CM-SERIES

External-Mount End Block

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.

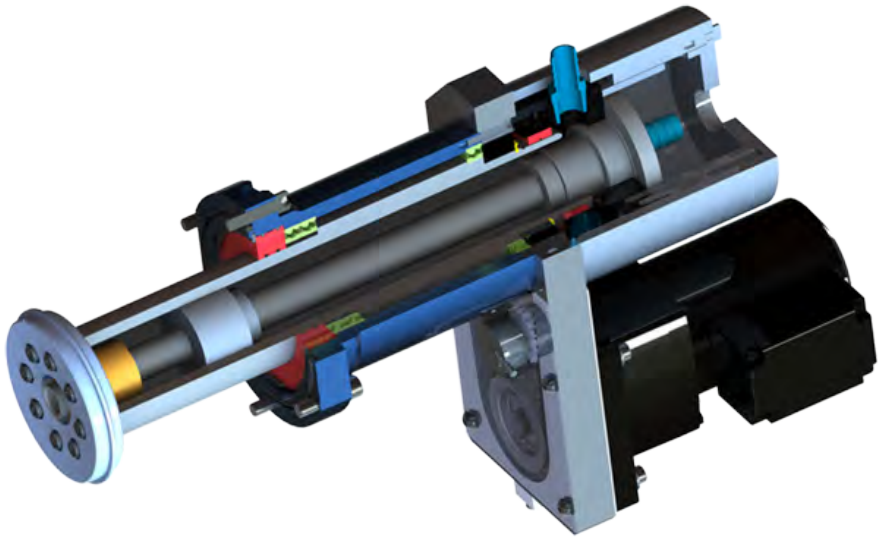
FEATURES

- Customizable drive shaft length
- Ultra compact and flexible form factor
- Easy access water seal cartridge
- Patented target water fill/drain feature
- Simple design - fewer parts and highly reliable
- Magnet bar externally adjusts to any angle
- Fits 80 mm size or industrial standard 125 mm

SPUTTERING COMPONENTS®

BENEFITS

Fill and drain	Patented; water completely fills the target for cooler operating temperature/high power; completely drains for target changes
Drive bearings	Exclusive to SCI; tested to verify years of trouble-free operation
Power transfer	Brushless, patented; no brushes to replace and no carbon brush dust; high power rating and reliable power transfer
Vacuum, water seals	Dual lip and redundant; tolerate running dry; easily replaced without removing the end block (water seal); can be monitored
Target attachment	Attaches to targets from any vendor for economical sourcing; high load bearing; fast target changes
Mounting	Can be mounted in any orientation using existing mounting holes and utility connections; externally adjustable sputter angle
Drive	Robust, reliable inverter-duty motor and belt drive; motors mounted inward, outward or anywhere around the housing; monitored rotation



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	< 3×10^{-7} mbar·L/s
Maintenance (typical)	Seal kit and bushings every year (1 hr); Static seals, bearings and belt after 10 years (3 hr)

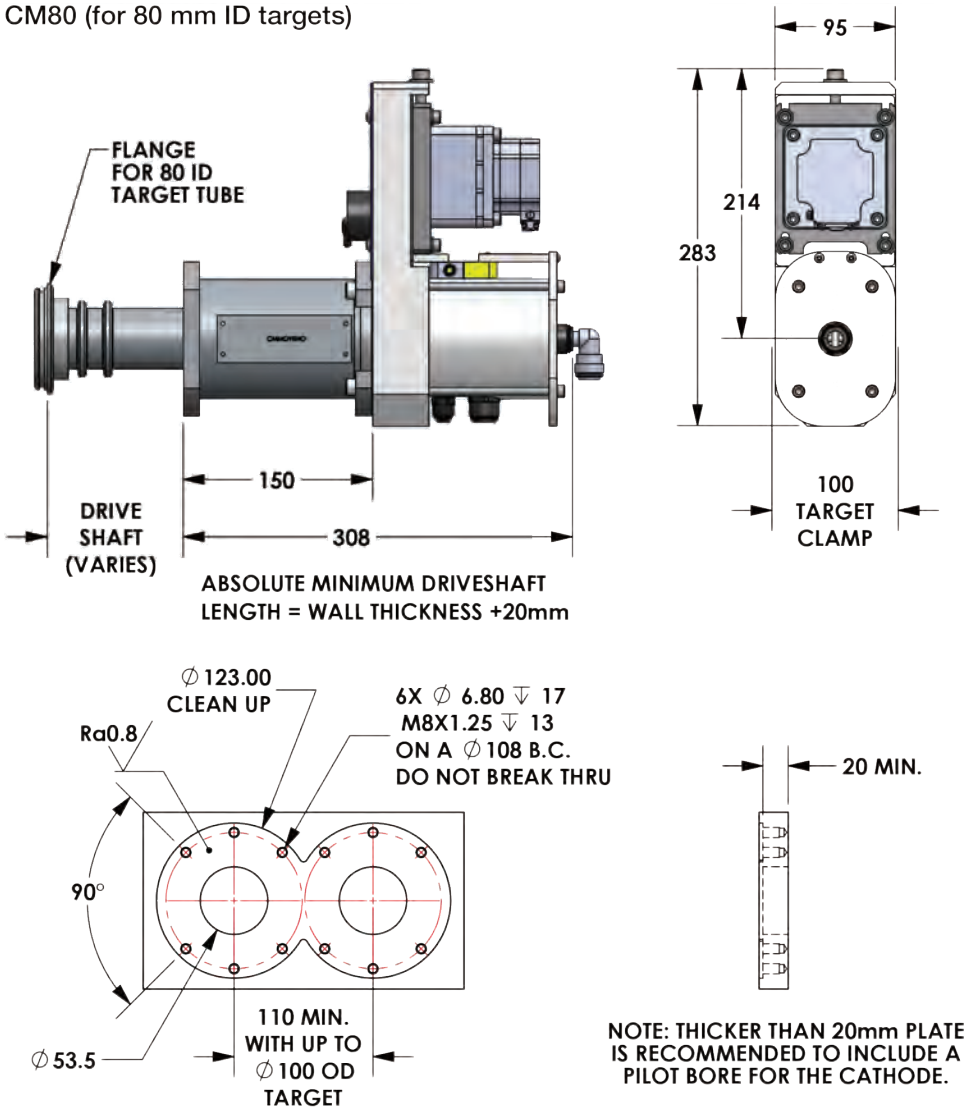
Cantilever capability

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.

CM80 (for 80 mm ID targets)



Dimensions in mm

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Mounting	Any orientation
Maximum target length	1000 mm
Maximum load	250 kg horizontal 100 kg vertical
Vacuum seal leak rate	< 3×10^{-7} mbar·L/s
Maintenance (typical)	Seal kit and bushings every year (1 hr); Static seals, bearings and belt after 10 years (3 hr)

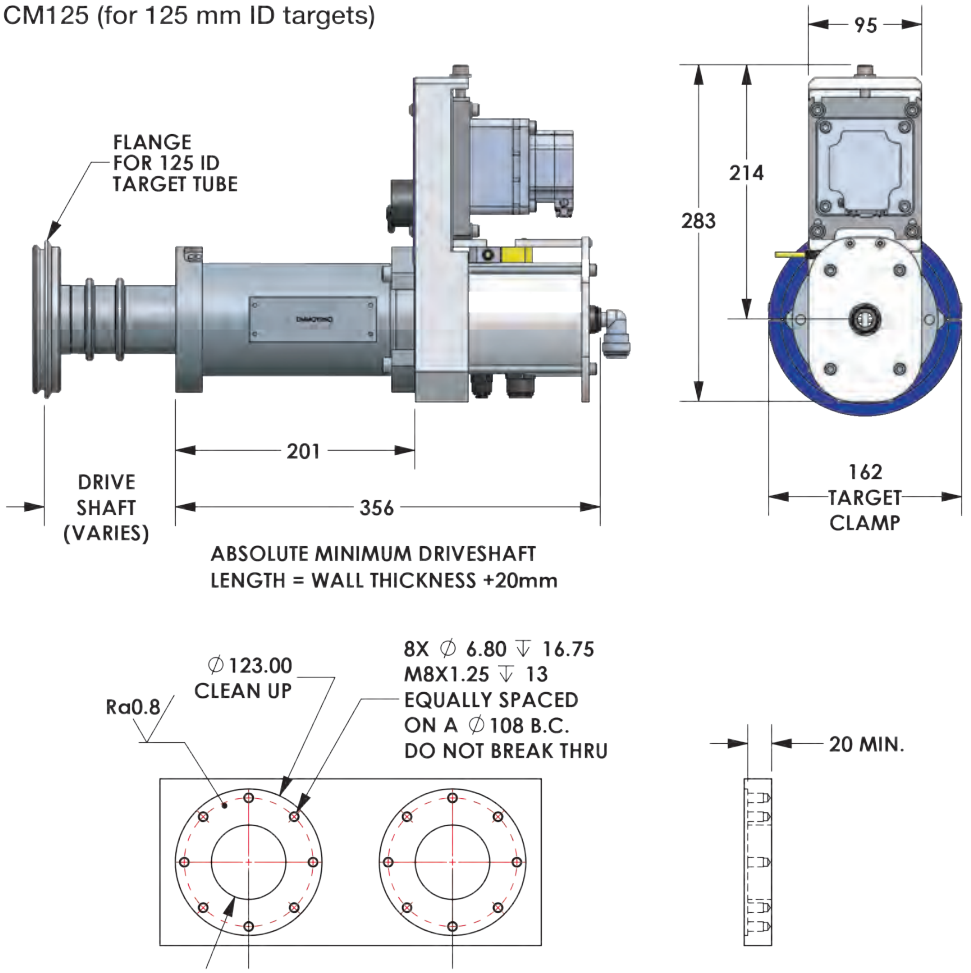
Cantilever capability

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.

CM125 (for 125 mm ID targets)



Dimensions in mm