

Material	Seamless or welded stainless steel tube, depending on outer diameter (see dimensions). 1.4404 / 1.4435 / UNS S31603 (316L)
Dimensions	Stock dimensions: Imperial: 1/8" (3.18 x 0.56 mm)* to 6" (152.40 x 2.77 mm) Pipe: NPS 8, 10, 12 Schedule 10S acc. to ASTM A 312 (219.08 x 3.76 mm to 323.85 x 4.57 mm) Metric: 3.00 x 0.50 mm* to 35.00 x 1.50 mm Further dimensions on demand: ISO: 13.50 x 1.60 mm to 219.10 x 2.60 mm
Technical terms of delivery Tubes Length Fittings Tube components Machined components Tolerances Weld ends	Acc. to ASTM A 269 / A 632 / A 312 / A 403 (Pipe), DIN EN 10217-7 / 10216-5 5900 - 6090 mm (max. 10% short lengths possible) Prematerial acc. to ASTM A 269 / A 632 / A 312 (Pipe), DIN EN 10217-7 / 10216-5 Prematerial acc. to ASTM A 479, DIN EN 10088-3, DIN 17440 Pipe dimensions acc. to ASTM A 182 According to ASTM A 269 / A 632 or DIN EN ISO 1127 - D4/T3 Tubes and fittings are prepared for orbital welding
Surface options Tubes and Fittings Fittings Pipes	Inner surface: $R_a \leq 0.18 \mu\text{m}$, $R_a \leq 0.25 \mu\text{m}$ and $R_a \leq 0.13 \mu\text{m}$ on request (7 μin , 10 μin , 5 μin) Outer surface: $R_a \leq 0.80 \mu\text{m}$ (32 μin) Inner and outer surface roughness of the cold worked area is not defined Specified roughness of total surface available on request $R_a \leq 0.51 \mu\text{m}$ (20 μin)
Inner surface treatment Tubes Fittings	Electropolishing procedure Spec. HE 175 8VN Electropolishing procedure Spec. HE 111 8VN Cleanroom cleaning and packing
Hardness	Max. 180 HV / 90 HRB
Test procedures	<ul style="list-style-type: none"> • Verification of basic test certificate • Verification of dimensions • Visual inspection • Roughness measurements • Conductivity test (DI water) • Endoscopic inspection of bright finished tubes before electropolishing • TOC-measurement of DI water • Particle measurements • REM • XPS/ESCA • Auger analysis (AES)
Marking Tubes Fittings	Permanently marked Needle marking
Information	<ul style="list-style-type: none"> • DOCKWEILER • DW number • Dimensions • Material • Heat number
Documentation	Inspection certificate 3.1 according to DIN EN 10204 for the prematerial
Packing and delivery	Tubes and fittings filled with N ₂ (99.9998% incl. inert gas), closed with PA/PE squares and yellow PE caps, sleeved and sealed in PE with yellow sticker „ULTRON“ – imperial dimensions double sleeved and sealed in PE. Delivery in tubular container or wooden crate, fittings in strong cardboard box with shock absorbing filler.

*For dimensions OD < 5.00 mm roughness is not defined. Length: 2950 ± 50 mm.