

External-Mount End Block **CM-Series**

The CM is our smallest external-mount end block and is an excellent choice for smaller systems or R&D systems.

There are two designs: one for a 125 mm ID and another for an 80 mm ID target.

External end blocks have a wider substrate coverage than internal models.

It has a simple, singled-ended, belt-driven design with brushless power transfer and an outboard support (if needed) for quick target changes, high reliability and easy, do-it-yourself maintenance.

To match any system, drive shaft length is customizable, and drive motors can be mounted inward or outward and at any angle around the main housing.

Magnet bar adjustments—to any angle—are made externally. All utilities are external and remain attached during target changes. The water seal cartridge is easily accessed for quick replacement.

Use in new systems or upgrade from planar systems.

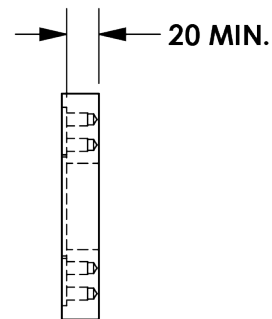
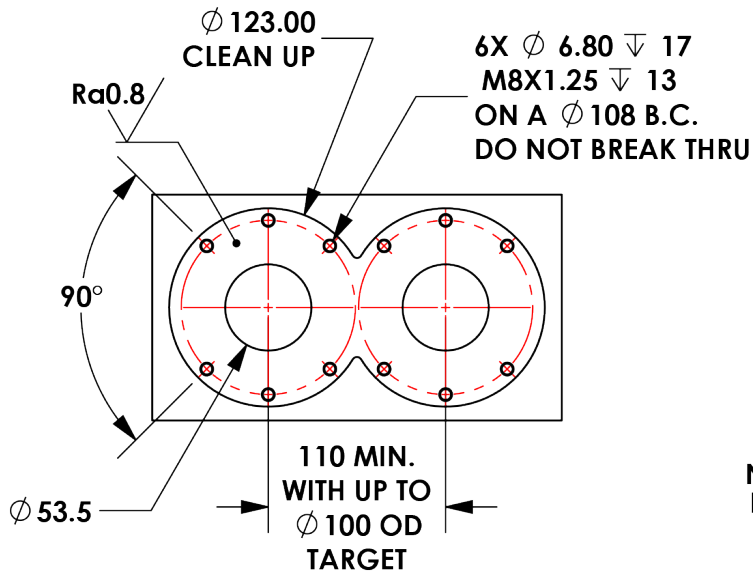
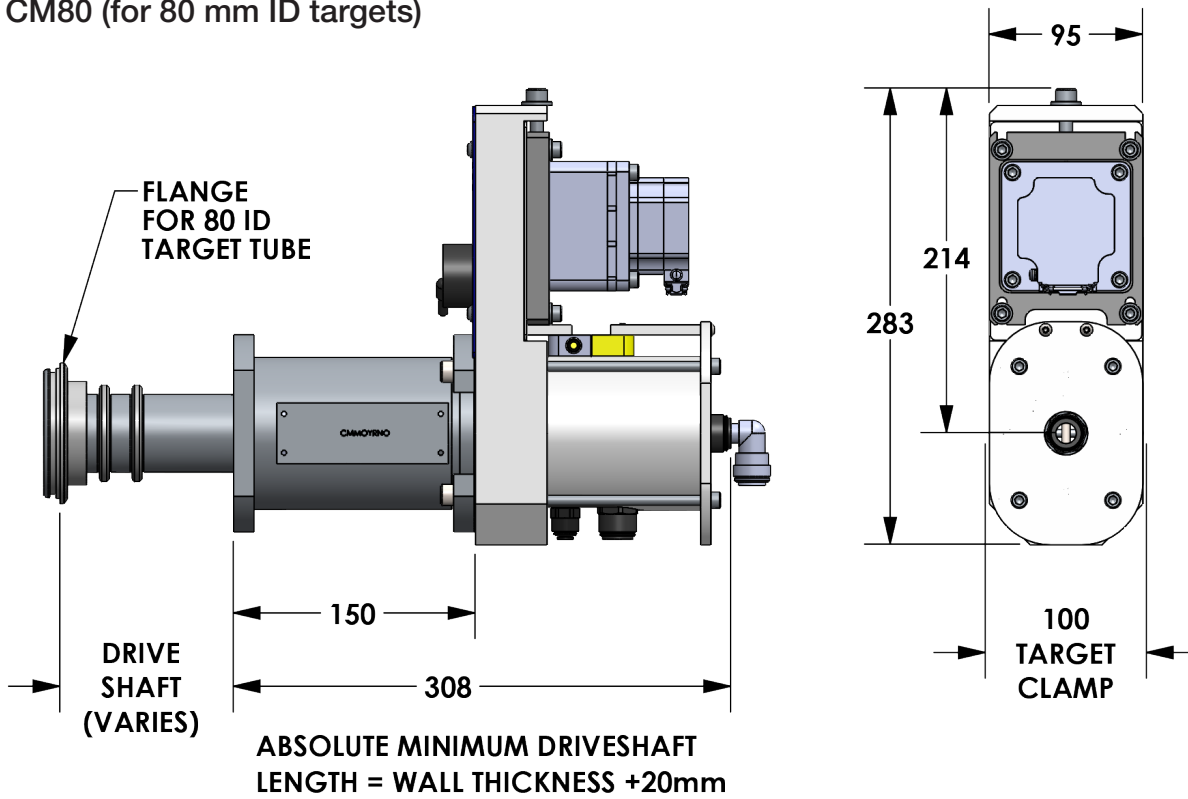
SCI can provide coater integration support.

TECHNICAL SPECIFICATIONS

Electrical rating	▶ 20 kW 1500 V / 50 A (DC or 80 kHz AC)
Mounting	▶ Any orientation
Maximum target length	▶ 1000 mm
Maximum load	▶ 250 kg horizontal 100 kg vertical
Vacuum seal leak rate	▶ $<3 \times 10^{-7}$ mbar·L/s
Maintenance (typical)	▶ Seal kit and bushings every year (1 hr); Static seals, bearings and belt after 10 years (3 hr)



CM80 (for 80 mm ID targets)



NOTE: THICKER THAN 20mm PLATE IS RECOMMENDED TO INCLUDE A PILOT BORE FOR THE CATHODE.

Dimensions in mm

Cantilever capability

Metric: $XY/2 + 10X^2 \leq 23$

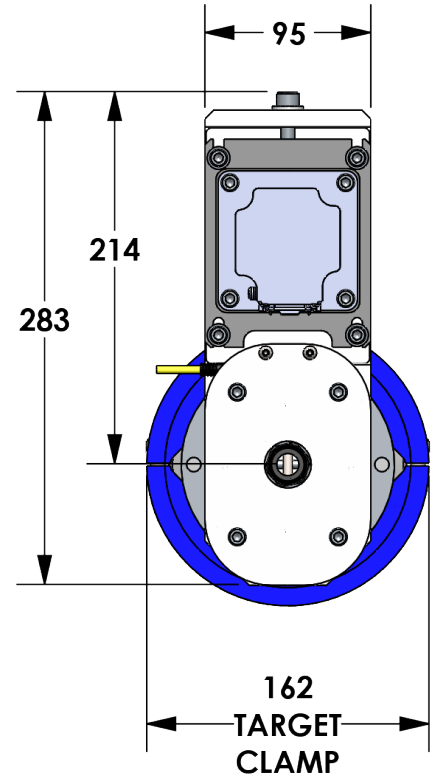
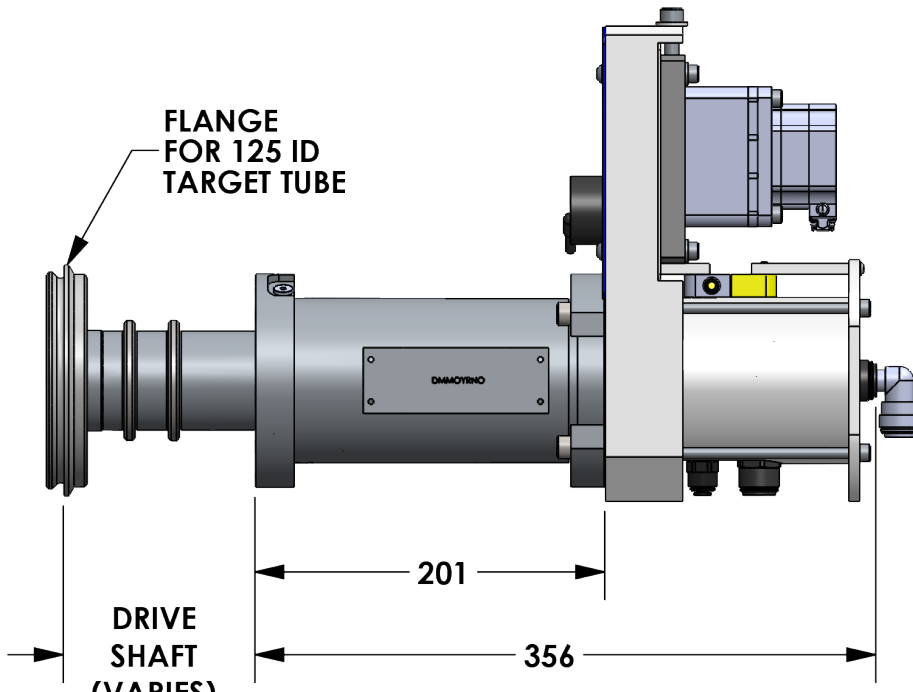
Imperial: $XY/2 + 0.33X^2 \leq 2,000$

X = Total of backing tube length plus drive shaft length (meters or inches)

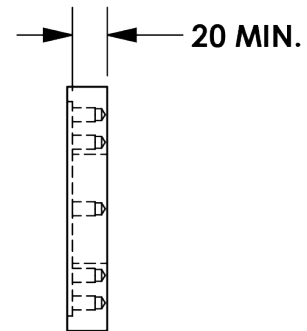
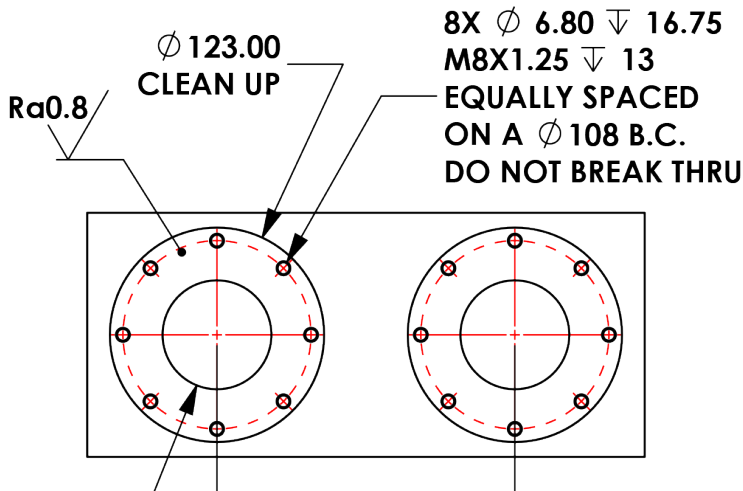
Y = Weight of target (kg or lb only)

Notes: The formula assumes a stainless steel backing tube; other materials may not qualify. The formula must be adjusted for long drive shafts.

CM125 (for 125 mm ID targets)



ABSOLUTE MINIMUM DRIVESHAFT LENGTH = WALL THICKNESS +20mm



Dimensions in mm

Cantilever capability

Metric: $XY/2 + 16X^2 \leq 46$
 Imperial: $XY/2 + 0.90X^2 \leq 4,000$

X = Total of backing tube length plus drive shaft length (meters or inches)
 Y = Weight of target (kg or lb only)

Notes: The formula assumes a stainless steel backing tube; other materials may not qualify. The formula must be adjusted for long drive shafts or when a RAM-Bar™ is used.

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