



HOSOKAWA MICRON POWDER SYSTEMS

10 Chatham Road, Summit, NJ 07901 · Tel. (908) 273-6360 · Fax (908) 273-7432 · hmiconpowder.com

HMPS Proposal No.: 2016-11475-202 Rev 9

February 27, 2017
Page 3 of 16

Technical Summary

Item 1. One (1) Feed Rotary Airlock Valve

- Drop-thru style
- Carbon steel housing and rotor
- Shallow pocket rotor for uniform feed to the mill
- Open end rotor with square edges on wane tips and ends
- 1 HP motor, TEFC, 460V/3Ph/60Hz
- Set of Neoprene flange gaskets
- Paint – color Dunes Tan. Matched by Eco Shell color sample prior to painting.

Item 2. One (1) Mikro-ACM® Model 300 Air Classifying Mill

- Structural steel base and stand legs
- Cast iron / carbon steel construction
- Gravity style feed assembly consisting of a flanged nozzle for rotary valve feeder connected to the mill grinding chamber feed duct
- Rotor disc with eight (8) hammers with tungsten carbide tipping
- Rotor disc with AR400 wear replaceable wear plate.
- Steel 24 LONG radial blade classifier wheel with TC coating
- Includes one (1) spare 24 long radial blade SHORT classifier wheel with TC coating per mill to produce 50 MESH product specification
- Multiple deflector type grinding liners, NiHard construction
- Standard dispersion ring
- T-1 Shroud ring assembly with baffles
- Automatic oil lube system: Type Bijur
- Body safety interlock switch
- 350 HP, 460V/3Ph/60Hz Main Grinder Drive motor, inverter-duty, TEFC
- 50 HP, 460V/3Ph/60Hz, 1800 RPM, TEFC, inverter-duty classifier motor
- Belt guards on base, equipped with handles for easy removal
- One (1) coat of primer and one (1) coat of manufacturers' standard finish paint
- Tachometer pick-up assemblies mounted to the classifier shaft and rotor shaft
- Paint – color Dunes Tan. Matched by Eco Shell color sample prior to painting.





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February 27, 2017

HMPS Proposal No.: 2016-11475-202 Rev 9

Page 4 of 16

Item 3. One (1) Dust Collector for ACM Mill

- Manufacturer: Donaldson Torit Model 484 RFW 10 AW
- Reinforced for -70" WG operating condition.
- Finish Coat: Paint – color Dunes Tan. Matched by Eco Shell color sample prior to painting.
- CUSTOM COLOR SAMPLE: 2" X 3" PHYSICAL SAMPLE needed for color match
- HOPPER TRANSITION: Ø24" to 24"x18" rectangular flange to match 9" trough screw conveyor with transition to Rotary Airlock (Item 13) as part of the live bottom hopper.
- FULL LEG SUPPORTS: Reinforced legs for 90 mph wind load in CA Seismic zone (to be determined) per ASCE 7-10. Engineering Work Order required
- BAGS / CAGES : DURA-LIFE™ BAGS & BOLTSAFE Hardware
- MANIFOLD DRIVE MOTOR ¾ HP EXPLOSION-PROOF
- TIMER & ENCLOSURE : NEMA 4 with UL TIMERBOARD
- MAGNEHELIC GAUGE to measure the pressure across the filters
- (2) EXPLOSION VENTS 36x44 Fike VMAX The explosion vents provide enough surface area for the reinforced RF MEETS KST OF 120.
- Positive Displacement BLOWER with premium 7.5 HP TEFC motor
- HOPPER SERVICE PORT (6" DIA)
- SPRINKLER TAP PACK - 1.5" NPT COUPLINGS (2/PK)
- 3" DIA WATER OVERFLOW VALVE
- INLET : Standard (Location to be confirmed at time of order)
- HOPPER OUTLET PACK : LIVE BOTTOM HOPPER
- EXPLOSION VENT LOCATION : Standard (to be confirmed at time of order)
- PLATFORM / LADDER with cage: To be painted the Same Custom Color As Collector.
- Construction to cosmetically match previous design and appearance purchased by Eco Shell.

Item 4. One (1) Rotary Airlock Valve

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- Flanged drop-thru design
- Carbon steel housing and rotor
- Open end rotor
- 1.5 HP motor, TEFC, 460V/3Ph/60Hz
- Paint – color Dunes Tan. Matched by Eco Shell color sample prior to painting.



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February 27, 2017

Page 5 of 16

HMPS Proposal No.: 2016-11475-202 Rev 9

Item 5. One (1) System Blower

- Designed to handle 300 ACM airflow requirements for both products
- Standard carbon steel construction
- Paint – color Dunes Tan. Matched by Eco Shell color sample prior to painting.
- Flanged inlet and outlet
- Housing Drain with plug
- Bolted Access Door
- Coupling guard
- ~~Flexible coupling deleted in this revision~~
- **350 HP TEFC Motor, Inverter-duty, 3,600 RPM, 460V/3Ph/60Hz**
- ~~Discharge silencer deleted in this revision~~

Item 6. ~~One (1) Control Panel & Field Instrumentation~~

- **Control Panel – deleted from HMPS Scope of Supply**
- **HMPS shall provide the following:**
 - P&ID
 - PLC program
 - OIT program (screens)
- **Control Panel, PLC, OIT and all hardware by Client**

Field Instrumentation – shipped loose (installation by customer)

- One (1) Thermal Mass Flow Meter – System Airflow
- Differential Pressure Transmitter - ACM 300 Mill
- Differential Pressure Transmitter – Product Collector Filters
- Differential Pressure Gauge – system blower inlet
- Level Probe – Product Collector

Item 7. Mikro-ACM300 Spare Parts

- One (1) Set - Hammers with Tungsten Carbide Tipping
- One (1) Wear Plate for Main Rotor Disc
- One (1) Set of NiHard Liners
- One (1) Set of rotor and classifier bearings
- One (1) LONG Classifier Wheel with TC coating
- One (1) SHORT Classifier Wheel with TC coating



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February 27, 2017

HMPS Proposal No.: 2016-11475-202 Rev 9

Page 7 of 16

Item 8. One (1) Volumetric Screw Feeder

- Material of Construction: 304 stainless steel
- Surge Hopper with 20 ft³ capacity
 - Equipped with nozzles for high and low level switches
 - Lid / cover with inlet flange and vent flange
- Hopper Agitator
- Vertical downspout
- Variable speed drive, 2 HP TEFC Motor

Item 9. One (1) Feed Rotary Airlock Valve

- Drop-thru style
- Carbon steel housing and rotor
- Shallow pocket rotor for uniform feed to the mill
- Open end rotor with square edges on wane tips and ends
- 1.5 HP motor, TEFC, 460V/3Ph/60Hz
- Set of Neoprene flange gaskets
- Paint – color Dunes Tan. Matched by Eco Shell color sample prior to painting.

Item 10. One (1) Micron Separator Model MS-4H Air Classifier



- Downstream air classifiers
- Carbon steel construction with wear protection
- Body / chamber and lower housing in carbon steel construction with Polyurethane lining
- MS-4H high speed classifier wheel, carbon steel with exchangeable ceramic (Al_2CO_3) wear blades
- Flanged inlet, exhaust and coarse outlets
- Speed sensor for classifier drive with 4-20 mA output
- Two (2) temperature sensors for bearing housing
- 40 HP variable speed motor
- Paint – color Dunes Tan. Matched by Eco Shell color sample prior to painting.



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February 27, 2017
Page 8 of 16

HMPS Proposal No.: 2016-11475-202 Rev 9

Item 11. One (1) Rotary Airlock Valve – Air Classifier Coarse Discharge

- Flanged drop-thru design
- Carbon steel housing and rotor
- Open end rotor
- 1.5 HP motor, TEFC, 460V/3Ph/60Hz
- Paint – color Dunes Tan. Matched by Eco Shell color sample prior to painting.

Item 12. One (1) Dust Collector for MS Classifier

- Manufacturer: Donaldson Torit Model ~~232 RFW 8 AW~~ **232 RFW 10 AW**
- Reinforced for -75" WG operating condition.
- Finish Coat: Paint – color Dunes Tan. Matched by Eco Shell color sample prior to painting.
- CUSTOM COLOR SAMPLE: 2" X 3" PHYSICAL SAMPLE needed for color match
- HOPPER TRANSITION : 24.5" I.D. TO MATCH Rotary Airlock (Item 13)
- HOPPER to be designed to accommodate 48" LIVE BOTTOM HOPPER
- FULL LEG SUPPORTS: Reinforced legs for 90 mph wind load in CA Seismic zone (to be determined) per ASCE 7-10. Engineering Work Order required
- BAGS / CAGES : DURA-LIFE™ BAGS & BOLTSAFE Hardware
- MANIFOLD DRIVE MOTOR ¾ HP EXPLOSION-PROOF
- TIMER & ENCLOSURE : NEMA 4 with UL TIMERBOARD
- MAGNEHELIC GAUGE to measure the pressure across the filters
- (2) EXPLOSION VENTS 36x44 Fike VMAX The explosion vents provide enough surface area for the reinforced RF MEETS KST OF 120.
- 5 HP TEFC PREMIUM Positive Displacement BLOWER
- HOPPER SERVICE PORT (6" DIA)
- SPRINKLER TAP PACK - 1.5" NPT COUPLINGS (2/PK)
- 3" DIA WATER OVERFLOW VALVE
- INLET : Standard (Location to be confirmed at time of order)
- HOPPER OUTLET PACK : LIVE BOTTOM HOPPER
- EXPLOSION VENT LOCATION : Standard (to be confirmed at time of order)
- CLEAN AIR OUTLET : ROUND
- CLEAN AIR OUTLET : Standard (location to be confirmed at time of order)
- PLATFORM / LADDER with cage: To be painted the Same Custom Color As Collector.



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February 27, 2017

HMPS Proposal No.: 2016-11475-202 Rev 9

Page 9 of 16

- Construction to cosmetically match previous design and appearance purchased by Eco Shell.

Item 13. One (1) Rotary Airlock Valve – Dust Collector Discharge

- Flanged drop-thru design
- Carbon steel housing and rotor
- Open end rotor
- 1.5 HP motor, TEFC, 460V/3Ph/60Hz
- Paint – color Dunes Tan. Matched by Eco Shell color sample prior to painting.

Item 14. One (1) System Blower

- Designed to handle MS-4H airflow requirements for both products
- Standard carbon steel construction
- Paint – color Dunes Tan. Matched by Eco Shell color sample prior to painting.
- Flanged inlet and outlet
- Housing Drain with plug
- Bolted Access Door
- Coupling guard
- ~~Flexible coupling~~ *deleted in this revision*
- 150 HP TEFC Motor, Inverter-duty, 3,600 RPM, 460V/3Ph/60Hz
- ~~Discharge silencer~~ *deleted in this revision*

Item 15. One (1) Sets of extra Hardware for Control Panel & Field Instrumentation

- It is the intent of Hosokawa to provide one control panel / system for each ACM300 / MS Classifier System.
- Item 16 included additional hardware, I/O, PLC programming and additional OIT screens to include the MS Classifier System in the integrated controls package.
- Additional Instrumentation and Filters for MS Classifier System, includes:
 - Two (2) Thermal Mass Flow Meter – System Airflow
 - Two (2) Differential Pressure Transmitters
 - One (1) Differential Pressure Gauge – system blower inlet
 - Two (2) Level Probes
 - One (1) Secondary Air Inlet Flow Control Valve
 - One (1) Primary Air Inlet Filter
 - One (1) Secondary Air Inlet Filter