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| <p align="center"><b>Datasheet:</b></p> <p align="center"><b>EN 1.4432/316L – Austenite<br/>Welded T-piece - Stainless Steel</b></p> <p align="center"><b>Alumeco ApS</b><br/>15-08-2025</p> | <p><b>Internal alloy name:</b> 1.4432<br/> <b>Alloy type:</b> Acid-resistance Austenite<br/> <b>Chemical Symbol:</b> X2CrNiMo17-12-3</p> <p><b>EN:</b> EN 1.4432<br/> <b>AISI:</b> 316L<br/> <b>UNS:</b> S31603<br/> <b>SS:</b> 2353<br/> <b>JIS:</b> SUS316L</p> |
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| <p><b>Main usage:</b></p> <ul style="list-style-type: none"> <li>Food processing industry</li> <li>Petrochemical equipment</li> <li>Chemical and pharmaceutical industry</li> <li>Construction sector</li> <li>Automotive and aerospace industry</li> <li>Electronical equipment</li> </ul> | <p><b>Main properties:</b></p> <ul style="list-style-type: none"> <li>Great weldability</li> <li>High corrosion resistance to non-oxidising acids and chlorine-containing materials</li> <li>Good formability, both cold and hot</li> <li>Higher thermal expansion and lower heat conductivity compared to other carbon steels</li> </ul> | <p><b>Important norms and literature:</b></p> <p><b>General Standards</b><br/>EN 10088-1: List of stainless Steel</p> <p><b>Product standards:</b><br/>EN 10253-4A: Butt-welding pipe fittings - Part 4: Wrought austenitic and austenitic-ferritic (duplex) stainless steels with specific inspection requirements</p> <p><b>Tolerances:</b><br/>EN 10253-4A: Butt-welding pipe fittings - Part 4: Wrought austenitic and austenitic-ferritic (duplex) stainless steels with specific inspection requirements</p> |
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#### Chemical composition in %: EN 10088-1

| C       | Si     | Mn     | P       | S        | Cr          | Mo        | Ni          | Remarks  | Rest |
|---------|--------|--------|---------|----------|-------------|-----------|-------------|----------|------|
| ≤ 0,030 | ≤ 1,00 | ≤ 2,00 | ≤ 0,045 | ≤ 0,015* | 16,5 - 18,5 | 2,5 - 3,0 | 10,5 - 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

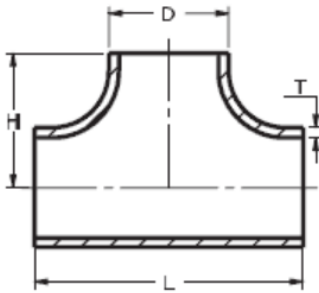
| Hardness*<br><br>HB | Tensile properties at room temperature |                   |                                               |                       |    | Reference heat treatment conditions<br><br>Solution temp. °C | Resistance to intergranular corrosion | Limit temp.<br><br>°C |
|---------------------|----------------------------------------|-------------------|-----------------------------------------------|-----------------------|----|--------------------------------------------------------------|---------------------------------------|-----------------------|
|                     | Proof strength<br>Min. MPa             |                   | Tensile strength<br><br>R <sub>m</sub><br>MPa | Elongation<br>Min. A% |    |                                                              |                                       |                       |
|                     | R <sub>p0,2</sub>                      | R <sub>p1,0</sub> |                                               | l                     | t  |                                                              |                                       |                       |
|                     | Max. 215                               | 190               | 225                                           | 490 – 700             | 40 | 30                                                           |                                       |                       |

\* Information values only;

#### Physical properties:

| Density<br>g/cm <sup>3</sup> | Electrical resistivity<br>Ω mm <sup>2</sup> / m | Thermal conductivity<br>W/m K | Thermal expansion<br>(μm m <sup>-1</sup> K <sup>-1</sup> ) | Specific heat<br>(J kg <sup>-1</sup> K <sup>-1</sup> ) | E - modulus<br>(N / mm <sup>2</sup> ) | Magnetizable | PREN<br>(Min.) |
|------------------------------|-------------------------------------------------|-------------------------------|------------------------------------------------------------|--------------------------------------------------------|---------------------------------------|--------------|----------------|
| 8,0                          | 0,75                                            | 15                            | 16,0                                                       | 500                                                    | 200.000                               | No           | 16,5           |

#### Product Overview:

| Material Nr. | DN  | Diameter D<br>(mm) | Thickness<br>T (mm) | Height H<br>(mm) | Length L<br>(mm) | Weight (kg) |  |
|--------------|-----|--------------------|---------------------|------------------|------------------|-------------|---------------------------------------------------------------------------------------|
| 1362003      | 10  | 17,2               | 2,00                | 20               | 40               | 0,05        |                                                                                       |
| 1358428      | 15  | 21,3               | 2,00                | 25               | 50               | 0,07        |                                                                                       |
| 1358430      | 20  | 26,9               | 2,00                | 29               | 58               | 0,09        |                                                                                       |
| 1358532      | 25  | 33,7               | 2,00                | 38               | 76               | 0,15        |                                                                                       |
| 1358533      | 32  | 42,4               | 2,00                | 47,5             | 95               | 0,23        |                                                                                       |
| 1358534      | 40  | 48,3               | 2,00                | 57               | 114              | 0,32        |                                                                                       |
| 1358535      | 50  | 60,3               | 2,00                | 64               | 128              | 0,45        |                                                                                       |
| 1358537      | 65  | 76,1               | 2,00                | 76               | 152              | 0,66        |                                                                                       |
| 1358538      | 80  | 88,9               | 2,00                | 86               | 172              | 0,86        |                                                                                       |
| 1358539      | 100 | 114,3              | 2,00                | 105              | 210              | 1,34        |                                                                                       |
| 1358540      | 125 | 139,7              | 2,60                | 124              | 248              | 2,48        |                                                                                       |
| 1358541      | 150 | 168,3              | 2,60                | 143              | 286              | 3,40        |                                                                                       |
| 1360078      | 200 | 219,1              | 2,60                | 178              | 356              | 5,22        |                                                                                       |
| 1358543      | 250 | 273,0              | 3,00                | 216              | 432              | 12,60       |                                                                                       |
| 1358546      | 300 | 323,9              | 3,00                | 254              | 508              | 15,00       |                                                                                       |
| 1358547      | 350 | 355,6              | 3,00                | 279              | 558              | 22,10       |                                                                                       |
| 1358549      | 400 | 406,4              | 3,00                | 305              | 610              | 27,90       |                                                                                       |

## Tolerances for welded stainless steel tees for EN 1.4432:

### Tolerances on outside diameter

The relevant outside diameters ( $D-D_1$ ) shall be measured at the welding ends of the fittings.

The tolerance is as follows:

- $\pm 1\%$  or  $\pm 0,5$  mm, whichever is the greater, but maximum  $\pm 5$  mm.

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

### Tolerances on roundness

At the welding ends:

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

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:  $\leq 4\%$ .

The out of roundness shall 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   |
| $\leq 610$        | all                     | -12,5 %                  | + 20 % |
|                   | seamless                | -12,5 %                  | + 20 % |
| $> 610$           | welded                  |                          |        |
|                   | $\leq 10$               | - 0,35 mm                | + 20 % |
|                   | $> 10$                  | - 0,5 mm                 |        |

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