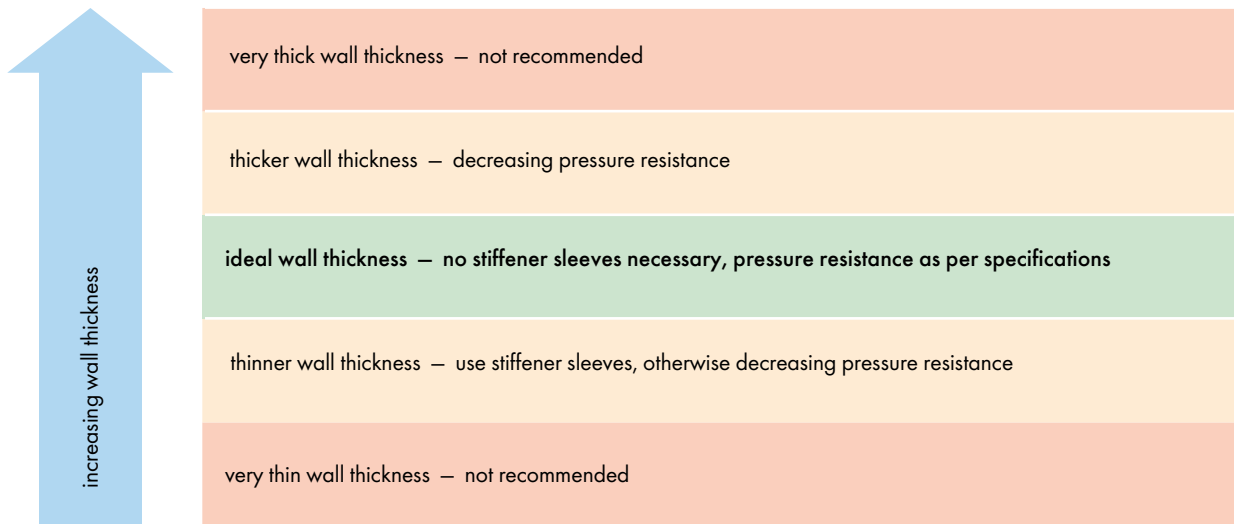


Tubes and stiffener sleeves Use of stiffener sleeves



Copper tubes

Seamless copper tubes (esp. EN 12449/1057) with clean smooth surface. Tolerance of outside diameter ± 0.1 mm.

Recommended wall thickness for use **without** stiffener sleeves:

for brass M unions		
Dimension	[bar]	recommended wall thickness [mm]
2	125	0.5
3	125	0.5
4	125	0.5
5	125	0.5
6	250	1.0
8	150	1.0
10	125	1.5
12	100	1.5
13	40	1.5
14	40	1.5
15	40	1.5
16	40	1.5
17	40	1.5
18	40	1.5
22	25	1.5
28	16	2.0
35	16	2.5
3.2	125	0.6
6.35	100	0.8
9.52	64	0.8
12.7	40	1.0

for brass G unions		
Dimension	[bar]	recommended wall thickness [mm]
4	125	1.0
5	125	1.0
6	125	1.0
8	125	1.0
10	100	1.5
12	100	1.5
14	64	1.5
15	64	1.5
6.35	100	0.8
9.52	100	0.8
12.7	100	1.0

Stainless steel tubes

Material

- stainless steel 1.4571 or 1.4301 according to EN 10305-1 / EN 10216-5 / ISO 1127

Type

- seamless, cold finished, bright, annealed, state of delivery CFA, according to DIN EN 10216-5

Wall thickness

- EN 10305-1, option 10 (outer Ø according to table 5)
- ISO 1127 (tolerance classes D4/T4)

Recommended wall thickness for use **without** stiffener sleeves:

for inox SO unions

Dimension	[bar]	recommended wall thickness [mm]
2	250	0.5
3	250	0.75
4	250	1.0
5	250	1.0
6	200	1.0
8	200	1.0
10	160	1.0
12	160	1.5
15	100	1.5
18	100	1.5
22	64	1.5
28	40	2.0
3.2	250	0.6
6.35	200	0.8
7.94	200	0.8
9.52	160	0.8
12.7	160	1.65

Surface finish

- non-scaling
- no surface damage (careful handling is essential!)
- tubes must be free of grooves

Hardness

- Vickers hardness 155-178 HV
- suitable for bending

for inox SOL unions

Dimension	[bar]	recommended wall thickness [mm]
6	400	1.0
8	330	1.0
10	330	1.5
12	330	2.0
15	250	2.0
16	250	2.0
18	200	2.0
6.35	400	0.84
9.52	330	1.65
12.7	330	1.65

Technical information

Steel tubes

Seamless precision steel tubing conforming to EN 10305-1 of St 35.4, normalized bright annealed with bright or rust preventative bonded finish.

Recommended wall thickness for use **without** stiffener sleeves:

for steel unions		
Dimension	[bar]	recommended wall thickness [mm]
6	400	1.0
8	300	1.5
10	250	1.5
12	250	2.0
14	250	2.0
15	200	2.0
16	200	2.0
18	200	2.0
20	200	2.5
22	160	2.5
25	160	3.0
28	160	3.5
30	160	3.5

Aluminium tubes

Drawn tubes with diameter tolerances according to DIN EN 754-7 (seamless drawn tubes), or 754-8 (not seamlessly drawn). Pressed (not drawn) tubes may also be used. However the external diameter must be within the tolerance range of DIN EN 754.

Recommended wall thickness for use **without** stiffener sleeves:

for aluminium unions		
Dimension	[bar]	recommended wall thickness [mm]
8	125	1.0
12	100	1.5
15	50	1.5
18	50	1.5
28	25	2.0

Technical information

Tubes (general)

Handling

- do not grind tubes on hard surfaces (e.g. cement, asphalt, gravel or metals)
- protect tube ends during transport and handling (with plastic caps, adhesive tape, etc.)
- lift tubes carefully out of case
- use only sharp tube cutters or hack saws and avoid cutting too deep in one turn
- always debur tube ends inside and out
- contamination and shavings can cause damage in the system and lead to leakage

Other version

Ask us about welded tubes, we will be happy to advise you.

Plastic tubes

Plastic tubing with an outside diameter tolerance of ± 0.1 mm can also be connected with SERTO unions. Plastic tubes must always be reinforced with stiffener sleeves. (e.g. PA: see DIN 73378)

Combination possibilities Unions / Tubes

		Material of union						
		Inox	Aluminium	Messing Laiton Brass	Messing CV Laiton CV Brass CV	Stahl Acier Steel	PVDF	PA
Tube material	Inox	✓	✗	(✓)	✓	(✓)	(✓)	✗
	Aluminium	(✓)	✓	(✓)	(✓)	✗	✗	✗
	Kupfer / Cuivre / Copper	(✓)	(✓)	✓	(✓)	(✓)	✗	✗
	Messing / Laiton / Brass	(✓)	(✓)	✓	(✓)	(✓)	✗	✗
	Stahl / Acier / Steel	(✓)	✗	(✓)	(✓)	✓	✗	✗
	PVDF	✓	✓	✓	✓	✗	✓	(✓)
	PTFE	✓	✓	✓	✓	✗	✓	(✓)
	PFA	✓	✓	✓	✓	✗	✓	(✓)
	FEP	✓	✓	✓	✓	✗	✓	(✓)
	PA	✓	✓	✓	✓	✗	(✓)	✓
	PE	✓	✓	✓	✓	✗	(✓)	✓
	PU	✓	✓	✓	✓	✗	(✓)	✓
	SERTOflex	✓	✓	✓	✓	✗	✗	✗

- ✓ sinnvolle Kombinationen
- (✓) mögliche, jedoch nicht sinnvolle Kombinationen
- ✗ Kombinationen nicht möglich oder nicht zu empfehlen

- ✓ combinaisons appropriées
- (✓) combinaisons possibles, mais pas appropriées
- ✗ combinaisons pas possibles ou pas recommandées

- ✓ appropriate combinations
- (✓) combinations possible, but not appropriate
- ✗ combinations not possible or not recommended