

Hygienic Pump

Vitastage

Type Series Booklet



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Type Series Booklet Vitastage

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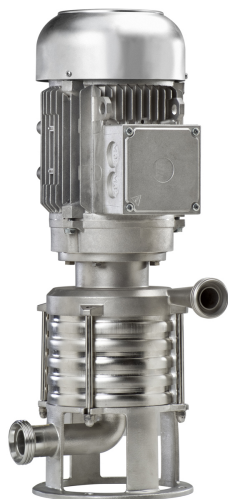
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Hygienic Pump

Sterile Process Pumps in Close-coupled Design

Vitastage



Main applications

- Food and beverage industry
- Chemical industry
- Further industrial applications with moderate hygienic requirements

Fluids handled

- Pure liquids not mechanically or chemically aggressive to the pump

Operating data

Operating properties

Characteristic	Value
Flow rate	Q [m³/h] ≤ 12,5
Head	H [m] ≤ 150
Operating pressure	p [bar] ≤ 16
Fluid temperature	T [°C] ≤ 140 (higher on request)

Designation

Example: Vitastage 10/3/75 2 B T

Designation key

Code	Description
Vitastage	Type series
10	Size
3	Number of stages
75	Motor rating (7.5 kW × 10)
2	Number of poles
B	Installation type
T	Seal design

Design details

Design

- Standard design with materials to Regulation (EC) No. 1935/2004

Design

- High-pressure centrifugal pump
- Casing in ring-section design
- Multistage

Installation

- Horizontal/vertical installation

Impeller type

- Closed radial impeller with multiply curved vanes

Shaft seal

- Standardised mechanical seal to EN 12756 (⇒ Page 5)

Drive

- Self-cooling IEC squirrel cage motor
- Winding 50 Hz, 230 V/400 V up to 4 kW
- Winding 50 Hz, 400 V/690 V from 5.5 kW
- Type of construction B5/B35
- IP55 enclosure
- Thermal class F
- Other motors on request

Materials

Component	Material
Pump casing	1.4408/1.4401 (AISI 316)
Impeller/diffuser	1.4401 (AISI 316)
Impeller nut	1.4401 (AISI 316)
Welle	1.4401 (AISI 316)
Motor housing	Aluminium/Cast iron
Motor shroud	1.4301 (AISI 304)
Connections	1.4408 (AISI 316)
Installation parts	1.4301 (AISI 304)

Certifications

Overview

Label	Effective in:	Note
	All countries	Certified quality management to ISO 9001
	All countries	Elastomers FDA, 3A, USP class VI certified

Connections

Horizontal installation

- Axial suction nozzle
- Tangential discharge nozzle

Vertical installation

- Horizontal suction nozzle
- Tangential discharge nozzle

Types of connection

- Threaded connection to DIN 11851
- Threaded connection to SMS standard
- Other connection types on request

Technical details

Mechanical seal design

Mechanical seal material, elastomers, static sealing elements

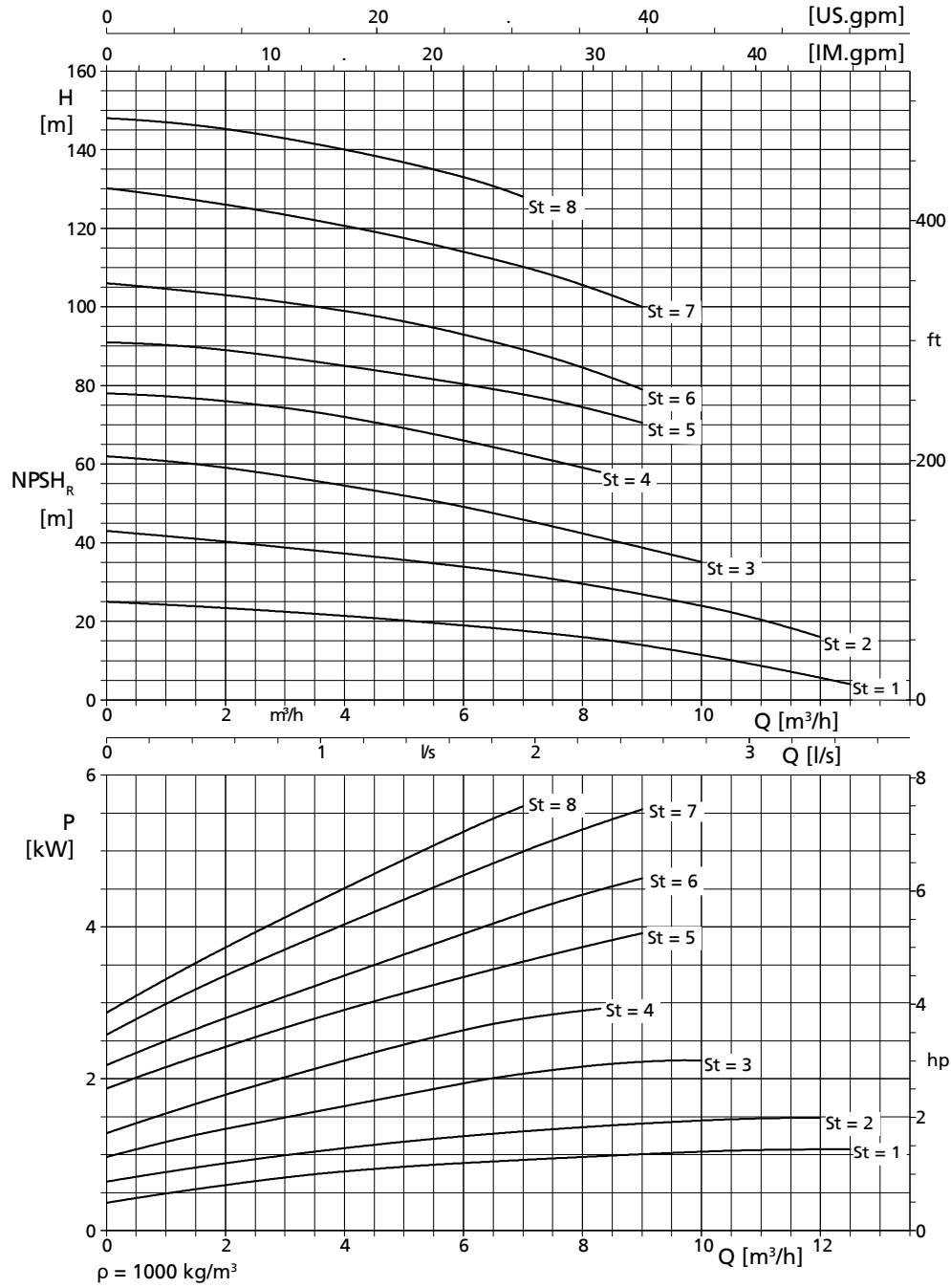
Description	Material
Mechanical seal (single internal mechanical seal)	SiC/CARB/EPDM ¹⁾ , SiC/TUC/EPDM, SiC/SiC/EPDM
Elastomers	EPDM ¹⁾ , FPM, FFPM, PTFE
Static sealing elements	EPDM ¹⁾ , NBR, FPM, FFPM, FEP

Key

Code	Material
CARB	Graphite
EPDM	Ethylene propylene diene rubber
TUC	Tungsten carbide
SiC	Silicon carbide
NBR	Nitrile rubber
FPM	Fluoroelastomer (Viton)
FFPM	Perfluoroelastomer
PTFE	Polytetrafluoroelastomer
FEP	Fluorocarbon (PTFE-encapsulated silicone)

1) Standard design

Characteristic curves



Dimensions

Horizontal installation – version without motor shroud

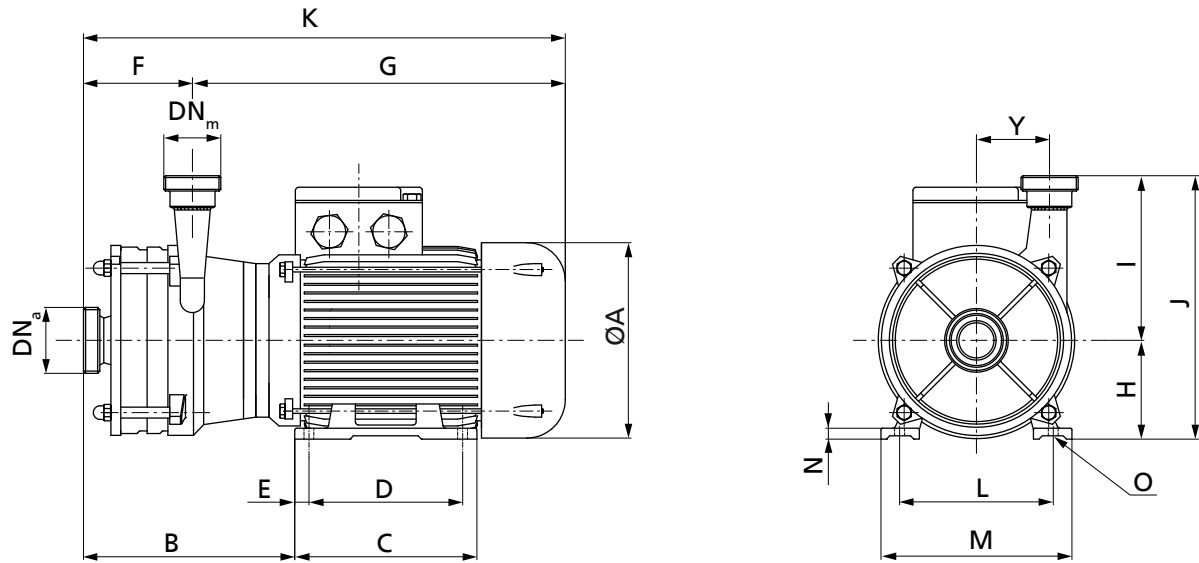


Fig. 1: Vitastage 05 without motor shroud

Dimensions

Size	P	DN _s	DN _m	ØA	B	C	D	E	F	G	K	H	J	I	L	M	N	O	Y	[kg]
	[kW]	[mm]																		
05/1	1,1	32	25	162	155	118	100	9	56	314	370	90	240	150	125	150	8	9,5	66,5	18
05/2	1,5	32	25	181	182	143	100	12,5	80	314	394	90	240	150	140	165	10	10	66,5	21
05/3	2,2	32	25	181	206	143	100	12,5	104	337	441	90	240	150	140	165	10	10	66,5	28
05/4	3,0	32	25	202	236	176	140	13	128	337	465	90	240	150	160	196	12	12	66,5	43

Horizontal installation – version with motor shroud

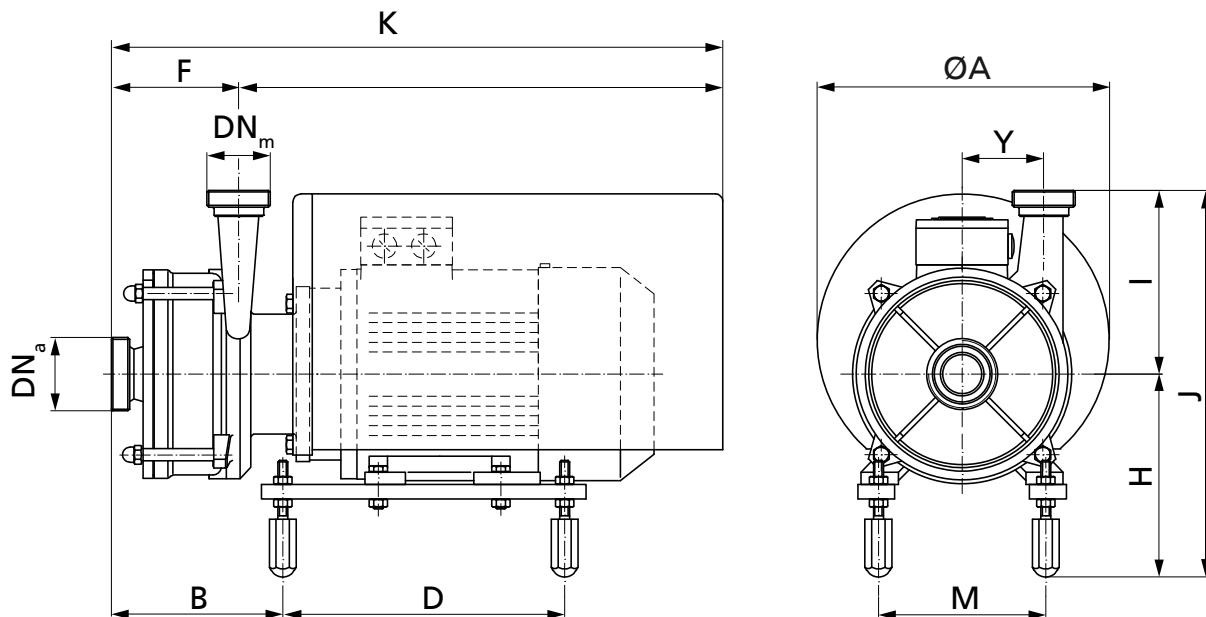


Fig. 2: Vitastage 05 with motor shroud

Dimensions

Size	P	DN _a	DN _m	ØA	B	D	F	G	H	I	K	J	M	Y	[kg]
	[kW]	[mm]													
05/1	1,1	32	25	238,5	92	230	56	395	178	150	451	315	136,5	66,5	22
05/2	1,5	32	25	238,5	118	230	80	395	178	150	477	315	136,5	66,5	25
05/3	2,2	32	25	238,5	140	230	104	395	178	150	499	315	136,5	66,5	32
05/4	3,0	32	25	238,5	164	230	128	395	178	150	523	315	136,5	66,5	48

Vertical installation

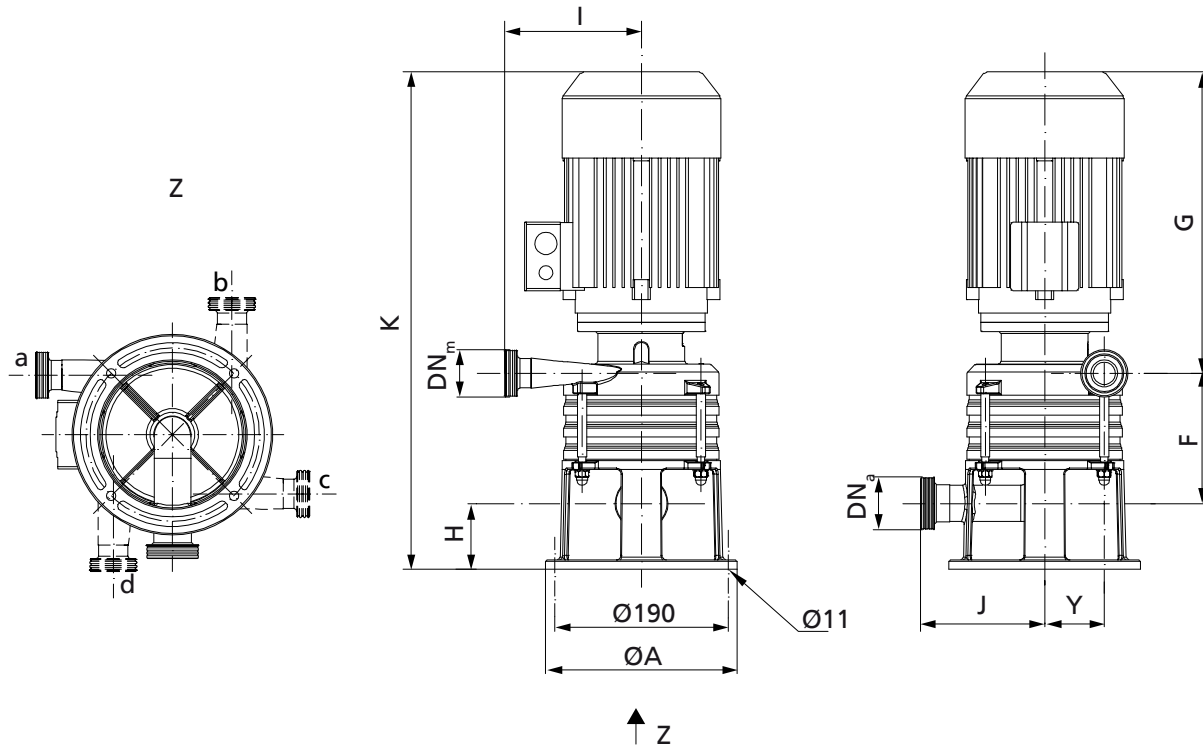


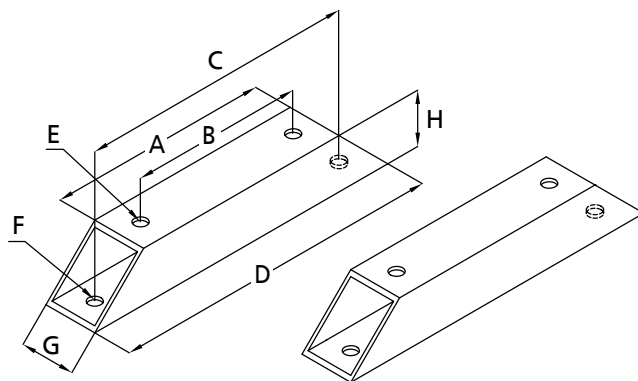
Fig. 3: Vitastage 05, vertical installation, discharge nozzle position

a	Discharge nozzle 270°
b	Discharge nozzle 0°/360°
c	Discharge nozzle 90°
d	Discharge nozzle 180°

Dimensions

Size	P	DN _a	DN _m	ØA	F	G	H	I	J	K	Y	[kg]
	[kW]	[mm]										
05/1	1,1	32	25	220	69	316	71	150	136	456	65	19
05/2	1,5	32	25	220	93	316	71	150	136	480	65	22
05/3	2,2	32	25	220	117	346	71	150	136	534	65	29
05/4	3,0	32	25	220	141	346	71	150	136	558	65	40
05/5	4,0	32	25	220	165	371	71	150	136	607	65	42
05/6	4,0	32	25	220	189	371	71	150	136	631	65	43
05/7	5,5	32	25	220	213	386	71	150	136	670	65	55
05/8	5,5	32	25	220	237	386	71	150	136	694	65	56

Motor feet



Motor foot dimensions [mm]

Motor size (IEC-DIN)	p [kW]		A	B	C	D	E	F	G	H
	2-pole	4-pole								
71	0,37; 0,55	0,25; 0,37	110	90	150	190	10	10	40	40
80	0,75; 1,1	0,55; 0,75	130	100	170	210	10	10	40	40
90 S	1,5	1,1	160	100	200	240	10	10	40	40
90 L	2,2	1,5	160	125	200	240	10	10	40	40
100 L	3	3	180	140	230	280	12	12	50	50
112 M	4	4	180	140	230	280	12	12	50	50
132 S	5,5; 7,5	5,5	226	140	266	346	12	12	60	60
132 M	-	7,5	226	178	266	346	12	12	60	60
160 M	11; 15	11	310	210	330	400	14	14	50	50
160 L	18,5	15	310	254	330	400	14	14	50	50
180 M	22	18,5	328	241	387	448	15	15	60	60
180 L	-	22	328	279	387	448	15	15	60	60

Pump accessories

- Stainless steel motor shroud
- Mounted on a trolley, with switch and power cable
- Vertically adjustable ball feet



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