

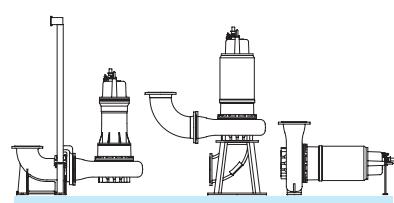
## Electric Submersible Sewage Pumps.

Series A.

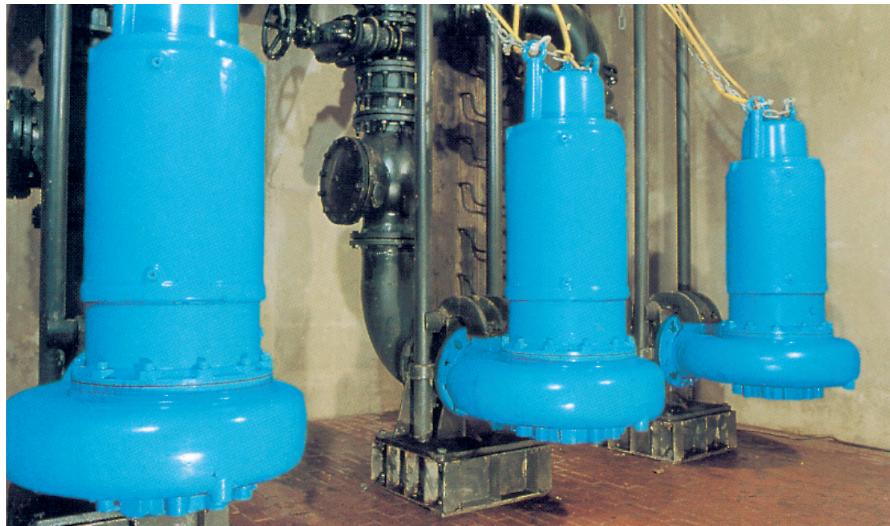
Discharge Size DN 200 – DN 300.



- Enclosed multi-vane impellers
- Spherical clearance 100 mm – 150 mm
- Standard and explosion proof motors
- Wet and dry installation



# Economic Sewage and Waste Water Disposal with HOMA Submersible Waste Water Pumps.



## High performance level through decades of experience.

Many years of experience in the design and construction of submersible pumps plus uncompromising attention to quality in every technical detail and strict monitoring of production quality ensure the utmost reliability and long service life of all HOMA pumps.

## System components for problem-free, low-cost installation.

HOMA supplies complete pumping stations encompassing everything from the pump, accessories, such as valves, piping, ready-made concrete or plastic sumps, through to electronic control and monitoring systems. Both the wet well type of installation with auto-coupling system, which requires the minimum of space, and all other types of installation are designed to keep installation costs as low as possible.

## The reliability of fully automatic operation.

HOMA pumping stations feature fully automatic control and monitoring. Reliable liquid level control systems of various types to suit every operational situation (e.g. float switch, pneumatic, ultrasound or electronic system) control the pump operation and ensure minimum possible energy consumption. All possible fault factors (power supply, temperature, state of the seals) are automatically monitored and any malfunctions may be signalled.

## Applications

HOMA series A submersible pumps are suitable for pumping sewage, sludge, effluents and surface water, even those containing a large proportion of solid or fibrous matter. They are installed in a great variety of domestic, industrial and agricultural heavy duty pumping applications.

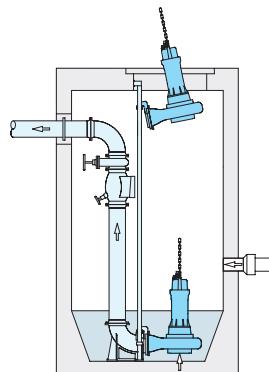
Applications range from waste removal for residential and industrial buildings through to operation in large municipal and industrial pumping stations and sewage treatment plants.

Operation: The motors are designed for continuous operating duty (S 1) at maximum 15 starts per hour with a fully submerged motor housing in wet well installation. A jacket cooled motor-variant is available for S 1 operating with a non submerged motor for dry pit installation.

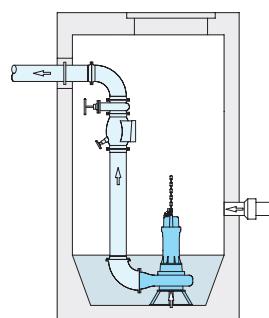
Pumps with multi-vane impellers are designed for intermittent operation, normally in automatic level-controlled wet well sump installations. They are also suitable for unlimited continuous operation, as in storm water retention tanks or industrial water supply.

## Installation

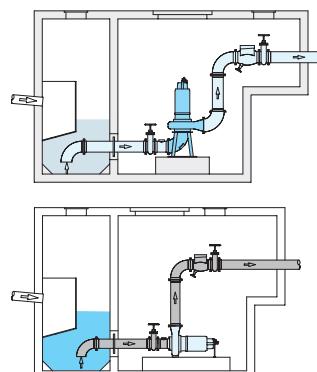
Permanent wet well installation: Submerged autocoupling guide tube system for automatic connection and disconnection of the pump from the pipework from outside the sump. All maintenance or repair work can be done outside the sump. Back in operating position, the weight of the pump ensures leak-proof discharge connection.



Transportable wet well installation: Submerged pump mounted on a ring basestand for temporary, service or emergency operation. Discharge connection with pipe or hose.



Permanent dry well installation, vertical or horizontal: Flood-proof installation for pump stations with separate collection sump. Fixed flanged connection of suction and discharge pipe.



## Construction – Proven quality in detail

HOMA sewage pumps are fully submersible, compact integrated motor-pump-units with reliable, robust design and all important components generously dimensioned.

### Pump section

Volute with discharge sizes DN 200 up to DN 300, DIN flange PN 10. Enclosed single and multi-channel impellers, dynamically balanced, with replaceable wear ring. Spherical clearances 100 mm up to 150 mm.

### Shaft seals

Two rotating mechanical seals with silicon-carbide and carbon-graphite/chrome steel faces, in tandem arrangement, operate independent of each other in an oil bath, with a separate large oil chamber as lubricating and cooling medium and extra buffer between the pump volute and the motor. A seal condition monitoring probe is available upon request.

### Shaft bearing

A large diameter stainless steel shaft rotates in pre-lubricated heavy-duty ball bearings.

### Motor

Three-phase electric motors, with 6-pole motor speed, 8-pole upon request. Motors are protected to IP 68 and Class F (155°C) insulation standards. Thermal sensors embedded in the stator winding protect the motor from overheating.

### Explosion protection

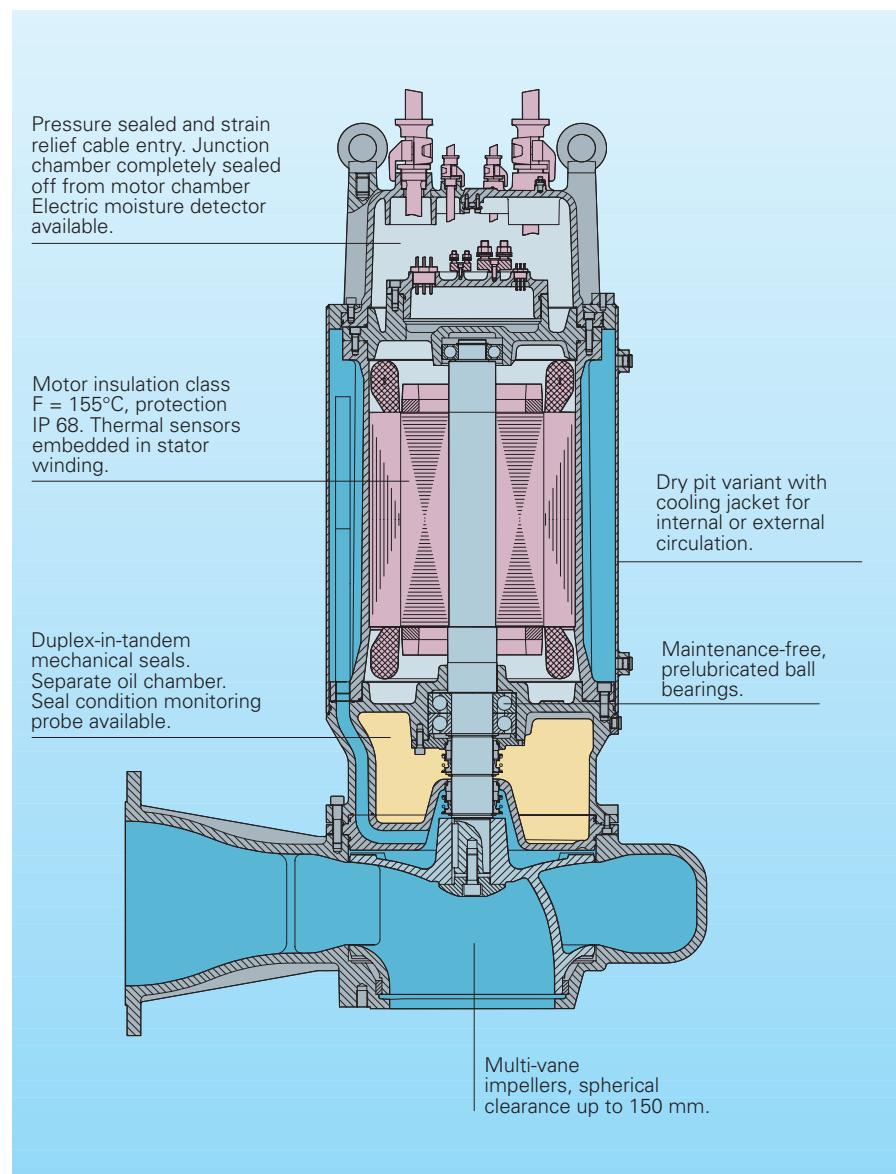
All pumps are available with explosion proof motors according to E Ex d (e) IIB standard.

### Motor cooling

Models for wet pit installation/submerged operating, are cooled directly by the water surrounding the motor casing. For dry pit installation/non-submerged operating, motors have a built-in cooling system with a cooling jacket around the motor casing. Cooling is achieved by an internal circulation of cleaned water from the pump volute. For special demands the cooling jacket can be sealed off from the volute and connected to an external cooling system (on request).

### Materials

Standard models with casing, volute, impeller from GG-25 cast iron. Volute and impeller from bronze or stainless steel upon request. Shaft, bolts and nuts from stainless steel.



## Choice of motor

**Speeds:** Depending on hydraulic the motors are designed for the following operations:

- 1450 rpm/4-pole
- 960 rpm/6-pole
- 700 rpm/8-pole (are available on request).

**Voltages:** All power specifications relate to an operating voltage of 400 V/3 Ph, 50 Hz. Other voltages are available on request.

**Type of starting:** The motors are supplied as standard with star-delta starting. Motors pre-connected for DOL starting are available on request.

**Explosion protection:** In addition to the standard version all motors can be supplied explosion proof according to E Ex d(e) II B standard.

**Dry pit variant:** Besides the standard model for submerged operating all motors are also available for dry pit installation. Motor cooling is provided by a cooling jacket, using either the pumped liquid or external coolant circulation.

## Choice of hydraulic system

Suction and discharge flange:

- DN 200
- DN 250
- DN 300

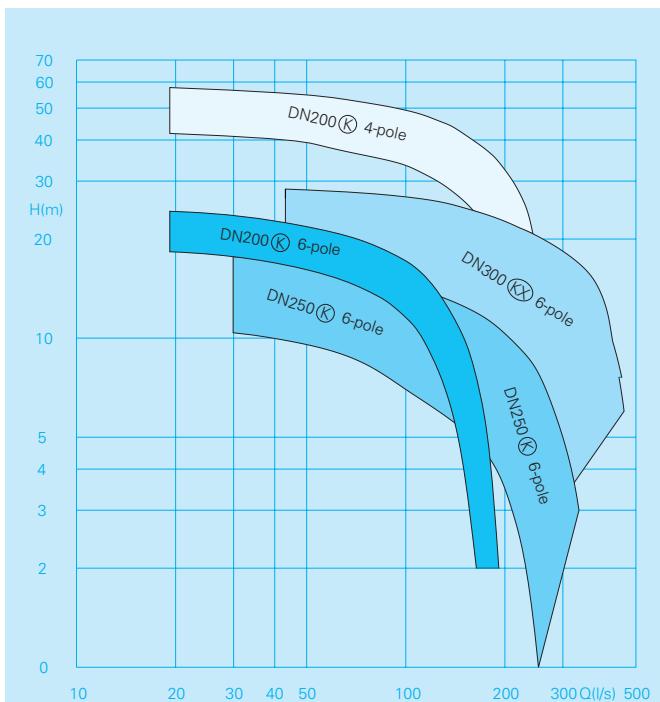
Reducing adapters for other coupling system and valve dimensions are available.

**K**



**Impellers:** Enclosed multi-vane impeller. For liquids containing impurities and sludge with solid particles or long fibres. Spherical clearance 100 mm up to 150 mm.

## Performance range



## Pump Selection Guide

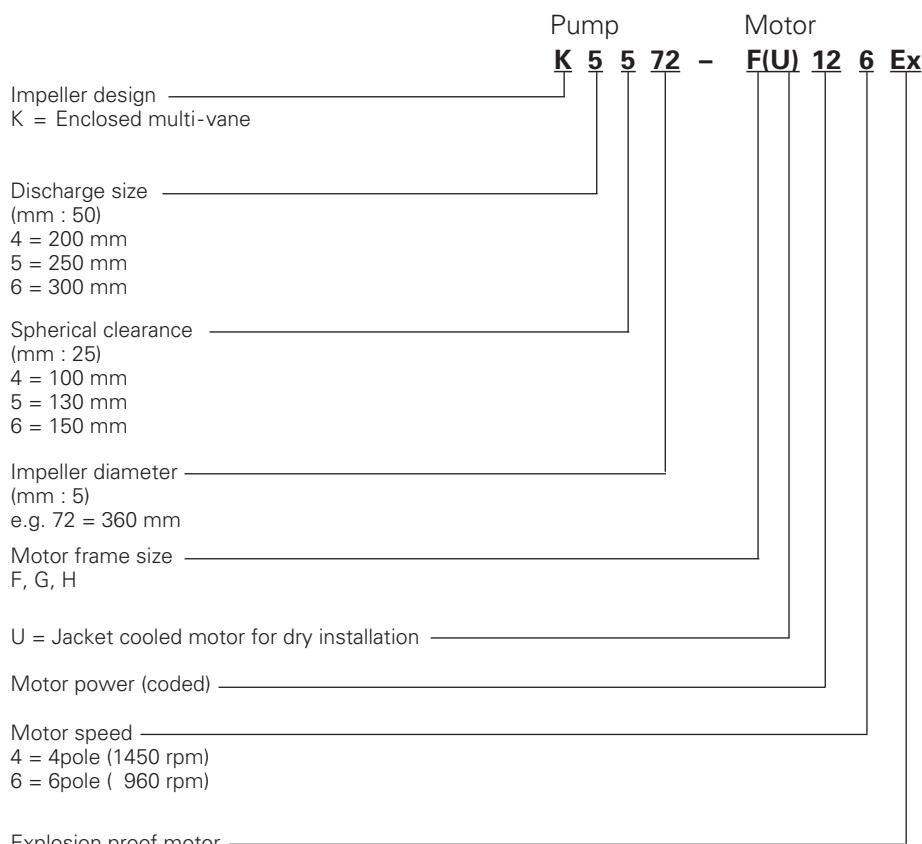
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<b>Impeller</b>	<b>Discharge Size</b>	<b>Spherical clearance</b>	<b>Speed</b>	<b>Pump Type</b>	<b>Page</b>
K 	DN 200	100 mm	1450 rpm 960 rpm	K44... K44...	-4 pole -6 pole
K 	DN 250	130 mm	960 rpm	K55...	-6 pole
KX 	DN 300	150 mm	960 rpm	KX66...	-6 pole
					on request
<b>Accessories</b>					14

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## Pump type code

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# K44...-4 pole

1450 rpm  
DN 200 discharge  
100 mm Ø spherical clearance

K



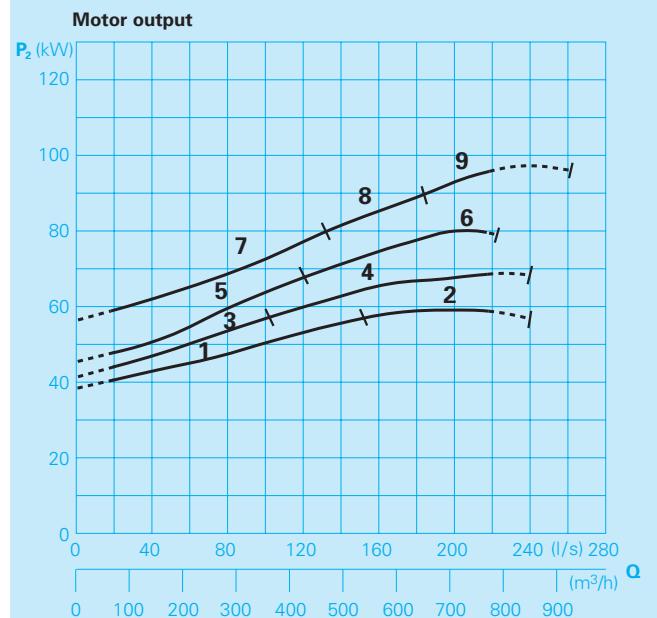
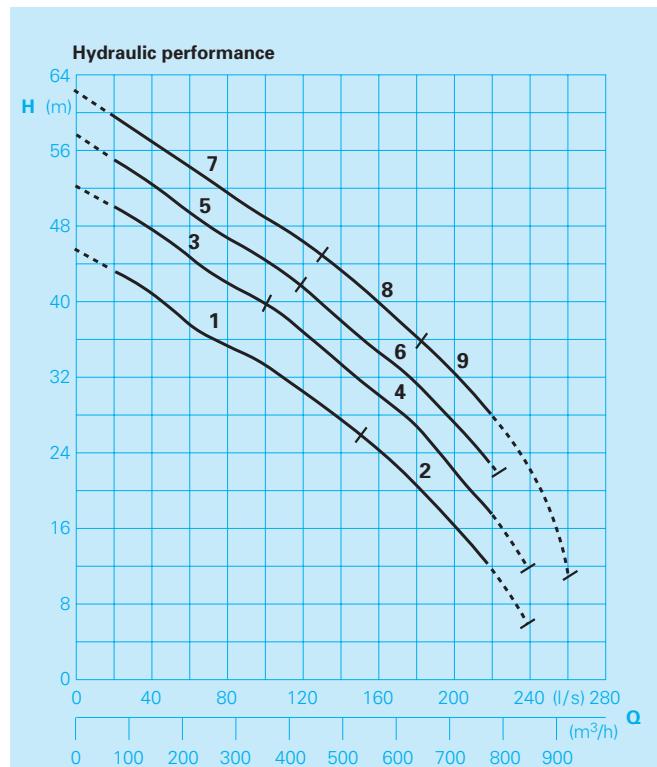
## Standard model

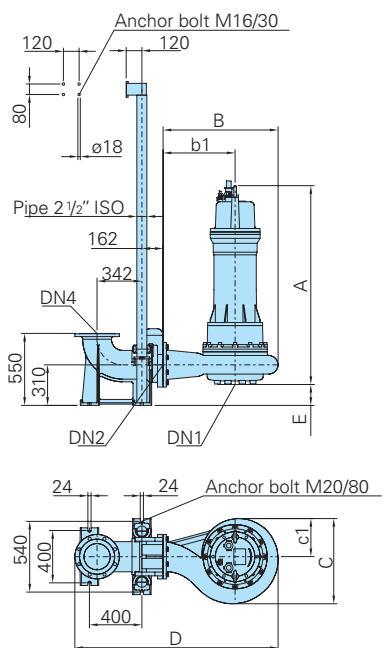
Curve	Pump type	Motor output	Rated curr.	Weight(kg)	
No.	Wet well installation	Dry well installation	$I_N$ (A)	Wet well inst. Dry well inst.	
1	K 4470-G 194	...GU 194	56,5	102	596 679
2	K 4470-G 214	...GU 214	68,0	123	662 758
3	K 4475-G 194	...GU 194	56,5	102	596 679
4	K 4475-G 214	...GU 214	68,0	123	662 758
5	K 4478-G 214	...GU 214	68,0	123	662 758
6	K 4478-G 224	...GU 224	79,0	141	728 824
7	K 4480-G 224	...GU 224	79,0	141	728 824
8	K 4480-H 244	...HU 244	90,0	163	862 927
9	K 4480-H 264	...HU 264	110,0	198	920 985

## Explosion-proof model

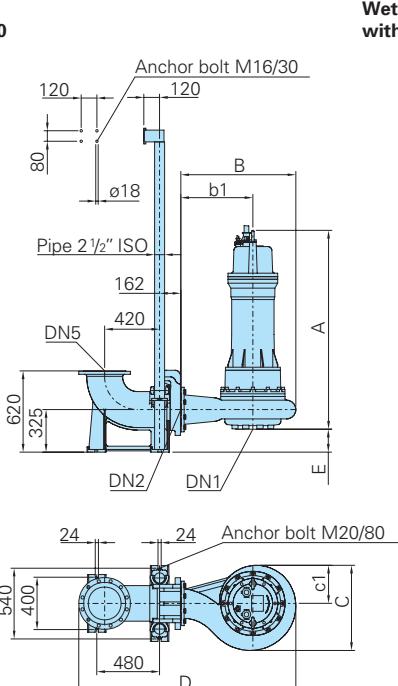
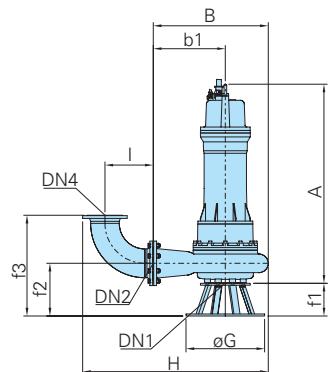
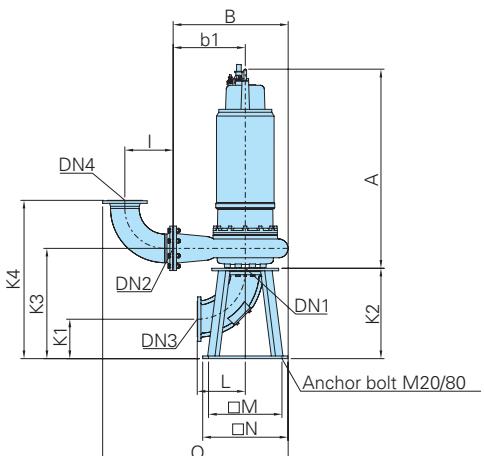
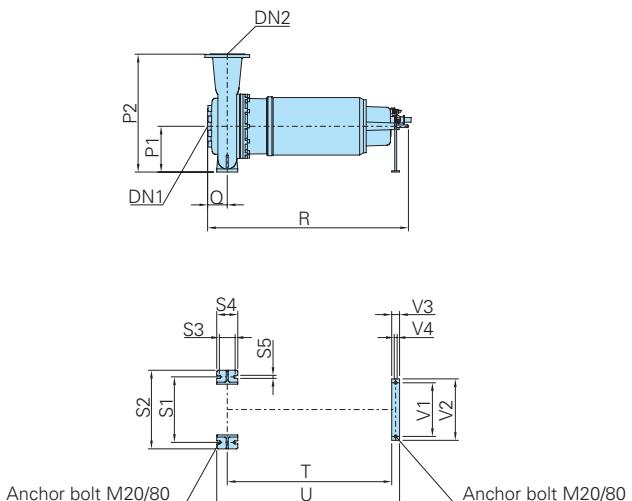
Curve	Pump type	Motor output	Rated curr.	Weight(kg)	
No.	Wet well installation	Dry well installation	$I_N$ (A)	Wet well inst. Dry well inst.	
1	K 4470-G 194 Ex	...GU 194 Ex	56,5	102	596 679
2	K 4470-G 214 Ex	...GU 214 Ex	68,0	123	662 758
3	K 4475-G 194 Ex	...GU 194 Ex	56,5	102	596 679
4	K 4475-G 214 Ex	...GU 214 Ex	68,0	123	662 758
5	K 4478-G 214 Ex	...GU 214 Ex	68,0	123	662 758
6	K 4478-G 224 Ex	...GU 224 Ex	79,0	141	728 824
7	K 4480-G 224 Ex	...GU 224 Ex	79,0	141	728 824
8	K 4480-H 244 Ex	...HU 244 Ex	90,0	163	862 927
9	K 4480-H 264 Ex	...HU 264 Ex	110,0	198	920 985

## Performance curves



**Installations and dimensions for K 44...-4 pole**
**Wet well installation with auto-coupling system  
DN 200**


DN 250


**Wet well installation  
with ring base stand**

**Dry well installation  
vertical**

**Dry well installation  
horizontal**


Pump type	A <sub>max.</sub>	B	b <sub>1</sub>	C	c <sub>1</sub>	D	E	f <sub>1</sub>	f <sub>2</sub>	f <sub>3</sub>	ø G	H	I	K <sub>1</sub>	K <sub>2</sub>	K <sub>3</sub>	K <sub>4</sub>	L	oM	oN	O
K4470 up to K4480-G...(Ex)	1518	878	550	650	291	1552	160	250	402	769	600	1417	369	301	690	842	1209	369	560	650	1417
K4470 up to K4480-G...(Ex)	1518	878	550	650	291	1657**	175**	250	402	769	600	1417	369	301	690	842	1209	369	560	650	1417
K4480-H... (Ex)	1523	878	550	650	291	1552	160	250	402	769	600	1417	369	301	690	842	1209	369	560	650	1417
K4480-H... (Ex)	1523	878	550	650	291	1657**	175**	250	402	769	600	1417	369	301	690	842	1209	369	560	650	1417

Pump type	P <sub>1</sub>	P <sub>2</sub>	Q	R <sub>max.</sub>	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	S <sub>4</sub>	S <sub>5</sub>	T <sub>max.</sub>	U <sub>max.</sub>	V <sub>1</sub>	V <sub>2</sub>	V <sub>3</sub>	V <sub>4</sub>	DN <sub>1</sub>	DN <sub>2</sub>	DN <sub>3</sub>	DN <sub>4</sub>	DN <sub>5</sub>
K4470 up to K4480-G... (Ex)	350	900	150	1533	500	600	120	160	23	1256	1396	410	470	60	ø23	200	200	200	200	-
K4470 up to K4480-G... (Ex)	350	900	150	1533	500	600	120	160	23	1256	1396	410	470	60	ø23	200	200	250*	250**	
K4480-H... (Ex)	350	900	150	1538	500	600	120	160	23	1291	1401	508	568	60	ø23	200	200	200	200	-
K4480-H... (Ex)	350	900	150	1538	500	600	120	160	23	1291	1401	508	568	60	ø23	200	200	250*	250**	

all dimensions in mm

\* with 90°-elbow DN200-DN200

\*\*wet well installation with auto-coupling system DN250

# K44...-6 pole

960 rpm  
DN 200 discharge  
100 mm Ø spherical clearance



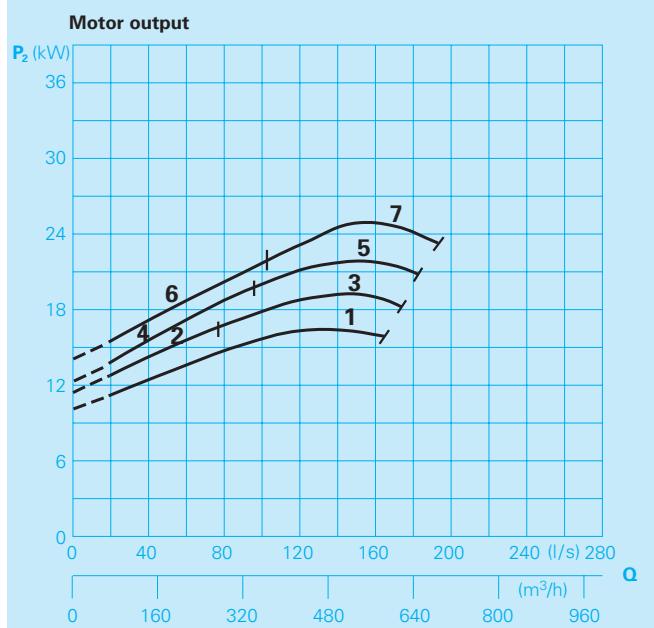
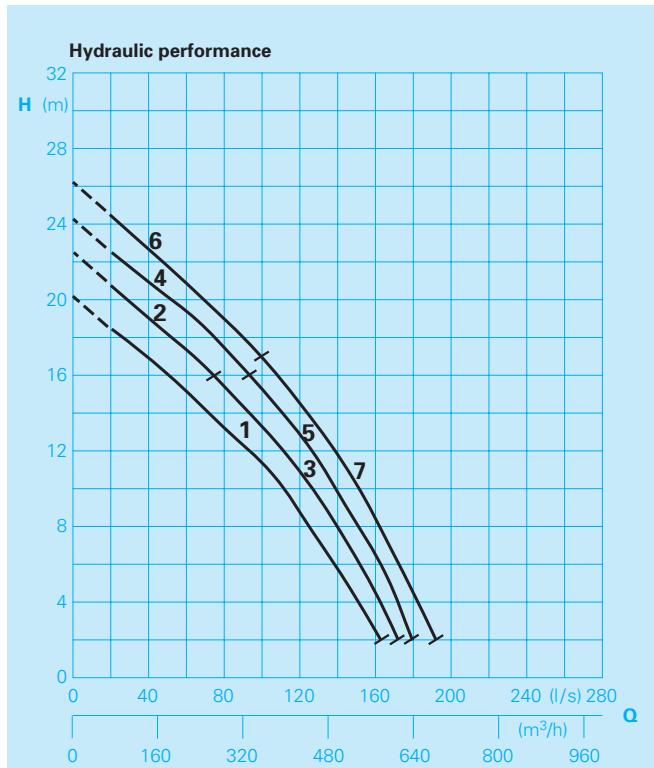
## Standard model

Curve	Pump type	Motor output	Rated curr.	Weight(kg)		
No.	Wet well installation	Dry well installation	P <sub>2</sub> (kW)	I <sub>n</sub> (A)	Wet well inst.	Dry well inst.
1	K 4471-F 96	...FU 96	17,0	38,5	442	505
2	K 4475-F 96	...FU 96	17,0	38,5	442	505
3	K 4475-F 106	...FU 106	20,0	42,5	463	538
4	K 4478-F 106	...FU 106	20,0	42,5	463	538
5	K 4478-F 116	...FU 116	22,0	47,5	473	548
6	K 4480-F 116	...FU 116	22,0	47,5	473	548
7	K 4480-F 126	...FU 126	25,5	54,5	495	570

## Explosion-proof model

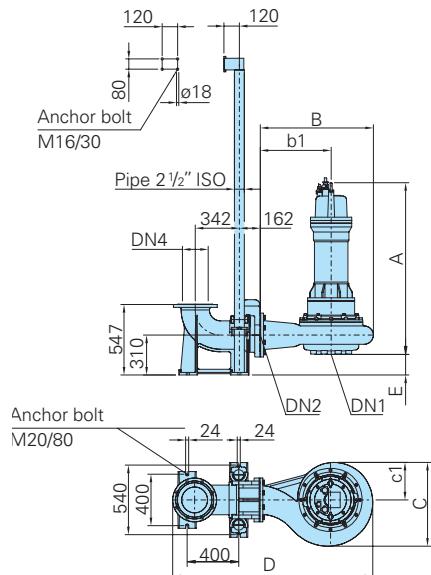
Curve	Pump type	Motor output	Rated curr.	Weight(kg)		
No.	Wet well installation	Dry well installation	P <sub>2</sub> (kW)	I <sub>n</sub> (A)	Wet well inst.	Dry well inst.
1	K 4471-F 96Ex	...FU 96Ex	17,0	38,5	442	505
2	K 4475-F 96Ex	...FU 96Ex	17,0	38,5	442	505
3	K 4475-F 106Ex	...FU 106Ex	20,0	42,5	463	538
4	K 4478-F 106Ex	...FU 106Ex	20,0	42,5	463	538
5	K 4478-F 116Ex	...FU 116Ex	22,0	47,5	473	548
6	K 4480-F 116Ex	...FU 116Ex	22,0	47,5	473	548
7	K 4480-F 126Ex	...FU 126Ex	25,5	54,5	495	570

## Performance curves

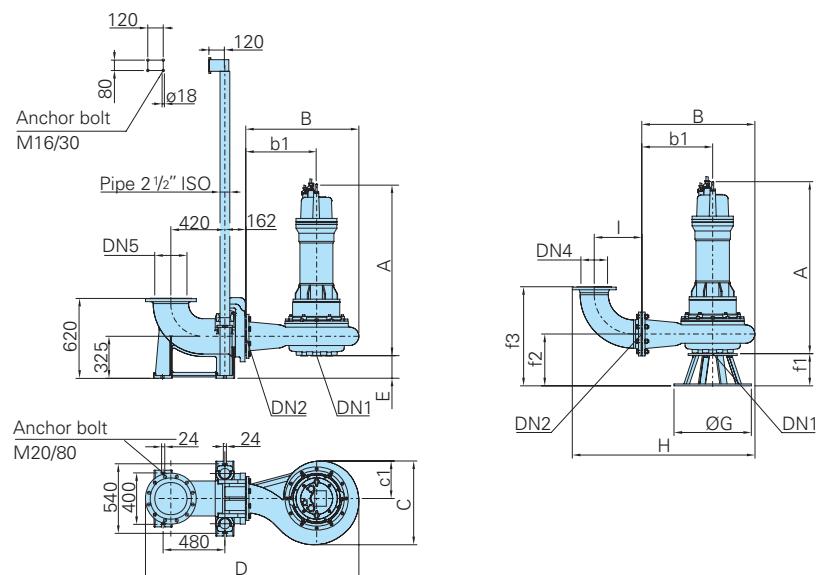


## Installations and dimensions for K 44...-6 pole

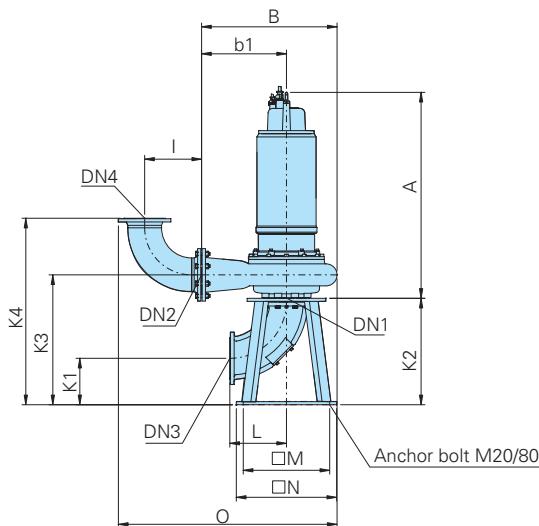
**Wet well installation with auto-coupling system**  
DN 200 DN 250



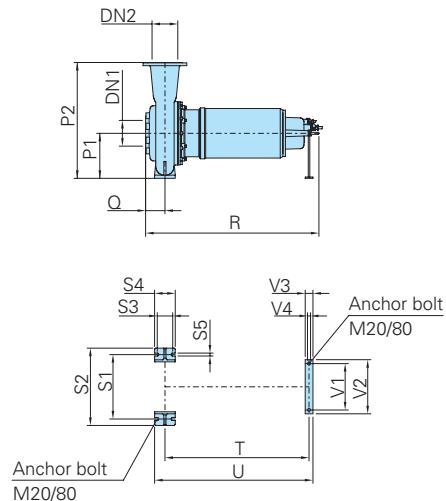
**Wet well installation with ring base stand**



**Dry well installation vertical**



**Dry well installation horizontal**



Pump type	A <sub>max.</sub>	B	b <sub>1</sub>	C	c <sub>1</sub>	D	E	f <sub>1</sub>	f <sub>2</sub>	f <sub>3</sub>	ø G	H	I	K <sub>1</sub>	K <sub>2</sub>	K <sub>3</sub>	K <sub>4</sub>	L	□M	□N	O
K4471 up to K4480-F...(Ex)	1333	878	550	650	291	1552	160	250	400	767	600	1415	367	301	690	842	1209	367	560	650	1417
K4471 up to K4480-F...(Ex)	1333	878	550	650	291	1657**	175**	250	400	767	600	1415	367	301	690	842	1209	367	560	650	1417

Pump type	P <sub>1</sub>	P <sub>2</sub>	Q	R <sub>max.</sub>	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	S <sub>4</sub>	S <sub>5</sub>	T <sub>max.</sub>	U <sub>max.</sub>	V <sub>1</sub>	V <sub>2</sub>	V <sub>3</sub>	V <sub>4</sub>	DN <sub>1</sub>	DN <sub>2</sub>	DN <sub>3</sub>	DN <sub>4</sub>	DN <sub>5</sub>
K4471 up to K4480-F...(Ex)	350	900	150	1345	500	600	120	160	23	1118	1228	360	420	60	ø 23	200	200	200	250	
K4471 up to K4480-F...(Ex)	350	900	150	1345	500	600	120	160	23	1118	1228	360	420	60	ø 23	200	200	250*	-	250**

all dimensions in mm

\* with 90°-elbow DN200-DN250 discharge

\*\*only wet well installation with auto-coupling system DN 250

# K55...-6 pole

960 rpm  
DN 250 discharge  
130 mm Ø spherical clearance



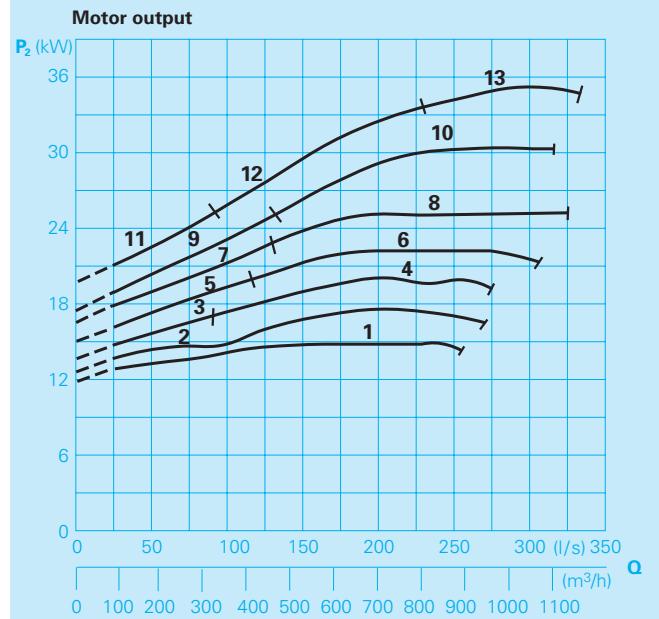
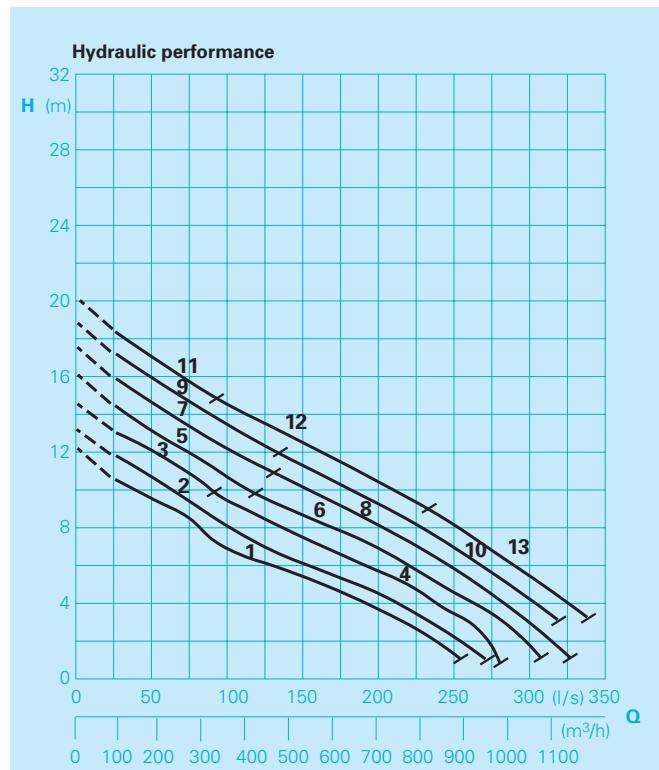
## Standard model

Curve No.	Pump type	Wet well installation	Dry well installation	Motor output P <sub>2</sub> (kW)	Rated curr. I <sub>N</sub> (A)		Weight(kg)	
					Wet well inst.	Dry well inst.	Wet well inst.	Dry well inst.
1	K 5564-F 96	...FU 96	17,0	38,5	489	552		
2	K 5566-F 96	...FU 96	17,0	38,5	489	552		
3	K 5568-F 96	...FU 96	17,0	38,5	489	552		
4	K 5568-F 106	...FU 106	20,0	42,5	510	585		
5	K 5570-F 106	...FU 106	20,0	42,5	510	585		
6	K 5570-F 116	...FU 116	22,0	47,5	520	595		
7	K 5572-F 116	...FU 116	22,0	47,5	520	595		
8	K 5572-F 126	...FU 126	25,5	54,5	542	617		
9	K 5574-F 126	...FU 126	25,5	54,5	542	617		
10	K 5574-G136	...GU 136	33,0	68,0	620	702		
11	K 5576-F 126	...FU 126	25,5	54,5	542	617		
12	K 5576-G136	...GU 136	33,0	68,0	620	702		
13	K 5576-G156	...GU 156	40,5	82,0	652	735		

## Explosion-proof model

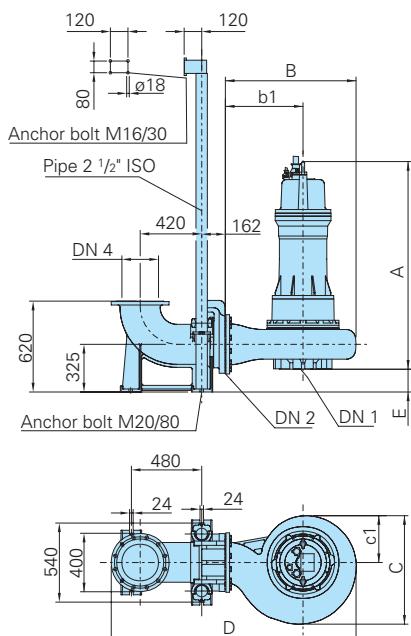
Curve No.	Pump type	Wet well installation	Dry well installation	Motor output P <sub>2</sub> (kW)	Rated curr. I <sub>N</sub> (A)		Weight(kg)	
					Wet well inst.	Dry well inst.	Wet well inst.	Dry well inst.
1	K 5564-F 96 Ex	...FU 96 Ex	17,0	38,5	489	552		
2	K 5566-F 96 Ex	...FU 96 Ex	17,0	38,5	489	552		
3	K 5568-F 96 Ex	...FU 96 Ex	17,0	38,5	489	552		
4	K 5568-F 106 Ex	...FU 106 Ex	20,0	42,5	510	585		
5	K 5570-F 106 Ex	...FU 106 Ex	20,0	42,5	510	585		
6	K 5570-F 116 Ex	...FU 116 Ex	22,0	47,5	520	595		
7	K 5572-F 116 Ex	...FU 116 Ex	22,0	47,5	520	595		
8	K 5572-F 126 Ex	...FU 126 Ex	25,5	54,5	542	617		
9	K 5574-F 126 Ex	...FU 126 Ex	25,5	54,5	542	617		
10	K 5574-G136 Ex	...GU 136 Ex	33,0	68,0	620	702		
11	K 5576-F 126 Ex	...FU 126 Ex	25,5	54,5	542	617		
12	K 5576-G136 Ex	...GU 136 Ex	33,0	68,0	620	702		
13	K 5576-G156 Ex	...GU 156 Ex	40,5	82,0	652	735		

## Performance curves

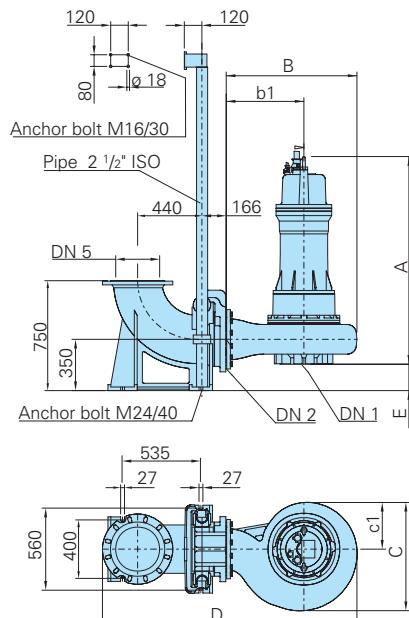


## Installations and dimensions for K 55...-6 pole

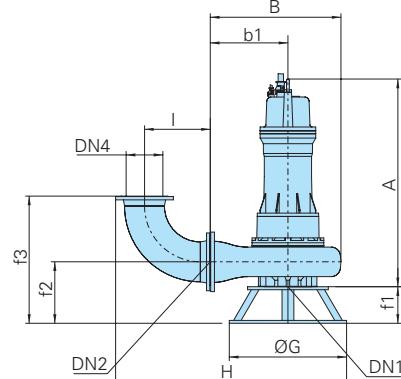
**Wet well installation with auto-coupling system  
DN 250**



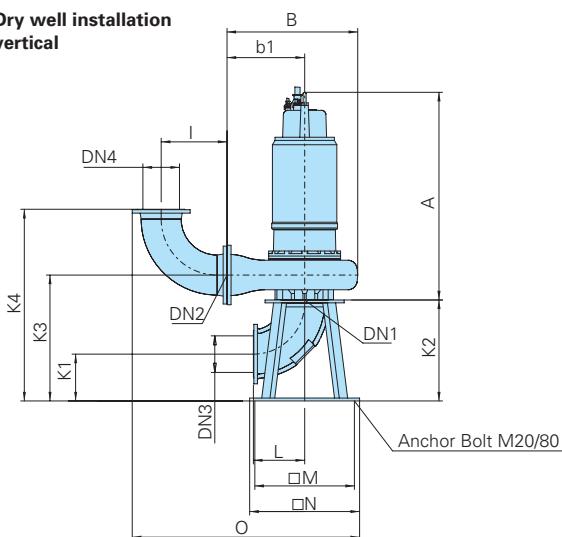
**DN 300**



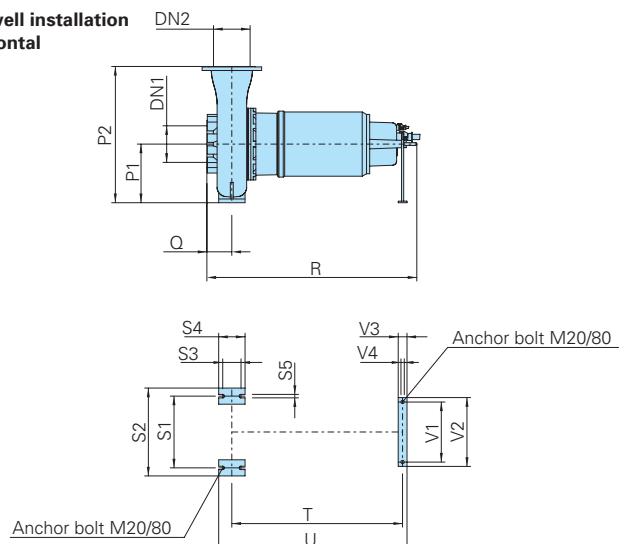
**Wet well installation  
with ring base stand**



**Dry well installation  
vertical**



**Dry well installation  
horizontal**



**Pump type**

A <sub>max.</sub>	B	b <sub>1</sub>	C	c <sub>1</sub>	D	E	f <sub>1</sub>	f <sub>2</sub>	f <sub>3</sub>	ø G	H	I	K <sub>1</sub>	K <sub>2</sub>	K <sub>3</sub>	K <sub>4</sub>	L	□ M	□ N	O
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*K5564 up to K5576-F... (Ex)	1363	892	530	741	320	1672	155	250	420	869	800	1577	449	320	690	860	1309	350	680	750	1552
**K5564 up to K5576-F... (Ex)	1363	892	530	741	320	1738**	180**	250	420	7701	800	15401)	3701)	300	690	860	12101)	350	680	750	15151)
*K5574 up to K5576-G... (Ex)	1363	892	530	741	320	1672	155	250	420	869	800	1577	449	320	690	860	1309	350	680	750	1552
**K5574 up to K5576-G... (Ex)	1363	892	530	741	320	1738**	180**	250	420	7701	800	15401)	3701)	300	690	860	12101)	350	680	750	15151)

**Pump type**

P <sub>1</sub>	P <sub>2</sub>	Q	R <sub>max.</sub>	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	S <sub>4</sub>	S <sub>5</sub>	T <sub>max.</sub>	U <sub>max.</sub>	V <sub>1</sub>	V <sub>2</sub>	V <sub>3</sub>	V <sub>4</sub>	DN <sub>1</sub>	DN <sub>2</sub>	DN <sub>3</sub>	DN <sub>4</sub>	DN <sub>5</sub>
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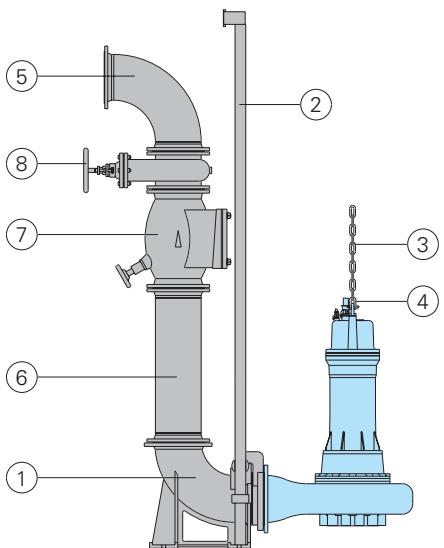
*K5564 up to K5576-F... (Ex)	400	930	170	1375	490	600	125	180	23	1128	1248	360	420	60	ø 23	250	250	250	250	-
**K5564 up to K5576-F... (Ex)	400	930	170	1375	490	600	125	180	23	1128	1248	360	420	60	ø 23	250	250	300*	300 <sup>1)</sup>	300**
*K5574 up to K5576-G... (Ex)	400	930	170	1433	490	600	125	180	23	1166	1286	410	470	60	ø 23	250	250	250	250	-
**K5574 up to K5576-G... (Ex)	400	930	170	1433	490	600	125	180	23	1166	1286	410	470	60	ø 23	250	250	300*	300 <sup>1)</sup>	300**

all dimensions in mm \* Flanged 90° elbows DN 250 – DN 300 suction \*\* only wet well installation with auto-coupling system DN 300

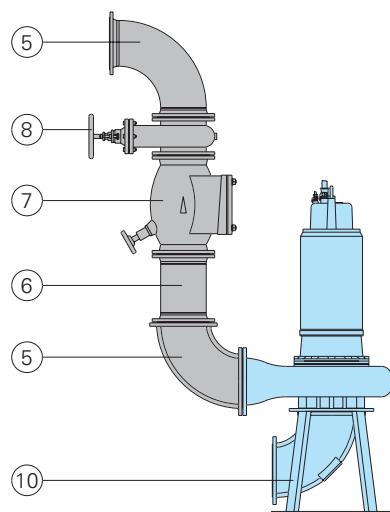
<sup>1)</sup> Flanged 90° elbow with DN250-DN 300 discharge

## Accessories

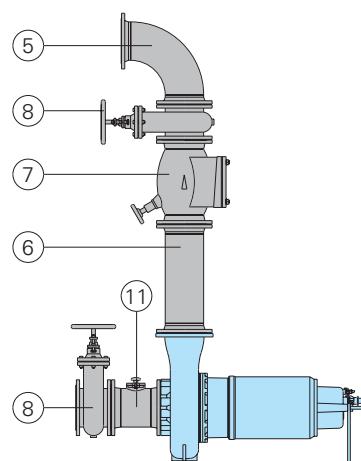
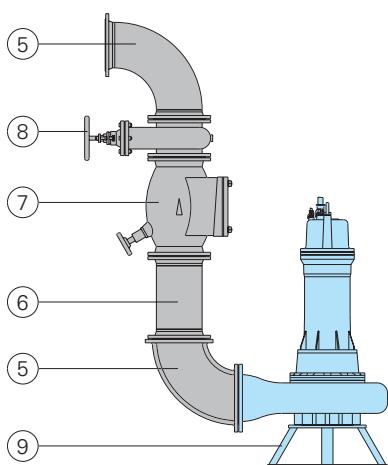
**Permanent wet well installation  
with elbow discharge connection**



**Permanent dry well installation  
vertical**



**horizontal**



Part Description	Type	Dim.	Part No.
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(1) Auto-coupling system consisting of auto-coupling with flanged elbow, flanged pump coupling and upper slide rail bracket

(2) Steel galvanized guide rails, pair, per m 2½" 2190225

(3) Steel galvanized lifting chain, per m 10 mm Ø 2800410  
13 mm Ø 2800385

(4) Steel galvanized shackle Dim.2 2801410

(5) 90° flanged elbow DN 200 2153363  
DN 250 2153373  
DN 300 2153383  
DN 250 x 6005001  
DN 300

or flanged y-piece for twin pump arrangement, horizontal discharge (optional with vertical discharge) available with different dimensions according to sump dimension

(6) Flanged discharge pipe with gasket and fixing bolts DN 200 2152271  
DN 250 2152281  
DN 300 2152291

Discharge pipe, per additional m DN 200 2150200  
DN 250 2150250  
DN 300 2150300

Flanged reducer on request

(7) Flanged swing check valve with gasket and fixing bolts DN 200 2212816  
DN 250 2212817  
DN 300 2212818

(8) Flanged gate valve with gasket and fixing bolts DN 200 2216200  
DN 250 2216250  
DN 300 2216300

(9) Ring base stand NB 200 DN 200 7321285  
NB 250 DN 250 7321675  
NB 300 DN 300 7321665

(10) Pump stand with 90° suction elbow with cleaning hole, gasket and fixing bolts TVS 200 R DN 200 8604240  
TVS 200/250 R DN 200/250 8604245  
TVS 250 R DN 250 8604250  
TVS 250/300 R DN 250/300 8604255  
TVS 300 R DN 300 8604260

(11) Flanged pipe with cleaning hole, gasket and fixing bolts DN 200 2159820  
DN 250 2159825  
DN 300 2159830

Coupling systems, elbows, pipes, fittings (valves, flaps etc.) of **stainless steel** on request.

Electrical and electronic **control panels** for pumps and pump stations with accessories on request.

**Sumps** of concrete or synthetic material for complete pump stations please see special leaflet.

**HOMA**  
P U M P T E C H N O L O G Y

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