

# DME STEEL PLATES

# DME-NO.7 **AISI 400**

(modified)



DME Steel No.7 is an AISI 400 modified stainless steel that has stood the test of time across a variety of uses worldwide. Trusted for decades to give you the quality, durability, and corrosion resistance you need. This stainless provides the excellent machinability, ductility, flatness and weldability you need for a vast array of molding and mold-based applications. Available in rotary ground (**RGM**) or finished ground (**FG**) to meet your needs when superior performance is required.

**When you need the best steel, DME is ready to support your steel needs – today!**

## STEEL CHARACTERISTICS

### PHYSICAL PROPERTIES (AT 68°F)

Temperature		68°F (20°C)	390°F (200°C)
Density	- lbs/cu.in. - fg/m <sup>3</sup>	0.264 7,800	0.282 7,750
Coefficient of Thermal Expansion	- per °F from 68° - per °C from 20°	— —	6.1 x 10 <sup>6</sup> 11.0 x 10 <sup>6</sup>
Thermal Conductivity	- BTU in/ft <sup>2</sup> hr °F - J/m s °C	202 29.0	205 29.5
Modulus of Elasticity	- psi - N/mm <sup>2</sup>	29.0 x 10 <sup>6</sup> 20,000	27.6 x 10 <sup>6</sup> 19,000

### MECHANICAL PROPERTIES - DME #7

Samples: round bar 3" (76mm) diameter. Hardness: 321HB

#### Tensile Strength - Approximate values

Testing temperature	68°F (20°C)	390°F (200°C)
Tensile strength		
psi	155,000	152,000
N/mm <sup>2</sup>	1069	1048
Yield strength		
psi	129,000	126,000
N/mm <sup>2</sup>	890	869
Reduction of area	34%	34%
Elongation in 2"	12%	12%

#### Impact Strength - Approximate values

	68°F (20°C)	390°F (200°C)
Joules	22	36
Ft-lbs.	16	26

### TOLERANCES

All dimensions are in inches.

	RGM	FG
Length and Width	-0.000 / +0.005	-0.000 / +0.005
Thickness 88 - 1518 - all other standard sizes	+0.015 / +0.020 +0.023 / +0.031	-0.001 / +0.001 —
Flatness	0.002 / ft	0.0007 / ft
Parallelism	0.003	0.0005
Chamfer	0.095 x 45°TYP / 0.125 x 45°	0.060 x 45°TYP / 0.100 x 45°

See Page 2 for Machining Characteristics.

## Applications

Modified AISI 400 or equivalent series stainless steel for holder block applications. It is supplied pre-hardened to 32-36 HRC (302-340 Bhn) and generally no further heat treatment is required. This stainless steel offers corrosion-resistance and exceptional machinability. Ideal for humid environments, corrosive plastics, clean room or 100% stainless applications. Various application for this versatile steel formulation include but are not limited to:

- Injection Molds
- Compression Molds
- Die Casting Dies
- Structural Or Engineered Applications
- Other applications.
- Extrusion Molds
- Blow Molds

## PLATES FOR THE ENTIRE MARKET

DME Steel is readily available for **all markets** – more than just mold industry applications. Our mold steels machinability, uniformity, and consistency make it ideal for a wide variety of uses. Our exclusive supply from the best steel mills allow DME to maintain readily accessible quality stock.. This availability means DME can deliver product to you quicker and easier.

All DME steel is available in standard and custom widths, lengths and thicknesses, in RGM or Finish Ground.



# DME NO. 7 STEEL

## Machining Specifications

MILLING		
Carbide tool and high speed tools	Rough Milling	Finish Milling
Depth of cut (t) in	0.08 - 0.20	≤ 0.08
mm	2.00 - 5.00	≤ 2.00
Carbide Tools		
ISO machining group	P20 - P40	P10 - P20
Cutting speed (v) f.p.m.	430 - 620	620 - 820
mm/min.	130 - 190	190 - 250
High Speed Steel Tools		
Cutting speed (v) f.p.m.	—	35 - 40
m/min.	—	115 - 130

DRILLING					
Drill Diameter		Cutting Speed		Feed (f)	
mm	inch	m/min	f.p.m	mm/r	l.p.r
– 5	– 3/16	17–19"	56 – 62"	0.05 – 0.10	0.002 - 0.004
5 – 10	3/16 – 3/8	17–19"	56 – 62"	0.10 – 0.20	0.004 - 0.008
10 – 15	3/8 – 5/8	17–19"	56 – 62"	0.20 – 0.25	0.008 - 0.010
15 – 20	5/8 – 3/4	17–19"	56 – 62"	0.25 – 0.30	0.010 - 0.014

\* For coated HSS drill  $vc = 29-31$  m/min (95–102 f.p.m.)  
 $RPM = (3.82 \times SFM) / \text{Tool Dia.}$        $\text{Feed Rate} = RPM \times IPR$

## Plate Services Available

- Saw Cut
- RGM - Rotary Ground
- FG - Finish Ground
- Lift Holes
- Pry Bar Slots
- Gun Drilling
- Drilling & Tapping
- Milling/Boring
- Rough or Finish Machined
- Radius Edges
- And More

## Key Benefits

- Excellent Machinability
- High compressive strength (resistant to indentation)
- Reduced mold maintenance costs
- Dimensionally stable
- Lower mold production cost due to less cutting tool wear and increased cutting speeds.
- Corrosion resistance

## Contact Milacron - DME

For more information or delivery options contact at:  
 800-626-6653 (U.S.), 800-387-6600 (Canada) or 248-398-6000 (worldwide).  
[www.dme.net](http://www.dme.net)  
<https://store.milacron.com>

Keyword search: **STEEL PLATE**



© 2017 Milacron LLC. All Rights Reserved.  
[www.dme.net](http://www.dme.net)

SP7-rev9.6.17

## Standard Available Sizes

NOMINAL SIZE	WIDTH (IN)	LENGTH (IN)
67	6.000	7.000
69	6.000	9.000
611	6.000	10.875
88	7.875	7.875
812	7.875	11.875
99	9.000	9.000
912	9.000	11.875
108	9.875	8.000
1012	9.875	11.875
1016	9.875	16.000
1020	9.875	20.000
1024	9.875	23.750
1112	10.875	12.000
1114	10.875	14.000
1118	10.875	18.000
1123	10.875	23.500
1212	11.875	12.000
1215	11.875	15.000
1217	11.875	17.500
1220	11.875	20.000
1223	11.875	23.500
1229	11.875	29.500
1315	13.375	15.000
1318	13.375	18.000
1321	13.375	20.750
1323	13.375	23.500
1326	13.375	26.000
1329	13.375	29.500
1518	14.875	17.875
1524	14.875	23.750
1529	14.875	29.500
1616	15.875	16.000
1620	15.875	20.000
1623	15.875	23.500
1626	15.875	26.000
1629	15.875	29.500
1635	15.875	35.500
1724	16.500	23.750
1729	16.500	29.500
1818	17.875	18.000
1820	17.875	20.000
1823	17.875	23.500
1826	17.875	26.000
1829	17.875	29.500
1835	17.875	35.500
1924	19.500	23.750
1929	19.500	29.500
1935	19.500	35.500
2424	23.750	23.750
2429	23.750	29.500
2435	23.750	35.500

### Over 230 standard plate sizes.

- Standard plate thickness for immediate delivery are: 7/8", 1-3/8", 1-7/8", 2-3/8", 2-7/8", 3-3/8", 3-7/8". (4-7/8" and 5-7/8" Available upon request.)
- **Additional and custom sizes available upon request.**
- Nominal sizes above shown in grey are off-the shelf and ready for delivery.