



**NIMET**

**H8**

**CYLINDER TUBES,  
INSIDE HONED OR SKIVED  
AND ROLLER BURNISHED**

## CYLINDER TUBES, INSIDE HONED OR SKIVED AND ROLLER BURNISHED

# NIMAX H8

E355+SR, EN 10305-1 | EN 10305-2

Cylinder steel tubes are suitable for a variety of hydraulic cylinders, where tight tolerances and smooth surface finishing are critical. Tubes either honed or skived and roller burnished are mainly characterized by a precise inside processed surface resulting into a superior finished product.

### ● 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	Cr	Mo	Ni	V	Cu	N
E355	max. 0.22	max. 0.55	max. 1.60	max. 0.025	max. 0.025	-	-	-	-	-	-

<sup>(1)</sup> Cr+Mo+Ni = max. 0.63

### ● MECHANICAL PROPERTIES

Steel grade	Tensile strength	Yield point	Elongation (longitudinal)	Impact energy (longitudinal direction)	Hardness <sup>(2)</sup>	Norm
	R <sub>m</sub>	R <sub>p0.2</sub>	A <sub>5</sub>	KV <sub>2</sub>	Brinell	
	N/mm <sup>2</sup>	N/mm <sup>2</sup>	%	J	N/mm <sup>2</sup>	
E355+SR	min. 580	min. 450	min. 10	(min. 27J / -20°C) <sup>(1)</sup>	min. 175	EN 10305-1

SR = stress-relieved, N = normalized, C = cold drawn

<sup>(1)</sup> On request

<sup>(2)</sup> The hardness values is for information only

## CYLINDER TUBES, INSIDE HONED OR SKIVED AND ROLLER BURNISHED

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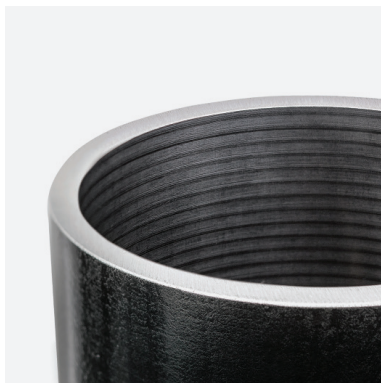
E355+SR, EN 10305-1 | EN 10305-2

H8

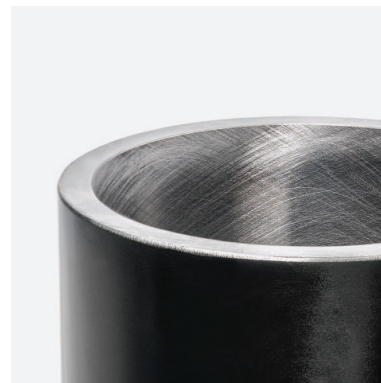
Outside diameter - OD	Ø50 - 245 mm
Inside diameter - ID	Ø40 - 200 mm
Inside tolerance - ID	ISO H8
Outside tolerance - OD	according to EN 10305-1 / EN 10305-2
Roundness - ID	within the limits of diameter tolerances
Standard lengths	mill lengths / on request, cut to fix lengths pieces
Surface roughness - ID	Ra: max. 0.30 µm for skived and roller burnished surface Ra: max. 0.40 µm for honed surface
Straightness local deviation	max. 1 mm / 1000 mm max. 3.5 mm for tubes with length up to 6000 mm
Straightness total deviation	for tubes with length more than 6000 mm, for each meter over this length, the tolerance must be increased by 0.5 mm

### ● TABLE OF DIMENSIONS ID TOLERANCE

Diameter mm	ISO H8 µm
30 < Ø ≤ 50	0 / +39
50 < Ø ≤ 80	0 / +46
80 < Ø ≤ 120	0 / +54
120 < Ø ≤ 180	0 / +63
180 < Ø ≤ 200	0 / +72



The skiving and roller burnishing production technique refers to a process consisting in micro-finishing metallic internal tube surfaces. The resulted effect is a mirror surface finish with technical roughness advantages.



Producing cylinder tubes by honing results in having a cross-grinding pattern. The tubes in this case present an improved inside straightness.

The very precise and smooth surface reduce friction negative effects and extends the life of the cylinder's components.

# CYLINDER TUBES

## STORAGE & HANDLING RECOMMENDATIONS



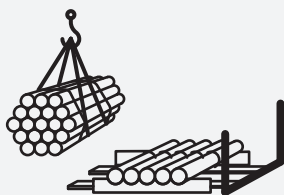
Keep the products stored in dry and covered spaces.



Do not expose the bars or tubes for a long time to the sunlight or to very low temperatures.



Direct contact with the floor and steel supports that are not lined with soft materials must be avoided; preferable to use rubber or wood lined supports.



Whenever possible, please use the crane to load or unload the bundles; when using the fork lift please avoid the direct contact of the forks with the products.



Always lift the bundles using textile slings. Do not use metal slings during handling of bundles.



**NIMET** srl

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