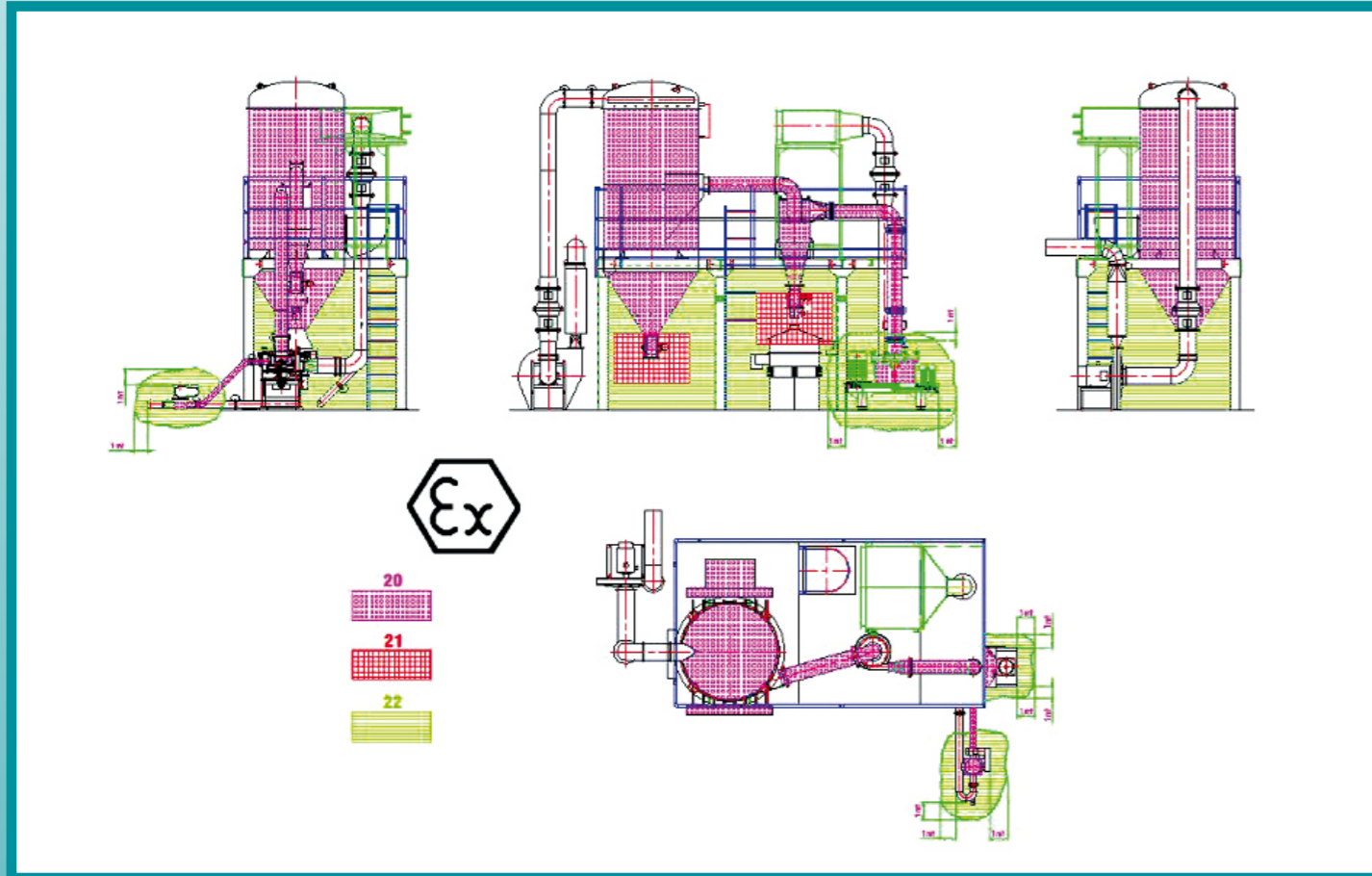




Extrusion & Powder Coating Division

Steel Belt Systems

Example of Layout



Extrusion & Powder Coating Division

Steel Belt Systems

Grinding System SERIES M00IT



CONTACTS

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Model	M10-01/2	M20-01/2	M30-01/2	M40-01/2
Capacity (Kg/h)	50÷120	150÷250	300÷400	500÷700
Grinding motor ATEX 22	5 kW 3 phase, 400V 50HZ, 2 poles, IP55	11 kW 3 phase, 400V 50HZ, 2 poles, IP55	22 kW 3 phase, 400V 50HZ, 2 poles, IP55	30 kW 3 phase, 400V 50HZ, 2 poles, IP55
Classifier motor ATEX 22	1.5 kW 3 phase, 400V 50HZ, 2 poles, IP55	3 kW 3 phase, 400V 50HZ, 2 poles, IP55	4 kW 3 phase, 400V 50HZ, 2 poles, IP55	5.5 kW 3 phase, 400V 50HZ, 2 poles, IP55
Filtering BAG Surface m ²	7	30	40	60

The grinding system M00IT SERIES has been designed according to ATEX directive 2014/34/EU* and is equipped with anti-explosion valves in order to minimize the explosion risk.

*Atex marking might change due to the updating of UE Examination Certificate.

Main features:

- Product dosing system through rotary valve in mill suction pipe
- Product discharging system through rotary valve
- Grinding chamber optimized to reach the particle sizes required for your products (105 micron) and for the required productive capacities. Such machine has also been designed with oversized steel thicknesses to resist to possible explosions PEX max
Many internal parts of the mill are in stainless steel
- Fineness is also adjustable by acting on the speed of the classifier and the grinding disc, which are driven by frequency converter in the electrical control board
- The mill has been designed according to the ATEX directives 2014/34/UE and equipped with anti-explosion valves, in order to minimize the explosion risk
- Stainless steel cyclone for product collection
- N° 2 Self-activating safety non return compartment valves
- N° 2 Anti-explosion safety valve
- Electrical control board with PLC system (SIEMENS)



Feeding rotary valve:

- Construction in carbon steel;
- Installed power: 0,25 kW ATEX Equipment II 1D/2GD c IIB TX
- Driven through frequency converter

Mill with vertical axis and with air selector

Composed by:

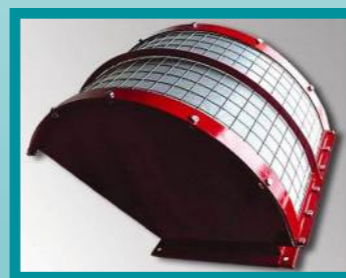
- Frame in welded steel plate, oversized thicknesses to resist to explosions (Pmax), with shaped cover, pneumatic opening and safety microswitch ATEX Category 3 Equipment
- Opening for pneumatic feeding of the material, for process air inlet and for product discharge, complete of special rapid release flanges for piping coupling
- Stainless steel AISI 304 peripheral cladding grinding chamber, with pins and feed port of the product
- Stainless steel AISI 304 Grinding with wear-resistant pins and stainless steel AISI 304 classifier with radial bars, both with variable speed and controlled by frequency converter SIEMENS included in the main control board functions
- Mechanical group with nr. 2 coaxial shafts, for the grinding disc and for the classifier, having appropriate bearing lubrication with special grease, specific for the application
- n° 2 Bearing temperature sensors
- n° 1 Vibration Sensor Ex(I)
- Basement to support the grinder and the motors with their safety protection
- Grinding Motor: : 11 kW - 3 Phase 400 V. - 50 Hz. - 2 poles - IP 55 ATEX Category 3 Equipment II 3G Ex na IIC T4 Gc
- Classifier motor: 3 kW - 3 phase 400 V. - 50 Hz. - 4 poles - IP 55 ATEX Category 3 Equipment II 3G Ex na IIC T4 Gc



High efficiency cyclone

Composed by:

- Materials: Stainless Steel AISI 304
- Decantation cone for dust separation at high efficiency
- Radial inlet air / dust



Filter bags

Composed by:

- Material: Carbon Steel
- Filtering surface depending on size of system
- Bag washing: compressed air
- N° 6 electro valves - 24 V DC - time control
- N° 12 Bags in antistatic polypropylene and anti-adhering material
- Rotary valve cell ATEX Equipment EX II 1D/3D c T 135°C
- N° 1 FIKE - FLAMQuench installed on the filter bag
- ATEX Equipment II 1GD Ins. /II 2GD Out.
- Motor 0,55 ATEX Category 2 Equipment
- Differential Pressure sensor

System for the process air cooling

Process data:

- Air inlet temperature: 35°C;
- Air outlet temperature: 10-12°C;
- Volume of air to be cooled: 4000 m3/h
- Water inlet temperature: 8-9°C
- Volume of water to be cooled: 10 m3/h
- Capacity kW 65

Composed by:

- Stainless steel outside frame with thermal insulation
- Cooling fluid: water (8-9°C) not included in the supply;
- Heat exchange battery water/air made of aluminum/ copper alloy;



Discharge rotary valve

(In case of EASY CLEAN VERSION Flip-Flap valve is necessary)

Composed by:

- Material: Carbon Steel completed with motor reducer 0,25 kW ATEX Category 2
- Equipment II 1D/2GD c IIB T



Safety valves certified by "VENTEX" for classified areas

II 1GD Ins. /II 2GD Out located:

- n° 1 VENTEX ESI-E prior to inlet of the heat exchanger for air cooling
- n° 1 VENTEX ESI-E after the filter bag, prior to the ventilator
- ATEX Equipment II 1GD Ins. /II 2GD Out



Electrical control board - control & management of the system

Comprehensive of:

- PLC Siemens S7 1200 with touch panel;
- N° 1 Siemens Frequency converter Grinder motor 12,5 kW;
- N° 1 Frequency converter for classifier with 4,2 kW;
- N° 1 Frequency converter for rotary valve feeder with 0.75 kW.