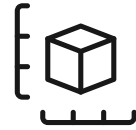


# CMF Debind 30 Debinding Station

The compact all-in-one debinding solution for small series



Integrated solvent debinding-, drying- and solvent recycling station. Optimized for CMF binder-component extraction with acetone solvent. Closed Loop System ensures maximum acetone reuse through dirt-tank to clean-tank distillation.



## 30 Liters Chamber

Build Tube Size 400mm (Length) x 300mm (Diameter)



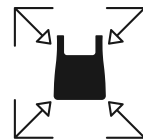
## Acetone Based Debinding

Acetone solvent used for optimal performance with ColdMetalFusion Feedstocks



## Closed Loop Solvent Reuse

Closed Loop System combined with distillation allows acetone reuse at virtually no loss. System needs to be fully filled only once (at commissioning) and topped-up at service intervals.



## Compact Form Factor

Optimized for lab and workshop environments with narrow doors (90cm).



# Distinctive Features



## Temperature Controlled Process

Acetone heated up and constantly kept below its boiling point to ensure consistent outcomes and enable high debinding performance.



## Highest Safety with inerted process chamber

Includes nitrogen atmosphere in process chamber, LÖMI Advanced Clean Technology, door safety-locking mechanism, chamber over pressure valve, double walled high quality steel chamber and a fully closed system design. Station is explosion proof according to II 2G Ex h IIA T3 Gb of ATEX 2014/34/EU directive.



## CMF - material debinding

Integrated PID digital temperature controller and circulation pump with adjustable flow rate. Machine ships with pre-configured profiles developed by Headmade Materials



## Integrated Tanks For 2 Debinding Cycles

128 liters tank divided in two chambers. Chamber is flooded with approx. 30 liters of fresh acetone, which is pumped into the dirt tank at job completion. Clean tank can be refilled upon depletion by running special distillation cycle - at the end of which the resulting binder-dust can be cleaned out of the chamber with a brush.



## Ultra high wall thickness parts

Advanced process design enables deep infusion of solvent into the part. Users are able to manufacture very large parts with wall thicknesses of up to 30mm.



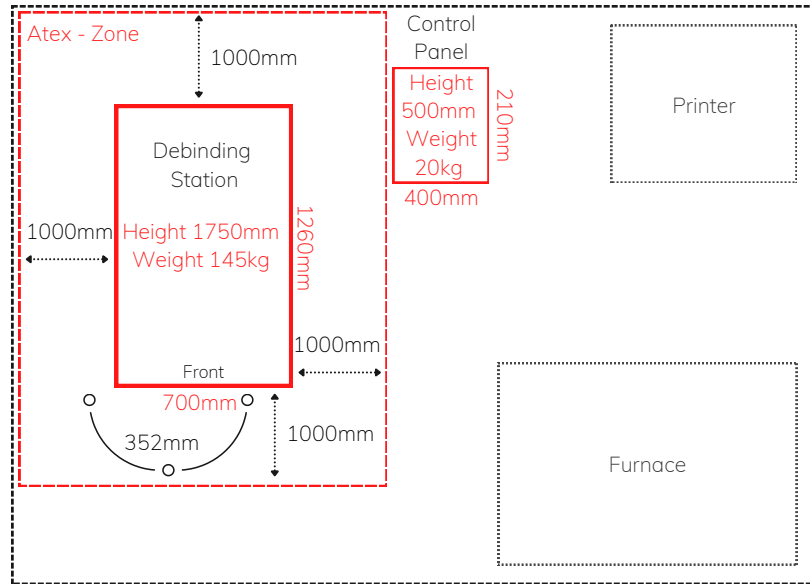
## Continuous Solvent Circulation

Circulation pump keeps constant acetone flow over parts to ensure homogenous fresh acetone distribution over all part's surface areas. This accelerates the process and reduces risk of crack building within the part during debinding.





# Dimensions & Required Connections\*



\* min. distance to walls 500mm

## Supply connections for power & support systems

- |   |  |                             |   |   |  |
|---|--|-----------------------------|---|---|--|
| ⚡ | Power  | 3 kW                        | ☼   | Room air extraction 5x the room volume per hour |  |
|   | Voltage  | 230V / 400V, 3PH/N/PE, 50Hz |   | 🧴   | Compressed air supply with >6 Bar pressure |
|   | Current  | 1x 7,5A                     |   |   |  |
| 🧴 | Thermal oil 10 Liters<br>Recommendation: Shell HTO S2                                    | ☼                           | Nitrogen gas supply with 0.2<0.3 Bar pressure                                   |   |  |
| ☼ | Room air extraction 5x the room volume per hour with ATEX certification                  | ☼                           | Pipe or house for ventilation of tanks towards exterior of building             |   |  |
| ☼ | (optional) Air extraction for hood for air suction system (door) with ATEX certification | ❄️                          | chilled water [10°C - 12°C] with [0.1-0.4] m³/h flow rate and 2-3 bars pressure |   |  |



# Technical Specifications

Insertion height for perforated tubs (mm)	~1160
Batch load volume W x H x D (mm)	200 x 209 x 380
Power usage during debinding process (kWh)	0,3 - 0,5
Power usage during destilation process (kWh)	1,0 - 2,0
Volume (litres)	30
Dimensions: External H x W x D (mm)	1620 x 530 x 955
L x D Debindingchamber (mm)	400 x 3000
Weight (kg)	145



# Maintenance at a glance

Check for any potential leaks	Daily
Cleaning of process chamber, removal of any dust or deposits	At least Monthly
Check ground cable (electrical)	Monthly
Check acetone level and refill if necessary	Quarterly
Check thermal oil level and refill if necessary	Quarterly
Check operational temperature and pressure level indicators	Half-Yearly
Hinges on the unit lock mechanism must remain lubricated with Teflon spray	Yearly
Check tube heater ( distance gasket to wall, function of temperature sensor)	Yearly
Visual Check of power supply and electrical connections	Yearly
Get pressure relieve valve, safety temperature limiter for heater and chamber checked by electrician	Yearly
Change of thermal Oil	Every 2 years

