

SIEKMANN ECONOSTO

An **ERIKS** Company

More than just a supplier.

Tri-X Butterfly Valves



Versions

Siekmann Econosto – product excellence and much more

We are a highly motivated, experienced team that sees itself as a manufacturer and problem solver with a focus on 100% precision. Relationship based on partnership and fair treatment of customers, employees and other business partners is a top priority for us. We advise our domestic and international customers and supply them with our high-quality valves for plant, pipeline and boiler construction. Our customers include operators of power plants, oil and gas plants and chemical plants. We also offer flexible, reliable and sustainable solutions for special customer requirements.

DIN Valves

The series of DIN Valves developed by Siekmann Econosto also includes high-quality Tri-X series of Butterfly Valves with triple eccentric design. These are available in a wide range of variants and designs and conform to the Pressure Equipment Directive (PED), AD 2000 Merkblätter, TA-Luft & DIN EN ISO 15848 as well as the factory standards and technical regulations of plant operators and construction companies.



Product description

Applications, approvals and descriptions

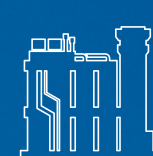
From the selection and use of materials to production, testing and inspection, the Tri-X Butterfly Valves conform to the European Pressure Equipment Directive and applicable standards.



Power plants



Oil and
gas plants



Petrochemical and
chemical plants

The requirements of the European Pressure Equipment Directive (PED) 2014/68/EU and the German AD 2000-A4 Merkblatt, including the manufacturer certification in accordance with AD 2000-HPO, as well as approval of the semi-

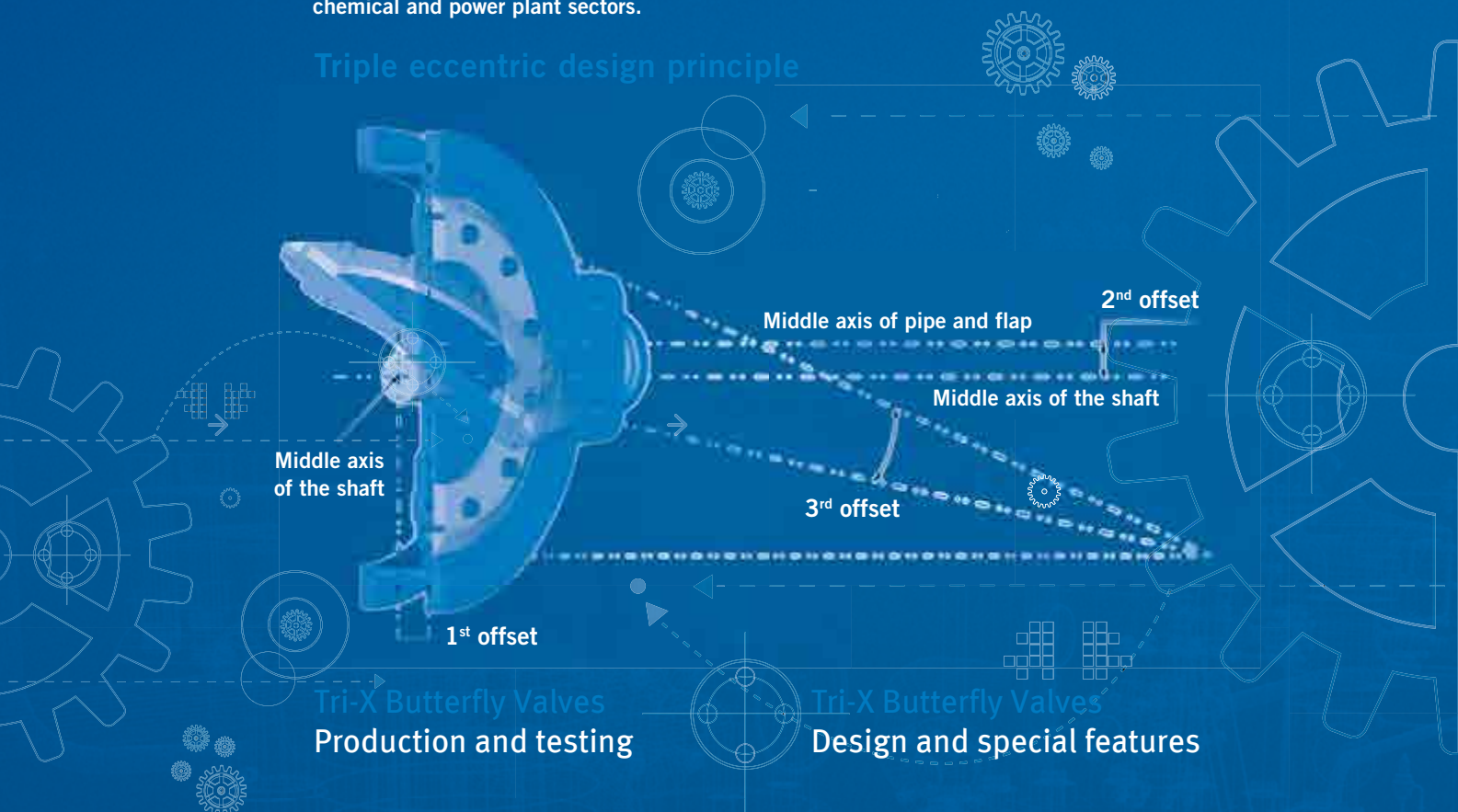
finished manufacturer in accordance with AD 2000-WO are complied with in full. The gas-gaskets and gland packings are certified in accordance with TA-Luft & DIN EN ISO 15848.



We provide solutions Always innovative. Always tailor-made.

The Siekmann Econosto product series of DIN Butterfly Valves was developed to meet the highest requirements for applications in industrial process plants, oil and gas systems and the petrochemical, chemical and power plant sectors.

Triple eccentric design principle

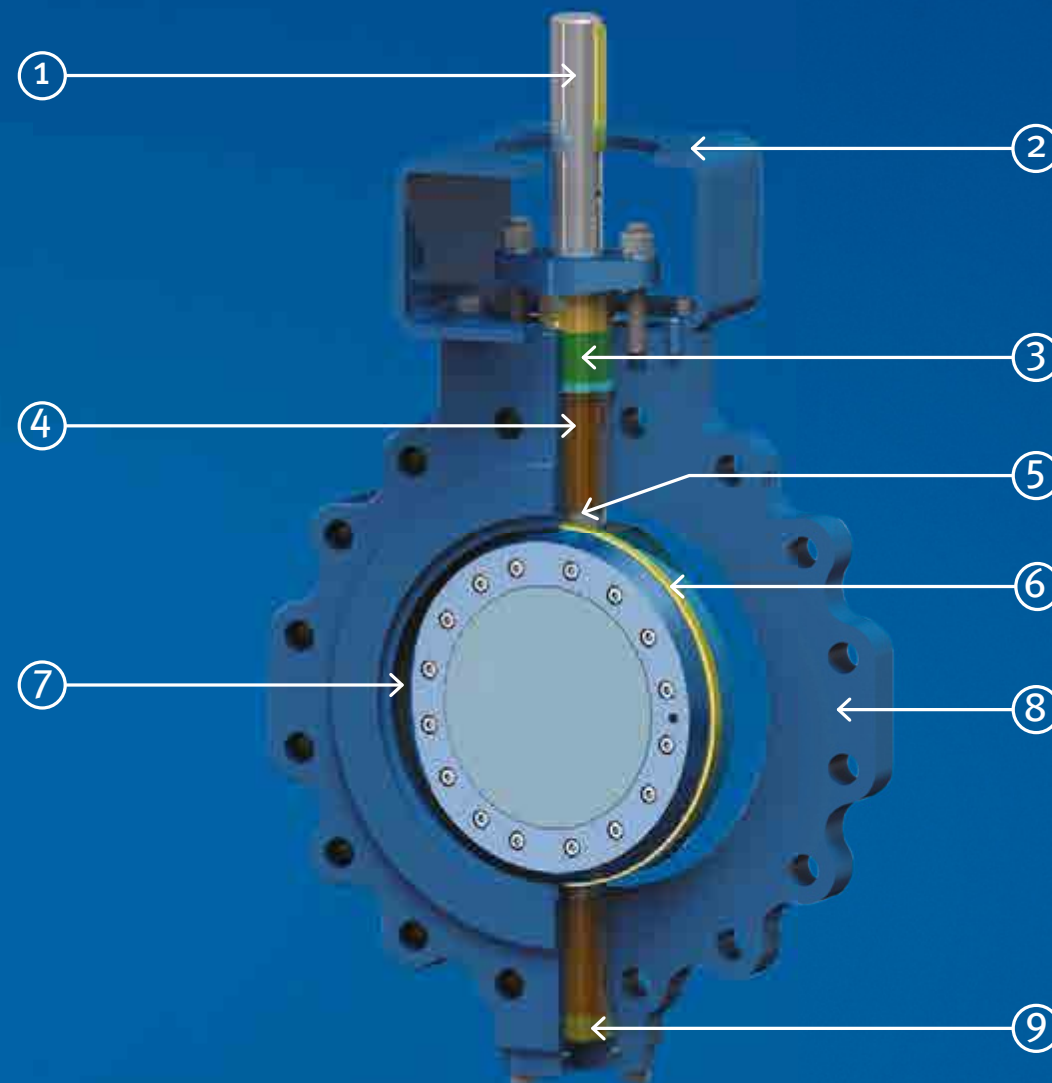


Tri-X Butterfly Valves
Production and testing

Tri-X Butterfly Valves
Design and special features

The pressure bearing components made from cast steel, such as the body and bonnet, comply with the requirements for the casting process in accordance with AD 2000-A4 Merkblatt. The casting quality is certified and documented in accordance with DIN 1690 T10.

The Butterfly Valves are designed and constructed in accordance with the current European regulations and the specific requirements of the AD 2000 Merkblätter. The construction is designed in accordance with DIN EN 12516. The face-to-face dimension has been specified in accordance with DIN EN 588 and DIN EN 1092 has been implemented for the flange dimensions.



1) High-performance drive shaft

2) Top-works flange in accordance with ISO 5211

For simple and safe assembly of gear units and different actuator variants

3) Packing in accordance with TA-Luft (DIN EN ISO 15848)

4) Shaft bearing

Precision-manufactured and hardened to minimise friction. The additional bearing seals prevent contamination of the bearings

5) Feather key connection

Slip-free torque transfer from the shaft to the disc and simple disassembly during maintenance

6) Lamellar seal

The exchangeable lamellar seal is flexible and guarantees a tight seal in both pressure directions

7) Integrated Stellite seat

The integrated Stellite seat in the housing increases service life and the ground surface assures full tightness

8) Body variants

Double flange, wafer- & lug type and welded ends

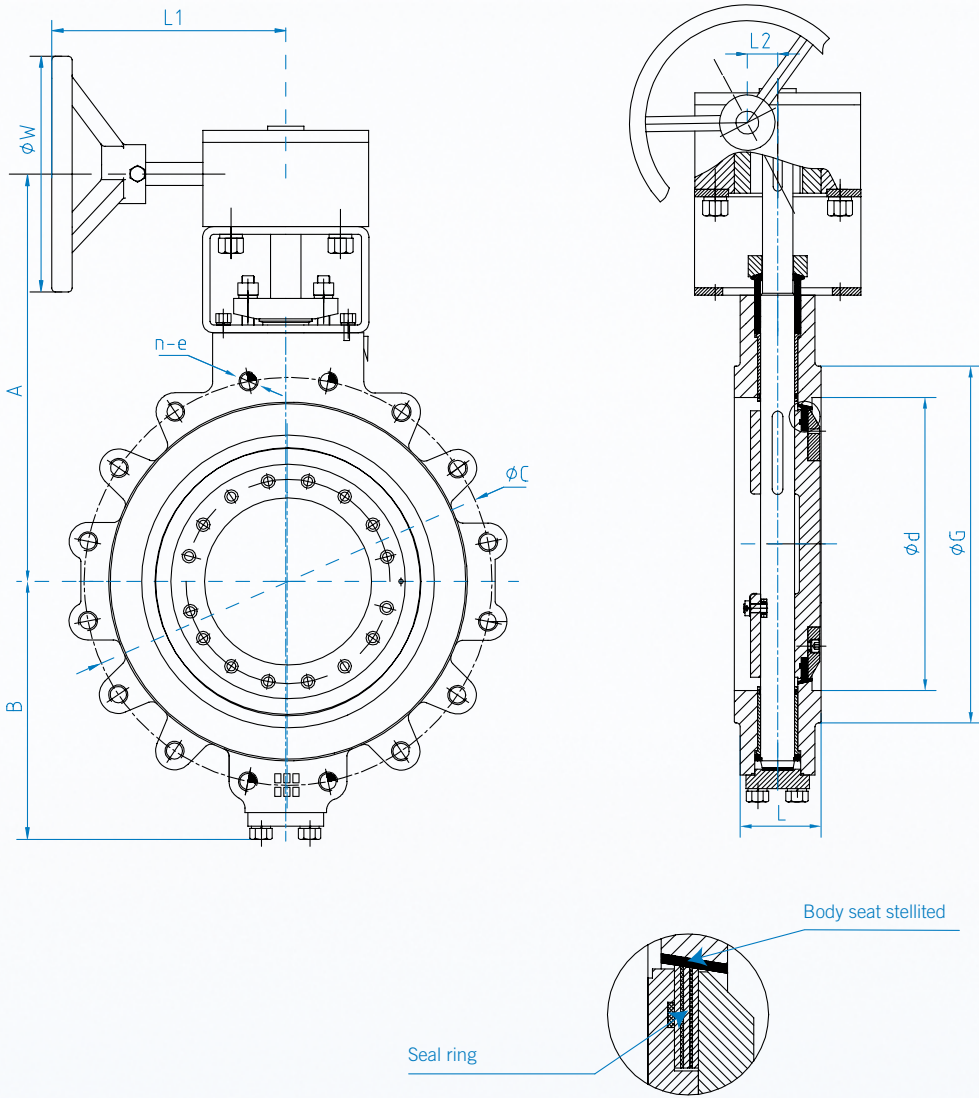
9) Blow-out proof stem design

Technical data
Materials

Note
The table below shows standard material combinations.
Other materials and material combinations can be supplied
on request!

Name	Carbon steel	Stainless steel
Body	1.0619	1.4408
Body seat	Stellite 21	Stellite 21
Bonnet	1.0619	1.4408
Shaft	17-4PH (UNS S17400)	17-4PH (UNS S17400)
Seal ring	Duplex steel and graphite	Duplex steel and graphite
Clamping ring	Carbon steel	Stainless steel
Gland flange	1.0619	1.4408
Gland ring	Stainless steel	Stainless steel
Gland packing	Graphite	Graphite
Cover	1.0352	1.4401
Adaptor	Coated carbon steel	Coated carbon steel
Bearing bush	Black-nitrided stainless steel	Black-nitrided stainless steel
Adjusting disc	Stainless steel	Stainless steel
Support ring	Black-nitrided stainless steel	Black-nitrided stainless steel
Blow-out	Black-nitrided stainless steel	Black-nitrided stainless steel
Bearing disc	Black-nitrided stainless steel	Black-nitrided stainless steel
Bolts	A4-70	A4-70
Nuts	A4	A4
Media contacted components	Stainless steel	Stainless steel
Gear unit with hand wheel	Manufactured by Rotork®	Manufactured by Rotork®
Name plate	Stainless steel	Stainless steel
Rivet	Stainless steel	Stainless steel
Nieten	Edelstahl	Edelstahl
Nieten	Edelstahl	Edelstahl

Technical data
Sectional drawing



Nominal sizes | dimensions | weights

Tri-X Butterfly Valve PN 10

DN	L (Lug)	L (Wafer)	L (Flange)	A	B	W	d	G	C	L1	L2	n-e	ISO 5211	Gear unit	Weight
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm		Rotork® type	kg
80	64	64	114	250	135	100	76	138	160	92	35	8-M16	F07	242-10M/CD100	16
100	64	64	127	288	153	200	100	158	180	160	42	8-M16	F10	242-20M/SG200	21
150	76	76	140	344	185	300	150	212	240	212	55	8-M20	F12	242-30M/SG300	35
200	89	89	152	409	217	300	201	268	295	212	55	8-M20	F12	242-30M/SG300	53
250	114	114	165	463	247	400	252	320	350	255	69	12-M20	F14	242-40M/SG400	71
300	114	114	178	503	277	400	303	370	400	255	69	12-M20	F14	242-40M/SG400	100
350	127	127	190	603	310	600	334	430	460	346	105	16-M20	F14	AB1250/SG600	150
400	140	140	216	623	368	600	385	482	515	346	105	16-M24	F16	AB1250/SG600	210
450	152	152	222	658	388	600	436	532	565	346	105	20-M24	F16	AB1250/SG600	276
500	152	152	229	705	423	500	487	585	620	398	130	20-M24	F25	AB1950/PR4/SG500	360
600	178	178	267	755	499	500	589	685	725	398	130	20-M27	F25	AB1950/PR4/SG500	555

* Flange connection in accordance with EN 1092-1 Form B1

Nominal sizes | dimensions | weights

Tri-X Butterfly Valve PN 16

DN	L (Lug)	L (Wafer)	L (Flange)	A	B	W	d	G	C	L1	L2	n-e	ISO 5211	Gear unit	Weight
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm		Rotork® type	kg
80	64	64	114	250	135	100	76	138	160	92	35	8-M16	F07	242-10M/CD100	16
100	64	64	127	288	153	200	100	158	180	160	42	8-M16	F10	242-20M/SG200	21
150	76	76	140	344	185	300	150	212	240	212	55	8-M20	F12	242-30M/SG300	35
200	89	89	152	409	217	300	201	268	295	212	55	12-M20	F12	242-30M/SG300	53
250	114	114	165	463	247	400	252	320	355	255	69	12-M24	F14	242-40M/SG400	71
300	114	114	178	503	277	400	303	370	410	255	69	12-M24	F14	242-40M/SG400	100
350	127	127	190	603	310	600	334	430	470	346	105	16-M24	F14	AB1250/SG600	150
400	140	140	216	623	368	600	385	482	525	346	105	16-M27	F16	AB1250/SG600	210
450	152	152	222	658	388	600	436	532	585	346	105	20-M27	F16	AB1250/SG600	276
500	152	152	229	705	423	500	487	585	650	398	130	20-M30	F25	AB1950/PR4/SG500	360
600	178	178	267	755	499	500	589	685	770	398	130	20-M33	F25	AB1950/PR4/SG500	555

* Flange connection in accordance with EN 1092-1 Form B1

Nominal sizes | dimensions | weights

Tri-X Butterfly Valve PN 25

DN	L (Lug)	L (Wafer)	L (Flange)	A	B	W	d	G	C	L1	L2	n-e	ISO 5211	Gear unit	Weight
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm		Rotork® type	kg
80	64	64	114	250	135	100	76	138	160	92	35	8-M16	F10	242-10M/CD100	17
100	64	64	127	288	153	200	100	162	190	160	42	8-M20	F10	242-20M/SG200	22
150	76	76	140	364	196	300	150	218	250	212	55	8-M24	F12	242-30M/SG300	48
200	89	89	152	448	227	400	201	285	310	255	69	12-M24	F14	242-40M/SG400	72
250	114	114	165	532	277	500	252	345	370	275	81	12-M27	F14	242-45M/SG500	117
300	114	114	178	568	318	600	303	410	430	346	105	16-M27	F16	AB1250/SG600	160
350	127	127	190	635	363	500	334	465	490	398	130	16-M30	F25	AB1950/PR4/SG500	285
400	140	140	216	660	404	500	385	535	550	398	130	16-M33	F25	AB1950/PR4/SG500	380
450	152	152	222	682	429	500	436	560	600	410	140	20-M33	F25	AB3000/PR4/SG500	475
500	152	152	229	742	467	400	487	615	660	390	140	20-M33	F25	AB3000/PR6/SG400	655
600	178	178	267	824	532	600	589	735	770	451	182	20-M36	F30	AB6800/PR6/SG600	905

* Flange connection in accordance with EN 1092-1 Form B1

Nominal sizes | dimensions | weights

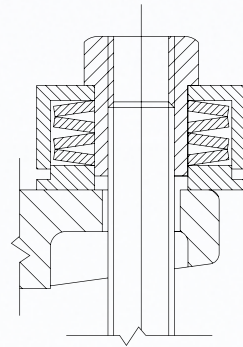
Tri-X Butterfly Valve PN 40

DN	L (Lug)	L (Wafer)	L (Flange)	A	B	W	d	G	C	L1	L2	n-e	ISO 5211	Gear unit	Weight
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm		Rotork® type	kg
80	64	64	180	250	135	100	76	138	160	92	35	8-M16	F10	242-10M/CD100	17
100	64	64	190	288	153	200	100	162	190	160	42	8-M20	F10	242-20M/SG200	22
150	76	76	210	364	196	300	150	218	250	212	55	8-M24	F12	242-30M/SG300	48
200	89	89	230	448	227	400	201	285	320	255	69	12-M27	F14	242-40M/SG400	72
250	114	114	250	532	277	500	252	345	385	275	81	12-M30	F14	242-45M/SG500	117
300	114	114	270	568	318	600	303	410	450	346	105	16-M30	F16	AB1250/SG600	160
350	127	127	290	635	363	500	334	465	510	398	130	16-M33	F25	AB1950/PR4/SG500	285
400	140	140	310	660	404	500	385	535	585	398	130	16-M36	F25	AB1950/PR4/SG500	380
450	152	152	330	682	429	500	436	560	610	410	140	20-M36	F25	AB3000/PR4/SG500	475
500	152	152	350	742	467	400	487	615	670	390	140	20-M39	F25	AB3000/PR6/SG400	655
600	178	178	390	824	532	600	589	735	795	451	182	20-M45	F30	AB6800/PR6/SG600	905

* Flange connection in accordance with EN 1092-1 Form B1

Tri-X Butterfly Valves

Special designs and accessories

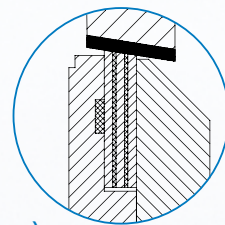


Belleville spring loaded TA-Luft gland packing

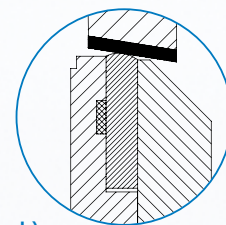
Locking device

Seal ring

Standard: Lamellar Duplex steel and graphite



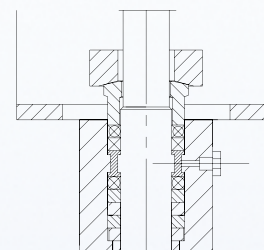
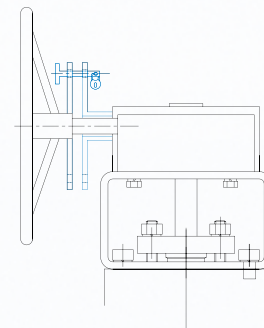
Option a):
Duplex steel and PTFE



Option b):
Solid Duplex steel seal ring

Also available:

- Remote position feedback
- Electrical, pneumatic and hydraulic actuators
- System locking with key cabinet



Seal water connection

Customer-specific solutions

Modifications and more

Thanks to our qualified employees and modern, flexible production and testing equipment, we can materialize all types of modifications on our Valves. In short: We adapt our Valves to meet the customer's requirements. The high level of quality and flexibility assure a tailor-made, reliable and finely tuned result. Special solutions / modifications include:

- > Product engineering
- > CAD development
- > Work preparation
- > Inspection and test plans
- > Production control
- > As-built documentation

Our quality management and our comprehensive range of inspection and testing devices ensure that your modified Valves conform with all applicable standards and statutory regulations. Our special solutions include:

- > Adaption and test run of actuators (electrical, pneumatic or hydraulic)
- > Installation of position indicators, locks, chain wheels, seal water connections and stem extensions
- > Special machining of welding ends
- > Production and conditioning of Valves for use in pure oxygen

In addition, we offer comprehensive, professional testing services, such as:

- > Shell, tightness and functional testing
- > Spectroscopic analysis of alloy elements (PMI test)
- > Testing of surface characteristics with magnetic particle and liquid penetrant inspection (MT & PT)
- > Volumetric testing by means of ultrasonic and X-ray (UT & RT)
- > Hardness and roughness testing on surfaces of functionally relevant components

For inspections, maintenance, repairs and other services on site, our professional service team is available to you quickly and at any time with state-of-the-art, mobile special equipment.

Product portfolio

- Design code:
DIN, AD 2000, ASME, API, BS, JIS, GOST, AFNOR
- End connections:
Flanged Ends, Butt weld Ends, Socket Weld Ends, Threaded Ends, special connections
- Certification:
ISO 9001, PED 2014/68/EU, EAC (TR-CU 032 & TR-CU 010) AD2000-HP0 / -W0, API- & ISO Industrial standards

		Nominal size			Nom. pressure		Options and variants					
		DN 15 – 50 / NPS 1/2" – 2"	DN 50 – 600 / NPS 2" – 24"	> DN 600 / NPS > 24"	PN10 – 100 / CL 150 – 600	PN160 – 640 / CL 600 – 4500	Actuated valves (Electrical, pneumatic and hydraulic) Cryo (BS6364; ISO)	Below seal: TA-Luft & DIN EN ISO 15848;; API 622	Heating jacket	Pressure seal design	Bypass	Fire-Safe (API 6FA, API 607, ISO 10497)
Gate Valves	Small Gate Valve forged	√			√	√	√	√	√			
	Gate Valve casted		√	√	√	√	√	√	√	√	√	√
	Gate Valve forged		√	√	√	√	√	√	√	√	√	
	Pipeline Through Conduit Gate Valve API 6D		√	√	√	√	√				√	
Globe Valves	Small Globe Valve forged	√	√	√	√	√	√	√	√	√	√	
	Globe Valve casted	√	√	√	√	√	√	√	√	√	√	√
	Globe Valve forged	√	√		√	√	√	√	√	√	√	
	3-way Globe Valves	√	√		√	√	√		√	√		
Check Valves	Small Check Valve forged	√			√	√						
	Check Valves wafer type	√	√		√	√			√	√		
	Swing Check Valves forged	√	√	√	√	√			√	√		
	Swing Check Valves casted	√	√	√	√	√			√			
Ball Valves	Ball Valves soft seated	√	√		√		√	√	√			√
	3-way Ball Valves	√	√		√		√	√				
	Ball Valves split body	√	√	√	√	√	√	√			√	√
	Ball Valves fully welded	√	√	√	√	√	√	√			√	√
	Ball Valves metal seated	√	√	√	√	√	√	√			√	√
	Top entry Ball Valves		√	√	√	√	√	√			√	√
Butterfly Valves	Butterfly Valve concentric	√	√	√	√		√	√	√			
	Butterfly Valve excentric		√	√	√		√	√	√			√
	Butterfly Valve triple excentric		√	√	√	√	√	√	√			√
Special Valves	Piggable Valves		√	√	√	√	√					
	Blow-down Valves	√			√	√	√					
	Nozzle-type Check Valves	√	√	√	√	√			√			
	Safety Valves	√	√	√	√	√		√	√			
	Sight Glasses	√	√	√	√				√			
	Steam Traps	√	√		√							
	Strainer	√	√	√	√	√				√		
	Control Valves	√	√	√	√	√	√	√	√			√

Warehouse, logistics, service



For Siekmann Econosto, close proximity to the customer means delivery of our products as quickly as if we were on site. Our customer specific deliveries are realized via our logistics centre in Zwenkau near Leipzig. With [one of the largest valve warehouses in Europe](#) (approx. 4,000 m²), we stock an assortment of industrial valves to match our customers' requirements.

Notes

- Material:
Non-alloy steel; highly heat-resistant steel; stainless steel; Duplex steel, Super Duplex steel; special materials (e.g. Ni-alloys; bronze)
- Areas of application:
Oil and gas; refineries and petrochemical applications; liquefied gas applications and cryogenic technology; chemical and process technology; power plants
- Specifics:
Extensive warehouse, inspection and consulting with troubleshooting with troubleshooting, development of customer-specific solutions, special valves designed and produced according to customer needs

Over 80,000 m²
of valve storage area

8,000
employees

More than 60 years
in the market



Locations
Siekmann Econosto



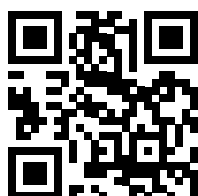
Locations of the
corporate group

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