 / PN 16. In case of request, ANSI/ASME flanges can be supplied.

## Pump Designation

Pump Type \_\_\_\_\_

Vertical \_\_\_\_\_

Discharge Nozzle (DN-mm) \_\_\_\_\_

Nominal Impeller Diameter (mm) \_\_\_\_\_

Special Application \_\_\_\_\_

# ECO SNM-V 100 - 250 - XXX

•Pumps are closed coupled with electric motors of IEC frame sizes with high efficiency class. ( IE3-IE4)

•All impellers are balanced dynamically or statically according to ISO 1940 grade 6.3.

•Axial thrust is balanced by impeller balancing holes system.

•Direction of rotation is clockwise viewed from drive end.

•In case of request, wear ring can be supplied.

•The pump and motor have separate shafts connected by a rigid coupling or through slide fit shaft. Axial and radial forces are absorbed by electric motor bearings.

•Closed coupled pumps are lighter and smaller comparing to the norm centrifugal pumps of same hydraulic specifications.

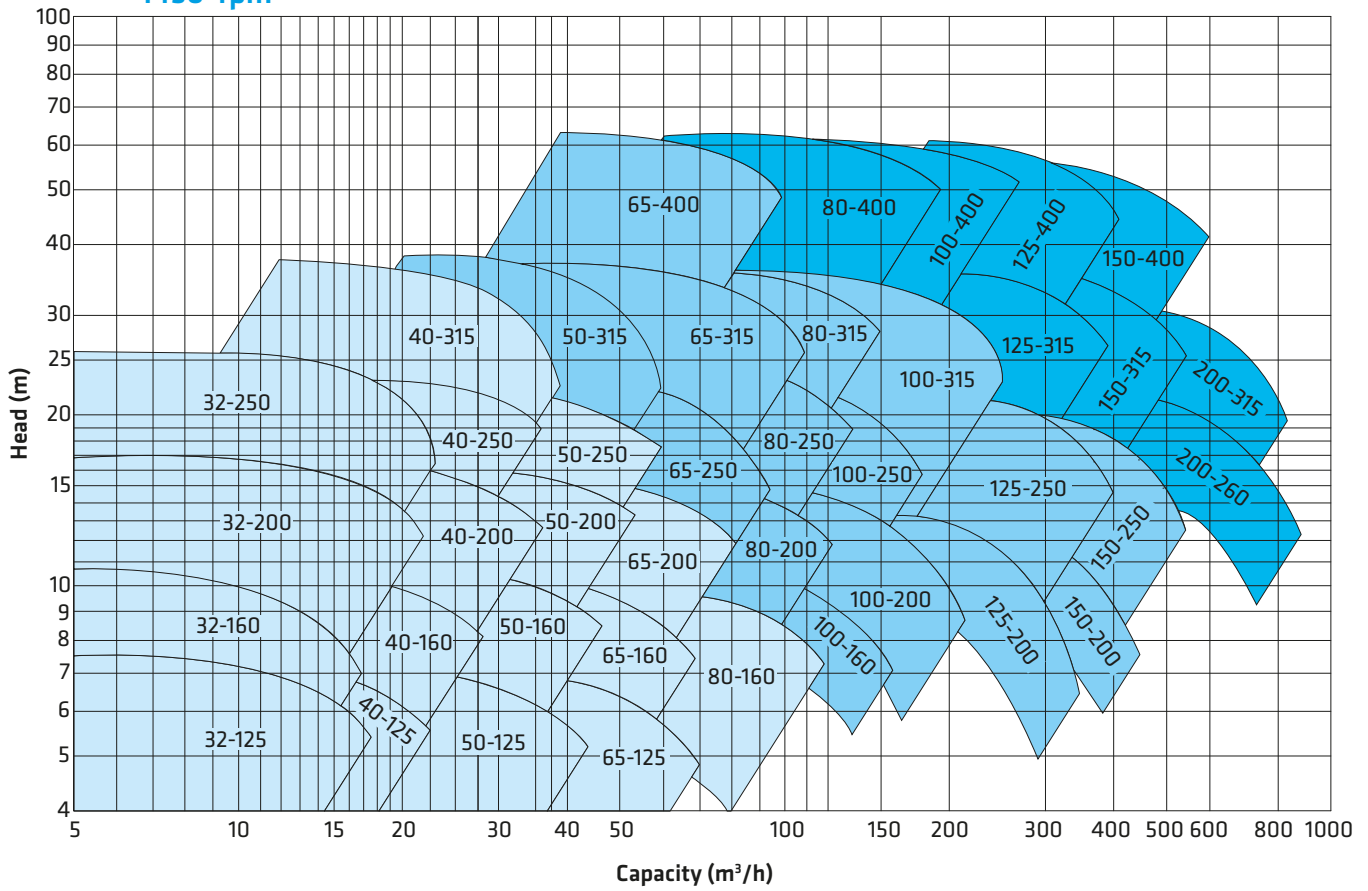
•When the elbow is mounted on the suction of the pump, the name is changed to ECO SNM-V. In this case, the pump is always installed vertically.

•The electrical motor powers of ECO SNM-V pumps are limited because of its installation type.

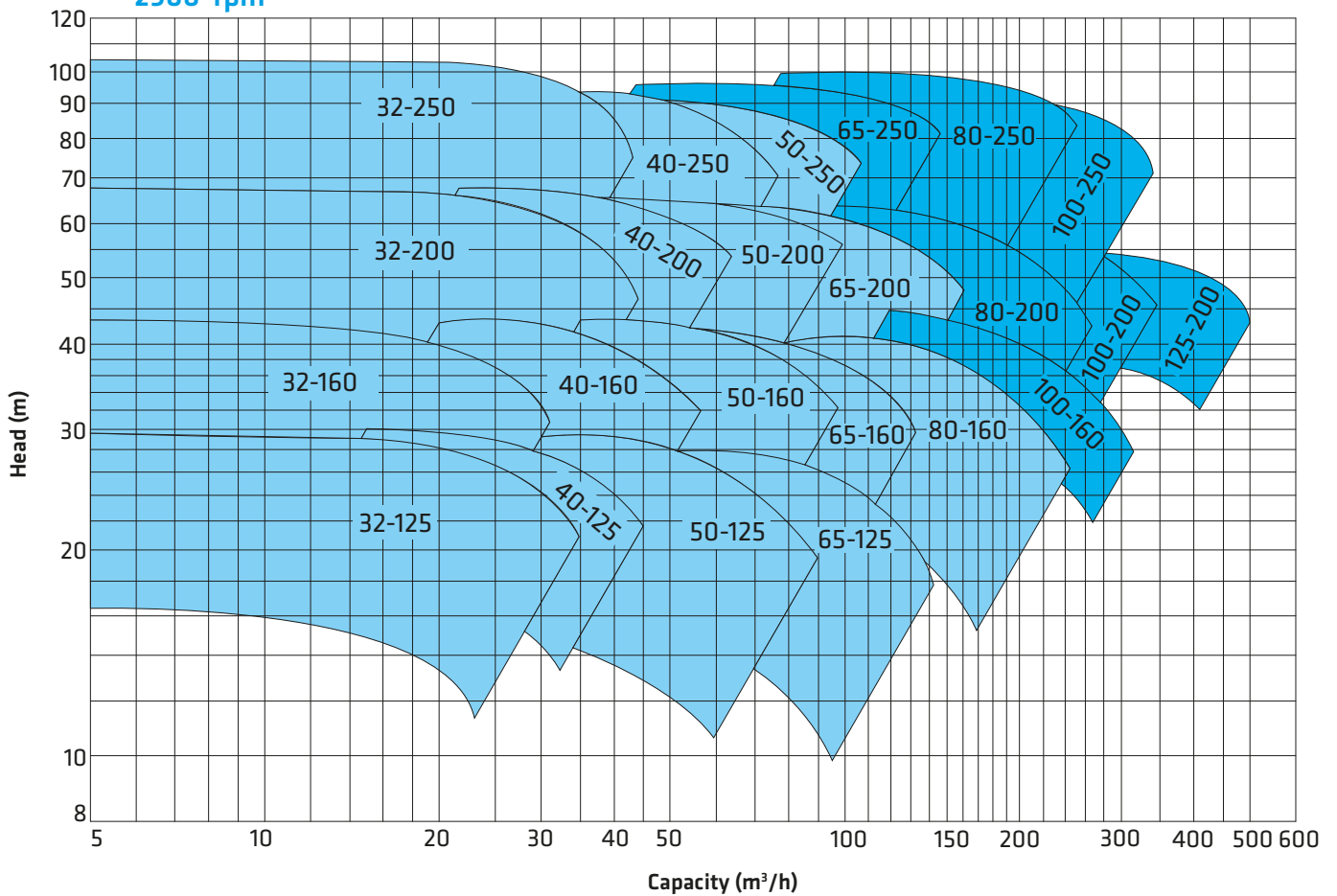
## Shaft Sealing

•Different mechanical seals are available according to customer request or liquid type.

1450 rpm



2900 rpm





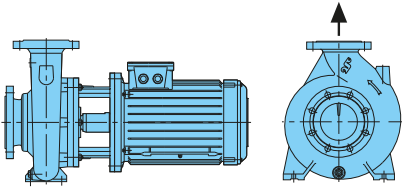




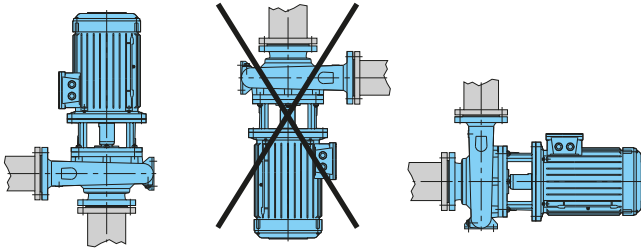


Installation Arrangements

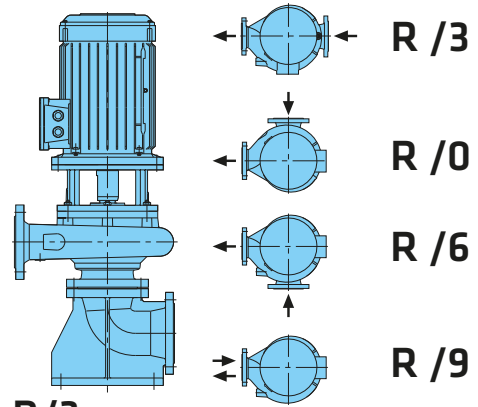
ECO SNM / ECO SNM-V pumps can be installed in different arrangements



**Horizontal installation on ground**  
Horizontal position on a base plate



**Installation on perpendicular pipes**  
•Between two perpendicular pipes in horizontal or vertical position. The axis of motor below the horizontal line is not admissible.



**R/3**  
Suction Flange Position  
Direction of Rotation (R)

Direction of rotation viewed from driver end: R : Right  
**Vertical installation on ground**

- Vertical position by means of a special suction elbow with foot.
- Standard manufacturing is as in the drawings above (R/3). Suction elbow position can be adjusted for different positions.

ECO SNM-V Type Pumps

Pump Type	MOTOR		
	kW	IEC	rpm
32-125	0.37	71M	1450
32-125	0.55	80M	1450
32-125	1.5	90S	2900
32-125	2.2	90L	2900
32-125	3	100L	2900
32-125	4	112M	2900
32-160	0.37	71M	1450
32-160	0.55	80M	1450
32-160	0.75	80M	1450
32-160	2.2	90L	2900
32-160	3	100L	2900
32-160	4	112M	2900
32-160	5.5	132S	2900
32-200	0.75	80M	1450
32-200	1.1	90S	1450
32-200	1.5	90L	1450
32-250	1.1	90S	1450
32-250	1.5	90L	1450
32-250	2.2	100L	1450
32-250	3	100H	1450
40-125	0.37	71M	1450
40-125	0.55	80M	1450
40-125	2.2	90L	2900
40-125	3	100L	2900
40-125	4	112M	2900
40-125	5.5	132S	2900
40-160	0.55	80M	1450
40-160	0.75	80M	1450
40-160	1.1	90S	1450
40-160	4	112M	2900
40-160	5.5	132S	2900
40-160	7.5	132S	2900
40-200	1.1	80M	1450
40-200	1.5	90S	1450
40-200	2.2	100L	1450
40-250	2.2	100L	1450
40-250	3	100H	1450
40-250	4	112M	1450

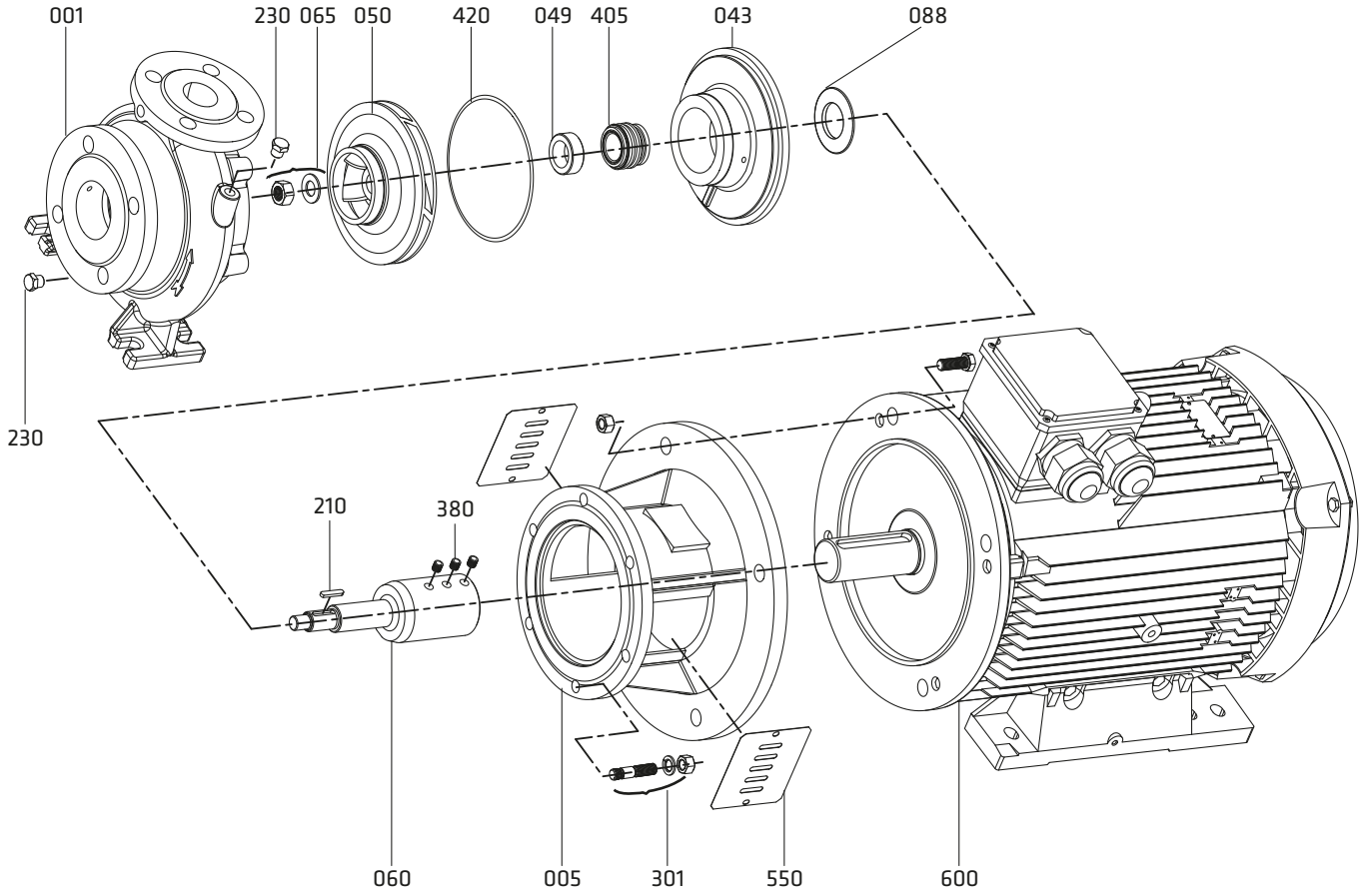
Pump Type	MOTOR		
	kW	IEC	rpm
50-125	0.55	80M	1450
50-125	0.75	80M	1450
50-125	1.1	80M	1450
50-125	3	100L	2900
50-125	4	112M	2900
50-125	5.5	132S	2900
50-125	7.5	132S	2900
50-160	0.75	80M	1450
50-160	1.1	90S	1450
50-160	1.5	90L	1450
50-160	2.2	100L	1450
50-160	5.5	132S	2900
50-160	7.5	132S	2900
50-160	11	160M	2900
50-200	1.1	90S	1450
50-200	1.5	90L	1450
50-200	2.2	100L	1450
50-200	3	100H	1450
50-250	2.2	100L	1450
50-250	3	100H	1450
50-250	4	112M	1450
50-250	5.5	132S	1450
65-125	0.55	80M	1450
65-125	0.75	80M	1450
65-125	1.1	90S	1450
65-125	1.5	90L	1450
65-125	4	112M	2900
65-125	5.5	132S	2900
65-125	7.5	132S	2900
65-125	11	160M	2900
65-160	1.1	90S	1450
65-160	1.5	90L	1450
65-160	2.2	100L	1450
65-160	7.5	132S	2900
65-160	11	160M	2900
65-160	15	160M	2900

Pump Type	MOTOR		
	kW	IEC	rpm
65-200	1.5	90S	1450
65-200	2.2	100L	1450
65-200	3	100H	1450
65-200	4	112M	1450
65-200	15	160M	2900
65-200	18.5	160L	2900
65-200	22	180M	2900
65-200	30	200L	2900
65-250	3	100H	1450
65-250	4	112M	1450
65-250	5.5	132S	1450
65-250	7.5	132M	1450
65-315	5.5	132S	1450
65-315	7.5	132M	1450
65-315	11	160M	1450
65-315	15	160H	1450
80-160	1.5	90L	1450
80-160	2.2	100L	1450
80-160	3	100H	1450
80-160	11	160M	2900
80-160	15	160M	2900
80-160	18.5	160H	2900
80-160	22	180M	2900
80-160	30	200L	2900
80-200	3	100H	1450
80-200	4	112M	1450
80-200	5.5	132S	1450
80-250	4	112M	1450
80-250	5.5	132S	1450
80-250	7.5	132M	1450
80-250	11	160M	1450
80-315	11	160M	1450
80-315	15	160H	1450
80-315	18.5	180M	1450
100-160	3	100H	1450
100-160	4	112M	1450
100-160	5.5	132S	1450

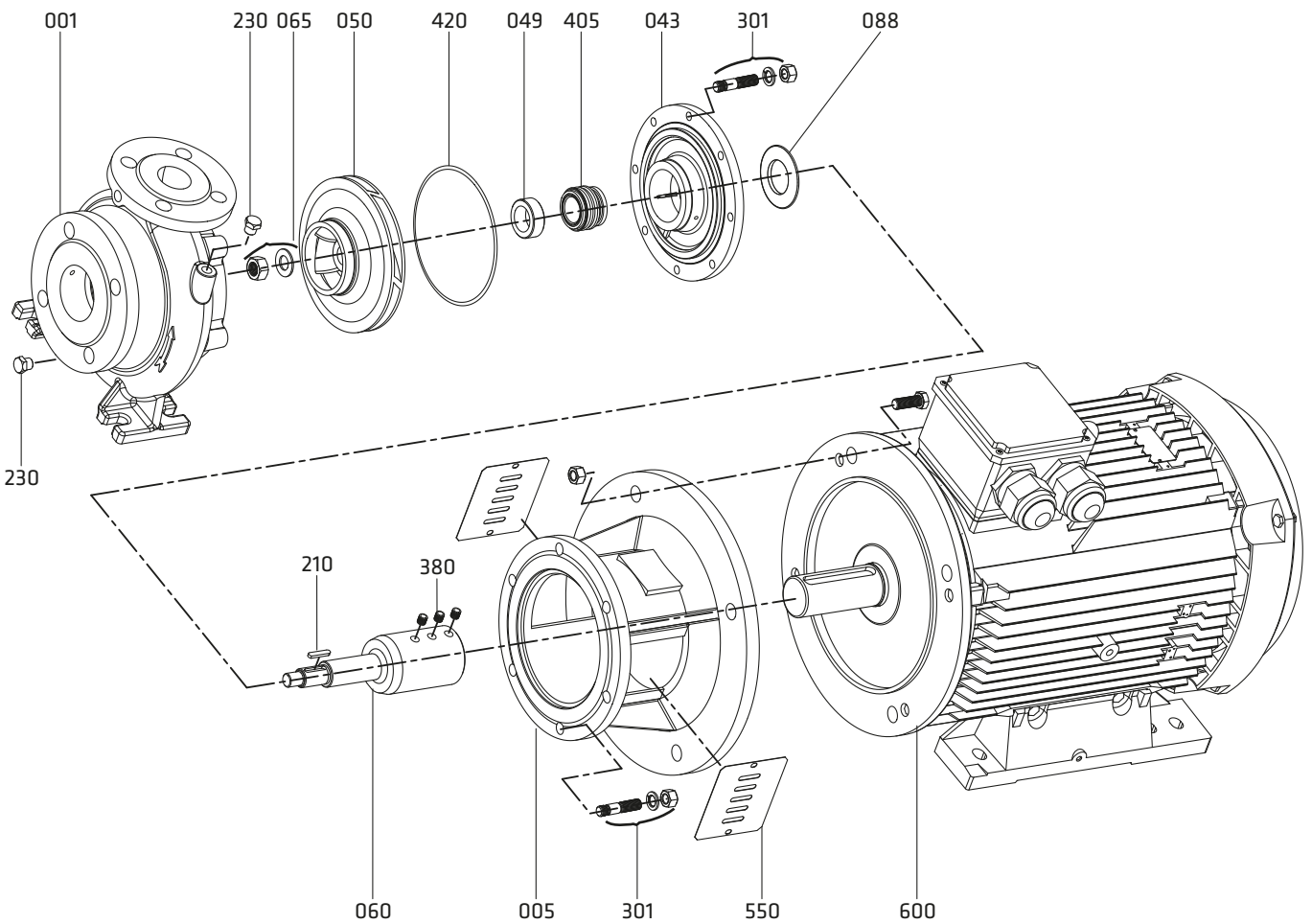
Pump Type	MOTOR		
	kW	IEC	rpm
100-200	4	112M	1450
100-200	5.5	132S	1450
100-200	7.5	132M	1450
100-250	5.5	132S	1450
100-250	7.5	132M	1450
100-250	11	160M	1450
100-250	15	160H	1450
100-315	15	160H	1450
100-315	18.5	180M	1450
100-315	22	180L	1450
100-315	30	200L	1450
125-200	5.5	132S	1450
125-200	7.5	132M	1450
125-200	11	160M	1450
125-250	15	160H	1450
125-250	18.5	180M	1450
125-250	22	180L	1450

Assembly Drawings

Form: F1 (Slide - Fit Shaft Application)



Form: F2 (Slide - Fit Shaft Application)

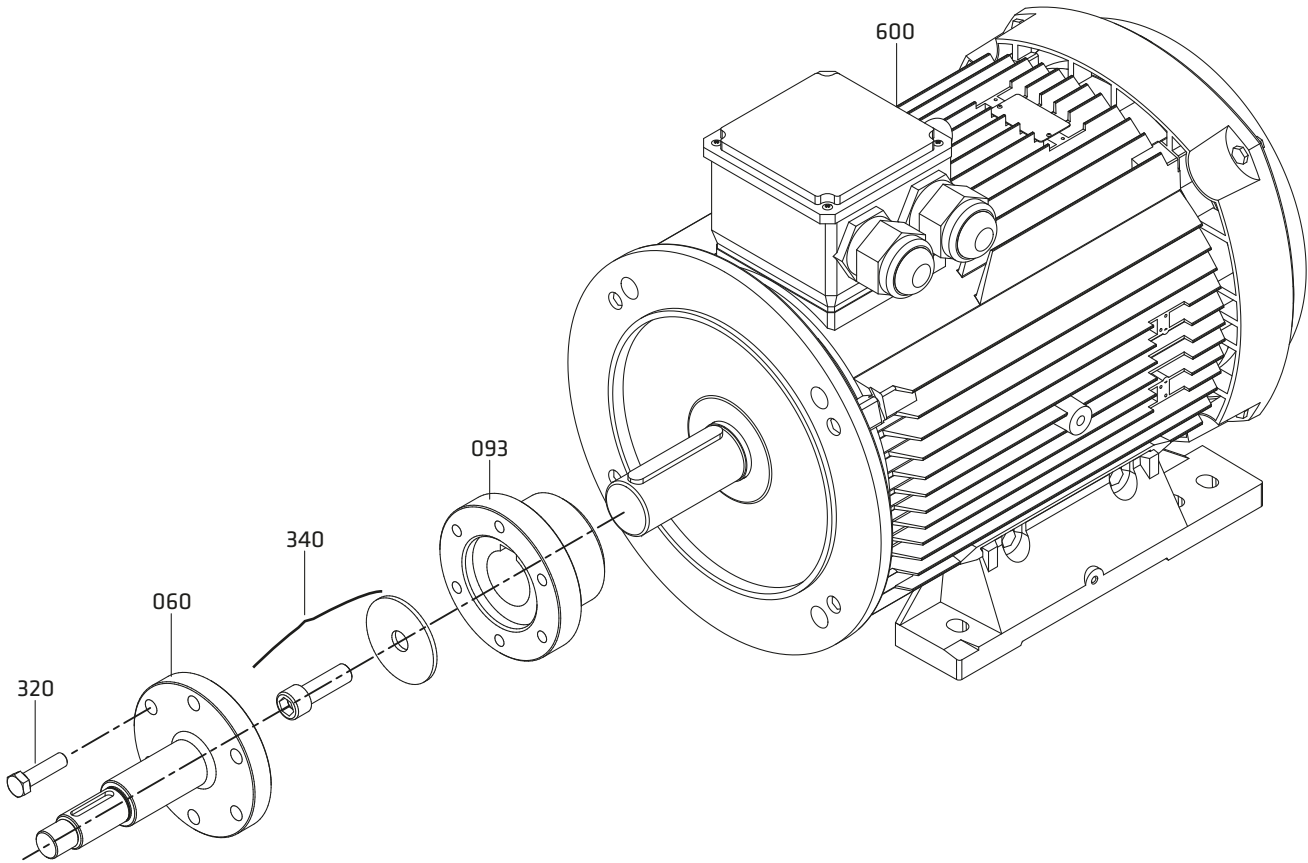




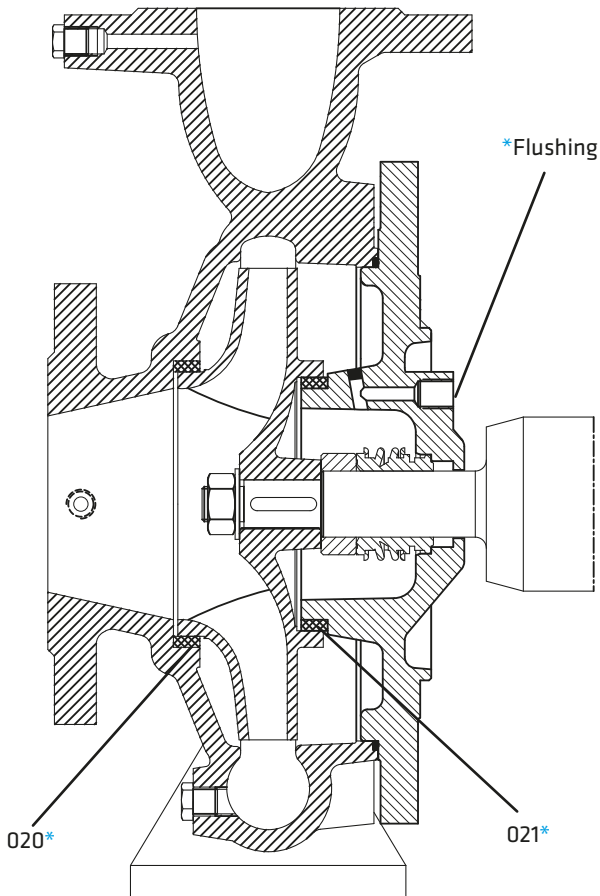
## Rigid Coupling Application

**ECO SNM**

For motor shaft diameters of Ø60 mm or bigger.



## Optional Applications



## Part List

001	Volute Casing
005	Motor Pedestal
020*	Wear Ring (Casing)
021*	Wear Ring (Seal Cover)
043	Mechanical Seal Cover
049	Mechanical Seal Spacer Sleeve
050	Impeller
060	Shaft
065	Impeller Nut and Washer
088	Thrower
093	Rigid Coupling
210	Impeller Key
230	Screw
301	Stud, Washer and Nut
320	Screw
340	Allen Screw and Washer
380	Set Screw
405	Mechanical Seal
420	O-ring
550	Guard
600	Electric Motor

(\*) Optional

Material Option

Part List	10	30	35	20	60	6L	70	7L	8M	7D	7S	8N	80	4C	4A	40	80	8T	60	7L	7E	7D	
	0.6025	0.7040	0.7043	1.0619	1.4308	1.4309	1.4408	1.4409	1.4500	1.4517	1.4469	1.4317	1.4008	2.1050.01	2.0975.01	2.1096.01	1.4021	1.4021+QT	1.4301	1.4404	1.4460	1.4462	
Volute Casing	●	○	○	○	○	○	○	○	○	○	○	○	○	○									
Mechanical Seal Cover	●	○	○	○	○	○	○	○	○	○	○	○	○	○									
Impeller	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○						○	
Shaft																	●	○	○	○			○
Bearing Housing	●	○	○	○	○	○	○	○															
Wear Ring	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○							
Mech. Seal Spacer Sleeve																	●	○	○	○			○
Mechanical Seal (*)	EN 12756																						

(\*) Optional: Depending on customer requirement or request different types and brands of mechanical seals are applicable.

● Standard manufacturing

NOTE: Depends on the request, different than above casting and shaft material can be supplied.

○ Optional

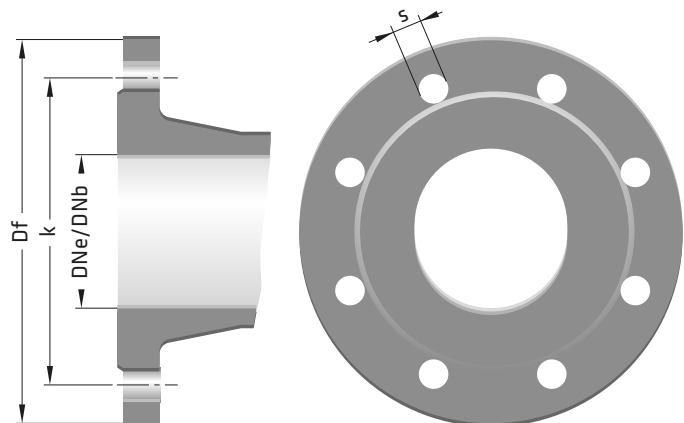
Material Equivalents

Description	DIN / EN		AISI / SAE / ASTM
Cast Iron	0.6025	EN-GJL-250 (GG25)	A48 Class 40B
Nodular Cast Iron	0.7040	EN-GJS-400-15 (GGG40)	A536 60-40-18
Nodular Cast Iron	0.7043	EN-GJS-400-18-LT (GGG40.3)	A536 60-40-18
Cast Steel	1.0619	GP240GHGS-C25	A216 WCB
Chrome Nickel Cast Steel	1.4308	GX5CrNi19-10	A351 CF8
Chrome Nickel Cast Steel (low carbon)	1.4309	GX2CrNi19-11	A351 CF3
Chrome Nickel Molybdenum Cast Steel	1.4408	GX5CrNiMo19-11-2	A351 CF8M
Chrome Nickel Molybdenum Cast Steel (low carbon)	1.4409	GX2CrNiMo19-11-2	A351 CF3M
Austenitic Cast Steel	1.4500	GX7NiCrMoCuNb25-20	A351 CN7M
Austenitic - Ferritic Cast Steel (duplex)	1.4517	GX2CrNiMoCuN25-6-3-3	A890 CD4MCuN
Austenitic - Ferritic Cast Steel (super duplex)	1.4469	GX2CrNiMoN26-7-4	A890 CE3MN
Martenzitic Stainless Cast Steel	1.4317	GX4CrNi13-4	A352 CA6NM
Martenzitic Stainless Cast Steel	1.4008	GX7CrNiMo12-1	A217 CA15
Cast Bronze (tin alloy)	2.1050.01	G-CuSn10	B427 C90700
Cast Bronze (nickel alloy)	2.0975.01	G-CuAl10Ni	B148 C95500
Cast Bronze (Leaded)	2.1096.01	G-CuSn5ZnPb	B584 C83600
Chrome Steel	1.4021	X20Cr13	A276 Type 420
Chrome Steel(heat treated)	1.4021	X20Cr13	A276 Type 420+QT
Chrome Nickel Steel	1.4301	X5CrNi18-10	A276 Type 304
Chrome Nickel Steel (low carbon)	1.4404	X2CrNiMo17-12-2	A276 Type 316L
Duplex (austenitic-ferritic) Steel	1.4460	X3CrNiMoN27-5-2	AISI 329
Duplex (austenitic-ferritic) Steel	1.4462	X2CrNiMoN22-5-3	UNS S32205

Flange Dimensions

EN 1092-2

DNe/DNb	Suction & Discharge (PN 16)			
	Df	k	s	n
32	140	100	18	4
40	150	110	18	4
50	165	125	18	4
65	185	145	18	4
80	200	160	18	8
100	220	180	18	8
125	250	210	18	8
150	285	240	22	8
200	340	295	22	12
250	405	355	26	12



" n " number of holes