> Our technology. Your success. Pumps · Valves · Service



**Product Portfolio 2020** 

## Valves I Actuators I Automation



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		-		

# Our tradition: Competence since 1871

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

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

- Over 147 years' experience
- Present in more than 100 countries
- More than 15,000 employees
- More than 170 service centres worldwide
- Approximately 3,000 service specialists





# **Smart services** for maximum availability and efficiency

As a leading supplier of pumps and valves, we attach great importance to providing you with a comprehensive service of the highest quality. In fact, we believe it's so important that we even gave it a special name: KSB SupremeServ.

KSB SupremeServ is on hand to support you with classic and digital service and spare parts solutions over the entire product life cycle. Whether it's a KSB product, non-KSB product or other rotating equipment, you'll benefit from the reliable and sustainable operation of your system.

Applications:

Industry

- Water and Waste Water
  - ter Energy Building Services
- Mining
- Wherever and whenever you need us, we're there for you worldwide. www.ksb.com





# Our mission: Certified quality assurance

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

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

#### Our five key goals:

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



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 anticorruption.





# **Industry 4.0:** we have experience with the future

Digital networking of production systems is one of the key challenges ahead. An expert in engineering with long-standing experience in developing Industry 4.0 solutions, KSB is your ideal partner to achieve:

- Resource efficiency and optimised use of materials
- Availability and operating reliability
- Flexibility through short-term reconfigurability
- Reduction of time to market

Increase your system's productivity already today with KSB's smart products and services: Use our intelligent technologies designed to communicate, such as PumpDrive and PumpMeter, to lay a foundation for your smart factory. Find out more about our future-driven solutions at www.ksb.com/industry40



## **KSB Trademarks**

Apart from the KSB umbrella brand, the following brand names identify quality products and services by the KSB Group:

# omri

#### **Butterfly valves**

Under the AMRI brand, KSB sells its butterfly valves. They are used in building services, industry, water engineering and power generation applications. AMRI products include pneumatic, hydraulic and electric valve actuators as well as control systems.

#### **Diaphragm valves**

**SISIO**<sup>®</sup>

Under the SISTO brand, KSB sells its diaphragm valves. They perform shut-off duties in building services, industrial, water management and power generation applications. Under this brand name, KSB offers special valves for sterile processes including biotech applications.



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## **General Information**

Regional products	Not all depicted products are available for sale in every country. Products only available in individual regions are indicated accordingly. Please contact your sales representative for details.
Key to actuators	<ul> <li>In the Products section from page 25 the symbol in conjunction with the relevant letter indicates the actuator type(s) available.</li> <li>m = manual (lever, handwheel, etc.)</li> <li>e = electric actuator</li> <li>p = pneumatic actuator</li> <li>h = hydraulic actuator</li> </ul>
Trademark rights	All trademarks or company logos shown in the catalogue are protected by trademark rights owned by KSB SE & Co. KGaA 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.
Product information	For information as per chemicals Regulation (EC) No 1907/2006 (REACH), see www.ksb.com/reach.

## Valves

Design/Application	Type series	Page	Automation	Water Transport and Water Treatment	Industry	Energy Conversion	Building Services	Solids Transport	Pharmaceuticals/ Food
	BOA-SuperCompact	25			_		-		
Soft-seated globe valves to DIN/EN	BOA-Compact	25 25	-		-				
	BOA-Compact EKB BOA-W	25	-	-	-		-		
	BOA-H	25	_		-		-		
		26					-		
					-				
Bellows-type globe valves to DIN/EN	NORI 40 ZXLBV/ZXSBV	26				_	-		
	NORI 40 ZXLB/ZXSB	26				_	-		
	NORI 40 ZYLB/ZYSB	26					-		
	BOACHEM-ZXAB/ZYAB	27			_				_
Bellows-type globe valves to ANSI/ASME	ECOLINE GLB 150-600	27	_			_			_
	ECOLINE GLB 800	27			_	_	_		
	NORI 40 ZXL/ZXS	27				_	-		
	NORI 40 ZXLF/ZXSF	28							
	NORI 160 ZXL/ZXS	28							
Globe valves to DIN/EN with gland packing	NORI 160 ZXLF/ZXSF	28							
	NORI 320 ZXSV	28							
	NORI 500 ZXSV	28							
	BOACHEM-ZXA	29							
	ECOLINE VA16	29							
	ECOLINE GLC 150-600	29							
	ECOLINE GLF 150-600	29							
	ECOLINE GLF 800	29							
Globe valves to ANSI/ASME with gland packing	ECOLINE GLV 150-600	30							
	SICCA 150-600 GLC	30							
	SICCA 900-2500 GLC	30							
	SICCA 800-4500 GLF	30							
	NUCA/-A/-ES, Types I, II, IV	30							
Globe valves for nuclear applications	ZXNB	31							
	ZXNVB	31							
	ZYNB/ZYN	31							
Automated globe valves to DIN/EN	BOA-H Mat E	31							
	BOA-H Mat P	31							
	BOA-CVE C/CS/W/IMS/EKB/IMS EKB	32							
Control valves to DIN/EN	BOA-CVE H	32							
	BOA-CVP H	32							
Balancing and shut-off valves to DIN/EN	BOA-Control/BOA-Control IMS	33							
	BOA-Control SAR	33							
Level control valves to DIN/EN	CONDA-VLC	33							
Pressure reducing valves to DIN/EN	CONDA-VRC	34							
Pressure sustaining valves to DIN/EN	CONDA-VSM	34							
	BOAVENT-AVF	34							
Air valves to DIN/EN	BOAVENT-SIF	34							
	BOAVENT-SVA	35							
	BOAVENT-SVF	35							
Vent valves for nuclear applications	SISTO-VentNA	35							
• F • • • • •	SISTO-KRVNA	35							

				t and it		uo	s		
			ation	Water Transport and Water Treatment	Ā	Energy Conversion	Building Services	Solids Transport	Pharmaceuticals/ Food
Design/Application	Type series	Page	Automation	Water Water	Industry	Energy	Buildin	Solids .	Pharmá Food
	COBRA-SGP/SGO/SGF	36							
	COBRA-SMP	36		•					
	ECOLINE SP/SO	36							
	ECOLINE GT 40	36							
Gate valves to DIN/EN	STAAL 40 AKD/AKDS	36							
	STAAL 100 AKD/AKDS	37							
	AKG-A/AKGS-A	37							
	ZTS	37							
	ECOLINE GTB 800	37							
	ECOLINE GTC 150-600	37							
	ECOLINE GTF 150-600	38							
Gate valves to ANSI/ASME	ECOLINE GTF 800	38							
	ECOLINE GTV 150-600	38							
	SICCA 150-600 GTC	38							
	SICCA 900-3600 GTC	38							
	SICCA 800-2500 GTF	39							
Gate valves for nuclear applications	ZTN	39							
Body pressure relief valve	UGS	39							
Knife gate valves to DIN/EN	HERA-BD	39							
	HERA-BDS	40							
Knife gate valves to ANSI/ASME	HERA-BHT	40							
	HERA-SH	40							
	BOA-RPL	40							
	BOA-RFV	41							
	BOA-RVK	41							
Lift check valves to DIN/EN	BOA-R	41							
	NORI 40 RXL/RXS	41							
	NORI 160 RXL/RXS	41							
	RGS	42							
	BOACHEM-RXA	42							
	ECOLINE PTF 150-600	42							
Lift check valves to ANSI/ASME	ECOLINE PTF 800	42							
	SICCA 800-4500 PCF	42							
	NUCA/-A/-ES, Type V	43							
Lift check valves for nuclear applications	RJN	43							
	RYN	43							
	ECOLINE WT/WTI	43							
	STAAL 40 AKK/AKKS	44							
	STAAL 100 AKK/AKKS	44							
Swing check valves to DIN/EN	AKR/AKRS	44							
	ZRS	44							
	SISTO-RSK/RSKS	44		_					
	SERIE 2000	45							
	ECOLINE SCC 150-600	45							
	ECOLINE SCF 150-600	45							
Swing check valves to ANSI/ASME	ECOLINE SCF 800	45							
<u> </u>	ECOLINE SCV 150-600	45							
	SICCA 150-600 SCC	46							
	SICCA 900-3600 SCC	46							
Swing check valves for nuclear applications	SISTO-RSKNA	46							
-	ZRN	46							
Tilting disc check valves to DIN/EN	COBRA-TDC01/03	47							

Design/Application	Type series	Page	Automation	Water Transport and Water Treatment	Industry	Energy Conversion	<b>Building Services</b>	Solids Transport	Pharmaceuticals/ Food
	BOA-S	47							
Strainers to DIN/EN	NORI 40 FSL/FSS	47							
	BOACHEM-FSA	47							
Strainers to ANSI/ASME	ECOLINE FYC 150-600	48							
	ECOLINE FYF 800	48							
	BOAX-CBV13	48							
	BOAX-S/SF	48							
	BOAX-B	49							
Centred-disc butterfly valves	ISORIA 10/16	49							
	ISORIA 20/25	49							
	ISORIA 20 UL	49							
	MAMMOUTH	49							
	KE	50							
	APORIS-DEB02	50							
Double-offset butterfly valves	DANAÏS 150	50							
Double-onset butterny valves	DANAÏS MTII	50							
	DANAÏS TBTII	51							
	TRIODIS 150	51							
Triple-offset butterfly valves	TRIODIS 300	51							
	TRIODIS 600	51							
Butterfly valves for nuclear applications	CLOSSIA	52							
Combined butterfly/check valves	DUALIS	52							
Cingle piece hell velves	MP-CI/MP-II	52							
Single-piece ball valves	PROFIN-VT1	52							
Two-piece ball valves	ECOLINE BLT 150-300	53							
Two-piece ball valves	PROFIN-VT2	53							
	ECOLINE BLC 1000	53							
Three-piece ball valves	PROFIN-SI3	53							
	PROFIN-VT3	54							
	SISTO-KB	54							
	SISTO-10	54							
	SISTO-10M	54							
	SISTO-16	55							
Soft-seated diaphragm valves to DIN/EN	SISTO-165	55							
	SISTO-16RGA	55							
	SISTO-16TWA/HWA/DLU	55							
	SISTO-20	55							
	SISTO-C	56							
	SISTO-20NA	56							
Diaphragm valves for nuclear applications	SISTO-DrainNA	56							
Feed water bypass valves	ZJSVM/RJSVM	56							
	ECOLINE GE1/GE2/GE3	57							
Expansion and anti-vibration joints	ECOLINE GE4	57							

## **Actuators**

Design/Application	Type series	Page	Water Transport and Treatment	Industry	Energy Conversion	Building Services	Solids Transport	Pharmaceuticals/ Food
Levers	CR/CM	58						
Levers	S/SR/SP	58						
Manual gearbox	MN	58						
Manual gearbox	MR	58						
	ACTELEC (AUMA)	59						
Electric actuators	ACTELEC (BERNARD CONTROLS)	59						
	SISTO-LAE	59						
Hydraulic actuators	HQ	59						
	ACTAIR NG	60						
	DYNACTAIR NG	60						
Pneumatic actuators	SISTO-LAD	60						
	SISTO-LAP	60						
	SISTO-C LAP	61						
Control accessories	RMD	61						

KSB offers a wide range of actuators. Just contact our specialists.

## Automation

Design/Application	Type series	Page	Water Transport and Treatment	Industry	Energy Conversion	Building Services	Solids Transport	Pharmaceuticals/ Food
	AMTROBOX	62						
	AMTROBOX EEx ia	62						
	AMTROBOX ATEX Zone 22	62						
Manitarian	AMTROBOX F	62						
Monitoring	AMTROBOX M	62						
	AMTROBOX R	63						
	AMTROBOX R EEx ia	63						
	AMTROBOX R Ex d	63						
ON/OFF valve controllers	AMTRONIC	63						
	AMTRONIC Ex ia	64						
Desitioners	SMARTRONIC MA	64						
Positioners	SMARTRONIC AS-i	64						
Intelligent positioners	SMARTRONIC PC	65						

		BOA-SuperCompact	BOA-Compact	BOA-Compact EKB	BOA-W		BOA-H	BOA-H/HE/HV/HEV	NORI 40 ZXLBV/ZXSBV	NORI 40 ZXLB/ZXSB	NORI 40 ZYLB/ZYSB	BOACHEM-ZXAB/ZYAB		ECOLINE GLB 150-600	ECOLINE GLB 800		NORI 40 7X1 /7 XS		NORI 40 ZXLF/ZXSF NOBI 160 7VI /7V5	NORI 160 ZAL/ZAS NORI 160 ZXI E/ZXSE	NORI 320 ZXSV	NORI 500 ZXSV	BOACHEM-ZXA	ECOLINE VA16		SICCA 150-600 GLC	SICCA 900-2500 GLC	SICCA 800-4500 GLF	ECOLINE GLC 150-600	ECOLINE GLF 150-600	ECOLINE GLF 800	ECOLINE GLV 150-600				
Abrasive fluids	z				:	z							ш			2	ת								g											_
Waste water with faeces	NE					Ž							ASN			l i X									Ŀ.											
Waste water without faeces	D												ISI//			Da.	2								pa											
Aggressive fluids	Soft-seated globe valves to DIN/EN					Bellows-type globe valves to DIN/EN							Bellows-type globe valves to ANSI/ASME			aland nacking	5								Globe valves to ANSI/ASME with gland packing											
Inorganic fluids	alve					alve							s to				ת								lg i											
Activated sludge	e <					e <							lve:			Globe valves to DIN/EN with									vith											
Brackish water	qol					<u>e</u>							e va			Z									ц											
Service water	d g					e g							obe			NF									<b>SN</b>								$\square$			_
Steam	ate					ťyp							l d												SILP								$\square$			_
Distillate	t-se					-SV							.ype			t v									AN								$\square$			
Explosive fluids	Sof				:	ello							vs-t			a la									5								$\square$			
Digested sludge						ã							l ∮												ves								$\square$			
Solids-laden fluids	1												Be			q	2								val								$\square$			
Solids (ore, sand, gravel, ash)	1															Ľ									be								$\square$			
Flammable fluids	]																								ថ								$\square$			
River, lake and groundwater	]																																$\square$			
Liquefied gas	]																																$\square$			
Fluids containing gas	]																																$\square$			
Gases																1																				
Harmful fluids	1					ĺ										1																				
Toxic fluids	1					ĺ										1																				
High-temperature hot water																																				
Heating water	]																																			
Highly aggressive fluids																																				
Condensate																																				
Corrosive fluids																																				
Valuable fluids																																				
Fuels																																				
Cooling water																																				
Volatile fluids																																				
Fire-fighting water																																				
Solvents																																				
Seawater																																	$\square$			
Fluids containing mineral oils																																	$\square$			
Oils		_																															$\square$	$\square$	$\square$	
Organic fluids		<u> </u>																			_	_	_	_		L							$\square$	$\square$	$\square$	
Polymerising/crystallising fluids		<u> </u>			_									_			L									_							-	$ \rightarrow$	$ \rightarrow$	
Radioactive fluids		<u> </u>																			_	_	_	_									$\square$	$\square$	$\square$	
Cleaning agents		<u> </u>			_									_			_	_			-	_	-	_		_							$\square$	$ \rightarrow$	$ \rightarrow$	
Raw sludge		<u> </u>	$\square$	_	_												_	_		_	_	_	-	-		-		_					$\square$	$ \rightarrow$	$ \rightarrow$	
Lubricants		<u> </u>		-+	_			_			<u> </u>	-		<u> </u>	-		_	_		_	-		-			-					-	-	-	$\rightarrow$	$\rightarrow$	
Grey water		<u> </u>		-+	_			_			<u> </u>	-		<u> </u>	-		_	_		_	-		-	-								-	-	$\rightarrow$	$\rightarrow$	
Brine		<u> </u>		-+	_		_	_	_	_	-	-		<u> </u>	-		-					+	+_	-		-	_		_	-	-	_	-	$\rightarrow$	$\rightarrow$	
Feed water		-	$\square$		_																			-									$\mid \mid$		-+	
Dipping paints		-	$\vdash$		_			_			<u> </u>	-		-	-		-	_	_	_	+-	+	+			-		<u> </u>		-	-	-	$\left  - \right $	-+	-+	
Drinking water		-	$\left  - \right $		_				_	_		-		-	-		-	_	_	_	+-	+	+			╞		<u> </u>		-	-	-	$\left  - \right $	-+	-+	
Vacuum Thermal oils		-	$\left  - \right $	-+	_			-	-					╞			-	-		_	+	+-	+	-		-				-	-	-	$\left  - \right $	$\rightarrow$	$\rightarrow$	
Wash water			$\vdash$		-			-						-	-		-	+	_	_	+	+	+							-	-	-	$\left  - \right $	-	$\dashv$	
vvasn water											L																									

		NUCA/-A/-ES, IJpes I, II, IV		ZXNVB		BOA-H Mat E	BOA-H Mat P		BOA-CVE C/CS/W/IMS/EKB/IMS EKB	BOA-CVE H	BOA-CVP H		BOA-Control /BOA-Control IMS	BOA-Control SAR		CONDA-VLC		CONDA-VRC		CONDA-VSM		<b>BOAVENT-AVF</b>	BOAVENT-SVF	BOAVENT-SIF	BOAVENT-SVA		SISTO-VentNA	SISTO-KRVNA							
Abrasive fluids	su				Z			Z				Z			Z		Z		Z		'es					su									
Waste water with faeces	atio				Ž			DIN/EN				N			DIN/EN		N.		N		valv					atio									
Waste water without faeces	olici																				Air valves					olic				$\square$					
Aggressive fluids	ap			_	globe valves to DIN/EN			Control valves to				valves to DIN/EN			es t		es t		es t							ap						$ \rightarrow$	$\perp$	$\perp$	
Inorganic fluids	ear		_	_	valv			valv				valv			valv		valv		valv				_			ear				$\square$		$\rightarrow$	$\rightarrow$	$\rightarrow$	_
Activated sludge		$\downarrow$		_	þe			ē				Ť			ē		lg		ŋg				$ \rightarrow$	$ \rightarrow$		Juc				$\square$	$ \rightarrow$	$\rightarrow$	$\rightarrow$	$\perp$	
Brackish water	or	$\downarrow$		_	<u> </u>	L		ontr			_	ut-o	_	_	ontr	L_	nci		inii				_			or r				$\square$	$\square$	$\rightarrow$	$\rightarrow$	$\rightarrow$	
Service water	es f		_		ed			Ŭ			므	l sh			S C	<u> </u>	red	-	usta				-+	$\rightarrow$		es f	$ \rightarrow$		$\mid \mid \mid$	$\mid \mid \mid$	$ \rightarrow$	-+	+	$\rightarrow$	_
Steam	Globe valves for nuclear applications				Automated				-			Balancing and shut-off	-		Level control valves to	<u> </u>	Pressure reducing valves to DIN/EN	-	Pressure sustaining valves to DIN/EN					-	_	Vent valves for nuclear applications	$ \rightarrow$		$\mid \mid \mid$	$\vdash$	$\rightarrow$	$\rightarrow$	+	$\rightarrow$	
Distillate	e <	+	_	_	lto	<u> </u>			<u> </u>			ng	_		-	<u> </u>	essi	-	ssur				$\rightarrow$	$\rightarrow$		5	$ \rightarrow$		$\square$	$\square$	$ \rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	
Explosive fluids	105	+	+	_	Ā	<u> </u>			-			anci	-	-		-	4	-	Pre				$\rightarrow$	$\rightarrow$		Ne l	-		$\left  - \right $	$\left  - \right $	$\rightarrow$	$\rightarrow$	+	+	
Digested sludge		+		_		-			-			Bali	-			-	-	-					_	-	_	-	-		$\left  - \right $	$\vdash$		$\dashv$	+	+	_
Solids-laden fluids	-	+		_		-			-				-			-	-	-					_	-	_	-	-		$\left  - \right $	$\vdash$		$\dashv$	+	+	_
Solids (ore, sand, gravel, ash) Flammable fluids	-	+		_					-				-	-		-		-					$\rightarrow$	$\rightarrow$		ŀ	-		$\left  - \right $	$\left  - \right $	$\rightarrow$	+	+	+	
River, lake and groundwater	-	+	-	+-		-	-		-	-			-			-	-						-+	$\rightarrow$		+	-		$\left  - \right $	$\vdash$		+	+	—	_
Liquefied gas	-	+	-	+-		-			-				-			-	-						$\rightarrow$	$\rightarrow$		-	-		$\left  - \right $	$\vdash$		+	+	—	—
Fluids containing gas									-					-		-								$\dashv$		ł	-			$\vdash$		+	+	+	_
Gases	-	-				F			-	Ħ	Ħ		-			-							$\rightarrow$	$\rightarrow$		ŀ	$\neg$	H	$\left  - \right $	$\vdash$		+	+		—
Harmful fluids		-				⊢	-		-	-	-					-								$\dashv$		ł	$\neg$			$\vdash$		+	+	+	—
Toxic fluids													-													ŀ						+	+	-	—
High-temperature hot water		-+-																								ł						+	+	+	—
Heating water		-	_																				$\neg$			ŀ						$\neg$	+	-	_
Highly aggressive fluids		Ť																								Ì						$\neg$	$\neg$		_
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Valuable fluids		T			1										1							Í								$\square$					_
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Cooling water																																			_
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Fire-fighting water																																			_
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Oils		_	_	_	-				_							_		<u> </u>					_						$\square$	$\square$	$ \rightarrow$	$ \rightarrow$	$\downarrow$	$\perp$	
Organic fluids				_		<u> </u>			<u> </u>		$\square$		L_			_	-	_						$ \rightarrow$					$\square$	$\square$	$ \rightarrow$	$\rightarrow$	$\downarrow$	$\perp$	
Polymerising/crystallising fluids	_	_	_	_		-			-	$\square$			_	_		<u> </u>		-						$\rightarrow$	_				$\mid \mid \mid$	$\vdash$	$\rightarrow$	$\rightarrow$	+	$\rightarrow$	
Radioactive fluids						<u> </u>			-				L			-	-	-					_	-		-	$ \rightarrow$		$\square$	$\square$	$ \rightarrow $	$\rightarrow$	+	+	
Cleaning agents	-	+				-	$\vdash$		-	$\vdash$	$\vdash$		-	-		-		-		$\vdash$			$\rightarrow$	+	_		-		$\vdash$	⊢┥	-+	$\rightarrow$	+	+	
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Lubricants	-	+	+		-	-			-				-	-			-										-		$\mid \mid \mid$	$\vdash$	$\rightarrow$	+	+	+	
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Feed water	-	+	+						-				-	-		-		-		$\left  - \right $			-+	+	_		$\neg$		$\left  - \right $	$\vdash$	-+	+	+	+	_
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Vacuum	-	+	+	+-		-			⊢	$\vdash$	$\left  - \right $		F	-		F		F				-			-		$\neg$		$\vdash$	$\vdash$	-+	+	+	+	_
Thermal oils	-	+	+	+					-				-	-		-		-					-+	+			$\neg$	-	$\left  - \right $	$\vdash$	-+	+	+	+	_
Wash water	-	+	+	+-		⊢			-					-		-		-					-+	+	-		$\neg$	$\neg$	$\left  - \right $	$\vdash$	-+	+	+	+	—
wash waler						1										1																			

		COBRA-SGP/SGO/SGF	COBRA-SMP	ECOLINE SP/SO	ECOLINE GT 40	STAAL 40 AKD/AKDS	STAAL 100 AKD/AKDS	AKG-A/AKGS-A	ZTS		ECOLINE GTB 800	ECOLINE GTC 150-600	ECOLINE GTF 150-600	ECOLINE GTF 800	ECOLINE GTV 150-600	SICCA 150-600 GTC	SICCA 900-3600 GTC	SICCA 800-2500 GTF		ZTN		HERA-BD		HERA-BDS	HERA-BHT	HERA-SH		UGS		BOA-RPL	BOA-RFV	BOA-RVK	BOA-R	NORI 40 RXL/RXS	NORI 160 RXL/RXS	
Abrasive fluids	z									щ									SC		z		щ				es		z							
Waste water with faeces	Gate valves to DIN/EN				1					Gate valves to ANSI/ASME									tion		Knife gate valves to DIN/EN		ASN				Body pressure relief valves		DIN/EN							_
Waste water without faeces										SILF									lica				SILF				ef v		D							_
Aggressive fluids	is to									AN									dde		is to		AN				relie		Lift check valves to							_
Inorganic fluids	alve									с									ar a		alve		9			_	rer		alve							
Activated sludge	e v e									ves									Icle		e ve		ves				nssi		s vâ							
Brackish water	Gate									val									nu -		gati		val				pre		loor							_
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Steam				1						Ű									ves		Kni	_	e g				B		E.							
Distillate				$\vdash$	+-	-	-		-		-	-	-	<b>–</b>	Ē	<u> </u>	<u> </u>	Ē	Gate valves for nuclear applications	$\dashv$		-	Knife gate valves to ANSI/ASME			_		-						_		
Explosive fluids				-								-	-		-	-	-	-	ate				Y		-	_				$\vdash$			$\vdash$			
Digested sludge				+	-	-	-	-	-		-	-			-	-	-	-	Ű	—		Ē						-		$\vdash$	$\vdash$	$\vdash$	$\vdash$	F	H	_
Solids-laden fluids				+	-	-	-		_		-	-			-	-	-	-												$\vdash$	$\vdash$	$\vdash$	$\vdash$	$\vdash$	$\vdash$	
Solids (ore, sand, gravel, ash)				$\vdash$	-			$\left  \right $			-	-		-	-	-	-	-		-				-	-	-					$\vdash$	$\vdash$	-		$\vdash$	
Flammable fluids			-	┢	-	-	<u> </u>		_		_	_		-	-	-	-	-				-		-	_	_					$\vdash$	$\vdash$				_
River, lake and groundwater			-	-	-	<u> </u>		$\left  - \right $	_		_	_		<u> </u>	-		-	-						_	_						H	$\vdash$		┍═┙		_
Liquefied gas		_	-	-	-			$\left  - \right $	-		_	_			-		-	-				-		-							$\vdash$	$\vdash$	$\left  - \right $		$\square$	
Fluids containing gas			_	-	-				_											_		_		_		_		_		$\vdash$	$\vdash$	$\vdash$				_
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Gases			_	-	-						-						<u> </u>					_								$\vdash$	$\vdash$		븓		냳	_
Harmful fluids				-	-				_		-	_			_	_		-		_		_		_		_				$\vdash$	$\square$	$\square$	븓			_
Toxic fluids			_	_	-	_	_		_		_	_	_	_	_	_		-				_		_				_			$\vdash$					<u> </u>
High-temperature hot water											_						<u> </u>					_		_												
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Highly aggressive fluids																															$\square$	$\square$		$\vdash$		
Condensate															<u> </u>							_										$\square$				<u> </u>
Corrosive fluids																																				
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Cooling water																																				
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Fluids containing mineral oils																																				
Oils																																				
Organic fluids																																				
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Radioactive fluids																																	$\square$			
Cleaning agents																		Í																		
Raw sludge																		Í																		
Lubricants																																				
Grey water				1																																
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Feed water				1																																_
Dipping paints				1	1													1																		
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		RGS	<b>BOACHEM-RXA</b>		ECOLINE PTF 150-600	ECOLINE PTF 800	SICCA 800-4500 PCF		NUCA/-A/-ES, Type V	RJN	RYN		ECOLINE WT/WTI	STAAL 40 AKK/AKKS	STAAL 100 AKK/AKKS	AKR/AKRS	ZRS	SISTO-RSK/RSKS	SERIE 2000		ECOLINE SCC 150-600	ECOLINE SCF 150-600	ECOLINE SCF 800	ECOLINE SCV 150-600	SICCA 150-600 SCC	SICCA 900-3600 SCC		SISTO-RSKNA	ZRN		COBRA-TDC01/03					
Abrasive fluids	z			끹				ns				z								끹							ns			z						_
Waste water with faeces	Ž			ASN				atio				IN								ASN							atio			Ň						
Waste water without faeces				ISI/				lice				D								ISI/							lici									
Aggressive fluids	-ift check valves to DIN/EN			Lift check valves to ANSI/ASME				Lift check valves for nuclear applications				Swing check valves to DIN/EN								Swing check valves to ANSI/ASME							Swing check valves for nuclear applications			Tilting disc check valves to DIN/EN						
Inorganic fluids	alve			to				ar				alve								t to							ar			alve						_
Activated sludge	×			lve				ncle				×								lve							loc			×						_
Brackish water	hed			Va				r nı				hec								Va							r n			hed						_
Service water	Ę			eck				5 fo				ğ								eck							5 fo			2 C C						_
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Distillate				15				va:				Ś								/ing							va Va			ting						_
Explosive fluids				1				eck												S							eck			Ē						_
Digested sludge				1				t c																			р С									_
Solids-laden fluids				1				E,																			/ing									_
Solids (ore, sand, gravel, ash)	1			1																1							Š									_
Flammable fluids	1			1																1							1									_
River, lake and groundwater	1																			1							1									
Liquefied gas	1			1																1							1									_
Fluids containing gas	1			1														1		1							1									_
Gases	1			1														1		1							1									_
Harmful fluids	1																			1																
Toxic fluids	1																			1																
High-temperature hot water																																				
Heating water																																				
Highly aggressive fluids																																				
Condensate																																				
Corrosive fluids																																				
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Cooling water																																		$\perp$	$ \rightarrow$	
Volatile fluids																																		$\perp$	$ \rightarrow$	
Fire-fighting water																																		$\downarrow$	$\downarrow$	
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Seawater		_	-		_								Ŀ		_		_										-						$\rightarrow$	$\downarrow$	$\rightarrow$	
Fluids containing mineral oils					_										_		_				-			_			-	<u> </u>					$\rightarrow$	$\downarrow$	$\rightarrow$	
Oils					-						_			-	-	_	-	+_	-								-	-			_		$\rightarrow$	$\rightarrow$	$\rightarrow$	
Organic fluids		-	-		-		_				_		<u> </u>	-	-	-	+				-	-	-				-	-			_	$\vdash$	$\rightarrow$	+	$\rightarrow$	
Polymerising/crystallising fluids Radioactive fluids		-			-								-	-	-	-	_	-				-	-				-	-				$ \square$	$\rightarrow$	+	+	
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Cleaning agents			-		-		_				_		-	-	-	-	+-		_		-	-	-				-	-			_	$\vdash$	$\rightarrow$	+	$\rightarrow$	
Raw sludge Lubricants		-	-		-						_		-	-	-	-	-		_		-	-	-				-	-	$\left  - \right $			$\left  - \right $	$\rightarrow$	+	+	
Grey water		-	-		-				—		_		-	-	-	-	-		_			-	-	-	H		-				_	$\vdash$	$\rightarrow$	+	+	—
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Brine Feed water											_		-						+									$\vdash$				$\left  - \right $	$\rightarrow$	+	+	
Dipping paints					F		-		_		_		-						-		F					-		-	$\vdash$			$\vdash$	$\rightarrow$	+	+	
Dipping paints Drinking water			-				_		—		$\neg$		-	-	-	+	+	_			-	-	-	-								$\vdash$	$\rightarrow$	+	+	—
Vacuum		-	-		-		-				-		⊢		-	+	+		-			-	-	-	$\square$			-	$\square$		_		$\rightarrow$	+	+	—
Thermal oils		-			-						-		⊢			+	+	+				-	-					-	$\square$		_		$\rightarrow$	+	+	
Wash water		-	⊢		⊢						-			-		+	+		_		-	-	-	-	Ħ				$\square$		_	$\vdash$	+	+	+	—
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			NORI 40 FSL/FSS	<b>BOACHEM-FSA</b>		Ϋ́	ΥF		13	п.		'16	25	Ы	MAMMOUTH			<b>APORIS-DEB02</b>	0	Ē	3TII		00	8	8											
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Abrasive fluids	7	-	-	-	ш	-		s	-					-	- 		S	`	-	-		s			-	s	Ŭ		-							—
Waste water with faeces	DIN/EN				Strainers to ANSI/ASME	-		Centred-disc butterfly valves				-	-	$\vdash$		-	Double-offset butterfly valves					<b>Triple-offset butterfly valves</b>	_		_	ion		alve	-					+	+	—
Waste water without faeces					SIVA			y và						$\vdash$	+	-	y vâ					y va			_	icat		k vä	-					+	+	—
Aggressive fluids	Strainers to				AN			erfl						╞			erfl					erfl				ldde		hec						+	+	_
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Service water					م			tre									ble-					ple-				is fo		per								
Steam								Cer									luo					Trij				alve		nbir					$ \rightarrow$	$\perp$	$\perp$	
Distillate		L_	_	_										_	-											Butterfly valves for nuclear applications		Combined butterfly/check valves	_	$\square$	$ \models \downarrow $		$\rightarrow$	$\rightarrow$	+	_
Explosive fluids	-		-			_			<u> </u>				_	_	-											terf							$\rightarrow$	$\rightarrow$	_	
Digested sludge				_								_		-	-	-			_	_					_	Butt							$\rightarrow$	+	_	_
Solids-laden fluids Solids (ore, sand, gravel, ash)		-		-		-				_		-		$\vdash$	-				-	-				E	Η				-				$\rightarrow$	+	+	_
Flammable fluids						-			<u> </u>	-	<u> </u>	-	-	┢	+										Ξ				-		$\square$		$\rightarrow$	+	-	—
River, lake and groundwater		-	-	-	-	⊢			-					┢					-	-					-				-	$\left  - \right $				+	+	—
Liquefied gas			-	-		-			-			-	-	┢	+-	+		-															$\rightarrow$	+	+	
Fluids containing gas									-					$\vdash$	┢	1					_				_								$\neg$	+	+	_
Gases														$\square$																				+		_
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Toxic fluids																																				
High-temperature hot water																																				
Heating water																															$\square$		$\square$	$\perp$	$\perp$	
Highly aggressive fluids		_			-																										$ \vdash $		$\rightarrow$	$\rightarrow$	$\rightarrow$	
Condensate						L								_	_									_	_				_		$ \parallel$		$ \rightarrow $	$\rightarrow$	+	
Corrosive fluids		Ŀ			-	-								-	-																		$\rightarrow$	$\rightarrow$	+	
Valuable fluids						-							-	$\vdash$	-										_								$\rightarrow$	+	+	
Fuels Cooling water			-	-	-	⊢								$\vdash$					-	-					-				-		$\square$		$\rightarrow$	+	+	—
Volatile fluids					-	⊢			-	-	-		-	$\vdash$	-			-						П					-	$\square$				+	+	
Fire-fighting water		-	-	-		⊢			-						$\vdash$	-			-	-					-									+	+	
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Oils																																				_
Organic fluids																																	$ \rightarrow$			
Polymerising/crystallising fluids																															$ \square$		$ \rightarrow$	$\rightarrow$	$\perp$	
Radioactive fluids	-	_	_	_		<u> </u>								_																			$\rightarrow$	$\rightarrow$	-	
Cleaning agents		-	-	-		-							-	-	-										_				_	$\left  - \right $	$ \rightarrow$		$\rightarrow$	-+	-+	_
Raw sludge		-	-	-		-				-	-	-	-	-	-	-				-	$\vdash$		$\vdash$	$\mid$	_				<u> </u>	$\left  - \right $	$ \square$	$\dashv$	$\rightarrow$	+	+	_
Grey water		-	-	-		-	$\left  - \right $		<u> </u>	-	-		-	$\vdash$	$\vdash$	-				-	$\vdash$		$\vdash$	$\vdash$	_					$\left  - \right $	-	$\neg$	$\rightarrow$	+	+	—
Brine		-	-	-		-			-	-	-		-	$\vdash$	$\vdash$					-	$\vdash$		$\vdash$	$\vdash$	_					$\left  - \right $	$ \rightarrow$	$\rightarrow$	$\rightarrow$	+	+	—
Feed water									-	-	-		-	-	-	-				-	$\vdash$		$\vdash$	$\vdash$	-				-	$\vdash$	$ \rightarrow$	$\neg$	$\rightarrow$	+	+	—
Dipping paints		F	-	-		F			-				-	$\vdash$	+	+		-					$\square$	$\vdash$	-					$\left  - \right $	$ \rightarrow$	$\neg$	$\rightarrow$	+	+	_
Drinking water														1		1														$\square$		$\neg$	$\neg$	+	+	_
Vacuum														1																				$\neg$		_
Thermal oils																																				_
Wash water																																				

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		MP-CI/MP-II	PROFIN-VT1		8	PROFIN-VT2		8	<b>PROFIN-SI3</b>	PROFIN-VT3		8	0	SISTO-10M	6	SISTO-16S	Ŝ.	Ē	0			SISTO-20NA	.a	Ĕ	3	G								
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Abrasive fluids	es			es			es				z										ns			es	ts									
Waste water with faeces	≥			<b>Two-piece ball valves</b>			Three-piece ball valves				Ĭ										E.			bypass valves	j.									
Waste water without faeces	2		1	2		<u> </u>	2														.e	-		2	 					+		-	+-	+
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Aggressive fluids	e l			e.			e				S										ap			2	rat									
Inorganic fluids	ie.			ie.			ie				al<										ar				li						i			
Activated sludge	d		1	d -			d				Š										U-B	- i		water	÷-									
Brackish water	Ъ		-	Š	-	<u> </u>	re				۵u							-		-	n n			Š –	an		+-			+			+-	
	Single-piece ball valves				_	_	는				Ira		-		_	_					5	$\rightarrow$	_	Feed	2		_			+	$\vdash$	+	+	
Service water											p										s f				a									
Steam											dia										ve N	Т			L O						ΙT			
Distillate			1		-	<u> </u>					D										val	$\dashv$			Expansion and anti-vibration joints		1	1	+	+		+	+	1
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Explosive fluids		L	-								Soft-seated diaphragm valves to DIN/EN								_		Diaphragm valves for nuclear applications	$ \downarrow$			ы	-	_	_	_	$\vdash$	$\vdash$	$\perp$	$\perp$	
Digested sludge											ŧ										F													
Solids-laden fluids			1	1							SC										iap													
Solids (ore, sand, gravel, ash)		-	-		-								-		_		<u> </u>	-	-				_		-		+-	+	+	+			+-	-
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Flammable fluids																																		
River, lake and groundwater																																		
Liquefied gas			1												_													1	+				-	1
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Fluids containing gas																									_		_	_		$\square$	$\square$	$\perp$	$\perp$	
Gases																																		
Harmful fluids			1																															
Toxic fluids			1			-			_								<u> </u>	-							-		+-	+		+			+	-
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High-temperature hot water																																		
Heating water																																		
Highly aggressive fluids			1												_												+	+	+			-	-	<u> </u>
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Condensate																									_							$\rightarrow$	$\rightarrow$	<u> </u>
Corrosive fluids																															i			
Valuable fluids			1																															
Fuels												-						-							-		+-	+	+	+		+	+-	+
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Cooling water																																		
Volatile fluids																																		
Fire-fighting water															_										-		+		+	+		+	+	+
		-	-		<u> </u>	-							_		_							-	_		-	-	+-	_		+	$\vdash$	+	+	
Solvents																																		
Seawater																															i			
Fluids containing mineral oils			1	1																		Ť												<u> </u>
Oils												-					<u> </u>	-				+	-			H	·	+-	+	+		+	+	+
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Organic fluids																																		
Polymerising/crystallising fluids																															i			
Radioactive fluids			1																								1					-	-	1
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Cleaning agents										_												_			_		_			$\vdash$		$\rightarrow$		
Raw sludge																																		
Lubricants				-																										$\square$				
Grey water			1		-								-									+							+				+	+
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Brine																														$\downarrow$	$\vdash$		_	<u> </u>
Feed water														]	]				1															
Dipping paints			1			i –												1				$\uparrow$					1	1	1			-	1	1
Drinking water													-	$\vdash$	-				-			+	-						+-	+	$\vdash$	+	+	+
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Vacuum																																		
Thermal oils																			1			T	1											
Wash water																		1	1			$\neg$					1	1	1	+		+	+	$\square$
wash water		-	_									-	_		-				1							1								

Spray irrigation	N BOA-SuperCompact	BOA-Compact	BOA-Compact EKB	BOA-W	7	BOA-H	BOA-H/HE/HV/HEV	NORI 40 ZXLBV/ZXSBV	NORI 40 ZXLB/ZXSB	NORI 40 ZYLB/ZYSB	BOACHEM-ZXAB/ZYAB	ш	ECOLINE GLB 150-600	ECOLINE GLB 800	D	NORI 40 ZXL/ZXS	NORI 40 ZXLF/ZXSF	NORI 160 ZXL/ZXS	NORI 160 ZXLF/ZXSF	NORI 320 ZXSV	NORI 500 ZXSV	<b>BOACHEM-ZXA</b>	ECOLINE VA16	0	SICCA 150-600 GLC	SICCA 900-2500 GLC	SICCA 800-4500 GLF	ECOLINE GLC 150-600	ECOLINE GLF 150-600	ECOLINE GLF 800	ECOLINE GLV 150-600				
Mining	Soft-seated globe valves to DIN/EN	┢	-	-	Bellows-type globe valves to DIN/EN							globe valves to ANSI/ASME	┢		packing								-	king	┢					H	-	$\left  \right $		$\neg$	
Irrigation		┢	1		D							SI/A			pac				_					pad										$\neg$	—
Chemical industry	es to		1		es to							AN			gland									and											
Pressure boosting	alve				alve							s to			lg (									lg (											
Disposal	> e <				oe v							alve			with									vith											
Drainage					glok							e võ			Š									√E ∕						$\square$				$ \rightarrow$	
Descaling units	eq		_		be							lob			DIN/EN									ASN							$\vdash$			$ \rightarrow$	
District heating	eat	_	_	-	s-ty									<u> </u>	<u>с</u>	<u> </u>								NSI/	_					$\square$	<u> </u>		$ \rightarrow$	$\rightarrow$	
Solids transport	-L-s	-	-	-	No						_	-typ	-		/es 1									o Al	_					$\square$	-		$ \rightarrow $	$\rightarrow$	
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Gas pipelines Gas storage facilities		+	+				_				-	Bellows-type	-	-	obe valves to	<u> </u>		$\left  - \right $		$\vdash$	-	$\vdash$	-	Globe valves to ANSI/ASME with gland packing			<u> </u>	-	-	$\vdash$	-	$\left  - \right $	$\rightarrow$	$\rightarrow$	
Maintaining groundwater levels			+	-							-		-	-	ы	<u> </u>	<u> </u>				-		-	oe <		<u> </u>	<u> </u>	-		$\vdash$	-	$\left  - \right $		$\rightarrow$	—
Domestic water supply		+		-			_				-		-	-		<u> </u>					-			GloI	-				-	$\vdash$	$\vdash$	$\vdash$	$\rightarrow$	$\rightarrow$	—
HVAC systems																							-	-	⊢		-				-			$\neg$	—
Homogenisation			1																															$\neg$	
Industrial recirculation systems			1																																_
Nuclear power stations																																			
Boiler feed applications																																			
Boiler recirculation																																			
Waste water treatment plants																																			
Air-conditioning systems																																	$\square$	$\square$	
Condensate transport		_	_	_															_		_						_				L		$ \rightarrow $	$\dashv$	
Fossil-fuelled power stations		_	+_								<u> </u>		-	<u> </u>						-	-		_		⊢								$ \rightarrow $	$\dashv$	
Cooling circuits Paint shops		-		-									⊢												-					$\vdash$	-	$\left  \right $	-	$\dashv$	
Food and beverage industry		+	+	-			-									<u> </u>							_		┝					$\vdash$	-	$\vdash$	$\rightarrow$	$\dashv$	—
Seawater desalination / reverse osmosis		+	+	-							-		F	-											-					$\vdash$	-	$\left  \right $		-+	
Mixing		+	+	+																	-				-						-			$\rightarrow$	
Paper and pulp industry		1	+	1																											-			$\neg$	
Petrochemical industry			1	1																															_
Pharmaceutical industry			Ť																																
Pipelines and tank farms																																			
Refineries																																			
Flue gas desulphurisation																																			
Rainwater harvesting				-																$\square$		$\square$								$\square$	L	$\square$	$\square$		
Recirculation		_					_						_			L	_		_						_					$\square$	L_	$\square$	$ \rightarrow$	$ \rightarrow$	
Shipbuilding		-	-	-									-												<u> </u>					$\vdash$	-	$\left  - \right $	$\rightarrow$	$\rightarrow$	
Sludge disposal		+	-								-		-			<u> </u>		$\left  - \right $		$\vdash$	-	$\mid$	-		<u> </u>		<u> </u>	-	-	$\vdash$	-	$\left  - \right $	$\rightarrow$	$\dashv$	
Sludge processing Snow-making systems		+	+								-		-	-		-				$\vdash$	-	$\vdash$	-			<u> </u>		-	-	$\vdash$	-	$\vdash$	$\rightarrow$	$\rightarrow$	—
Swimming pools		+	+								-		-	-						$\vdash$	-	$\vdash$	-		-			-	-	$\vdash$	-	$\left  - \right $	-+	$\rightarrow$	—
Keeping in suspension		+	+	-							-			-		-	-				-	$\vdash$	-			-	-	-	-		-	$\vdash$	$\dashv$	$\rightarrow$	—
Thermal oil circulation		┢	1	1												-																	$\neg$	╡	_
Process engineering		1	1																														$\neg$	$\neg$	
Heat recovery systems			_																																_
Hot-water heating systems																																			_
Washing plants																														Ц		$\square$	$\square$		_
Water treatment				_																										$\square$		$\square$		$ \downarrow$	
Water extraction		-	-										_	<u> </u>		<u> </u>									_					$\vdash$	<u> </u>	$\square$	$ \rightarrow$	$\downarrow$	
Water supply		+		-						_			ŀ			╞									<u> </u>					$\vdash$	-	$\left  - \right $	$ \rightarrow $	$\neg$	
Sugar industry																																			

		NUCA/-A/-ES, Types I, II, IV	ZYNB/ZYN	ZXNB	ZXNVB		BOA-H Mat E	BOA-H Mat P		BOA-CVE C/CS/W/IMS/EKB/IMS EKB	BOA-CVE H	BOA-CVP H		BOA-Control /BOA-Control IMS	BOA-Control SAR		CONDA-VLC			CONDA-VNC	CONDA-VSM		BOAVENT-AVF	BOAVENT-SVF	BOAVENT-SIF	BOAVENT-SVA		SISTO-VentNA	SISTO-KRVNA							
Spray irrigation	S	-					_	_	z	-	<u> </u>	<u> </u>	z	-	<u> </u>										_	<u> </u>	SC							Τ		_
Mining	tior					globe valves to DIN/EN	_		DIN/EN				DIN/EN			DIN/EN		N/E		NI/E		Air valves					tior							-		_
Irrigation	olica					D			DO				DO			D 0						Air v					olica									_
Chemical industry	app					es ti			Control valves to				es to			valves to		es to	5_		5	4					app									
Pressure boosting	ear					/alv			/alv	_			/alv			/alv		/alv	2	1	<u> </u>						ear				$\square$		$\downarrow$	$\perp$	$\perp$	
Disposal	Juc		<u> </u>			be \			-j	_			Et /	_		5	L		_م		<u> </u>		L				Incl				$\square$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\perp$	
Drainage	or r		_		_	glo			ont	-		_	ut-	-		control	┝	luci			_	_	⊢			<u> </u>	or r				$\vdash$	$\rightarrow$	$\rightarrow$	$\rightarrow$	-+	
Descaling units District heating	es f	-	-		_	ted			Ŭ	-		-	d sh	-	-	e C	┝	rec	-	- +		_	⊢	-			es f			$\left  - \right $	$\left  - \right $	$\rightarrow$	$\rightarrow$	+	_	
Solids transport	valv		-		_	ma				-		-	ano	-	-	Level	┝	sure			-	-	⊢	-		-	valv		$\vdash$	$\left  - \right $	$\vdash$	$\rightarrow$	+	+	+	
Fire-fighting systems	Globe valves for nuclear applications	-	-	$\left  \right $	-	Automated	-			-	-	-	Balancing and shut-off valves to	-	-		┢	Pressure reducing valves to DIN/FN	2	Procentra enertaining valvaet to DIN/EN				$\vdash$	-	-	Vent valves for nuclear applications	$\vdash$	$\vdash$	⊢┤	$\vdash$	$\dashv$	+	+	+	
Gas pipelines	B					◄				-			land				F			à							ž			$\square$		$\neg$	+	+	+	
Gas storage facilities													Ba																					1		
Maintaining groundwater levels																]																				
Domestic water supply																						L														
HVAC systems																						_											$\square$	$\perp$	$\perp$	
Homogenisation			_		_					<u> </u>		<u> </u>					┝					_	_			<u> </u>					$\left  - \right $	$\rightarrow$	$\rightarrow$	$\rightarrow$	_	
Industrial recirculation systems			_		_					-		_		-			-	-		_		-	-			<u> </u>				-	$\left  - \right $	$\rightarrow$	$\rightarrow$	+	-+	
Nuclear power stations Boiler feed applications					-					-				-			┝	-	┢	_		-	-			<u> </u>			┝┻┙	$\left  - \right $	$\vdash$	$\rightarrow$	$\rightarrow$	+	+	
Boiler recirculation			-		-									-	$\vdash$		┢	-				-				-				$\left  - \right $	$\vdash$	$\rightarrow$	$\rightarrow$	+	+	
Waste water treatment plants			-				-	-			-	-					┢									<u> </u>				$\left  - \right $		$\neg$	-	+	-	
Air-conditioning systems																																$\neg$	+	+	-	
Condensate transport																																				
Fossil-fuelled power stations																																				
Cooling circuits																		_		_		_	_									_	$ \rightarrow$		$\square$	
Paint shops			_		_					<u> </u>							L	_		_	_	_	_								$\square$	$\rightarrow$	$\rightarrow$	-		
Food and beverage industry			-		_		_			_				_		-	┝	_		_	_	_	-								$\left  - \right $	_	$\rightarrow$		_	
Seawater desalination / reverse osmosis Mixing			-		_					-	-	-					-	-	-	_	-	-	-	-		-		$\vdash$		$\mid \mid \mid$	$\vdash$	$\rightarrow$	$\rightarrow$	+	_	
Paper and pulp industry			-		-		_			-		-			-		⊢	-		-		-		-		-		$\vdash$		$\left  - \right $	$\vdash$	$\rightarrow$	-	+	+	
Petrochemical industry			-				_					-		-			F					-			-	-						$\rightarrow$	-	+	+	
Pharmaceutical industry							_															-				<u> </u>						$\neg$	-	+	+	_
Pipelines and tank farms																																		+		
Refineries																																				_
Flue gas desulphurisation				$  \_ [$																									$\square$	$\square$	Ш			$\downarrow$		
Rainwater harvesting			<u> </u>							_				_		-						_									$\square$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	
Recirculation					_							-		-		-	┝	-		_		_								$\square$	$\vdash$	$\rightarrow$	$\rightarrow$	$\rightarrow$	-	
Shipbuilding Sludge disposal		-	-	$\left  - \right $	_					-	-	-		-	-		-	-		-	-	-	-	-		-		$\vdash$	<u> </u>	$\mid \mid \mid$	$\vdash$	$\rightarrow$	$\rightarrow$	+	-+	
Sludge disposal		-	-		-					-		-		-	-		┝	-		-		-		-				$\vdash$	$\vdash$	┝─┤	$\vdash$	$\rightarrow$	$\rightarrow$	+	+	
Snow-making systems			-							-		-		-	-		⊢	-	┢			-	⊢		-			$\vdash$		$\left  - \right $	$\left  - \right $	$\rightarrow$	-	+	-	
Swimming pools							-				-						┢	-														-	+	+	-	
Keeping in suspension																																$\neg$		+	-	_
Thermal oil circulation																																				
Process engineering																																				_
Heat recovery systems																																				
Hot-water heating systems																																	$\square$	$\square$	$\square$	
Washing plants		_								_				<u> </u>							_		_	-				$\square$	$\left  - \right $	$\square$	$\mid \mid \mid$	$ \rightarrow$	$\rightarrow$	$\downarrow$	$\perp$	
Water treatment		<u> </u>	-							-		-		-	-			4										$\vdash$	$\vdash$	$\square$	$\left  - \right $	$\rightarrow$	$\rightarrow$	$\rightarrow$	-+	
Water extraction		<u> </u>	-		_					╞	-	<u> </u>		╞	-		╞						╞					$\vdash$	<u> </u>	$\left  - \right $	⊢┤	$\rightarrow$	$\rightarrow$	+	+	
Water supply Sugar industry		<u> </u>	-		_									-	-		L				-	4	-					$\vdash$	$\vdash$	$\left  - \right $	$\vdash$	$\dashv$	+	+	+	
Sugar mulstry																										1										

		COBRA-SGP/SGO/SGF	COBRA-SMP	ECOLINE SP/SO	ECOLINE GT 40	STAAL 40 AKD/AKDS	STAAL 100 AKD/AKDS	AKG-A/AKGS-A	ZTS		ECOLINE GTB 800	ECOLINE GTC 150-600	ECOLINE GTF 150-600	ECOLINE GTF 800	ECOLINE GTV 150-600	SICCA 150-600 GTC	SICCA 900-3600 GTC	SICCA 800-2500 GTF		ZTN	HFRA-BD		HERA-BDS	HERA-BHT	HERA-SH		UGS		BOA-RPL	BOA-RFV	BOA-RVK	BOA-R	NORI 40 RXL/RXS	NORI 160 RXL/RXS
Spray irrigation	Z U									ME									Suc	_		H				ves		N.						L
Mining	Gate valves to DIN/EN	_	_						-	Gate valves to ANSI/ASME	<u> </u>		-	-				_	atic	_	Knite gate valves to DINEN	AS		-	-	Body pressure relief valves	-	Lift check valves to DIN/EN		$\square$	-			
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## Soft-seated globe valves to DIN/EN

## **BOA-SuperCompact**

	<ul> <li>Description</li> <li>Globe valve to DIN/EN with wafer-type body, super-compact DN face-to-face</li> <li>length to EN 558/94, slanted seat design with vertical bonnet, with flange</li> <li>alignment holes for centring, dead-end service and downstream dismantling;</li> <li>single-piece body, insulating cap with anti-condensation feature as standard,</li> <li>position indicator, locking device, travel stop, soft main and back seat;</li> <li>maintenance-free, full insulation possible.</li> <li>Applications</li> <li>Hot-water heating systems up to 120 °C. Air-conditioning systems. Not suitable for</li> <li>fluids containing mineral oils, steam or fluids liable to attack EPDM and grey cast</li> <li>iron. Other fluids on request.</li> </ul>	
<mark>e</mark> m, e	http://shop.ksb.com/catalog/k0/en/product/ES000312	

## **BOA-Compact**

	<ul> <li>Description</li> <li>Globe valve to DIN/EN with flanged ends, short face-to-face length to EN 558/14, slanted seat design with vertical bonnet, single-piece body, EPDM-encapsulated throttling plug, soft main and back seat, position indicator, locking device, travel stop, insulating cap with anti-condensation feature; maintenance-free, full insulation possible.</li> <li>Applications</li> <li>Hot-water heating systems up to 120 °C. Air-conditioning systems. Not suitable for fluids containing mineral oils, steam or fluids liable to attack EPDM and cast iron. Other fluids on request.</li> </ul>	
<mark>e</mark> m, e	http://shop.ksb.com/catalog/k0/en/product/ES000310	

## **BOA-Compact EKB**

(Å	PN DN T [°C]	10/16 15 - 200 ≥ -10 - ≤ +80	Globe valve to DIN/EN with flanged ends, compact face-to-face length for drinking	
📕 m, e			http://shop.ksb.com/catalog/k0/en/product/ES000311	

#### **BOA-W**

	PN DN T [°C] ≥ -10	15 - 200 0 - ≤ +120	Description Globe valve to DIN/EN with flanged ends, standard face-to-face length to EN 558/1, slanted seat design with vertical bonnet, single-piece body, EPDM-encapsulated throttling plug, soft main and back seat, position indicator, locking device, travel stop, insulating cap with anti-condensation feature; maintenance-free; full insulation possible. Applications Hot-water heating systems up to 120 °C. Air-conditioning systems. Not suitable for fluids containing mineral oils, steam or fluids liable to attack EPDM and grey cast iron. Other fluids on request.	
<b>—</b> m, e			http://shop.ksb.com/catalog/k0/en/product/ES000309	

## **Bellows-type globe valves to DIN/EN**

#### **BOA-H**

	<ul> <li>5 Description</li> <li>Bellows-type globe valve to DIN/EN with flanged ends, with on/off disc or throttling plug, standard position indicator with colour coding for identification of valve design, replaceable valve disc; bellows protected when valve is in fully open position; seat/disc interface made of wear and corrosion resistant chrome steel or chrome nickel steel.</li> <li>Applications</li> <li>Hot-water heating systems, high-temperature hot water systems, cooling circuits, heat transfer systems, general steam applications in building services and industry. Other fluids on request.</li> </ul>
<mark>e</mark> m	http://shop.ksb.com/catalog/k0/en/product/ES000328

#### **BOA-H/HE/HV/HEV**

j.	PN DN T [°C]	10 - 350	<b>Description</b> Bellows-type globe valve to DIN/EN with flanged ends (BOA-H and BOA-HV), butt weld ends or socket weld ends (BOA-HE and BOA-HEV), with on/off disc or throttling plug, seat/disc interface made of wear and corrosion resistant chrome steel or chrome nickel steel. <b>Applications</b> Industrial plants, building services, power stations and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.	
<mark>e</mark> m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000329	

## NORI 40 ZXLBV/ZXSBV

ĀĀ	DN 10 - 200	Description         Bellows-type globe valve to DIN/EN with flanged ends (ZXLBV), butt weld ends or socket weld ends (ZXSBV), tapered on/off disc or throttling plug, two-piece stem, integrated position indicator, seat/disc interface made of wear and corrosion resistant chrome steel or chrome nickel steel.         Applications         Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.
<mark>, ●</mark> m		http://shop.ksb.com/catalog/k0/en/product/ES000334

#### NORI 40 ZXLB/ZXSB

Ā	<ul> <li>Description         <ul> <li>Bellows-type globe valve to DIN/EN with flanged ends (ZXLB), butt weld ends or socket weld ends (ZXSB), tapered on/off disc or throttling plug, two-piece stem, integrated position indicator, seat/disc interface made of wear and corrosion resistant chrome steel or chrome nickel steel.</li> </ul> </li> <li>Applications         <ul> <li>Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.</li> </ul> </li> </ul>
<mark>e</mark> m, e, p	http://shop.ksb.com/catalog/k0/en/product/ES000332

## NORI 40 ZYLB/ZYSB

	PN DN T [°C]	15 - 300 ≥ -10 - ≤ +450	Description Bellows-type globe valve to DIN/EN with flanged ends (ZYLB) or butt weld ends (ZYSB), Y-valve, with replaceable throttling plug (up to DN 100) or on/off disc (DN 125 and above), single-piece non-rotating stem, position indicator, travel stop, locking device; seat/disc interface made of wear and corrosion resistant chrome steel or chrome nickel steel. Applications Heat transfer systems, industrial plants, building services and shipbuilding. For thermal oils, water, steam, gas and other non-aggressive fluids. Other fluids on request.
<b>m</b>			http://shop.ksb.com/catalog/k0/en/product/ES000521

## **BOACHEM-ZXAB/ZYAB**

	PN DN T [°C]	15 - 400	<b>Description</b> Bellows-type globe valve to DIN/EN with flanged ends, body made of stainless steel, with replaceable on/off disc or throttling plug. <b>Applications</b> Process engineering, industry, building services, food and beverage industries, for aggressive fluids. Other fluids on request.	
<b>—</b> m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000337	

## Bellows-type globe valves to ANSI/ASME

#### ECOLINE GLB 150-600

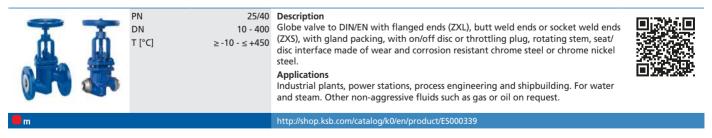
121	Class NPS [inch] T [°C]	2 - 12	Description Globe valve to ANSI/ASME with flanged ends, cast steel/stainless steel body, trim and bellows made of stainless steel, with bolted bonnet, outside screw and yoke, sealed by graphite gland packing and metal bellows, stainless steel/graphite gaskets. Applications Petrochemical plants, chemical plants, power stations, process engineering and general industrial applications; for thermal oil, steam, toxic and volatile fluids. Other fluids on request.	
<mark>e</mark> m, e			http://shop.ksb.com/catalog/k0/en/product/ES000901	

#### **ECOLINE GLB 800**

	Class NPS [inch] T [°C]	1/2 - 2	Description Globe valve to ANSI/ASME with threaded sockets (NPT) or socket weld ends (SW), cast steel/stainless steel body, trim and bellows made of stainless steel, outside screw and yoke, sealed by graphite gland packing and metal bellows, stainless steel/graphite gaskets. Applications Petrochemical plants, chemical plants, power stations, process engineering and general industrial applications; for thermal oil, steam, toxic and volatile fluids. Other fluids on request.	
🛑 m, e			http://shop.ksb.com/catalog/k0/en/product/ES000902	

## Globe valves to DIN/EN with gland packing

## NORI 40 ZXL/ZXS



Valves

#### NORI 40 ZXLF/ZXSF

	PN DN T [°C]	10 - 200	<b>Description</b> Globe valve to DIN/EN with flanged ends (ZXLF), butt weld ends or socket weld ends (ZXSF), with gland packing, with on/off disc or throttling plug, non-rotating stem, integrated position indicator, seat/disc interface made of wear and corrosion resistant chrome steel or chrome nickel steel. <b>Applications</b> Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.	
<mark>e</mark> m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000341	

#### NORI 160 ZXL/ZXS

1 I I I I I I I I I I I I I I I I I I I	DN 10 - 200	Description Globe valve to DIN/EN with flanged ends (ZXL), butt weld ends or socket weld ends (ZXS), with gland packing, with on/off disc or throttling plug, rotating stem, seat/ disc interface made of wear and corrosion resistant 17 % chrome steel or Stellite. Applications Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.
m		http://shop.ksb.com/catalog/k0/en/product/ES000343

## NORI 160 ZXLF/ZXSF

	PN DN T [°C]	10 - 200	Description Globe valve to DIN/EN with flanged ends (ZXLF), butt weld ends or socket weld ends (ZXSF), with gland packing, with on/off disc or throttling plug, non-rotating stem, integrated position indicator, seat/disc interface made of wear and corrosion resistant 17 % chrome steel or Stellite. Applications Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.	
<b>—</b> m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000345	

#### NORI 320 ZXSV

	PN DN T [°C]	10 - 50	<ul> <li>Description</li> <li>Globe valve to DIN/EN with flanged, butt weld or socket weld ends, gland packing, throttling plug, non-rotating stem, bayonet-type body/yoke connection, integrated position indicator, seat/disc interface made of Stellite.</li> <li>Applications</li> <li>Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.</li> </ul>	
<b>m</b> , e, p			http://shop.ksb.com/catalog/k0/en/product/ES000347	

#### NORI 500 ZXSV

	PN DN T [°C]	10 - 65	<ul> <li>Description</li> <li>Globe valve to DIN/EN with butt weld or socket weld ends, gland packing, throttling plug, non-rotating stem, bayonet-type body/yoke connection, integrated position indicator, seat/disc interface made of Stellite.</li> <li>Applications</li> <li>Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.</li> </ul>	
<mark>e</mark> m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000350	

## **BOACHEM-ZXA**

	DN 15 - 400	<ul> <li>Description</li> <li>Globe valve to DIN/EN with flanged ends, body made of stainless steel, gland packing, rotating stem, with on/off disc or throttling plug.</li> <li>Applications</li> <li>Process engineering, industry, building services, food and beverage industries, for aggressive fluids. Other fluids on request.</li> </ul>
m		http://shop.ksb.com/catalog/k0/en/product/ES000354

### **ECOLINE VA16**

	PN DN T [°C]	15 - 250	<b>Description</b> Globe valve to DIN/EN with flanged ends, body made of cast iron, with gland packing, rotating stem, with on/off disc or throttling plug. <b>Applications</b> District heating, domestic water supply, air-conditioning systems, cooling circuits, high-temperature hot water heating systems, water supply.
<b>— — — — — — — — — —</b>			

## Globe valves to ANSI/ASME with gland packing

## ECOLINE GLC 150-600

	<ul> <li>Description</li> <li>Globe valve to ANSI/ASME with flanged ends, cast steel A216 WCB, Trim 8</li> <li>(Stellite/13 % chrome steel) for Class 150/300/600, Trim 5 (Stellite/Stellite) for</li> <li>Class 600, with bolted bonnet, outside screw and yoke, graphite gland packing, stainless steel/graphite gaskets.</li> <li>Applications</li> <li>Refineries, power stations, process engineering and general industrial applications; water, steam, oil, gas. Other fluids on request.</li> </ul>	
🛑 m, e	http://shop.ksb.com/catalog/k0/en/product/ES000775	

#### ECOLINE GLF 150-600

No.	NPS [inch]	½ - 2 - ≤ +816	Description Globe valve to ANSI/ASME with flanged ends, forged steel A105, Trim 8 (Stellite/13 % chrome steel), with bolted bonnet, outside screw and yoke, graphite gland packing, stainless steel/graphite gaskets, reduced bore. Applications Industrial plants, power stations, process engineering, refineries, oil and marine applications; for water, steam, gas, oil and other non-aggressive fluids.	
📕 m, e			http://shop.ksb.com/catalog/k0/en/product/ES000426	

## **ECOLINE GLF 800**

Ĩ	Class NPS [inch] T [°C]	1/2 - 2	Description Globe valve to ANSI/ASME with threaded sockets (NPT), butt weld ends (BW) or socket weld ends (SW), Trim 8 (Stellite/13 % chrome steel), with bolted bonnet, outside screw and yoke, graphite gland packing, stainless steel/graphite gaskets, available in carbon steel and alloy steel. Applications Industrial plants, power stations, process engineering, refineries, oil and marine applications; for water, steam, gas, oil and other non-aggressive fluids.	
<mark>e</mark> m, e			http://shop.ksb.com/catalog/k0/en/product/ES000796	

Valves

## ECOLINE GLV 150-600

	Description Globe valve to ANSI/ASME with flanged ends, cast steel A351 CF8/CF8M, Trim 2 (304/304) and Trim 10 (316/316) for Class 150/300, with bolted bonnet, outside screw and yoke, integral seat, graphite gland packing, stainless steel / graphite gaskets. Applications Fine chemicals, food industry, general industry. For water, steam, gas and other fluids. Other fluids on request.
🛑 m, e	http://shop.ksb.com/catalog/k0/en/product/ES000584

## SICCA 150-600 GLC

ACIED	<ul> <li>Description</li> <li>Globe valve to ANSI/ASME with flanged or butt weld ends, bolted bonnet, outside screw and yoke. Rotating rising stem, Stellite hard-faced seat/disc interface made of 13 % chrome steel, with graphite gasket and gland packing, available in carbon steel, low-alloy steel and stainless steel.</li> <li>Applications</li> <li>Refineries, power stations, general industry and process engineering. For water, steam, oil, gas and non-aggressive fluids. Other fluids on request.</li> </ul>
	http://shop.ksb.com/catalog/k0/en/product/ES000484

## SICCA 900-2500 GLC

	Class NPS [inch] T [°C]	2 - 8	<ul> <li>Description</li> <li>Globe valve to ANSI/ASME with butt weld ends, Y-pattern, pressure seal design, outside screw and yoke, rising stem and non-rising handwheel, Stellite hard-faced seat/disc interface and back seat, with graphite gasket and gland packing.</li> <li>Available in carbon steel and alloy steel.</li> <li>Applications</li> <li>Power stations, general industry and process engineering. For water, steam, oil, gas and non-aggressive fluids. Other fluids on request.</li> </ul>	
<mark>e</mark> m, e			http://shop.ksb.com/catalog/k0/en/product/E\$000485	

## SICCA 800-4500 GLF

Ĩ	Class NPS [inch] T [°C]	Description Globe valve to ANSI/ASME with NPT (F) threaded ends or socket weld ends, with bolted bonnet (Class 800) or welded bonnet (Class 1500/2500/4500), outside screw and yoke, Stellite hard-faced body seat, disc seating face made of Stellite hard- faced 13 % chrome steel, with graphite gaskets and gland packing. Available in carbon steel and alloy steel. Applications Refineries, power stations, general industry and process engineering. For water, steam, oil, gas and non-aggressive fluids. Other fluids on request.	
<b>—</b> m, e		http://shop.ksb.com/catalog/k0/en/product/ES000480	

## Globe valves for nuclear applications

## NUCA/-A/-ES, Types I, II, IV

	PN DN T [°C]	10 - 50	<b>Description</b> Globe valve with butt weld or socket weld ends, for nuclear applications, with gland packing or bellows, replaceable seat (NUCA-ES), straight-way pattern, made of steel, stainless steel or nickel. <b>Applications</b> Reactor cooling, moderator, safety feed, feed water, live steam and cleaning systems.	
<mark>–</mark> m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000452	

## ZXNB

	PN DN T [°C]	<b>Description</b> Bellows-type globe valve with butt weld ends, for nuclear applications with safety- related requirements, in straight-way or angle pattern, or as a two-way valve, made of steel or stainless steel. <b>Applications</b> Reactor cooling, moderator, safety feed, feed water, live steam and cleaning systems.	
<b>—</b> m, e, p		http://shop.ksb.com/catalog/k0/en/product/ES000458	

#### ZXNVB

	PN DN T [°C]	4 - 25	Description Globe valve with butt weld or socket weld ends, for nuclear applications, with gland packing or bellows, straight-way pattern, made of steel or stainless steel. Applications Reactor cooling, moderator, safety feed, feed water, live steam and cleaning systems.
m			http://shop.ksb.com/catalog/k0/en/product/ES000457

## ZYNB/ZYN

Sec. 1	DN 300 - 400 T [°C] ≥ -29 - ≤ +365	<b>Description</b> Globe valve with butt weld ends, for nuclear applications with safety-related requirements, with gland packing or bellows, Y-valve, made of cast stainless steel. <b>Applications</b> Residual heat removal systems in nuclear applications.	
e		http://shop.ksb.com/catalog/k0/en/product/ES000331	

## Automated globe valves to DIN/EN

## BOA-H Mat E

	PN DN T [°C]	20 - 150	<b>Description</b> Automated globe valve to DIN/EN with flanged ends, with electric actuator and 3- point actuation, actuating forces from 2000 N to 14,000 N, stem sealed by maintenance-free PTFE V-packing (up to 250 °C) or graphite gland packing (up to 350 °C). <b>Applications</b> General industrial facilities, process engineering, plant engineering, cooling circuits, heating systems.	
e			http://shop.ksb.com/catalog/k0/en/product/ES000801	

#### **BOA-H Mat P**

	PN DN T [°C]	20 - 150	Description         Automated globe valve to DIN/EN with flanged ends, with pneumatic actuator in spring-to-open or spring-to-close design on option, actuating forces from 1500 N to 26,000 N, stem sealed by maintenance-free PTFE V-packing (up to 250 °C) or graphite gland packing (up to 350 °C).         Applications         General industrial facilities, process engineering, plant engineering, cooling circuits, heating systems.
<mark>e</mark> p			http://shop.ksb.com/catalog/k0/en/product/ES000885

## **Control valves to DIN/EN**

## BOA-CVE C/CS/W/IMS/EKB/IMS EKB

	PN DN T [°C]	Description Control valve to DIN/EN based on standard type series BOA-Compact, BOA- SuperCompact, BOA-W, BOA-Compact EKB and BOA-Control IMS, bonnetless pressure-retaining body, soft-seated. Leakage rate selectable from 0.05 % to drop- tight, Kvs values between 6.3 and 700 m³/h and closing pressures of up to 16 bar. With intelligent microprocessor-controlled and pre-set electric actuators providing actuating forces from 1000 N to 14,000 N; electronic configuration of flow characteristic, Kvs value, actuating signal and actuating time using PC tool or manual parameterisation unit. Customised configuration can be implemented at the KSB factory on request. <b>Applications</b> Hot-water heating systems up to 120 °C. Ventilation and air-conditioning systems. Water supply systems, drinking water. Not suitable for fluids containing mineral oils, steam or fluids liable to attack EPDM and uncoated cast iron. Other fluids on request.	
e		http://shop.ksb.com/catalog/k0/en/product/ES000326	

#### **BOA-CVE H**

	PN DN T [°C]	a much a supervision of a standard straight is at 10 much loss of 0.4 to 0.20 m <sup>3</sup> / <sub>2</sub> / <sub>2</sub> and all straight	
e		http://shop.ksb.com/catalog/k0/en/product/ES000772	

#### **BOA-CVP H**

	PN DN T [°C]	15 - 200	Service-friendly control valve to DIN/EN with flanged ends, either with linear or	
þ			http://shop.ksb.com/catalog/k0/en/product/ES000662	

## Balancing and shut-off valves to DIN/EN

## **BOA-Control/BOA-Control IMS**

m, e http://shop.ksb.com/catalog/k0/en/product/ES000323
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## **BOA-Control SAR**

	PN DN T [°C] ≥ -2!	10 - 50 5 - < +150	Description Balancing valve to DIN/EN with female screwed ends; differential pressure measurement for flow metering with PFM 2000 measuring computer; digital travel position indicator with 40 settings, locking device and travel stop, maintenance- free. Applications Hot-water heating systems up to 150 °C. Air-conditioning systems. Other fluids on request.	
<mark>, ●</mark> m			http://shop.ksb.com/catalog/k0/en/product/ES000324	

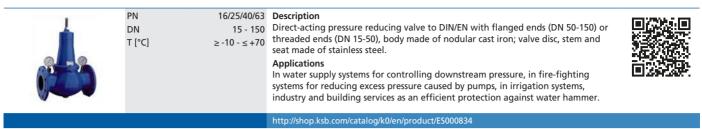
## Level control valves to DIN/EN

## **CONDA-VLC**

PN DN T [°C]	25 - 300	The area of the second of the	
		http://shop.ksb.com/catalog/k0/en/product/ES000835	

## Pressure reducing valves to DIN/EN

## **CONDA-VRC**



## Pressure sustaining valves to DIN/EN

## **CONDA-VSM**

PN DN T [°C]	50 - 150	Description Direct-acting pressure sustaining valve to DIN/EN with flanged ends, body made of nodular cast iron, valve disc, stem and seat made of stainless steel. Applications Controlling upstream pressure in water supply systems, irrigation systems or fire- fighting systems, in industry and building services.	
		http://shop.ksb.com/catalog/k0/en/product/ES000678	

## Air valves to DIN/EN

## **BOAVENT-AVF**

PN DN T [°C]	50 - 300	<b>Description</b> Automatic air valve with two floats and three functions. Flanged ends, body made of nodular cast iron, double-chamber design with ABS floats. The air valve ensures proper operation of piping systems. It is specially designed to allow the entry and discharge of large volumes of air and the release of air pockets in working conditions. <b>Applications</b> Water supply, clean water, irrigation.	
		http://shop.ksb.com/catalog/k0/en/product/ES000831	

#### **BOAVENT-SIF**

PN DN T [°C]	25 - 200	<b>Description</b> Automatic air valve with one float and three functions. With flanged ends (DN 25-300R) or threaded ends (DN 25-150), body made of stainless steel, single- chamber design with polypropylene float. The air valve ensures proper operation of piping systems. It is specially designed to allow the entry and discharge of large volumes of air and the release of air pockets in working conditions. <b>Applications</b> Water supply, clean water, irrigation.	
		http://shop.ksb.com/catalog/k0/en/product/ES000832	

## **BOAVENT-SVA**

PN DN T [°C]	polypropylene float. The air valve ensures proper operation of piping systems. It is specially designed to allow the entry and discharge of large volumes of air and the release of air pockets in working conditions. <b>Applications</b> Water supply, waste water, untreated waste water.	
	http://shop.ksb.com/catalog/k0/en/product/ES000833	

#### **BOAVENT-SVF**

jį	PN DN T [°C]	(an activity of the second sec	
		http://shop.ksb.com/catalog/k0/en/product/ES000832	

## Vent valves for nuclear applications

### SISTO-VentNA

 PN DN	15	Description Soft-seated vent valve with butt weld ends, for nuclear applications	
T [°C]	≥ -20 - ≤ +100	Applications Heating systems, air-conditioning systems.	

http://shop.ksb.com/catalog/k0/en/product/ES000842

#### SISTO-KRVNA

PN DN T [°C]	25 - 100	<b>Description</b> Vent valve with flanged or butt weld ends, for nuclear applications, soft-seated, with floating ball. <b>Applications</b> Tank venting, drainage systems.	
		http://shop.ksb.com/catalog/k0/en/product/ES000839	

## Gate valves to DIN/EN

## COBRA-SGP/SGO/SGF

The second secon	DN 25 - 600	Description         Gate valve to DIN/EN with flanged ends, elastomer-coated wedge, bolted bonnet, rotating stem, inside screw, body made of nodular cast iron.         Applications         Water supply systems, water treatment systems, air-conditioning systems.
<mark>e</mark> m, e		http://shop.ksb.com/catalog/k0/en/product/ES000828

#### **COBRA-SMP**

9	DescriptionGate valve to DIN/EN with flanged ends, bolted bonnet, metal-seated, rotating stem, inside screw, body and flexible wedge made of nodular cast iron, stem and seats made of stainless steel.Applications Water supply systems, heating systems, air-conditioning systems, general industrial applications, building services.
<mark>–</mark> m, e	http://shop.ksb.com/catalog/k0/en/product/ES000829

#### **ECOLINE SP/SO**

Ă	DN 40 - 600	Description         Gate valve to DIN/EN with flanged ends, bolted bonnet, metal-seated, rotating stem, inside screw, body made of cast iron, seats made of brass.         Applications         Water supply systems, heating systems, air-conditioning systems, general industrial applications, water engineering, building services.
📕 m, e		http://shop.ksb.com/catalog/k0/en/product/ES000654

#### **ECOLINE GT 40**

	PN DN T [°C]	50 - 800	Description         Gate valve to DIN/EN with flanged ends or butt weld ends, bolted bonnet, body made of cast steel, non-rotating stem, with flexible wedge, seat/disc interface made of wear and corrosion resistant 13 % chrome steel or Stellite.         Applications         Industrial plants, process engineering and shipbuilding. For water and steam.         Other non-aggressive fluids such as gas or oil on request.
📕 m, e			http://shop.ksb.com/catalog/k0/en/product/ES000676

## STAAL 40 AKD/AKDS

Ā	Ā	PN DN T [°C]	DescriptionGate valve to DIN/EN with flanged ends (AKD) or butt weld ends (AKDS), with bolted bonnet, body of forged or welded construction, non-rotating stem, split wedge with flexibly mounted discs for precise alignment with the body seats. Seat/ disc interface made of wear and corrosion resistant 17 % chrome steel.Applications Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.
m, e			http://shop.ksb.com/catalog/k0/en/product/ES000469

### STAAL 100 AKD/AKDS

e e e e e e e e e e e e e e e e e e e	PN DN T [°C]	50 - 600	Description Gate valve to DIN/EN with flanged ends (AKD) or butt weld ends (AKDS), with bolted bonnet, body of forged or welded construction, non-rotating stem, split wedge with flexibly mounted discs for precise alignment with the body seats. Seat/ disc interface made of wear and corrosion resistant 17 % chrome steel or Stellite. Applications Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.
📕 m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000369

### AKG-A/AKGS-A

	PN DN T [°C]	65 - 300	Description Gate valve to DIN/EN with flanged ends (AKG-A) or butt weld ends (AKGS-A), pressure seal design, body of forged or welded construction, non-rotating stem, split wedge with flexibly mounted discs for precise alignment with the body seats. Seat/disc interface made of wear and corrosion resistant 17 % chrome steel or Stellite. Applications Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.	
<b>e</b> m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000371	

## ZTS

Ā	Class 4 DN 50 -	32 Stellite, split wedge with flexibly mounted discs for precise alignment with the body seats
📕 m, e, p		http://shop.ksb.com/catalog/k0/en/product/ES000375

## Gate valves to ANSI/ASME

### **ECOLINE GTB 800**

	<ul> <li>Description</li> <li>Gate valve to ANSI/ASME with threaded sockets (NPT) or socket weld ends (SW),</li> <li>cast steel/stainless steel body, trim and bellows made of stainless steel, bolted bonnet, outside screw and yoke, sealed by graphite gland packing and metal bellows, stainless steel/graphite gaskets.</li> <li>Applications</li> <li>Petrochemical plants, chemical plants, power stations, process engineering and general industrial applications; for thermal oil, steam, toxic and volatile fluids.</li> <li>Other fluids on request.</li> </ul>
🛑 m, e	http://shop.ksb.com/catalog/k0/en/product/ES000903

## ECOLINE GTC 150-600

17	<ul> <li>Description</li> <li>Gate valve to ANSI/ASME with flanged ends, cast steel A216 WCB, Trim 8</li> <li>(Stellite/13 % chrome steel) for Class 150/300/600, Trim 5 (Stellite/Stellite) for</li> <li>Class 600, with bolted bonnet, outside screw and yoke, non-rotating stem, flexible wedge, graphite gland packing, stainless steel/graphite gaskets.</li> <li>Applications</li> <li>Industrial plants, power stations, process engineering, refineries, oil and marine applications; for water, steam, gas, oil and other non-aggressive fluids.</li> </ul>
em, e	http://shop.ksb.com/catalog/k0/en/product/ES000774

### ECOLINE GTF 150-600

A.	Class NPS [inch] T [°C]	½ - 2 ≥ 0 - ≤ +816	<ul> <li>Description</li> <li>Gate valve to ANSI/ASME with flanged ends, forged steel A105, Trim 8</li> <li>(Stellite/13 % chrome steel), with bolted bonnet, outside screw and yoke, non-rotating stem, single-piece wedge, graphite gland packing, stainless steel/graphite gaskets, reduced bore.</li> <li>Applications</li> <li>Industrial applications, power stations, process engineering, refineries, oil and marine applications; water, steam, gas, oil and other non-aggressive fluids.</li> </ul>	
<b>—</b> m, e			http://shop.ksb.com/catalog/k0/en/product/ES000611	

### **ECOLINE GTF 800**

	<ul> <li>Description</li> <li>Gate valve to ANSI/ASME with threaded sockets (NPT), butt weld ends (BW) or socket weld ends (SW), Trim 8 (Stellite/13 % chrome steel), with bolted bonnet, outside screw and yoke, single-piece wedge, graphite gland packing, stainless steel/graphite gaskets, available in carbon steel and alloy steel.</li> <li>Applications</li> <li>Industrial applications, power stations, process engineering, refineries, oil and marine applications; water, steam, gas, oil and other non-aggressive fluids.</li> </ul>
🛑 m, e	http://shop.ksb.com/catalog/k0/en/product/ES000797

### ECOLINE GTV 150-600

	Class NPS [inch] T [°C]	2 - 12	<b>Description</b> Gate valve to ANSI/ASME with flanged ends, cast steel A351 CF8/CF8M, Trim 2 (304/304) and Trim 10 (316/316) for Class 150/300, with bolted bonnet, outside screw and yoke, non-rotating stem, flexible wedge, integral seat, graphite gland packing, stainless steel/graphite gaskets. <b>Applications</b> Fine chemicals, food industry, general industry; water, steam, gas and other fluids.	
📕 m, e			http://shop.ksb.com/catalog/k0/en/product/ES000373	

### SICCA 150-600 GTC

	Class NPS [inch] T [°C]	2 - 24	Description Gate valve to ANSI/ASME with flanged or butt weld ends, with bolted bonnet, outside screw and yoke, flexible wedge, non-rising or rising stem and non-rising handwheel, Stellite hard-faced seat/disc interface made of 13 % chrome steel, with graphite gasket and gland packing, available in carbon steel, low-alloy steel and stainless steel. Applications Power stations, general industry and process engineering. For water, steam, oil, gas and non-aggressive fluids. Other fluids on request.
<b>—</b> m, e			http://shop.ksb.com/catalog/k0/en/product/ES000482

#### SICCA 900-3600 GTC

	Class NPS [inch] T [°C]	2 - 28	<ul> <li>Description</li> <li>Gate valve to ANSI/ASME with butt weld ends, pressure seal design, split wedge, outside screw and yoke, rising stem and non-rising handwheel, Stellite hard-faced seat/disc interface and back seat, with graphite gasket and gland packing.</li> <li>Available in carbon steel and alloy steel.</li> <li>Applications</li> <li>Power stations, general industry and process engineering. For water, steam, oil, gas and non-aggressive fluids. Other fluids on request.</li> </ul>	
<mark>–</mark> m, e			http://shop.ksb.com/catalog/k0/en/product/ES000483	

## SICCA 800-2500 GTF

1. The II	Class NPS [inch] T [°C]	Description Gate valve to ANSI/ASME with NPT (F) threaded ends or socket weld ends, with bolted bonnet (Class 800) or welded bonnet (Class 1500/2500), solid wedge, outside screw and yoke, Stellite hard-faced seat/disc interface made of 13 % chrome steel, with graphite gaskets and gland packing. Available in carbon steel, low-alloy steel and stainless steel. Applications Refineries, power stations, general industry and process engineering. For water, steam, oil, gas and non-aggressive fluids. Other fluids on request.	
e m, e		http://shop.ksb.com/catalog/k0/en/product/ES000479	

# Gate valves for nuclear applications

ZTN			
0	PN DN T [°C]	Gate valve with butt weld ends, for nuclear applications, with bolted or pressure	
<mark>e</mark> m, e, p		http://shop.ksb.com/catalog/k0/en/product/ES000456	

# **Body pressure relief valves**

### UGS

	Description Spring-loaded body pressure relief valve to DIN/EN, with or without bursting disc, for gate valves in pressure seal design. Applications Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.	
	http://shop.ksb.com/catalog/k0/en/product/ES000375	

# Knife gate valves to DIN/EN

### HERA-BD

	PN DN 50 - 12 T [°C] ≥ -10 - ≤ +	<ul> <li>Description</li> <li>Knife gate valve to DIN/EN with wafer-type single-piece or two-piece body made of nodular cast iron, bi-directional, with gland packing, non-rising stem, corrosion-protected by epoxy coating.</li> <li>Applications         <ul> <li>Industrial plants, waste water engineering, process engineering and food industry. For water, waste water and solids-laden fluids. Other fluids on request.</li> </ul> </li> </ul>
<mark>e</mark> m, e, p		http://shop.ksb.com/catalog/k0/en/product/ES000597

## Knife gate valves to ANSI/ASME

### **HERA-BDS**

0	0	<ul> <li>Description         Knife gate valve to ANSI/ASME with full-lug body made of carbon steel or stainless steel; bi-directional, with gland packing, rubber-lined, rising stem, non-rising handwheel.         Applications         Primarily in mining for handling slurries, abrasive fluids and high-density fluids; also in pulp applications, cement plants, waste water treatment plants and the chemical industry. Other fluids on request.     </li> </ul>
📕 m, e, p		http://shop.ksb.com/catalog/k0/en/product/ES000895

### **HERA-BHT**

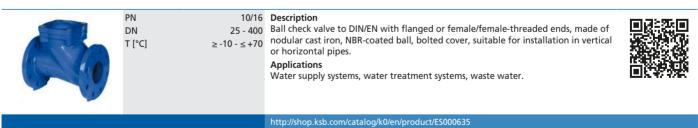
T	Class DN T [°C]	80 - 600	Description Knife gate valve to ANSI/ASME with semi-lug body made of carbon steel or stainless steel, bi-directional, with gland packing, through-going blade, rising stem, non-rising handwheel, robust yoke for actuator mounting as standard. Applications Primarily in mining for handling slurries and high-density fluids; excellent flow characteristic due to through-going blade; also in pulp applications and water applications. Other fluids on request.
📕 m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000891

#### **HERA-SH**

	Class DN T [°C]	150 50 - 1000 ≥ -10 - ≤ +180	and a second	
📕 m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000844	

## Lift check valves to DIN/EN

**BOA-RPL** 



### **BOA-RFV**

PN DN T [°C]	10/16/25/40/63 40 - 600 ≥ -10 - ≤ +90	Nozzle check valve to DIN/EN with flanged ends, Venturi-type body, max. flow velocity 2.5 m/s. Body made of cast iron, check disc made of brass and cast iron, seat made of stainless steel. Suitable for installation in horizontal or vertical pipes. Rapid closure without surge pressures. <b>Applications</b> Water supply systems, heating systems, air-conditioning systems.
		http://shop.ksb.com/catalog/k0/en/product/ES000653

#### **BOA-RVK**

PN DN T [°C]	pins. Low-noise designs with plastic plate (DN 15 - 100) or valve disc with O-ring (DN 125 - 200), maintenance-free. <b>Applications</b> Industrial plants and heating systems, liquids and gases, hot-water heating systems, high-temperature hot water heating systems, heat transfer systems. Any limits given in the technical codes must be complied with. Not suitable for fluids liable to attack the materials used. Other fluids on request.	
	http://shop.ksb.com/catalog/k0/en/product/ES000357	

### **BOA-R**

DN 15-3	<ul> <li>Description</li> <li>Lift check valve to DIN/EN with flanged ends, spring-loaded valve disc,</li> <li>maintenance-free.</li> <li>Applications</li> <li>Hot-water heating systems, high-temperature hot water heating systems, heat transfer systems. General steam applications in building services and industry. Other fluids on request.</li> </ul>	
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http://shop.ksb.com/catalog/k0/en/product/ES000356

#### NORI 40 RXL/RXS

PN DN T [°C]	Description Lift check valve to DIN/EN with flanged ends (RXL), butt weld ends or socket weld ends (RXS), check disc with closing spring, seat/disc interface made of wear and corrosion resistant chrome steel or chrome nickel steel. Applications Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.	
	http://shop.ksb.com/catalog/k0/en/product/ES000358	

### NORI 160 RXL/RXS

(学) 学	PN DN T [°C]	10 - 200	<b>Description</b> Lift check valve to DIN/EN with flanged ends (RXL), butt weld ends or socket weld ends (RXS), check disc with closing spring, seat/disc interface made of wear and corrosion resistant 17 % chrome steel or Stellite. <b>Applications</b> Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.	
			http://shop.ksb.com/catalog/k0/en/product/ES000360	

Valves

PN DN T [°C]	10 - 50 ≥ -10 - ≤ +580	<b>Description</b> Lift check valve to DIN/EN with butt weld or socket weld ends, Y-pattern, check disc with closing spring, pressure seal design, Hastelloy-faced body seats. <b>Applications</b> Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.	
		http://shop.ksb.com/catalog/k0/en/product/ES000364	

### **BOACHEM-RXA**

PN DN T [°C]	15 - 400	<ul> <li>Description</li> <li>Lift check valve to DIN/EN with flanged ends, body made of stainless steel, check disc with closing spring, lapped seat/disc interface.</li> <li>Applications</li> <li>Process engineering, industry, building services, food and beverage industries, for aggressive fluids. Other fluids on request.</li> </ul>	
		http://shop.ksb.com/catalog/k0/en/product/ES000366	

## Lift check valves to ANSI/ASME

### ECOLINE PTF 150-600

Class NPS [inch] T [°C]	1/2 - 2	<b>Description</b> Lift check valve to ANSI/ASME with flanged ends, forged steel A105, Trim 8 (Stellite/13 % chrome steel), reduced bore, with bolted cover, spring-loaded valve disc. <b>Applications</b> Industrial plants, power stations, process engineering, refineries, oil and marine applications; for water, steam, gas, oil and other non-aggressive fluids.	
		http://shop.ksb.com/catalog/k0/en/product/ES000424	

#### **ECOLINE PTF 800**

Class NPS [inch] T [°C]	1/2 - 2	Description Lift check valve to ANSI/ASME with threaded sockets (NPT), butt weld ends (BW) or socket weld ends (SW), Trim 8 (Stellite/13 % chrome steel), with bolted cover, spring-loaded valve disc, available in carbon steel and alloy steel. Applications Industrial plants, power stations, process engineering, refineries, oil and marine applications; for water, steam, gas, oil and other non-aggressive fluids.	
		http://shop.ksb.com/catalog/k0/en/product/ES000374	

## SICCA 800-4500 PCF

207- 107- 107-	Class NPS [inch] T [°C]	(Class 1500/2500/4500), Stellite hard-faced body seat, disc seating face made of Stellite hard-faced 13 % chrome steel, with graphite gasket. Available in carbon steel and alloy steel. <b>Applications</b> Refineries, power stations, general industry and process engineering. For water, steam, oil, gas and non-aggressive fluids. Other fluids on request.	
		http://shop.ksb.com/catalog/k0/en/product/ES000481	

# Lift check valves for nuclear applications

## NUCA/-A/-ES, Type V

	PN DN T [°C]	10 - 50	Description Lift check valve for nuclear applications, with butt weld ends, replaceable seat (NUCA-ES), straight-way pattern, made of steel or stainless steel. Applications Feed water and live steam systems.	
			http://shop.ksb.com/catalog/k0/en/product/ES000455	

### RJN

and in Anter	PN DN T [°C]		
		http://shop.ksb.com/catalog/k0/en/product/ES000459	

### RYN

and the second s	PN DN T [°C]	65 - 300	<b>Description</b> Combined lift check/shut-off valve with butt weld ends, for nuclear applications, Y- pattern, with gland packing or bellows, made of steel or stainless steel. <b>Applications</b> Feed water and live steam systems.	
			http://shop.ksb.com/catalog/k0/en/product/ES000333	

# Swing check valves to DIN/EN

## **ECOLINE WT/WTI**

	9	DN 50 - 300 T [°C] ≥ -10 - ≤ +110	Description Swing check valve to DIN/EN with wafer-type body; body and valve disc made of carbon steel (WT) or stainless steel (WTI), O-ring made of Viton. Applications Irrigation systems, district heating, domestic water supply, waste water treatment plants, air-conditioning systems, cooling circuits, water supply systems. http://shop.ksb.com/catalog/k0/en/product/ES000638
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Valves

### **STAAL 40 AKK/AKKS**

PN DN T [°C]	80 - 400	seat/disc interface made of wear and corrosion resistant 17 % chrome steel. <b>Applications</b> Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.	
		http://shop.ksh.com/catalog/k0/en/product/ES000471	

### **STAAL 100 AKK/AKKS**

1 <b>6</b> 10 - <b>6</b> 10	DN 80 - 400	<ul> <li>Description</li> <li>Swing check valve to DIN/EN with flanged ends (AKK) or butt weld ends (AKKS), with bolted cover, internally mounted hinge pin, body of forged or welded construction, seat/disc interface made of wear and corrosion resistant 17 % chrome steel or Stellite.</li> <li>Applications</li> <li>Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.</li> </ul>
		http://shop.ksb.com/catalog/k0/en/product/ES000391

### **AKR/AKRS**

PN DN T [°C]	80 - 300	Description         Swing check valve to DIN/EN with flanged ends (AKR) or butt weld ends (AKRS), pressure seal design, internally mounted hinge pin, body of forged and welded construction, seat/disc interface made of wear and corrosion resistant 17 % chrome steel or Stellite.         Applications         Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.
		http://shop.ksb.com/catalog/k0/en/product/ES000394

ZRS

PN DN T [°C]	≤ 600 50 - 800 ≥ -10 - ≤ +650	<ul> <li>Description</li> <li>Swing check valve to DIN/EN with butt weld ends, pressure seal design, internally mounted hinge pin, billet-forged body; seat/disc interface made of wear and corrosion resistant Stellite.</li> <li>Applications</li> <li>Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.</li> </ul>	
		http://shop.ksb.com/catalog/k0/en/product/ES000396	

#### SISTO-RSK/RSKS

5.1	25 - 300	Description Swing check valve to DIN/EN with flanged ends, body with or without lining, soft- seated, no dead volumes, straight-way pattern, full bore, slanted seat, static sealing to atmosphere; with soft rubber encapsulated pre-loaded valve disc featuring short travel to closure. Applications Building services, industry and power stations; suitable for drinking water, service water, fluids handled in the food and beverage industry, abrasive and aggressive products in chemical engineering and process engineering.	
		http://shop.ksb.com/catalog/k0/en/product/ES000397	

### **SERIE 2000**

PN Class DN T [°C]	16/25 150/300 50 - 600 ≥ -196 - ≤ +538	Description Dual-plate check valve with single-piece, wafer-type body made of lamellar graphite cast iron, nodular cast iron, steel, stainless steel or copper aluminium alloy, metal/elastomer-seated or metal/metal-seated, maintenance-free, connections to EN, ASME or JIS. Applications Building services: heating, air-conditioning, water supply, irrigation, water treatment. General processes: water, air, gas. Process engineering, chemical and petrochemical industry, sugar industry, paper industry, water supply, desalination, marine applications: water, air, gas, hydrocarbons.	
		http://shop.ksb.com/catalog/k0/en/product/ES000393	

# Swing check valves to ANSI/ASME

## ECOLINE SCC 150-600

Class NPS [inch] T [°C]	2 - 24	Description Swing check valve to ANSI/ASME with flanged ends, cast steel A216 WCB, Trim 8 (Stellite/13 % chrome steel) for Class 150/300/600, Trim 5 (Stellite/Stellite) for Class 600, with bolted cover, internally mounted hinge pin (2"-12"), stainless steel/ graphite gaskets. Applications Refineries, power stations, process engineering and general industry; water, steam, oil, gas. Other fluids on request.	
		http://shop.ksb.com/catalog/k0/en/product/ES000776	

## ECOLINE SCF 150-600

Class NPS [inch] T [°C]	1/2 - 2	<b>Description</b> Swing check valve to ANSI/ASME with flanged ends, forged steel A105, Trim 8 (Stellite/13 % chrome steel), reduced bore, with bolted cover, internally mounted hinge pin. <b>Applications</b> Industrial plants, power stations, process engineering, refineries, oil and marine applications; for water, steam, gas, oil and other non-aggressive fluids.	
		http://shop.ksh.com/catalog/k0/en/product/ES000799	

## **ECOLINE SCF 800**

Class NPS [inch] T [°C]	1/2 - 2	Description Swing check valve to ANSI/ASME with threaded sockets (NPT), butt weld ends (BW) or socket weld ends (SW), Trim 8 (Stellite/13 % chrome steel), with bolted cover (Class 800) or welded cover (Class 1500 and 2500), internally mounted hinge pin, available in carbon steel and alloy steel. Applications Industrial plants, power stations, process engineering, refineries, oil and marine applications; for water, steam, gas, oil and other non-aggressive fluids.	
		http://shop.ksb.com/catalog/k0/en/product/ES000798	

### ECOLINE SCV 150-600

Class NPS [inch] T [°C]	2 - 12 > -29 - < +593	<b>Description</b> Swing check valve to ANSI/ASME with flanged ends, cast steel A351 CF8/CF8M, Trim 2 (304/304) and Trim 10 (316/316) for Class 150/300, with bolted cover, integral seat, stainless steel/graphite gaskets. <b>Applications</b> Fine chemicals, food industry and general industry. For water, steam, gas and other fluids. Other fluids on request.	
		http://shop.ksb.com/catalog/k0/en/product/ES000335	

Valves

### SICCA 150-600 SCC

E TILL	Class NPS [inch] T [°C]	2 - 24	arrangement (optional), graphite gaskets. Stellite hard-faced seat/disc interface made of 13 % chrome steel. Available in carbon steel, low-alloy steel and stainless steel. <b>Applications</b> Power stations, general industry and process engineering. For water, steam, oil, gas and non-aggressive fluids. Other fluids on request.	
			http://shop.ksb.com/catalog/k0/en/product/ES000486	

### SICCA 900-3600 SCC

Class NPS [inch] T [°C]	2 - 28	<b>Description</b> Swing check valve to ANSI/ASME with butt weld ends, pressure seal design, internally mounted hinge pin, Stellite hard-faced seat/disc interface, with graphite gasket. Available in carbon steel and alloy steel. <b>Applications</b> Power stations, general industry and process engineering. For water, steam, oil, gas and non-aggressive fluids. Other fluids on request.	
		http://shop.ksb.com/catalog/k0/en/product/ES000487	

# Swing check valves for nuclear applications

### SISTO-RSKNA

PN DN T [°C]	25 - 300	<b>Description</b> Swing check valve with flanged ends, body with or without lining, soft-seated, no dead volumes, straight-way pattern, full bore, slanted seat, static sealing to atmosphere; with soft rubber encapsulated pre-loaded valve disc featuring short travel to closure. <b>Applications</b> Waste water systems, pump systems.	
		http://shop.ksb.com/catalog/k0/en/product/ES000838	

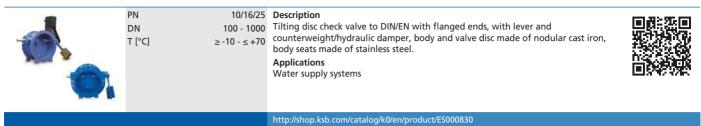
### ZRN

	PN DN T [°C] ≥ -2	50 - 600	<b>Description</b> Swing check valve for nuclear applications, with butt weld ends, with bolted cover, internally mounted hinge pin, forged body made of steel or stainless steel. <b>Applications</b> Safety feed, feed water, live steam and condensate systems.	
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http://shop.ksb.com/catalog/k0/en/product/ES000399

## Tilting disc check valves to DIN/EN

### COBRA-TDC01/03



## **Strainers to DIN/EN**

#### **BOA-S**

PN DN T [°C]	15 - 400	<b>Description</b> Strainer to DIN/EN with flanged ends, with standard or fine screen; all nominal sizes with drain plug in the cover. Made of grey cast iron or nodular cast iron. <b>Applications</b> Hot-water heating systems, high-temperature hot water heating systems, heat transfer systems. General steam applications in building services and industry. Other fluids on request.	
		http://shop.ksb.com/catalog/k0/en/product/ES000401	

#### **NORI 40 FSL/FSS**

PN DN T [°C]	15 - 300 > -10 - < +450	<ul> <li>Description</li> <li>Strainer to DIN/EN with flanged ends (FSL) or butt weld ends (FSS), made of cast steel, with standard or fine screen; all nominal sizes with drain plug in the cover, optional magnetic insert.</li> <li>Applications</li> <li>Heat transfer systems, industrial plants, building services and shipbuilding. For thermal oils, water, steam, gas and other non-aggressive fluids. Other fluids on request.</li> </ul>	
		http://shop.ksb.com/catalog/k0/en/product/ES000523	

#### **BOACHEM-FSA**

PN DN T [°C]	15 - 400	<b>Description</b> Strainer to DIN/EN with flanged ends, body made of stainless steel, with standard or fine screen; all nominal sizes with drain plug in the cover. <b>Applications</b> Process engineering, industry, building services, food and beverage industries, for aggressive fluids. Other fluids on request.	
		http://shop.ksb.com/catalog/k0/en/product/ES000402	

## **Strainers to ANSI/ASME**

### ECOLINE FYC 150-600

Class NPS [inch] T [°C]	2 - 12	Description Strainer to ANSI/ASME with flanged ends, Y-pattern, bolted cover, cast steel A216 WCB, screen made of stainless steel 304, mesh width 1.5 mm. Applications Refineries, power stations, process engineering and general industry; water, steam, oil, gas. Other fluids on request.	
		http://shop.ksb.com/catalog/k0/en/product/ES000665	

#### **ECOLINE FYF 800**

Class NPS [inch] T [°C] ≥	1/2 - 2	<b>Description</b> Strainer to ANSI/ASME with threaded sockets (NPT) or socket weld ends (SW), Y-pattern, with bolted cover, forged steel A105, screen made of stainless steel 304. Mesh width 0.8 to 0.9 mm. <b>Applications</b> Industrial plants, power stations, process engineering, refineries, oil and marine applications; for water, steam, gas, oil and other non-aggressive fluids.	
		http://shop.ksb.com/catalog/k0/en/product/ES000666	

# Centred-disc butterfly valves

#### **BOAX-CBV13**

+	PN DN T [°C]	50 - 1200	Description Centred-disc butterfly valve with epoxy coating. Perfect shut-off in either flow direction. Flanged ends to EN standards, body made of nodular cast iron, valve disc made of stainless steel. Applications Shut-off or control duties, drinking water, seawater, water supply systems, water treatment systems and water distribution systems, waste water, irrigation, ultra- pure water, air, oil.	
<mark>e</mark> m, e, p			http://shop.ksb.com/catalog/k0/en/product/E5000825	

#### **BOAX-S/SF**

	PN DN T [°C]	20 - 600	Description Centred-disc butterfly valve, with heat barrier and elastomer liner (EPDM XU or Nitrile K), with lever, manual gearbox or electric actuator (BOAXMAT-S and BOAXMAT-SF models); semi-lug body (T2) or full-lug body (T4) for downstream dismantling and dead-end service. Valve disc made of stainless steel 1.4308, connections to EN. Applications Building services, heating, ventilation, air-conditioning systems, for drinking water.	
m, e, p + AMTROBOX/AMTRONIC/SMARTRONIC			http://shop.ksb.com/catalog/k0/en/product/ES000388	

### **BOAX-B**

	PN DN T [°C]	40 - 1000	<b>Description</b> Centred-disc butterfly valve, sealed by elastomer liner (EPDM XC or Nitrile K), with lever, manual gearbox, pneumatic or electric actuator; semi-lug body (T2), full-lug body (T4). Body types T2 and T4 are suitable for downstream dismantling and dead-end service. Valve disc made of nodular cast iron or stainless steel. Connections to EN. <b>Applications</b> Engineering contractors. General water circuits, fuel oil, oil. Shut-off and control duties in water management, for water supply and water treatment, drainage and irrigation.
m, e, p + AMTROBOX/AM	MTRONIC/SMART	RONIC	http://shop.ksb.com/catalog/k0/en/product/ES000573

### **ISORIA 10/16**

S	PN DN T [°C]	40 - 1000 ≥ -10 - ≤ +200	<b>Description</b> Centred-disc butterfly valve, sealed by elastomer liner, with lever or manual gearbox, pneumatic, electric or hydraulic actuator. Wafer-type body (T1), semi-lug body (T2), full-lug body (T4) or U-section body with flat faces (T5). Body types T2 and T4 are suitable for downstream dismantling and dead-end service with counterflange. Connections to EN, ASME, JIS. <b>Applications</b> Shut-off and control duties in all industrial and energy sectors.	
m, e, h, p + AMTROBOX/AMTRONIC/SMARTRONIC		RONIC	http://shop.ksb.com/catalog/k0/en/product/ES000377	

#### **ISORIA 20/25**

ð	DN 32 - 10	<ul> <li>Description</li> <li>Centred-disc butterfly valve, sealed by elastomer liner, with lever or manual gearbox, pneumatic, electric or hydraulic actuator. Semi-lug body (T2), full-lug body (T4) or U-section body with flat faces (T5). Body types T2, T4 and T5 are suitable for downstream dismantling and dead-end service with counterflange. Connections to EN, ASME, JIS.</li> <li>Applications</li> <li>Shut-off and control duties in all industrial and energy sectors.</li> </ul>
m, e, h, p + AMTROBOX/AN	ATRONIC/SMARTRONIC	http://shop.ksb.com/catalog/k0/en/product/ES000379

### **ISORIA 20 UL**

θ <b>*</b>	PN DN T [°C]	40 - 700	<b>Description</b> Centred-disc butterfly valve, sealed by elastomer liner, with manual gearbox; semi- lug body (T2), full-lug body (T4). Body types T2 and T4 are suitable for downstream dismantling and dead-end service with counterflange. Connections to EN, ASME or JIS. Underwriter Laboratories (UL) approved. <b>Applications</b> Fire protection	
m			http://shop.ksb.com/catalog/k0/en/product/ES000379	

### MAMMOUTH

<b>K</b>	PN DN T [°C]		
m, e, p + AMTROBOX/AMTRONIC/SMARTRONIC		http://shop.ksb.com/catalog/k0/en/product/ES000382	

#### KE

Valves

\$ ð	PN DN T [°C]	40 - 600 ≥ -20 - ≤ +200		
	MTRONIC/SMARTRON	NIC	http://shop.ksb.com/catalog/k0/en/product/ES000380	

# **Double-offset butterfly valves**

### **APORIS-DEB02**

TG	PN 10/ DN 150 - T [°C] ≥ -10 - :	
📕 m, e, p		

## DANAÏS 150

	PN ≤ 25 Class 150 DN 50 - 1200 T [°C] ≥ -50 - ≤ +260	Double-offset butterfly valve, with plastomer seat (also in fire-safe design), metal seat or elastomer seat (FKM [VITON R] or NBR [Nitrile]). Lever or manual gearbox,	
📕 m, e, h, p + AMTROBOX/AM	ITRONIC/SMARTRONIC	http://shop.ksb.com/catalog/k0/en/product/ES000427	

## DANAÏS MTII

	PN 25/50 Class 150/300 DN 50 - 600 T [°C] ≥ -50 - ≤ +260	gland packing, maintenance-free, with lever or manual gearbox, pneumatic,	
📕 m, e, h, p + AMTROBOX/AN	ITRONIC/SMARTRONIC	http://shop.ksb.com/catalog/k0/en/product/ES000381	

## DANAÏS TBTII

Ĩ	PN Class DN T [°C]	10/20 150 50 - 1200 ≥ -196 - ≤ +200	body (T7) with flat or raised faces, or body with butt weld ends made of stainless	
m, e, h, p + AMTROBOX/AMTRONIC/SMARTRONIC			http://shop.ksb.com/catalog/k0/en/product/ES000815	

# Triple-offset butterfly valves

## **TRIODIS 150**

	Class 150 DN 50 - 1500 T [°C] ≥ -196 - ≤ +450	maintenance-free, with lever or manual gearbox, pneumatic, electric or hydraulic actuator. Body made of steel or stainless steel, full-lug body (T4), flanged body (T7) with flat or raised faces, body with butt weld ends (BWSE). Body types T4 and T7 are suitable for dead-end service. Connections to EN, ASME or JIS. Connections to ASME: Schedule 10S, 10, STD and XS to NPS for valves with butt weld ends (other connections on request). Fugitive emissions performance tested and certified to EN ISO 15848-1. Certified to German TA Luft Technical Guidelines on Air Quality Control. Fire-safe design tested and certified to EN ISO 10497 (BS 6755 - API 6FA). ATEX-compliant version in accordance with Directive 2014/34/EU. In compliance with NACE MR0175 / ISO 15156 and MR 0103. <b>Applications</b> Natural gas liquefaction. All liquefied gases. Heat transfer fluids, oil, gas, petrochemical industry, tank farms, refineries, onshore and offshore plants.	
m, e, h, p + AMTROBOX/AMTRONIC/SMARTRONIC		http://shop.ksb.com/catalog/k0/en/product/ES000816	

## **TRIODIS 300**

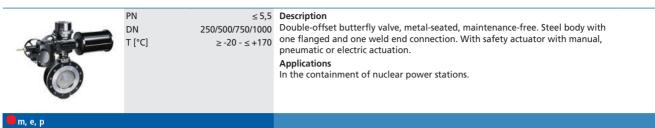
	PN ≤ 50 Class 300 DN 80 - 1200 T [°C] ≥ -196 - ≤ +450	Triple-offset butterfly valve, metal-seated (fire-safe), without gland packing, maintenance-free, with lever or manual gearbox, pneumatic, electric or hydraulic	
m, p + AMTROBOX/AMTRO	NIC/SMARTRONIC	http://shop.ksb.com/catalog/k0/en/product/ES000817	

### **TRIODIS 600**

6	PN ≤ 100 Class 600 DN 150 - 1000 T [°C] ≥ -196 - ≤ +450	Triple-offset butterfly valve, metal-seated (fire-safe), without gland packing, maintenance-free, with lever or manual gearbox, pneumatic, electric or hydraulic actuator. Body made of steel or stainless steel, full-lug body (T4), flanged body (T7) with flat or raised faces. Body types T4 and T7 are suitable for dead-end service. Connections to EN, ASME or JIS (other connections on request). Fugitive emissions performance tested and certified to EN ISO 15848-1. Certified to German TA Luft Technical Guidelines on Air Quality Control. Fire-safe design tested and certified to BS 6775-2. ATEX-compliant in accordance with Directive 2014/34/EU. In compliance with NACE MR0175 / ISO 15156 and MR 0103. <b>Applications</b> Natural gas liquefaction. All liquefied gases. Heat transfer fluids, aggressive fluids, oil, gas, petrochemical industry, tank farms, refineries, onshore and offshore plants.	
m, p + AMTROBOX/AMTRO	NIC/SMARTRONIC	http://shop.ksb.com/catalog/k0/en/product/ES000818	

## Butterfly valves for nuclear applications

### **CLOSSIA**



## Combined butterfly/check valve

### DUALIS

DN T [°C]	Description Combined butterfly/check valve with single-acting hydraulically controlled counterweight actuator. For mounting on valves with DN 500 to 1400. Applications For installation in the pump discharge lines of pumping stations. Power station cooling circuits. Protects pipelines and turbines.	
	http://shop.ksb.com/catalog/k0/en/product/ES000905	

## Single-piece ball valves

MP-CI/MP-II

	PN DN T [°C]	15 - 150	Description Ball valve to DIN/EN with wafer-type body made of Kanigen-treated carbon steel (MP/CI) or stainless steel (MP/II), stainless steel ball, PTFE/graphite seat. Applications Irrigation and fire-fighting systems, domestic water supply, air-conditioning systems, cooling circuits, water supply systems.
m, p + AMTROBOX/AMT	RONIC		http://shop.ksb.com/catalog/k0/en/product/ES000625

#### **PROFIN-VT1**

	PN DN T [°C]	8 - 50	Description Ball valve to ANSI/ASME with threaded ends (BSP), single-piece body, reduced bore, solid ball, blowout-proof shaft, body made of stainless steel. Applications Spray irrigation systems, general irrigation systems, fire-fighting systems, air- conditioning systems, paint shops, snow-making systems, washing plants, water supply systems, mining, pressure boosting, chemical industry, process engineering, paper and pulp industry, domestic water supply, heating, ventilation and air- conditioning applications. For cleaning agents, condensate, cooling water, corrosive fluids, drinking water, fire-fighting water, lubricants, oil, river water, seawater, groundwater, service water, wash water and solvents.
m			

# Two-piece ball valves

## ECOLINE BLT 150-300

	Class DN T [°C]	15 - 300	Description Ball valve to ANSI/ASME with flanged ends, two-piece body, full bore, floating ball, plastomer sealing (also in fire-safe design). Applications General industry, power stations, chemical industry, petrochemical industry and all related branches of industry, paper industry, food industry and pharmaceutical industry.	
📕 m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000795	

### **PROFIN-VT2**

	PN DN T [°C] ≥ -40	8 - 80	Description Ball valve to ANSI/ASME with threaded ends (BSP), two-piece body, full bore, solid ball, anti-static design, blowout-proof shaft, body made of stainless steel. Applications Spray irrigation systems, general irrigation systems, fire-fighting systems, air- conditioning systems, paint shops, snow-making systems, washing plants, water supply systems, mining, pressure boosting, chemical industry, process engineering, paper and pulp industry, domestic water supply, heating, ventilation and air- conditioning applications. For cleaning agents, condensate, cooling water, corrosive fluids, drinking water, fire-fighting water, lubricants, oil, river water, seawater, groundwater, service water, wash water and solvents.
m			

# Three-piece ball valves

### **ECOLINE BLC 1000**

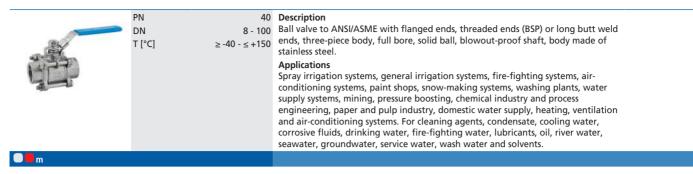
	Class DN T [°C]	8 - 100	Description Ball valve to ANSI/ASME with threaded ends (NPT), butt weld or socket weld ends, three-piece body, full bore, floating ball. Plastomer sealing (also in fire-safe design). Applications General industry, power stations, chemical industry, petrochemical industry and all related branches of industry, paper industry, food industry and pharmaceutical industry.
<b>—</b> m, p			http://shop.ksb.com/catalog/k0/en/product/ES000794

### **PROFIN-SI3**

	PN 16/40 DN 15 - 100 T [°C] ≥ -40 - ≤ +150	Ball valve to ANSI/ASME with flanged ends, threaded ends (BSP) or long butt weld
── <b>─</b> m, p		

#### **PROFIN-VT3**

Valves



## Soft-seated diaphragm valves to DIN/EN

#### SISTO-KB

	PN DN T[°C] ≥	15 - 200	Description Diaphragm valve to DIN/EN with flanged ends; shut-off and sealing to atmosphere by diaphragm; hydraulically favourable body with or without lining, position indicator with integrated stem protection. DN 125 to DN 200 with threaded bush. All moving parts are separated from the fluid by the diaphragm. Maintenance- free. Applications Building services, industry, power stations; suitable for abrasive and aggressive products such as service water, waste water, acids, alkaline solutions, sludges and suspensions.	
<mark>e</mark> m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000314	

#### SISTO-10

	PN DN 15 T [°C] ≥ -20 - ≤	<ul> <li>Description</li> <li>Diaphragm valve to DIN/EN with flanged ends; shut-off and sealing to atmosphere</li> <li>by spiral-supported diaphragm (DN 65 and above); body with or without lining,</li> <li>position indicator with integrated stem protection. All moving parts are separated</li> <li>from the fluid by the diaphragm. Maintenance-free.</li> <li>Applications</li> <li>Industrial plants, chemical engineering, process engineering, for service water, air,</li> <li>oil, abrasive and aggressive fluids.</li> </ul>
📕 m, e, p		http://shop.ksb.com/catalog/k0/en/product/ES000315

#### SISTO-10M

	<ul> <li>Description         Diaphragm valve to DIN/EN with threaded sockets; shut-off and sealing to atmosphere by spiral-supported diaphragm (DN 65 and above); position indicator with integrated stem protection. All moving parts are separated from the fluid by the diaphragm. Maintenance-free.     </li> <li>Applications         Industrial plants, chemical engineering, process engineering, for service water, air, oil, abrasive and aggressive fluids.     </li> </ul>
🛑 m, e, p	http://shop.ksb.com/catalog/k0/en/product/ES000513

### SISTO-16

Ť	PN DN T [°C]	15 - 200	Diaphragm valve to DIN/EN with flanged ends; shut-off and sealing to atmosphere	
<b>m</b> , e, p			http://shop.ksb.com/catalog/k0/en/product/ES000316	

#### SISTO-16S

	PN DN 15 - 2 T [°C] ≥ -20 - ≤ +1	1 i i i i i i i i i i i i i i i i i i i	
<mark>b</mark> m, e, p		http://shop.ksb.com/catalog/k0/en/product/ES000514	

### SISTO-16RGA

	PN DN T [°C]	15 - 80 > -10 - < +90	Description Diaphragm valve to DIN/EN with gunmetal body and threaded sockets for drinking water installations in building services to DIN 1988, DIN-DVGW-approved for water acc. to test W 270, in compliance with KTW recommendations (use of elastomers in drinking water applications); shut-off and sealing to atmosphere by completely enclosed diaphragm; position indicator with integrated stem protection. All moving parts are separated from the fluid by the diaphragm. Maintenance-free. Applications Drinking water, particularly drinking water installations to DIN 1988, seawater, all service water qualities.	
m			http://shop.ksb.com/catalog/k0/en/product/ES000319	

### SISTO-16TWA/HWA/DLU

No. and an	PN DN 15 - T [°C] ≥ -10 - ≤ +	
<b>—</b> m, e, p		http://shop.ksb.com/catalog/k0/en/product/ES000318

## SISTO-20

0.000	PN DN T [°C]	15 - 200	<ul> <li>Description</li> <li>Diaphragm valve to DIN/EN with flanged ends; shut-off and sealing to atmosphere by completely enclosed spiral-supported diaphragm; body with or without lining, position indicator with integrated stem protection. All moving parts are separated from the fluid by the diaphragm. Maintenance-free.</li> <li>Applications</li> <li>Building services, industry and power stations; suitable for drinking water, service water, air, oil, technical gases, fluids handled in the food and beverage industry, abrasive and aggressive products in chemical engineering and process engineering.</li> </ul>	
<mark>e</mark> m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000317	

### SISTO-C

	PN DN T [°C]	16 6 - 200 ≥ -20 - ≤ +160	Diaphragm valve with butt weld ends or clamps; straight-way, Y or T pattern, or as	
<mark>e</mark> m, p			http://shop.ksb.com/catalog/k0/en/product/ES000320	

# Diaphragm valves for nuclear applications

### SISTO-20NA

_L	PN DN T [°C]	8 - 150	<b>Description</b> Diaphragm valve with butt weld ends, for nuclear applications, shut-off and sealing to atmosphere by completely enclosed spiral-supported diaphragm. All moving parts are separated from the fluid by the diaphragm. Maintenance-free. <b>Applications</b> Cleaning systems, condensate and cooling water systems, waste water systems, auxiliary systems.	
<mark>e</mark> m, e, p			http://shop.ksb.com/catalog/k0/en/product/ES000840	

### SISTO-DrainNA

	PN DN T [°C]	15 - 25	<b>Description</b> Diaphragm valve with butt weld ends, for nuclear applications; shut-off and sealing to atmosphere by completely enclosed diaphragm. All moving parts are separated from the fluid by the diaphragm. Maintenance-free. <b>Applications</b> Heating systems, air-conditioning systems, auxiliary systems.	
n 🛑 m			http://shop.ksb.com/catalog/k0/en/product/ES000841	

## Feed water bypass valves

### **ZJSVM/RJSVM**

	PN DN T [°C]	100 - 800	<b>Description</b> Feed water bypass valve to DIN/EN with butt weld ends, pressure seal design, billet-forged body, Z or T pattern, seat/disc interface made of wear and corrosion resistant Stellite, controlled by process fluid. <b>Applications</b> Industrial plants, power stations, process engineering and shipbuilding. For water and steam. Other non-aggressive fluids such as gas or oil on request.
<mark>e</mark> m, e, p			

# Expansion and anti-vibration joints

## ECOLINE GE1/GE2/GE3

PN DN T [°C]	15 - 300	<b>Description</b> Expansion joint to DIN/EN with flanged or threaded ends, made of EPDM elastomer or NBR, flanges made of nickel-coated carbon steel. <b>Applications</b> Irrigation, domestic water supply, air-conditioning systems, cooling circuits, food and beverage industry, water treatment, water supply.

## **ECOLINE GE4**

Irrigation, domestic water supply, air-conditioning systems, cooling circuits, food and beverage industry, water treatment, water supply.		PN DN T [°C]		Irrigation, domestic water supply, air-conditioning systems, cooling circuits, food
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## Levers

#### CR/CM

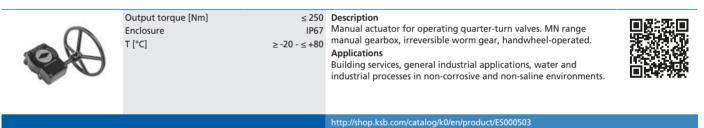
T [°C]	≥ -20 - ≤ +80	<ul> <li>Description</li> <li>Lever made of ductile cast iron. CR type series: locks in 10 positions (open, closed and 8 evenly spaced intermediate positions). CM type series: same as CR, with special coating.</li> <li>Applications</li> <li>All applications in building services, water engineering, energy engineering, and industry.</li> </ul>	
		http://shop.ksb.com/catalog/k0/en/product/ES000501	

### S/SR/SP

-	T [°C] ≥ -20	≤ +80 Description Lever made of light metal alloy; S type series: locks in limit positions (open and closed), SR type series: locks in 9 positions (open, closed and 7 evenly spaced intermediate positions), SP type series: locks in any position. Applications All applications in water engineering, energy engineering, and industry.	
		http://shop.ksb.com/catalog/k0/en/product/ES000501	

## Manual gearboxes

#### MN



MR

	Output torque [Nm]≤ 1600EnclosureIP67/IP6T [°C]≥ -20 - ≤ +80	
AMTROBOX		http://shop.ksb.com/catalog/k0/en/product/ES000504

## **Electric actuators**

### **ACTELEC (BERNARD CONTROLS)**

Î	Quarter-turn actuator Multi-turn actuator Enclosure Output torque [Nm] T [°C]	AQ1L - SQ120 31 - 800 IP67 ≤ 8000 ≥ -20 - ≤ +80	Electric actuators by BERNARD CONTROLS for direct mounting on quarter-turn valves (actuator flange to ISO 5211) with a manual gearbox of the MR type series (actuator flange to ISO 5210). Power supply: single-phase AC, three-phase or direct current Torque	
			http://shop.ksb.com/catalog/k0/en/product/ES000407	

### **ACTELEC (AUMA)**

911	Quarter-turn actuator Multi-turn actuator Enclosure Output torque [Nm]	SQ 05.2 - SQ 12 31 - 1600 IP67 ≤ 16000	Electric actuators by AUMA for direct mounting on quarter-turn valves (actuator flange to ISO 5211) with a manual gearbox of the MR ture sorier (actuator flange to ISO 5210). Bower supply single	
			http://shop.ksb.com/catalog/k0/en/product/ES000407	

### SISTO-LAE



## Hydraulic actuators

HQ

	Output torque [Nm] Enclosure T [°C] ≥	≤ 55000 IP68 45 - ≤ +100		
AMTROBOX			http://shop.ksb.com/catalog/k0/en/product/ES000924	

## **Pneumatic actuators**

### **ACTAIR NG**

ai 6 En	utput torque [Nm] ≤ 8000 : a control pressure of bar nclosure IP68 [°C] ≥ -50 - ≤ +150	Description Double-acting pneumatic actuator for mounting on quarter-turn valves (butterfly valves or ball valves). Actuator flange to ISO 5211. Control pressure up to 8 bar. Mounts on valves with square or flat shaft end. Force transmission via scotch-yoke kinematics provides output torques of up to 8000 Nm which are ideal for actuating quarter-turn valves. Equipped with a visual position indicator and, depending on the actuator size, adjustable travel stops for open/ closed position or closed position as standard. Optional separate or integrated manual override. Suitable for mounting control unit type series AMTROBOX, AMTRONIC, SMARTRONIC or any other device with an interface to VDI/VDE 3845. Applications All applications in water engineering, energy and industrial engineering.	
AMTROBOX, AMTRONIC, SMA	RTRONIC	http://shop.ksb.com/catalog/k0/en/product/ES000411	

### **DYNACTAIR NG**

	Output torque [Nm] ≤ 4000 at a control pressure of 6 bar Enclosure IP68 T [°C] ≥ -50 - ≤ +150	shaft end. Force transmission via scotch-voke kinematics provides	
AMTROBOX, AMTRONIC, S	MARTRONIC	http://shop.ksb.com/catalog/k0/en/product/ES000412	

## SISTO-LAD

4	Control air pressure [bar] Closing force [N] :	Diaphragm actuator in compact design for mounting on valves with a linear stem movement (globe valves, diaphragm valves and gate valves). Available in single-acting spring-to-close or spring-to-open design, or double-acting air-to-open/air-to-close design; suitable for mounting limit switches or positioners to suit customer requirements, factory-mounted. Settings are adjusted during factory test run. <b>Applications</b> Building services, industry, power stations; suitable for abrasive and aggressive products such as service water, waste water, acids, alkaline solutions, sludges and suspensions.	
		http://shop.ksb.com/catalog/k0/en/product/ES000805	

### SISTO-LAP

Control air pressure [bar] Closing force [N]	5,5 - 10 ≤ 250000	<b>Description</b> Piston actuator in heavy-duty design for mounting on valves with a linear stem movement (globe valves, diaphragm valves and gate valves). Actuator flange to DIN/ISO 5210. Available in single-acting spring-to-close or spring-to-open design, or double-acting air-to-open/air-to-close design; suitable for mounting limit switches or positioners to suit customer requirements, factory-mounted. Settings are adjusted during factory test run. <b>Applications</b> Building services, industry, power stations, food and beverage industries, and chemical industry. The pneumatic actuators can also be used in potentially explosive atmospheres.	
		http://shop.ksb.com/catalog/k0/en/product/ES000409	

### SISTO-C LAP

Control air pressure [bar] Closing force [N] :	 Description Piston actuator in high-grade stainless steel design for use on SISTO- C diaphragm valves. Available in single-acting spring-to-close or spring-to-open design, or double-acting air-to-open/air-to-close design; suitable for mounting limit switches or positioners to suit customer requirements, factory-mounted. Settings are adjusted during factory test run. Applications Biotechnology, pharmaceutical industry, sterile processes, food and beverage industry.	
	http://shop.ksb.com/catalog/k0/en/product/ES000320	

## **Actuator accessories**

**RMD**Image: Second Second

## Monitoring

### AMTROBOX

Enclosure IP€ T [°C] ≥ -20 - ≤ +8	<ul> <li>7 Description</li> <li>Multi-functional AMTROBOX limit switch box. For open/closed position signalling via mechanical limit switches or proximity sensors. AMTROBOX (R1149) mounts on MR manual gearboxes, ACTAIR NG pneumatic actuators and HQ hydraulic actuators.</li> <li>Applications</li> <li>All applications in water engineering, building services and energy engineering.</li> </ul>
	http://shop.ksb.com/catalog/k0/en/product/ES000463

### **AMTROBOX EEx ia**

Enclosure T [°C]	<b>Description</b> Multi-functional AMTROBOX limit switch box. For open/closed position signalling via mechanical limit switches or proximity sensors. AMTROBOX EEx ia (R1172): intrinsically safe version for potentially explosive atmospheres. <b>Applications</b> All applications in water engineering, building services and energy engineering.	
	http://shop.ksb.com/catalog/k0/en/product/ES000463	

### AMTROBOX ATEX Zone 22

Enclosure T [°C]	<b>Description</b> Multi-functional AMTROBOX limit switch box. For open/closed position signalling via mechanical limit switches or proximity sensors. AMTROBOX ATEX (X1140, X1149): ATEX-compliant version for potentially explosive dust atmospheres (Zone 22). <b>Applications</b> All applications in water engineering, building services and energy engineering.	
	http://shop.ksb.com/catalog/k0/en/product/ES000463	

### **AMTROBOX F**

Enclosure T [°C]	IP67 ≥ -25 - ≤ +70	<b>Description</b> Limit switch box specially designed for levers and all actuators with ISO 5211 interface for signalling open or closed position via proximity sensors. It can be used with type series S or C levers and ACTAIR NG/ DYNACTAIR NG pneumatic actuators. Thanks to its particularly low height (< 5 mm), it can be mounted between any valve and actuator with ISO 5211 interface. <b>Applications</b> All applications in water engineering, building services and energy engineering.	
		http://shop.ksb.com/catalog/k0/en/product/ES000463	

### **AMTROBOX M**

Enclosure T [°C] ≥ -	-20 - ≤ +80	Description Limit switch box specially designed for manual actuation. For open/ closed position signalling via mechanical limit switches or proximity sensors. AMTROBOX M mounts on the S series of quarter-turn levers (R1020) and manual gearbox types MA 12 and MA 25 (R1021). Applications All applications in water engineering, building services and energy engineering.	
		http://shop.ksb.com/catalog/k0/en/product/ES000463	

### AMTROBOX R

Enclosure T [°C]	Description Sturdy and multi-functional. For open/closed position signalling via mechanical limit switches or proximity sensors. AMTROBOX R (R1187) mounts on MR manual gearboxes, ACTAIR NG pneumatic actuators, HQ hydraulic actuators and any actuators with VDI/VDE interface.	
	Applications All applications in water engineering, energy engineering, offshore plants and heavy industry.	
	http://shop.ksb.com/catalog/k0/en/product/ES000463	

### **AMTROBOX R EEx ia**

	<ul> <li>Description</li> <li>Sturdy and multi-functional. For open/closed position signalling via mechanical limit switches or proximity sensors. AMTROBOX R EEx ia (R1188): intrinsically safe version for potentially explosive atmospheres (Zones 0 + 21).</li> <li>Applications</li> <li>All applications in water engineering, energy engineering, offshore plants and heavy industry.</li> </ul>
	http://shop.ksb.com/catalog/k0/en/product/ES000463

## AMTROBOX R Ex d

Enclosure T [°C]	<ul> <li>Description</li> <li>Sturdy and multi-functional. For open/closed position signalling via mechanical limit switches or proximity sensors. AMTROBOX R Exd (R1189): intrinsically safe version for potentially explosive atmospheres.</li> <li>Applications</li> <li>All applications in water engineering, energy engineering, offshore plants and heavy industry.</li> </ul>	
	http://shop.ksb.com/catalog/k0/en/product/ES000463	

# **ON/OFF** valve controllers

### AMTRONIC

### **AMTRONIC Ex ia**

Enclosure Control air pressure [bar] T [°C]	<b>Description</b> On/off control of pneumatic quarter-turn actuators and open/closed position signalling. Mounts directly on ACTAIR NG actuators with no need for a bracket, providing a rugged, compact and integrated solution. Its integrated directional control valve eliminates the need for any pneumatic lines between AMTRONIC and the actuator. The actuating time of the actuator can be set via AMTRONIC's air flow reducer. The intrinsically safe AMTRONIC Ex ia can be operated in potentially explosive atmospheres. It complies with Directive 2014/34/EU and is marked in accordance with CE 0081 Ex II 1 G. Type of protection Ex ia IIC T6 Ga in accordance with EN 60079-0 and EN 60079-11. <b>Applications</b> All applications in water engineering, energy engineering, and industry.	
	http://shop.ksb.com/catalog/k0/en/product/ES000462	

## Positioners

### **SMARTRONIC MA**

Enclosure IPG Control air pressure [bar] 2 - T [°C] ≥ -20 - ≤ +8	
	http://shop.ksb.com/catalog/k0/en/product/ES000461

### SMARTRONIC AS-i

Enclosure Control air pressure [bar] T [°C]	3 - 8	<b>Description</b> Electro-pneumatic digital positioner for connection to an AS-i field bus. Certified by AS International. Mounts on ACTAIR NG/ DYNACTAIR NG actuators with direct compressed air supply, or on any type of quarter-turn actuator with VDI/VDE 3845 interface and linear actuators with NAMUR interface. <b>Applications</b> All applications in water engineering, energy engineering, and industry.	
		http://shop.ksb.com/catalog/k0/en/product/ES000874	

# Intelligent positioners

## **SMARTRONIC PC**

Enclosure	IP67		in 2004 A lat
Control air pressure [bar] T [°C]		SMARTRONIC PC (R1312) is an intelligent, compact and innovative positioner. The integrated control offered by this multi-functional control unit represents the latest in open-loop and closed-loop control technology for valves. The unit attaches directly to ACTAIR NG and DYNACTAIR NG actuators with no need for a bracket or external piping, providing a rugged, compact overall solution. SMARTRONIC PC offers four functions: programmable characteristic curves for valve opening and closing, intelligent positioning, process monitoring and control. SMARTRONIC PC is PC programmable and can be connected to a Profibus DP field bus. <b>Applications</b> All applications in water engineering, energy engineering, and industry.	
		http://shop.ksb.com/catalog/k0/en/product/ES000873	

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