

THE BUHLMANN EXPERTISE

MORE THAN JUST TUBES: A BROAD ASSORTMENT FOR EVERY NEED

Our range – a brief overview

Carbon steel and alloy steel

- Seamless and welded boiler tubes to DIN / EN
- Seamless tubes to ASTM / ASME
- Heat exchanger tubes
- Low-temperature steel tubes to DIN / EN / ASTM
- Seamless and welded steel pipes for the gas industry
- Commercial grade seamless and welded steel tubes
- Wharf pipes
- Chemical tubes and pipes
- MBS steel mechanical engineering tubes / swivel pipes
- Seamless hydraulic pipes
- Seamless and welded precision steel tubes
- Cylinder tubes
- Elbows to DIN / EN / ASTM
- T-pieces to DIN / EN / ASTM
- Reduction pieces to DIN / EN / ASTM
- Caps to DIN / EN / ASTM
- Fittings turned from solid steel
- Flanges to DIN / EN / ASTM

Special steel

- Seamless and welded special steel tubes to DIN / EN / ASTM
- Heat exchanger tubes
- Heat-resistant tubes to DIN / EN / ASTM
- Elbows to DIN / EN / ASTM
- T-pieces to DIN / EN / ASTM
- Reduction pieces to DIN / EN / ASTM
- Caps to DIN / EN / ASTM
- Flanges to DIN / EN / ASTM

GRP

- Glass-reinforced epoxy resin pipe systems
- Fixed, blind and loose flanges with flange sleeve
- Elbows 90°, 45°, 22 1/2° standard
- T-pieces
- Reduction T-pieces
- Weld saddles
- Centred and eccentric reduction pieces
- Saddles for locating points
- Threaded saddles

Valves and fittings

- Steel ball valves made from steel, special steel and special materials
- Non-return valves/caps made from steel, special steel, PTFE and special materials
- Bellows valves made from steel, special steel and special materials
- Condensate drains made from steel, special steel and cast iron
- Sampling valves / systems made from steel, special steel, PTFE-lined

A comprehensive listing of our products can be found in our latest product catalogues, which can be downloaded from our website at www.buhlmann-group.com or requested by post.

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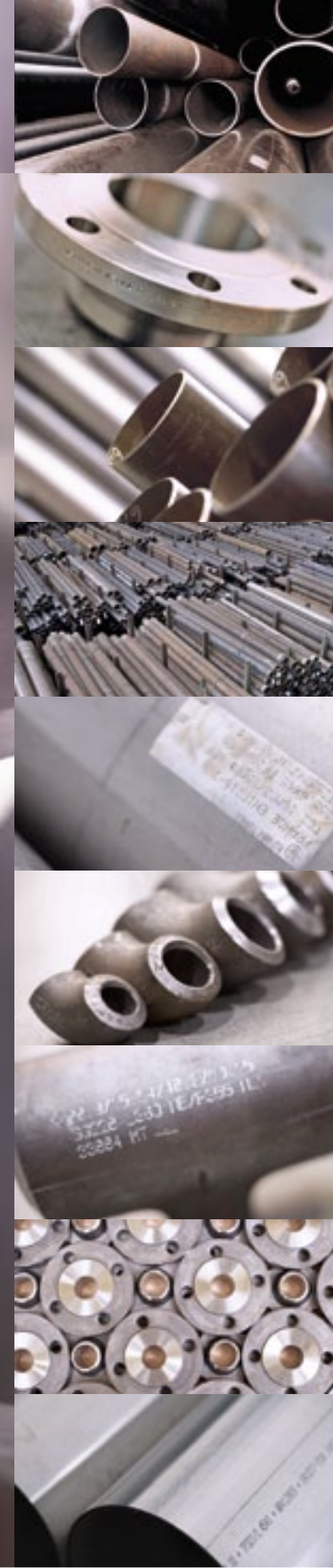
BUHLMANN TUBE SOLUTIONS

COMPANY PROFILE, SERVICES AND PRODUCTS

we know how

Power | Process | Engineering | Oil & Gas | Projects

ENG



THE BUHLMANN EXPERIENCE

MORE THAN JUST WORLDWIDE: GLOBAL COMPETENCE Our strategy – global presence ensures closeness to the customer

The BUHLMANN GROUP specializes in total solutions to pipeline, plant and power station engineering problems. As a service partner with global operations, the BUHLMANN GROUP advises and supplies companies worldwide in industries, such as energy supply, chemicals, petrochemicals, shipbuilding and mechanical engineering. At the present time, the BUHLMANN GROUP has a presence in 25 locations in 18 countries.

MORE THAN JUST TUBES: MULTIPURPOSE VARIETY Our strength – our comprehensive product portfolio

The BUHLMANN GROUP boasts an extensive, varied range of high-quality steel tubes and connection pieces. The materials employed range from plain carbon steel to high-alloy special steel. The product range is continuously expanding to meet changing demands and requirements.

MORE THAN JUST DELIVERY: EFFICIENT EXECUTION Our logistics – flexible, fast, efficient

A cost-effective, efficient warehousing and stock-holding system with our own warehouses enables the BUHLMANN GROUP to provide fast, on-demand logistics for a comprehensive “immediate delivery” range. As a powerful logistics partner, the BUHLMANN GROUP uses its own or a logistics service provider’s vehicles, depending on the destination. Deliveries are made directly to the place of use – including the construction site – in accordance with customer instructions.

The two brand lines: BUHLMANN ChemTec and BUHLMANN PowerGen, have been specifically

developed for chemical plant engineering and power station engineering and are manufactured exclusively for the BUHLMANN GROUP. These tubes and pipes can be used as delivered without the need for time-consuming supplementary test procedures – a new benefit offered only by the BUHLMANN GROUP.

MORE THAN JUST STANDARDS: INNOVATIVE SOLUTIONS Our advantage – innovative solutions that benefit customers

As a consulting partner, the BUHLMANN GROUP provides its customers with innovative solutions and versatile project management for pipeline, plant and power station engineering – from project planning, procurement management and supply logistics for the original build to procurement of spare parts. In this way, the BUHLMANN GROUP achieves optimum results in terms of level of performance and customer satisfaction – standards that are repeatedly recognized by “Best Supplier” and similar awards.



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COMPARISON TABLE FOR PIPES AND FITTINGS

Product Type	Material number	ASTM/ASME Standard	ASTM/ASME Material	EN Standard	EN short name	DIN Standard	DIN short name	API Standard	API Material
Seamless carbon steel tubes		A / SA 53 A / SA 53 T&C	Grade B Grade B, galvanized						
	1.0345			10216-2	P235GH TC 1	17175	St 35.8/I		
	1.0345			10216-2	P235GH TC 2	17175	St 35.8/III		
	1.0425	A / SA 106	Grade B	10216-2	P265GH TC 1	17175	St 45.8/I	Spec. 5 L	Grade B
				10208-2	L245 MB/NB			Spec. 5 L	Grade B
				10208-2	L360NB/MB			Spec. 5 L	Grade X 52
			10208-2	L415MB/NB/QB			Spec. 5 L	Grade X 60	
			10208-2	L485 MB			Spec. 5 L	Grade X 70	
		A / SA 106	Grade C						
Seamless pipes for low temperature services	1.0451			10216-4	P215NL TC 1	17173	TT St 35 N		
	1.0452	A / SA 333	Grade 6	10216-4	P255QL TC 1	17173	TT St 35 V		
Seamless alloy steel tubes	1.5415	A / SA 335, A / SA 209 A / SA 335, A / SA 213	Grade P 1 / T 1 Grade P 11 / T 11	10216-2	16 Mo 3	17175	15 Mo 3		
	1.7335	A / SA 335, A / SA 213	Grade P 12 / T 12	10216-2	13 CrMo 4-5	17175	13 CrMo 4 4		
	1.7380	A / SA 335, A / SA 213 A / SA 335, A / SA 213	Grade P 22 / T 22 Grade P 5 / T 5	10216-2	10 CrMo 9-10	17175	10 CrMo 9 10		
	1.6368			10216-2	15 NiCuMoNb 5-6-4	17175 / Vd TÜV 377/2	15 NiCuMoNb 5 (WB 36)		
	1.4903	A / SA 335, A / SA 213	Grade P 9 / T 9	10216-2	X10 CrMoVNb 9-1	17175 / Vd TÜV 511/2	X10 CrMoVNb 9 1		
	1.4922	A / SA 335, A / SA 213	Grade P 91 / T 91	10216-2	X20 CrMoV 11-1	17175 / Vd TÜV 110	X20 CrMoV 12 1		
	1.4915				X12CrWMoNb12-2-2	VdTÜV 560/2	VM12-SHC		
						17175 / Vd TÜV 506	15 CrMoV 510		
	1.4901	A / SA 335, A / SA 213	P 92 / T 92	10216-2	X10 CrWMoNb9-2	17175 / Vd TÜV 552/2			
Elbows, tees, reducers, caps	1.0345			10253-2	P235GH TC 1	2605 / 2615 / 2616 / 2617	St 35.8/I		
	1.0345			10253-2	P235GH TC 2	2605 / 2615 / 2616 / 2617	St 35.8/III		
				10253-2		2605	St 42.8/I		
		ANSI B 16.9 / ANSI B 16.28 ANSI B 16.9	A / SA 234 WPB A / SA 234 WPC						
	1.0451			10253-2	P215NL TC 1	2605 / 2615 / 2616 / 2617	TT St 35 N		
	1.0452	ANSI B 16.9 / ANSI B 16.28	A / SA 420 WPL 6	10253-2	P255QL TC 1	2605 / 2615 / 2616 / 2617	TT St 35 V		
	1.5415			10253-2	16 Mo 3	2605 / 2615 / 2616 / 2617	15 Mo 3		
	1.7335	ANSI B 16.9	A / SA 234 WP 11						
	1.7380	ANSI B 16.9	A / SA 234 WP 22	10253-2	13 CrMo 4-5	2605 / 2615 / 2616 / 2617	13 CrMo 4 4		
	1.4903	ANSI B 16.9	A / SA 234 WP 5	10253-2	10 CrMo 9-10	2605 / 2615 / 2616 / 2617	10 CrMo 9 10		
	ANSI B 16.9	A / SA 234 WP 91							
Welding neck flanges, blind flanges, slip-on flanges, lap-joint flanges, plain flanges	1.0460	ANSI B 16.5 / 150 lbs - 2500 lbs ANSI B 16.5 / 150 lbs - 2500 lbs	A / SA 105 A / SA 350 LF 2	1092-1	P250GH	2642 / 2576 / 2527 / 2632 - 2638 / 2628 - 2629	C 22.8		
	1.5415			1092-1	16 Mo 3	2527 / 2632 - 2638 / 2628 - 2629	15 Mo 3		
	1.7335			1092-1	13 CrMo 4-5	2527 / 2632 - 2638 / 2628 - 2629	13 CrMo 4 4		
	1.7380	ANSI B 16.5 / 150 lbs - 2500 lbs ANSI B 16.5 / 150 lbs - 2500 lbs	A / SA 182 F 22 A / SA 182 F 5	1092-1	10 CrMo 9-10	2527 / 2632 - 2638 / 2628 - 2629	10 CrMo 9 10		
	1.4903	ANSI B 16.5 / 150 lbs - 2500 lbs	A / SA 182 F 91	1092-1	X10 CrMoVNb 9-1	2527 / 2632 - 2638 / 2628 - 2629	X10 CrMoVNb 9 1		

Inspection certificates 3.1 / 3.2 in accordance with DIN EN 10204
Classification authorities: TÜV / GL / LR / DNV / ABS etc.

GAS INDUSTRY

Pipes:

- Seamless/welded line pipes acc. to EN 10208-2
- Seamless steel tubes for pressure services acc. to EN 10216-3 / EN 10217-3
- Seamless/welded line pipes to API 5 L

Fittings and flanges:

- Elbows and fittings made of material acc. to EN 10208-2 / EN 10216-3 and ASTM A 860
- Induction bending BA10/BA20
- Technical delivery conditions and dimensions acc. to DIN 2609 and ASTM A 860 / ANSI B 16.9
- Dimensions acc. to DIN 2605, 2615, 2616 and ANSI B 16.9
- Flanges acc. to DIN / EN and ANSI standards
- Material grades:
L360NB / P355NL1-NL2-NH / L415QB / L450QB / P460NL1-NH
WPHY 52 / WPHY 60 / WPL 6
P355NL1 / P250GH
F52 / LF2 / P355QH1
- Acid gas restrictions in accordance with customer's specification
- Calculation of wall thickness as per TÜV regulations
- Special components: manufactured in accordance with drawing

Inspection certificates 3.1 / 3.2 in accordance with DIN EN 10204
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COMPARISON TABLE FOR CARBON STEEL, SEAMLESS AND WELDED

Product Type	DIN Standard	EN Standard	DIN Material	EN Material
Seamless carbon steel tubes	1629	10216-1	St 37.0	P 235 TR1/TR2
	1629/17121	10210-1	St 52.0 / St 52.3	S 355 J2H
		10216-3		P 355 N
		10297-1		E 355
Welded carbon steel tubes	1626	10217-1	St 37.0	P 235 TR1/TR2
	17119/17120	10219	St 37.0	S 235 JRH
Seamless hollow bars for machining	ISO 2938		20 MN V 6	
Seamless precision steel tubes	2391	10305-1	St 35 BK	E 235 + C
			St 35 NBK	E 235 + N
Seamless hydraulic steel tubes, black / galvanized	1630/2391	10305-4	St 37.4 NBK	E 235 + N
Seamless carbon steel tubes for pressure services		10216-3		P 355 NL 1
				P 355 NH
		10217-3		P 355 N P 355 NH
Seamless carbon steel line pipe		10208-2		L 245 MB
				L 290 MB
				L 360 MB
				L 290 NB L 360 NB

Inspection certificates 3.1 / 3.2 in accordance with DIN EN 10204
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COMPARISON TABLE FOR STAINLESS STEEL PIPES AND FITTINGS

Product Type	DIN Standard	EN Standard	ASTM Standard	DIN material number	EN material number	ASTM Material	
Seamless stainless steel pipes, AD 2000-W2/-W10	17458 PK 1 + 2	10216-5 TC 1 + 2	A 312	1.4301/1.4306	1.4301/1.4306	TP304/TP304L	
	17458 PK 1 + 2	10216-5 TC 1 + 2	A 312	1.4541/1.4878	1.4541	TP321/TP321H	
	17458 PK 1 + 2	10216-5 TC 1 + 2	A 312	1.4401/1.4404	1.4401/1.4404	TP316/TP316L	
	17458 PK 1 + 2	10216-5 TC 1 + 2		1.4571	1.4571		
		10216-5 TC 1 + 2	A 312		1.4539	N08904	
		10216-5 TC 1 + 2	A 312		1.4550	TP347/TP347H	
		10216-5 TC 2	A 790		1.4462	S31803	
Welded stainless steel pipes, AD 2000-W2/-W10	17457 PK 1 + 2	10217-7 TC 1 + 2		1.4541	1.4541		
	17457 PK 1 + 2	10217-7 TC 1 + 2		1.4571	1.4571		
			A 312			TP304/TP304L	
			A 312			TP316/TP316L	
Stainless steel elbows, tees, reducers, caps	2605	10253-4		1.4541			
	2605	10253-4		1.4571			
	2615	10253-4		1.4541			
	2615	10253-4		1.4571			
	2616	10253-4		1.4541			
	2616	10253-4		1.4571			
	2617	10253-4		1.4541			
	2617	10253-4		1.4571			
		10253-4	A 403 A 403			WP304/WP304L WP316/WP316L	
Stainless steel flanges	2642	1092-1		1.4541	1.4541		
	2642	1092-1		1.4571	1.4571		
	2576	1092-1		1.4541	1.4541		
	2576	1092-1		1.4571	1.4571		
	2632 - 2638	1092-1		1.4541	1.4541		
	2632 - 2638	1092-1		1.4571	1.4571		
	2527	1092-1		1.4541	1.4541		
	2527	1092-1		1.4571	1.4571		
				A 182			F304/F304L
				A 182			F316/F316L

Inspection certificates 3.1 / 3.2 in accordance with DIN EN 10204
Classification authorities: TÜV / GL / LR / DNV / ABS etc.