

VERSAR
Industry Pump

VS

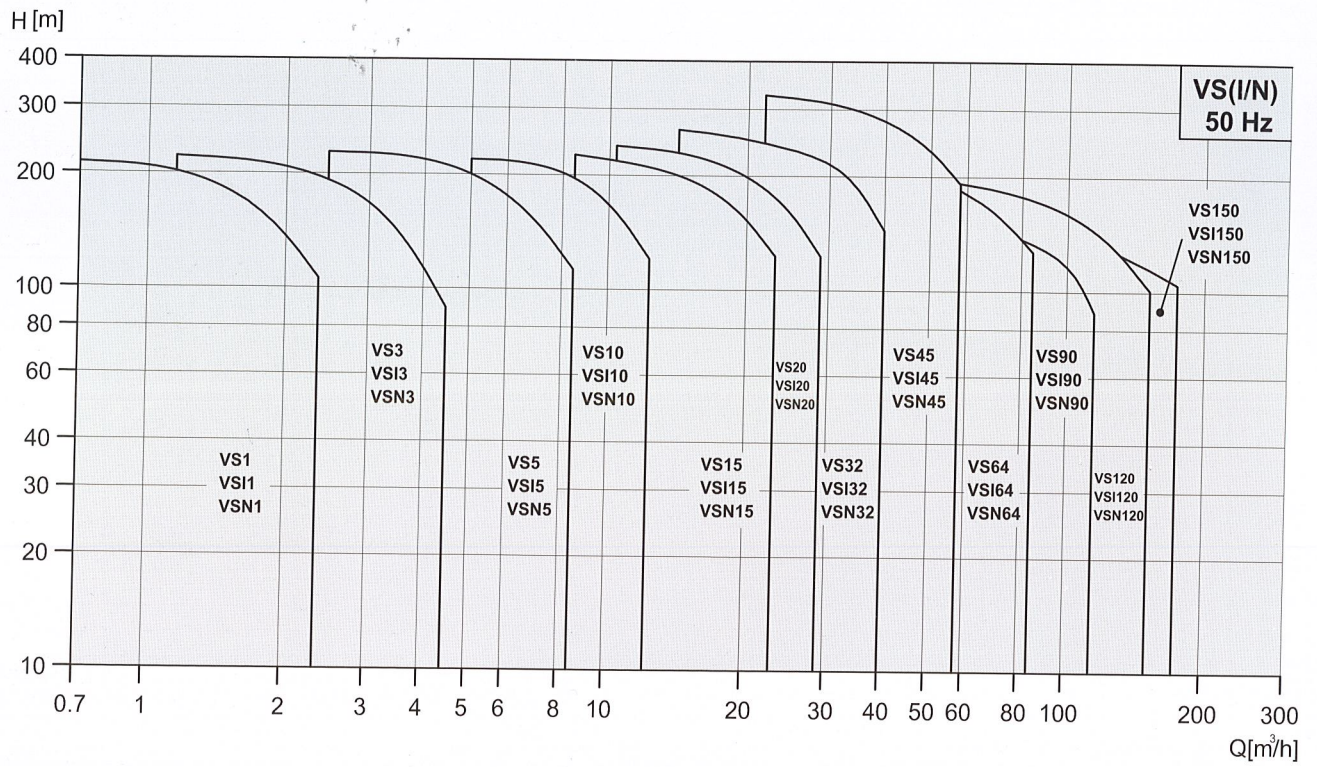
VS SERIES ISO 9906

**Vertical Multi-Stage,
Stainless Steel Pumps**



VERSAR
Industry Pump

VS, VSI, VSN Series Performance range 50 Hz

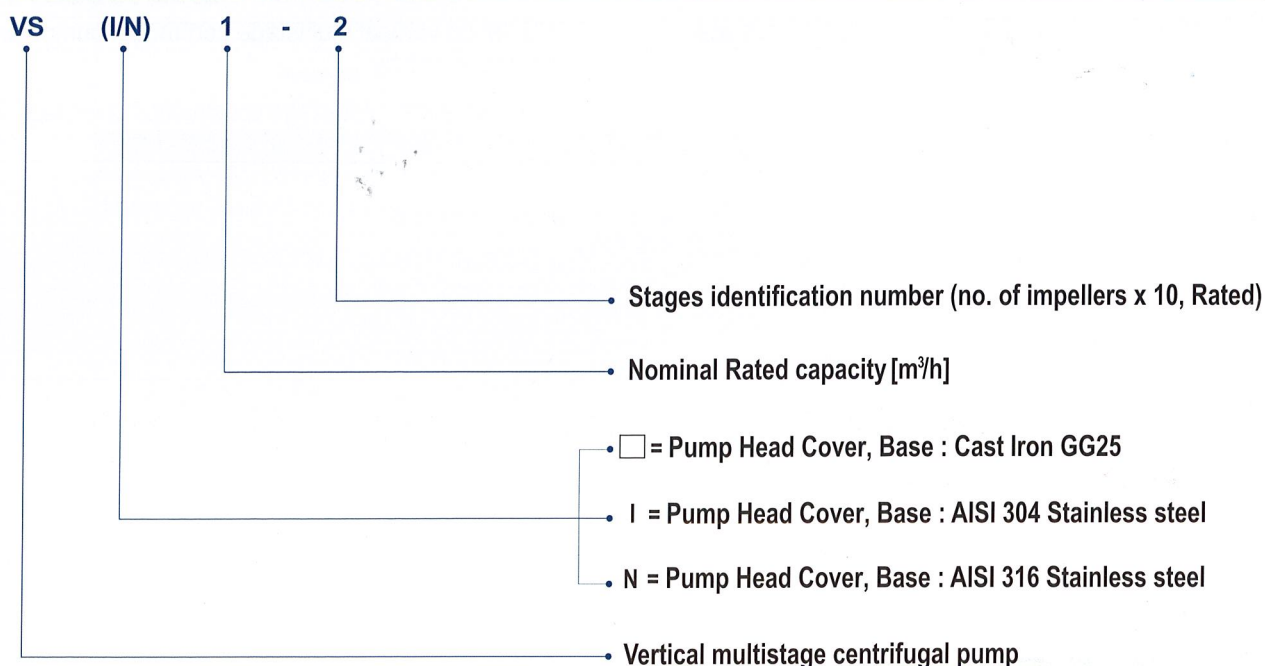


Product data

Range	VS, VSI, VSN					
	1	3	5	10	15	20
50Hz						
Nominal flow [m ³ /h]	1.8	3	5.7	10	17	21
Flow range [m ³ /h]	0.7-2.4	1.2-4.5	2.5-8.5	5-13	8.5-23.5	10.5-29
Max. pressure [bar]	21.5	23	24	21.5	23	24.3
Fluid temperature [°C]	-15 to +120					
Motor power [kW]	0.37-2.2	0.37-3	0.37-5.5	0.37-7.5	1.1-15	1.1-18.5
Version						
VS: Cast iron and stainless steel EN 1.4301/AISI 304	•	•	•	•	•	•
VSI: Stainless steel EN 1.4301/AISI 304	•	•	•	•	•	•
VSN: Stainless steel EN 1.4401/AISI 316	•	•	•	•	•	•
Motor						
Mains connection 1~ [V/Hz] (Permissible voltage tolerance ± 10%)	220-240 V 50 Hz					
Mains connection 3~ [V/Hz] (Permissible voltage tolerance ± 10%)	0.37-7.5 kW 220-240/380-415 V 50 Hz From 11 kW 380-415 V 50 Hz					
Insulation class	F					
Enclosure class	IP 55					
Ambient temperature	50° C					
VS Pipe Connection						
Flange	DN 25/ DN 32	DN 25/ DN 32	DN 25/ DN 32	DN 40	DN 50	DN 50
VSI, VSN Pipe Connection						
Flange	DN 25/ DN 32	DN 25/ DN 32	DN 25/ DN 32	DN 40	DN 50	DN 50
Victaulic-connections	R 1 ¹ / ₄ DN32	R 1 ¹ / ₄ DN 32	R 1 ¹ / ₄ DN 32	R 2 DN 50	R 2 DN 50	R 2 DN 50
Mechanical Seals						
SiC/SiC	Standard					
Seals						
EPDM	Standard					
Viton						

* Flange standards : Refer to dimensional drawings

DESIGNATION



ELECTRIC MOTOR CONSTRUCTION FEATURES

The electric motors are asynchronous single- and three-phase squirrel cage rotor units of the totally enclosed type (TEFC) with 2 poles, steel rotor shaft and external cooling.

Rugged aluminium alloy construction up to size 180. Case and shields in cast iron for motors from size 200 to size 280.

Voltage:

Single-phase 220V - 240V

Three-phase: 3 x 230-240V/380-415V
(From 0.37 - 7.5 kW)

Three-phase: 3 x 380-415V From 11kW

Frequency:

50 Hz

No. of Poles:

2 poles 2900 rpm (Rated)

Insulation class:

Class F

Protection rating:

IP 55 (Protection against dust and water jets)

Type of duty:

Continuous - S1

Thermal protection:

- Single-phase:

The motors are equipped as standard with integral thermal and current protection and permanently active capacitor.

- Three-phase:

Motors from size 180 are equipped as standard with 3 PTC thermistor sensors in the windings.

Bearing grease nipples: standard from 11 kW

Painting: Black or RAL 6004 blue (Standard)

Ambient temperature: 50 C° max.

Applicable European Council directives:

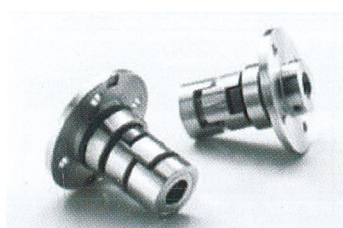
- "Electromagnetic compatibility Directive" 89/336/EEC
- 2006/95/EEC Low Voltage Directive
- "Machinery" Directive 89/392/EEC

Motor Data

Motor Type				Nominal current in [A]					
HP	kW	Pole	Flange	Frame	3-220V	3-240V	3-380V	3-415V	
0.5	0.37	2	B14	71A	1.7	1.9	1.0	1.1	
0.75	0.55			71B	2.6	2.9	1.5	1.7	
1.0	0.75			80A	3.4	3.4	2.0	2.0	
1.5	1.1			80B	4.8	5.0	2.8	2.9	
2.0	1.5			90S	6.1	6.2	3.5	3.6	
3.0	2.2			90L	9.7	11.1	5.6	6.4	
4.0	3.0			100L	11.9	12.1	6.9	7.0	
5.5	4.0			112M	15.1	15.2	8.7	8.8	
7.5	5.5			B5	132S	18.7	18.0	10.8	10.4
10	7.5				132S	25.5	24.9	14.7	14.4
				3-380V 3-415V 3-660V 3-720V					
4.0	3.0		B14	100L	6.8	6.9	3.9	4.0	
5.5	4.0			112M	8.7	8.3	5.0	4.8	
7.5	5.5			132S	10.9	10.8	6.3	6.2	
10	7.5			132S	14.9	14.8	8.6	8.5	
15	11			160L	22.2	20.9	12.8	12.1	
20	15			160L	30.2	28.4	17.4	16.4	
				3-380V 3-660V					
15	11		B5	160M			21.0	12.1	
20	15			160M			28.4	16.3	
25	18.5	160L				34.7	20.0		
30	22	180M				41.1	23.7		
40	30	200L				55.7	32.1		
50	37	200L				68.3	39.3		
60	45	225M				82.7	47.6		
75	55	250M				100.7	58.0		
100	75		280S			136.5	78.6		

Mechanical Seal

Standard Cartridge type mechanical seal made of Silicon Carbide/Silicon Carbide/EPDM or Viton. Based on the type of application, alternative materials are available for the seal and the elastomers. The cartridge type mechanical seal can be replaced in minutes without special tools and without dismantling the pump.



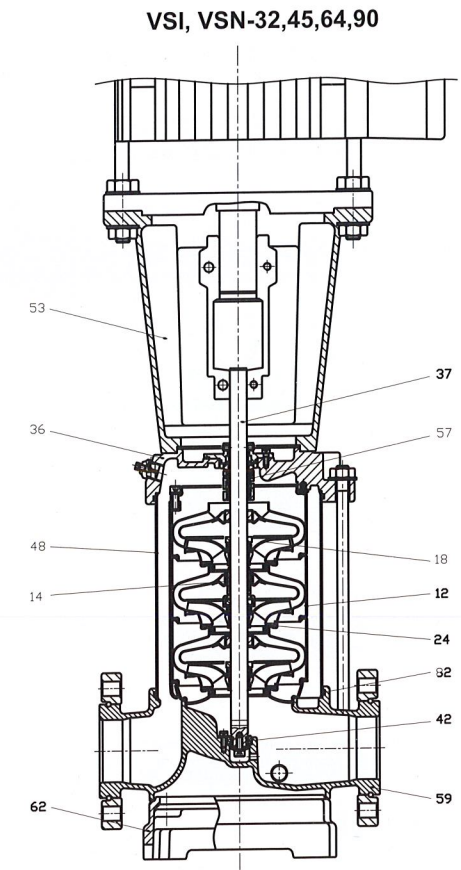
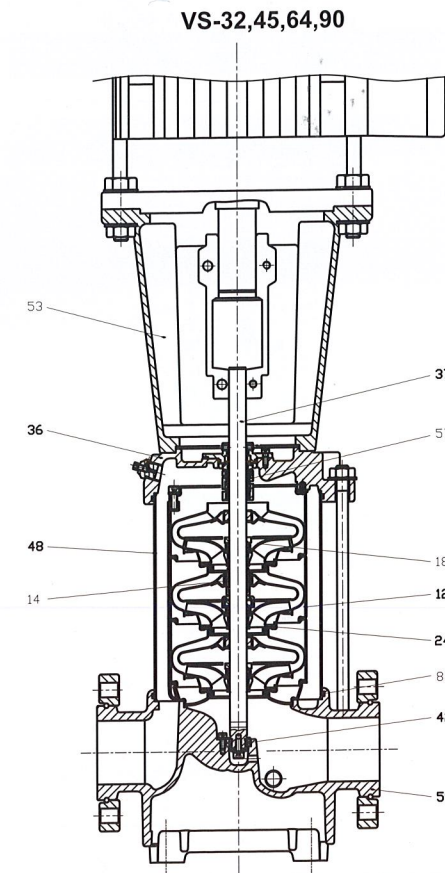
List of Materials

Q : Silicon carbide	E : EPDM
U : Tungsten carbide	V : Viton
B : Carbon	

Type of Seal

Seal Type	VS, VSI, VSN		
	1/3/5/10/15/20 /32/45/64/90	120/150	
		0.5-60HP	75-100HP
Mechanical Seals			
S: O-ring seal Cartridge type	●	●	
B: Rubber bellows seal Cartridge type			●
QQ	●	●	●
UU	Optional	Optional	
QB	Optional	Optional	
UB	Optional	Optional	
Seals			
E	●	●	●
V	Optional	Optional	Optional

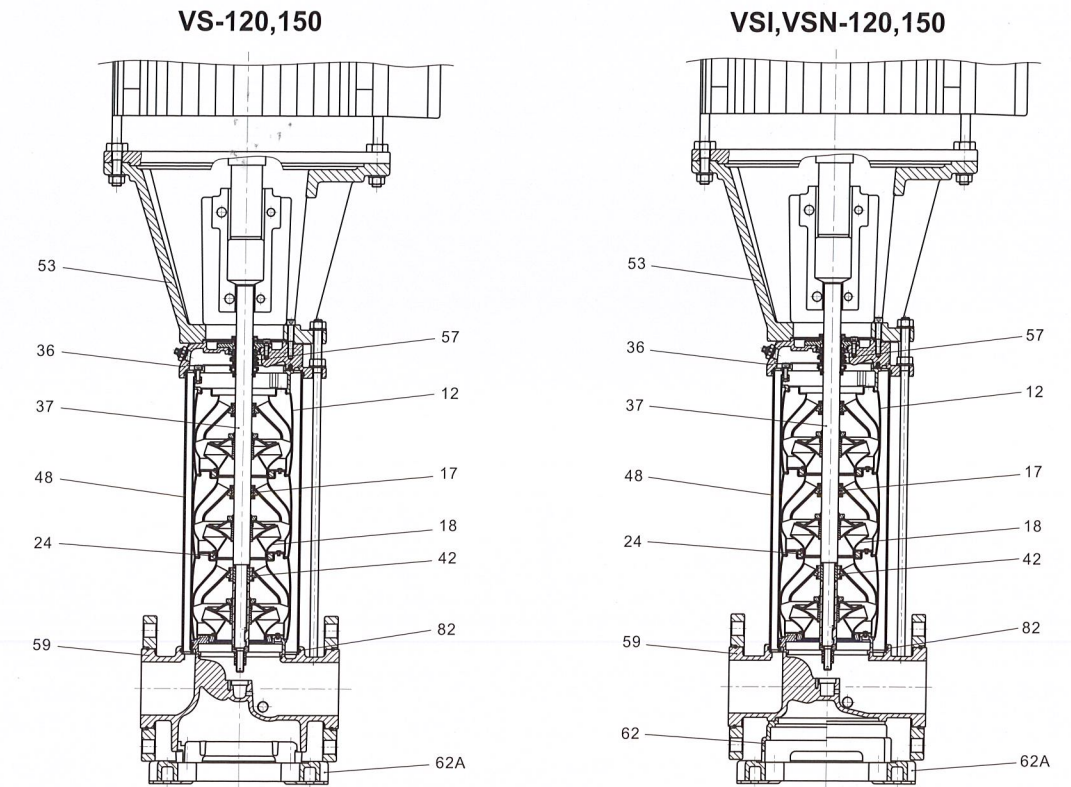
Construction



CONSTRUCTION

Pos.	Name	Material	VS 32,45,64,90		VSI 32,45,64,90		VSN 32,45,64,90	
			Standard		Standard		Standard	
			Europe	USA	Europe	USA	Europe	USA
36	Pump head	Cast Iron	EN-GJL-250	ASTM 35B				
		Stainless steel			1.4301	AISI 304	1.4401	AISI 316
53	Motor Bracket	Cast Iron	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B
18	Impeller	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
37	Shaft	Stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI 316
48	Outer Sleeve	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
82	O-ring for outer sleeve	EPDM						
12	Chamber	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
24	Neck ring	Carbon Fiber + POB + PTFE						
59	Base	Cast Iron	EN-GJL-250	ASTM 35B	N/A			
	Base	Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
62	Base plate	Cast Iron	N/A		EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B
57	Mechanical seal	Cartridge type						
14	Bearing ring		Bronze				POB+Graphite+PTFE	
42	Bottom bearing ring	Tungsten carbide/ Tungsten carbide						

Construction



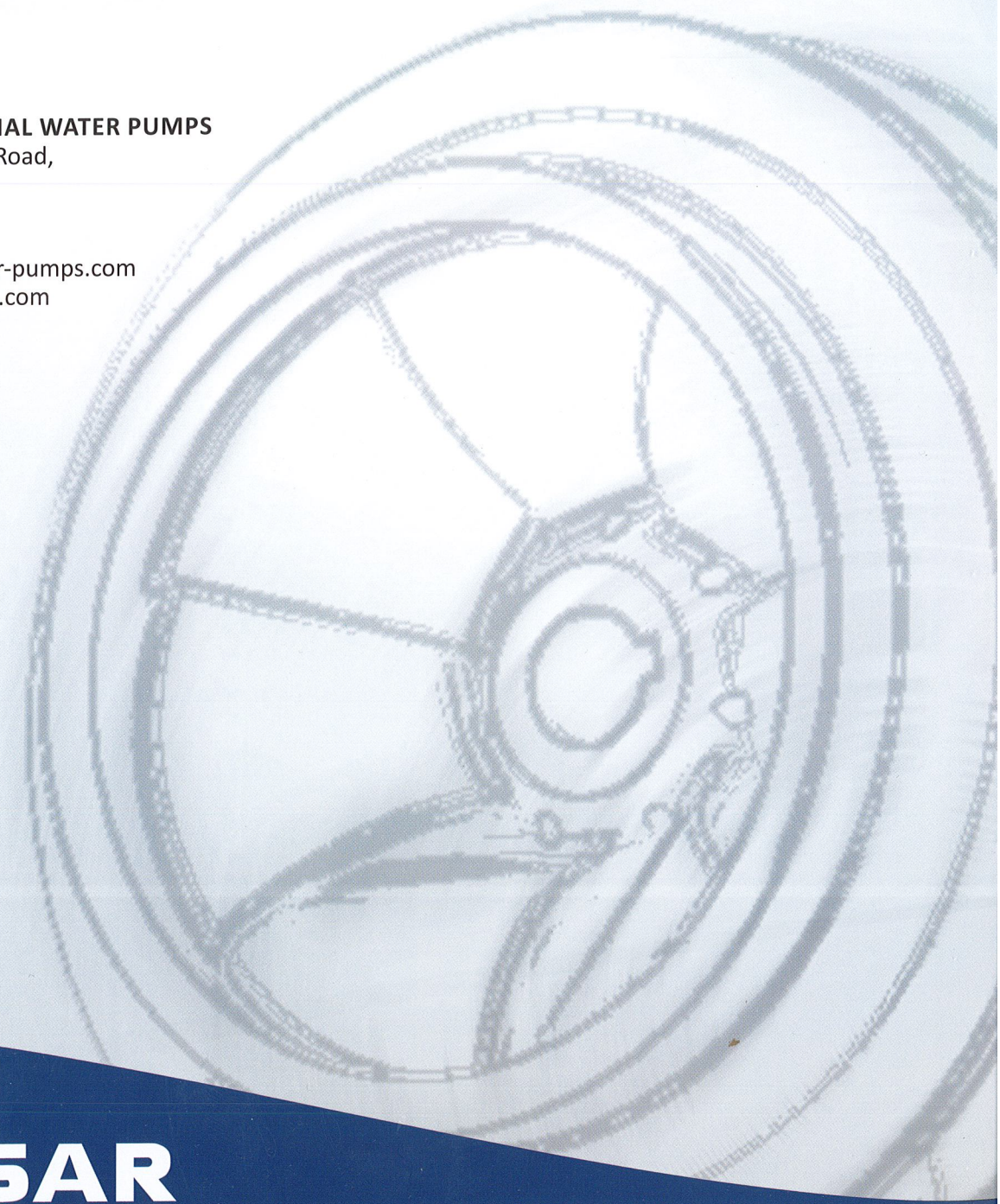
CONSTRUCTION

Pos.	Name	Material	VS 120,150		VSI 120,150		VSN 120,150	
			Standard		Standard		Standard	
			Europe	USA	Europe	USA	Europe	USA
36	Pump head	Cast Iron	EN-GJL-250	ASTM 35B	N/A			
		Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
53	Motor bracket (15HP~60HP)	Cast Iron	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B
	Motor bracket (75HP~100HP)	Cast Iron	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
17	bearing ring	PTFE						
18	Impeller	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
37	Shaft	Stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI 316
48	Outer sleeve	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
82	O-ring for outer sleeve	EPDM						
12	Chamber	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
24	Neck ring	PTFE						
59	Base	Cast Iron	EN-GJL-250	ASTM 35B	N/A			
		Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
62	Base plate	Cast Iron	N/A		EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
62A	Base plate	Cast Iron	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
57	Mechanical seal	Cartridge type						
42	Bottom bearing ring	SiC / SiC						

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