



## Quality F9 (ASTM A182)

### CORRESPONDENCE TO INTERNATIONAL DESIGNATIONS

Quality	Europe	Germany		France	Spain	G.B.	USA
	EN	DIN	W.n.	AFNOR	UNE	B.S.	ASTM
<b>F9</b>	<b>X12CrMo9-1</b>	<b>12CrMo9-1</b>	<b>1,7386</b>	-	-	-	<b>ASTM A182 F9 ASME SA 182</b>

### CHEMICAL ANALYSIS



C max	Mn	Si	P max	S max	Cr	Ni	Mo	Cu max
<b>0,15</b>	<b>0,30 ÷ 0,60</b>	<b>0,50 ÷ 1,00</b>	<b>0,030</b>	<b>0,030</b>	<b>8,00 ÷ 10,00</b>	-	<b>0,90 ÷ 1,10</b>	<b>0,35</b>

Concentration limits of the elements that are not indicated in the table can be deduced in the en 10020 regulation.

### MECHANICAL CHARACTERISTICS

Steel	Normalisation temperature 900°C min – Tempering temperature 620°C min				
Symbolic	R <sub>e</sub> min	R <sub>m</sub> min	A min	Z min	Durezza HB
	N/mm <sup>2</sup>		%	%	max
<b>F9</b>	<b>380</b>	<b>585</b>	<b>20</b>	<b>40</b>	<b>179÷217</b>

### USUALLY AVAILABLE EX STOCK

M.T. Coloration	Quality	Heat treatment	Surface
	F9	Normalizzato e rinvenuto	laminato / forgiato tornito
	F9	Ricotto	laminato / forgiato