

Material	Welded or seamless austenitic stainless steel tubes, depending on outer diameter (see dimensions). TP316L 1.4435/BN2/TP316L, δ -Ferrite content of the basic material and longitudinal weld $\leq 0.5\%$. 1.4404/TP316L 1.4539/904L (UNS N089904) TP316L												
Dimensions	Stock dimensions: Imperial: 1/4" (6.35 x 0.89 mm) to 6" (152.40 x 2.77 mm) ISO: 13.50 x 1.60 mm to 219.10 x 2.60 mm Further dimensions on demand: metric: 6.00 x 1.00 mm to 154.00 x 2.60 mm												
Technical terms of delivery Tubes Length Fittings Tolerances Ends	According to ASTM A 269 / A 270, DIN EN 10217-7 / DIN EN 10216-5 5900 - 6090 mm (max. 10% short lengths possible) Tube components: Prematerial according to ASTM A 269 / A 270, DIN EN 10217-7 / 10216-5 Machined components: Prematerial according to ASTM A 479, DIN EN 10088-3, DIN 17440 According to ASTM A 269 / A 270 (pharmaceutical tubes) or DIN EN ISO 1127 - D4/T3 Tubes and fittings are prepared for orbital welding												
Surface options Tubes and Fittings Fittings	<table border="0"> <tr> <td></td> <td>bright finish</td> <td>anodic clean</td> <td>electropolished</td> </tr> <tr> <td>Inner surface :</td> <td>Ra $\leq 0.40 \mu\text{m}$ (16 μin)</td> <td>Ra $\leq 0.40 \mu\text{m}$ (16 μin)</td> <td>Ra $\leq 0.25 \mu\text{m}$ (10 μin)</td> </tr> <tr> <td>Outer surface:</td> <td colspan="3">Ra $\leq 0.80 \mu\text{m}$ (32 μin)</td> </tr> </table> <p>Inner and outer surface roughness of the cold worked area is not defined Specified roughness of total surface available on request</p>		bright finish	anodic clean	electropolished	Inner surface :	Ra $\leq 0.40 \mu\text{m}$ (16 μin)	Ra $\leq 0.40 \mu\text{m}$ (16 μin)	Ra $\leq 0.25 \mu\text{m}$ (10 μin)	Outer surface:	Ra $\leq 0.80 \mu\text{m}$ (32 μin)		
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Inner surface treatment Tubes ac Tubes ep Fittings ac Fittings ep	Anodic cleaning procedure Spec. HE 150 3VNS Electropolishing procedure Spec. HE 175 4VN Anodic cleaning procedure Spec. HE 111 3VNS Electropolishing procedure Spec. HE 111 4VN												
Hardness	Max. 180 HV 5/90 HRB												
Test procedures	<ul style="list-style-type: none"> • Verification of basic test certificate • Verification of dimensions • Visual control • Roughness measurements • Endoscopic inspection of bright finished tubes 												
Marking Tubes Fittings	Permanently marked Needle marking												
Information	<ul style="list-style-type: none"> • Heat number • DOCKWEILER • DW number • Material • Dimensions 												
Documentation	Inspection certificate (3.1) according to DIN EN 10204 for the prematerial												
Packing and delivery	Bright finished tubes and fittings closed with PE caps, anodically cleaned and electropolished tubes and fittings with PE/PA squares and PE caps, bagged in polythene PE and marked with a green sticker „safetron“ or the electropolished parts with a green sticker „safetron ep“. Delivery of tubes in tubular container or wooden crate, fittings in strong cardboard box with shock-absorbing filler.												