

# HVS HIGH VISCOSITY SYSTEM

## drum unloading machine

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topflo®

The HVS Drum unloading machine is designed for handling high viscous liquids in industrial as well as hygienic applications. The system is emptying substances transported in barrels, such as: tomato paste, coconut oil, tahini oil, resins, fruit and vegetable pulps.

The HVS Drum Unloading machine is a fully pneumatic device. The actuators move the pump up and down, while the AODD pump works due to two diaphragms connected by a diaphragm shaft. The shaft is pushed back and forth by alternate pressurising the air chambers behind the diaphragms using an automatically cycling air valve system.

It is perfectly suited for ensuring efficiency and process safety while pumping high viscosity, paste-like, non-self-flowing media out of device drums stand in line.

## Typical applications

### Industry

### Example of application

Food & Beverage

tomato pastes, caramels, fruit and vegetable concentrates, peanut butters, mayonnaises, nougat pastes, chocolate/fudge, glycerine, oils

Cosmetics & Pharma

cosmetic and pharma vaselines, ointments, creams & lotions, semi-solid wax/paraffins, glycerins, oils, lip glosses, mascaras, facial cleansers



EN 10204



Certificates may vary depending on material execution of particular product.

## Fast facts

Max. capacity:	590 l/min
Volume per stroke:	2 300 ml
Max discharge pressure:	8 bar



## Features

- ✓ Safe, simple and easy to use and maintain
- ✓ Seal-less construction and without rotating parts
- ✓ Significantly reduce processing times compared to manual emptying
- ✓ Removes up to 99% of product in drum
- ✓ Suitable for a variety of duties in industrial and hygienic installations
- ✓ Hygienic surfaces with perfect cleanability made from polished steel
- ✓ Reduce waste & associated costs

[www.tapflo.com](http://www.tapflo.com)

# Main elements and advantages of HVS Unit



✓ **Easy dismantling by Tri-Clamps**  
Other connections on request

✓ **Pneumatic system in frame**  
Smooth and clean design

✓ **Essential and compact design**  
Electropolished or sandblasted execution for various process needs

✓ **2 types of drum sealing:**  
» Lip seal  
» Inflated seal

✓ **Replaceable stands:**  
» Base plate stand  
» Wheeled stand

✓ **Functional control box**  
Allows to operate the device in various modes

✓ **AODD Sanitary pump**  
Smooth surfaces and cleanability

✓ **Pneumatic blockade**  
Safe operation in every condition

✓ **Excellent tightness**  
Due to flexible shape of the inflated seal

# Technical data

## Materials, data and limits

Max capacity (l/min) / (US gpm)	590/ 156
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)	190 / 420

Wetted metal details	Stainless steel AISI 316L electro polished   sandblasted
Liquid contact surfaces roughness	Ra < 1.6 (standard), Ra < 0.8 and 0.5 as option
Centre block (not wetted)	PP, PP conductive, aluminium
Diaphragms	PTFE, PTFE with white back, EPDM, white EPDM, white NBR, NBR (non FDA)
Valve balls	PTFE, AISI 316, Ceramic, SiC, EPDM (non FDA), NBR (non FDA)
Air valve	Brass (std.), stainless steel AISI 316L or PET with NBR (std.), EPDM or FKM O-rings
Housing stud bolt	A4-80



## HVS code

I. HVS II. I III. 425 IV. S V. T VI. T VII. 7PV

I. HVS = Tapflo HVS unit

II. Basic options:

I = Inflated

L = Lip seal

III. Max. capacity (l/min)

425

IV. Material of wetted metal parts:

F = 1.4435 Stainless steel (Bassler norm)

H = Hastelloy

S = stainless steel AISI 316L

V. Material of diaphragms:

B = PTFE TFM 1705b

E = EPDM

N = NBR

T = PTFE

W = White (food grade) EPDM

Z = PTFE with white back (food grade)

VI. 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 (polyurethane)

T = PTFE

VII. Special executions:

1 = Optional in/outlet

3 = Optional connection type \* = standard execution

4 = backup diaphragm system configuration

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

14 = Optional pump feet

15 = Flap valve execution

16 = Optional clamp type

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