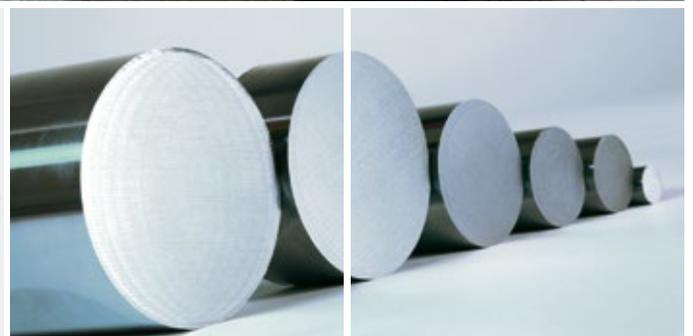


Delivery program

# Carbon steel and stainless steel tubes as well as piston products





## About us

BENTELER Distribution is one of the leading international operating stockholding and processing companies of high-quality carbon and stainless steel tubes and fittings.

You can benefit from our comprehensive knowledge of materials, state-of-the-art processing methods, and individual services. We offer competent consultancy, bundling of procurement volumes, as well as customized stocking and logistics solutions, and we can extensively support you in developing new or improving existing products and processes.

We commit ourselves to national and international quality standards, and we can serve you at about 59 locations in 24 countries with the same high level of quality, all having attained ISO 9001 approval.

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Technical consulting and development support  
Your benefits: increased product  
quality and profitability



We can take over complete production stages in order to make your production more efficient. We have the expertise, capacity and partners to provide you with the entire range of processing techniques.

## Applications engineering

Markets and industries are constantly changing and with that, the demands for the applied materials. Our proximity to the procurement and sales markets enable us to react to changing demands and utilize the potential of latest technological developments to the maximum.

## Improved profitability by means of material savings

Steel grades with an increased yield strength lead to an application with reduced wall thickness. Thus, material consumption goes down, and at the same time your overall costs.

## Utilizing weight-saving potentials by using high strength steels

Applications, for which weight reduction is the vital key requirement, require the use of technologically advanced high strength steels. This enables saving weight by up to 39%.

## Increased product reliability by means of property-optimized materials

Applications, which are exposed to extreme conditions such as very low temperatures or aggressive media, make the highest demands on the material. The selection of the appropriate material is decisive for the quality of your product.

## Fulfillment of individual high performance requirements by means of precisely designed products

In close collaboration with leading technological steel tube manufacturers, we support you in the development of individual steel tube products for specific material requirements.

## Delivery program

# Seamless precision steel tubes

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## Seamless precision steel tubes

Standard	EN 10305-1
Dimensions	4 x 0.5 mm to 200 x 10 mm
Lengths	4 to 7 m other lengths and fixed lengths on request
Delivery conditions	+C (BK) +N (NBK) +SR (BKS) other delivery conditions on request
Materials	Steel grade (EN) E235 E355 other materials on request
Certification	2.2 acc. to EN 10204 other certifications on request

## Seamless precision steel tubes for hydraulic and pneumatic lines (HPL-tubes)

Standard	EN 10305-4
Dimensions	4 x 0.5 mm to 114.3 x 20 mm also available in inch sizes
Lengths	6 m other lengths and fixed lengths on request
Delivery conditions	+N (NBK) other delivery conditions on request
Materials	Steel grade (EN) E235 E355 other materials on request
Surface treatment	bonderized and oiled, non-bonderized and oiled, outside galvanized and passivated (CR-VI-free) other surface treatment on request
Ends	tube ends closed with plugs or caps
Marking	continuous marking along the entire tube length
Certification	3.1 acc. to EN 10204 other certifications on request



## Seamless hydraulic and pneumatic line pipes – BENTELER Zista Seal®

Standard	EN 10305-4
Dimensions	4 x 0.5 mm to 42 x 6 mm
Lengths	6 m other lengths and fixed lengths on request
Delivery conditions	+N (NBK)
Materials	Steel grade (EN) E235 E355 other materials on request
Surface treatment	outside galvanized (min. 12 µm), CR-VI-free passivation, additional sealing (sealer < 5 µm) other thicknesses on request
Marking	continuous marking along the entire tube length
Certification	3.1 acc. to EN 10204 other certifications on request

## Seamless hydraulic and pneumatic line pipes – BENTELER Zistaplex®

Standard	EN 10305-4 other standards such as EN 10305-1/-2/-3 on request
Dimensions	4 x 0.5 mm to 42 x 6 mm
Lengths	6 m other lengths and fixed lengths on request
Delivery conditions	+N (NBK) other delivery conditions on request
Materials	Steel grade (EN) E235 E355 other materials on request
Surface treatment	outside galvanized (min. 8 µm), CR-VI-free passivation, additional organic coating (EPOXY ≤ 50 µm), RAL 9005, black other colors, coatings and thicknesses on request
Marking	continuous marking along the entire tube length
Certification	3.1 acc. to EN 10204 other certifications on request

The Zistaplex coating can also be used on welded tubes.

## Delivery program

# Welded precision steel tubes

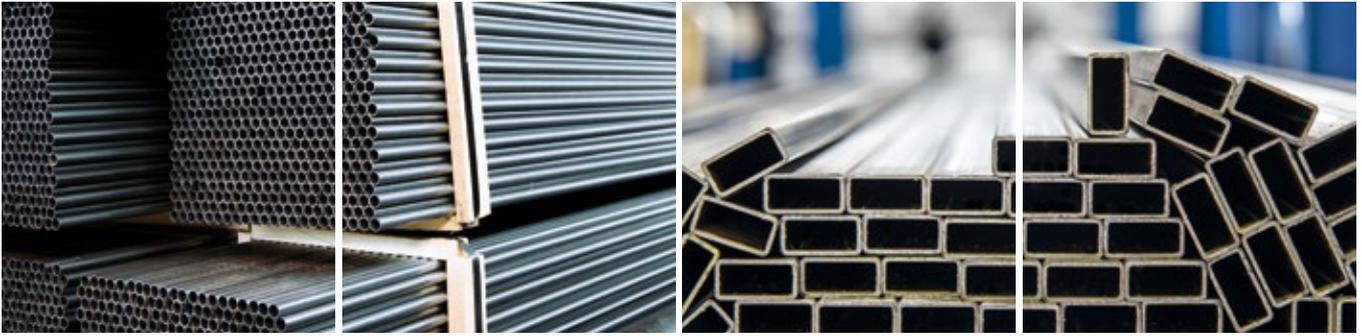
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## Welded cold drawn precision steel tubes

Standard	EN 10305-2
Dimensions	8 x 1 mm to 200 x 10 mm
Lengths	4 to 7 m other lengths and fixed lengths on request
Delivery conditions	+C (BK) +N (NBK) +A (GBK) +LC (BKW) +SR (BKS)
Materials	Steel grade (EN) E235 E355 other materials on request
Certification	2.2 acc. to EN 10204 other certifications on request

## Welded cold sized precision steel tubes

Standard	EN 10305-3
Dimensions	8 x 1 mm to 159 x 4.5 mm
Lengths	6 m other lengths and fixed lengths on request
Delivery conditions	+CR1 (BKM) +CR2 (BKM/soft) +N (NBK) other delivery conditions on request
Materials	Steel grade (EN) E190 E195 E220 E235 other materials on request
Surface treatment	cold rolled strip, pickled or unpickled hot rolled strip, aluminized, sendzimir galvanized, galvanized, hot-dip galvanized, for chrome-plating, inside welding seam removed
Certification	2.2 acc. to EN 10204 other certifications on request



## Welded cold sized precision steel tubes (square or rectangular)

Standard	EN 10305-5
Dimensions	
square	10 x 10 x 1.5 mm to 100 x 100 x 5 mm
rectangular	20 x 10 x 1.5 mm to 120 x 80 x 5 mm
Lengths	6 m other lengths and fixed lengths on request
Delivery conditions	+CR1 (BKM) +CR2 (BKM/soft) other delivery conditions on request
Materials	Steel grade (EN) E190 E195 E220 E235 E275 E355 other materials on request
Surface treatment	cold rolled strip, pickled or unpickled hot rolled strip, aluminized, sendzimir galvanized, galvanized, hot-dip galvanized, for chrome-plating, inside welding seam removed (on request positioned on the edge)
Certification	2.2 acc. to EN 10204 other certifications on request

## Delivery program

# Welded precision steel tubes

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### Welded hollow drawing precision steel tubes – BENTELER Zista 07®

Dimensions	4.0 x 0.7 to 12 x 1.8 mm
Tolerances	outside diameter $\pm 0,08$ mm wall thickness $\pm 10\%$ (except welded seam)
Lengths	6 m or on coil other lengths and fixed lengths on request
Delivery conditions	+CR1 +N (NBK) other delivery conditions on request
Materials	Steel grade (EN) E195 E235 IF25 other materials on request
Surface treatment	outside galvanized and passivated (CR-VI-free)
Testing	eddy current testing acc. to EN 10246-3, ZK E3H (only for bar lengths)
Certification	3.1 acc. to EN 10204 other certifications on request



## Welded hollow drawing precision steel tubes – BENTELER Spezial 07®

Dimensions	4.0 x 0.7 mm to 12 x 1.8 mm
Tolerances	outside diameter $\pm 0,08$ mm wall thickness $\pm 10\%$ (except welded seam)
Lengths	6 m or on coil other lengths and fixed lengths on request
Delivery conditions	+CR1 +N (NBK) other delivery conditions on request
Materials	Steel grade (EN) E195 E235 IF25 other materials on request
Surface treatment	bright
Testing	eddy current testing acc. to EN 10246-3, ZK E3H (only for bar lengths)
Certification	3.1 acc. to EN 10204 other certifications on request

## Delivery program

# Cylinder tubes

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### Welded cold-drawn cylinder tubes with ready-to-use inside surface (HPS)

Standard	EN 10305-2
Dimensions	30 x 5 mm to 140 x 7.5 mm
Tolerances	outside diameter acc. to EN 10305-2 inside diameter acc. to H9, ISO 286 part 2
Lengths	5 to 7 m other lengths and fixed lengths on request
Delivery conditions	+C (BK)
Materials	Steel grade (EN) E355 other materials on request
Surface roughness (inside)	Ra max. 0.8 µm, exceptions admitted up to 1 µm
Testing	Eddy current testing acc. to ISO 10893-10
Certification	3.1 acc. to EN 10204 other certifications on request

### Seamless cold-drawn precision steel tubes for the production of piston tubes

Standard	EN 10305-1
Dimensions	35 x 3.5 mm to 300 x 25 mm
Tolerances	outside diameter acc. to customer specifications
Delivery conditions	+C (BK) cold finished, hard +SR (BKS) cold finished and stress-relief annealed +N (NBK) normal annealed
Materials	Steel grade (EN) E355 other materials on request
Certification	3.1 acc. to EN 10204 other certifications on request



## Honed or skived and roller burnished cylinder tubes

Standard	EN 10305-1/-2
Dimensions	30 x 5 mm to 300 x 25 mm also available in inch sizes
Tolerances	outside diameter acc. to EN 10305-1/-2 inside diameter acc. to H8, ISO 286 part 2
Lengths	5 to 8 m other lengths and fixed lengths on request
Delivery conditions	+SR (BKS)
Materials	Steel grade (EN) E355 other materials on request
Surface roughness (inside)	Ra max. 0.3 µm acc. to EN ISO 4287
Certification	3.1 acc. to EN 10204 other certifications on request

## Cylinder tubes suitable for honing or skiving and roller burnishing

Standard	EN 10305-1/-2
Dimensions	30 x 5 mm to 300 x 25 mm
Tolerances	outside diameter acc. to EN 10305-1/-2
Delivery conditions	+ SR (BKS)
Materials	Steel grade (EN) E 355 other materials on request
Surface treatment	inside suitable for honing or skiving and roller burnishing
Certification	3.1 acc. to EN 10204 other certifications on request

## Delivery program

# Piston tubes and bars

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### Hard chromed bars for piston rod applications

Dimensions	outside diameter 8 to 200 mm	
Tolerances	outside diameter 8 to 16 mm acc. to f8 outside diameter 18 to 200 mm acc. to f7 other tolerances on request	
Materials	Steel grade (EN)	Material number
	C45E	1.1191*
	20MnV6 (E470)	1.5217
	42CrMo4+QT	1.7225*
	X17CrNi16-2	1.4057
	X2CrNiMoN22-5-3	1.4462
		other materials on request *also induction hardened
Surface	chromed double chromed and NICROM (nickel/chrome) on request Ra max. 0.25 µm	
Chrome		
thickness	min. 15 µm for tubes with an outside diameter of 8 to 18 mm min. 20 µm for tubes with an outside diameter of 20 to 250 mm	
micro hardness	min. 850 HV 0.1	
Corrosion resistance	min. 200 h in NSS rating 9	
Testing	corrosion testing acc. to ISO 9227	
Certification	3.1 acc. to EN 10204 other certifications on request	



## Hard chromed piston tubes

Standard	EN 10305-1
Dimensions	16 x 3 mm to 140 x 10 mm
Tolerances	outside diameter acc. to f7
Delivery conditions	+C (BK) cold finished, hard +SR cold finished and stress-relief annealed +N normal annealed
Materials	Steel grade (EN) E355 other materials on request
Surface	chromed double chromed and NICROM (nickel/chrome) on request Ra max. 0.25 µm
Chrome	
thickness	min. 20 µm
micro hardness	min. 850 HV 0.1
Corrosion resistance	min. 120 h in NSS rating 9
Testing	corrosion testing acc. to ISO 9227
Certification	3.1 acc. to EN 10204 other certifications on request

## Delivery program

# Heavy, standard wall and mechanical tubes

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### Seamless hot rolled tubes for steel constructions

Standard	EN 10210-1/-2	
Dimensions	10.2 x 1.6 mm to 711 x 100 mm other dimensions on request	
Lengths	4 to 15 m other lengths and fixed lengths on request	
Materials	Material number	Steel grade (EN)
	1.0576	S355 J2H
	1.0539	S355 NH
	other materials on request	
Marking	manufacturer stamp, EN standard, material, delivery condition, size, heat number or identification number	
Testing	on request	
Certification	3.1 acc. to EN 10204 other certifications on request	

### Seamless hot rolled tubes for pressure requirements

Standard (part 1)	EN 10216-1	
Dimensions	10.2 x 1.6 mm to 711 x 14.2 mm other dimensions on request	
Lengths	4 to 15 m other lengths and fixed lengths on request	
Materials	Material number	Steel grade (EN)
	1.0254	P235 TR 2
	1.0258	P265 TR 1
	other materials on request	
Standard (part 3)	EN 10216-3	
Dimensions	10.2 x 1.6 mm to 711 x 100 mm other dimensions on request	
Lengths	4 to 15 m other lengths and fixed lengths on request	
Materials	Material number	Steel grade (EN)
	1.0562	P355 N TC1 (usually in combination with E355 N and S355 J2H)
	other materials on request	
Marking	manufacturer stamp, EN standard, material, delivery condition, size, heat number or identification number	
Certification	3.1 acc. to EN 10204, other certifications on request	



## Seamless hot rolled tubes for mechanical engineering

Standard	EN 10297-1	
Dimensions	10.2 x 1.6 mm to 711 x 100 mm other dimensions on request	
Lengths	4 to 15 m other lengths and fixed lengths on request	
Delivery conditions	+AR +N other delivery conditions on request	
Materials	Material number	Steel grade (EN)
	1.0308	E235
	1.0580	E355
	1.0536	E470
	1.5217	20MnV6
	other materials on request	
Marking	manufacturer stamp, EN standard, material, delivery condition, size, heat number or identification number	
Testing	water pressure testing or leak testing acc. to EN ISO 10893-1 other testing on request	
Certification	3.1 acc. to EN 10204 other certifications on request	

## Seamless steel tubes for machining

Standard	EN 10294-1	
Dimensions	30 x 20 mm to 250 x 120 mm other dimensions on request	
Lengths	4 to 8 m other lengths and fixed lengths on request	
Materials	Material number	Steel grade (EN)
	1.0580	E355
	1.0592	E355 J2
	1.0599	E420 J2
	1.0536	E470
	1.0644	E590 K2
	other materials on request	
Marking	manufacturer stamp, EN standard, material, delivery condition, size, heat number or identification number	
Testing	on request	
Certification	3.1 acc. to EN 10204 other certifications on request	

## Delivery program

# Hollow sections

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### Welded cold formed hollow sections for constructions

Standard	EN 10219-1/-2	
Dimensions		
round	26.9 x 2.6 mm to 1,219 x 25 mm	
square	25 x 25 x 3 mm to 500 x 500 x 20 mm	
rectangular	40 x 30 x 3 mm to 600 x 400 x 20 mm	
Lengths	6 to 15 m, special lengths up to 18 m, single lengths up to 24 m other lengths and fixed lengths on request	
Materials	Material number	Steel grade (EN)
unannealed steel	1.0039	S235 JRH
	1.0149	S275 J0H
	1.0138	S275 J2H
	1.0547	S355 J0H
	1.0576	S355 J2H
fine grain steel	materials on request	
Marking	manufacturer stamp, EN standard, material, size, heat number or identification number	
Certification	3.1 acc. to EN 10204 other certifications on request	



## Hot formed hollow sections in seamless and welded for steel constructions

<b>Standard</b>	EN 10210-1/-2	
<b>Dimensions</b>		
<b>round</b>	21.3 x 2.3 mm to 1,219 x 100 mm	
<b>square</b>	40 x 40 x 2.9 mm to 400 x 400 x 20 mm	
<b>rectangular</b>	50 x 30 x 2.9 mm to 500 x 300 x 20 mm	
<b>Delivery conditions</b>	hot or cold formed with a following suitable heat treatment	
<b>Materials</b>	<b>Material number</b>	<b>Steel grade (EN)</b>
<b>non-alloy steel</b>	1.0039	S235 JRH
	1.0576	S355 J2H
	1.0539	S355 NH
<b>fine grain steel</b>	materials on request	
<b>Marking</b>	manufacturer stamp, EN standard, material, size, heat number or identification number	
<b>Certification</b>	3.1 acc. to EN 10204 other certifications on request	

## Delivery program

# Stainless steel tubes

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### Seamless stainless instrumentation tubes

Standard	EN 10216-5 TC1 resp. TC2, AD2000-W2 Einbaurohre resp. no Einbaurohre, ADW10, ASTM A 312, ASME SA 312, NACE MR 0175/ISO 15156-3	
Dimensions	4 x 0.5 mm to 42 x 3 mm other dimensions on request	
Tolerances	acc. to EN 10305-1 and ASTM A 269/999 (for O.D. ≤ 30 mm)	
Lengths	5 to 7 m other lengths and fixed lengths on request	
Delivery conditions	cold finished, bright annealed or pickled	
Materials	Material number	Steel grade (ASTM/ASME/AISI)
	1.4301/06	TP 304/304L
	1.4404	TP 316L
	1.4541	TP 321
	1.4571	TP 316Ti / UNS S31635
Certification	3.1 or 3.2 (in case of AD2000-W2) acc. to EN 10204	

### Seamless stainless tubes, cold finished

Standard	EN 10216-5 TC1 resp. TC2, AD2000-W2 Einbaurohre resp. no Einbaurohre, ADW10, ASTM A 312, ASME SA 312, NACE MR 0175/ISO 15156-3	
Dimensions	12.7 x 2.11 to 139.7 x 4 mm other dimensions on request	
Tolerances	acc. to EN ISO 1127D3/T3 and ASTM A 312	
Lengths	5 to 7 m other lengths and fixed lengths on request	
Delivery conditions	cold finished, bright annealed or annealed and pickled	
Materials	Material number	Steel grade (ASTM/ASME/AISI)
	1.4301/06	TP 304/304L
	1.4404	TP 316L
	1.4541	TP 321
	1.4571	TP 316Ti / UNS S31635
Certification	3.1 or 3.2 (in case of AD2000-W2) acc. to EN 10204	

Fittings and flanges available on request.



## Seamless stainless tubes, hot finished

<b>Standard</b>	EN 10216-5 TC1 resp. TC2, AD2000-W2 Einbaurohre resp. no Einbaurohre, ADW10, ASTM A 312, ASME SA 312, NACE MR 0175/ISO 15156-3	
<b>Dimensions</b>	33.4 x 6.35 mm to 323.9 x 9.52 mm other dimensions on request	
<b>Tolerances</b>	acc. to EN ISO 1127 D2/T1 or D2/T2 and ASTM A 312	
<b>Lengths</b>	5 to 7 m (if technically feasible) other lengths and fixed lengths on request	
<b>Delivery conditions</b>	hot finished, annealed and pickled	
<b>Materials</b>	Material number	Steel grade (ASTM/ASME/AISI)
	1.4301/06	TP 304/304L
	1.4404	TP 316L
	1.4541	TP 321
	1.4571	TP 316Ti / UNS S 31635
<b>Certification</b>	3.1 or 3.2 (in case of AD2000-W2) acc. to EN 10204	

Fittings and flanges available on request.

## Delivery program

# Stainless steel tubes

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### Welded stainless decoration tubes

Standard	EN 10296-2	
Dimensions	10 x 1 mm to 300 x 4 mm other dimensions on request	
Tolerances	acc. to EN ISO 1127 or ASTM A 269/999, D4/T3 or D3/T3 or D2/T2	
Lengths	5 to 7 m other lengths and fixed lengths on request	
Delivery conditions	metallically bright or polished 240/320	
Materials	Material number	Steel grade (ASTM/ASME/AISI)
	1.4301	TP 304
Certification	2.2 or 3.1 acc. to EN 10204	

### Welded square and rectangular tubes

Standard	EN 10296-2	
Dimensions	10 x 10 x 1 mm to 200 x 200 x 6 mm 20 x 10 x 1.2 mm to 250 x 150 x 4 mm other dimensions on request	
Tolerances	acc. to EN ISO 1127 or ASTM A 269/999	
Lengths	5 to 7 m other lengths and fixed lengths on request	
Delivery conditions	metallically bright or polished 240	
Materials	Material number	Steel grade (ASTM/ASME/AISI)
	1.4301	TP 304
	1.4571	TP 316Ti
Certification	2.2 or 3.1 acc. to EN 10204	



## Welded stainless process tubes

Standard	EN 10217-7 and ASTM A 312	
Dimensions	12 x 1.5 mm to 609.6 x 4 mm other dimensions on request	
Tolerances	acc. to EN ISO 1127 or ASTM A 269/999	
Lengths	5 to 7 m other lengths and fixed lengths on request	
Delivery conditions	not annealed, metallicly bright, pickled, brushed	
Materials	Material number	Steel grade (ASTM/ASME/AISI)
	1.4301	TP 304
	1.4404	TP 316L
	1.4541	TP 321
	1.4571	TP 316Ti
Certification	3.1 acc. to EN 10204, TC 1/2	

## Welded stainless process tubes

Standard	EN 10217-7 and ASTM A 312	
Dimensions	8 x 1.5 mm to 114.3 x 3.6 mm other dimensions on request	
Tolerances	acc. to EN ISO 1127 or ASTM A 269/999, D3/T3, D4/T3	
Lengths	5 to 7 m other lengths and fixed lengths on request	
Delivery conditions	annealed, metallicly bright, pickled	
Materials	Material number	Steel grade (ASTM/ASME/AISI)
	1.4301	TP 304
	1.4404	TP 316L
	1.4541	TP 321
	1.4571	TP 316Ti
Certification	3.1 acc. to EN 10204, TC 1/2	

Fittings and flanges available on request.

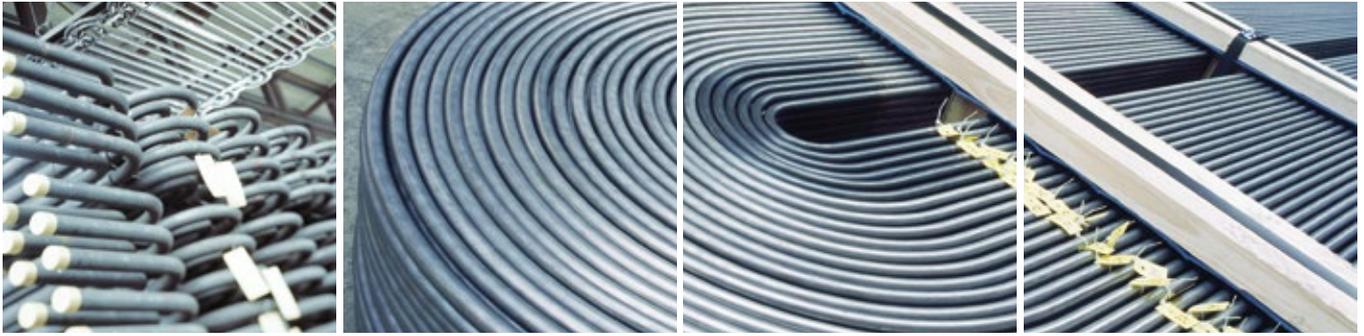
## Delivery program

# Boiler and heat exchanger tubes

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## Seamless boiler tubes

Standard	EN 10216-2 other standards on request		
Dimensions	13.5 x 1.8 mm to 610 x 30 mm other dimensions on request		
Tolerances	outside diameter and wall thickness acc. to EN 10216-2		
Lengths	5 to 7 m, partly 10 to 14 m other lengths and fixed lengths on request		
Materials	Steel grade (EN)	Steel grade (JIS)	Steel grade (ASTM/ASME)
	P235 GH TC 1	ST B 340	A/SA 192
	P235 GH TC 2	ST B 410	A/SA 210
	16Mo3	ST B 510	A/SA 213
	13CrMo4-5	ST BA 12	T5, T11, T12, T22, T91
	10CrMo9-10	ST BA 22 ST BA 24	
	other materials on request		
Surface protection	on request		
Marking	manufacturer stamp, EN standard, material, size, heat number or identification number, if applicable test category and tube number (depending on material)		
Leak testing	water pressure or electromagnetic testing acc. to EN 10246-1 (SEP 1925) other testing on request		
Certification	3.1 acc. to EN 10204 3.2 acc. to EN 10204 for alloyed boiler tubes		



## Seamless heat exchanger tubes

<b>Standard</b>	
metric dimensions	EN 10216-2, tolerances acc. to EN 10305
inch dimensions	ASTM A 179M-1990a, ASME SA 179M, ASME Section II part A
<b>Dimensions</b>	
metric dimensions	10 x 1 mm to 30 x 2.5 mm
inch dimensions	19.05 x 1.65 mm to 25.4 x 3.4 mm other dimensions on request
<b>Lengths</b>	
	lengths and fixed lengths on request
<b>Materials</b>	
metric dimensions	Steel grade (EN) P235 GH TC 1      Steel grade (ASTM/ASME) SA 556 C 2
inch dimensions	P235 GH TC 1      A 179/SA 179
	other materials on request
<b>Marking</b>	
	manufacturer stamp, material, size, heat number or identification number
<b>Leak testing</b>	
metric dimensions	electromagnetic testing acc. to EN 10246-1 (SEP 1925)
inch dimensions	electromagnetic testing acc. to ASME SA 450, test hole 0.8 mm
<b>Certification</b>	
	3.1 acc. to EN 10204 other certifications on request

## U-bent tubes

<b>Standard</b>	
metric dimensions	EN 10216-2, tolerances acc. to EN 10305
inch dimensions	ASME SA 556 C 2 ASTM A 179M 1990a, ASME SA 179M, ASME Section II part A
<b>Dimensions</b>	
metric dimensions	10 x 1 mm to 30 x 2.5 mm
inch dimensions	19.05 x 1.65 mm to 25.4 x 3.4 mm
<b>Tolerances</b>	
metric dimensions	acc. to EN 10305-1
inch dimensions	outside diameter acc. to EN 10305-1 wall thickness 0/+20 % (SA 556M)
<b>Materials</b>	
metric dimensions	Steel grade (EN) P235 GH TC 1      Steel grade (ASTM/ASME) SA 556 C 2
inch dimensions	P235 GH TC 1      A 179/SA 179
	other materials on request
<b>Certification</b>	
	3.1 acc. to EN 10204 other certifications on request

# Delivery program

## Press fitting system PreFiS-XL

### Advantages

<p><b>More safety</b> Safe installation as no welding is needed</p>	<p><b>More convenience</b> Easy installation with the help of a handy press tool and a high pressure pump</p>	<p><b>More quality</b> High reliability and resistance to high pressures, temperatures and chemicals</p>
<p><b>Less effort</b> No additional preparation and no reworking required</p>	<p><b>Less time</b> Installation within a few seconds</p>	<p><b>Lower costs</b> No expenditure for safety measures or X-ray controls necessary</p>

### Fitting specifications

#### Materials

carbon steels	body: 1.0570 press ring sets: 42CrMo4 (1.7225, 1.7227)
stainless steels	body: 1.4404, 1.4571 press ring sets: 42CrMo4 (1.7225, 1.7227)

#### Outside pipe diameter (acc. to DIN/EN and ASTM)

carbon steels	10.0 – 88.9 mm
stainless steels	10.0 – 76.1 mm

#### Temperatures

-55°C – 400°C (depending on approval)

#### Pressures

carbon steels	up to 630 bar operating pressure
stainless steels	up to 260 bar operating pressure

#### Coating

carbon steels	body and press ring sets: zinc-nickel 6–16 µm
stainless steels	press ring sets: zinc-nickel 6–16 µm

### Certificates

<p><b>Det Norske Veritas (DNV):</b> Type Approval Certification No. P-14208</p>	<p><b>Bureau Veritas (BV):</b> Type Approval Certification No. 33955/A0 BV</p>	<p><b>Germanischer Lloyd (GL):</b> Type Approval Certification No. 43 340 – 02 HH</p>
<p><b>Deutscher TÜV:</b> Certification No. 922/915-011087</p>	<p><b>Lloyd's Register (LR):</b> Type Approval Certification No. 01/20024 (E4) PED Certification No. 50223/1</p>	<p><b>American Bureau of Shipping &amp; Affiliated Companies (ABS):</b> Type Approval Certification No. 13-HG994027-PDA</p>
<p><b>Wehrtechnische Dienststelle für Schiffe und Marinewaffen (WTD71):</b> Test report WTA 91317</p>		



## Pipe specifications

Pipe outside diameter		Wall thickness			
mm	inch (ASME/ASA pipe schedule)	Pipe mm (min.)	Pipe mm (max.) <sup>1</sup>	Pipe mm (max.) <sup>2</sup>	Pipe mm (max.) <sup>3</sup>
10.0	-	0.8	1.5	2.0	2.0
10.3	1/8"				
12.0	-				
13.7	1/4"	1.0			
15.0	-				
16.0	-				
17.1	3/8"				
17.2	-				
18.0	-				
20.0	-	1.6	2.6	4.0	3.2
21.3	1/2"				
22.0	-				
25.0	-				
26.7	3/4"				
26.9	-				
28.0	-				
30.0	-	1.6	3.6	4.5	3.6
33.4	1"				
33.7	-				
35.0	-				
38.0	-				
42.0	-	1.6	3.6	5.0	4.0
42.2	1 1/4"				
42.4	-				
48.3	1 1/2"				
54.0	-	1.8	4.0	5.0	4.0
60.3	2"	2.0	4.0	5.0	4.0
73.0	2 1/2"	2.0	4.0	5.6	4.5
76.1	-				
88.9	3"	2.0	4.0	5.6	4.5

<sup>1</sup> acc. to type approval shipbuilding for stainless steel pipes

<sup>2</sup> acc. to type approval shipbuilding for steel pipes with  $Rp_{0.2} < 350 \text{ N/mm}^2$

<sup>3</sup> acc. to type approval shipbuilding for steel pipes with  $Rp_{0.2} > 350 \text{ N/mm}^2$

Errors and technical modifications reserved.

## Additional services

# Our contribution to strengthen your competitiveness

### Technical consulting and development support

Our proximity to the procurement and sales markets enables us to react to changing demands and utilize the potential of latest technological developments. We give you advice in all questions regarding material selection and the optimum adjustment of product properties. The right material will help you to increase your product reliability and quality and to improve your profitability by means of material and weight savings. We can also support you in the development of individual steel tube products for specific requirements.

### Partner for logistic challenges

We use modern and automated storage technologies and packaging systems and we consistently work on minimizing the processing times from order receipt until shipment of the goods. We make sure that your production process continues to run smoothly with production-synchronous delivery concepts such as Just-in-Time (JIT), Just-in-Sequence (JIS), Kanban or express deliveries and on request, we operate integrated consignments at your production facilities. These concepts help to reduce your material in stock and free up valuable capital.

### Worldwide logistics capacities

We offer our support for complex global procurement and supply requirements. We provide you with access to leading steel tube suppliers and to a worldwide expert and distribution network. We take care of the optimum selection of the steel tube production facility and negotiate all parameters defining the basic framework and order. We only work with certified partners and we personally assure ourselves of potential suppliers' performance at the production facilities. You receive your merchandise on schedule and furnished with all necessary customs and shipping documents.

### Global account management

Companies with production facilities in more than one country benefit from our integrated global account management approach. By working with a main supplier, you not only lower your administrative and financial costs but also increase your local quality level. We provide your central purchasing department with a contact person for the negotiation of all international contractual parameters and we provide you with a competent and efficient business associate on location for all operational matters.



We offer you additional services in order to strengthen your competitiveness. We help you to improve the performance and profitability of your products and to increase the efficiency of your business processes.



# Locations worldwide







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Find your local contact at [www.benteler-distribution.com](http://www.benteler-distribution.com)

