

# CPM10

## Centrifugal High Energy

**ACTON**<sup>®</sup>  
FINISHING

We built the CPM10 with the latest high energy technology and it has a direct drive system with counter rotating turrets and barrels. Typically used for small components, it can be aggressive enough to handle your toughest burr, yet precise enough to process the most delicate piece.

Part of the Centrifugal High Energy Range, the CPM10s' are possibly the most efficient of the finishing systems available in industry. These CPM10 generates a very high gravitational force and is designed to perfection and engineered to maximise output. Hence these machines enable faster finishing of the parts, while ensuring high quality of the finishing component.

### Key Benefits and Features

- ✓ Unique barrel design with clamping system in either circular or hexagonal configuration.
- ✓ Removable barrels in Stainless Steel.
- ✓ Wear resistant polyurethane liners.
- ✓ Pressure release valves on barrels.
- ✓ Mobile unit as it is mounted on castor wheels.
- ✓ Storage space for spare barrels and consumables.
- ✓ Compact design, space saving machine.
- ✓ Very quiet machine in operation.
- ✓ High Polishing efficiency
- ✓ High or low rate of stock removal
- ✓ Gentle action on parts
- ✓ Greater control of the process
- ✓ No need for fixturing or tooling
- ✓ Fast processing times
- ✓ No part impingement
- ✓ Easy to maintain
- ✓ Operator friendly
- ✓ Option to carry out different processes in each barrel.



## The MTC Case Study

### High Energy Finishing Process for AM Parts

We worked with **The Manufacturing Technology Centre (MTC)** to develop the most efficient finishing processes on Additively Manufactured parts.

#### Aim

The AM parts have been built using SLM or EBM processes. Hence these required intensive manual finishing, to remove support structures and to smooth down rough surfaces. Our main objective was to develop a **cost effective finishing process** to remove support structures and smooth the rough surface of AM part.



#### What we did

- ✓ Carried out trial & determined **CHE technology** as the most efficient to achieve **1µm RA surface finish**.
- ✓ **MTC acquired ActOn CPM-10** machine for further in-house trials.
- ✓ Determined **optimum** machine parameter **settings to process AM materials like Ti6Al4V**

#### Results

- ✓ Achieved a **Ra of sub 1µm in 5 hours, 80% faster** than vibratory finishing.
- ✓ Achieved a **Ra between 2µm to 3µm in approx. 30 minutes**

#### Technology

- ✓ **CPM 10** - built with the latest HE technology; faster than traditional finishing methods; produces superior finishes.
- ✓ **Ceramic Media Compound**

#### Benefits

- ✓ **46% cost savings** on the finishing process.
- ✓ **Consistent & repeatable results.**
- ✓ Project provided information on surface finish parameters, component weight loss, media weight loss, effectiveness of using media with different abrasive grades and hardness.

**MADE IN  
BRITAIN**

**ActOn Finishing Ltd**  
213 Torrington Avenue,  
Coventry, CV4 9HN, U.K.  
Tel: +44 (0) 24 7646 6914  
[www.acton-finishing.co.uk](http://www.acton-finishing.co.uk)

## Technical Specifications

<b>Model</b>	CPM10		
<b>Capacity</b>	<b>Cu. Ft.</b>	0.35	
	<b>Litres</b>	10	
<b>No. of Barrels</b>	4		
<b>Barrel Shape</b>	Hexagonal / Circular		
<b>Overall Dimensions in mm/Inch</b>	<b>Length</b>	1080mm/ 42.5"	
	<b>Width</b>	875mm/ 34.4"	
	<b>Height</b>	1700mm/ 66.9"	
<b>Barrel Size in mm / Inch (with liners fitted)</b>	<b>Hexagonal Barre</b>	<b>Width X Length</b>	<b>136mm X 129mm 5.4" X 5.1"</b>
	<b>Circular Barrel</b>	<b>Diameter X Length</b>	<b>157mm X 129mm 6.2" X 5.1"</b>
<b>Max. Motor Rating (KW)</b>	1.1		
<b>Max. Barrel Speed (RPM)</b>	225		
<b>Power Supply</b>	415 VAC, 3 Phase, 50 Hz / (Also available in 1 Phase)		

Note: Sizes indicated above are standard. Custom sizes can be manufactured to suit specific applications. Dimensions are subject to change due to design improvements.

## CPM 10 Accessories

### Barrel Assembly (Spare) With Removable Liners

ActOn Finishing offers the option of choosing between hexagonal and circular shaped barrels for the CPM10 machine to suit your process requirements. All barrels include removable polyurethane liners.

- ✓ The hexagonal barrel capacity is 2 litres / 0.07 Cu. Ft.
- ✓ The circular barrel capacity is 2.5 litres / 0.08 Cu. Ft.



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## Barrel Holding Station

Designed to provide a place to seat the barrels and lids of the CPM10 finishing machine. In order to make this portable, the table includes castor wheels. It also comes equipped with lid storage shelves along the flange, thus providing better storage facilities.

Each of the barrel holder is has been designed to include a screw clamp in order to hold the barrel into place when accessing the contents.



## Manual Separator with Splash-Guard

Enables end user to separate parts from media from CPM10 barrels at the end of the process.

- ✓ Includes a barrel resting station, for emptying contents onto a separation screen.
- ✓ The separation screen has a tapered end to feed the media back into the barrels for next cycle.
- ✓ Equipped with water gun to clean media and parts of any sludge accumulation.
- ✓ Includes a collection chamber attached to a drain valve, to collect the discharged water. This can be connected to a drain directly, or emptied into a drum for later removal
- ✓ Mounted on castor wheels for easy movement



## Finishing Consumables

Over the years, we have been at the forefront of the industry, developing & manufacturing a range of consumables, suitable for the high energy range, with the aim of achieving the desired finish on various components.

From ceramic and plastic media, to liquid finishing compounds and a wide range of Powders & Pastes, we ensure that you achieve the optimum results in the most cost-effective way.

