

QUESTIONNAIRE – VACUUM CONVEYING SYSTEM VSU

Please complete the form fields and return the questionnaire to biuro@interprocess.pl – we will prepare our quotation on this basis. Any questions: tel. +48 787 783 590.

CONTACT DETAILS

Full name:		Phone number:	
Company:		E-mail address:	
Street and number:		Country:	
Postcode, town:		Date completed:	

ORDER

Number of lines:		Required delivery date:	
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REQUIREMENTS

Conveying rate [kg/h]:		system operating time [h/day]:	
Operating mode:	☐ continuous operation (suction – receiver discharge cycles)		
	☐ batch → batch weight [kg]: batches per hour:		
Batch weighing in receiver:	☐ no ☐ yes → required accuracy [$\pm$ kg]:		
Conveying distance [m]:	total:	horizontal:	vertical (lift height):
Number of bends in line:	90°:	45°:	diverter valves:
System layout:	number of pick-up points: number of delivery points (receivers):		
Conveying mode:	☐ dilute phase ☐ dense phase (friable, abrasive products) ☐ to be selected		

MATERIAL PICK-UP AND DELIVERY POINTS

Material picked up from:	☐ sack tipping station ☐ big-bag discharge station ☐ hopper / silo
	☐ drums, octabins, containers ☐ mixer ☐ sieve ☐ other:
Pick-up method:	☐ suction lance ☐ suction hopper ☐ bottom pick-up unit ☐ to be selected
Material delivered to:	☐ buffer hopper ☐ mixer ☐ reactor ☐ packaging machine ☐ feeder
	☐ scale ☐ sieve ☐ mill ☐ tablet press ☐ other:
Conditions in receiving equipment:	☐ atmospheric pressure ☐ overpressure / vacuum [bar]:
	☐ vapours, solvents ☐ elevated temperature [°C]:
Receiver installation:	available height above equipment [mm]: equipment inlet diameter [mm]:
VSU receiver:	size: ☐ S (5 l) ☐ M (25 l) ☐ L (110 l) ☐ to be selected
	discharge: ☐ butterfly valve ☐ rotary valve ☐ to be selected
	filter with pulse-jet cleaning: ☐ cartridges ☐ bags ☐ to be selected

VACUUM SOURCE AND UTILITIES

Vacuum source:	☐ side channel blower ☐ Roots blower ☐ vane / claw pump
	☐ multi-stage ejector (compressed air) ☐ to be selected by InterProcess
Compressed air on site:	☐ no ☐ yes → pressure [bar]: available flow rate [Nm ³ /h]:
Electrical supply:	☐ 3×400 V, 50 Hz ☐ other: permissible noise level [dB(A)]:

MATERIAL

Material name:			
Particle size [mm]:		Bulk density [kg/m ³]:	
Moisture content [%]:		Angle of repose [°]:	
Air humidity [%]:			
Material temperature [°C]:	☐ 0–40 ☐ other:		
Material properties:	☐ free-flowing ☐ medium-flowing ☐ poor-flowing ☐ dusty ☐ abrasive ☐ friable		
	☐ sticky ☐ cohesive (caking) ☐ hanging up, bridging ☐ hygroscopic		
	☐ aeratable (flooding) ☐ toxic ☐ chemically aggressive (corrosive)		
	☐ intended for food contact / pharmaceutical product		
Particle shape:	☐ powder ☐ granules ☐ crystals ☐ flakes ☐ fibres ☐ tablets / capsules		
Product sensitivity:	☐ to particle breakage ☐ to segregation ☐ to temperature ☐ prone to static charge		
Chemical reactivity:	☐ no ☐ yes → materials not permitted in contact with product		
	(e.g. aluminium, stainless steel, silicone, polyethylene):		

If the system is to convey several products, please give data for each in the remarks or in an attachment.

CONSTRUCTION

- Product-contact parts: ☐ stainless steel 1.4301 (AISI 304) ☐ stainless steel 1.4404 (AISI 316L)
finish: ☐ glass-bead blasted ☐ ground Ra < 0.8 µm ☐ electropolished
- Conveying line: ☐ stainless steel pipes ☐ antistatic flexible hose ☐ wear-resistant plastic
preferred diameter [mm]:
- System version: ☐ stationary ☐ mobile (on wheeled frame)
- Cleaning: ☐ dry ☐ manual washing (tool-free dismantling) ☐ wet-in-place (WIP)
product changeover frequency:
- Requirements and certificates: ☐ FDA / (EC) No 1935/2004 ☐ GMP ☐ EHEDG ☐ ATEX
- Line equipment: ☐ magnetic separator ☐ metal detector ☐ check sieve
☐ line clearing valve ☐ vacuum relief valve

OPERATING ENVIRONMENT AND EXPLOSION HAZARD ZONES

Location	Ambient temperature [°C]	Gases/vapours – inside	Gases/vapours – outside	Dusts – inside	Dusts – outside
Pick-up point	☐ 0–40 ☐ other:	☐ 0 ☐ 1 ☐ 2	☐ 1 ☐ 2	☐ 20 ☐ 21 ☐ 22	☐ 21 ☐ 22
Receiver (delivery point)	☐ 0–40 ☐ other:	☐ 0 ☐ 1 ☐ 2	☐ 1 ☐ 2	☐ 20 ☐ 21 ☐ 22	☐ 21 ☐ 22
Vacuum source (pump, blower)	☐ 0–40 ☐ other:	☐ 0 ☐ 1 ☐ 2	☐ 1 ☐ 2	☐ 20 ☐ 21 ☐ 22	☐ 21 ☐ 22

Please mark explosion hazard zones (ATEX) only if present; otherwise leave the fields blank.

- Installation: ☐ indoors ☐ outdoors site altitude a.s.l. [m]:
- Gases, flammable liquid vapours: explosion group and temperature class:
- Dust parameters: dust explosion class: ☐ St 1 ☐ St 2 ☐ St 3 ☐ conductive dust (IIIC)
min. ignition energy [mJ]: Kst [bar·m/s]: Pmax [bar]:
min. ignition temp. [°C] – dust cloud: 5 mm dust layer:

CONTROL SYSTEM

- Scope of supply: ☐ with control system ☐ without control system (control by customer)
- Cycle control: ☐ time-based ☐ volumetric (level sensor) ☐ gravimetric (load cells)
- HMI operator panel: ☐ no ☐ yes
- Control cabinet IP65: ☐ powder-coated steel ☐ stainless steel 1.4301 (AISI 304) ☐ other:
- Communication: ☐ Modbus TCP ☐ Modbus RTU ☐ EtherNet/IP ☐ PROFIBUS DP
☐ PROFINET ☐ other:

INSTALLATION SITE AND ADDITIONAL REMARKS

System description: line routing, pick-up and delivery points, associated equipment (please attach a sketch):

Additional remarks/requirements (e.g. process description, special requirements, scope of supply, documentation, installation, commissioning):

If possible, please attach drawings, a plant layout or photos of the installation site and the material safety data sheet (SDS).