Datasheet:

EN 1.4404/316L – Austenite Welded Reducer Tubes - Stainless Steel

Concentric & Eccentric

Alumeco ApS
15-08-2025

Internal alloy name:	**1.4404**
Alloy type:	**Acid-resistance Austenite**
Chemical Symbol:	**X2CrNiMo17-12-2**
EN:	**EN 1.4404**
AISI:	**316L**
UNS:	**S31603**
SS:	**2348**
JIS:	**SUS316L**
GB:	**S31603**

Main usage:

- Food processing industry
- Petrochemical equipment
- Chemical and pharmaceutical industry
- Construction sector
- Automotive and aerospace industry
- Electronical equipment

Main properties:

- Great weldability
- High corrosion resistance to non-oxidising acids and chlorine-containing materials
- Good formability, both cold and hot
- Higher thermal expansion and lower heat conductivity compared to other carbon steels

Important norms and literature:

General Standards
EN 10088-1: List of stainless Steel

Product standards:
EN 10253-4A: Butt-welding pipe fittings - Part 4: Wrought austenitic and austenitic-ferritic (duplex) stainless steels with specific inspection requirements

Tolerances:
EN 10253-4A: Butt-welding pipe fittings - Part 4: Wrought austenitic and austenitic-ferritic (duplex) stainless steels with specific inspection requirements

Chemical composition in %: EN 10088-1

C	Si	Mn	P	S	Cr	Mo	Ni	Remarks	Rest
≤ 0,030	≤ 1,00	≤ 2,00	≤ 0,045	≤ 0,030*	16,5-18,5	2,0-2,5	10,0-13,0	N ≤ 0,10	Fe

*** For machinability, a controlled sulfur content of 0,015%-0,030% is recommended & permitted. For weldability a controlled sulfur content of 0,008%- 0,030% is recommended & permitted. For polishability, a controlled sulfur content of 0,015% is recommended.**

Mechanical properties: EN 10253-4A

Hardness* HB	Tensile properties at room temperature: Proof strength Min. MPa $R_{p0,2}$	Proof strength Min. MPa $R_{p1,0}$	Tensile strength R_m MPa	Elongation Min. A% *l*	Elongation Min. A% *t*	Reference heat treatment conditions Solution temp. °C	Resistance to intergranular corrosion	Limit temp. °C
Max. 215	190	225	490 – 700	40	30	1020 – 1120	Yes	400

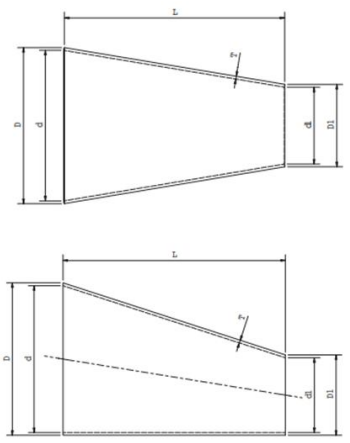
*** Information values only;**

Physical properties:

Density g/cm³	Electrical resistivity Ω mm² / m	Thermal conductivity W/m K	Thermal expansion (µm m^{-1} K^{-1})	Specific heat (J kg^{-1} K^{-1})	E - modulus (N / mm²)	Magnetizable	PREN (Min.)
8,0	0,75	15	16,0	500	200.000	No	16,5

Product Overview:

Material nr. Concentric	Material nr. Eccentric	DN	Diameter D	Diameter D_1	Thickness T (mm)	Length L (mm)	Weight (kg)
1358544	1358527	15x10	21,3	17,2	2,00	12	0,01
1333146	1358552	20x15	26,9	21,3	2,00	17	0,02
1333512	1358554	25x20	33,7	26,9	2,00	20	0,03
1333569	1358556	32x25	42,4	33,7	2,00	26	0,05
1333597	1358558	40x42	48,3	42,4	2,00	18	0,04
1333867	1358560	50x40	60,3	48,3	2,00	36	0,10
1333875	1358563	65x50	76,1	60,3	2,00	47	0,16
1358548	1358569	80x65	88,9	76,1	2,00	38	0,16
1358551	1358570	100x80	114,3	88,9	2,00	76	0,39
1358553	1358572	125x100	139,7	114,3	2,00	76	0,48
1358557	1358573	150x125	168,3	139,7	2,00	85	0,66
1358559	1358574	200x150	219,1	168,3	2,00	152	1,47
1358561	1358575	250x200	273,0	219,1	3,00	161	2,97
1358564	1358576	300x250	323,9	273,0	3,00	152	3,40
1358567	1358577	350x300	355,6	323,9	3,00	95	2,41
1358568	1358578	400x350	406,4	355,6	3,00	152	4,34



Tolerances for welded stainless steel reducers for EN 1.4404:

Tolerances on outside diameter

The relevant outside diameters (D-D_1) shall be measured at the welding ends of the fittings.
The tolerance is a follows:

- ±1% or ±0,5 mm, whichever is the greater, but maximum ±5 mm.

* Values are referred from Section 11.2.1 of EN 10253-4:2025

Tolerances on roundness

At the welding ends:

- D ≤ 406,4 is included in the diameter tolerance
- D > 406,4 and D/T ≤ 100, then O_v ≤ 2%

For fittings with a D/T ratio > 100 the values for out-of-roundness shall be agreed at the time of enquiry and order.
On the body for elbows and return bends: ≤ 4%.
The out of roundness shal be calculated as follows:

- $O_v = 100 * (D_{max} – D_{min}) / D$ (in %)

* Values are referred from Section 11.2.2 of EN 10253-4:2025

Tolerances on wall thickness

NOTE: The minus tolerances shown in below table also applies to the body of the fitting, but there is no plus tolerance for the body of the fitting defined.

Diameter *D* (mm)	**Wall thickness *T*** (mm)	**Wall thickness tolerance**	
		minus	plus
≤ 610	all	-12,5 %	+ 20 %
> 610	seamless	-12,5 %	+ 20 %
	welded		
	≤ 10	- 0,35 mm	+ 20 %
	> 10	- 0,5 mm	

* Values are referred from Section 11.2.3 of EN 10253-4:2025