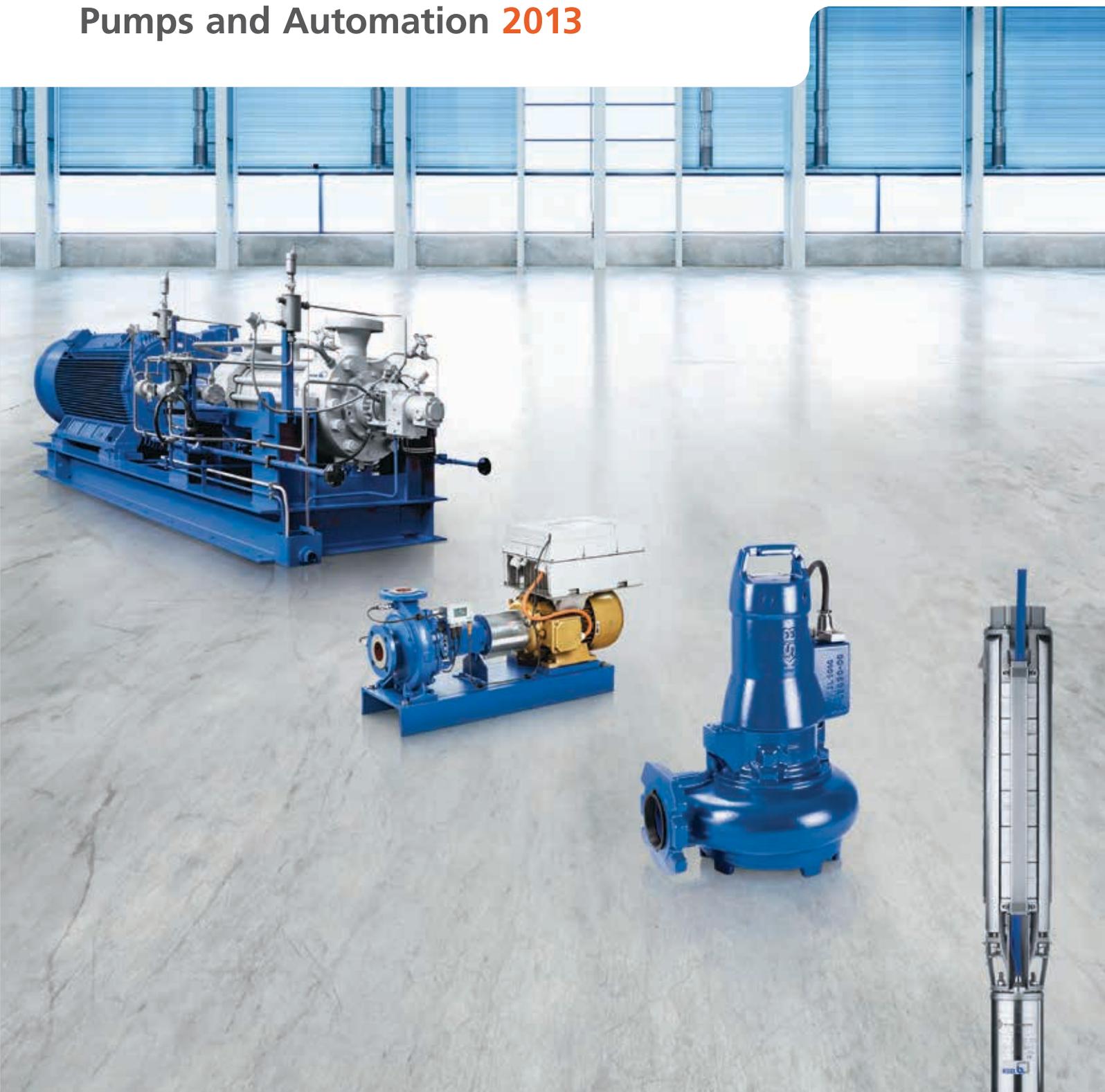


## Pumps and Automation 2013



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## Our tradition:

### Competence since 1871.

We have supplied generations of customers world-wide with pumps, valves, automation products and services. A company with that kind of experience knows that success is a process based on a stream of innovations. A process made possible by a close working alliance between developer and user, between production and practice.

Partners achieve more together. We do everything possible to ensure that our customers always have access to the ideal product and system solution. KSB is a loyal partner. And a strong one:

- Over 140 years' experience
- Present in more than 100 countries
- More than 16,000 employees
- More than 160 service centres worldwide
- Approximately 2,600 service specialists

## Type series index

### for pumps and automation

Amacan K	43	HGB / HGC / HGD	53	Omega	51
Amacan P	43	HGM	53		
Amacan S	43	HGM-RO	57	PSR	55
Amacontrol	60	HHH	47	PumpDrive	59
AmaDS3	40	HK (Nikkiso-KSB)	31	PumpMeter	60
Ama-Drainer-Box	40	HN/BN/TN (Nikkiso-KSB)	31	Pump Station CK 800-Eu	41
Ama-Drainer-Box Mini	40	HPH	27		
Ama-Drainer N 301 – 358	38	HPK	27	RDLO	51
Ama-Drainer 400 – 500	38	HPK-L	27	RDLP	51
Ama-Drainer 80, 100	39	HT/BT/TT (Nikkiso-KSB)	31	RER	55
Amajet	44	HX (Nikkiso-KSB)	28	RHD	55
Amaline	44	HY (Nikkiso-KSB)	28	RHM	56
Amamix	44	Hya-Compact K	37	RHR	56
Ama-Porter F / S	39	Hya-Compact VP	37	Rio-Eco N	22
Ama-Porter CK Pump Station	41	Hya-Eco VP	37	Rio-Eco-Therm N	23
Amaprop	44	Hyamaster ISB	59	Rio-Eco Z N	22
Amarex KRT	42	Hyamaster SPS	60	Rio-Therm N	22
Amarex KRT dry-installed	42	Hyamat IK, IV, IVP	38	Riotherm	22
Amarex KRT wet/dry-installed	42	Hyamat K	37	Rotex	39
Amarex N	42	Hyamat V	37	RPH	32
Amarex N CK Pump Station	41	Hya-Rain / Hya-Rain N	34	RPHb	32
API series (Nikkoso-KSB)	32	Hya-Rain Eco	34	RPH-RO	57
		Hya-Solo E	36	RPH-V	32
Beveron	54	Hya-Solo D	36	RSR	55
BOA-Systronic	61	Hya-Solo DV	36	RUV	55
		hyatronic N	58	RVM	56
		hyatronic spc	59	RVR	56
Cervomatic EDP.2	58			RWCP/RWCN	33
CHTA / CHTC / CHTD	53	ILN / ILNE / ILNS	24		
CHTR	33	ILNC / ILNCE / ILNCS	24	S 100D / UPA 100C	49
CINP/CINCN	33	INVCP/INVCN	33	SalTec System	57
Compacta	40	Ixo	35	SalTec DT	57
Controlmatic E	58			Secochem Ex	30
Controlmatic E.2	58	KWP / KWP-Bloc	45	Secochem Ex K	30
CPKN	29			Sewatec / Sewabloc	45
CTN	32	LCC-M	46	SEZ / SEZT / PHZ / PNZ	54
		LCC-R	46	SNW / PNW	54
DN (Nikkiso-KSB)	31	LCV	46	SPY	54
		LevelControl Basic 2	58		
Etabloc	25	LHD	47	TBC	46
Etabloc PumpDrive	25	LSA-S	45		
Etabloc SYT / Etaline SYT	28	LUV / LUVA	53	UPA 150C	49
Etachrom BC	25	LUV-Nuclear	56	UPA 200, 200B, 250C	49
Etachrom BC PumpDrive	26			UPA 300, 350	49
Etachrom NC	26	Magnochem	29	UPA Control	58
Etachrom NC PumpDrive	26	Magnochem-Bloc	30	UPZ, BSX-BSF	49
Etaline	23	Mega	47		
Etaline PumpDrive	23	MegaCPK	29	Vitachrom	52
Etaline-R	24	MegaCPK PumpDrive/PumpMeter	29	Vitacast / Vitacast E	52
Etaline Z	23	MDX	48	Vitalobe	52
Etaline Z PumpDrive	24	MHD	47	Vitaprime	52
Etanorm / Etanorm-R	25	mini-Compacta	40	Vitastage	52
Etanorm PumpDrive	25	MK / MKY	39	VN (Nikkiso-KSB)	31
Etanorm GPV / CPV	26	Movitec PumpDrive	50		
Etanorm SYT / RSY	28	Movitec VME	35	WBC	45
Etaprime B / BN	48	Movitec V / LHS / VS / VC	50	WKTA / WKTB	54
Etaprime L	48	Multi Eco	35	WKTR	34
Etaseco / Etaseco-I	30	Multi Eco-Pro	35		
Etaseco RVP	30	Multi Eco-Top	35	YNK	53
Evamatic-Box	41	Multitec	50	YNKR	33
		Multitec PumpDrive	50		
Filtra N	36	Multitec-RO	57	ZW	48
FGD	47				



## Our spare parts and services: **Dependability at your call.**

We tailor our services to enable new ways of individually optimising our products. They underscore our far-reaching sense of customer responsibility. That commitment starts before any orders – for example with sound advice on financing options. And it goes far beyond product arrival. A dependable partnership with KSB lasts for years.

In addition to spare parts, we offer our customers a plethora of services around pumps, valves, and other rotating equipment – also for non-KSB products:

- Technical consultancy
- Services provided on-site and in our service centres
- Maintenance inspection management
- Reverse engineering / retrofit
- TPM® Total Pump Management
- SES System Efficiency Services

Ready where you are. KSB runs more than 160 service centres around the world. Some 2,600 highly trained KSB specialists are on call to install, commission and maintain your equipment. So you can plan for a future free of unwanted surprises. And we also provide on-site training sessions. They ensure that operators can use KSB products and systems efficiently and profitably, day in, day out.



Which is how we secure the long-term value of our customers' facilities.



## Our mission: **Certified quality assurance.**

First-class products and excellent service take top priority at KSB. To maintain this level of excellence, we have developed a modern quality management system with globally applicable guidelines. It is based on the Business Excellence model of the European Foundation for Quality Management, which already ensures improved quality management Europe-wide.

Our guidelines define uniform quality for all KSB locations and have helped us to optimise our manufacturing processes. The results are shorter delivery times and global availability of our products. These guidelines govern the way we act so comprehensively that even the competence of our consulting and the good value for money we offer are clearly stipulated. Like the 'Made in Germany' quality seal, we introduced internal certification as a sign of the highest quality: 'Made by KSB'.

### Our five key goals:

- **Maximum customer satisfaction:** We do everything to fulfil our customers' wishes on time and in full.
- **Fostering quality awareness:** We put our quality commitment into daily practice – from executives to employees, whose qualifications and competence we foster through continuing training.
- **Prevention rather than cure:** We systematically analyse errors and prevent the causes.
- **Improvement in quality:** We continually optimise our processes in order to work more efficiently.
- **Involvement of suppliers:** We attach great importance to working together fairly and openly to achieve our shared goals.

In addition to quality, energy efficiency also plays an important role at KSB. Our products already fulfil the statutory minimum efficiency values of the ErP regulations for 2015, making a valuable contribution at the component level. You can potentially save even more energy by optimising your entire plant with the FluidFuture® energy efficiency concept.



As a signatory to the United Nations Global Compact, KSB is committed to endorsing the ten principles of the international community in the areas of human rights, labour standards, environmental protection and anti-corruption.

Type / Application	Type series	Page	FluidFuture® + ErP	Automation	Water Transport and Treatment	Industry	Energy Conversion	Building Services	Solids Transport
				A					
Circulator pumps/hot water service pumps, fixed speed	Rio-Therm N	22		■				■	
	Riotherm	22		■				■	
Circulator pumps, variable speed	Rio-Eco N	22	■	■				■	
	Rio-Eco Z N	22		■				■	
	Rio-Eco Therm N	23		■				■	
In-line pumps with fixed/variable speed drive	Etaline	23	■	■	■	■		■	
	Etaline Z	23	■	■	■				
	Etaline PumpDrive	23	■	■	■	■		■	
	Etaline Z PumpDrive	24	■	■	■	■		■	
	Etaline-R	24	■	■	■	■		■	
	ILN / ILNE / ILNS	24	■	■	■	■		■	
	ILNC / ILNCE / ILNCS	24	■	■	■	■		■	
Standardised/close-coupled pumps, fixed/variable speed	Etanorm / Etanorm-R	25	■	■	■	■	■	■	
	Etanorm PumpDrive	25	■	■	■	■	■	■	
	Etabloc	25	■	■	■	■	■	■	
	Etabloc PumpDrive	25	■	■	■	■	■	■	
	Etachrom BC	25	■	■	■	■	■	■	
	Etachrom BC PumpDrive	26	■	■	■	■	■	■	
	Etachrom NC	26	■	■	■	■	■	■	
	Etachrom NC PumpDrive	26	■	■	■	■	■	■	
	Etanorm GPV / CPV	26	■	■	■	■	■	■	
	Hot water pumps	HPK-L	27		■		■	■	■
HPK		27		■		■	■	■	
HPH		27		■		■	■	■	
Hot water/thermal oil pumps	Etanorm SYT / RSY	28		■		■		■	
	Etabloc SYT / Etaline SYT	28		■		■		■	
Thermal oil pumps with magnetic drive / canned motor	HX (Nikkiso-KSB)	28				■			
	HY (Nikkiso-KSB)	28				■			
Standardised chemical pumps	MegaCPK	29	■	■		■	■		
	MegaCPK PumpDrive / PumpMeter	29	■	■		■	■		
	CPKN	29		■		■			
Seal-less pumps	Magnochem	29		■		■	■		
	Magnochem-Bloc	30		■		■	■		
	Etaseco / Etaseco-I	30		■	■	■	■	■	
	Etaseco RVP	30		■	■	■	■	■	
	Secochem Ex	30		■		■	■		
	Secochem Ex K	30		■		■	■		
	HN / BN / TN (Nikkiso-KSB)	31				■	■		
	HT / BT / TT (Nikkiso-KSB)	31				■	■		
	HK (Nikkiso-KSB)	31				■	■		
	VN (Nikkiso-KSB)	31				■	■		
Process pumps	DN (Nikkiso-KSB)	31				■	■		
	RPH	32		■		■	■		
	RPHb	32				■	■		
	RPH-V	32				■	■		
	CTN	32				■	■		
	API series (Nikkiso-KSB)	32				■	■		
	CHTR	33				■	■		
	YNKR	33				■	■		
	CINCP / CINCN	33		■		■	■		
	INVCP / INVCN	33	■	■	■	■	■		
	RWCP / RWCN	33		■	■	■	■	■	
	WKTR	34				■			
	Rainwater harvesting systems	Hya-Rain / Hya-Rain N	34		■	■			■
Hya-Rain Eco		34		■	■			■	
Domestic water supply systems with automatic control unit/swimming pools	Multi Eco	35		■	■	■		■	
	Multi Eco-Pro	35		■	■	■		■	
	Multi Eco-Top	35		■	■	■		■	
	Movitec VME	35	■	■	■	■		■	
	Ixo	35		■	■	■		■	
	Filtra N	36				■		■	

Type / Application	Type series	Page	FluidFuture® + ErP	Automation	Water Transport and Treatment	Industry	Energy Conversion	Building Services	Solids Transport
				A					
Pressure booster systems	Hya-Solo E	36		■	■	■		■	
	Hya-Solo D	36		■	■	■		■	
	Hya-Solo DV	36		■	■	■		■	
	Hya-Compact VP	37		■	■	■		■	
	Hya-Compact K	37		■	■	■		■	
	Hya-Eco VP	37		■	■	■		■	
	Hyamat K	37		■	■	■		■	
	Hyamat V	37		■	■	■		■	
	Hyamat VP	38	■	■	■	■		■	
	Hyamat IK, IV, IVP	38		■	■	■			
Drainage pumps/waste water pumps	Ama-Drainer N 301, 302, 303, 358	38		■				■	
	Ama-Drainer 400/10 400/35 500/10/11	38		■		■		■	
	Ama-Drainer 80, 100	39		■				■	
	Ama-Porter F / S	39		■				■	
	Rotex	39				■		■	
	MK / MKY	39		■		■		■	
Lifting units / collection tanks	AmaDS3	40		■	■			■	
	Ama-Drainer-Box	40		■				■	
	Ama-Drainer-Box Mini	40		■				■	
	mini-Compacta	40		■				■	
	Compacta	40		■		■		■	
	Pump Station CK 800-Eu	41		■				■	
	Ama-Porter CK Pump Station	41		■				■	
	Amarex N CK Pump Station	41		■				■	
Evamatic-Box	41						■		
Submersible motor pumps	Amarex N	42	■	■	■	■		■	
	Amarex KRT	42		■	■	■		■	
	Amarex KRT dry-installed	42		■	■	■		■	
	Amarex KRT wet/dry-installed	42	■	■	■	■		■	
Submersible pumps in discharge tubes	Amacan K	43		■	■			■	
	Amacan P	43		■	■			■	
	Amacan S	43		■	■			■	
Mixers/agitators/tank cleaning units	Amamix	44			■	■			
	Amaprop	44			■	■			
	Amajet	44			■	■			
	Amaline	44			■	■			
Pumps for solids-laden fluids	Sewatec / Sewabloc	45		■	■	■			
	KWP / KWP-Bloc	45		■	■	■	■		■
Slurry pumps	WBC	45							■
	LSA-S	45				■	■		■
	LCC-M	46				■	■		■
	LCC-R	46				■	■		■
	TBC	46							■
	LCV	46							■
	FGD	47				■	■		■
	Mega	47							■
	HHD	47							■
	MHD	47							■
	LHD	47							■
	MDX	48				■			■
	ZW	48							■
Self-priming pumps	Etaprime L	48			■	■			
	Etaprime B / BN	48			■	■			
Submersible borehole pumps	S 100D / UPA 100C	49	■	■	■	■		■	
	UPA 150C	49	■	■	■	■			
	UPA 200, 200B, 250C	49		■	■	■			
	UPA 300, 350	49		■	■	■			
	UPZ, BSX-BSF	49		■	■	■			
High-pressure pumps, fixed/variable speed	Movitec V / LHS / VS / VC	50	■	■	■	■	■	■	
	Movitec PumpDrive	50	■	■	■	■	■	■	
	Multitec	50	■	■	■	■	■	■	
	Multitec PumpDrive	50	■	■	■	■	■	■	

Type / Application	Type series	Page	FluidFuture® + ErP	Automation	Water Transport and Treatment	Industry	Energy Conversion	Building Services	Solids Transport
Axially split pumps	Omega	51	■	■	■	■	■	■	
	RDLO	51		■	■	■	■	■	
	RDLP	51			■				
Hygienic pumps for the food, beverage and pharmaceutical industries	Vitachrom	52		■		■			
	Vitacast / Vitacast E	52		■		■			
	Vitaprime	52		■		■			
	Vitastage	52		■		■			
	Vitalobe	52		■		■			
Pumps for power station conventional islands	CHTA / CHTC / CHTD	53					■		
	HGB / HGC / HGD	53				■	■		
	HGM	53		■		■	■		
	YNK	53					■		
	LUV / LUVA	53					■		
	WKTA / WKTB	54					■		
	SEZ / SEZT / PHZ / PNZ	54			■	■	■		
	SNW / PNW	54			■	■	■		
	Beveron	54			■	■	■		
	SPY	54			■	■	■		
Pumps for nuclear power plants	RER	55					■		
	RSR	55					■		
	RUV	55					■		
	PSR	55					■		
	RHD	55					■		
	LUV Nuclear	56					■		
	RHM	56					■		
	RVM	56					■		
	RHR	56					■		
	RVR	56					■		
Pumps and pressure exchangers for seawater desalination by reverse osmosis	SalTec System	57		■	■				
	SalTec DT	57		■	■				
	RPH-RO	57			■				
	HGM-RO	57			■				
	Multitec-RO	57		■	■	■			

Automation			Page	FluidFuture®	Water Transport and Treatment	Industry	Energy Conversion	Building Services	Solids Transport
Control units	Controlmatic E	58		■				■	
	Controlmatic E.2	58		■				■	
	Cervomatic EDP.2	58		■				■	
	LevelControl Basic 2	58		■	■			■	
	UPA Control	58		■				■	
	hyatronic N	59		■	■			■	
Speed control	PumpDrive	59	■	■	■			■	
	hyatronic spc	59		■	■			■	
	Hyamaster ISB	59		■	■			■	
	Hyamaster SPS	60	■	■	■			■	
Monitoring and diagnostic systems	PumpMeter	60	■	■	■			■	
	Amacontrol	60		■	■				
Control system	BOA-Systronic	61	■					■	

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The absence of the “®” symbol should not be interpreted to mean that the term is not a registered trademark.

Fluids

Pumps

	Rio Therm N Riotherm	Rio-Eco N Rio-Eco Z N Rio-Eco Therm N	Etaline Etaline Z Etaline PumpDrive Etaline Z PumpDrive Etaline-R ILN / ILNE / ILNS ILNC / ILNCE / ILNCS	Etanorm / Etanorm-R Etanorm PumpDrive Etabloc Etabloc PumpDrive Etachrom BC Etachrom BC PumpDrive Etachrom NC Etachrom NC PumpDrive Etanorm GPV / CPV	HPK-L HPH HPK
Activated sludge					
Aggressive liquids					
Brackish water					
Brine					
Cleaning agents					
Condensate					
Coolant					
Cooling water	■	■	■	■	■
Corrosive liquids					
Distillate					
Digested sludge					
Dipping paints					
Drinking water	■				
Explosive liquids					
Feed water					
Filtered water					
Fire-fighting water					
Flammable liquids					
Fuels					
Gas-containing liquids					
Harmful liquids					
Heating water	■	■	■	■	■
High-temperature hot water					
Highly aggressive liquids					
Hot water	■	■	■	■	■
Industrial service water	■	■	■	■	■
Inorganic liquids					
Liquefied gas					
Liquids in food and beverage production					
Lubricants					
Oils					
Organic liquids					
Pharmaceutical fluids					
Polymerizing liquids					
Rainwater / stormwater					
Raw sludge					
River, lake and ground water					
Seawater					
Service water	■	■	■	■	■
Sewage with faeces					
Sewage without faeces					
Slurries					
Slurries (ore, sand, gravel, ash)					
Solvents					
Swimming-pool water					
Thermal oil					
Toxic liquids					
Valuable liquids					
Volatile liquids					
Wash water					
Waste water					

Circulator pumps / hot water service pumps, fixed speed

Circulator pumps, variable speed

In-line pumps with fixed / variable speed drive

Standardised / close-coupled pumps, fixed / variable speed

Hot water pumps



Fluids

Pumps

	Hya-Rain / Hya-Rain N Hya-Rain Eco	Multi Eco Multi Eco-Pro Multi Eco-Top Movitec VME	Ixo Filtra N	Hya-Solo E Hya-Solo D / DV Hya-Eco VP	Hyamat K Hyamat V Hyamat VP Hyamat IK, IV, IVP	Ama-Drainer N 301, 302, 303, 358 Ama-Drainer 400/10 400/35 500/10/11 Ama-Drainer 80, 100 Ama-Porter F / S Rotex MK / MKY
Activated sludge						
Aggressive liquids						
Brackish water						
Brine						
Cleaning agents						
Condensate						
Coolant						
Cooling water						
Corrosive liquids						
Distillate						
Digested sludge						
Dipping paints						
Drinking water		■	■	■	■	■
Explosive liquids						
Feed water						
Filtered water						
Fire-fighting water						
Flammable liquids						
Fuels						
Gas-containing liquids						
Harmful liquids						
Heating water						
High-temperature hot water						
Highly aggressive liquids						
Hot water						
Industrial service water				■	■	■
Inorganic liquids						
Liquefied gas						
Liquids in food and beverage production						
Lubricants						
Oils						
Organic liquids						
Pharmaceutical fluids						
Polymerizing liquids						
Rainwater / stormwater						
Raw sludge						
River, lake and ground water						
Seawater						
Service water	■	■	■	■	■	■
Sewage with faeces						
Sewage without faeces						
Slurries						
Slurries (ore, sand, gravel, ash)						
Solvents						
Swimming-pool water						
Thermal oil						
Toxic liquids						
Valuable liquids						
Volatile liquids						
Wash water						
Waste water						

Rainwater harvesting systems

Domestic water supply systems with automatic control unit / swimming pools

Pressure booster systems

Drainage pumps / waste water pumps



Fluids

Pumps

	Etaprime L	Etaprime B / BN	S 100D / UPA 100C	UPA 150C	UPA 200, 200B, 250C	UPA 300, 350	UPZ, BSX-BSF	Movitec V / LHS / VS / VC	Movitec PumpDrive	Multitec	Multitec PumpDrive	Omega	RDLO	RDLP	Vitachrom	Vitacast / Vitacast E	Vitaprime	Vitastage	Vitalobe
Activated sludge																			
Aggressive liquids	■	■																	
Brackish water																			
Brine																			
Cleaning agents																			
Condensate																			
Coolant																			
Cooling water			■	■	■	■	■	■	■	■	■	■	■	■					
Corrosive liquids																			
Destillate																			
Digested sludge																			
Dipping paints																			
Drinking water			■	■	■	■	■	■	■	■	■	■	■	■					
Explosive liquids																			
Feed water																			
Filtered water																			
Fire-fighting water				■	■	■		■	■	■	■	■	■	■					
Flammable liquids																			
Fuels																			
Gas-containing liquids																			
Harmful liquids																			
Heating water																			
High-temperature hot water																			
Highly aggressive liquids																			
Hot water																			
Industrial service water			■	■	■	■	■	■	■	■	■	■	■	■					
Inorganic liquids																			
Liquefied gas																			
Liquids in food and beverage production															■	■	■	■	■
Lubricants																			
Oils																			
Organic liquids																			
Pharmaceutical fluids															■	■	■	■	■
Polymerizing liquids																			
Rainwater / stormwater																			
Raw sludge																			
River, lake and ground water			■	■	■	■	■												
Seawater				■	■	■	■												
Service water			■	■	■	■	■												
Sewage with faeces																			
Sewage without faeces																			
Slurries																			
Slurries (ore, sand, gravel, ash)																			
Solvents																			
Swimming-pool water																			
Thermal oil																			
Toxic liquids																			
Valuable liquids																			
Volatile liquids																			
Wash water								■	■	■	■								
Waste water																			

Self-priming pumps

Submersible borehole pumps

High-pressure pumps, fixed / variable speed

Axially split pumps

Hygienic pumps for the food, beverage and pharmaceutical industries

	CHTA / CHTC / CHTD	HGB / HGC / HGD	HGM	YNK	LUV / LUVA	WKTA / WKTB	SEZ / SEZT / PHZ / PNZ	SNW / PNW	Beveron	SPY	RER	RSR	PSR	RUV	RHD	LUV nuclear	RHM	RVM	RHR	RVR	RPH-RO	HGM-RO	Multitec-RO	PumpMeter
Pumps for power station conventional islands	■	■	■	■	■	■	■	■	■	■														
Pumps for nuclear power plants											■	■	■	■		■	■	■	■	■				
Pumps for seawater desalination by reverse osmosis																					■	■	■	
Monitoring and diagnostic systems																								■

- Activated sludge
- Aggressive liquids
- Brackish water
- Brine
- Cleaning agents
- Condensate
- Coolant
- Cooling water
- Corrosive liquids
- Distillate
- Digested sludge
- Dipping paints
- Drinking water
- Explosive liquids
- Feed water
- Filtered water
- Fire-fighting water
- Flammable liquids
- Fuels
- Gas-containing liquids
- Harmful liquids
- Heating water
- High-temperature hot water
- Highly aggressive liquids
- Hot water
- Industrial service water
- Inorganic liquids
- Liquefied gas
- Liquids in food and beverage production
- Lubricants
- Oils
- Organic liquids
- Pharmaceutical fluids
- Polymerizing liquids
- Rainwater / stormwater
- Raw sludge
- River, lake and ground water
- Seawater
- Service water
- Sewage with faeces
- Sewage without faeces
- Slurries
- Slurries (ore, sand, gravel, ash)
- Solvents
- Swimming-pool water
- Thermal oil
- Toxic liquids
- Valuable liquids
- Volatile liquids
- Wash water
- Waste water









Applications

Pumps

	Etaprime L	Etaprime B / BN	S 100D / UPA 100C	UPA 150C	UPA 200, 200B, 250C	UPA 300, 350	UPZ, BSX-BSF	Movitec V / LHS / VS / VC	Movitec PumpDrive	Multitec	Multitec PumpDrive	Omega	RDLO	RDLP	Vitachrom	Vitacast / Vitacast E	Vitaprime	Vitastage	Vitalobe
Air-conditioning systems																			
Aquaculture																			
Boiler circulation																			
Boiler feed applications																			
Chemical industry																			
Cleaning of stormwater tanks / storage sewers																			
Condensate transport																			
Cooling circuits																			
Descaling units																			
Dewatering																			
Disposal																			
District heating																			
Dock facilities																			
Domestic water supply																			
Drainage																			
Drainage of pits, shafts, etc.																			
Dredging																			
Fire-fighting systems																			
Flood control / coast protection (stormwater)																			
Flue gas desulphurization																			
Food and beverages industry																			
Fountains																			
Heat recovery systems																			
Heavy oil and coal upgrading																			
Homogenization																			
Hot water heating systems																			
Hydraulic solids transport																			
Industrial recirculation systems																			
Irrigation																			
Keeping in suspension																			
Lowering ground water levels																			
Maintaining ground water levels																			
Mining																			
Mixing																			
Nuclear power plants																			
Offshore platforms																			
Paint shops																			
Paper and cellulose industry																			
Petrochemical industry																			
Pharmaceutical industry																			
Pipelines and tank farms																			
Pressure boosting																			
Process engineering																			
Rainwater harvesting																			
Recirculation																			
Refineries																			
Seawater desalination / reverse osmosis																			
Sewage treatment plants																			
Shipbuilding																			
Sludge disposal																			
Sludge processing																			
Snow guns																			
Solar thermal energy																			
Spray irrigation																			
Sugar industry																			
Swimming pools																			
Thermal oil circulation																			
Thickening																			
Washing plants																			
Water extraction																			
Water supply																			
Water treatment systems																			

Self-priming pumps

Submersible borehole pumps

High-pressure pumps, fixed / variable speed

Axially split pumps

Hygienic pumps for the food, beverage and pharmaceutical industries

	CHTA / CHTC / CHTD	HGB / HGC / HGD	HGM	YNK	LUV / LUVA	WKTA / WKTB	SEZ / SEZT / PHZ / PNZ	SNW / PNW	Beveron	SPY	RER	RSR	PSR	RUV	RHD	LUV nuclear	RHM	RVM	RHR	RVR	RPH-RO	HGM-RO	Multitec-RO	Pump/Meter
Pumps for power station conventional islands	■	■	■	■	■	■	■	■	■	■														
Pumps for nuclear power plants															■									
Pumps for seawater desalination by reverse osmosis																								
Monitoring and diagnostic systems																								

- Air-conditioning systems
- Aquaculture
- Boiler circulation
- Boiler feed applications
- Chemical industry
- Cleaning of stormwater tanks / storage sewers
- Condensate transport
- Cooling circuits
- Descaling units
- Dewatering
- Disposal
- District heating
- Dock facilities
- Domestic water supply
- Drainage
- Drainage of pits, shafts, etc.
- Dredging
- Fire-fighting systems
- Flood control / coast protection (stormwater)
- Flue gas desulphurization
- Food and beverages industry
- Fountains
- Heat recovery systems
- Heavy oil and coal upgrading
- Homogenization
- Hot water heating systems
- Hydraulic solids transport
- Industrial recirculation systems
- Irrigation
- Keeping in suspension
- Lowering ground water levels
- Maintaining ground water levels
- Mining
- Mixing
- Nuclear power plants
- Offshore platforms
- Paint shops
- Paper and cellulose industry
- Petrochemical industry
- Pharmaceutical industry
- Pipelines and tank farms
- Pressure boosting
- Process engineering
- Rainwater harvesting
- Recirculation
- Refineries
- Seawater desalination / reverse osmosis
- Sewage treatment plants
- Shipbuilding
- Sludge disposal
- Sludge processing
- Snow guns
- Solar thermal energy
- Spray irrigation
- Sugar industry
- Swimming pools
- Thermal oil circulation
- Thickening
- Washing plants
- Water extraction
- Water supply
- Water treatment systems

## Circulator pumps / hot water service pumps, fixed speed

Rio®-Therm N		Glandless circulator pump with up to 4 speed levels for drinking water and hot service water
	RP / DN	1/2 - 1 1/4 / 40 - 80
	Q [m³/h]	max. 50
	H [m]	max. 9
	p [bar]	max. 10
	T <sub>heating water</sub> [°C]	-10 to +110
	T <sub>drinking water</sub> [°C]	up to +80 (20 °dH) Up to +110 for short periods (2 h)
	n [min <sup>-1</sup> ]	max. 2800
	Data for 50 Hz operation	
<b>Design:</b> Maintenance-free glandless circulator pump with up to four speed levels. <b>Applications:</b> Hot service water/drinking water supply systems.		Reference no. 1142.52 available in 50 Hz and 60 Hz, also suitable for 50 Hz operation

Riotherm®		Hot water service pump
	Rp	1-1 1/4
	Q [m³/h]	max. 10
	H [m]	max. 6
	p [bar]	max. 10
	T [°C]	-2 to +110
	Data for 50 Hz operation	
<b>Design:</b> Screw-ended glanded pump with mechanical seal and fixed speed. <b>Applications:</b> Swimming pools, cooling circuits and industrial plants.		Reference no. 1118.5 also available in 60 Hz

## Circulator pumps, variable speed

Rio-Eco® N		High-efficiency glandless circulator pump with continuously variable differential pressure control
	Rp / DN	1/2 - 1 1/4
	Q [m³/h]	max. 65
	H [m]	max. 14
	p [bar]	max. 10
	T [°C]	+5 to +95
	n [min <sup>-1</sup> ]	max. 3660
	Data for 50 Hz operation	
<b>Design:</b> Maintenance-free glandless circulator pump with integrated frequency inverter for continuously variable differential pressure control. <b>Applications:</b> Systems for heating/ventilation/air-conditioning/heat recovery/cooling as well as industrial recirculation.		Reference no. 1140.51 suitable for 50 and 60 Hz operation

Rio-Eco® Z N		High-efficiency glandless twin circulator pump with continuously variable differential pressure control
	DN	32 - 80
	Q [m³/h]	max. 46
	H [m]	max. 14
	p [bar]	max. 10
	T [°C]	-10 to +110
	n [min <sup>-1</sup> ]	max. 3550
	Data for 50 Hz operation	
<b>Design:</b> Maintenance-free glandless circulator pump with integrated frequency inverter for continuously variable differential pressure control. <b>Applications:</b> Systems for heating/ventilation/air-conditioning/heat recovery/cooling as well as industrial recirculation.		Reference no. 1140.51 suitable for 50 and 60 Hz operation

## Circulator pumps, variable speed

Rio-Eco®-Therm N		High-efficiency glandless circulator pump with continuously variable differential pressure control for drinking water and hot service water
	Rp / DN	1-1 1/4 / 32 - 80
	Q [m³/h]	max. 38
	H [m]	max. 12
	p [bar]	max. 10
	T <sub>heating water</sub> [°C]	-10 to +110
	T <sub>drinking water</sub> [°C]	+80 (20 °dH)
	n [min <sup>-1</sup> ]	max. 3700
Data for 50 Hz operation		
		<b>Design:</b> Maintenance-free glandless circulator pump with integrated frequency inverter for continuously variable differential pressure control. <b>Applications:</b> Hot service water/drinking water supply systems.
		Reference no. 1142.51 <span style="float: right;">suitable for 50 and 60 Hz operation</span>

## In-line pumps with fixed / variable speed drive

Etaline®		In-line pump	
	DN	32 - 200	
	Q [m³/h]	max. 700	
	H [m]	max. 95	
	p [bar]	max. 16	
	T [°C]	-30 to +140	
	Data for 50 Hz operation		
			<b>Design:</b> Close-coupled, in-line circulator pump with volute casing and standardised motor. <b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning, water and service water supply systems, industrial recirculation systems.
		 	
		Reference no. 1146.51 <span style="float: right;">also available in 60 Hz</span>	

Etaline® Z		In-line twin pump	
	DN	32 - 200	
	Q [m³/h]	max. 1120	
	H [m]	max. 38	
	p [bar]	max. 16	
	T [°C]	-30 to +140	
	Data for 50 Hz operation		
			<b>Design:</b> Close-coupled, in-line twin circulator pump, pump shaft and motor shaft are rigidly coupled. <b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning systems, water and service water supply systems, industrial recirculation systems.
		 	
		Reference no. 1148.5 <span style="float: right;">also available in 60 Hz</span>	

Etaline® PumpDrive		In-line pump with motor-mounted variable speed system
	DN	32 - 200
	Q [m³/h]	max. 788
	H [m]	max. 100
	p [bar]	max. 16
	T [°C]	-10 to +140
	n [min <sup>-1</sup> ]	max. 4200
		 
		Reference no. 1149.52 <span style="float: right;">also suitable for 60 Hz operation</span>

## In-line pumps with fixed / variable speed drive

Etaline® Z PumpDrive		In-line pump with motor-mounted variable speed system
	DN 32 - 200 Q [m³/h] max. 990 H [m] max. 38 p [bar] max. 16 T [°C] -10 to +140 n [[min⁻¹] max. 2100	<b>Design:</b> Close-coupled in-line circulator pump, in twin pump design with motor-mounted variable speed system; pump shaft and motor shaft are rigidly coupled. Double pump control modules (accessories) enable redundant operation of Etaline Z without a higher-level controller.  <b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning systems, water and service water supply systems, industrial recirculation systems.
	PumpMeter · BOA-Systronic	Reference no. 1154.51 also suitable for 60 Hz operation

Etaline®-R		In-line pump
	DN 150 - 350 Q [m³/h] max. 1900 H [m] max. 93 p [bar] max. 25 T [°C] -30 to +140 <small>Data for 50 Hz operation</small>	<b>Design:</b> Vertical close-coupled, in-line circulator pump with volute casing and standardised motor.  <b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning, water and service water supply systems, industrial recirculation systems.
	PumpMeter · PumpDrive · Hyamaster · Switchgears	Reference no. 1146.51 also available in 60 Hz

ILN / ILNE / ILNS		In-line pump
	DN 65 - 400 Q [m³/h] max. 3100 H [m] max. 112 p [bar] max. 16 T [°C] -20 to +70 n [min⁻¹] max. 3000 <small>Data for 50 Hz operation</small>	<b>Design:</b> Vertical in-line centrifugal pump with closed impeller and mechanical seal. ILNS fitted with an auxiliary vacuum pump and ILNE with ejector. Process design allows removal of the impeller without removing the pipes and the motor.  <b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning, marine applications, water and service water supply systems, cleaning systems, industrial recirculation systems.
	PumpMeter · PumpDrive · Hyamaster · Switchgear	also suitable for 60 Hz operation

ILNC / ILNCE / ILNCS		In-line pump
	DN 32 - 125 Q [m³/h] max. 370 H [m] max. 112 p [bar] max. 16 T [°C] -20 to +70 n [min⁻¹] max. 3000 <small>Data for 50 Hz operation</small>	<b>Design:</b> Closed-coupled vertical in-line centrifugal pump with electric motor, closed impeller and mechanical seal. ILNCS fitted with an auxiliary vacuum pump and ILNCE with ejector. Standardised IEC motor.  <b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning, marine applications, water and service water supply systems, cleaning systems, industrial recirculation systems.
	PumpMeter · PumpDrive · Hyamaster · Switchgear	also suitable for 60 Hz operation

## Standardised / close-coupled pumps, fixed / variable speed

Etanorm® / Etanorm®-R		Standardised pump	
	DN	25 - 300	<p><b>Design:</b> Horizontal, long-coupled, single-stage volute casing pump (pump size 125 - 500 with two stages) with ratings and main dimensions to EN 733, in back pull-out design, with replaceable shaft sleeves / shaft protecting sleeves and casing wear rings. ATEX-compliant version available.</p> <p><b>Applications:</b> Spray irrigation, irrigation, drainage, district heating, water supply systems, heating and air-conditioning systems, condensate transport, swimming pools, fire-fighting systems, handling of hot water, cooling water, fire-fighting water, oil, brine, drinking water, brackish water, service water, etc.</p>
	Q [m³/h]	max. 1900	
	H [m]	max. 160	
	p [bar]	max. 16	
	T [°C]	max. +140	
Data for 50 Hz operation		 	
		Reference no. 1311.5 + 1211.5 <span style="float: right;">also available in 60 Hz</span>	

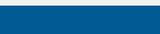
Etanorm® PumpDrive		Standardised pump with motor-mounted variable speed system	
	DN	25 - 150	<p><b>Design:</b> Horizontal, long-coupled, single-stage volute casing pump in back pull-out design, with replaceable shaft sleeves / shaft protecting sleeves and casing wear rings and motor-mounted variable speed system.</p> <p><b>Applications:</b> Spray irrigation, irrigation, drainage, district heating, water supply systems, heating and air-conditioning systems, condensate transport, swimming pools, fire-fighting systems, handling of hot water, cooling water, fire-fighting water, oil, brine, drinking water, brackish water, service water, etc.</p>
	Q [m³/h]	max. 660	
	H [m]	max. 160	
	p [bar]	max. 16	
	T [°C]	max. +140	
Data for 50 Hz operation		 	
		Reference no. 1311.5	

Etabloc®		Close-coupled pump	
	DN	25 - 150	<p><b>Design:</b> Close-coupled, single-stage volute casing pump, ratings to EN 733, with replaceable shaft sleeve and casing wear rings. ATEX-compliant version available.</p> <p><b>Applications:</b> Spray irrigation, irrigation, drainage and water supply systems, heating and air-conditioning systems, condensate transport, swimming pools, handling of hot water, cooling water, fire-fighting water, seawater, oil, brine, drinking water, cleaning agents, brackish water, service water, etc.</p>
	Q [m³/h]	max. 660	
	H [m]	max. 102	
	p [bar]	max. 16	
	T [°C]	max. +140	
Data for 50 Hz operation		 	
		Reference no. 1167.5 <span style="float: right;">also available in 60 Hz</span>	

Etabloc® PumpDrive		Close-coupled pump with motor-mounted variable speed system	
	DN	25 - 150	<p><b>Design:</b> Close-coupled, single-stage volute casing pump, ratings to EN 733, with replaceable shaft sleeve and casing wear rings and motor-mounted variable speed system.</p> <p><b>Applications:</b> Spray irrigation, irrigation, drainage and water supply systems, heating and air-conditioning systems, condensate transport, swimming pools, handling of hot water, cooling water, fire-fighting water, seawater, oil, brine, drinking water, cleaning agents, brackish water, service water, etc.</p>
	Q [m³/h]	max. 660	
	H [m]	max. 101	
	p [bar]	max. 16	
	T [°C]	max. +110	
Data for 50 Hz operation		 	
		Reference no. 1167.5 + 4070.5	

Etachrom® BC		Close-coupled chrome steel pump	
	DN	25 - 80	<p><b>Design:</b> Close-coupled, horizontal, single-stage annular casing pump, with ratings and main dimensions to EN 733, with replaceable casing wear rings. ATEX-compliant version available.</p> <p><b>Applications:</b> Spray irrigation, irrigation, drainage and water supply systems, heating and air-conditioning systems, fire-fighting systems, condensate transport, swimming pools, handling of hot water, cooling water, fire-fighting water, oil, drinking water, cleaning agents, service water.</p>
	Q [m³/h]	max. 260	
	H [m]	max. 106	
	p [bar]	max. 12	
	T [°C]	max. +110	
Data for 50 Hz operation		 	
		Reference no. 1213.5 <span style="float: right;">also available in 60 Hz</span>	

## Standardised / close-coupled pumps, fixed / variable speed

<b>Etachrom® BC PumpDrive</b>		<b>Close-coupled chrome steel pump with motor-mounted variable speed system</b>	
	DN 25 - 80 Q [m³/h] max. 260 H [m] max. 106 p [bar] max. 12 T [°C] max. +110 n [min⁻¹] max. 3600	<b>Design:</b> Close-coupled, horizontal, single-stage annular casing pump, with ratings and main dimensions to EN 733, with replaceable casing wear rings and motor-mounted variable speed system.	 
	<b>Applications:</b> Spray irrigation, irrigation, drainage and water supply systems, heating and air-conditioning systems, fire-fighting systems, condensate transport, swimming pools, handling of hot water, cooling water, fire-fighting water, oil, drinking water, cleaning agents, service water.		
		<b>Reference no. 1213.5 + 4070.5</b>	
<b>Etachrom® NC</b>		<b>Standardised chrome steel pump</b>	
	DN 25 - 80 Q [m³/h] max. 260 H [m] max. 106 p [bar] max. 12 T [°C] max. +110 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, single-stage annular casing pump, with ratings and main dimensions to EN 733, with replaceable casing wear rings. ATEX-compliant version available.	 
	<b>Applications:</b> Water supply, spray irrigation, irrigation and drainage systems, heating and air-conditioning systems, fire-fighting systems, handling of drinking water, service water, hot water, cooling water, swimming pool water, fire-fighting water, condensate, oil and cleaning agents.		
		<b>Reference no. 1212.5</b> <span style="float: right;">also available in 60 Hz</span>	
<b>Etachrom® NC PumpDrive</b>		<b>Standardised chrome steel pump with motor-mounted variable speed system</b>	
	DN 25 - 80 Q [m³/h] max. 260 H [m] max. 106 p [bar] max. 12 T [°C] max. +110 n [min⁻¹] max. 3600	<b>Design:</b> Horizontal, single-stage annular casing pump, with ratings and main dimensions to EN 733, with replaceable casing wear rings and motor-mounted variable speed system.	 
	<b>Applications:</b> Water supply, spray irrigation, irrigation and drainage systems, heating and air-conditioning systems, fire-fighting systems, handling of drinking water, service water, hot water, cooling water, swimming pool water, fire-fighting water, condensate, oil and cleaning agents.		
		<b>Reference no. 1212.5 + 4070.5</b>	
<b>Etanorm® GPV/CPV</b>		<b>Vertical low-pressure pump</b>	
	DN 32 - 150 Q [m³/h] max. 660 H [m] max. 102 p [bar] max. 16 T [°C] max. +95 <small>Data for 50 Hz operation</small>	<b>Design:</b> Single-stage volute casing pump, ratings to EN 733, for vertical installation in closed tanks under atmospheric pressure. Up to an immersion depth of 2000 mm.	 
	<b>Applications:</b> Handling of neutral degreasing and phosphatizing solutions, wash water with degreasing agents, dipping paints, etc.		
		<b>Reference no. 1214.5</b> <span style="float: right;">also available in 60 Hz</span>	

## Hot water pumps

<b>HPK<sup>®</sup>-L</b>		<b>Heat transfer liquid / hot water recirculation pump without external cooling</b>	
	DN 25 - 250 Q [m <sup>3</sup> /h] max. 1330 H [m] max. 155 p [bar] max. 40 T [°C] max. +240 / +400 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, radially split volute casing pump in back pull-out design to EN 22 858 / ISO 2858 / ISO 5199, single-stage, single-entry, with radial impeller. Equipped with heat barrier, seal chamber air-cooled by integrated fan impeller, no external cooling. ATEX-compliant version available.  <b>Applications:</b> Handling of hot water and thermal oil in piping or tank systems, particularly in medium-sized and large hot water heating systems, forced circulation boilers, district heating systems, etc.	
	<b>PumpDrive • Hyamaster</b>	<b>Reference no. 1136.5</b>	<b>also available in 60 Hz</b>
<b>HPK<sup>®</sup></b>		<b>Heat transfer liquid / hot water recirculation pump</b>	
	DN 150 - 400 Q [m <sup>3</sup> /h] max. 4150 H [m] max. 185 p [bar] max. 40 T [°C] max. +400 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, radially split volute casing pump in back pull-out design to EN 22 858 / ISO 2858 / ISO 5199, single-stage, single-entry, with radial impeller. TÜV certification to TRD on option. ATEX-compliant version available.  <b>Applications:</b> Handling of hot water and thermal oil in piping or tank systems, particularly in medium-sized and large hot water heating systems, forced circulation boilers, district heating systems, etc.	
	<b>PumpDrive • Hyamaster</b>	<b>Reference no. 1121.51</b>	<b>also available in 60 Hz</b>
<b>HPH<sup>®</sup></b>		<b>Hot water recirculation pump</b>	
	DN 40 - 350 Q [m <sup>3</sup> /h] max. 2350 H [m] max. 225 p [bar] max. 110 T [°C] max. +320 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, radially split volute casing pump in back pull-out design, single-stage, single-entry, with centreline pump feet and radial impeller. TÜV certification to TRD on option. ATEX-compliant version available.  <b>Applications:</b> Handling of hot water in high-pressure hot water generation plants and for use as boiler feed and recirculation pump.	
	<b>Hyamaster</b>	<b>Reference no. 1122.5</b>	<b>also available in 60 Hz</b>

## Hot water / thermal oil pumps

### Etanorm® SYT / RSY

Hot water / thermal oil pump



DN	32 - 300
Q [m³/h]	max. 1900
H [m]	max. 102
p [bar]	max. 16
T [°C]	max. +350

Data for 50 Hz operation

**Design:** Horizontal, long-coupled volute casing pump in back pull-out design with ratings and main dimensions to EN 733, single-stage, with replaceable casing wear rings. ATEX-compliant version available.

**Applications:** Heat transfer systems (DIN 4754, VDI 3033) or hot water recirculation (DIN 4752).

Hyamaster

Reference no. 1220.5

also available in 60 Hz

### Etabloc® SYT / Etaline® SYT

Hot water / thermal oil pump



DN	32 - 100
Q [m³/h]	max. 280
H [m]	max. 67
p [bar]	max. 16
T [°C]	max. +350

Data for 50 Hz operation

**Design:** Horizontal, single-stage volute casing pump in back pull-out design with ratings and main dimensions to EN 733, or in in-line design, with replaceable casing wear rings.

**Applications:** Heat transfer systems (DIN 4754) or hot water recirculation.

Hyamaster

Reference no. 1170.5

also available in 60 Hz

## Thermal oil pumps with magnetic drive / canned motor

(Only available in Europe, Russia, Middle East and Africa)

### HX (Nikkiso-KSB)

Thermal oil pump with explosion protection



DN	32 - 100
Q [m³/h]	max. 200
H [m]	max. 100
p [bar]	max. 40
T [°C]	max. +350

Data for 50 Hz operation

**Design:** Horizontal, seal-less, single-stage pump with fully enclosed canned motor, uncooled. ATEX-compliant version available.

**Applications:** Handling of thermal oils and other hot fluids in heat transfer systems to DIN 4754.

also available in 60 Hz

(Only available in Europe, Russia, Middle East and Africa)

### HY (Nikkiso-KSB)

Thermal oil pump with explosion protection



DN	32 - 80
Q [m³/h]	max. 150
H [m]	max. 100
p [bar]	max. 40
T [°C]	max. +250

Data for 50 Hz operation

**Design:** Horizontal, seal-less, single-stage pump with fully enclosed canned motor, uncooled, coolable or heatable. ATEX-compliant version available.

**Applications:** Handling of thermal oils and other hot fluids in heat transfer systems to DIN 4754.

also available in 60 Hz

## Standardised chemical pumps

MegaCPK		Standardised chemical pump with two bearing bracket variants
	DN _____ 25 - 250 Q [m³/h] _____ max. 1160 H [m] _____ max. 162 p [bar] _____ max. 25 T [°C] _____ max. +400 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, radially split volute casing pump in back pull-out design to EN 22 858 / ISO 2858 / ISO 5199, single-stage, single-entry, with radial impeller. Also available as variant with "wet" shaft. ATEX-compliant version available.  <b>Applications:</b> Handling of aggressive liquids in the chemical and petrochemical industries as well as in refinery.
	PumpMeter • PumpDrive	Reference no. 2731.5 <span style="float: right;">also available in 60 Hz</span>

MegaCPK PumpDrive / PumpMeter		Standardised chemical pump with two bearing bracket variants
	DN _____ 25 - 250 Q [m³/h] _____ max. 1150 H [m] _____ max. 162 p [bar] _____ max. 25 T [°C] _____ max. +140 n [min⁻¹] _____ max. 3600 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, radially split volute casing pump in back pull-out design to EN 22 858 / ISO 2858 / ISO 5199, single-stage, single-entry, with radial impeller. Also available as variant with "wet" shaft. ATEX-compliant version available.  <b>Applications:</b> Handling of aggressive liquids in the chemical and petrochemical industries as well as in refinery.
	Reference no. 2730.5 + 4070.5	

CPKN		Standardised chemical pump with reinforced bearing bracket
	DN _____ 150 - 400 Q [m³/h] _____ 1160 - max. 4150 H [m] _____ 162 - max. 185 p [bar] _____ max. 25 T [°C] _____ max. +400 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, radially split volute casing pump in back pull-out design to EN 22 858 / ISO 2858 / ISO 5199, single-stage, single-entry, with radial impeller. Also available as variant with "wet" shaft, conical seal chamber and/or semi-open impeller (CPKNO). ATEX-compliant version available.  <b>Applications:</b> Handling of aggressive liquids in the chemical and petrochemical industries as well as in refinery and fire-fighting systems, handling of brine.
	PumpMeter • PumpDrive	Reference no. 2730.5 <span style="float: right;">also available in 60 Hz</span>

## Seal-less pumps

Magnochem®		Standardised chemical pump with mag-drive
	DN _____ 25 - 250 Q [m³/h] _____ max. 1250 H [m] _____ max. 153 p [bar] _____ max. 25 T [°C] _____ max. +300 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, seal-less, mag-drive volute casing pump in back pull-out design to ISO 2858 / EN 22 858 / ISO 5199, single-stage, single-entry, with radial impeller. ATEX-compliant version available.  <b>Applications:</b> Handling of aggressive, toxic, explosive, valuable, flammable, malodorous or harmful liquids in the chemical, petrochemical and general industry.
	Hyamaster	Reference no. 2739.5 <span style="float: right;">also available in 60 Hz</span>

## Seal-less pumps

<b>Magnochem®-Bloc</b>		<b>Close-coupled chemical pump with mag-drive</b>
	DN 25 - 125 Q [m³/h] max. 240 H [m] max. 153 p [bar] max. 25 T [°C] max. +250 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, seal-less, close-coupled, mag-drive volute casing pump to ISO 2858 / EN 22 858 / ISO 5199, single-stage, single-entry, with radial impeller. ATEX-compliant version available.  <b>Applications:</b> Handling of aggressive, toxic, explosive, valuable, flammable, malodorous or harmful liquids in the chemical, petrochemical and general industry.
	Hyamaster	Reference no. 2749.5 <span style="float: right;">also available in 60 Hz</span>

<b>Etaseco® / Etaseco®-I</b>		<b>Standardised water pumps with canned motor</b>
	DN 32 - 100 Q [m³/h] max. 250 H [m] max. 100 p [bar] max. 16 T [°C] max. +140 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal / vertical, seal-less volute casing pump in back pull-out design with fully enclosed canned motor, low noise emission, with radial impeller, single-stage, single-entry, pump casing connecting dimensions to EN 733.  <b>Applications:</b> Handling of aggressive, flammable, toxic, volatile, or valuable liquids in the chemical and petrochemical industry, in environmental engineering and the general industry.
	PumpMeter • Hyamaster • PumpDrive	Reference no. 2935.5 <span style="float: right;">also available in 60 Hz</span>

<b>Etaseco® RVP</b>		<b>Cooling circuit pump with canned motor</b>
	DN 32 Q [m³/h] max. 20 H [m] max. 25 p [bar] max. 10 T [°C] max. +85	<b>Design:</b> Horizontal/vertical seal-less volute casing pump in back pull-out design with fully enclosed canned motor, low noise emission, with radial impeller, single-stage, single-entry.  <b>Applications:</b> Pump for handling toxic, volatile or valuable fluids in environmental and industrial engineering and for use as a coolant pump in cooling systems. Transport vehicles, environmental and industrial engineering; applications where low noise emission, smooth running or long service intervals are required.
	PumpMeter • PumpDrive	Reference no. 2935.17 <span style="float: right;">also available in 60 Hz</span>

<b>Secochem® Ex</b>		<b>Standardised chemical pump with canned motor and explosion protection</b>
	DN 25 - 100 Q [m³/h] max. 300 H [m] max. 150 p [bar] max. 25 T [°C] max. +130 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, seal-less volute casing pump in back pull-out design with fully enclosed canned motor, low noise emission, with radial impeller, single-stage, single-entry, casing connecting dimensions to EN 22 858 / ISO 2858. Design to ATEX.  <b>Applications:</b> Handling of aggressive, flammable, explosive, toxic, volatile or valuable liquids in the chemical and petrochemical industry, in environmental engineering and the general industry.
	Hyamaster	Reference no. 2939.5 <span style="float: right;">also available in 60 Hz</span>

<b>Secochem® Ex K</b>		<b>Standardised chemical pump with canned motor and explosion protection</b>
	DN 25 - 100 Q [m³/h] max. 300 H [m] max. 150 p [bar] max. 25 T [°C] max. +400 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, seal-less volute casing pump in back pull-out design with fully enclosed canned motor, low noise emission, with radial impeller, single-stage, single-entry, pump casing connecting dimensions to EN 22 858 / ISO 2858, with external cooler. Design to ATEX.  <b>Applications:</b> Handling of aggressive, flammable, explosive, toxic, volatile or valuable liquids in the chemical and petrochemical industry, in environmental engineering and the general industry.
	Hyamaster	Reference no. 2939.51 <span style="float: right;">also available in 60 Hz</span>

## Seal-less pumps

(Only available in Europe, Russia, Middle East and Africa)

HN / BN / TN (Nikkiso-KSB)		Chemical canned motor pump with explosion protection
	DN	32 - 300
	Q [m³/h]	max. 800
	H [m]	max. 200
	p [bar]	max. 40
	T [°C]	max. +180
	Data for 50 Hz operation	
		<p><b>Design:</b> Horizontal (HN) or vertical (BN / TN), seal-less, single-stage pump with fully enclosed canned motor, uncooled, coolable or heatable. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of aggressive, flammable, explosive, toxic, volatile or valuable liquids in the chemical and petrochemical industry.</p>
		also available in 60 Hz

(Only available in Europe, Russia, Middle East and Africa)

HT / BT / TT (Nikkiso-KSB)		Chemical canned motor pump with explosion-protection for special applications
	DN	32 - 300
	Q [m³/h]	max. 800
	H [m]	max. 200
	p [bar]	max. 40
	T [°C]	max. +400
	Data for 50 Hz operation	
		<p><b>Design:</b> Horizontal (HT) or vertical (BT / TT), seal-less, single-stage pump with fully enclosed canned motor, coolable. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of aggressive, solids-containing, polymerizing, flammable, explosive, toxic, volatile or valuable liquids as well as thermal oils in the chemical and petrochemical industry.</p>
		also available in 60 Hz

(Only available in Europe, Russia, Middle East and Africa)

HK (Nikkiso-KSB)		Two-stage canned motor pump with explosion protection
	DN	25 - 40
	Q [m³/h]	max. 10
	H [m]	max. 300
	p [bar]	max. 40
	T [°C]	max. +150
	n [min⁻¹]	max. 8400
	Data for n = 8400 min⁻¹	
		<p><b>Design:</b> Horizontal, seal-less pump with fully enclosed canned motor, two-stage design in tandem arrangement. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of aggressive, flammable, explosive, toxic, volatile or valuable liquids in the chemical and petrochemical industry. For small flow rates, high discharge heads and low NPSH<sub>R</sub>.</p>
		high speed, up to 130 Hz

(Only available in Europe, Russia, Middle East and Africa)

VN (Nikkiso-KSB)		Multistage canned motor pump with explosion protection
	DN	40 - 100
	Q [m³/h]	max. 140
	H [m]	max. 450
	p [bar]	max. 40
	T [°C]	max. +180
	Data for 50 Hz operation	
		<p><b>Design:</b> Horizontal, seal-less pump with fully enclosed canned motor, multistage. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of aggressive, flammable, explosive, toxic, volatile or valuable liquids in the chemical and petrochemical industry. For high discharge heads.</p>
		also available in 60 Hz

DN (Nikkiso-KSB)		Self-priming canned motor pump with explosion protection
	DN	32 - 50
	Q [m³/h]	max. 40
	H [m]	max. 60
	p [bar]	max. 40
	T [°C]	max. +180
	Data for 50 Hz operation	
		<p><b>Design:</b> Horizontal, seal-less pump with fully enclosed canned motor, single stage, self-priming. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of aggressive, flammable, explosive, toxic, volatile or valuable liquids in the chemical and petrochemical industry. Self-priming pump for draining of tanks and unloading of tanks and tank trucks.</p>
		also available in 60 Hz

## Process pumps

<b>RPH®</b>		<b>Process pump</b> OH2 process pump to API 610
	DN _____ 25 - 400 Q [m³/h] _____ max. 4150 H [m] _____ max. 270 p [bar] _____ max. 51 T [°C] _____ max. +450 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, radially split volute casing pump in back pull-out design to API 610, ISO 13709 (heavy-duty), with radial impeller, single-stage, single-entry, centreline pump feet; with inducer, if required. ATEX-compliant version available.  <b>Applications:</b> Refineries, petrochemical and chemical industry, power stations.
	Hyamaster	Reference no. 1312.5 / 1316.51 <span style="float: right;">also available in 60 Hz</span>

<b>RPHb</b>		<b>Process pump</b> BB2 process pump to API 610
	DN _____ 50 - 150 Q [m³/h] _____ max. 450 H [m] _____ max. 400 p [bar] _____ max. 100 T [°C] _____ max. +450 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, radially split volute casing pump in back pull-out design to API 610, ISO 13709 (heavy-duty), with radial impeller, single-entry, two-stage design, back-to-back impeller arrangement, centreline pump feet.  <b>Applications:</b> Refineries, petrochemical and chemical industry.
		also available in 60 Hz

<b>RPH-V</b>		<b>Process pump</b> VS4 process pump to API 610
	DN _____ 25 - 80 Q [m³/h] _____ max. 100 H [m] _____ max. 240 p [bar] _____ max. 35 T [°C] _____ max. +230 <small>Data for 50 Hz operation</small>	<b>Design:</b> Vertical, radially split volute casing pump to API 610 and ISO 13709 (heavy-duty), with radial impeller, single-entry, single-stage.  <b>Applications:</b> Refineries, petrochemical and chemical industry.
		also available in 60 Hz

<b>CTN</b>		<b>Chemical vertical shaft submersible pump</b>
	DN _____ 25 - 250 Q [m³/h] _____ max. 800 H [m] _____ max. 93 p [bar] _____ max. 16 T [°C] _____ max. +300 <small>Data for 50 Hz operation</small>	<b>Design:</b> Radially split, vertical shaft submersible pump with double volute for wet and dry installation, single- or double-stage, single-entry, with radial impeller; heatable model available. ATEX-compliant version available.  <b>Applications:</b> Handling of chemically aggressive liquids, also slightly contaminated or with a low solids content, in the chemical and petrochemical industry.
		Reference no. 2711.5 <span style="float: right;">also available in 60 Hz</span>

(Only available in Europe, Russia, Middle East and Africa)

<b>API series (Nikkiso-KSB)</b>		<b>Refinery pump</b>
	DN _____ 1½ - 6 Q [m³/h] _____ max. 360 H [m] _____ max. 220 p [bar] _____ max. 40 T [°C] _____ max. +450 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal or vertical canned motor pump to API 685, single-stage, with centreline pump feet; also available with inducer.  <b>Applications:</b> HNP: for clean liquids; HTP: for hot fluids; HSP / HMP: for contaminated or polymerising fluids; HRP: for fluids with a steep vapour pressure curve such as liquefied gases.
		also available in 60 Hz

## Process pumps

	<b>CHTR</b>	<table border="0"> <tr> <td>DN</td> <td>50 - 150</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 900</td> </tr> <tr> <td>H [m]</td> <td>max. 2500</td> </tr> <tr> <td>p [bar]</td> <td>max. 250</td> </tr> <tr> <td>T [°C]</td> <td>max. +400</td> </tr> <tr> <td>n [min⁻¹]</td> <td>max. 7000</td> </tr> </table> <small>Data for 50 Hz operation, higher values available upon request</small>	DN	50 - 150	Q [m³/h]	max. 900	H [m]	max. 2500	p [bar]	max. 250	T [°C]	max. +400	n [min⁻¹]	max. 7000	<p style="text-align: right;"><b>High-pressure pump</b> <b>BB5 high-pressure pump to API 610</b></p> <p><b>Design:</b> Horizontal, high-pressure barrel-type pump with radial impellers, single- and double-entry, multistage, with flanges / weld end nozzles to DIN, API 610 and ANSI.</p> <p><b>Applications:</b> In refineries, in the petrochemical industry and in steam generation plants.</p>
			DN	50 - 150											
Q [m³/h]	max. 900														
H [m]	max. 2500														
p [bar]	max. 250														
T [°C]	max. +400														
n [min⁻¹]	max. 7000														
<b>Reference no. 2701</b>		<b>also available in 60 Hz</b>													

	<b>YNKR</b>	<table border="0"> <tr> <td>DN</td> <td>125 - 500</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 3800</td> </tr> <tr> <td>H [m]</td> <td>max. 390</td> </tr> <tr> <td>p [bar]</td> <td>max. 60</td> </tr> <tr> <td>T [°C]</td> <td>max. +400</td> </tr> <tr> <td>n [min⁻¹]</td> <td>max. 3600</td> </tr> </table> <small>Data for 50 Hz operation, higher values available upon request</small>	DN	125 - 500	Q [m³/h]	max. 3800	H [m]	max. 390	p [bar]	max. 60	T [°C]	max. +400	n [min⁻¹]	max. 3600	<p style="text-align: right;"><b>Process pump</b> <b>BB2 process pump to API 610</b></p> <p><b>Design:</b> Horizontal, radially split, single-stage, double-entry pump with single or double volute casing made of cast steel, in accordance with API 610.</p> <p><b>Applications:</b> In refineries, in the petrochemical industry, solarthermal power plants and in steam generation plants.</p>
			DN	125 - 500											
Q [m³/h]	max. 3800														
H [m]	max. 390														
p [bar]	max. 60														
T [°C]	max. +400														
n [min⁻¹]	max. 3600														
<b>Reference no. 1139.21</b>		<b>also available in 60 Hz</b>													

	<b>CINCP / CINCN</b>	<table border="0"> <tr> <td>DN</td> <td>32 - 200</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 780</td> </tr> <tr> <td>H [m]</td> <td>max. 105</td> </tr> <tr> <td>p [bar]</td> <td>max. 10</td> </tr> <tr> <td>T [°C]</td> <td>-10 to +100</td> </tr> <tr> <td>n [min⁻¹]</td> <td>max. 3000</td> </tr> </table> <small>Data for 50 Hz operation</small>	DN	32 - 200	Q [m³/h]	max. 780	H [m]	max. 105	p [bar]	max. 10	T [°C]	-10 to +100	n [min⁻¹]	max. 3000	<p style="text-align: right;"><b>Vertical immersion pump for sumps and tanks</b></p> <p><b>Design:</b> Centrifugal vertical sump pump in cantilever design, for wet or dry well installation. Semi-open impeller, pump shaft without guide bearing, supported by ball bearings in the upper section. Supplied with discharge pipe extending above the baseplate (CINCP) or without discharge pipe (CINCN). ATEX-compliant version available.</p> <p><b>Applications:</b> Chemical and petrochemical industry, raw materials extraction processes and waste water management.</p>
			DN	32 - 200											
Q [m³/h]	max. 780														
H [m]	max. 105														
p [bar]	max. 10														
T [°C]	-10 to +100														
n [min⁻¹]	max. 3000														
<b>Hyamaster</b>		<b>also suitable for 60 Hz operation</b>													

	<b>INVCP / INVCN</b>	<table border="0"> <tr> <td>DN</td> <td>32 - 300</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 1600</td> </tr> <tr> <td>H [m]</td> <td>max. 116</td> </tr> <tr> <td>p [bar]</td> <td>max. 10</td> </tr> <tr> <td>T [°C]</td> <td>-10 to +100</td> </tr> <tr> <td>n [min⁻¹]</td> <td>max. 3000</td> </tr> </table> <small>Data for 50 Hz operation</small>	DN	32 - 300	Q [m³/h]	max. 1600	H [m]	max. 116	p [bar]	max. 10	T [°C]	-10 to +100	n [min⁻¹]	max. 3000	<p style="text-align: right;"><b>Vertical immersion pump for sumps and tanks</b></p> <p><b>Design:</b> Centrifugal vertical sump pump, for wet or dry well installation, available with closed or semi-open impeller. Supplied with discharge pipe extending above the baseplate (INVCP) or without discharge pipe (INVCN). ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of chemically aggressive, slightly contaminated or solids-laden fluids in the chemical and petrochemical industries.</p>
			DN	32 - 300											
Q [m³/h]	max. 1600														
H [m]	max. 116														
p [bar]	max. 10														
T [°C]	-10 to +100														
n [min⁻¹]	max. 3000														
<b>Hyamaster</b>		<b>also suitable for 60 Hz operation</b>													

	<b>RWCP / RWCN</b>	<table border="0"> <tr> <td>DN</td> <td>50 - 200</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 700</td> </tr> <tr> <td>H [m]</td> <td>max. 100</td> </tr> <tr> <td>p [bar]</td> <td>max. 16</td> </tr> <tr> <td>T [°C]</td> <td>-10 to +100</td> </tr> <tr> <td>n [min⁻¹]</td> <td>max. 3000</td> </tr> </table> <small>Data for 50 Hz operation</small>	DN	50 - 200	Q [m³/h]	max. 700	H [m]	max. 100	p [bar]	max. 16	T [°C]	-10 to +100	n [min⁻¹]	max. 3000	<p style="text-align: right;"><b>Vertical immersion pump for sumps and tanks</b></p> <p><b>Design:</b> Process pump with free-flow, semi-open or two/three-channel impeller. Shaft sealed by mechanical seal or gland packing with various API pipework plans. Oil-lubricated bearings. ATEX-compliant version available.</p> <p><b>Applications:</b> Refineries, chemical and petrochemical industry, steel factories, descaling systems, raw materials extraction processes and waste water management.</p>
			DN	50 - 200											
Q [m³/h]	max. 700														
H [m]	max. 100														
p [bar]	max. 16														
T [°C]	-10 to +100														
n [min⁻¹]	max. 3000														
<b>Hyamaster</b>		<b>also suitable for 60 Hz operation</b>													

## Process pumps

WKTR		Condensate pump VS6 process pump to API 610
	DN _____ 40 - 150 Q [m <sup>3</sup> /h] _____ max. 400 H [m] _____ max. 500 p [bar] _____ max. 51 Install. depth [m] _____ 1.6 n [min <sup>-1</sup> ] _____ max. 3600 <small>Data for 50 Hz operation</small>	<b>Design:</b> Vertical multistage can-type ring-section pump. Type VS6 to API 610 and DIN ISO 13709, radial impellers, first-stage impeller designed as suction impeller. ATEX-compliant version available.  <b>Applications:</b> For handling condensate and other NPSH critical products in industrial systems, particularly in refineries and petrochemical plants.
	<b>Reference no. 1765.11</b> <span style="float: right;">also available in 60 Hz</span>	

## Rainwater harvesting systems

Hya-Rain® / Hya-Rain® N		Rainwater harvesting system with one pump
	Rp _____ 1 Q [m <sup>3</sup> /h] _____ max. 4 H [m] _____ max. 43 p [bar] _____ max. 6 T [°C] _____ max. +35 <small>Data for 50 Hz operation</small>	<b>Design:</b> Ready-to-connect package rainwater harvesting system. Automatic mains water back-up if the rain water storage tank is empty, with integrated dry-running protection. Automated with automatic control unit.  <b>Applications:</b> Rainwater and service water utilization, irrigation and spray irrigation systems.
	<b>Reference no. 5602.51</b>	

Hya-Rain® Eco		Rainwater harvesting system with one pump
	Rp _____ 1 Q [m <sup>3</sup> /h] _____ max. 4 H [m] _____ max. 43 p [bar] _____ max. 6 T [°C] _____ max. +35 <small>Data for 50 Hz operation</small>	<b>Design:</b> Ready-to-connect package rainwater harvesting system. Automatic mains water back-up function if the rain water storage tank is empty, with integrated dry-running protection.  <b>Applications:</b> Rainwater and service water utilization, irrigation and spray irrigation systems.
	<b>Reference no. 5605.5</b>	

## Domestic water supply systems with automatic control unit / swimming pools

<b>Multi Eco®</b>		<b>Multistage, self-priming centrifugal pump</b>
	Rp	1-1¼
	Q [m³/h]	max. 8
	H [m]	max. 54
	p [bar]	max. 10
	T [°C]	max. +50
	n [min⁻¹]	max. 2800
Controlmatic • Cervomatic		Reference no. 5180.5

**Design:** Multistage, self-priming centrifugal pump in close-coupled design.  
**Applications:** Single- or two-family houses, agricultural facilities, spray irrigation and irrigation systems, washing plants, water supply and rainwater harvesting systems.

<b>Multi Eco®-Pro</b>		<b>Multistage, self-priming centrifugal pump with automatic control unit</b>
	Rp	1-1¼
	Q [m³/h]	max. 8
	H [m]	max. 54
	p [bar]	max. 10
	T [°C]	max. +50
	n [min⁻¹]	max. 2800
		Reference no. 5182.5

**Design:** Multistage, self-priming centrifugal pump in close-coupled design, with power cable, plug and Controlmatic E automatic control unit switching the pump on and off as consumers are opened / closed and protecting the pump against dry running. Automated with automatic control unit.  
**Applications:** Single- or two-family houses, agricultural facilities, spray irrigation and irrigation systems, washing plants, water supply and rainwater harvesting systems.

<b>Multi Eco®-Top</b>		<b>Domestic water supply system</b>
	Rp	1-1¼
	Q [m³/h]	max. 8
	H [m]	max. 54
	p [bar]	max. 7
	T [°C]	max. +50
	n [min⁻¹]	max. 2800
		Reference no. 5181.5

**Design:** Multistage, self-priming centrifugal pump in close-coupled design incl. accumulator with replaceable membrane in drinking water quality, total volume 20 or 50 l, pressure switch for automatic pump operation and 1.5 m power cable. Automated with automatic control unit.  
**Applications:** Single- or two-family houses, agricultural facilities, spray irrigation and irrigation systems, washing plants, water supply and rainwater harvesting systems.

<b>Movitec® VME</b>		<b>High-pressure in-line pump in close-coupled design</b>
	Rp	1½
	Q [m³/h]	max. 9
	H [m]	max. 48
	p [bar]	max. 16
	T [°C]	max. +60
	n [min⁻¹]	max. 2900
Data for 50 Hz operation		
PumpMeter • Hyamaster		Reference no. 1798.5

**Design:** Multistage, vertical (horizontal installation upon request) high-pressure centrifugal pump, with suction and discharge nozzles of identical nominal diameters arranged opposite to each other (in-line design).  
**Applications:** Single- or two-family houses, agricultural facilities, spray irrigation and irrigation systems, washing plants, water supply and rainwater harvesting systems, pressure boosting, hot water and cooling water recirculation, fire-fighting systems.



also available in 60 Hz

<b>Ixo</b>		<b>Submersible motor pump</b>
	Rp	1¼
	Q [m³/h]	max. 8
	H [m]	max. 65
	T [°C]	max. +35
	n [min⁻¹]	max. 2900
Switchgears • Cervomatic		Reference no. 2146.5

**Design:** Fully or partly submerged, multistage, close-coupled centrifugal pump (min. immersion depth 0.1 m), low-level inlet, suction strainer with a max. mesh size of 2.5 mm.  
**Applications:** Water supply, spray irrigation and irrigation systems, washing plants, rainwater harvesting systems, water extraction from wells, tanks and cisterns.

## Domestic water supply systems with automatic control unit / swimming pools

Filtru N		Recirculating pump for swimming pool filtering systems
	Rp	2
	Q [m³/h]	max. 36
	H [m]	max. 21
	p [bar]	max. 2.5
	T [°C]	max. +35
	n [min⁻¹]	max. 2800
	<b>Design:</b> Self-priming, single-stage, close-coupled centrifugal pump. <b>Applications:</b> Handling of clean or slightly contaminated water, swimming pool water with a chlorine content of up to 0.3 %, ozonized swimming pool water with a salt content of up to 7 ‰.	
Reference no. 2127.5		

## Pressure booster systems

Hya®-Solo E		Pressure booster system, 1 pump
	Rp	1¼
	Q [m³/h]	max. 6
	H [m]	max. 50
	p [bar]	max. 10
	T [°C]	max. +60
	Data for 50 Hz operation	
	<b>Design:</b> Fully automatic package single-pump system with 8 l membrane-type accumulator, pressure-controlled starting and flow-controlled stopping. Automated with automatic control unit. <b>Applications:</b> Water supply systems for residential and office buildings, irrigation/spray irrigation and rainwater harvesting systems, service water supply systems in trade and industry.	
Reference no. 1951.5		

Hya®-Solo D		Pressure booster system, 1 pump
	Rp / DN	1¼ / 100
	Q [m³/h]	max. 110
	H [m]	max. 150
	p [bar]	max. 16
	T [°C]	max. +70
	Data for 50 Hz operation	
	<b>Design:</b> Fully automatic package single-pump system with 8 l membrane-type accumulator, pressure-controlled starting and stopping. <b>Applications:</b> For industrial plants, water supply systems for residential and office buildings, irrigation/spray irrigation and rainwater harvesting systems, service water supply systems in trade and industry.	
Reference no. 1951.5		

Hya®-Solo DV		Pressure booster system, 1 pump
	Rp / DN	1¼ / 100
	Q [m³/h]	max. 110
	H [m]	max. 150
	p [bar]	max. 16
	T [°C]	max. +70
	Data for 2900 min⁻¹	
	<b>Design:</b> Fully automatic variable-speed package single-pump system with PumpDrive, pressure-controlled starting and flow-controlled stopping. Automated with PumpDrive. <b>Applications:</b> For industrial plants, water supply systems for residential and office buildings, irrigation/spray irrigation and rainwater harvesting systems, service water supply systems in trade and industry.	
Reference no. 1951.5		

## Pressure booster systems

### Hya®-Compact VP

Pressure booster system, 2 pumps



Rp / DN	1¼ / 40
Q [m³/h]	max. 10
H [m]	max. 100
p [bar]	max. 10
T [°C]	max. +40

Data for 50 Hz operation,  
data for 2900 min<sup>-1</sup>

**Design:** Fully automatic package pressure booster system with integrated standby pump. Two vertical high-pressure pumps with continuously variable speed adjustment by BoosterControl Advanced. Two standard volt-free changeover contacts integrated for fault indication. Configuration and function to DIN 1988-500. Stationary floor-mounted or wall-mounted installation.

**Applications:** For industrial plants, water supply systems for residential and office buildings, irrigation / spray irrigation and rainwater harvesting systems, service water supply systems in trade and industry.

Reference no. 1972.5

### Hya®-Compact K

Pressure booster system, 2 pumps



Rp / DN	1¼ / 40
Q [m³/h]	max. 10
H [m]	max. 100
p [bar]	max. 10
T [°C]	max. +40

Data for 50 Hz operation,  
data for 2900 min<sup>-1</sup>

**Design:** Fully automatic package pressure booster system with integrated standby pump. Two vertical high-pressure pumps in cascade operation, automated with BoosterControl Advanced. Integrated pressure transmitter for the suction and discharge side, respectively. Two standard volt-free changeover contacts for fault indication as standard. Configuration and function to DIN EN 806-2. Stationary floor-mounted or wall-mounted installation.

**Applications:** For industrial plants, water supply systems for residential and office buildings, irrigation/spray irrigation and rainwater harvesting systems, service water supply systems in trade and industry.

Reference no. 1972.5

### Hya®-Eco VP

Pressure booster system with continuously variable speed control of each pump



Rp / DN	2 / 80
Q [m³/h]	max. 70
H [m]	max. 120
p [bar]	max. 16
T [°C]	max. +70

Data for 3500 min<sup>-1</sup>

**Design:** Fully automatic package pressure booster system, with 2 or 3 vertical high-pressure pumps and continuously variable speed adjustment of each pump for fully electronic control of the required supply pressure, with two standard volt-free change-over contacts for fault indication. Configuration and function to DIN 1988-500. Automated with Booster Control Advanced.

**Applications:** Residential buildings, hospitals, office buildings, hotels, department stores, industry, and other applications.

Reference no. 1967.52

### Hyamat® K

Pressure booster system, 2 to 6 pumps



Rp / DN	1½ / 250
Q [m³/h]	max. 660
H [m]	max. 160
p [bar]	max. 16
T [°C]	max. +70

Data for 50 Hz operation

**Design:** Fully automatic package pressure booster system, with 2 to 6 vertical high-pressure pumps, fully electronic control to ensure the required supply pressure, with volt-free changeover contact for general fault indication and live-zero monitoring of the connected sensors, configuration and functions to DIN EN 806-2. Automated with Booster Control Advanced.

**Applications:** Residential buildings, hospitals, office buildings, hotels, department stores, industry, etc.

Reference no. 1952.5

### Hyamat® V

Pressure booster system with continuously variable speed adjustment of one pump



Rp / DN	1½ / 250
Q [m³/h]	max. 660
H [m]	max. 160
p [bar]	max. 16
T [°C]	max. +70

Data for 2900 min<sup>-1</sup>

**Design:** Fully automatic package pressure booster system, with 2 to 6 vertical high-pressure pumps and continuously variable speed adjustment of one pump for fully electronic control of the required supply pressure. Configuration and functions to DIN 1988-500. Automated with Booster Control Advanced.

**Applications:** Pressure boosting in residential buildings, hospitals, office buildings, hotels, department stores, industry, etc.

Reference no. 1953.51

## Pressure booster systems

Hyamat® VP		Pressure booster system with continuously variable speed control of each pump
	Rp / DN	1½ / 250
	Q [m³/h]	max. 660
	H [m]	max. 160
	p [bar]	max. 16
	T [°C]	max. +70
	Data for 2900 min⁻¹	
		<p><b>Design:</b> Fully automatic package pressure booster system, with 2 to 6 vertical high-pressure pumps and continuously variable speed control of each pump by PumpDrive speed control system. For fully electronic control of the required supply pressure. Configuration and functions to DIN 1988-500. Automated with Booster Control Advanced and PumpDrive.</p> <p><b>Applications:</b> Pressure boosting in residential buildings, hospitals, office buildings, hotels, department stores, industry, etc.</p> 
		Reference no. 1953.52

Hyamat® IK, IV, IVP		Pressure booster system for industrial applications
	DN	100 - 200
	Q [m³/h]	max. 640
	H [m]	max. 160
	p [bar]	max. 16
	T [°C]	max. +70
	Data for 50 Hz operation	
		<p><b>Design:</b> Fully automatic package pressure booster system, with 2 to 4 vertical high-pressure pumps and fully electronic control to ensure the required supply pressure, configuration and functions to DIN 1988-500. Automated with PLC.</p> <p><b>Applications:</b> Handling of service water and cooling water not chemically or mechanically aggressive to the pump materials in industry, etc.</p>
		Reference no. 1950.5

## Drainage pumps / waste water pumps

Ama-Drainer® N 301, 302, 303, 358		Submersible motor pump
	Rp	¼ - 1½
	Q [m³/h]	max. 16,5
	H [m]	max. 12
	T [°C]	max. +50
	(301, 302, 303)	
	max. +35 (358)	
Data for 50 Hz operation		<p><b>Design:</b> Vertical, fully floodable submersible motor pump in close-coupled design, IP 68, single-stage, with or without level control, max. immersion depth 2 m.</p> <p><b>Applications:</b> Automatic drainage of pits, shafts, yards and cellars subject to a flooding risk, lowering of surface water levels, dewatering, drainage of underground passages, water extraction from rivers and reservoirs.</p>
Switchgears • LevelControl		Reference no. 2331.51 / 2331.52

Ama-Drainer® 400/10 400/35 500/10/11		Submersible motor pump	
	Rp	1½ - 2	
	Q [m³/h]	max. 50	
	H [m]	max. 24	
	T [°C]	max. +40	
	Data for 50 Hz operation		<p><b>Design:</b> Vertical, fully floodable submersible motor pump in close-coupled design, IP 68, single-stage, with or without level control, max. immersion depth 7 m.</p> <p><b>Applications:</b> Automatic drainage of pits, shafts, yards and cellars subject to a flooding risk, lowering of surface water levels, dewatering, drainage of underground passages, water extraction from rivers and reservoirs, disposal of highly contaminated, fibre-containing water.</p>
	Switchgears • LevelControl		Reference no. 2331.53

## Drainage pumps / waste water pumps

### Ama-Drainer® 80, 100

Submersible motor pump



Rp / DN \_\_\_\_\_ 2½ / 100  
 Q [m³/h] \_\_\_\_\_ max. 130  
 H [m] \_\_\_\_\_ max. 26  
 T [°C] \_\_\_\_\_ max. +50  
 Data for 50 Hz operation

**Design:** Vertical, fully floodable submersible motor pump in close-coupled design, IP 68, single-stage, with or without level control, max. immersion depth 10 m.

**Applications:** Automatic drainage of pits, shafts, yards and cellars subject to a flooding risk, lowering of surface water levels, dewatering, drainage of underground passages, water extraction from rivers and reservoirs.

Switchgears • LevelControl

Reference no. 2331.54

### Ama-Porter® F / S

Submersible motor pump



DN \_\_\_\_\_ 50 - 65  
 Q [m³/h] \_\_\_\_\_ max. 40  
 H [m] \_\_\_\_\_ max. 21  
 T [°C] \_\_\_\_\_ max. +40  
 Data for 50 Hz operation

**Design:** Vertical, fully floodable submersible waste water pump in close-coupled design (cast iron variant), single-stage, without explosion protection.

**Applications:** Handling of all types of waste water.

Switchgears • LevelControl

Reference no. 2541.51 / 2539.51

### Rotex®

Waste water pump



Rp \_\_\_\_\_ 1¼ - 2  
 Q [m³/h] \_\_\_\_\_ max. 24  
 H [m] \_\_\_\_\_ max. 14  
 Install. depth [m] \_\_\_\_\_ max. 1.7  
 T [°C] \_\_\_\_\_ max. +90  
 n [min-1] \_\_\_\_\_ max. 2900  
 Data for 50 Hz operation

**Design:** Vertical, single-stage centrifugal pump with discharge to the top and parallel with the pump shaft, pump foot designed as suction strainer. Pump and motor are rigidly connected by a support pipe, ready to be plugged in, with 1.5 m power cable and level switch.

**Applications:** Automatic disposal of waste water from buildings, pits and tanks, lowering of surface water levels and drainage.

Reference no. 2322.5

### MK / MKY

Waste water, condensate and heat transfer liquid pump



Rp / DN \_\_\_\_\_ 2 / 50  
 Q [m³/h] \_\_\_\_\_ max. 36  
 H [m] \_\_\_\_\_ max. 19  
 Install. depth [m] \_\_\_\_\_ max. 2.8  
 T [°C] \_\_\_\_\_ max. +200  
 n [min-1] \_\_\_\_\_ max. 3500  
 Data for 50 Hz operation

**Design:** Vertical submersible pump with three-channel impeller, volute casing designed as suction strainer.

**Applications:** Handling of condensate and heat transfer liquids below the boiling point, condensate return systems, primary and secondary heating circuits, direct installation in heating tanks or heat exchangers in the secondary circuits of heat transfer systems (MKY).

Switchgears • LevelControl

Reference no. 2324.5

## Lifting units / pump stations

<h3>AmaDS<sup>3</sup></h3>		<b>Waste water pump station with solids separation system</b>
	Inflow rate [m <sup>3</sup> /h] 6 - 120 H [m] max. 85 T [°C] depending on pump n [min <sup>-1</sup> ] depending on pump Viscosity [cP] depending on pump Data for 50 Hz operation, higher values available upon request	<b>Design:</b> Waste water pump station with solids separation system. Indirect hydraulic transport of waste water, with solids separators upstream of the pumps, for maximum economic efficiency, operating reliability and ease of maintenance.  <b>Applications:</b> Municipal and industrial waste water transport. Applications with special drainage requirements, e.g. hotels, hospitals, campgrounds, etc.
	<span style="color: red;">■</span> LevelControl	<b>Reference no. 2581 and 2567.021</b>
<h3>Ama-Drainer-Box</h3>		<b>Automatic waste water lifting unit</b>
	DN 40, 50 Q [m <sup>3</sup> /h] max. 46 H [m] max. 24 T [°C] max. +40 Data for 50 Hz operation	<b>Design:</b> Stable above-floor or impact-resistant underfloor plastic collecting tank with floor drain and odour trap, both variants with Ama-Drainer submersible motor pump starting and stopping automatically and swing check valve. Automated with switchgear and LevelControl. Volumetric tank content: 100 or 200 litres. To EN 12050.  <b>Applications:</b> Washbasins, showers, washing machines, garage gateways, basements, rooms at risk of flooding, etc.
	<span style="color: green;">■</span>	<b>Reference no. 2336.51</b>
<h3>Ama-Drainer-Box Mini</h3>		<b>Automatic waste water lifting unit</b>
	DN 40 Q [m <sup>3</sup> /h] max. 10 H [m] max. 6.5 T [°C] max. +35 Data for 50 Hz operation	<b>Design:</b> Reliable and compact waste water lifting unit in a modern design with activated carbon filter meeting hygiene requirements and with shower connection as a standard. To EN 12050-2.  <b>Applications:</b> Automatic drainage of washbasins, showers, washing machines, dishwashers, etc.
	<span style="color: green;">■</span>	<b>Reference no. 2336.52</b>
<h3>mini-Compacta</h3>		<b>Floodable sewage lifting unit</b>
	DN 32 - 100 Q [m <sup>3</sup> /h] max. 36 H [m] max. 25 T [°C] max. +40 Data for 50 Hz operation	<b>Design:</b> Floodable single-pump or dual-pump sewage lifting unit for automatic disposal of domestic sewage and faeces below the flood level. Automated with LevelControl.  <b>Applications:</b> Basement flats, bars, basement party rooms and saunas, cinemas and theatres, department stores and hospitals, hotels, restaurants, schools, etc.
	<span style="color: green;">■</span>	<b>Reference no. 2317.54</b>
<h3>Compacta®</h3>		<b>Floodable sewage lifting unit</b>
	DN 80 - 100 Q [m <sup>3</sup> /h] max. 140 H [m] max. 24 T [°C] max. +40* Data for 50 Hz operation  * up to +65 °C for short periods	<b>Design:</b> Floodable single-pump or dual-pump sewage lifting unit for automatic disposal of sewage and faeces below the flood level. Automated with LevelControl.  <b>Applications:</b> Basement flats, bars, basement party rooms and saunas, cinemas and theatres, department stores and hospitals, hotels, restaurants, schools, public buildings, industrial plants, joint sewage disposal for rows of houses, etc.
	<span style="color: green;">■</span>	<b>Reference no. 2317.55</b>

## Lifting units / pump stations

Pump Station CK 800-Eu		Pump station, plastic collecting tank with Amarex N S and Ama-Porter S
	DN _____ 32 - 50 Q [m³/h] _____ max. 22 H [m] _____ max. 49 T [°C] _____ max. +40 <small>Data for 50 Hz operation</small>	<b>Design:</b> Ready-to-connect package single or dual pump station with PE-LLD (polyethylene) collecting tank for underground installation. Equipped with one or two Amarex N S and Ama-Porter submersible waste water pumps without explosion protection. Collecting tank design to DIN 1986-100 and EN 752 / EN 476. Automated with LevelControl. <b>Applications:</b> Renovation of premises, sewage disposal in various sectors, joint sewage disposal for several residential units, pumped drainage.
	Reference no. 2334.541	

Ama-Porter CK Pump Station		Pump station, plastic collecting tank with Ama-Porter F
	DN _____ 50 - 65 Q [m³/h] _____ max. 40 H [m] _____ max. 21 T [°C] _____ max. +40 <small>Data for 50 Hz operation</small>	<b>Design:</b> Ready-to-connect package single or dual pump station with PE-LLD (polyethylene) collecting tank for underground installation. Equipped with one or two Ama-Porter submersible waste water pumps without explosion protection. Collecting tank design to DIN 1986-100 and EN 752 / EN 476. Automated with switchgears and LevelControl. <b>Applications:</b> Renovation of premises, sewage disposal in various sectors, joint sewage disposal for several residential units, pumped drainage.
	Reference no. 2334.51	

Amarex N CK Pump Station		Pump station, plastic collecting tank with Amarex N F
	DN _____ 50 - 65 Q [m³/h] _____ max. 50 H [m] _____ max. 39 T [°C] _____ max. +40 <small>Data for 50 Hz operation</small>	<b>Design:</b> Ready-to-connect package single or dual pump station with PE-LLD (polyethylene) collecting tank for underground installation. Equipped with one or two Amarex N submersible waste water pumps, also available with explosion protection. Collecting tank design to DIN 1986-100 and EN 752 / EN 476. Automated with LevelControl. <b>Applications:</b> Renovation of premises, sewage disposal in various sectors, joint sewage disposal for several residential units, pumped drainage.
	Reference no. 2334.52	

Evamatic-Box		Sewage lifting unit
	DN _____ 50 - 65 Q [m³/h] _____ max. 40 H [m] _____ max. 21 T [°C] _____ max. +40 <small>Data for 50 Hz operation</small>	<b>Design:</b> Single-pump or dual-pump sewage lifting unit with one or two Ama-Porter submersible waste water pumps with free-flow impeller (F) or cutter (S), to EN 12050-1. <b>Applications:</b> Disposal of domestic waste water and sewage.
	Reference no. 2319.51	

## Submersible motor pumps

Amarex® N		Submersible motor pump DN 32 to 100
	DN 32 - 100 Q [m³/h] max. 190 H [m] max. 49 T [°C] max. +55 <small>Data for 50 Hz operation</small>	<p><b>Design:</b> Vertical, single-stage submersible motor pump, for wet installation, stationary and transportable design. Amarex N pumps are floodable, single-stage, single-entry close-coupled units which are not self-priming. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of all types of waste water, especially untreated sewage containing long fibres and solid substances, fluids containing gas / air, as well as raw, activated and digested sludge, dewatering / water extraction, drainage of rooms and surfaces subject to a flooding risk.</p>
	Switchgears • LevelControl	Reference no. 2553.5 <span style="float: right;">also available in 60 Hz</span>

Amarex® KRT®		Submersible motor pump DN 40 to DN 700
	DN 40 - 700 Q [m³/h] max. 10080 H [m] max. 100 T [°C] max. +60 n [min⁻¹] max. 2900 <small>Data for 50 Hz operation</small>	<p><b>Design:</b> Vertical, single-stage submersible motor pump in close-coupled design, various impeller types, for wet or dry installation, stationary and transportable version. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of all types of abrasive or aggressive waste water in water and waste water engineering as well as industry, especially untreated sewage containing long fibres and solid substances, fluids containing gas / air, as well as raw, activated and digested sludge; sea water desalination.</p>
	PumpDrive • Hyamaster • Amacontrol • Switchgears • LevelControl	Reference no. 2553.5 <span style="float: right;">also available in 60 Hz</span>

Amarex® KRT® dry-installed, with cooling jacket		Submersible motor pump DN 100 to DN 700
	DN 100 - 700 Q [m³/h] max. 10000 H [m] max. 100 p [bar] max. 10 T [°C] max. +40 n [min⁻¹] max. 1450 <small>Data for 50 Hz operation</small>	<p><b>Design:</b> Vertical, single-stage submersible motor pump in close-coupled design, various impeller types, dry installation.</p> <p><b>Applications:</b> Handling of all types of waste water in waste water engineering and industry, especially sewage containing long fibres and solid substances, fluids containing gas / air, as well as raw, activated and digested sludge.</p>
	PumpDrive • Hyamaster • Amacontrol • Switchgears • LevelControl	Reference no. 2553.5 <span style="float: right;">also available in 60 Hz</span>

Amarex® KRT® wet/dry-installed, with energy-saving motor		Submersible motor pump DN 80 to DN 200
	DN 80 - 200 Q [m³/h] max. 550 H [m] max. 25 T [°C] max. +40 n [min⁻¹] max. 1450 <small>Data for 50 Hz operation</small>	<p><b>Design:</b> Horizontal or vertical single-stage submersible motor pump in close-coupled design, with various impeller types, for wet or dry installation, stationary and transportable version, with energy-saving motor.</p> <p><b>Applications:</b> Handling of all types of waste water in waste water engineering and industry, especially sewage containing long fibres and solid substances, fluids containing gas / air, as well as raw, activated and digested sludge.</p>
	PumpDrive • Hyamaster • Amacontrol • Switchgears • LevelControl	Reference no. 2553.5 <span style="float: right;">also available in 60 Hz</span>

## Submersible pumps in discharge tubes

<h3>Amacan® K</h3> <p style="text-align: right;">Submersible motor pump with non-clogging impeller</p>	
	DN _____ 700 - 1400 Q [m³/h] _____ max. 7200 H [m] _____ max. 30 T [°C] _____ max. +40 n [min⁻¹] _____ max. 980 <small>Data for 50 Hz operation</small>
<p><b>Design:</b> Wet-installed submersible motor pump with non-clogging impeller, single-stage, single-entry, for installation in discharge tubes. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of pre-cleaned, chemically neutral waste water, industrial effluents and sewage, fluids not containing any stringy substances pre-treated by screens and sills, as waste water, mixed water and activated sludge pump in effluent treatment plants, irrigation and drainage pumping systems.</p>	
	Reference no. 1579.5 <span style="float: right;">also available in 60 Hz</span>
<h3>Amacan® P</h3> <p style="text-align: right;">Submersible motor pump with axial propeller</p>	
	DN _____ 500 - 1500 Q [m³/h] _____ max. 25200 H [m] _____ max. 12 T [°C] _____ max. +40 n [min⁻¹] _____ max. 1450 <small>Data for 50 Hz operation</small>
<p><b>Design:</b> Wet-installed, submersible motor pump with axial propeller in ECB design for installation in discharge tubes, single-stage, single-entry. ATEX-compliant version available.</p> <p><b>Applications:</b> Irrigation and drainage pumping stations, stormwater pumping stations, handling of raw and clean water in water and effluent treatment plants, of cooling water in power stations and industrial plants, industrial water supply systems, water pollution and flood control systems, aquaculture.</p>	
	Reference no. 1580.5 <span style="float: right;">also available in 60 Hz</span>
<h3>Amacan® S</h3> <p style="text-align: right;">Submersible motor pump with mixed flow impeller</p>	
	DN _____ 650 - 1300 Q [m³/h] _____ max. 10800 H [m] _____ max. 40 T [°C] _____ max. +30 n [min⁻¹] _____ max. 1450 <small>Data for 50 Hz operation</small>
<p><b>Design:</b> Wet-installed submersible motor pump with mixed flow impeller, single-stage, for installation in discharge tubes. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of water without stringy substances in irrigation and drainage pumping systems, general water supply systems, water pollution and flood control systems.</p>	
	Reference no. 1589.5 <span style="float: right;">also available in 60 Hz</span>

## Mixers / agitators / tank cleaning units

<b>Amamix</b>		<b>Submersible mixer</b>
	Propeller ø [mm] 200 - 600 Install. depth [m] max. 30 T [°C] max. +40 n [min <sup>-1</sup> ] max. 1400 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal submersible mixer with self-cleaning ECB propeller, close-coupled design, direct drive or with gear unit. ATEX-compliant version available. <b>Applications:</b> Handling of municipal and industrial waste water and sludges, also in environmental engineering (biogas plants, etc.).
		Reference no. 1592.551 / 1592.552 <span style="float: right;">also available in 60 Hz</span>
<b>Amaprop</b>		<b>Submersible agitator</b>
	Propeller ø [mm] 1000 - 2500 Install. depth [m] max. 30 T [°C] max. +40 n [min <sup>-1</sup> ] max. 109	<b>Design:</b> Horizontal submersible agitator with self-cleaning ECB propeller, close-coupled design, equipped with coaxial spur gear. ATEX-compliant version available. <b>Applications:</b> In environmental engineering, particularly for circulating, keeping in suspension and inducing flow in municipal and industrial waste water and sludges; in nitrification and denitrification tanks, activated sludge tanks, mixing tanks, final storage tanks, biological phosphate elimination tanks, flocculation tanks and in biogas applications.
		Reference no. 1592.505
<b>Amajet</b>		<b>Cleaning system</b>
	DN 100 - 150 Q [m <sup>3</sup> /h] max. 195 T [°C] max. +40 n [min <sup>-1</sup> ] max. 1450	<b>Design:</b> Stationary or portable unit with horizontal or vertical submersible motor propulsive jet pump with non-clogging free-flow impeller. Motor rating 5.5 to 27 kW. Available variants: Amajet, SewerAmajet, SwingAmajet, MultiAmajet. <b>Applications:</b> Cleaning of stormwater tanks and storage sewers.
		Reference no. 1574.5
<b>Amaline</b>		<b>Submersible motor recirculation pump</b>
	DN 300 - 800 Q [m <sup>3</sup> /h] max. 5400 H [m] max. 2 T [°C] max. +40 n [min <sup>-1</sup> ] max. 960	<b>Design:</b> Wet-installed, horizontal propeller pump with submersible motor, equipped with spur gear or direct drive, ECB propeller with 3 rigid, fibre-repellent blades, bolt-free connection to the discharge pipe. ATEX-compliant version available. <b>Applications:</b> Recirculation of activated sludge in waste water treatment systems.
		Reference no. 1594.5

## Pumps for solids-laden fluids

Sewatec® / Sewabloc		Dry-installed volute casing pump	
	DN	50 - 700	<p><b>Design:</b> Horizontal or vertical volute casing pump with free-flow (F), single vane (E), multi-vane (K) and diagonal single vane (D) impellers, discharge flange to DIN and ANSI standards. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of sewage and all types of waste water in waste water management and industry.</p>
	Q [m³/h]	60 - 10000	
	H [m]	max. 95	
	p [bar]	max. 10	
	T [°C]	max. +70	
	n [min⁻¹]	max. 2900	
Data for 50 Hz operation			
<b>Hyamaster • PumpDrive • LevelControl</b>		Reference no. 2580.5 / 2580.45 / 2580.35 <span style="float: right;">also available in 60 Hz</span>	

KWP® / KWP®-Bloc		Non-clogging impeller centrifugal pump / close-coupled unit	
	DN	40 - 900 (max. 1000)	<p><b>Design:</b> Horizontal, radially split volute casing pump in back pull-out or close-coupled design, single-stage, single-entry, available with various impeller types: non-clogging impeller, open multi-vane impeller, free-flow impeller. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of pre-treated sewage, waste water, all types of slurries without stringy substances and pulps up to 5 % bone dry.</p>
	Q [m³/h]	max. 15000 (18000)	
	H [m]	max. 100	
	p [bar]	max. 10	
	T [°C]	-40 to +120 (max. +280)	
	n [min⁻¹]	max. 2900	
Data for 50 Hz operation			
<b>Hyamaster</b>		Reference no. 2361.5 / 2362.5 / 2361.450 / 2361.453 / 2361.460 <span style="float: right;">also available in 60 Hz</span>	

## Slurry pumps

WBC		Slurry pump	
	Q [m³/h]	max. 13600	<p><b>Design:</b> Patented design incorporates state-of-the-art hydraulic and wear technologies for heavy-duty, high-pressure applications. The pump shell is designed to reduce stresses that can cause a structural failure during a pressure surge.</p> <p><b>Applications:</b> Ideal for ore and tailings transport to minimize the effect of sudden pressure spikes.</p>
	H [m]	max. 80	
	p [bar]	max. 40	
	T [°C]	max. +120	

LSA-S		Slurry pump	
	Q [m³/h]	max. 14000	<p><b>Design:</b> Premium design hard iron pumps for long wear life pumping severe slurries. The basic, single-wall construction and heavy section, hard metal wet end combined with the cartridge bearing assembly provides maximum reliability and ease of maintenance.</p> <p><b>Applications:</b> Pumps are widely used in ore transport, mill discharge, cyclone feed, tailings and plant process.</p>
	H [m]	max. 90	
	p [bar]	max. 16	
	T [°C]	max. +120	

## Slurry pumps

### LCC-M

#### Slurry pump



Q [m <sup>3</sup> /h]	max. 3865
H [m]	max. 90
p [bar]	max. 16
T [°C]	max. +120

**Design:** The hydraulic wet end consists of three components: a shell or casing, an impeller and a suction plate/liner to permit easy removal for maintenance and inspections.

**Applications:** Reliable pumps for high discharge head, mildly corrosive slurries and a wide range of particle sizes. Used in mineral processing, mine dewatering, ash and tailings.

### LCC-R

#### Slurry pump



Q [m <sup>3</sup> /h]	max. 3865
H [m]	max. 90
p [bar]	max. 16
T [°C]	max. +100

**Design:** Interchangeable rubber and metal design allows best material choice for any application. Easy wet end change can adapt existing pumps to new applications.

**Applications:** Pumps are suitable for moderate discharge heads, fine particles and highly corrosive slurries.

### TBC

#### Slurry pump



Q [m <sup>3</sup> /h]	max. 18200
H [m]	max. 90
p [bar]	max. 55
T [°C]	max. +120

**Design:** A high-pressure design, these pumps are constructed as horizontal, end suction centrifugal pumps to give maximum resistance to wear while simplifying maintenance. The conventional single-wall design transfers stress loads to non-wearing side plates in high-pressure applications.

**Applications:** Features high head and high flow rates for hydrotransport, tailings, dredging, pipeline booster stations and other severe duties.

### LCV

#### Slurry pump



Q [m <sup>3</sup> /h]	max. 1360
H [m]	max. 38
p [bar]	max. 14
T [°C]	max. +120

**Design:** Vertical cantilever, rugged hard metal sump pump with bottom suction and no submerged bearings. Replaceable wet end parts in metal alloys with a durable mechanical end.

**Applications:** Ideal for industrial process pumping, tailings disposal in mining and pit use.

## Slurry pumps

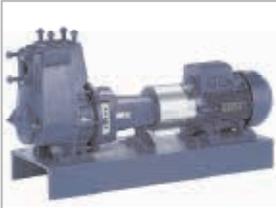
<b>FGD</b>	<b>Slurry pump</b>
	<p>Q [m<sup>3</sup>/h] _____ max. 22700  H [m] _____ max. 45  p [bar] _____ max. 17  T [°C] _____ max. +120</p>
<p><b>Design:</b> High-flow/low-head hard metal pumps with a single-wall shell design. High-efficiency impeller. Suction-side liner is equipped with integrated mounting plates.</p> <p><b>Applications:</b> Absorber recirculation and ancillary process pumps.</p>	
<b>Mega</b>	<b>Slurry pump</b>
	<p>Q [m<sup>3</sup>/h] _____ max. 45  H [m] _____ max. 30  p [bar] _____ max. 24  T [°C] _____ max. +120</p>
<p><b>Design:</b> Horizontal, end suction, modified volute casing pump includes 3 vane open design impeller for large solids passage.</p> <p><b>Applications:</b> High-performance, low maintenance slurry pump recommended for coarse or fine particles from solids-laden waste water to aggressive slurries of an abrasive nature.</p>	
<b>HHD</b>	<b>Slurry pump</b>
	<p>Q [m<sup>3</sup>/h] _____ max. 14400  H [m] _____ max. 90  p [bar] _____ max. 29  T [°C] _____ max. +120</p>
<p><b>Design:</b> Best suited for high-flow, high-head pumping where high production requires the reduction in the number of pumps.</p> <p><b>Applications:</b> Ideal for pipeline booster stations and severe mining duties. Also, as booster or main hull pump on cutter suction dredges.</p>	
<b>MHD</b>	<b>Slurry pump</b>
	<p>Q [m<sup>3</sup>/h] _____ max. 32000  H [m] _____ max. 80  p [bar] _____ max. 28  T [°C] _____ max. +120</p>
<p><b>Design:</b> Designed to provide high flow/medium head with high efficiency for high volume transportation in long pipelines.</p> <p><b>Applications:</b> Ideal for pipeline booster stations and severe mining duties. Also for hopper dredges or as main pump on cutter dredges.</p>	
<b>LHD</b>	<b>Slurry pump</b>
	<p>Q [m<sup>3</sup>/h] _____ max. 21600  H [m] _____ max. 65  p [bar] _____ max. 17  T [°C] _____ max. +120</p>
<p><b>Design:</b> High-flow/low-head design with balanced NPSH<sub>r</sub> and sphere passage for high volume transportation over short distance.</p> <p><b>Applications:</b> Ideal for sand &amp; gravel, severe mining, dredge ladder and booster pumps.</p>	

## Slurry pumps

MDX		Slurry pump
	Q [m <sup>3</sup> /h] _____ max. 14000 H [m] _____ max. 90 p [bar] _____ max. 16 T [°C] _____ max. +120	<p><b>Design:</b> The latest technology from GIW provides superior wear life and increased up-time handling your most aggressive slurry applications.</p> <p><b>Applications:</b> Designed for SAG and ball mill discharge duties as well as cyclone feed and screen feed applications in ore mining.</p>

ZW		Slurry pump
	Q [m <sup>3</sup> /h] _____ max. 400 H [m] _____ max. 35 p [bar] _____ max. 10 T [°C] _____ max. +120	<p><b>Design:</b> Vertical cantilever, rugged hard metal sump pumps with top and bottom suction, not submerged bearings. Replaceable wet end parts in metal alloys with a durable mechanical end.</p> <p><b>Applications:</b> Abrasive slurries, dewatering, floor clean up, and process transfer.</p>

## Self-priming pumps

Etaprime® L		Self-priming pump for pure or contaminated liquids
	DN _____ 25 - 125 Q [m <sup>3</sup> /h] _____ max. 180 H [m] _____ max. 85 p [bar] _____ max. 10 T [°C] _____ max. +90 <small>Data for 50 Hz operation</small>	<p><b>Design:</b> Horizontal, long-coupled, self-priming volute casing pump in back pull-out design, single-stage, with open multi-vane impeller. ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of pure, contaminated or aggressive liquids not containing abrasive substances and / or solids.</p>
Reference no. 2745.5		also available in 60 Hz

Etaprime® B / BN		Self-priming close-coupled pump for pure or contaminated liquids
	DN _____ 25 - 100 Q [m <sup>3</sup> /h] _____ max. 130 H [m] _____ max. 72 p [bar] _____ max. 10 T [°C] _____ max. +90 <small>Data for 50 Hz operation</small>	<p><b>Design:</b> Horizontal, self-priming volute casing pump, single-stage, with open multi-vane impeller, in close-coupled design, with common pump and motor shaft (B) or rigidly connected (BN). ATEX-compliant version available.</p> <p><b>Applications:</b> Handling of pure, contaminated or aggressive liquids not containing abrasive substances and / or solids.</p>
Reference no. 2746.5		also available in 60 Hz

## Submersible borehole pumps

S 100D / UPA 100C		Submersible borehole pump
	DN _____ 100 Q [m³/h] _____ max. 16 H [m] _____ max. 400 T [°C] _____ max. +30 <small>Data for 50 Hz operation</small>	<p><b>Design:</b> Multistage centrifugal pump in ring-section design, for vertical or horizontal installation, impellers made of plastic (S 100D) or stainless steel (UPA 100C) for well diameters of 100 mm (4 inches) and above, available with single-phase a.c. motor or three-phase motor with motor lead.</p> <p><b>Applications:</b> Domestic water supply, irrigation and spray irrigation systems, lowering of ground water levels, fire-fighting systems, cooling circuits, fountains, pressure boosting and air-conditioning systems.</p>
	Switchgears • Cervomatic	Reference no. 3400.5 <span style="float: right;">also available in 60 Hz</span>

UPA 150C		Submersible borehole pump
	DN _____ 150 Q [m³/h] _____ max. 79 H [m] _____ max. 570 T [°C] _____ max. +50 <small>Data for 50 Hz operation</small>	<p><b>Design:</b> Single-stage or multistage centrifugal pump in ring-section design, for vertical or horizontal installation, completely made of stainless steel, for well diameters of 150 mm (6 inches) and above.</p> <p><b>Applications:</b> Handling of clean or slightly contaminated water, irrigation and drainage, spray irrigation, industrial and municipal water supply, maintaining / lowering of groundwater levels, fire-fighting systems, drinking, raw and service water supply, pressure boosting.</p>
	Hyamaster • PumpDrive	Reference no. 3400.52 <span style="float: right;">also available in 60 Hz</span>

UPA 200, 200B, 250C		Submersible borehole pump
	DN _____ 200 - 250 Q [m³/h] _____ max. 330 H [m] _____ max. 460 T [°C] _____ max. +50 <small>Data for 50 Hz operation</small>	<p><b>Design:</b> Single-stage or multistage single-entry centrifugal pump in ring-section design for vertical or horizontal installation. Available with non-return valve or connection branch.</p> <p><b>Applications:</b> Handling of clean or slightly contaminated water in general water supply, irrigation and spray irrigation systems, maintaining / lowering of ground water levels, fountains, pressure boosting systems, in mines, fire-fighting systems, emergency water supply systems, etc.</p>
	Hyamaster	Reference no. 3400.5 <span style="float: right;">also available in 60 Hz</span>

UPA 300, 350		Submersible borehole pump
	DN _____ 300 - 350 Q [m³/h] _____ max. 840 H [m] _____ max. 480 T [°C] _____ max. +50 <small>Data for 50 Hz operation</small>	<p><b>Design:</b> Single- or multistage, single-entry centrifugal pump in ring-section design for vertical or horizontal installation. Non-return valve or connection branch on option. Mixed flow hydraulic systems available with reduced impeller diameters.</p> <p><b>Applications:</b> Handling of clean or slightly contaminated water in general water supply, irrigation and spray irrigation systems, maintaining / lowering of ground water levels, in mines, fire-fighting systems, fountains, etc.</p>
	Hyamaster	Reference no. 3400.5 <span style="float: right;">also available in 60 Hz</span>

UPZ, BSX-BSF		Submersible borehole pump
	DN _____ > 350 Q [m³/h] _____ max. 2200 H [m] _____ max. 1500 T [°C] _____ max. +50 <small>Data for 50 Hz operation</small>	<p><b>Design:</b> Single- or multistage, single-entry (BSX-BSF) or double-entry (UPZ) centrifugal pump in ring-section design for vertical or horizontal installation.</p> <p><b>Applications:</b> Handling of clean or slightly contaminated water, maintaining / lowering of ground water levels, in mines.</p>
	Automation possible	Reference no. 3470.021 <span style="float: right;">also available in 60 Hz</span>

## High-pressure pumps, fixed / variable speed

Movitec® V / LHS / VS / VC		High-pressure in-line pump
	RP / DN 1 - 2 / 25 - 100 Q [m³/h] max. 113 H [m] max. 401 p [bar] max. 40 T [°C] max. +140 n [min⁻¹] max. 2900 <small>Data for 50 Hz operation</small>	<b>Design:</b> Multistage, vertical high-pressure centrifugal pump in ring-section design with suction and discharge nozzles of identical nominal diameters arranged opposite to each other (in-line design), close-coupled. ATEX-compliant version available.  <b>Applications:</b> Spray irrigation, irrigation, washing, water treatment, fire-fighting and pressure boosting systems, hot water and cooling water recirculation, boiler feed systems, etc.
	 	 
		Reference no. 1798.5 <span style="float: right;">also available in 60 Hz</span>

Movitec® PumpDrive		High-pressure in-line pump with motor-mounted variable speed system
	DN 25 - 100 Q [m³/h] max. 113 H [m] max. 401 p [bar] max. 40 T [°C] max. +140 n [min⁻¹] max. 2900	<b>Design:</b> Multistage, vertical high-pressure centrifugal pump in ring-section design with suction and discharge nozzles of identical nominal diameters arranged opposite to each other (in-line design), close-coupled and motor-mounted variable speed system.  <b>Applications:</b> Spray irrigation, irrigation, washing, water treatment, fire-fighting and pressure boosting systems, hot water and cooling water recirculation, boiler feed systems, etc.
	 	 
		Reference no. 1798.5 + 4070.5 <span style="float: right;">also suitable for 60 Hz operation</span>

Multitec®		High-pressure pump in ring-section design
	DN 32 - 150 Q [m³/h] max. 850 H [m] max. 630 (1000) p [bar] max. 63 (100) T [°C] -10 to +200 n [min⁻¹] max. 4000 <small>Data for 50 Hz operation, data for 60 Hz operation</small>	<b>Design:</b> Multistage horizontal or vertical centrifugal pump in ring-section design, long-coupled and close-coupled variant, with axial or radial suction nozzle, cast radial impellers. ATEX-compliant version available.  <b>Applications:</b> Water and drinking water supply systems, general industry, pressure boosting systems, irrigation systems, in power stations, heating, filter, fire-fighting, reverse osmosis and washing plants, snow guns, etc.
		
		Reference no. 1777.5 <span style="float: right;">available in 50 Hz and 60 Hz</span>

Multitec® PumpDrive		High-pressure pump in ring-section design with motor-mounted variable speed system
	DN 32 - 125 Q [m³/h] max. 180 H [m] max. 630 p [bar] max. 63 T [°C] max. +140 n [min⁻¹] max. 4000	<b>Design:</b> Multistage horizontal or vertical centrifugal pump in ring-section design, long-coupled and close-coupled variant, with axial or radial suction nozzle, cast radial impellers and motor-mounted variable speed system.  <b>Applications:</b> Water and drinking water supply systems, general industry, pressure boosting systems, irrigation systems, in power stations, heating, filter, fire-fighting, reverse osmosis and washing plants, snow guns, etc.
		
		Reference no. 1777.5 + 4070.5 <span style="float: right;">also suitable for 60 Hz operation</span>

## Axially split pumps

Omega®		Axially split volute casing pump DN 80 - 350
	DN 80 - 350 Q [m³/h] max. 2880 H [m] max. 210 p [bar] max. 25 T [°C] max. +80 n [min⁻¹] max. 2900 <small>Data for 50 Hz operation, higher values available upon request</small>	<b>Design:</b> Single-stage, axially split volute casing pump for horizontal or vertical installation, with double-entry radial impeller, mating flanges to DIN EN or ASME. <b>Applications:</b> For handling water with a low solids content, e.g. in waterworks, irrigation and drainage pumping stations, desalination systems for water extraction, power plants, fire-fighting systems, shipbuilding, district heating/cooling.
	<b>Hyamaster - PumpMeter</b>	Reference no. 1384.5 also available in 60 Hz, also suitable for 60 Hz operation

RDLO		Axially split volute casing pump DN 350 - 700
	DN 350 - 700 Q [m³/h] max. 10000 H [m] max. 240 p [bar] max. 25 T [°C] max. +80 n [min⁻¹] max. 1500 <small>Data for 50 Hz operation, higher values available upon request</small>	<b>Design:</b> Single-stage, axially split volute casing pump for horizontal or vertical installation with double-entry radial impeller, mating flanges to DIN EN or ASME. <b>Applications:</b> For handling water with a low solids content, e.g. in waterworks, irrigation and drainage pumping stations, desalination systems for water extraction, power plants, fire-fighting systems, shipbuilding, district heating/cooling.
	<b>Hyamaster</b>	Reference no. 1385.51 / 1387.5 also available in 60 Hz, also suitable for 60 Hz operation

RDLP		Axially split volute casing pump DN 350-1200
	DN 350 - 1200 Q [m³/h] max. 18000 H [m] max. 550 p [bar] max. 64 T [°C] max. +80 n [min⁻¹] max. 1500 <small>Data for 50 Hz operation, higher values available upon request</small>	<b>Design:</b> Single, two or three-stage, axially split volute casing pump for horizontal installation with double-entry radial impeller, mating flanges to DIN, ISO or ANSI. <b>Applications:</b> For handling water with a low solids content in water works and long-distance water supply systems.
		also available in 60 Hz, also suitable for 60 Hz operation

## Hygienic pumps for the food, beverage and pharmaceutical industries

<b>Vitachrom</b>		<b>Rolled steel centrifugal pump</b>
	DN 50 - 125 Q [m³/h] max. 340 H [m] max. 100 p [bar] max. 12 T [°C] max. +140 <small>Data for 50 Hz operation</small>	<b>Design:</b> Maintenance-friendly annular casing pump, close-coupled with standardised motor, all wetted components made of 1.4404/1.4409 stainless steel. CIP/SIP-compatible, certified by the TNO Nutrition and Food Research Institute to EHEDG standards for processing food products.  <b>Applications:</b> Hygienic handling of fluids in the food, beverage and pharmaceutical industries as well as in the chemical industry.
	<b>Hyamaster • PumpDrive</b>	<b>Reference no. 1966.5</b> <span style="float: right;">also available in 60 Hz</span>
<b>Vitacast® / Vitacast® E</b>		<b>Investment cast centrifugal pump</b>
	DN 25 - 150 Q [m³/h] max. 560 H [m] max. 100 p [bar] max. 10 T [°C] max. +140 <small>Data for 50 Hz operation, other values available upon request</small>	<b>Design:</b> Maintenance-friendly volute casing pump with standardised motor, all wetted components made of 1.4404/1.4409 stainless steel. Hygienic design for the highest requirements on cleanability (CIP/SIP-compatible), certified by the TNO Nutrition and Food Research Institute to EHEDG standards (Vitacast E).  <b>Applications:</b> Hygienic handling of fluids in the food, beverage and pharmaceutical industries as well as in the chemical industry.
	<b>PumpDrive</b>	<b>Reference no. 1969.51 / 1969.52</b> <span style="float: right;">also available in 60 Hz</span>
<b>Vitaprime®</b>		<b>Self-priming centrifugal pump</b>
	DN 40 - 80 Q [m³/h] max. 55 H [m] max. 45 p [bar] max. 10 T [°C] max. +140 <small>Data for 50 Hz operation, other values available upon request</small>	<b>Design:</b> Maintenance-friendly, self-priming side channel pump in close-coupled design with standardised motor, all wetted components made of 1.4404/1.4409 stainless steel. Hygienic design for the highest requirements on cleanability (CIP/SIP-compatible).  <b>Applications:</b> Hygienic handling of fluids in the food, beverage and pharmaceutical industries as well as in the chemical industry.
	<b>PumpDrive</b>	<b>Reference no. 1969.54</b> <span style="float: right;">also available in 60 Hz</span>
<b>Vitastage®</b>		<b>Multistage centrifugal pump</b>
	Q [m³/h] max. 40 H [m] max. 150 p [bar] max. 16 T [°C] max. +140 <small>Data for 50 Hz operation, other values available upon request</small>	<b>Design:</b> Multistage centrifugal pump in close-coupled design for vertical or horizontal installation. All wetted components made of 1.4401/1.4408 stainless steel.  <b>Applications:</b> Processes in the food and beverage industry as well as in the chemical industry with moderate hygienic requirements.
	<b>PumpDrive</b>	<b>Reference no. 1969.55</b> <span style="float: right;">also available in 60 Hz</span>
<b>Vitalobe®</b>		<b>Rotary lobe pump</b>
	DN 25 - 200 (1" - 8") Q [m³/h] max. 300 H [m] max. 200 p [bar] max. 30 T [°C] -40 to +200 Viscosity [cP] ≤ 200000 Volume displaced [litres per revolution] max. 10,5 <small>Data for 50 Hz operation, other values available upon request</small>	<b>Design:</b> Sturdy rotary lobe pump in hygienic design, bi-directional operation possible, horizontal and vertical orientation of connections. Hygienic design, CIP/SIP-compatible, all wetted components made of 1.4404/1.4409 stainless steel; various rotor types and process connections available. Pump set with geared motor.  <b>Applications:</b> Hygienic and gentle handling of sensitive or high-viscosity fluids in the food, beverage and pharmaceutical industries as well as in the chemical industry and general process engineering.
	<b>Frequency inverter</b>	<b>Reference no. 1969.53</b> <span style="float: right;">also available in 60 Hz</span>

## Pumps for power station conventional islands

### CHTA / CHTC / CHTD

Boiler feed pump



DN	100 - 500
Q [m³/h]	max. 3700
H [m]	max. 5300
p [bar]	max. 560
T [°C]	max. +210
n [min⁻¹]	max. 6750

Data for 50 Hz operation,  
higher values available upon request

**Design:** Horizontal, high-pressure barrel-type pump with radial impellers, single- and double-entry, multistage, with flanges / weld end nozzles to DIN and ANSI.

**Applications:** Handling of feed water and condensate in power stations and industrial facilities, generation of pressurized water for bark peeling machines and descaling equipment.

Reference no. 1860.1

also available in 60 Hz

### HGB / HGC® / HGD

Boiler feed pump



DN	40 - 400
Q [m³/h]	max. 2300
H [m]	max. 5300
p [bar]	max. 560
T [°C]	max. +210
n [min⁻¹]	max. 7000

Data for 50 Hz operation,  
higher values available upon request

**Design:** Horizontal, radially split, multistage ring-section pump with radial impellers, single- or double-entry.

**Applications:** Handling of feed water and condensate in power stations and industrial facilities, generation of pressurized water for bark peeling machines, descaling equipment, snow guns, etc.

Reference no. 1850.02

also available in 60 Hz

### HGM®

Boiler feed pump



DN	25 - 100
Q [m³/h]	max. 274
H [m]	max. 1400
p [bar]	max. 140
T [°C]	max. +160
n [min⁻¹]	max. 3600

Data for 50 Hz operation,  
higher values available upon request

**Design:** Horizontal, radially split, product-lubricated, multistage ring-section pump with radial impellers, axial and radial single-entry inlet.

**Applications:** Handling of feed water in power stations, boiler feed water and condensate in industrial facilities.

Reference no. 1856.02

also available in 60 Hz

### YNK

Boiler feed booster pump



DN	125 - 600
Q [m³/h]	max. 3700
H [m]	max. 280
p [bar]	max. 40
T [°C]	max. +210
n [min⁻¹]	max. 1800

Data for 50 Hz operation,  
higher values available upon request

**Design:** Horizontal, radially split, single-stage, double-entry boiler feed booster pump (booster system) with single or double cast steel volute casing.

**Applications:** Handling of feed water in power stations and industrial facilities.

Reference no. 1130.5

also available in 60 Hz

### LUV® / LUVA

Boiler recirculation pump



DN	100 - 550
Q [m³/h]	max. 7000
H [m]	max. 275
p [bar]	max. 320
T [°C]	max. +420
n [min⁻¹]	max. 3600

Higher values available upon request

**Design:** Vertical spherical casing pump, radial impellers, single-entry, single- to three-stage. Suitable for very high inlet pressures and temperatures. Integrated wet winding motor to VDE. Product-lubricated bearings, no need for oil supply systems. Design to TRD or ASME.

**Applications:** Hot water recirculation in forced-circulation, forced-flow and combined-circulation boilers for very high pressures and in solar power towers.

Reference no. 1127.021

available in 50 Hz and 60 Hz

## Pumps for power station conventional islands

<b>WKTA / WKTB</b>		<b>Condensate pump</b>
	DN 150 - 300 Q [m³/h] max. 1800 H [m] max. 370 p [bar] max. 40 T [°C] max. +100 n [min⁻¹] max. 1800 <small>Data for 60 Hz operation, higher values available upon request</small>	<b>Design:</b> Vertical can-type ring-section pump. Radial and mixed flow impellers, multistage. Single-entry and double-entry suction impellers. Flanges to DIN or ANSI. Also available in re-entry design.  <b>Applications:</b> For handling condensate in power stations and industrial systems.
	<b>Reference no. 0361.033</b> <span style="float: right;">also available in 60 Hz</span>	
<b>SEZ / SEZT / PHZ / PNZ</b>		<b>Cooling water pump</b>
	Q [m³/h] max. 80000 H [m] max. 100 T [°C] max. +40 n [min⁻¹] max. 980 <small>Data for 50 Hz operation, higher values available upon request</small>	<b>Design:</b> Vertical tubular casing pump with open mixed flow impeller (SEZ), mixed flow propeller (PHZ) or axial propeller (PNZ). Pump inlet with bellmouth or suction elbow, pull-out design available, discharge nozzle arranged above or below floor, flanges to DIN or ANSI standards available.  <b>Applications:</b> Handling of raw, pure, service and cooling water in industry, water supply systems, in power stations and seawater desalination plants.
	<b>Reference no. 1471.02</b> <span style="float: right;">available in 50 Hz and 60 Hz</span>	
<b>SNW / PNW</b>		<b>Cooling water pump</b>
	DN 350 - 800 Q [m³/h] max. 9000 H [m] max. 50 p [bar] max. 10 T [°C] max. +60 n [min⁻¹] max. 1500 <small>Data for 50 Hz operation, higher values available upon request</small>	<b>Design:</b> Vertical tubular casing pump with mixed flow impeller (SNW) or axial propeller (PNW), single-stage, with maintenance-free Residur shaft bearings, discharge nozzle arranged above or below floor.  <b>Applications:</b> Irrigation and drainage systems, stormwater pumping stations, handling of raw and pure water, water supply systems, handling of cooling water.
	<b>Reference no. 1481.5 / 1591.5</b> <span style="float: right;">available in 50 Hz and 60 Hz</span>	
<b>Beveron</b>		<b>Concrete volute casing pump</b>
	Q [m³/s] max. 30 H [m] max. 27 <small>Data for 50 Hz operation, higher values available upon request</small>	<b>Design:</b> Concrete volute casing pump with mixed flow impeller, single-stage, with maintenance and lubricant-free Residur bearings.  <b>Applications:</b> Coast protection and flood control, irrigation and drainage, low-lift pumping stations, reservoir filling, stormwater applications, cooling water, raw and pure water.
	<b>Reference no. 1.471.021</b> <span style="float: right;">available in 50 Hz and 60 Hz</span>	
<b>SPY</b>		<b>Cooling water pump</b>
	DN 350 - 1200 Q [m³/h] max. 21600 H [m] max. 50 p [bar] max. 10 T [°C] max. +105 n [min⁻¹] max. 1480 <small>Data for 50 Hz operation, higher values available upon request</small>	<b>Design:</b> Long-coupled, single-stage volute casing pump in back pull-out design.  <b>Applications:</b> Drainage, irrigation and water supply systems, handling of condensate, cooling water, service water, etc.
	<b>Reference no. 2384.51</b> <span style="float: right;">also available in 60 Hz</span>	

## Pumps for nuclear power plants

<b>RER</b>	<b>Reactor coolant pump</b>	
	DN _____ max. 800 Q [m³/h] _____ max. 40000 H [m] _____ max. 140 p [bar] _____ max. 175 T [°C] _____ max. +350 n [min⁻¹] _____ max. 1800 Higher values available upon request	<p><b>Design:</b> Vertical, single-stage reactor coolant pump RCP with forged annular casing plated on the inside, with diffuser; either with integrated pump thrust bearing or shaft supported by motor bearing.</p> <p><b>Applications:</b> Reactor coolant recirculation in nuclear power plants (PWR).</p>
Reference no. 1682.021		available in 50 Hz and 60 Hz
<b>RSR</b>	<b>Reactor coolant pump</b>	
	DN _____ max. 750 Q [m³/h] _____ max. 24000 H [m] _____ max. 215 p [bar] _____ max. 175 T [°C] _____ max. +350 n [min⁻¹] _____ max. 1800 Higher values available upon request	<p><b>Design:</b> Vertical, single-stage reactor coolant pump RCP, with cast casing, shaft supported by motor bearing.</p> <p><b>Applications:</b> Reactor coolant recirculation in nuclear power plants (PWR, PHWR, BWR).</p>
Reference no. 1665.021		available in 50 Hz and 60 Hz
<b>RUV</b>	<b>Reactor coolant pump</b>	
	DN _____ max. 650 Q [m³/h] _____ max. 22000 H [m] _____ max. 111 p [bar] _____ max. 155 T [°C] _____ max. +350 n [min⁻¹] _____ max. 1800 Higher values available upon request	<p><b>Design:</b> Vertical, single-stage reactor coolant pump RCP. Seal-less design with integrated wet winding motor and integrated flywheel. Product-lubricated bearings, no oil supply systems required.</p> <p><b>Applications:</b> Reactor coolant recirculation in generation III+ nuclear power plants (PWR).</p>
available in 50 Hz and 60 Hz		
<b>PSR</b>	<b>Reactor internal pump</b>	
	DN _____ max. 600 Q [m³/h] _____ max. 9000 H [m] _____ max. 45 p [bar] _____ max. 75 T [°C] _____ max. +300 n [min⁻¹] _____ max. 2000 Higher values available upon request	<p><b>Design:</b> Vertical pump set integrated in the reactor pressure vessel RIP, seal-less pump with leak-free, low-maintenance wet winding motor.</p> <p><b>Applications:</b> Reactor coolant recirculation in boiling water reactors (BWR).</p>
Reference no. 1576.021		available in 50 Hz and 60 Hz
<b>RHD</b>	<b>Feed water pump</b>	
	DN _____ 125 - 500 Q [m³/h] _____ max. 6500 H [m] _____ max. 1000 p [bar] _____ max. 150 T [°C] _____ max. +210 n [min⁻¹] _____ max. 6500 Higher values available upon request	<p><b>Design:</b> Horizontal, single-stage, double-entry main feed water pump MFWP, cast or forged variant.</p> <p><b>Applications:</b> Main feed water supply (MFWS) in steam generation systems of nuclear power plants.</p>
Reference no. 1668.023		available in 50 Hz and 60 Hz

## Pumps for nuclear power plants

<b>LUV® - Nuclear</b>		<b>Reactor coolant / reactor water clean-up pump</b>
	DN 40 - 600 Q [m³/h] max. 7000 H [m] max. 300 p [bar] max. 320 T [°C] max. +430 <small>Higher values available upon request</small>	<b>Design:</b> Vertical pump with integrated motor, single-entry, one to three stages. Suitable for very high inlet pressures and temperatures. Integrated wet winding motor to VDE. Product-lubricated bearings, no need for oil supply systems. Design to ASME Section 3, KTA, etc.  <b>Applications:</b> As reactor water clean-up pump RWCP in boiling water reactors, reactor coolant pump RCP in boiling water and pressurized water reactors, and as recirculation pump in test facilities.
	<b>Reference no. 1128.021</b> <span style="float: right;">available in 50 Hz and 60 Hz</span>	
<b>RHM</b>		<b>Pump for safety-related and auxiliary systems</b>
	DN max. 150 Q [m³/h] max. 300 H [m] max. 2100 p [bar] max. 220 T [°C] max. +180 n [min⁻¹] max. 8000 <small>Higher values available upon request</small>	<b>Design:</b> Horizontal, multistage barrel pull-out pump.  <b>Applications:</b> Core flooding, emergency cooling and residual heat removal systems RHRS, chemical and volume control systems CVCS, control rod drive systems CRDS, high- and medium-pressure safety injection systems HPSI / LPSI / MHSI / LHSI, emergency feed water systems EFWS, start-up and shutdown feed water systems SSS, high-pressure charging.
	<b>Reference no. 1666.021</b> <span style="float: right;">available in 50 Hz and 60 Hz</span>	
<b>RVM</b>		<b>Pump for safety-related and auxiliary systems</b>
	DN max. 85 Q [m³/h] max. 50 H [m] max. 2000 p [bar] max. 200 T [°C] max. +100 n [min⁻¹] max. 6000 <small>Higher values available upon request</small>	<b>Design:</b> Vertical, multistage barrel pull-out pump.  <b>Applications:</b> Core flooding, emergency cooling and residual heat removal systems RHRS, chemical and volume control systems CVCS, high- and medium-pressure safety injection systems HPSI / LPSI.
	<b>Reference no. 166.021</b> <span style="float: right;">available in 50 Hz and 60 Hz</span>	
<b>RHR</b>		<b>Pump for safety-related and auxiliary systems</b>
	DN max. 500 Q [m³/h] max. 6000 H [m] max. 190 p [bar] max. 63 T [°C] max. +200 n [min⁻¹] max. 3600	<b>Design:</b> Horizontal annular casing pump with forged or cast pressure boundary and diffuser.  <b>Applications:</b> Core flooding, emergency cooling and residual heat removal systems RHRS, ancillary systems, acid feed system and low-pressure injection system LPSI, component cooling water system CCWS, essential service water system ESWS.
	<b>Reference no. 1662.021</b> <span style="float: right;">available in 50 Hz and 60 Hz</span>	
<b>RVR</b>		<b>Pump for safety-related and auxiliary systems</b>
	DN max. 500 Q [m³/h] max. 6000 H [m] max. 190 p [bar] max. 63 T [°C] max. +200 n [min⁻¹] max. 3600	<b>Design:</b> Vertical annular casing pump with forged or cast pressure boundary and diffuser.  <b>Applications:</b> Core flooding, emergency cooling and residual heat removal systems RHRS / RNS, ancillary systems, acid feed system and low-pressure injection system LPSI, component cooling water system CCWS, essential service water system ESWS.
	<b>Reference no. 166.021</b> <span style="float: right;">available in 50 Hz and 60 Hz</span>	

## Pumps and pressure exchangers for seawater desalination by reverse osmosis

SalTec® System		Hydraulic system
	Q [m³/day] ≥ 10000 p [bar] max. 80 T [°C] max. +40	<b>Design:</b> Hydraulic system for pressure boosting and energy recovery in reverse osmosis processes for seawater desalination. <b>Components:</b> SalTec® DT pressure exchanger, HGM-RO high-pressure pump, RPH-RO booster pump and control unit. <b>Applications:</b> Seawater desalination by reverse osmosis.
		Reference no. 1858.11

SalTec® DT		Pressure exchanger
	Q [m³/h] max. 280 p [bar] max. 80 T [°C] max. +40	<b>Description:</b> Pressure exchanger specially developed for use in RO seawater desalination systems, in duplex stainless steel (standard) or super-duplex stainless steel (on request).
		Reference no. 1858.1

RPH®-RO		Booster pump
	DN 25 - 400 Q [m³/h] max. 4150 H [m] max. 270 p [bar] max. 104 T [°C] max. +50 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, radially split volute casing pump, dry-installed, made of duplex stainless steel (standard) or super-duplex stainless steel (on request). <b>Applications:</b> Booster pump for RO seawater desalination systems.
		also available in 60 Hz

HGM®-RO		High-pressure pump
	DN 65 - 250 Q [m³/h] max. 1500 H [m] max. 950 p [bar] max. 120 T [°C] max. +40 n [min⁻¹] max. 3600 <small>Data for 50 Hz operation, higher values available upon request</small>	<b>Design:</b> Horizontal, radially-split, product-lubricated, multistage ring-section pump with radial impellers and plain bearings. Axial and radial single-entry inlet. Duplex and super-duplex stainless steel variant also suitable for chilled water applications. <b>Applications:</b> High-pressure pump for RO seawater desalination systems.
		Reference no. 1582.12 also available in 60 Hz

Multitec®-RO		High-pressure pump in ring-section design
	DN 50 - 150 Q [m³/h] max. 850 H [m] max. 1000 p [bar] max. 100 T [°C] max. +45 n [min⁻¹] max. 4000 <small>Data for 50 Hz operation, data for 60 Hz operation</small>	<b>Design:</b> Horizontal, multistage pump in ring-section design. Axial suction nozzle, discharge nozzle can be turned in steps of 90°. Closed radial impellers. In duplex or super-duplex stainless steel. <b>Applications:</b> High-pressure pump for RO seawater desalination systems.
Hyamaster • PumpDrive		Reference no. 1777.5 available in 50 Hz and 60 Hz

## Control units

<b>Controlmatic E</b>		<b>Automatic control unit</b>
	No. of pumps _____ max. 1 Voltage [V] _____ 1~230	<b>Design:</b> Single-pump control system for starting, stopping and monitoring pumps. <b>Applications:</b> Water supply systems, in combination with pump types Multi Eco, Multichrom S, Ixo, S 100D, etc.
		<b>Reference no. 5125.53</b>
<b>Controlmatic E.2</b>		<b>Automatic control unit</b>
	No. of pumps _____ max. 1 Voltage [V] _____ 1~230	<b>Design:</b> Single-pump control system for starting, stopping and monitoring pumps. <b>Applications:</b> Water supply systems, in combination with pump types Multi Eco, Multichrom S, Ixo, S 100D, etc.
		<b>Reference no. 5125.1785</b>
<b>Cervomatic EDP.2</b>		<b>Automatic control unit</b>
	No. of pumps _____ max. 1 Voltage [V] _____ 1~230 / 3~400	<b>Design:</b> Single-pump control unit for pressure-controlled starting and either pressure-controlled or flow-controlled stopping as well as monitoring pumps. <b>Applications:</b> In water supply systems using, for example, Multi Eco, Ixo, S 100D and UPA 150C.
		<b>Reference no. 5125.178</b>
<b>LevelControl Basic 2</b>		<b>Level control unit</b>
	No. of pumps _____ max. 2 [kW] _____ max. 22 Voltage [V] _____ 1~230 / 3~400 <small>higher values available upon request</small>	<b>Design:</b> Level control unit for controlling up to two pumps. Direct starting up to 4 kW, star-delta starting up to 22 kW. <b>Applications:</b> Tank drainage via float switches, pneumatic or bubbler control in building services and waste water applications.
		<b>Reference no. 4041.5</b>
<b>UPA Control</b>		<b>Control system for submersible borehole pumps</b>
	No. of pumps _____ max. 1 [kW] _____ 3 Voltage [V] _____ 1~230 / 3~400	<b>Design:</b> Single-pump control unit for submersible borehole pumps, submersible motor pumps and dry-installed pumps. <b>Applications:</b> Water supply systems, in combination with pump types S 100D, UPA 150S, etc.
		<b>Reference no. 3465.1</b>

## Control units

hyatronic N		Pump control system for cascade starting and stopping
	No. of pumps _____ max. 6 [kW] _____ 22 Voltage [V] _____ 3 ~ 400 <small>higher values available upon request</small>	<b>Design:</b> Pump control system in control cabinet for cascade starting and stopping of up to 6 pumps on the mains. <b>Applications:</b> Water supply systems.
		Reference no. 0543.5026

## Speed control

PumpDrive		Self-cooling, motor-independent variable-speed system
	No. of pumps _____ max. 6 FI _____ 1 per pump/motor [kW] _____ 45 Voltage [V] _____ 3~380 to 480	<b>Design:</b> Self-cooling frequency inverter which allows the motor speed to be varied continuously by means of standard signals and a field bus. Because PumpDrive is self-cooling, it can be mounted on the motor, on the wall or in a cabinet. Control of up to 6 pumps without an additional controller (with PumpDrive Advanced). <b>Applications:</b> Cooling circuits, filters, water supply systems, heating, ventilation and air-conditioning systems, spray irrigation systems, boiler feed systems, steam generation plants, process engineering circuits, cooling lubricant supply systems, service water supply systems and other process engineering applications.
		Reference no. 4070.5

hyatronic spc		Pump control system for continuously variable speed adjustment
	No. of pumps _____ max. 1 FI _____ max. 1 [kW] _____ 7.5 Voltage [V] _____ 3~400	<b>Design:</b> Single-pump control system for continuously variable speed adjustment with integrated frequency inverter. <b>Applications:</b> Heating, ventilation, air-conditioning, water supply and drainage systems.
		Reference no. 0973.5

Hyamaster ISB		Pump control system for continuously variable speed adjustment
	No. of pumps _____ max. 8 FI _____ max. 2 [kW] _____ 200 Voltage [V] _____ 3~400	<b>Design:</b> Control system for pumps with three-phase motors of all types and makes, consisting of a KSB controller with display and control panel and all required power components. <b>Applications:</b> Industrial and process engineering circuits, service water supply, cooling and lubrication, energy supply in cogeneration plants, heat transfer and district heating stations, water extraction and treatment, water supply and waste water disposal.
		Reference no. 1961.5



## Control system

### BOA-Systronic®



No. of pumps \_\_\_\_\_ max. 1  
 PN \_\_\_\_\_ 6 / 10 / 16  
 DN \_\_\_\_\_ 20 - 200  
 Voltage [V] \_\_\_\_\_ 24 VAC  
 T [°C] \_\_\_\_\_ +20 bis +120  
 Higher values available upon request

**Design:** Energy-saving system for the coordinated operation of pump and control valve. The system provides an all-in solution designed to access untapped hydraulic savings potential. Irrespective of the pump technology used, it allows savings of 50% in pump electricity while also reducing primary energy costs thanks to lower return flow temperatures. The system can be combined with all control systems and pumps with a 0-10 V control input. Straightforward integration in automation systems with optional BACnet gateway.

**Einsatz:** Supply temperature control in HVAC installations with volume flow rates of 0.5 to 185 m<sup>3</sup>/h and temperature differentials of 3 to 30 °K. Threaded (DN20) or flanged (DN25-DN200) line connections; suitable for upgrading installed systems and for new systems, for connection to all types of heat generators (boiler or district heating), all main feed manifolds, all control systems, all supply temperatures.



Reference no. 7540.1



Energy diet



## KSB SuPremE® – the world's most efficient magnet-less pump motor.

The new KSB SuPremE® motor generation cuts energy costs by up to 70%\*. Satisfying tomorrow's IE4 efficiency requirements (to IEC [CD] 60034-30 Ed.2) today, the motors are already outclassing what the European ErP regulations have targeted for 2017. Moreover, by doing completely without magnetic materials, KSB SuPremE® motors make a significantly smaller environmental footprint than comparable permanent-magnet synchronous motors and asynchronous motors. Their particular combination of robust materials and sturdy design makes them especially durable. Invest today in tomorrow's slender drives. [www.none-more-efficient.com](http://www.none-more-efficient.com)

\* Depending on the load profile, for centrifugal pumps, compared with control by throttling and IE2 asynchronous motors

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## Here's a big reason you can save even more energy.

Etanorm is a classic that keeps getting more efficient. It meets the energy efficiency requirements of the ErP Directive for 2015 already today – for three good reasons: optimised hydraulic components for pace-setting efficiency, individual impeller trimming, and ideally matching drives and automation components. Etanorm is available really fast, comes in numerous variations, and provides the unique reliability of a globally identical product. For more information, please visit [www.etanorm.com](http://www.etanorm.com)



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## Energy: we spend all ours to save lots of yours.

FluidFuture® is our comprehensive energy efficiency concept for your entire hydraulic system. Its aim is to optimise your plant's overall efficiency. To make that reality, we've developed five interlocking modules. Together they enable us to identify and achieve savings right through the life cycle of your pumps and valves. That's where our highly efficient products come into play, products that already meet or exceed the ErP regulations for 2015. And by optimising overall efficiency we help your plant run even better, longer and more cheaply. FluidFuture® is good news for your company, the environment and generations to come. Find out more on [www.ksb.com/fluidfuture](http://www.ksb.com/fluidfuture)

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