



Powder Compaction

CMI manufactures a wide range of compaction tooling in solid carbide for the highest performance in the these demanding applications. Our capability to produce rings from less than 1" O.D. to 23" O.D. is the largest range available in the industry and provides our customers with the the widest possible choice in carbide tooling.

From our standard stock CM10F grade punches and core pins to our specifically developed CMX152 grade compaction punches, CMI can provide application specific products and materials to maximize the performance of your operations.

With the widest combination of sizes, grades and finish conditions available, CMI customers never have to compromise on set-up time, material costs or tooling performance.

Standard Ring Size Range			Standard Stock Core Pin / Punch Rod		
O.D. inch	I.D. inch	Height inch	O.D. inch	Length inch	O.D. Tolerance inch
2.5 - 3.25	1 - 1.75	.25 - 4	> 1/16 - 1/4	12.60	+0.000 / -0.0003
3.5 - 4.5	2 - 3	.25 - 4	> 1/4 - 3/8	12.60	+0.000 / -0.0003
4.5 - 5.5	3 - 4	.25 - 5	> 3/8 - 3/4	12.60	+0.000 / -0.0004
5.5 - 7.5	4 - 6	.5 - 6	> 3/4 - 1 1/8	12.60	+0.000 / -0.0005
7.5 - 9.5	6 - 8	.5 - 6	> 1 1/8 - 1 1/2	12.60	+0.000 / -0.0006
9.5 - 11.5	8 - 10	.75 - 5	Rings available in Inch sizes per customer specifications and with ground O.D., I.D. & Height on request. Standard stock Core Pin and Punch Rod stocked in CM10F material. CMX152 punch material available manufactured to customer specifications.		
11.5 - 13.5	10 - 12	.75 - 5			
13.5 - 16	12 - 14	1 - 5			
15.5 - 18	14 - 16	1 - 5			
17.5 - 20	16 - 18	1 - 4			
19.5 - 23	18 - 21	1 - 3			

CM10F

0.8 Micron / WC 90.0% / Co 10% / 91.5 HRA Sub-Micron Grade - Applications: High Hardness & Wear Resistance Ideal Material for Core Pins & Punches

CMX11N

1.5 Micron / WC 88.5% / Co 5.75 / Ni 5.75% / 88.0 HRA Fine Grade - Applications: **Corrosion Resistant Alloyed Binder Grade** Mold Cavities, Bodies

CMX12N

1.5 Micron / WC 88% / Co 7.5% / Ni 4.5% / 89.5 HRA Fine Grade - Applications: **Corrosion Resistant Alloyed Binder Grade** Mold Cavities, Bodies

 $\begin{array}{c} \textbf{CMX152} \\ \textbf{1.0 Micron / WC 85\% / CO 14\% / CR_3C_2 1\% / 88.0 HRA} \end{array}$ Fine Grade - Applications: Specialized Binder, Excellent Combination of High Toughness, Hardness, Developed for **Fe Powder Compaction Punches**

CXK15

3-4 Micron / WC 84% / Co 14% / TaC 2% / 86.5 HRA **Course Grade - Applications:** Specialized Binder, High Toughness, High Temperature, Anti Galling

CX25C 6-9 Micron / WC 75.0% / Co 25.0% / 81.0 HRA

- Heavy Grade Applications:
- Heavy Impact, Large Sections
- **High Pressure**

All CMI Material Grades are produced using 100% virgin raw materials & sinter-HIP technology for maximum reliability and performance

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