The source for world wide pump technology

HOMA PUMP TECHNOLOGY

HOMA
Product Range









- Submersible drainage pumps
- Contractor pumps
- Drainage pumps for emergency application
- Deepwell submersible pumps
- Submersible sewage pumps
- Submersible grinder pumps
- Domestic waste water disposal units
- Compact sewage disposal units
- Packaged pumps stations
- Mixers and flow generators
- Injector systems for tank cleaning
- Garden pumps
- Domestic booster units
- Fountain pumps
- Control panels







Worldwide Presence

HOMA pumps are installed in more than 60 countries around the world – in countless projects of various kinds. They comply to all international safety and quality standards and are certified by many institutions and organisations responsible for national waste water treatment standards. To maintain and further develop this high quality level is our main target.

Network of Sales and Service Partners



HOMA provides a worldwide network of agents and distributors supporting our customers with excellent sales and service assistance in planning, specification and selection, including a computer software program available on CD-ROM or from the WorldWideWeb.

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Fax: ++49 (0) 22 47/7 02-44

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www.homapumps.com

3.0/0405.(RP).001 / Nr. 0033080EN We reserve the right to alter our specifications without notice.

HOMA PUMP TECHNOLOGY

Electric Submersible Sewage Pumps
Ranges KX86



Discharge Size
DN 400

Innovation in Hydraulic Performance

High Performance in Waste Water Pumping

HOMA submersible waste water and sewage pumps operate worldwide in numerous kinds of domestic, municipal and industrial applications. Decades of experience in the design and manufacturing of submersible pumps plus uncompromising attention to quality in every detail and strict monitoring of production quality ensure the utmost reliability and long service life of all **HOMA** products.



Flexible system-components for problem-free installation

HOMA combines efficiency, safety, high quality and robust design with a flexibility that allows the individual optimization of every project realization:

Pumps for various types of application and installation, a complete program of installation equipment including pipes, valves, pump pits from concrete or composite materials, electric control and monitoring systems. With this range HOMA can provide a tailor-made solution for every waste water pumping application.

The reliability of fully automatic operation

HOMA waste water pumping stations feature fully automatic control and monitoring. Reliable liquid level control systems of various types (float switch, pneumatic, ultrasound or electronic systems) are available to secure reliable pump operation at minimum energy consumption. All possible fault factors like shaft seal condition, temperatures, moisture or power supply can be automatically monitored and transferred to various alarm systems.

Higher Performance to meet every Challenge

Various challenges – individual solutions: **HOMA** submersible wastewater pumps are designed for pumping sewage, sludge, effluents or surface water, including liquids containing a large proportion of solid or fibrous matter. They are installed in domestic, municipal, industrial and agricultural pumping applications.

For chemically aggressive liquids, specific components like impellers, volutes or complete units are also available from high-resistant materials like stainless steel, duplex or bronze.









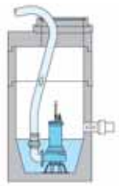
The right installation for every pump station

Wet well installation with auto-coupling system

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.

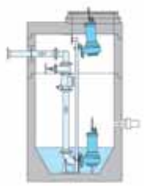
Wet well installation with base stand

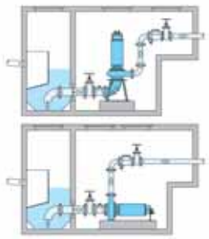
Submerged pump mounted on a ring base stand for temporary, service or emergency operation. Discharge connection with pipe or hose.



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.





Operating conditions

The motors are designed for continuous operating duty (S1) at maximum 15 starts per hour. In addition to a fully submerged motor housing in wet well installation, a jacket cooled motor-variant is available for S1 operating with a non-fully submerged motor or for dry well installation.

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

Ranges and Models

Motor selection

Motor speed:

For the standard hydraulic ranges, the motors are designed with the following speeds:

- 1450 U/min = 4-pole
- 960 U/min = 6-pole
- 720 U/min = 8-pole

Voltages:

All specified data relate to an operating voltage of 400 V/3 Ph, 50 Hz. Different voltages are available on request.

Type of starting:

The motors are supplied as standard suitable for Direct- or Star-Delta-Start.

All motors are also suitable for operating with frequency converter or soft starter device.

Explosion protection:

In addition to the standard version, all motors are available explosion proof according to ATEX Ex II 2 G EEXd.

Dry well variant:

Besides the version for submerged operation, all pumps are also available for dry well or non-submerged operation. Motor cooling is provided by a cooling jacket, using either the pumped liquid or external coolant circulation.

Motor monitoring:

All motors are supplied with temperature sensors in the winding, bi-metalic sensors (standard) or PTC sensors or PT 100 (on request).

- Motors for wet well installation (without cooling jacket):
  As C-version (see pump type code) with oil chamber seal condition monitoring probe and moisture sensor in junction chamber)
- Motors with cooling jacket:
  Supplied as standard with oil chamber seal condition monitoring probe.

S-version additionally with moisture monitoring in the stator housing.
Additional monitoring devices (e. g. bearing temperature) on request.

Hydraulic selection

Discharge and suction flange:

- DN 200
- DN 250
- DN 300
- DN 400

Reducing adapters for different auto-coupling system and valve dimensions are available.

Enclosed two channel impeller

For liquids containing impurities and sludge with solid particles.



Impeller spherical clearance:

The pumps are available with impeller spherical clearances from 100 mm to 165 mm according to pump range.

Pump type code:

Pump				Motor						
K(X)	4	4	80 -	H	(U)	26	4	(C)	(S)	(EX)
Impeller design:	Discharge size:	Spherical clearance:	Impeller diameter:	Motor frame size:	Jacket cooled:	Motor power (coded)	Speed:	only for motors without jacket cooling	Moisture monitoring in the stator housing	Explosion proof motor
K, KX = Enclosed two channel	4 = 200 mm 5 = 250 mm 6 = 300 mm 8 = 400 mm	4 = 100 mm 5 = 130 mm 6 = 150 mm 165 mm	(mm : 5) e. g. 80 = 100 mm	F, G, H, R	Jacket cooled motor for non-submerged installation		4 = 4 pole (1450 rpm) 6 = 6 pole (960 rpm) 8 = 8 pole (720 rpm)			

Design - Proven Quality in Detail

More quality in design and materials – less maintenance and failures

Quality can be measured – **HOMA** submersible waste water pumps are characterized by the robust design, generous dimensioning and high quality materials of all components.



Materials

Motor housing	Cast iron GG 25 [1]
Pump housing	Cast iron GG 25 [1]
Impeller	Cast iron GG 25 [1] [2]
Wear rings	Bronze / Stainless Steel
Motor shaft	Stainless steel
Mechanical seals	Silicon-carbide / Silicon-carbide
Motor cooling jacket (model U)	Stainless steel
Seals and O-rings	NBR (Perbonane) [3]
Cable	H07RN-F (PLUS) [4]

[1]) also available in stainless steel
[2]) also available in bronze
[3]) also available from FPM (vitone)
[4]) screened cable on request

1 Discharge
With DIN/ANSI flange DN 200 up to DN 400 (PN 16)

2 Non-clogging, high efficiency impellers
Enclosed two channel impeller with replaceable wear ring and large spherical clearance.

3 Shaft seals
Two independently working silicon-carbide mechanical seals in tandem-arrangement.

4 Oil chamber
Separate large oil chamber, lubricating and cooling the mechanical seals, forming an extra safety and inspection element. Additional electronic seal condition monitoring probe.

5 Motor
Three-phase electric motors, with 4-, 6- or 8-pole motor speed.
Insulation class F (155 °C), degree of protection IP 68
Explosion protection
All models available with explosion proof motors according to ATEX Ex II 2 G EExd.

6 Motor cooling
Motors for submerged operation are cooled by the surrounding liquid. For dry well or non-submerged operation, motors are available with a cooling jacket, providing an internal cooling circulation of water from the pump volute. For special applications the cooling jacket can also be connected to an external cooling system.

7 Thermal sensor (bi-metal)
Embedded in the motor winding. PTC sensors or PT 100 available on request.

8 Moisture monitoring in stator housing
Separate chamber with float monitoring.

9 Shaft bearing
Maintenance-free, prelubricated ball bearings.

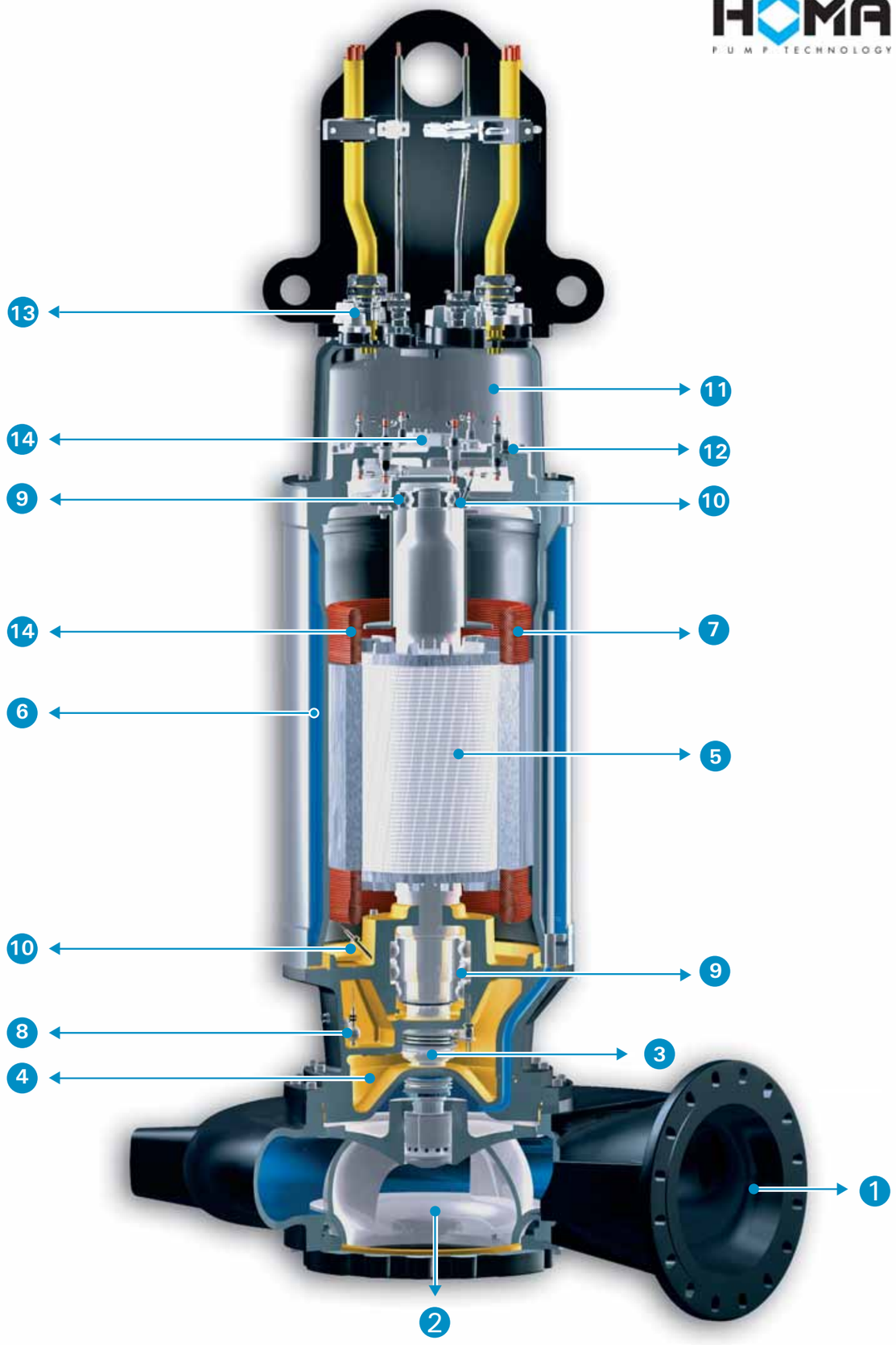
10 Temperature monitoring of the shaft bearings
Available on request.

11 Cable junction chamber
Separate junction chamber

12 Electronic moisture sensor in junction chamber

13 Pressure sealed, strain relief cable entry

14 Anti-condensation heating for cable junction chamber and stator housing available on request



DN400 - KX86...-6 pole

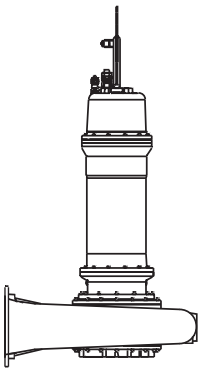


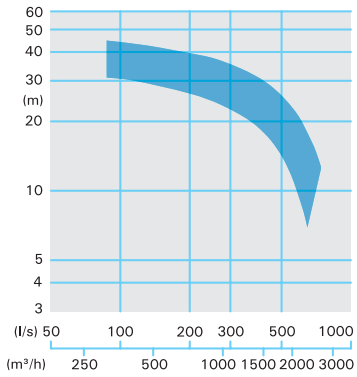
Enclosed two channel impeller

165 mm Ø

Spherical clearance

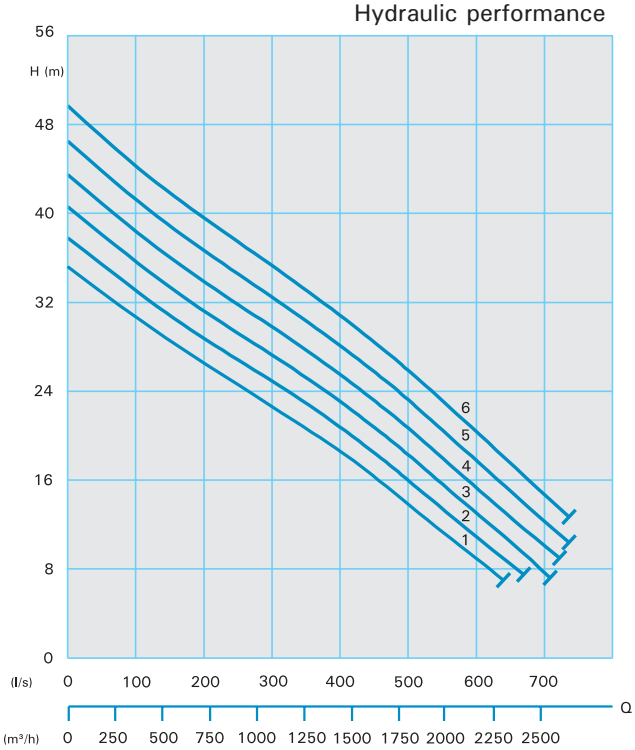
960 rpm



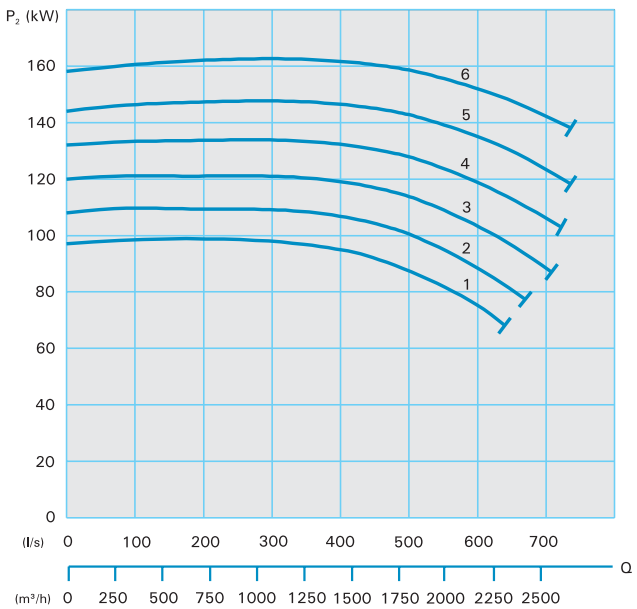


Performance curves

Hydraulic performance



Motor output



Technical data

Standard- and Explosion-proof model - Wet well installation

Curve No.	Pump type	Motor input P_1(kW)	Motor output P_2(kW)	Rated current I_N(A)	Weight (kg)
1	KX86100-H276(C)(S)(EX)	123,5	112,0	227,0	1602
2	KX86102-H276(C)(S)(EX)	123,5	112,0	227,0	1605
3	KX86104-R286(C)(S)(EX)	140,0	132,0	241,0	2110
4	KX86106-R316(C)(S)(EX)	169,0	160,0	287,0	2150
5	KX86108-R316(C)(S)(EX)	169,0	160,0	287,0	2153
6	KX86110-R346(C)(S)(EX)	195,0	185,0	337,0	2355

Standard- and Explosion-proof model - Dry well installation

Curve No.	Pump type	Motor input P_1(kW)	Motor output P_2(kW)	Rated current I_N(A)	Weight (kg)
1	KX86100-HU276(S)(EX)	123,5	112,0	227,0	1702
2	KX86102-HU276(S)(EX)	123,5	112,0	227,0	1705
3	KX86104-RU286(S)(EX)	140,0	132,0	241,0	2220
4	KX86106-RU316(S)(EX)	169,0	160,0	287,0	2260
5	KX86108-RU316(S)(EX)	169,0	160,0	287,0	2263
6	KX86110-RU346(S)(EX)	195,0	185,0	337,0	2465

DN400 - KX86...-8 pole

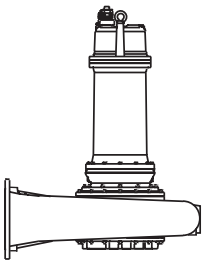


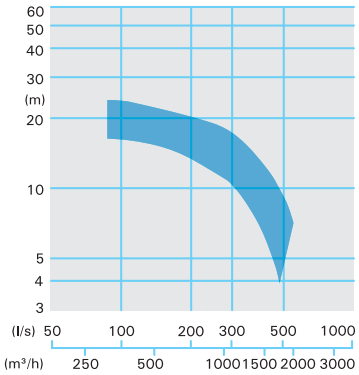
Enclosed two channel impeller

165 mm Ø

Spherical clearance

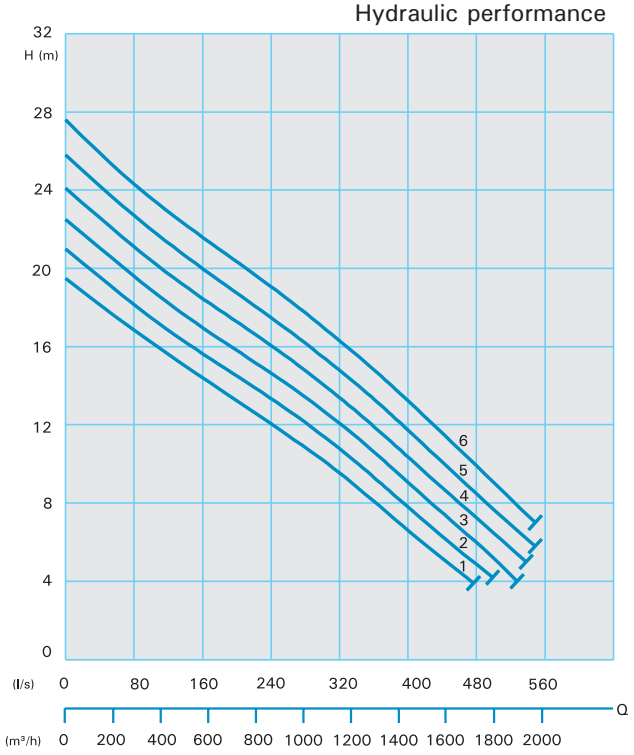
720 rpm



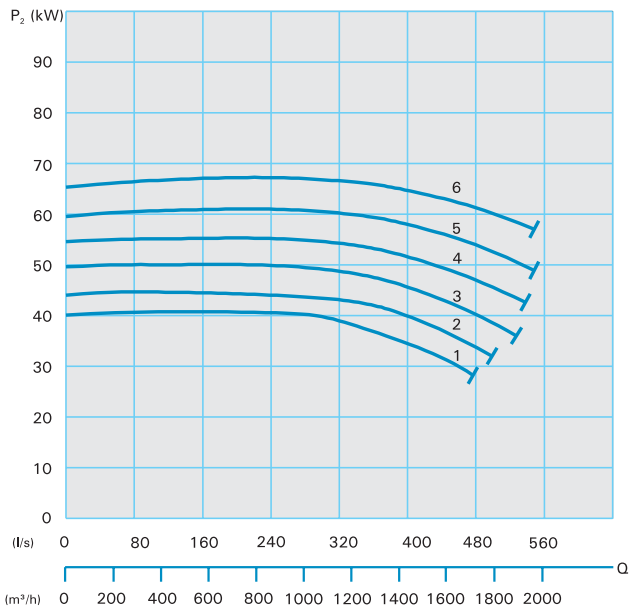


Performance curves

Hydraulic performance



Motor output



Technical data

Standard- and Explosion-proof model - Wet well installation

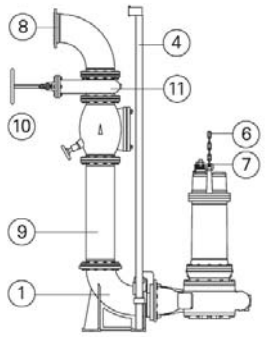
Curve No.	Pump type	Motor input P_1(kW)	Motor output P_2(kW)	Rated current I_N(A)	Weight standard (kg)
1	KX86100-H178(C)(S)(EX)	49,5	45,0	93,9	1550
2	KX86102-H178(C)(S)(EX)	49,5	45,0	93,9	1552
3	KX86104-H198(C)(S)(EX)	58,5	53,0	109,9	1582
4	KX86106-H208(C)(S)(EX)	70,0	63,0	129,6	1614
5	KX86108-H208(C)(S)(EX)	70,0	63,0	129,6	1617
6	KX86110-H228(C)(S)(EX)	79,0	72,0	148,2	1656

Standard- and Explosion-proof model - Dry well installation

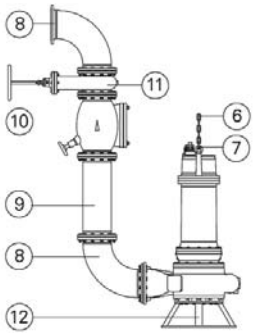
Curve No.	Pump type	Motor input P_1(kW)	Motor output P_2(kW)	Rated current I_N(A)	Weight standard (kg)
1	KX86100-HU178(S)(EX)	49,5	45,0	93,9	1650
2	KX86102-HU178(S)(EX)	49,5	45,0	93,9	1652
3	KX86104-HU198(S)(EX)	58,5	53,0	109,9	1682
4	KX86106-HU208(S)(EX)	70,0	63,0	129,6	1714
5	KX86108-HU208(S)(EX)	70,0	63,0	129,6	1717
6	KX86110-HU228(S)(EX)	79,0	72,0	148,2	1756

Accessories

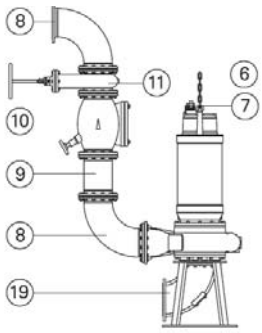
Permanent wet well installation with autocoupling system



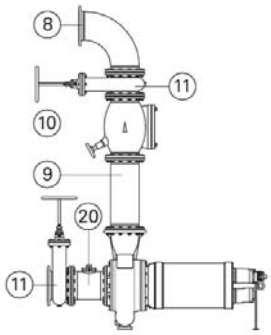
Transportable wet well installation



Permanent dry well installation vertical



Permanent dry well installation horizontal



No.	Description	Type	Dimension	Part No.
1	Auto-coupling system, cast iron, consisting of auto-coupling with flanged elbow, flanged pump coupling and upper slide rail bracket	KK 200/200 KK 250/200 KK 250/250 KK 300/250 KK 300/300 KK 400/350 KK 400/400	DN200 DN250/200 DN250 DN300/250 DN300 DN400/350 DN400	8604100 8604120 8604110 8604130 8604090 8604144 8604140
2	Auto-coupling system, consisting of auto-coupling with horizontal discharge flange, flanged pump coupling and upper slide rail bracket	KS 200/200 KS 250/250	DN200 DN250	8604081 8604085
4	Guide rails, pair, per meter - Galvanized steel		2“ 2½“ 3“	2190205 2190225 2190230
	- Stainless steel		2“ 2½“ 3“	2190256 2190258 2190260
6	Lifting chain, per meter			
	- Galvanized steel - Stainless steel			on request on request
7	Shackle			
	- Galvanized steel - Stainless steel			on request on request
8	90° steel elbow with 2 flanges, gasket and fixing bolts		DN200 DN250 DN300 DN400	2153363 2153373 2153383 on request
	90° cast iron elbow with cleaning hole and 2 flanges, gasket and fixing bolts		DN200 DN200/250 DN250 DN250/300 DN300 DN400	on request
	Flanged Y-piece for twin pump arrangement, gasket and fixing bolts		DN200 DN250 DN300 DN400	on request

No.	Description	Type	Dimension	Part No.
9	Flanged discharge pipe, 1 meter, with gasket and fixing bolts		DN200 DN250 DN300 DN400	2150200 2150250 2150300 on request
	Discharge pipe, per additional meter			on request
	Flanged reducer			on request
10	Flanged swing check valve, cast iron		DN200 DN250 DN300 DN400	2212816 2216817 2216300 on request
11	Flanged gate valve, cast iron		DN200 DN250 DN300 DN400	2216200 2216250 2216300 on request
12	Ring base stand	NB200 NB250 NB300	DN200 DN250 DN300	7321295 7321675 7321665
19	Pump stand for vertical dry well installation on concrete base with 90° suction elbow and cleaning hole	TVS200 R TVS200/250 R TVS250 R TVS250/300 R TVS300 R	DN200 DN200/250 DN250 DN250/300 DN300	8604240 8604245 8604250 8604255 8604260
	Mounting plate for vertical dry well installation on concrete base with 90° suction elbow	TVM400	DN400	on request
20	Flanged pipe with cleaning hole, gasket and fixing bolts		DN200 DN250 DN300 DN400	2159820 2159825 2159830 on request

Stainless steel coupling systems, elbows, pipes, fittings (valves, flaps etc.) on request.

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

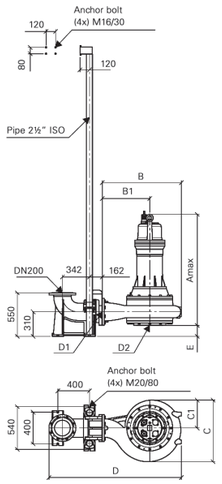
Sumps of concrete or synthetic material for complete pump stations please see special leaflet.

Installations and Dimensions

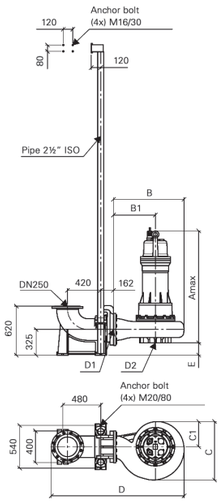
Pump type	DN1	DN2	DN3	Amax	B	B1	C	C1	D	E	F1	F2	F3	øG	H	J1	J2	K1	K2	K3	K4	L	MxM	O	P1	P2	Q	Rmax	S1	S3	Tmax	Umax	V1
KX44(68-80)-G(U)… 4(Ex)	200	200	200	1518	878	550	650	291	1552	160	250	400	767	600	1417	369	369	301	690	842	1209	367	560x560	1417	350	900	150	1533	500	120	1256	1396	410
KX44(76-83)-H(U)… 4(Ex)	200	200	200	1673	878	550	650	291	1552	160	250	400	767	600	1417	369	369	301	690	842	1209	367	560x560	1417	350	900	150	1688	500	120	1440	1550	308
KX44(68-83)-F(U)… 6(Ex)	200	200	200	1333	878	550	650	291	1552	160	250	400	767	600	1417	369	369	301	690	842	1209	367	560x560	1417	350	900	150	1345	500	120	1118	1228	360
KX44(85-92)-H(U)… 4(Ex)	200	250	200	1695	1000	600	779	353	1674	138	250	422	789	800	1539	369	369	318	692	864	1231	350	680x680	1539	430	1030	172	1710	450	120	1440	1550	508
KX44(85-92)-G(U)… 6(Ex)	200	250	200	1535	1000	600	779	353	1674	138	250	422	789	800	1539	369	369	318	692	864	1231	350	680x680	1539	430	1030	172	1550	450	120	1281	1391	410
K55(64-76)-F(U)… 6(Ex)	250	250	250	1363	892	530	741	320	1681	155	250	420	869	800	1577	449	449	320	690	860	1309	350	680x680	1552	400	930	170	1375	490	125	1128	1448	360
K55(74-76)-G(U)… 6(Ex)	250	250	250	1418	892	530	741	320	1681	155	250	420	869	800	1577	449	449	320	690	860	1309	350	680x680	1552	400	930	170	1250	490	125	1003	1123	360
K55(64-76)-F(U)… 8(Ex)	250	250	250	1363	892	530	741	320	1681	155	250	420	869	800	1577	449	449	320	690	860	1309	350	680x680	1552	400	930	170	1375	490	125	1128	1248	360
KX66(78-86)-G(U)… 6(Ex)	300	300	300	1593	1100	630	915	387	1946	145	300	505	1030	850	1850	527	527	308	752	957	1482	420	730x730	1850	500	1130	205	1608	500	120	1306	1416	410
KX66(89-95)-H(U)… 6(EX)	300	300	300	1773	1100	630	915	387	1946	145	300	505	1030	850	1850	527	527	308	752	957	1482	420	730x730	1850	500	1130	205	1788	500	120	1486	1596	508
KX66(80-95)-G(U)… 8(Ex)	300	300	300	1593	1100	630	915	387	1946	145	300	505	1030	850	1850	527	527	308	752	957	1482	420	730x730	1850	500	1130	205	1608	500	120	1306	1416	410
KX86(100-102)-H(U)… 6(Ex)	400	400	400	1811	1500	880	1215	512	2703	167	–	–	–	–	–	–	684	400	1111	1343	2025	682	400	2466	650	1530	233	1826	740	140	1496	1616	508
KX86(104-110)-R(U)… 6(Ex)	400	400	400	2894	1500	880	1215	512	2703	167	–	–	–	–	–	–	684	400	1111	1343	2025	682	400	2466	650	1530	233	2293	740	140	2021	2161	740
KX86(100-110)-H(U)… 8(Ex)	400	450	400	1811	1500	880	1215	512	2703	167	–	–	–	–	–	–	684	400	1111	1343	2025	682	560	2466	650	1530	233	1826	740	140	1496	1616	508

Wet well installation with auto-coupling system

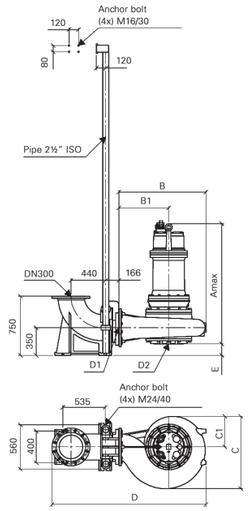
DN200



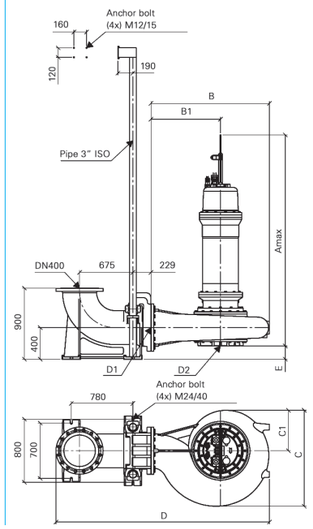
DN250



DN300

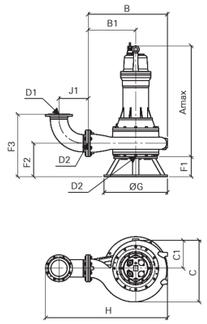


DN400



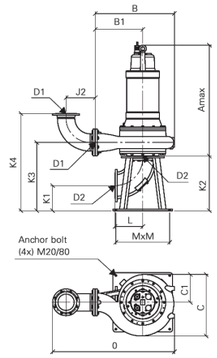
Wet well installation with base stand

only KX44
K55
KX66



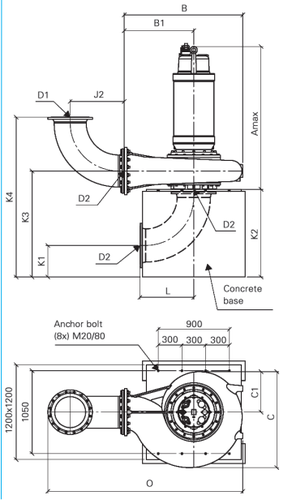
Dry well installation vertical with base stand

only KX44
K55
KX66



Dry well installation vertical with concrete base

only KX86



Dry well installation horizontal

