DIRECTOR's CUT

neoplast®

People You can believe

SCENE LIVE PREVIEW

ON STAGE STATE - OF - ART HORIZONTAL COOLER MIXER

VENUE PLASTINDIA 2018 HALL # 5 STALL # C4

DATE FEB. 07 - 12 | neoplast | Seeing is Believing



Excellence in Mixing & Cooling results on the basis of more than 40 years of experience

Sound Mixing & Economical preparation of Plastic Compounding

High Throughput Rate

Optimum Homogeneal Mixing

Compact Configuration

Exercised with extensive know-how in the selection of elements particularly subject to wear

neoplast® Engineering Pvt. Ltd.

Corporate Office: Safal Profitaire | Block A | 2nd Floor A/7 | Opposite AUDA Garden | Corporate Road | Prahladnagar – 380 015 | Ahmedabad | Gujarat | INDIA

Unit-1: 43 GIDC Industrial Estate | Phase-1 | Opposite AMCO Bank | Vatva – 382 445 | Ahmedabad | Gujarat | INDIA

Unit-2: Survey # 138 | Near Divya Bhaskar Press | Chachrawadi Vasna Patia | Changodar-Bawda Highway - 382 213 | Ahmedabad | Gujarat | INDIA

: www.neoplastgroup.com **email:** customercare@neoplastgroup.com **Contact #** 079 - 40304185 / 88

CIN:U29259GJ1973PTC002377

neoplast®

HSM Series

PERFECT MIX – HIGH INTENSITY MIXING SYSTEM

5th GEN Heater Mixer

a) ***High Energy Efficiency Standards*** - Lowest Compounding Cost per batch compared to any mixer manufacturers in the industry.

b) ***Shortest Mixing Cycle*** – Thanks to our Patented ***Aerodynamic Angular Twist Blade*** Technology (*Patent Reg. # 201621011484 A*).

c) ***Perfect Homogenisation*** – Introduction of our latest laterally mounted ***CONVEX BAFFLE PLATE*** concept generates a true *3-Dimensional Deep Vortex* during mixing cycle resulting into an excellent mix of your precious compound.

d) ***Quick Horizontal Residue free Discharge*** – New Discharge Valve Assembly is bigger & stronger with Leak-Proof Closed–Cell Silicone Plunger Ring. Dust Free & Faster Discharge. Ensures 100% sealing during Mixing Cycle.

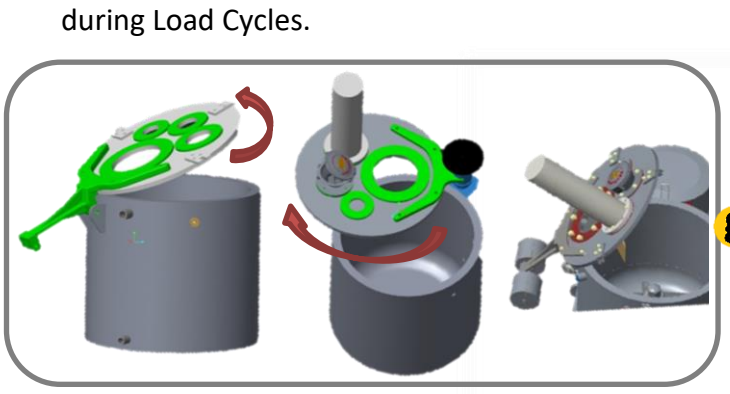
e) ***Jet Filtration System*** – Optimum Performance compared to conventional Cotton Breather Caps. Stainless Steel Housing with Special Filter Cartridge. Compressed air filter cleaning after every compounding cycle. This system is attached from the side of the vessel with Bend Clamp design for ease of maintenance.

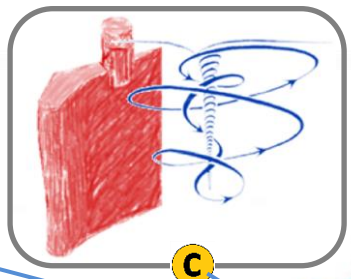
f) ***Dust Proof Panels*** – Electric & Pneumatic Panels are with IP Level hermetically sealed Lock & Key enclosures. Inspection Window provided to view inside Pressure Gauges.

g) ***Mixer Lid*** – Lid with Manual or Pneumatic Opening with Vertical Arm or Horizontal Swivel orientation with all necessary Ports by default. Accessories like conveying systems, Aspiration Units, Chemical Hoppers etc. can be mounted without any extra modifications.

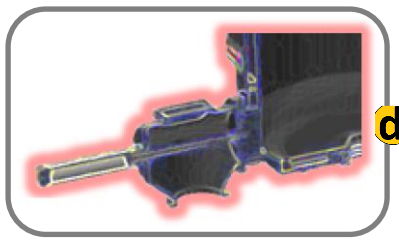
h) ***Highly Efficient Power Transmission*** – Transmission via Taper Lock Pulley & V-Belts. Re-designed longer mixing shaft assembled with Water-Resistant Pneumaseal housing delivers excellent performance during intensive mixing operation. Whole complex transmission assembly is dynamically balanced as per ISO1940-G6.3 standards achieving smooth operation under load condition.

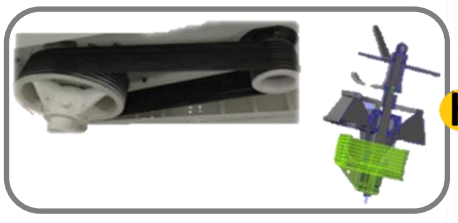
i) ***Independent Structures*** – Robust Independent Structures & Elevation Pad for each mixer results into Vibration Free Operation during Load Cycles.



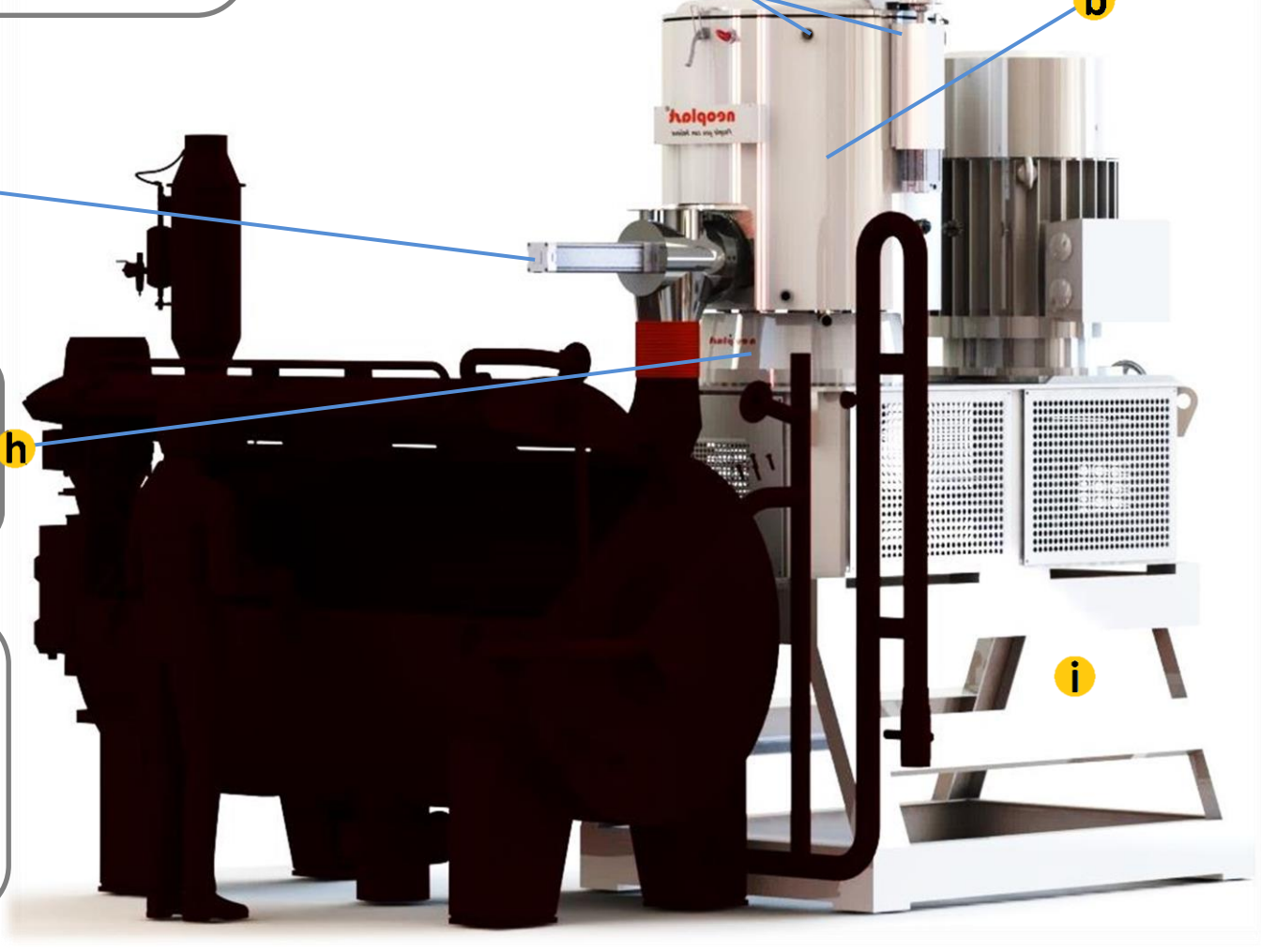












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Signature Design Platform

HCM Series

PERFECT BLENDING – HORIZONTAL COOLING SYSTEM

a) ***Horizontal Cooler Vessel*** – Highest cooling efficiency through almost 100% utilization of the available cooling surface. A Constant Heat Exchange between Vessel Jacket Surface & Compound. No dead-spots often found in conventional Cooler Mixers.

b) ***Mixing Geometry in accordance to Froude Number*** – State-Of-Art Shovel arrangement with optimum Peripheral Tip Speed to achieve gentle treatment with 3-D Material Flow in Ring Layer. The complex ***Neoshare***® shovel geometry besides efficient cooling also delivers gentle blending of dry blend in optimum fashion. The Shovel Elements generates turbulence with constant product mobility preventing the formation of dead/static zones resulting in precision cooling in shortest possible time.

c) ***Powered Transmission through Direct Drive Helical Bevel Gearbox*** – More than 95% energy efficiency during operation compared to traditional worm gearboxes. Design accordance to Lowest parts per assembly (LPPA) resulting into minimal friction loss. The Heli-Bevel Gearbox is powered by SIEMENS® Motor, exclusively controlled by Variable Frequency Drive.

d) ***Safe Pneumatic Lid Lifting Operation*** – The Mixer Lid Open / Close Operation is handled with a precise combination of Pneumatic Cylinders to ensure total safety during operation even in the event of a power failure. Safety Limit Switch mounted on the Vessel ensures the Open/Close position during operation. Optional Non-Contact Magnetic Coded Safety Switch can be installed for additional safety.

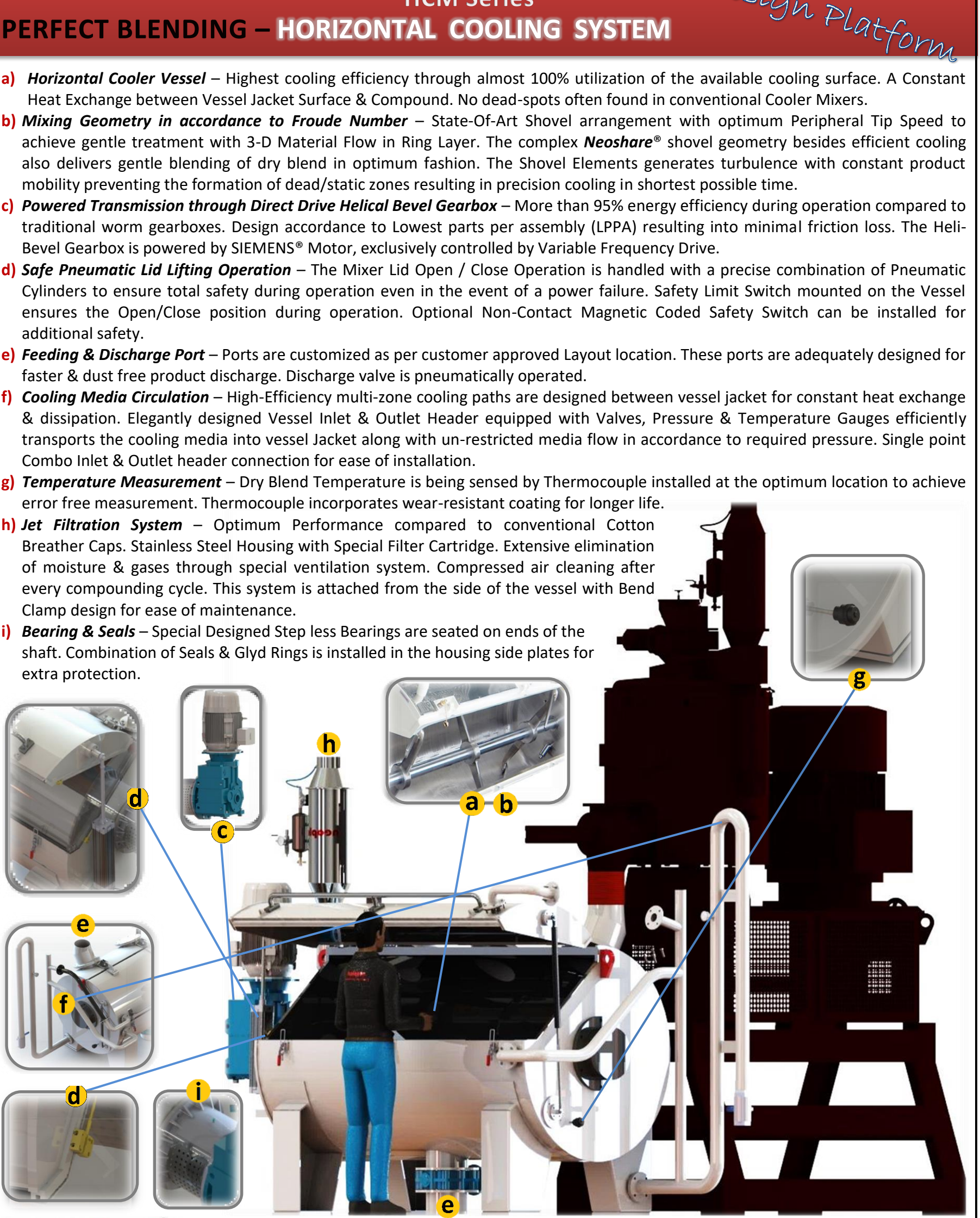
e) ***Feeding & Discharge Port*** – Ports are customized as per customer approved Layout location. These ports are adequately designed for faster & dust free product discharge. Discharge valve is pneumatically operated.

f) ***Cooling Media Circulation*** – High-Efficiency multi-zone cooling paths are designed between vessel jacket for constant heat exchange & dissipation. Elegantly designed Vessel Inlet & Outlet Header equipped with Valves, Pressure & Temperature Gauges efficiently transports the cooling media into vessel Jacket along with un-restricted media flow in accordance to required pressure. Single point Combo Inlet & Outlet header connection for ease of installation.

g) ***Temperature Measurement*** – Dry Blend Temperature is being sensed by Thermocouple installed at the optimum location to achieve error free measurement. Thermocouple incorporates wear-resistant coating for longer life.

h) ***Jet Filtration System*** – Optimum Performance compared to conventional Cotton Breather Caps. Stainless Steel Housing with Special Filter Cartridge. Extensive elimination of moisture & gases through special ventilation system. Compressed air cleaning after every compounding cycle. This system is attached from the side of the vessel with Bend Clamp design for ease of maintenance.

i) ***Bearing & Seals*** – Special Designed Step less Bearings are seated on ends of the shaft. Combination of Seals & Glyd Rings is installed in the housing side plates for extra protection.



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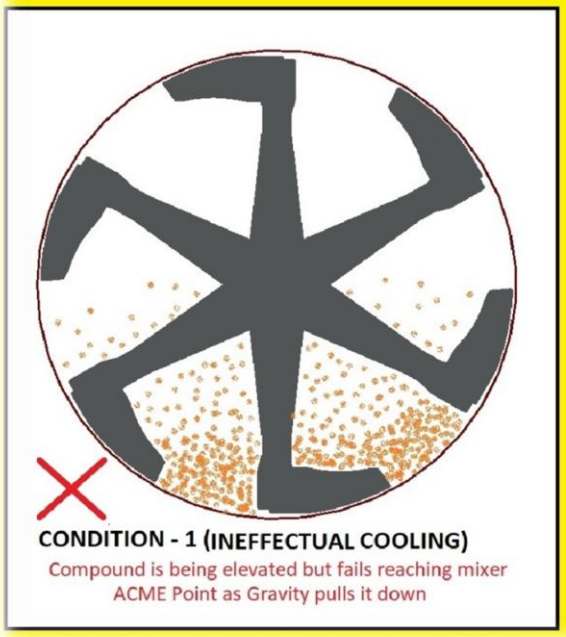
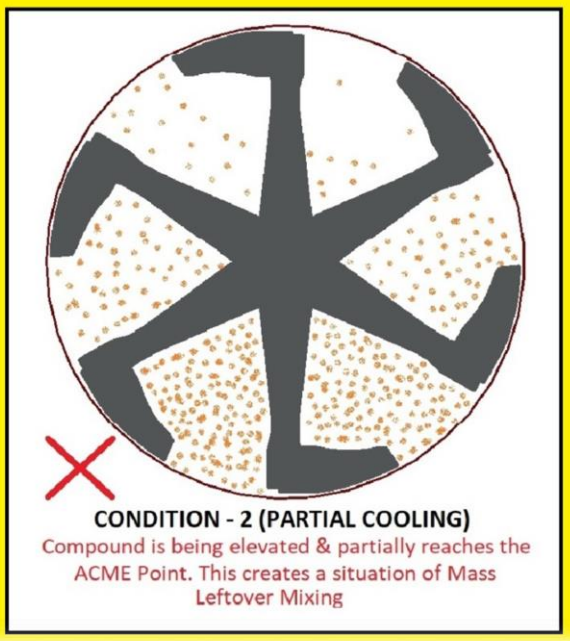
DIFFERENTIATION BETWEEN 3 CONDITIONS WITHIN HORIZONTAL COOLER MIXER



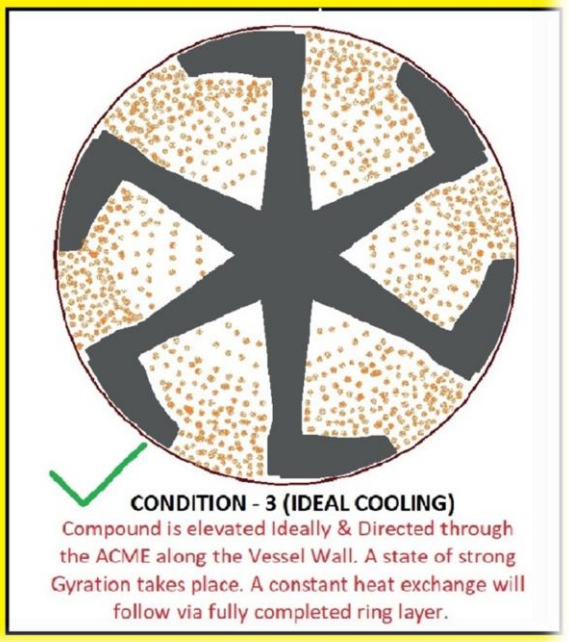
CONDITION - 1 (INEFFECTUAL COOLING)

Compound is being elevated but fails reaching mixer ACME Point as Gravity pulls it down



CONDITION - 2 (PARTIAL COOLING)

Compound is being elevated & partially reaches the ACME Point. This creates a situation of Mass Leftover Mixing



CONDITION - 3 (IDEAL COOLING)

Compound is elevated Ideally & Directed through the ACME along the Vessel Wall. A state of strong Gyration takes place. A constant heat exchange will follow via fully completed ring layer.

HSM / HCM Combination Series: (Vertical Mixing with Horizontal Cooling)

**Output Based on - Rigid PVC ISI Formulation (Batch Bulk Density @ 0.55 Grams / CC)*

**Output Based on - Heating Temperature @ 120°C / Cooling Temperature @ 40°C with req. flow rate & water inlet temperature*

Model:	Vessel Volume *HSM / HCM*	Typical Drive Capacity *HSM / HCM*	Typical Batch Size (Batches / Hr.)	Feeding - Manual (6 Batches / Hr.)*	Feeding – Basic Automation (7 Batches / Hr.)*	Feeding – Full Automation (8 - 9 Batches / Hr.)*
HSM-250 / HCM-800	250 Ltr. / 800 Ltr.	37 kW. / 7.5 kW.	90 Kgs.	540 Kg. / Hr.	630 Kg. / Hr.	720 Kg. – 810 Kg. / Hr.
HSM-350 / HCM-1200	350 Ltr. / 1200 Ltr.	55 kW. / 11 kW.	120 Kgs.	720 Kg. / Hr.	840 Kg. / Hr.	960 – 1080 Kg. / Hr.
HSM-500 / HCM-1800	500 Ltr. / 1800 Ltr.	110 kW. / 15 kW.	200 Kgs.	1200 Kg. / Hr.	1400 Kg. / Hr.	1600 - 1800 Kg. / Hr.
HSM-750 / HCM-2700	750 Ltr. / 2700 Ltr.	132 kW. / 22 kW.	300 Kgs.	1800 Kg. / Hr.	2100 Kg. / Hr.	2400 – 2700 Kg. / Hr.
HSM-1200 / HCM-4600	1200 Ltr. / 4600 Ltr.	250 kW. / 45 kW.	500 Kgs.	3000 Kg. / Hr.	3500 Kg. / Hr.	4000 – 4500 Kg. / Hr.

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Warning:

- Specifications & Data's in the Presentation are indicative & as a part of our continuous R &D. We reserve the right to change the specifications without prior notice.
- For Customize applications the specifications can be altered.
- Product Output depends of types of material, batch formulation, processing parameters & ambient conditions.
- All Data's are conducted taking ISI Batch Trials (6 to 8 PHR Filler) @ 120ºC and Non-ISI Batch Trials (50-80 PHR) @ 135ºC in Rigid PVC Compounding Formulations.

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