



Series	Description
NIMAX-H9	Welded Cold Drawn Tubes, Inside Smooth as Drawn or Honed steel grade: E355 / ID: Ø32 - 110 mm

Steel grades correspondents

EN	Werkstoff	DIN	B.S.	UNI	JIS	GOST	AISI SAE ASTM
E355	1.0580	St52	CFS5	Fe510	STKM19A	St6sp	1524 / 1024

Chemical composition - in % by weight

Steel grade	C	Si	Mn	P	S
E355	max. 0.22	max. 0.55	max. 1.60	max. 0.025	max. 0.040

Mechanical properties

Steel grade	Tensile strength R_m N/mm ²	Yield point $R_{p0.2}$ N/mm ²	Impact energy KV J	Elongation A_5 %	Hardness ** Brinell N/mm ²	Norm
E355+SR	min. 580	min. 450	27 J / -20 °C *	min. 10	min. 175	EN 10305-1
E355+C	min. 640	min. 540	-	min. 4	min. 185	EN 10305-2

SR = stress-relieved, C = cold drawn

* on request

** The hardness values are for information only

Series **NIMAX-H9** - E355+C / EN 10305-2

Outside diameter - OD	Ø40 - 125 mm
Inside diameter - ID	Ø32 - 110 mm
Outside tolerance - OD	according to EN 10305-2
Inside tolerance - ID	ISO H9 / ISO H10
Roundness - ID	within the limits of diameter tolerances
Standard length	mill lengths / on request, cut lengths
Surface roughness - ID	Ra: max. 0.40 µm for honed surface Ra: max. 0.60 µm for smooth surface, ready to use
Straightness local deviation	max. 1 mm / 1000 mm
Straightness total deviation	max. 3.5 mm for tubes with length up to 6000 mm for tubes with length more than 6000 mm, for each meter over 6 m, the tolerance must be increased by 0.5 mm.

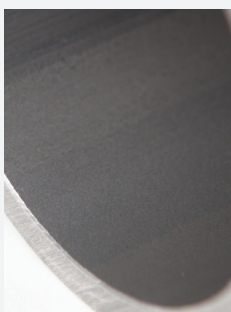


✓ *Cylinder steel tubes are available for a variety of hydraulic cylinder manufacturing where close tolerances and smooth surface finishes are critical.*

✓ *Materials either honed or skived and roller burnished are mainly characterized by a precise inside processed surface resulting into a superior finished product.*

Table of dimensions - ID tolerance

Diameter mm	ISO H9 µm	ISO H10 µm
30 < Ø ≤ 50	0 / +62	0 / +100
50 < Ø ≤ 80	0 / +74	0 / +120
80 < Ø ≤ 110	0 / +87	0 / +140



✓ *A good roundness and a high ID precision is achieved during the cold drawing process of welded tubes, so called "ready to use" or ready for the assembly of hydraulic and pneumatic cylinders.*



✓ *Supplementary honing operation for a better precision surface.*

✓ *Special texture surface which permits oil storing and helps the system to work properly and well lubricated, even after a long period of stagnation.*