

Cryogenic High Pressure pumps VT-1 series

**For cryogenic fluids, up to 420 bar
max operating pressure**

INNOVATIVE SOLUTIONS
EASY MAINTENANCE
VANZETTI ENGINEERING MODULAR SYSTEM



FLUIDS: LIN / LAR / LOX / LNG *
* Ex-Proof model (ADPE)

**Vanzetti Engineering manufactures high tech
cryogenic pumps.**

The VT-1 high pressure reciprocating pump is specially designed for cylinder filling either from *thermosyphon* or from *cold converter* storage tanks. The VT-1 is a very innovative development of high-pressure reciprocating pump and is designed for gas cylinder filling applications up to 300/400/420 bar max operating pressure (see "Technical Features" hereunder).

FEATURES:

- > Direct and fast installation due to the 360° swinging gas inlets and outlets
- > Modular construction and optimised dynamic flow of the fluid
- > Reduced heat leak due to the cold end reduced mass
- > Modular assembly – several identical spare parts for the three pump models
- > Quick and easy maintenance – no special tools required
- > Piston rod seal contained in an interchangeable cartridge
- > Seal automatic heating with electric resistance (80w) allowing extended operation without maintenance
- > Very low operating noise (72 ÷ 82 dBA)

TECHNICAL FEATURES:

	Model VT-1 32		Model VT-1 36			Model VT-1 40	
PISTON DIAMETER (mm)	32		36			40	
DRIVE	TW3	TW6,5	TW3	TW6	TW6,5	TW6	TW6,5
PISTON STROKE (mm)	20 / 32	35	20 / 32	32	35	32 / 40	35
FLOW RATE (l/min)	1,4 ÷ 8,5	2,5 ÷ 9,5	1,7 ÷ 11,5	3 ÷ 11,5	3,1 ÷ 12,5	3,4 ÷ 17	3,7 ÷ 14,9
MAX WORKING PRESSURE (Bar)	400	420	300	420	420	420	420
NPSP min (bar)	0,15 - 0,2		0,15 - 0,2			0,15 - 0,2	
MIN - MAX WORKING PRESSURE (Bar)	1 - 15		1 - 15			1 - 15	
MAX PUMP SPEED (rpm)	400		400			400	



Cryogenic High Pressure pumps VT-1 series



VT-1 COLD END



VT-1 TW6,5 DRIVE END

Installed on a galvanised frame with electrical motor, pulleys and belts, the pump has been specifically designed for perfect operation with *thermosyphon* tanks. The pump works properly also with *cold converters* by means of an automatic valve for gas saving, installed on the pump gas return line.

VT-1 COLD END:

The VT-1 cold end is particularly powerful for filling 300 bar compressed gas cylinders.

The pump design is based on the newest technology and a long experience operating with *thermosyphon* and *cold converter* tanks.

DRIVE ENDS:

The TW3 and TW6 drives, grease lubricated, are suitable for general applications. The TW6,5 drive is oil lubricated and suitable for heavy-duty applications where longer overhaul intervals are required.

The flow rate can be constant, double (with 2 speed motor) or variable (by means of a frequency inverter)

ACCESSORIES:

	TANK TYPE	
	COLD CONVERTER	THERMOSYPHON
SUCTION FLEXIBLE HOSE	STD	STD
RETURN FLEXIBLE HOSE	STD	STD
LOW PRESSURE RELIEF VALVE	STD	STD
PULSATION DAMPER	STD	STD
HIGH PRESSURE RELIEF VALVE	STD	STD
CHECK VALVE	STD	STD
INTEGRATED SUCTION STRAINER	STD	STD
PRESSURE GAUGE 0-600 BAR	STD	STD
MANUAL VENT VALVE HP	OPT	OPT
AUTOMATIC VENT VALVE HP	OPT	OPT
AUTOMATIC GAS SEPARATION VALVE	STD	-
PRESSURE SWITCH 150-420 BAR	STD	STD
COOL DOWN LOCK-UP PT100 PROBE	OPT	OPT
CAVITATION PROTECTION PT100 PROBE	OPT	OPT
LEAK DETECTION PT100 PROBE	OPT	OPT
PT100 PROBE FOR GAS TEMPERATURE TOO		
LOW AT THE VAPORIZER OUTLET	OPT	STD
ELECTRICAL PANEL BOARD	OPT	OPT
FOMBLIN OIL for TW6,5 (O ₂ / N ₂ / Ar)	OPT	OPT

Note :

STD: standard

OPT: optional

" Base " configuration includes: galvanised skid, electric motor, rail, belts, pulleys and stainless steel belt box

For further information:

VANZETTI ENGINEERING S.r.l.
via Avv. Giovanni Agnelli 10
12033 MORETTA (CN) - ITALY -
Tel. (+39) 0172 915811
Fax. (+39) 0172 915822

info@vanzettiengineering.com
www.vanzettiengineering.com

Easy, safe, modular

