

## Pumps and Automation 2012



Type series index	p. 3
Product portfolio	p. 6-9
Overview of applications	p. 10-21



## **Our high standard: Creating intelligent solutions**

We have supplied generations of customers worldwide with pumps, valves, automation products and services. A company with that kind of experience knows that success never stands still. It flows. And the process that makes that possible is a running partnership between developer and user, between production and practice.

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

- Over 140 years' experience
- Present in more than 100 countries
- More than 14,500 employees
- More than 160 service centres worldwide
- Approximately 2,600 service specialists

## Type series index

### for pumps and automation

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



## Our services: Dependability at your call

We tailor our services to enable new ways of individually optimizing 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.

We offer our customers a plethora of services around valves, pumps, and other rotating equipment – also for non-KSB products:

- Technical consultancy
- Services provided on-site and in our service centres
- Maintenance inspection management
- Rehabilitation / Retrofits
- 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 individual 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 vision: Moving more, together

Yesterday: Movement with a mission.

When KSB started business in 1871, our pumps got things moving almost overnight. From the word go, the company was an enthusiastic pioneer. The motor of that dynamism was the sense of contributing to new movement in modern industry. That is all history now. But KSB still stays true to its tradition, and continues to pioneer remarkable technical skills.

Today: Impetus from innovations. KSB has spent its long history providing technical innovations that help customers and partners work more successfully than ever.

We gear everything we do to the real demands of everyday operations. Products, systems, life cycle costs and our steadily growing range of services all put customers and their processes first. This relies on our special concentration of activities – from development to sales and marketing

Tomorrow: Perspectives for partnerships.

Lively dialogue with customers has been a KSB speciality for over 130 years. Mutual respect remains its hallmark. Our aim is to strengthen this working partnership still further. The benefits are mutual, too: we profit from practical experience that complements our years of development know-how. And so our customers profit from innovative products, systems and services that match their demands with precision and performance.

**Partnership is a value whose products keep their value. So moving more together makes doubly good sense. We look forward to teaming up.**



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	A	Automation	Water Transport and Treatment	Industry	Energy Conversion	Building Services	Solids Transport
Circulator pumps/hot water service pumps, fixed speed	Rio C	22	■					■	
	Rio	22	■					■	
	Rio Z	22	■					■	
	Riotherm C	22	■					■	
	Riotherm	22	■			■		■	
Circulator pumps, variable speed	Riotronic P	23	■					■	
	Riotronic Eco	23	■					■	
	Rio-Eco	23	■					■	
	Rio-Eco B	23	■					■	
	Rio-Eco Z	23	■					■	
In-line pumps with fixed/variable speed drive	Etaline	24	■			■		■	
	Etaline Z	24	■			■		■	
	Etaline PumpDrive	24	■			■		■	
	Etaline Z PumpDrive	24	■			■		■	
	Etaline-R	24	■			■		■	
	ILN / ILNE / ILNS	25	■		■	■		■	
Standardized/close-coupled pumps, fixed/variable speed	ILNC / ILNCE / ILNCS	25	■		■	■		■	
	Etanorm / Etanorm-R	25	■		■	■	■	■	
	Etanorm PumpDrive	25	■		■	■	■	■	
	Etabloc	26	■		■	■	■	■	
	Etabloc PumpDrive	26	■		■	■	■	■	
	Etachrom BC	26	■		■	■	■	■	
	Etachrom BC PumpDrive	26	■		■	■	■	■	
	Etachrom NC	26	■		■	■	■	■	
Hot water pumps	Etachrom NC PumpDrive	27	■		■	■	■	■	
	Etanorm GPV / CPV	27	■		■	■	■	■	
Hot water/thermal oil pumps	HPK-L	27	■			■	■	■	
	HPK	27	■			■	■	■	
	HPH	28	■			■	■	■	
Thermal oil pumps with magnetic drive / canned motor	Etanorm SYT / RSY	28	■			■		■	
	Etabloc SYT / Etaline SYT	28	■			■		■	
Standardized chemical pumps	Etamagno SY / SYI / Bloc SY	29	■			■			
	HX (Nikkiso-KSB)	29				■			
	HY (Nikkiso-KSB)	29				■			
Seal-less pumps	MegaCPK	30	■			■	■		
	MegaCPK PumpDrive	30	■			■	■		
	CPKN	30	■			■	■		
	Magnochem	30	■			■	■		
Process pumps	Magnochem-Bloc	31	■			■	■		
	Etaseco / Etaseco-I	31	■		■	■	■	■	
	Etaseco RVP	31	■		■	■	■	■	
	Secochem Ex	31	■			■	■		
	Secochem Ex K	31	■			■	■		
	HN / BN / TN (Nikkiso-KSB)	32				■	■		
	HT / BT / TT (Nikkiso-KSB)	32				■	■		
	HK (Nikkiso-KSB)	32				■	■		
	VN (Nikkiso-KSB)	32				■	■		
	DN (Nikkiso-KSB)	32				■			
	Centrifugal pump for minimal volume flows	RPH	33	■			■	■	
CTN		33				■			
API series (Nikkiso-KSB)		33				■			
CHTR		33				■	■		
YNKR		33				■	■		
Rainwater harvesting systems	Microchem	34	■			■			
Domestic water supply systems with automatic control unit/swimming pools	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	A	Automation	Water Transport and Treatment	Industry	Energy Conversion	Building Services	Solids Transport
Pressure booster systems	Hya-Solo E	36	■	■	■			■	
	Hya-Solo D	36	■	■	■			■	
	Hya-Solo DV	36	■	■	■			■	
	Hya-Eco K	37	■	■	■			■	
	Hya-Eco VP	37	■	■	■			■	
	Hyamat K	37	■	■	■			■	
	Hyamat V	37	■	■	■			■	
	Hyamat VP	37	■	■	■			■	
	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	38	■					■	
	Ama-Porter F / S	39	■					■	
	Ama-Porter ICS	39	■					■	
	Rotex	39	■		■			■	
	MK / MKY	39	■		■			■	
Lifting units/pump stations	AmaDS3	39	■	■				■	
	Ama-Drainer-Box	40	■					■	
	mini-Compacta	40	■					■	
	Compacta	40	■		■			■	
	CK 800-Eu Pump Station	40	■					■	
	Ama-Porter CK Pump Station	40	■					■	
	Amarex N CK Pump Station	41	■					■	
	Evamatic-Box	41	■					■	
	Evamatic-Box ICS	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 / VS / VC / LHS	50	■	■	■	■	■	■	
	Movitec PumpDrive	50	■	■	■	■	■	■	
	Multitec	50	■	■	■	■	■	■	
	Multitec PumpDrive	50	■	■	■	■	■	■	

Type / Application	Type series	Page	Automation	Water Transport and Treatment	Industry	Energy Conversion	Building Services	Solids Transport
			A					
Axially split pumps	Omega	51	■	■	■	■	■	
	RDLO	51	■	■	■	■	■	
Hygienic pumps for the food, beverage and pharmaceutical industries	Vitachrom	51	■		■			
	Vitacast / Vitacast E	51	■		■			
	Vitaprime	52	■		■			
	Vitastage	52	■		■			
	Vitalobe	52	■		■			
Pumps for power station conventional islands	CHTA / CHTC / CHTD	52				■		
	HGB / HGC / HGD	53			■	■		
	HGM	53	■		■	■		
	YNK	53				■		
	LUV / LUVA	53				■		
	WKT / WKTA / WKTB	53				■		
	SEZ / SEZT / PHZ / PNZ	54		■		■		
	SNW / PNW	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			Automation	Water Transport and Treatment	Industry	Energy Conversion	Building Services	Solids Transport
		Page						
Control units	Controlmatic E.2	58		■			■	
	Cervomatic EDP.2	58		■			■	
	LevelControl Basic 2	58		■	■		■	
	UPA Control	58		■			■	
	hyatronic N	58		■	■		■	
Speed control	PumpDrive	59		■	■		■	
	hyatronic spc	59		■	■		■	
	hyatronic mb	59		■	■		■	
	Hyamaster ISB	59		■	■		■	
	Hyamaster SPS	59		■	■		■	
Monitoring and diagnostic systems	PumpMeter	60		■	■		■	
	Amacontrol	60		■	■			
Control s ystem	BOA-Systronic	60					■	

All trademarks or company logos shown in the catalogue are protected by trademark rights owned by KSB Aktiengesellschaft and/or a KSB Group company.

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

Fluids

Pumps

	Rio C	Rio	Rio Z	Riotherm C	Riotherm	Riotronic P	Riotronic Eco	Rio-Eco	Rio-Eco B	Rio-Eco Z	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																															
Destillate																															
Digested sludge																															
Dipping paints																															
Drinking water				■	■				■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Explosive liquids																															
Feed water																															
Fire-fighting water																															
Flammable liquids																															
Fuels																															
Gas-containing liquids																															
Harmful liquids																															
Heating water	■	■	■			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Highly aggressive liquids																															
High-temperature hot water		■	■																												
Hot water	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Industrial service water				■	■																										
Inorganic liquids																															
Liquefied gas																															
Liquids in food and beverage production																															
Lubricants																															
Oils																															
Organic liquids																															
Pharmaceutical fluids																															
Polymerizing liquids																															
Raw sludge																															
River, lake and ground water																															
Seawater																															
Service water				■	■			■			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Sewage with faeces																															
Sewage without faeces																															
Slurries																															
Slurries (ore, sand, gravel, ash)																															
Solar thermal energy																															
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

Standardized / close-coupled pumps, fixed / variable speed

Hot 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	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																		
Fire-fighting water				■	■	■		■	■	■	■	■	■					
Flammable liquids																		
Fuels																		
Gas-containing liquids																		
Harmful liquids																		
Heating water																		
Highly aggressive liquids																		
High-temperature hot water																		
Hot water																		
Industrial service water			■	■	■	■	■	■	■	■	■	■	■					
Inorganic liquids																		
Liquefied gas																		
Liquids in food and beverage production															■	■	■	■
Lubricants																		
Oils																		
Organic liquids																		
Pharmaceutical fluids															■	■	■	■
Polymerizing liquids																		
Raw sludge																		
River, lake and ground water			■	■	■	■	■											
Seawater				■	■	■	■											
Service water			■	■	■	■	■											
Sewage with faeces																		
Sewage without faeces																		
Slurries																		
Slurries (ore, sand, gravel, ash)																		
Solar thermal energy																		
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



Applications

Pumps

	Rio C	Rio	Rio Z	Riotherm C	Riotherm	Riotronic P	Riotronic Eco	Rio-Eco	Rio-Eco B	Rio-Eco Z	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
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	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
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	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
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	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
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

Circulator pumps, variable speed

In-line pumps with fixed / variable speed drive

Standardized / close-coupled pumps, fixed / variable speed

Hot water pumps



Applications

Pumps

	Hya-Rain / Hya-Rain N	Hya-Rain Eco	Multi Eco	Multi Eco-Pro	Multi Eco-Top	Movitec VME	Ixo	Filtera N	Hya-Solo E	Hya-Solo D / DV	Hya-Eco K	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 / ICS	Rotex	MK / MKY	
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																							
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																							
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																							
Spray irrigation																							
Sugar industry																							
Swimming pools																							
Thermal oil circulation																							
Thickening																							
Washing plants																							
Water extraction																							
Water supply																							
Water treatment systems																							

Rainwater harvesting systems

Domestic water supply systems with automatic control unit / swimming pools

Pressure booster systems

Drainage pumps / waste water pumps



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	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																		
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																		
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																		
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	WKT / WKTA / WKTB	SEZ / SEZT / PHZ / PNZ	SNW / PNW	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																																												

- 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
- 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
- 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
- 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

<b>Rio® C</b>		<b>Circulator pump with manual speed control</b>
	<p>Rp _____ 1-1¼          Q [m³/h] _____ max. 4          H [m] _____ max. 5.8          p [bar] _____ max. 10          T [°C] _____ -10 to +110          Data for 50 Hz operation</p>	<p><b>Design:</b> Maintenance-free, glandless wet rotor pump, screw-ended, with three speed levels.</p> <p><b>Applications:</b> Industrial recirculation systems, air-conditioning systems, cooling circuits, heat recovery systems and hot water heating systems.</p> 
	Switchgears	Reference no. 1120.5-10 <span style="float: right;">also available in 60 Hz</span>

<b>Rio®</b>		<b>Circulator pump with manual speed control</b>
	<p>Rp / DN _____ 1-1¼ / 40 - 100          Q [m³/h] _____ max. 77          H [m] _____ max. 19          p [bar] _____ max. 10          T [°C] _____ -20 to +130          Data for 50 Hz operation</p>	<p><b>Design:</b> Maintenance-free, glandless wet rotor pump, flanged or screw-ended, with three speed levels.</p> <p><b>Applications:</b> Industrial recirculation systems, air-conditioning systems, cooling circuits, heat recovery systems and hot water heating systems.</p> 
	Switchgears	Reference no. 1115.51-10 <span style="float: right;">also available in 60 Hz</span>

<b>Rio® Z</b>		<b>Circulator pump with manual speed control</b>
	<p>Rp / DN _____ 1-1¼ / 32 - 80          Q [m³/h] _____ max. 130          H [m] _____ max. 18          p [bar] _____ max. 10          T [°C] _____ -20 to +130          Data for 50 Hz operation</p>	<p><b>Design:</b> Maintenance-free, glandless wet rotor pump, flanged or screw-ended, with three speed levels; in twin pump design (Rio Z) for standby operation with integrated swing check valve or, on option, peak load operation (parallel operation).</p> <p><b>Applications:</b> Industrial recirculation systems, air-conditioning systems, cooling circuits, heat recovery systems and hot water heating systems.</p> 
	Switchgears	Reference no. 1115.51-10 <span style="float: right;">also available in 60 Hz</span>

<b>Riotherm® C</b>		<b>Hot water service pump</b>
	<p>Rp / DN _____ ½ - 1¼ / 40 - 50          Q [m³/h] _____ max. 28          H [m] _____ max. 7.5          p [bar] _____ max. 10          T [°C] _____ -10 to +110          Data for 50 Hz operation</p>	<p><b>Design:</b> Maintenance-free, glandless wet rotor pump, flanged or screw-ended, with three speed levels.</p> <p><b>Applications:</b> Air-conditioning systems, cooling circuits and water supply.</p>
	Switchgears	Reference no. 1109.5-10 <span style="float: right;">also suitable for 60 Hz operation</span>

<b>Riotherm®</b>		<b>Hot water service pump</b>
	<p>Rp _____ 1-1¼          Q [m³/h] _____ max. 10          H [m] _____ max. 6          p [bar] _____ max. 10          T [°C] _____ -2 to +110          Data for 50 Hz operation</p>	<p><b>Design:</b> Screw-ended dry rotor pump with mechanical seal and fixed speed.</p> <p><b>Applications:</b> Swimming pools, cooling circuits and industrial plants.</p>
	Switchgears	Reference no. 1118.5-10 <span style="float: right;">also available in 60 Hz</span>

## Circulator pumps, variable speed

Riotronic® P		High-efficiency circulator pump with continuously variable differential pressure control
	Rp                    1-1¼ Q [m³/h]            max. 4.2 H [m]                max. 6 p [bar]                max. 10 T [°C]                -2 to +110 n [min⁻¹]            max. 4230	<b>Design:</b> Maintenance-free wet rotor pump with integrated frequency inverter for continuously variable differential pressure control. <b>Applications:</b> Industrial recirculation systems, air-conditioning systems, heat recovery systems and hot water heating systems.
		
		Reference no. 1112.52-10                    also suitable for 60 Hz operation

Riotronic® Eco		High-efficiency circulator pump with continuously variable differential pressure control
	Rp                    1-1¼ Q [m³/h]            max. 2.5 H [m]                max. 5 p [bar]                max. 10 T [°C]                +15 to +110 n [min⁻¹]            max. 3500	<b>Design:</b> Maintenance-free wet rotor pump with integrated frequency inverter for continuously variable differential pressure control. <b>Applications:</b> Industrial recirculation systems, air-conditioning systems, heat recovery systems and hot water heating systems.
		
		Reference no. 1112.51-10

Rio-Eco®		High-efficiency circulator pump with continuously variable differential pressure control
	Rp / DN            1-1¼ / 32 - 100 Q [m³/h]            max. 62 H [m]                max. 13 p [bar]                max. 10 T [°C]                -10 to +110 n [min⁻¹]            max. 4800	<b>Design:</b> Maintenance-free wet rotor pump with integrated frequency inverter for continuously variable differential pressure control and IR interface for remote control. <b>Applications:</b> Industrial recirculation systems, air-conditioning systems, cooling circuits, heat recovery systems and hot water heating systems.
		
		Reference no. 1137.5-10                    also suitable for 60 Hz operation

Rio-Eco® B		High-efficiency circulator pump with continuously variable differential pressure control
	Rp / DN            1-1¼ / 40 - 65 Q [m³/h]            max. 38 H [m]                max. 10 p [bar]                max. 10 T [°C]                -10 to +80 n [min⁻¹]            max. 4800	<b>Design:</b> Maintenance-free wet rotor pump with integrated frequency inverter for continuously variable differential pressure control and IR interface for remote control. <b>Applications:</b> Air-conditioning systems, cooling circuits and water supply
		
		Reference no. 1137.5-10                    also suitable for 60 Hz operation

Rio-Eco® Z		High-efficiency circulator pump with continuously variable differential pressure control
	DN                    32 - 80 Q [m³/h]            max. 108 H [m]                max. 13 p [bar]                max. 10 T [°C]                -10 to +110 n [min⁻¹]            max. 4800	<b>Design:</b> Maintenance-free wet rotor pump in twin pump design, with integrated frequency inverter for continuously variable differential pressure control and IR interface for remote control. Optional pump assignment to main or stand-by duty, with automatic changeover in the event of a fault, timer-controlled pump change-over or parallel operation; peak load pump started or stopped as required for optimum efficiency. <b>Applications:</b> Industrial recirculation systems, air-conditioning systems, cooling circuits, heat recovery systems and hot water heating systems.
		
		Reference no. 1137.51-10                    also suitable for 60 Hz operation

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

<b>Etaline®</b> <span style="float: right;">In-line pump</span>	
	<p>DN 32 - 200            Q [m³/h] max. 700            H [m] max. 95            p [bar] max. 16            T [°C] -30 to +140  <small>Data for 50 Hz operation</small></p>
<p><b>Design:</b> Close-coupled, in-line circulator pump with volute casing and standardized motor.</p> <p><b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning, water and service water supply systems, industrial recirculation systems.</p>	
<span style="color: red;">■</span> PumpMeter · Hyamaster · LevelControl · Switchgears	Reference no. 1146.51-10 <span style="float: right;">also available in 60 Hz</span>
<b>Etaline® Z</b> <span style="float: right;">In-line twin pump</span>	
	<p>DN 32 - 200            Q [m³/h] max. 1120            H [m] max. 77            p [bar] max. 16            T [°C] -30 to +140  <small>Data for 50 Hz operation</small></p>
<p><b>Design:</b> Close-coupled, in-line twin circulator pump, pump shaft and motor shaft are rigidly coupled.</p> <p><b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning systems, water and service water supply systems, industrial recirculation systems.</p>	
<span style="color: red;">■</span> PumpMeter · Hyamaster · LevelControl · Switchgears	Reference no. 1148.5-10 <span style="float: right;">also available in 60 Hz</span>
<b>Etaline® PumpDrive</b> <span style="float: right;">In-line pump with motor-mounted variable speed system</span>	
	<p>DN 32 - 200            Q [m³/h] max. 788            H [m] max. 100            p [bar] max. 16            T [°C] -10 to +110            n [min⁻¹] max. 4200</p>
<p><b>Design:</b> Close-coupled in-line circulator pump with motor-mounted variable speed system; pump shaft and motor shaft are rigidly coupled.</p> <p><b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning systems, water and service water supply systems, industrial recirculation systems.</p>	
<span style="color: green;">■</span> PumpMeter · BOA-Systronic	Reference no. 1149.52-10 <span style="float: right;">also suitable for 60 Hz operation</span>
<b>Etaline® Z PumpDrive</b> <span style="float: right;">In-line pump with motor-mounted variable speed system</span>	
	<p>DN 32 - 200            Q [m³/h] max. 990            H [m] max. 76            p [bar] max. 16            T [°C] -10 to +110            n [[min⁻¹] max. 4200</p>
<p><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.</p> <p><b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning systems, water and service water supply systems, industrial recirculation systems.</p>	
<span style="color: green;">■</span> PumpMeter · BOA-Systronic	Reference no. 1154.51-10 <span style="float: right;">also suitable for 60 Hz operation</span>
<b>Etaline®-R</b> <span style="float: right;">In-line pump</span>	
	<p>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></p>
<p><b>Design:</b> Vertical close-coupled, in-line circulator pump with volute casing and standardized motor.</p> <p><b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning, water and service water supply systems, industrial recirculation systems.</p>	
<span style="color: red;">■</span> PumpMeter · PumpDrive · Hyamaster · Switchgears	Reference no. 1146.51-10 <span style="float: right;">also available in 60 Hz</span>

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

ILN / ILNE / ILNS		In-line pump
	DN 65 - 400 Q [m³/h] max. 3700 H [m] max. 162 p [bar] max. 16 T [°C] -20 to +70 n [min⁻¹] max. 3600 <small>Data for 60 Hz operation</small>	<p><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.</p> <p><b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning, marine applications, water and service water supply systems, cleaning systems, industrial recirculation systems.</p>
	PumpDrive · Hyamaster · Hyatronic	also available in 50 Hz

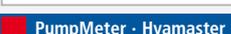
ILNC / ILNCE / ILNCS		In-line pump
	DN 32 - 125 Q [m³/h] max. 447 H [m] max. 161 p [bar] max. 16 T [°C] -20 to +70 n [min⁻¹] max. 3600 <small>Data for 60 Hz operation</small>	<p><b>Design:</b> Closed-coupled vertical in-line centrifugal pump with electric motor, closed impeller and mechanical seal. ILNCS fitted with an auxiliary vacuum pump and ILNCE with ejector. Standardized IEC motor.</p> <p><b>Applications:</b> Hot water heating systems, cooling circuits, air-conditioning, marine applications, water and service water supply systems, cleaning systems, industrial recirculation systems.</p>
	PumpDrive · Hyamaster · Hyatronic	also available in 50 Hz

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

Etanorm® / Etanorm®-R		Standardized pump
	DN 32 - 300 Q [m³/h] max. 1900 H [m] max. 102 p [bar] max. 16 T [°C] max. +140 <small>Data for 50 Hz operation</small>	<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>
	PumpMeter · Hyamaster	Reference no. 1211.5-10 also available in 60 Hz

Etanorm® PumpDrive		Standardized pump with motor-mounted variable speed system
	DN 32 - 150 Q [m³/h] max. 800 H [m] max. 102 p [bar] max. 16 T [°C] max. +140 n [min⁻¹] max. 4200	<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>
	PumpMeter	Reference no. 1211.5-10 + 4070.5-10

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

<b>Etabloc®</b>		<b>Close-coupled pump</b>
	DN 25 - 150 Q [m³/h] max. 660 H [m] max. 102 p [bar] max. 16 T [°C] max. +140 <small>Data for 50 Hz operation</small>	<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.  <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.
		Reference no. 1167.5-10
<b>Etabloc® PumpDrive</b>		<b>Close-coupled pump with motor-mounted variable speed system</b>
	DN 25 - 150 Q [m³/h] max. 800 H [m] max. 102 p [bar] max. 16 T [°C] max. +110 n [min⁻¹] max. 4200	<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.  <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.
		Reference no. 1167.5-10 + 4070.5-10
<b>Etachrom® BC</b>		<b>Close-coupled chrome steel pump</b>
	DN 25 - 80 Q [m³/h] max. 260 H [m] max. 108 p [bar] max. 12 T [°C] max. +110 <small>Data for 50 Hz operation</small>	<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.  <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.
		Reference no. 1213.5-10
<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. 3500	<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.
		Reference no. 1213.5-10 + 4070.5-10
<b>Etachrom® NC</b>		<b>Standardized 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.
		Reference no. 1212.5-10

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

Etachrom® NC PumpDrive		Standardized chrome steel pump with motor-mounted variable speed system
	DN 25 - 80 Q [m³/h] max. 260 H [m] max. 106 p [bar] max. 12 T [°C] max. +110 n [min⁻¹] max. 3500	<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.
	 PumpMeter	Reference no. 1212.5-10 + 4070.5-10

Etanorm® GPV/CPV		Vertical low-pressure pump
	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.
	 PumpMeter	Reference no. 1214.5-10 <span style="float: right;">also available in 60 Hz</span>

## Hot water pumps

HPK®-L		Hot water / thermal oil recirculation pump without external cooling
	DN 25 - 250 Q [m³/h] max. 1330 H [m] max. 155 p [bar] max. 40 T [°C] max. +240 / +350 <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.
	 PumpDrive • Hyamaster	Reference no. 1136.5-10 <span style="float: right;">also available in 60 Hz</span>

HPK®		Hot water recirculation pump
	DN 150 - 400 Q [m³/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.
	 PumpDrive • Hyamaster	Reference no. 1121.51-10 <span style="float: right;">also available in 60 Hz</span>

## Hot water pumps

HPH®		Hot water recirculation pump
	DN _____ 40 - 350 Q [m³/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>	Reference no. 1122.5-10 <span style="float: right;">also available in 60 Hz</span>

## 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 <small>Data for 50 Hz operation</small>	<b>Design:</b> 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.  <b>Applications:</b> Heat transfer systems (DIN 4754, VDI 3033) or hot water recirculation (DIN 4752).
	<b>Hyamaster</b>	Reference no. 1220.5-10 <span style="float: right;">also available in 60 Hz</span>

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 <small>Data for 50 Hz operation</small>	<b>Design:</b> 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.  <b>Applications:</b> Heat transfer systems (DIN 4754) or hot water recirculation.
	<b>Hyamaster</b>	Reference no. 1170.5-10 <span style="float: right;">also available in 60 Hz</span>

## Thermal oil pumps with magnetic drive / canned motor

Etamagno® SY / SYI / Bloc SY		Thermal oil pump
	DN _____ 32 - 150 Q [m³/h] _____ max. 660 H [m] _____ max. 102 p [bar] _____ max. 16 T [°C] _____ max. +350 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, seal-less, single-stage volute casing pump with magnetic drive, ratings and main dimensions to EN 733, with replaceable casing wear rings. <b>Applications:</b> Handling of thermal oil in heat transfer systems to DIN 4754.
	<b>Hyamaster</b>	Reference no. 1218.5-10 <span style="float: right;">also available in 60 Hz</span>

(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 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, seal-less, single-stage pump with fully enclosed canned motor, uncooled. ATEX-compliant version available. <b>Applications:</b> 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 <small>Data for 50 Hz operation</small>	<b>Design:</b> Horizontal, seal-less, single-stage pump with fully enclosed canned motor, uncooled, coolable or heatable. ATEX-compliant version available. <b>Applications:</b> Handling of thermal oils and other hot fluids in heat transfer systems to DIN 4754.
		also available in 60 Hz

## Standardized 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. 2731.5-10 <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. +110 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.
	PumpMeter • PumpDrive	Reference no. 2730.5-10 + 4070.5-10

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. 2730.5-10 <span style="float: right;">also available in 60 Hz</span>

## Seal-less pumps

Magnochem®		Standardized 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. 2739.5-10 <span style="float: right;">also available in 60 Hz</span>

## Seal-less pumps

### Magnochem® - Bloc

Close-coupled chemical pump with mag-drive



DN	25 - 125
Q [m³/h]	max. 240
H [m]	max. 153
p [bar]	max. 25
T [°C]	max. +250

Data for 50 Hz operation

**Design:** 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.

**Applications:** Handling of aggressive, toxic, explosive, valuable, flammable, mal odorous or harmful liquids in the chemical, petrochemical and general industry.

Hyamaster

Reference no. 2749.5-10

also available in 60 Hz

### Etaseco® / Etaseco®-I

Standardized water pumps with canned motor



DN	32 - 100
Q [m³/h]	max. 250
H [m]	max. 100
p [bar]	max. 16
T [°C]	max. +140

Data for 50 Hz operation

**Design:** 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.

**Applications:** 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. 2935.5-10

also available in 60 Hz

### Etaseco® RVP

Cooling circuit pump with canned motor



DN	32
Q [m³/h]	max. 20
H [m]	max. 25
p [bar]	max. 10
T [°C]	max. +85

**Design:** 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.

**Applications:** 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. 2935.17-10

also available in 60 Hz

### Secochem® Ex

Standardized chemical pump with canned motor and explosion protection



DN	25 - 100
Q [m³/h]	max. 300
H [m]	max. 150
p [bar]	max. 25
T [°C]	max. +130

Data for 50 Hz operation

**Design:** 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.

**Applications:** 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. 2939.5-10

also available in 60 Hz

### Secochem® Ex K

Standardized chemical pump with canned motor and explosion protection



DN	25 - 100
Q [m³/h]	max. 300
H [m]	max. 150
p [bar]	max. 25
T [°C]	max. +400

Data for 50 Hz operation

**Design:** 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.

**Applications:** 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. 2939.51-10

also available in 60 Hz

## 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 <sup>-1</sup> ]	max. 8400
	Data for n = 8400 min <sup>-1</sup>	
		<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>a</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

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

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

RPH®		Process pump
	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, 10th edition, or 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.
	<b>Hyamaster</b>	<b>Reference no. 1312.5-10 / 1316.51 -10</b> <span style="float: right;">also available in 60 Hz</span>

CTN		Chemical vertical shaft submersible pump
	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.
		<b>Reference no. 2711.5-10</b> <span style="float: right;">also available in 60 Hz</span>

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

API series (Nikkiso-KSB)		Refinery pump
	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.
		<span style="float: right;">also available in 60 Hz</span>

CHTR		High pressure pump
	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 <small>Data for 50 Hz operation, higher values available upon request</small>	<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.  <b>Applications:</b> In refineries, in the petrochemical industry and in steam generation plants.
		<b>Reference no. 2701-10</b> <span style="float: right;">also available in 60 Hz</span>

YNKR		Heavy duty process pump
	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 <small>Data for 50 Hz operation, higher values available upon request</small>	<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.  <b>Applications:</b> In refineries, in the petrochemical industry, solarthermal power plants and in steam generation plants.
		<b>Reference no. 1139.21</b> <span style="float: right;">also available in 60 Hz</span>

## Centrifugal pump for minimal volume flows

Microchem®		Centrifugal pump for minimal volume flows
	Q [ml/min] _____ 0 to 5000 H [m] _____ max. 200 p [bar] _____ max. 25 T [°C] _____ -10 to +100	<p><b>Design:</b> System consisting of a variable-speed single-stage centrifugal pump with directly flanged motor and control unit.</p> <p><b>Applications:</b> Continuous volume flow control for handling aggressive organic and inorganic fluids in chemical and pharmaceutical processes. The pump is suitable for use in laboratories, pilot plants and in production processes, particularly in industrial process engineering, continuous processes, micro-process engineering, miniplants, dosing, coating, spray-drying and injection applications.</p>
	Reference no. 2600.5-10	

## Rainwater harvesting systems

Hya-Rain® / Hya-Rain® N		Rainwater harvesting system with one pump
	Rp _____ 1 Q [m³/h] _____ max. 4 H [m] _____ max. 43 p [bar] _____ max. 6 T [°C] _____ max. +35 <small>Data for 50 Hz operation</small>	<p><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.</p> <p><b>Applications:</b> Rainwater and service water utilization, irrigation and spray irrigation systems.</p>
	Reference no. 5602.51-10	

Hya-Rain® Eco		Rainwater harvesting system with one pump
	Rp _____ 1 Q [m³/h] _____ max. 4 H [m] _____ max. 43 p [bar] _____ max. 6 T [°C] _____ max. +35 <small>Data for 50 Hz operation</small>	<p><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.</p> <p><b>Applications:</b> Rainwater and service water utilization, irrigation and spray irrigation systems.</p>
	Reference no. 5605.5-10	

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

Multi Eco®		Multistage, self-priming centrifugal pump
	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. 5180.5-10
<p><b>Design:</b> Multistage, self-priming centrifugal pump in close-coupled design.</p> <p><b>Applications:</b> Single- or two-family houses, agricultural facilities, spray irrigation and irrigation systems, washing plants, water supply and rainwater harvesting systems.</p>		

Multi Eco®-Pro		Multistage, self-priming centrifugal pump with automatic control unit
	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. 5182.5-10		
<p><b>Design:</b> 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.</p> <p><b>Applications:</b> Single- or two-family houses, agricultural facilities, spray irrigation and irrigation systems, washing plants, water supply and rainwater harvesting systems.</p>		

Multi Eco®-Top		Domestic water supply system
	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. 5181.5-10		
<p><b>Design:</b> 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.</p> <p><b>Applications:</b> Single- or two-family houses, agricultural facilities, spray irrigation and irrigation systems, washing plants, water supply and rainwater harvesting systems.</p>		

Movitec® VME		High-pressure in-line pump in close-coupled design
	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. 1798.5-10 also available in 60 Hz
<p><b>Design:</b> 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).</p> <p><b>Applications:</b> 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.</p>		

Ixo		Submersible motor pump
	Rp	1¼
	Q [m³/h]	max. 8
	H [m]	max. 65
	T [°C]	max. +35
	n [min⁻¹]	max. 2900
	Switchgears • Cervomatic	
<p><b>Design:</b> 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.</p> <p><b>Applications:</b> Water supply, spray irrigation and irrigation systems, washing plants, rainwater harvesting systems, water extraction from wells, tanks and cisterns.</p>		

## 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
		Reference no. 2127.5-10

## 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
		Reference no. 1951.5-10

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
		Reference no. 1951.5-10

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
		Reference no. 1951.5-10

## Pressure booster systems

### Hya®-Eco K

Pressure booster system, 2 to 3 pumps



Rp / DN	2 / 80
Q [m³/h]	max. 70
H [m]	max. 100
p [bar]	max. 10
T [°C]	max. +70

Data for 50 Hz operation

**Design:** Fully automatic package pressure booster system, with 2 to 3 vertical high-pressure pumps, fully electronic control to ensure the required supply pressure, standard version with volt-free changeover contact for general fault indication and live-zero monitoring of the connected sensors, configuration and functions to DIN 1988, Part 5. Automated with BoosterControl.

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

Reference no. 1967.5-10

### 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. 12
T [°C]	max. +70

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

**Design:** Fully automatic package pressure booster system, with 2 to 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 changeover contacts for fault indication. Configuration and function to DIN 1988, Part 5. Automated with BoosterControl.

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

Reference no. 1967.52-10

### 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 1988, Part 5. Automated with BoosterControl.

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

Reference no. 1952.5-10

### 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, Part 5. Automated with BoosterControl.

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

Reference no. 1953.51-10

### 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<sup>-1</sup>

**Design:** 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, Part 5. Automated with BoosterControl and PumpDrive.

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

Reference no. 1953.52-10



## Drainage pumps / waste water pumps

Ama-Porter® F / S / ICS		Submersible motor pump
	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> Vertical, fully floodable submersible waste water pump in close-coupled design (cast iron variant), single-stage, without explosion protection. <b>Applications:</b> Handling of all types of waste water.
	(ICS)  Switchgears • LevelControl (Ama-Porter F/S)	Reference no. 2541.51-10 / 2539.51-10 / 2539.52-10 / 2539.53-10

Rotex®		Waste water pump
	Rp _____ 1¼ - 2 Q [m³/h] _____ max. 24 H [m] _____ max. 14 T [°C] _____ max. +90 <small>Data for 50 Hz operation</small>	<b>Design:</b> 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. <b>Applications:</b> Automatic disposal of waste water from buildings, pits and tanks, lowering of surface water levels and drainage.
		Reference no. 2322.5-10

MK / MKY		Waste water, condensate and heat transfer liquid pump
	Rp / DN _____ 2 / 50 Q [m³/h] _____ max. 36 H [m] _____ max. 19 T [°C] _____ max. +200 <small>Data for 50 Hz operation</small>	<b>Design:</b> Vertical submersible pump with three-channel impeller, volute casing designed as suction strainer. <b>Applications:</b> 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. 2324.5-10

## Lifting units / pump stations

AmaDS³		Waste water pump station with solids separation system
	Inflow rate [m³/h] _____ 6 - 120 H [m] _____ max. 85 T [°C] _____ depending on pump n [min⁻¹] _____ depending on pump Viscosity [cP] _____ depending on pump <small>Data for 50 Hz operation, higher values available upon request</small>	<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.
	 LevelControl	Reference no. 2581 and 2567.021-10

## Lifting units / pump stations

<h3>Ama-Drainer-Box</h3>		<b>Automatic waste water lifting unit</b>
	DN _____ 40, 50 Q [m³/h] _____ max. 46 H [m] _____ max. 24 T [°C] _____ max. +40 <small>Data for 50 Hz operation</small>	<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 switchgears and LevelControl. <b>Applications:</b> Wash-basins, showers, washing machines, garage gateways, basements, rooms subject to a flooding risk, etc.
	<b>Reference no. 2331.55-10 and 2336.51-10</b>	
<h3>mini-Compacta</h3>		<b>Floodable sewage lifting unit</b>
	DN _____ 32 - 100 Q [m³/h] _____ max. 36 H [m] _____ max. 25 T [°C] _____ max. +40 <small>Data for 50 Hz operation</small>	<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.
	<b>Reference no. 2317.54-10</b>	
<h3>Compacta®</h3>		<b>Floodable sewage lifting unit</b>
	DN _____ 80 - 100 Q [m³/h] _____ max. 140 H [m] _____ max. 24 T [°C] _____ max. +40* <small>Data for 50 Hz operation</small> <small>* up to +65 °C for short periods</small>	<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.
	<b>Reference no. 2317.55-10</b>	
<h3>CK 800-Eu Pump Station</h3>		<b>Pump station, plastic collecting tank with Amarex N S and Ama-Porter</b>
	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.
	<b>Reference no. 2334.541-10</b>	
<h3>Ama-Porter CK Pump Station</h3>		<b>Pump station, plastic collecting tank with Ama-Porter</b>
	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.
	<b>Reference no. 2334.51-10</b>	

## Lifting units / pump stations

### Amarex N CK Pump Station

Pump station, plastic collecting tank with Amarex N



DN \_\_\_\_\_ 50 - 65  
 Q [m³/h] \_\_\_\_\_ max. 50  
 H [m] \_\_\_\_\_ max. 39  
 T [°C] \_\_\_\_\_ max. +40  
 Data for 50 Hz operation

**Design:** 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.

**Applications:** Renovation of premises, sewage disposal in various sectors, joint sewage disposal for several residential units, pumped drainage.

Reference no. 2334.52-10

### Evamatic-Box

Sewage lifting unit



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

**Design:** 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.

**Applications:** Disposal of domestic waste water and sewage.

Reference no. 2319.51-10

### Evamatic-Box ICS

Sewage lifting unit



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

**Design:** Single-pump or dual-pump sewage lifting unit with one or two Ama-Porter ICS submersible waste water pumps with free-flow impeller (F) or cutter (S) and ICS control system.

**Applications:** Disposal of domestic waste water and sewage.

Reference no. 2319.52-10

## Submersible motor pumps

<b>Amarex® N</b> <span style="float: right;">Submersible motor pump DN 32 to 100</span>															
	<table border="0"> <tr> <td>DN</td> <td>32 - 100</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 190</td> </tr> <tr> <td>H [m]</td> <td>max. 49</td> </tr> <tr> <td>T [°C]</td> <td>max. +55</td> </tr> <tr> <td colspan="2"><small>Data for 50 Hz operation</small></td> </tr> </table> <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>	DN	32 - 100	Q [m³/h]	max. 190	H [m]	max. 49	T [°C]	max. +55	<small>Data for 50 Hz operation</small>					
DN	32 - 100														
Q [m³/h]	max. 190														
H [m]	max. 49														
T [°C]	max. +55														
<small>Data for 50 Hz operation</small>															
<span>Switchgears • LevelControl</span>	<span>Reference no. 2563.5-10</span> <span style="float: right;">also available in 60 Hz</span>														
<b>Amarex® KRT®</b> <span style="float: right;">Submersible motor pump DN 40 to DN 700</span>															
	<table border="0"> <tr> <td>DN</td> <td>40 - 700</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 10080</td> </tr> <tr> <td>H [m]</td> <td>max. 100</td> </tr> <tr> <td>T [°C]</td> <td>max. +60</td> </tr> <tr> <td>n [min<sup>-1</sup>]</td> <td>max. 2900</td> </tr> <tr> <td colspan="2"><small>Data for 50 Hz operation</small></td> </tr> </table> <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>	DN	40 - 700	Q [m³/h]	max. 10080	H [m]	max. 100	T [°C]	max. +60	n [min <sup>-1</sup> ]	max. 2900	<small>Data for 50 Hz operation</small>			
DN	40 - 700														
Q [m³/h]	max. 10080														
H [m]	max. 100														
T [°C]	max. +60														
n [min <sup>-1</sup> ]	max. 2900														
<small>Data for 50 Hz operation</small>															
<span>PumpDrive • Hyamaster • Amacontrol • Switchgears • LevelControl</span>	<span>Reference no. 2553.5-10</span> <span style="float: right;">also available in 60 Hz</span>														
<b>Amarex® KRT® dry-installed, with cooling jacket</b> <span style="float: right;">Submersible motor pump DN 100 to DN 700</span>															
	<table border="0"> <tr> <td>DN</td> <td>100 - 700</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 10000</td> </tr> <tr> <td>H [m]</td> <td>max. 100</td> </tr> <tr> <td>p [bar]</td> <td>max. 10</td> </tr> <tr> <td>T [°C]</td> <td>max. +40</td> </tr> <tr> <td>n [min<sup>-1</sup>]</td> <td>max. 1450</td> </tr> <tr> <td colspan="2"><small>Data for 50 Hz operation</small></td> </tr> </table> <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>	DN	100 - 700	Q [m³/h]	max. 10000	H [m]	max. 100	p [bar]	max. 10	T [°C]	max. +40	n [min <sup>-1</sup> ]	max. 1450	<small>Data for 50 Hz operation</small>	
DN	100 - 700														
Q [m³/h]	max. 10000														
H [m]	max. 100														
p [bar]	max. 10														
T [°C]	max. +40														
n [min <sup>-1</sup> ]	max. 1450														
<small>Data for 50 Hz operation</small>															
<span>PumpDrive • Hyamaster • Amacontrol • Switchgears • LevelControl</span>	<span>Reference no. 2553.5-10</span> <span style="float: right;">also available in 60 Hz</span>														
<b>Amarex® KRT® wet/dry-installed, with energy-saving motor</b> <span style="float: right;">Submersible motor pump DN 80 to DN 200</span>															
	<table border="0"> <tr> <td>DN</td> <td>80 - 200</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 550</td> </tr> <tr> <td>H [m]</td> <td>max. 25</td> </tr> <tr> <td>T [°C]</td> <td>max. +40</td> </tr> <tr> <td>n [min<sup>-1</sup>]</td> <td>max. 1450</td> </tr> <tr> <td colspan="2"><small>Data for 50 Hz operation</small></td> </tr> </table> <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>	DN	80 - 200	Q [m³/h]	max. 550	H [m]	max. 25	T [°C]	max. +40	n [min <sup>-1</sup> ]	max. 1450	<small>Data for 50 Hz operation</small>			
DN	80 - 200														
Q [m³/h]	max. 550														
H [m]	max. 25														
T [°C]	max. +40														
n [min <sup>-1</sup> ]	max. 1450														
<small>Data for 50 Hz operation</small>															
<span>PumpDrive • Hyamaster • Amacontrol • Switchgears • LevelControl</span>	<span>Reference no. 2553.5-10</span> <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>	
 Hyamaster - Amacontrol	Reference no. 1579.5-10 <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>	
 Hyamaster - Amacontrol	Reference no. 1580.5-10 <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>	
 Hyamaster - Amacontrol	Reference no. 1589.5-10 <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. 1592.551-10 / 1592.552-10 <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. 1592.505-10
<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. 1574.5-10
<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. 1594.5-10

## 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		
Hyamaster • PumpDrive • LevelControl		Reference no. 2580.5-10/2580.45-10/2580.35-10 also available in 60 Hz	

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]	+120 (max. +280)	
	n [min⁻¹]	max. 2900	
	Data for 50 Hz operation		
Hyamaster		Reference no. 2361.5-10/2362.5-10/2361.450-10/2361.453-10/2361.460-10 also available in 60 Hz	

## 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	<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>
	H [m] _____ max. 90	
	p [bar] _____ max. 16	
	T [°C] _____ max. +120	

ZW		Slurry pump
	Q [m <sup>3</sup> /h] _____ max. 400	<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>
	H [m] _____ max. 35	
	p [bar] _____ max. 10	
	T [°C] _____ max. +120	

## Self-priming pumps

Etaprime® L		Self-priming pump for pure or contaminated liquids
	DN _____ 25 - 125	<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>
	Q [m <sup>3</sup> /h] _____ max. 180	
	H [m] _____ max. 85	
	p [bar] _____ max. 10	
	T [°C] _____ max. +90	
Data for 50 Hz operation		
Reference no. 2745.5-10		also available in 60 Hz

Etaprime® B / BN		Self-priming close-coupled pump for pure or contaminated liquids
	DN _____ 25 - 100	<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>
	Q [m <sup>3</sup> /h] _____ max. 130	
	H [m] _____ max. 72	
	p [bar] _____ max. 10	
	T [°C] _____ max. +90	
Data for 50 Hz operation		
Reference no. 2746.5-10		also available in 60 Hz

## Submersible borehole pumps

<b>S 100D / UPA 100C</b> <span style="float: right;">Submersible borehole pump</span>											
	<table> <tr> <td>DN</td> <td>100</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 16</td> </tr> <tr> <td>H [m]</td> <td>max. 400</td> </tr> <tr> <td>T [°C]</td> <td>max. +30</td> </tr> <tr> <td colspan="2">Data for 50 Hz operation</td> </tr> </table>	DN	100	Q [m³/h]	max. 16	H [m]	max. 400	T [°C]	max. +30	Data for 50 Hz operation	
DN	100										
Q [m³/h]	max. 16										
H [m]	max. 400										
T [°C]	max. +30										
Data for 50 Hz operation											
<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>											
<span style="color: red;">■</span> Switchgears • Cervomatic	Reference no. 3400.5-10 <span style="float: right;">also available in 60 Hz</span>										
<b>UPA 150C</b> <span style="float: right;">Submersible borehole pump</span>											
	<table> <tr> <td>DN</td> <td>150</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 79</td> </tr> <tr> <td>H [m]</td> <td>max. 570</td> </tr> <tr> <td>T [°C]</td> <td>max. +50</td> </tr> <tr> <td colspan="2">Data for 50 Hz operation</td> </tr> </table>	DN	150	Q [m³/h]	max. 79	H [m]	max. 570	T [°C]	max. +50	Data for 50 Hz operation	
DN	150										
Q [m³/h]	max. 79										
H [m]	max. 570										
T [°C]	max. +50										
Data for 50 Hz operation											
<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>											
<span style="color: red;">■</span> Hyamaster • PumpDrive	Reference no. 3400.52-10 <span style="float: right;">also available in 60 Hz</span>										
<b>UPA 200, 200B, 250C</b> <span style="float: right;">Submersible borehole pump</span>											
	<table> <tr> <td>DN</td> <td>200 - 250</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 330</td> </tr> <tr> <td>H [m]</td> <td>max. 460</td> </tr> <tr> <td>T [°C]</td> <td>max. +50</td> </tr> <tr> <td colspan="2">Data for 50 Hz operation</td> </tr> </table>	DN	200 - 250	Q [m³/h]	max. 330	H [m]	max. 460	T [°C]	max. +50	Data for 50 Hz operation	
DN	200 - 250										
Q [m³/h]	max. 330										
H [m]	max. 460										
T [°C]	max. +50										
Data for 50 Hz operation											
<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>											
<span style="color: red;">■</span> Hyamaster	Reference no. 3400.5-10 <span style="float: right;">also available in 60 Hz</span>										
<b>UPA 300, 350</b> <span style="float: right;">Submersible borehole pump</span>											
	<table> <tr> <td>DN</td> <td>300 - 350</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 840</td> </tr> <tr> <td>H [m]</td> <td>max. 480</td> </tr> <tr> <td>T [°C]</td> <td>max. +50</td> </tr> <tr> <td colspan="2">Data for 50 Hz operation</td> </tr> </table>	DN	300 - 350	Q [m³/h]	max. 840	H [m]	max. 480	T [°C]	max. +50	Data for 50 Hz operation	
DN	300 - 350										
Q [m³/h]	max. 840										
H [m]	max. 480										
T [°C]	max. +50										
Data for 50 Hz operation											
<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>											
<span style="color: red;">■</span> Hyamaster	Reference no. 3400.5-10 <span style="float: right;">also available in 60 Hz</span>										
<b>UPZ, BSX-BSF</b> <span style="float: right;">Submersible borehole pump</span>											
	<table> <tr> <td>DN</td> <td>&gt; 350</td> </tr> <tr> <td>Q [m³/h]</td> <td>max. 2200</td> </tr> <tr> <td>H [m]</td> <td>max. 1500</td> </tr> <tr> <td>T [°C]</td> <td>max. +50</td> </tr> <tr> <td colspan="2">Data for 50 Hz operation</td> </tr> </table>	DN	> 350	Q [m³/h]	max. 2200	H [m]	max. 1500	T [°C]	max. +50	Data for 50 Hz operation	
DN	> 350										
Q [m³/h]	max. 2200										
H [m]	max. 1500										
T [°C]	max. +50										
Data for 50 Hz operation											
<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>											
<span style="color: red;">■</span>	Reference no. 3470.021-10 <span style="float: right;">also available in 60 Hz</span>										

## High-pressure pumps, fixed / variable speed

Movitec® V / VS / VC / LHS		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.
	<b>PumpMeter • Hyamaster</b>	Reference no. 1798.5-10 <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.
	<b>PumpMeter</b>	Reference no. 1798.5-10 + 4070.5-10 <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.
	<b>PumpMeter • Hyamaster • PumpDrive</b>	Reference no. 1777.5-10 <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. +110 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.
	<b>PumpMeter</b>	Reference no. 1777.5-10 + 4070.5-10 <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	<p><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.</p> <p><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.</p>
	Q [m³/h]	max. 2880	
	H [m]	max. 210	
	p [bar]	max. 25	
	T [°C]	max. +80	
	n [min⁻¹]	max. 2900	
	Data for 50 Hz operation, higher values available upon request		
Hyamaster - PumpMeter		Reference no. 1384.5-10 also available in 60 Hz	

RDLO		Axially split volute casing pump DN 350 - 700	
	DN	350 - 700	<p><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.</p> <p><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.</p>
	Q [m³/h]	max. 10000	
	H [m]	max. 240	
	p [bar]	max. 25	
	T [°C]	max. +80	
	n [min⁻¹]	max. 1450	
	Data for 50 Hz operation, higher values available upon request		
Hyamaster		Doku-Nr. 1385.51-10/1387.5 -10 also available in 60 Hz	

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

Vitachrom		Rolled steel centrifugal pump	
	DN	50 - 125	<p><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.</p> <p><b>Applications:</b> Hygienic handling of fluids in the food, beverage and pharmaceutical industries as well as in the chemical industry.</p>
	Q [m³/h]	max. 340	
	H [m]	max. 100	
	p [bar]	max. 12	
	T [°C]	max. +140	
	Data for 50 Hz operation		
Hyamaster - PumpDrive		Reference no. 1966.5-10 also available in 60 Hz	

Vitacast® / Vitacast® E		Investment cast centrifugal pump	
	DN	25 - 150	<p><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).</p> <p><b>Applications:</b> Hygienic handling of fluids in the food, beverage and pharmaceutical industries as well as in the chemical industry.</p>
	Q [m³/h]	max. 560	
	H [m]	max. 100	
	p [bar]	max. 10	
	T [°C]	max. +140	
	Data for 50 Hz operation, other values available upon request		
PumpDrive		Reference no. 1969.51 / 1969.52 also available in 60 Hz	

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

<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>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

<b>CHTA / CHTC / CHTD</b>		<b>Boiler feed pump</b>
	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 <small>Data for 50 Hz operation, higher values available upon request</small>	<b>Design:</b> Horizontal, high-pressure barrel-type pump with radial impellers, single- and double-entry, multistage, with flanges / weld end nozzles to DIN and ANSI. <b>Applications:</b> Handling of feed water and condensate in power stations and industrial facilities, generation of pressurized water for bark peeling machines and descaling equipment.
		<b>Reference no. 1860.1-10</b> <span style="float: right;">also available in 60 Hz</span>

## Pumps for power station conventional islands

### 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. 1850.02-10

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. 1856.02-10

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. 1130.5-10

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. 1127.021-10

available in 50 Hz and 60 Hz

### WKT / WKTA / WKTB

Condensate pump



DN	40 - 300
Q [m³/h]	max. 1800
H [m]	max. 340
p [bar]	max. 40
T [°C]	max. +100
n [min⁻¹]	max. 1800

Data for 50 Hz operation,  
higher values available upon request

**Design:** Vertical, multistage, can-type ring-section pump with radial and mixed flow impellers. Single- and double-entry suction impellers, flanges to DIN or ANSI. The can is arranged in a pit below the installation floor. The pump is connected with the structure by means of a baseplate.

**Applications:** Handling of condensate in power stations and energy systems.

Reference no. 0361.033-10

also available in 60 Hz

## Pumps for power station conventional islands

SEZ / SEZT / PHZ / PNZ		Cooling water pump
	Q [m³/s] _____ max. 22 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>	<p><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.</p> <p><b>Applications:</b> Handling of raw, pure, service and cooling water in industry, water supply systems, in power stations and seawater desalination plants.</p>
	Reference no. 1471.02-10 <span style="float: right;">also available in 60 Hz</span>	
SNW / PNW		Cooling water pump
	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>	<p><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.</p> <p><b>Applications:</b> Irrigation and drainage systems, stormwater pumping stations, handling of raw and pure water, water supply systems, handling of cooling water.</p>
	Reference no. 1481.5-10/1591.5-10 <span style="float: right;">also available in 60 Hz</span>	
SPY		Cooling water pump
	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>	<p><b>Design:</b> Long-coupled, single-stage volute casing pump in back pull-out design.</p> <p><b>Applications:</b> Drainage, irrigation and water supply systems, handling of condensate, cooling water, service water, etc.</p>
	Reference no. 2384.51-10 <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 <small>Higher values available upon request</small>	<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.  <b>Applications:</b> Reactor coolant recirculation in nuclear power plants (PWR).
	Reference no. 1682.021-10 <span style="float: right;">available in 50 Hz and 60 Hz</span>	
<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 <small>Higher values available upon request</small>	<b>Design:</b> Vertical, single-stage reactor coolant pump RCP, with cast casing, shaft supported by motor bearing.  <b>Applications:</b> Reactor coolant recirculation in nuclear power plants (PWR, PHWR, BWR).
	Reference no. 1665.021-10 <span style="float: right;">available in 50 Hz and 60 Hz</span>	
<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 <small>higher values available upon request</small>	<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.  <b>Applications:</b> Reactor coolant recirculation in generation III+ nuclear power plants (PWR).
	Reference no. 1576.021-10 <span style="float: right;">available in 50 Hz and 60 Hz</span>	
<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 <small>Higher values available upon request</small>	<b>Design:</b> Vertical pump set integrated in the reactor pressure vessel RIP, seal-less pump with leak-free, low-maintenance wet winding motor.  <b>Applications:</b> Reactor coolant recirculation in boiling water reactors (BWR).
	Reference no. 1576.021-10 <span style="float: right;">available in 50 Hz and 60 Hz</span>	
<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 <small>Higher values available upon request</small>	<b>Design:</b> Horizontal, single-stage, double-entry main feed water pump MFWP, cast or forged variant.  <b>Applications:</b> Main feed water supply (MFWS) in steam generation systems of nuclear power plants.
	Reference no. 1668.023-10 <span style="float: right;">available in 50 Hz and 60 Hz</span>	

## 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. 1128.021-10</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. 1666.021-10</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. 166.021-10</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. 1662.021-10</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. 166.021-10</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. 1858.11-10

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. 1858.1-10

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 stainless steel variant also suitable for chilled water applications. <b>Applications:</b> High-pressure pump for RO seawater desalination systems.
		Reference no. 1582.12-10 also available in 60 Hz

Multitec®-RO		High-pressure pump
	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. 1777.5-10 available in 50 Hz and 60 Hz

## Control units

<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 pumps like Multi Eco, Multichrom S, Ixo, S 100D, etc.
		<b>Reference no. 5125.1785-10</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. 5125.178-10</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. 4041.5-10</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 pumps like S 100D, UPA 150S, etc.
		<b>Reference no. 3465.1-10</b>
<b>hyatronic N</b>		<b>Pump control system for cascade starting and stopping</b>
	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.
		<b>Reference no. 0543.5026-10</b>

## Speed control

<b>PumpDrive</b>		<b>Self-cooling, motor-independent variable-speed system</b>
	No. of pumps _____ max. 6 FI _____ 1 per pump/motor [kW] _____ 45 Voltage [V] _____ 3–380 to 480	<p><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).</p> <p><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.</p>
		<b>Reference no. 4070.5-10</b>
<b>hyatronic spc</b>		<b>Pump control system for continuously variable speed adjustment</b>
	No. of pumps _____ max. 1 FI _____ max. 1 [kW] _____ 7.5 Voltage [V] _____ 3–400	<p><b>Design:</b> Single-pump control system for continuously variable speed adjustment with integrated frequency inverter.</p> <p><b>Applications:</b> Heating, ventilation, air-conditioning, water supply and drainage systems.</p>
		<b>Reference no. 0973.5-10</b>
<b>hyatronic mb</b>		<b>Pump control system for continuously variable speed adjustment</b>
	No. of pumps _____ max. 8 FI _____ max. 2 [kW] _____ 200 Voltage [V] _____ 3–400	<p><b>Design:</b> Pump control system in control cabinet for asynchronous motors of all types and makes for controlling and monitoring hydraulic systems.</p> <p><b>Applications:</b> Heating, ventilation and air-conditioning systems, water supply and drainage systems.</p>
		<b>Reference no. 0974.5-10</b>
<b>Hyamaster ISB</b>		<b>Pump control system for continuously variable speed adjustment</b>
	No. of pumps _____ max. 8 FI _____ max. 2 [kW] _____ 200 Voltage [V] _____ 3–400	<p><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.</p> <p><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.</p>
		<b>Reference no. 1961.5-10</b>
<b>Hyamaster SPS</b>		<b>Pump control system for continuously variable speed adjustment</b>
	No. of pumps _____ max. 4 FI _____ 1 per pump [kW] _____ 650 Voltage [V] _____ 3–400	<p><b>Design:</b> Control system for pumps with three-phase motors of all types and makes, consisting of a programmable logic controller (PLC) with display and control panel and all required power components housed in a control cabinet.</p> <p><b>Applications:</b> Process engineering circuits, service water supply, cooling and lubrication systems, cogeneration plants, heat transfer and district heating stations, water extraction and treatment, water supply and waste water disposal.</p>
		<b>Reference no. 1964.5-10</b>



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

Fluid Future® 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. By optimising overall efficiency we help your plant run better, longer and more cheaply. Fluid Future® 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)



Energy Efficiency by KSB

Your local KSB representative:

Placeholder for contact information, indicated by four L-shaped corner brackets forming a large rectangle.

More space for solutions.



**KSB Aktiengesellschaft**  
Johann-Klein-Straße 9  
67227 Frankenthal (Germany)  
[www.ksb.com](http://www.ksb.com)