

HVS

High Viscosity Drum Unloading System

2025 | 1

topflo®

The HVS Drum Unloading System is designed to transfer high viscosity food, cosmetic, pharmaceutical and industrial ingredients out of straight and conical shaped drums.

Working principle

While the pump is operating, the actuators move the piston down, pushing the product into the pump chambers, for easier transfer into the discharge line.

Typical applications

Sector	Example of application
Food & Beverage	tamato paste, fruit and vegetable pulp, mayonnaise, seed oils
Cosmetics & Pharma	thickening agents, glycerine, paraffin, oils
Industrial	greases and resins



EN 10204



Certificates may vary depending on material execution of particular product.

Fast facts

Max. capacity:	460 l/min*
Volume per stroke:	2 300 ml
Max discharge pressure:	8 bar (higher pressure on request)

* Product viscosity affects pump capacity, max capacity is given for water.



Benefits

- ✓ Remove up to 99% of the product
- ✓ Eliminate product airborne contamination by creating a sealed region between the piston and the drum.
- ✓ Improve worker ergonomics by eliminating manual handling.
- ✓ Advanced cleanability thanks to seal-less design diaphragm pump.
- ✓ The inflatable seal system fits multiple drum shapes and sizes.
- ✓ Multiple piston, control and frame options makes the HVS configurable enough to fulfill most application requirements.
- ✓ High capacity achieved with lower viscosity products.

Features & Benefits



Clean frame design

Pneumatic system routed inside the frame



Surface finish

Electropolished or sandblasted execution for various process needs



Tri-clamp connections

Convenient cleaning and maintenance



2 types of drum sealing (replaceable):

- » Lip seal suitable for straight drums
- » Inflatable seal suitable for conical drums



2 types of stands (replaceable):

- » Base plate
- » Wheeled stand





Functional control box
Easy to comprehend layout



Air Operated Double Diaphragm (AODD) hygienic pump

- Smooth design and cleanability
- Easy flow control
- Gentle product handling
- Dry suction and dry run capabilities



Pneumatic lock
In case of lack of air supply piston stops automatically.



Excellent tightness
Inflatable seal shape adopts to conical drum variable geometry



Technical data

Materials, data and limits

Max capacity (l/min) / (US gpm)	460 / 122
Volume per stroke (ml) / (cu in)	2300 / 140
Max discharge pressure (bar) / (psi)	8 / 116
Max air pressure (bar) / (psi)	8 / 116
Max size of solids (ø in mm) / (in)	15 / 0.59
Max temperature with EPDM (°C) / (°F)	90 / 194
Max temperature with NBR (°C) / (°F)	70 / 158
Max temperature with PTFE (°C) / (°F)	110 / 230
Weight (kg) / (lb)	160 / 353

Pump body (W)	AISI 316L; electro polished sandblasted
Wetted metal surfaces roughness	Ra < 1.6 (standard) Ra < 0.8 Ra < 0.5
Sealings (W)	PTFE EPDM Silicon
Centre block (NW)	PP
Diaphragms (W)	PTFE EPDM white EPDM NBR* white NBR
Valve balls (W)	PTFE AISI 316 Ceramic* EPDM* NBR* PU*
Air valve (NW)	Body: Brass (std.) AISI 316L PET O-rings: NBR (std.) EPDM FKM
Fasteners (NW)	A4-80
Standard connection	Tri-clamp DN65 ISO 2037

* not intended for food contact
N – wetted; NW – not wetted



HVS code

I. HVS	II. H	III. I	IV. 425	V. S	VI. T	VII. T	VIII. 7PV
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I. HVS = Tapflo HVS unit

II. Basic executions:

H = Hygienic

I = Industrial

III. Basic options:

I = Inflatable seal

L = Lip seal

IV. Pump type and size:

V. Material of wetted metal parts:

S = stainless steel AISI 316L

VI. Material of diaphragms:

B = PTFE TFM 1705b

E = EPDM

N = NBR

T = PTFE

W = White EPDM

Z = PTFE with white EPDM backing

VII. Material of valve balls:

blank = flap valve version

B = PTFE TFM 1705b

E = EPDM

K = Ceramic

N = NBR

S = AISI 316 Stainless Steel

P = PU

T = PTFE

VIII. Special executions:

1 = Optional in/outlet

3 = Optional connection type

5 = Other special execution

6 = Optional material of centre body

7 = Optional material of air valve

8 = Optional material of pos. 18 seals

9 = Optional material of housing stud bolts

15 = Flap valve execution

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