

# Precision steel pipes DIN EN 10305

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### Part 1: Seamless cold drawn tubes

**Area of application:** Automotive, mechanical engineering

Standards (formerly DIN)	State as delivered (previous designation)	Size range	EN materials (formerly DIN)	Notes
EN 10305-1 (DIN 2391-1 /-2)	+C Cold finished, hard (BK) +LC Cold finished, soft (BKW) +SR Cold finished and stress-relieved (BKS) +A Annealed (GBK) +N Normalised (NBK)	4,0–260 mm	E215 (St 30 Al) E235 (St 35) E355 (St 52)	· Precisely defined tolerances · Specified surface roughness

### Part 2: Welded cold drawn tubes

**Area of application:** Automotive, mechanical engineering

Standards (formerly DIN)	State as delivered (previous designation)	Size range	EN materials (formerly DIN)	Notes
EN 10305-2 (DIN 2393-1 /-2)	+C Cold finished, hard (BK) +LC Cold finished, soft (BKW) +SR Cold finished and stress-relieved (BKS) +A Annealed (GBK) +N Normalised (NBK)	4,0–150 mm	E195 (St 34-2) E235 (St 37-2) E275 (St 44-2) E355 (St 52-3)	· Precisely defined tolerances · Specified surface roughness

### Part 3: Welded cold sized tubes

**Area of application:** Automotive, mechanical and plant engineering

Standards (formerly DIN)	State as delivered (previous designation)	Size range	EN materials (formerly DIN)	Insert strip
EN 10305-3 (DIN 2394-1 /-2)	+CR1 Usually not heat-treated, but suitable for final annealing (BKM) +CR2 Heat treatment after welding, and sizing is not provided (BKM) +A After welding and sizing the pipes are annealed (GBK) +N After welding and sizing the pipes are normalised (NBK)	6,0–193.7	E155 E195 (St 34-2) E235 (St 37-2) E275 (St 44-2) E355 (St 52-3) Additional for +CR2: E190, E220, E260, E320, E370, E420	S1 (black) S2 (pickled) S3 (cold rolled) S4 (coated)

### Part 4: Seamless cold drawn tubes for hydraulic and pneumatic power systems

**Area of application:** Hydraulic and pneumatic power systems

Standards (formerly DIN)	Surface finish	Size range	EN materials (formerly DIN)	Notes
EN 10305-4 (DIN 2391-1 /-2 in connection with DIN 1630)	· Phosphate-treated (bonderised) · Galvanised – chromated: with Cr6: yellow/olive-green Cr6-free: white/blue	4,0–80,0	E215 E235 (St 37.4) E355 (St 52.4)	· Precisely defined tolerances · Specified surface roughness · Suitable for conveying pressurised fluids

**Part 5:** Welded and cold sized square and rectangular tubes

**Area of application:** Automotive, mechanical and plant engineering

Standards (formerly DIN)	State as delivered (previous designation)	Size range (H / B)	EN materials (formerly DIN)	Insert strip
EN 10305-5 (DIN 2395-1 /-2)	<p><b>+CR1</b> Usually not heat-treated, but suitable for final annealing (BKM)</p> <p><b>+CR2</b> Heat treatment after welding and sizing not provided (BKM)</p> <p><b>+A</b> After welding and sizing the pipes are annealed (GBK)</p> <p><b>+N</b> After welding and sizing the pipes are normalised (NBK)</p>	15 / 15 mm – 120 / 60 mm	<p>E155</p> <p>E195 (St 33 / S185)</p> <p>E235 (RSt 37-2 / S235JRG2)</p> <p>E275</p> <p>E355 (St 52-3 / S355J2G3)</p> <p>Additional for +CR2: E190, E220, E260, E320, E370, E420</p>	<p><b>S1</b> (black)</p> <p><b>S2</b> (pickled)</p> <p><b>S3</b> (cold rolled)</p> <p><b>S4</b> (coated)</p>