

# **BETTER** mixing technology with mixing sense



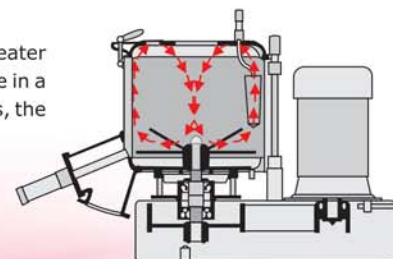
The PRIMETECH PHM / PCM Heating/Cooling mixer combinations are used in many fields of processing thermoplasts or elastomers. PRIMETECH PHM / PCM Heating/Cooling mixer combinations are used in processes, which require step by step heating and cooling of the product. Specific requirements of products are frequently very diverse.

 **PRIMETECH**  
INDUSTRIES

## **HIGH SPEED MIXER AND COOLER**

# PHM HEATER MIXER

In a High speed mixer, the heat generated due to friction is utilised for mixing, hence it's known as "Heater mixer". High speed mixers are used to mix solid to solid, liquid and pasty components. The Heating phase in a heater mixer - it is not only the shortest possible cycle time which is the decisive factor, but in many cases, the way in which friction is introduced in to the product is of far greater importance.



**LID**  
High quality and pneumatically operated



**DEFLECTOR**  
Influences the flow



**BOTTOM RADIUS**  
Improves performance

**MIXING TOOL**  
Process consistent and self cleaning



**PNEUMA SEAL**  
Prevents powder infiltration into bearing



Stainless steel vessel

Vessel-highly polished surface inside, discharge plate blended into bottom dish

Mixing tools-self cleaning, adjustable in height specific to the material being mixed, simple design, armoured leading edges

Robust, easily serviced and maintained construction

Twin jacket

Chopper with separate drive

Programmable logic control

Corrosion and abrasion resistance

No deposits, crusts or pockets of colour  
Fast and complete discharge of the mixed material  
Easy and perfect cleaning

Optimum adaptability to each type and size of mixing batch  
Optimum dispersion and distribution of components  
Improved tool life Quick, easy dismantling and reassembling

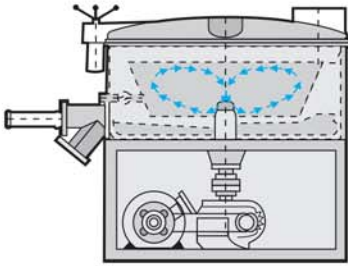
Long service life  
Low noise level  
Short maintenance and repair times

For heating and cooling purposes

Additional device for dispersion, especially for soft mixes

Optimum adaptability to the process requirements  
Constant high quality of the mixed material

# PCM COOLER MIXER



The hot mixture should be cooled subsequently in "Cooler mixer" in order to keep it in a free flow condition, suitable to storage, transportation and subsequent treatment. Also helps in case of PVC dryblend staticfree, heat stabilized and stressfree compound. The cooling phase - a large number of additional process steps are required. Good heat transfer co-efficients, necessary for obtaining short cooling times are essential for high throughput capacities. Mixing and dispersing processes and also de-agglomeration are frequently of equal importance as factors concerning the handling of the machines.



## LID

High quality with safe and effective lid opening



## COOLING CONE

Highest cooling performance through unique material guidance & active material circulation



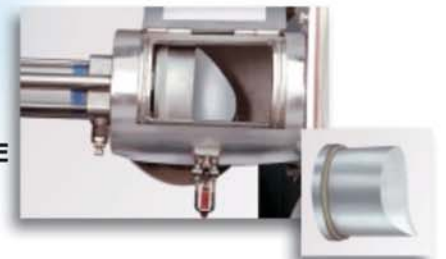
## BOTTOM RADIUS

Inside wall polished to mirror finish



## MIXING TOOLS

Process enhancing and self cleaning



## DISCHARGE VALVE

Piston type valve pneumatically operated

## FEATURES OF COOLER MIXER

Stainless steel vessel

Vessel-highly polished surface inside, discharge plate blended into bottom dish

Mixing tool

Twin jacket for cooling with forced circulation of cooling water

Cooling cone

Robust, easily serviced and maintained construction.

Jacketed lid

Chopper with separate drive

Corrosion and abrasion resistance

No deposits crusts or pockets of colour  
Easy and perfect cleaning

Self-cleaning, quick, easy fitting and removal

Optimum dimensions of cooling surface  
Intensive cooling of the mixed material

Increased cooling surface  
Reduction in cooling-time through forced circulation of the batch being mixed

Long life Low noise level  
Maintenance and repair takes little time.

Greater cooling surface Shorter cooling cycle time

Avoids lump formation  
Homogenization of the mixing batch

Fast and complete discharge of the mixed material

# HIGH SPEED MIXER AND COOLER

## HEATER MIXER - PHM

SR. NO.	MODEL	CHARGE BATCH CAPACITY (IN KGS.)	CONTAINER CAPACITY (IN LTRS.)	* PRODUCTION CAPACITY / HR. (IN KGS.)	DRIVE (IN kW)	MOTOR SPEED (IN RPM)	TOOL SPEED (IN RPM)	SUITABLE SUGGESTED COOLER MIXER
1	PHM-10	3	10	15	2.2 / 3.7	1500 / 3000	750 / 1500	PCM-40
2	PHM-50	15	50	75	5.5 / 7.5	1500 / 3000	500 / 1000	PCM-150
3	PHM-130-R	40	130	200	12 / 15	1500 / 3000	500 / 1000	PCM-400
4	PHM-130	40	130	200	15 / 18	1500 / 3000	500 / 1000	PCM-400
5	PHM-200-R	70	200	350	26 / 31	1500 / 3000	500 / 1000	PCM-400 / 600
6	PHM-200	70	200	350	32 / 38	1500 / 3000	500 / 1000	PCM-400 / 600
7	PHM-250-R	90	250	450	32 / 38	1500 / 3000	500 / 1000	PCM-600
8	PHM-250	90	250	450	38 / 45	1500 / 3000	500 / 1000	PCM-600
9	PHM-350-R	120	350	600	38 / 56	750 / 1500	430 / 860	PCM-600 / 1000
10	PHM-350	120	350	600	46 / 67	750 / 1500	430 / 860	PCM-600 / 1000
11	PHM-500	200	500	1000	110	1500	100-800	PCM-1500 / 2000
12	PHM-750	300	750	1500	132	1500	100-650	PCM-1500 / 2000
13	PHM-1200	475	1200	2250	200	1500	100-600	PCM-3000

## COOLER MIXER - PCM

SR. NO.	MODEL	CHARGE BATCH CAPACITY (IN KGS.)	CONTAINER CAPACITY (IN LTRS.)	* PRODUCTION CAPACITY/HR. (IN KGS.)	DRIVE (IN kW)	TOOL SPEED (IN RPM)	COOLING SURFACE (IN m <sup>2</sup> )
1	PCM-40	4	40	20	0.75	150	1.3
2	PCM-150	25	150	125	1.5	90	1.7
3	PCM-400	75	400	375	3.7	72	3.5
4	PCM-600	160	600	800	5.5	72	5.0
5	PCM-1000	200	1000	1000	7.5	60	6.5
6	PCM-1500	350	1500	1750	11	55	8.0
7	PCM-2000	500	2000	2500	18	50	11.0
8	PCM-3000	700	3000	3500	30	50	14.5

\* Production capacity is based on 5 batches/hr.

Specifications are indicative & as a part of our continuous development, we reserve the right to change specifications without prior notice.

For customized application the specifications can be altered.

Output depends on type of material, formulations, processing parameters and ambient temperature.



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