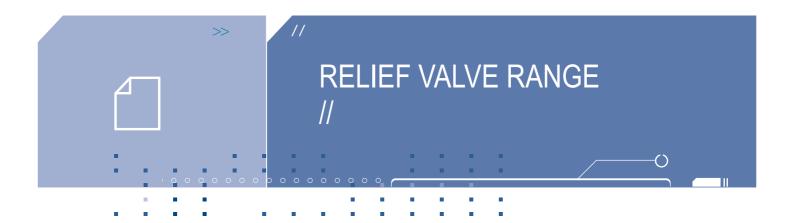


The Fort Vale
Range of Twinact
& Uniact Relief
Valves





9

(13)

(10

SUPER MAXI RELIEF VALVE

Developed to cater for the IMDG fire engulfment regulations for IMO1, IMO2 and IMO4 tanks. The flow capacity has been witnessed and is certified by Lloyds Register of Shipping. The Mk3 Super Maxi is available in 2½" BSP screwed male fitting or DN65 and DN80 flanged models for use in combination with a bursting disc. The drilling patterns cover most popular standards (ASA, DIN etc.). The Mk3 Super Maxi can be supplied as a combined pressure/vacuum valve or as a pressure only valve. (See the Fort Vale Super Maxi & Hyperflow Relief Valve Catalogue, ref. LCATMAXI)

PRESSURE = 3 - 66 PSIG (0.21 - 4.55 bar) VACUUM = 0.5" - 24" Hg (0.02 - 0.81 bar)

HYPERFLOW RELIEF VALVE

An 80mm flanged Mk3 Maxi Highflow valve fitted with special springs giving increased flow capacity at low pressures. For swap bodies and tank containers of ultra large capacity and low pressure ratings. (See the Fort Vale Super Maxi & Hyperflow Relief Valve Catalogue, ref. LCATMAXI)

PRESSURE = 3 - 66 PSIG (0.21 - 4.55 bar) VACUUM = 0.5" - 24" Hg (0.02 - 0.81 bar)

TWINACT RELIEF VALVE

Designed for use on road tankers, process and static tanks. Twinacts are offered with both $2\frac{1}{2}$ " and $1\frac{1}{2}$ " BSP male connections with matching venting nominal bore to cater for different sizes of vessels. All valves relieve under vacuum and pressure. The vacuum system is equipped with a manual push button which allows the vessel to be bled back to atmospheric pressure if necessary. (See the Fort Vale Twinact & Uniact Relief Valve Catalogue, ref. LCATTWIN)

PRESSURE = 1 - 63 PSIG (0.07 - 4.34 bar) VACUUM = 0.5" - 24" Hg (0.02 - 0.81 bar)

UNIACT RELIEF VALVE

Single action valve designed to relieve pressure **OR** vacuum on pressure vessels of all kinds. Available with 1½" or 2" BSP male fitting. The Uniact relief valves can be covered with an aluminium or stainless steel cap for weather protection. They can also be used as an in-line fitting thus providing a spring loaded non-return valve. (See the Fort Vale Twinact & Uniact Relief Valve Catalogue, ref. **LCATTWIN**)

PRESSURE = 1 - 72 PSIG (0.07 - 4.97 bar) VACUUM = 0.5" - 29" Hg (0.02 - 0.98 bar)



1" NB version of Twinact range and is specifically designed for IBC tanks or very small vessels. Can be supplied with or without vent button and with or without venting lock. Tank connections available are 1" BSP male and 1" BSP female. (See the Fort Vale Twinact & Uniact Relief Valve Catalogue, ref. LCATTWIN)

PRESSURE = 1 - 45 PSIG (0.07 - 3.10 bar) VACUUM = 0.5" - 3" Hg (0.02 - 0.10 bar)

STEAM RELIEF VALVE

Mounted on the inlet of steam lines used to heat container tanks and road tankers to prevent over pressure of steam circuit. Supplied with a ¾" BSPT screwed fitting. (See the Fort Vale Twinact & Uniact Relief Valve Catalogue, ref. **LCATTWIN**)

RANGE: PRESSURE = 15 - 145 PSIG (1.03 - 10 Bar)



APPROVALS

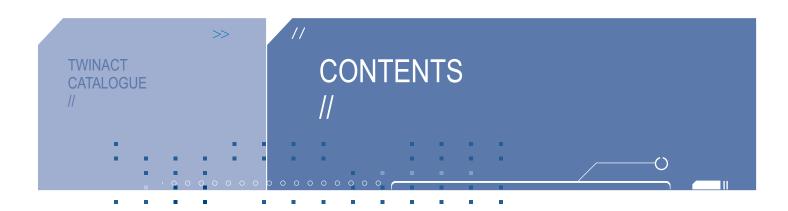
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3

2.5

368

All Relief Valves have full design approval from Lloyds Register of Shipping. Tests may be witnessed and valves individually stamped by an independent inspectorate by arrangement.





3/4" STEAM RELIEF VALVES //

- » 3/4" BSPT STEAM TELL-TALE VALVE
- » ¾" BSPT STEAM RELIEF VALVE

1" BSP MINNOW RELIEF VALVES //

- » 1" BSP PRESSURE/VACUUM MINNOW IBC RELIEF VALVE
- » 1" BSP PRESSURE ONLY MINNOW IBC RELIEF VALVE
- » 1" BSP PRESSURE/VACUUM MINNOW VENTLOCK IBC RELIEF VALVE

UNIACT RELIEF VALVES

- » 1½" BSP PRESSURE ONLY UNIACT RELIEF VALVE
- » 1½" BSP VACUUM ONLY UNIACT RELIEF VALVE
- » 2" BSP VACUUM ONLY UNIACT RELIEF VALVE

1½" BSP TWINACT RELIEF VALVES

- » 1½" BSP PRESSURE/VACUUM TWINACT RELIEF VALVE
- » 1½" BSP PRESSURE ONLY TWINACT RELIEF VALVE
- » 1½" MILK FITTING PRESSURE/VACUUM TWINACT

21/2" BSP TWINACT RELIEF VALVES

- » 2½" BSP PRESSURE/VACUUM TWINACT RELIEF VALVE
- » 2½" BSP PRESSURE ONLY TWINACT RELIEF VALVE
- » 2½" MILK FITTING PRESSURE/VACUUM TWINACT RELIEF VALVE

ANCILLARIES

» RELIEF VALVE ANCILLARIES

3/4" BSPT Steam Tell-Tale Valve



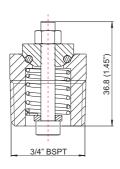
3/4" BSPT Steam Tell-Tale Valve - 3/4" BSPT (taper) male connection. Suitable for a pressure range of between 7 - 150 PSI (0.48 - 10.34 bar). Contact parts manufactured in 316 stainless steel fitted with Viton seal as standard.

Options - extended body version. 3/4" NPT threaded connection available.

Fitting Details



Example shown: 56/0XXX0





Specification



Weight 0.2 Kg 200°C (392°F) **Design Temperature**

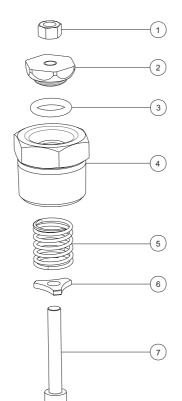
Range



Part No.	Description	
56/0XXX0	3/4" BSPT Steam Tell-Tale Valve	
52/0XXX0	3/4" NPTM Steam Tell-Tale Valve	

Parts Drawing





Item	Description	Part No.
1	M5 nut	5112-010
2	Poppet head	54/00003
3	Viton O ring	5005-650
4	Body	54/00001
5	Spring Part no. varies	5104-XXXA
6	Spring locator	54/00002
7	M5 cap screw	5111-128

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

In-house test certificates confirming valve settings and serial numbers are supplied as standard.

3/4" BSPT Steam Relief Valve



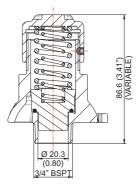
3/4" BSPT Steam Relief Valve - 3/4" BSPT (taper) male connection. Suitable for a pressure range of between 15 - 220 PSI (1.03 - 15.17 Bar). Contact parts manufactured in stainless steel fitted with Viton GF seal as standard.

Options - 3/4" NPT threaded connection available. Available with CE marking to PED.

Fitting Details



Example shown: 58/0XXX00





Specification



0.6 Kg Weight -20°C to 200°C **Design Temperature** (-4°F to 392°F)

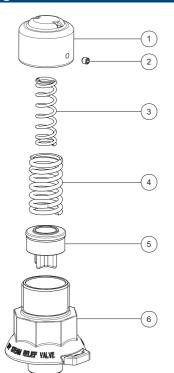
Range



Part No. Description	
58/0XXX00	3/4" BSPT steam relief valve
CE58/0XXX00	3/4" BSPT steam relief vlv with CE mark
58/0XXX00NPT	3/4" NPT steam relief valve

Parts Drawing





Item	Description	Part No.
1	Сар	58/03650
2	Setscrew	5121-001
3	Inner spring * See note	5104-90XX
4	Outer spring * See note	5104-9XXX
5	Poppet assembly with Viton GF seal	58/0362X
	* See note	
6	Body	58/03640

NOTE: Inner/Outer spring part numbers and Poppet assembly part number varies depending upon valve set pressure.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

In-house test certificates confirming valve settings and serial numbers are supplied as standard.



1" BSP Pressure/Vacuum Minnow IBC Relief Valve



1"BSP Minnow IBC Relief Valve - 1"BSP male connection. Suitable for a pressure range of between 1 - 45 PSI (0.07 - 3.10 Bar) and a vacuum range of between 0.5" - 7" Hg (0.02 - 0.24 Bar). Contact parts manufactured in 316 stainless steel fitted with Viton seals as standard. Complete with PTFE tank seal.

Options - pressure only version. Alternative seal materials available. Manual vacuum vent button option. Ventlock option. 1" BSP female connection available. 1"NPT version.

Specification

Silicone



-20°C to +200°C

Weight	0.2 Kg
Seal Temperature Range:	_
Viton	-20°C to +200°C
Perfluoroelastomer	-15°C to +240°C
EPDM	-20°C to +150°C

Test certificates supplied as standard.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

Range



Part No.	Description
65/XXXXX	1" BSPM standard valve
65/XXXXXNPT	1" NPT standard valve
65B/XXXXX	1" BSPM valve with manual vent button
65BT/XXXXX	1" BSPM valve with manual vent button
	& TIR facility
68/XXXXX	1" BSPM valve with manual vent button
	& ventlock facility
66/XXXXX	1" BSPF standard valve
69/XXXXX	1" BSPF valve with manual vent button &
	ventlock facility

Associated Parts

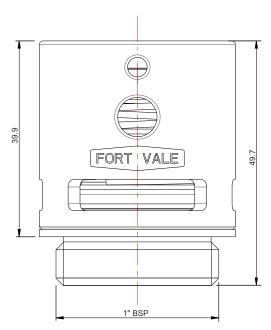


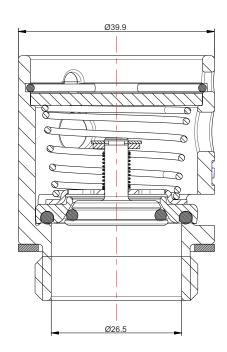
Part No.	Description	
600/1025	1" Tank weld-in socket	
600/1026	1" Tank weld-in nipple	
179/0300	1" Clamped type gauze ring	

Fitting Details



Example shown 65/XXXXX

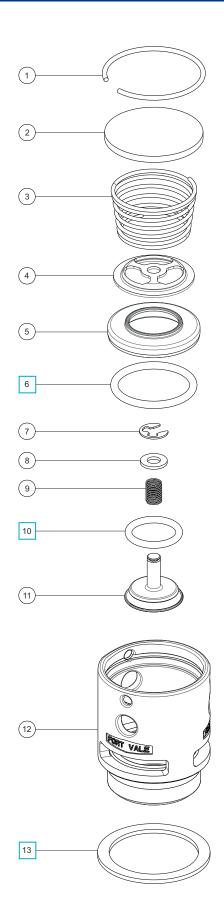




1" BSP Pressure/Vacuum Minnow IBC Relief Valve

Parts drawing





Item	Description	Part No.
1	Retaining clip (below 10 PSI/0.69 Bar)	5120-015
	Retaining clip (above 10 PSI/0.69 Bar)	5120-021
2	Top cap	179/0010
3	Pressure spring See Table 1	5104-XXX
4	Poppet guide	179/0055
5	Pressure plate See NOTE	179/0040XX
6	Pressure o ring See Table 3 & NOTE	5005-XXX 🔲
7	Circlip	5120-002
8	Plain washer	5113-017
9	Vacuum spring See Table 2	5104-XXX
10	Vacuum o ring See Table 3	5005-XXX
11	Vacuum poppet	179/0020
12	Body	179/0100
13	PTFE gasket	5005-553

SEAL KIT

Part number **65/XPVSK** contains all parts marked (Part number varies according to seal material).

NOTE

Please note that additional tooling is required to peen the pressure o ring into the pressure plate. When a pressure o ring requires replacing, Fort Vale strongly recommends the purchase of a pressure plate with a factory-fit pressure o ring. (See Table 4)

TABLE 1

Common Pressure Settings	Pressure Spring Part No.
3 PSI (0.21 Bar)	5104-653
6 PSI (0.41 Bar)	5104-656
9 PSI (0.62 Bar)	5104-659

Pressure springs are available from 1 PSI (0.07 Bar) to 45 PSI (3.10 Bar)

TABLE 2

Common Vacuum Setting	Vacuum Spring Part No.	
1" Hg (0.03 Bar)	5104-671	

Vacuum springs are available from 0.5"Hg (0.02 Bar) to 7"Hg (0.24 Bar) $\,$

TABLE 3 - See NOTE

Seal Material	Pressure Seal	Vacuum Seal
Viton	5005-552	20361
EPDM	5005-651	5005-652
Perfluoroelastomer	5005-585	5005-586
Silicone	5005-615	5005-614

TABLE 4

Seal Material	Pressure plate with o ring
Viton	179/0040VS
EPDM	179/0040ES
Perfluoroelastomer	179/0040PERS
Silicone	179/0040SS



1" BSP Pressure Only Minnow IBC Relief Valve



1"BSP Minnow IBC Relief Valve - 1"BSP male connection. Suitable for a pressure range of between 1 - 45 PSI (0.07 - 3.10 Bar). Contact parts manufactured in 316 stainless steel fitted with Viton seals as standard. Complete with PTFE tank seal.

Options - combined pressure/vacuum version. Alternative seal materials available. Manual vent button option. Ventlock option. 1" BSP female connection available. 1"NPT version.

Specification



Weight 0.18 Kg Seal Temperature Range :

 Viton
 -20°C to +200°C

 Perfluoroelastomer
 -15°C to +240°C

 EPDM
 -20°C to +200°C

 Silicone
 -20°C to +200°C

Test certificates supplied as standard.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

Range



Part No.	Description
65/XXX00	1" BSPM standard valve
65/XXX00NPT	1" NPT standard valve
65B/XXX00	1" BSPM valve with manual vent button
65BT/XXX00	1" BSPM valve with manual vent button &
	TIR facility
68/XXX00	1" BSPM valve with manual vent button &
	ventlock facility
66/XXX00	1" BSPF standard valve
69/XXX00	1" BSPF valve with manual vent button &
	ventlock facility

Associated Parts

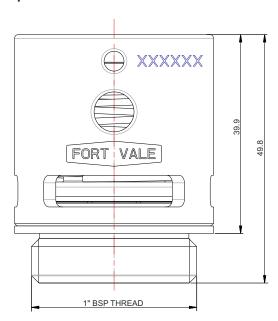


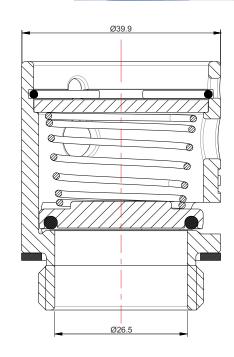
Part No.	Description
600/1025	1" tank weld-in socket
600/1026	1" tank weld-in nipple
179/0300	1" Clamped type gauze ring

Fitting Details



Example shown 65/XXX00

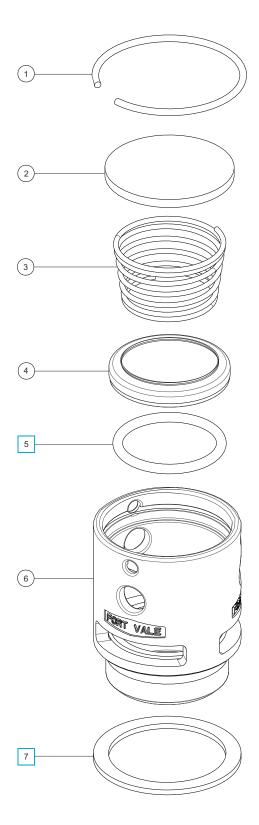




1" BSP Pressure Only Minnow IBC Relief Valve

Parts drawing





Item	Description	Part No.
1	Retaining clip (below 10 PSI/0.69 Bar)	5120-015
	Retaining clip (above 10 PSI/0.69 Bar)	5120-021
2	Top cap	179/0010
3	Pressure spring See Table 1	5104-XXX
4	Pressure plate See NOTE	179/0050XX
5	Pressure o ring See Table 2 & NOTE	5005-XXX
6	Body	179/0100
7	PTFE gasket	5005-553

SEAL KIT

Part number **65/XPSK** contains all parts marked \square (Part number varies according to seal material).

NOTE

Please note that additional tooling is required to peen the pressure o ring into the pressure plate. When a pressure o ring requires replacing, Fort Vale strongly recommends the purchase of a pressure plate with a factory-fit pressure o ring. (See Table 2)

TABLE 1

Common Pressure Settings	Pressure Spring Part No.
3 PSI (0.21 Bar)	5104-653
6 PSI (0.41 Bar)	5104-656
9 PSI (0.62 Bar)	5104-659
30 PSI (2 Bar)	5104-695

Pressure springs are available from 1 PSI (0.07 Bar) to 45 PSI (3.10 Bar)

TABLE 2 - See NOTE

Seal Material	Pressure o ring	Pressure plate with o ring
Viton	5005-552	179/0050VS
EPDM	5005-651	179/0050ES
Perfluoroelastomer	5005-585	179/0050PERS
Silicone	5005-615	179/0050SS



1" BSP Minnow Ventlock IBC Relief Valve - 1" BSP male connection. Suitable for a pressure range of between 1-9 PSI (0.07 - 0.62 Bar) and a vacuum range of between 0.5" - 7" Hg (0.02 - 0.24 Bar). Contact parts manufactured in 316 stainless steel fitted with Viton seals as standard. Complete with manual vent button, ventlock facility and PTFE tank seal.

The locking bracket can only be used at pressures of 9 PSI and below. For greater pressures, a valve without the locking bracket is required (See REL019 & REL020)

Options - Alternative seal materials available. 1"BSP Female thread connection available. 1"NPT version.

Specification



Weight 0.2 Kg

Seal Temperature Range :

 Viton
 -20°C to +200°C

 Perfluoroelastomer
 -15°C to +240°C

 EPDM
 -20°C to +150°C

 Silicone
 -20°C to +200°C

Test certificates supplied as standard.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

Range



Part No.	Description
65/XXXXX	1" BSPM standard valve
65/XXXXXNPT	1" NPT standard valve
65B/XXXXX	1" BSPM valve with manual vent button
65BT/XXXXX	1" BSPM valve with manual vent button & TIR facility
68/XXXXX	1" BSPM valve with manual vent button & ventlock facility
66/XXXXX	1" BSPF standard valve
69/XXXXX	1" BSPF valve with manual vent button & ventlock facility

Associated Parts

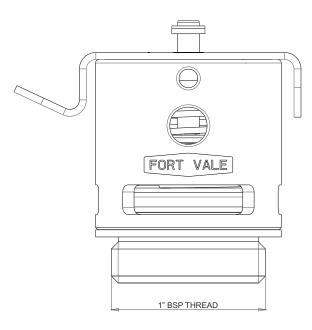


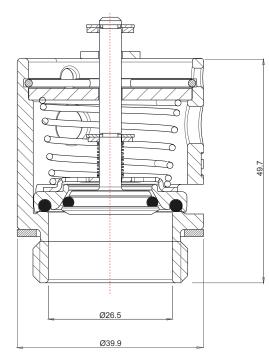
Part No.	Description
600/1025	1" Tank weld-in socket
600/1026	1" Tank weld-in nipple
179/0300	1" Clamped type gauze ring

Fitting Details

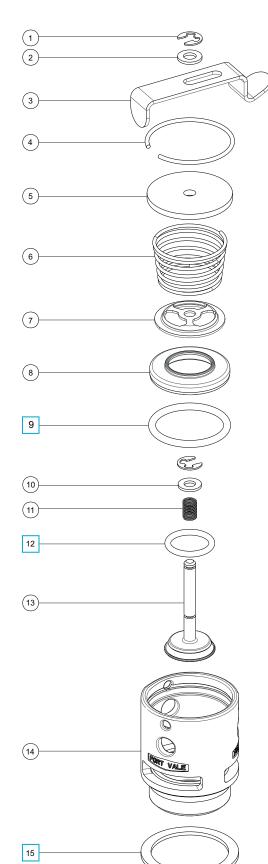


Example shown 68/XXXXX





Parts drawing



Item	Description	Part No.
1	Circlip (2)	5120-002
2	Plain washer	5113-015
3	Locking bracket	179/0150
4	Retaining clip (below 20 PSI/1.38 Bar)	5120-015
5	Top cap	179/0060
6	Pressure spring See Table 1	5104-XXX
7	Poppet guide	179/0055
8	Pressure plate See NOTE	179/0040XX
9	Pressure o ring See Table 3 & NOTE	5005-XXX 🔲
10	Plain washer	5113-017
11	Vacuum spring See Table 2	5104-XXX
12	Vacuum o ring See Table 3	5005-XXX
13	Vacuum poppet	179/0090
14	Body	179/0100
15	PTFE gasket	5005-553

SEAL KIT

Part number **65/XPVSK** contains all parts marked (Part number varies according to seal material).

NOTE

Please note that additional tooling is required to peen the pressure oring into the pressure plate. When a pressure oring requires replacing. Fort Vale

When a pressure o ring requires replacing, Fort Vale strongly recommends the purchase of a pressure plate with a factory-fit pressure o ring. (See Table 4)

TABLE 1

Common Pressure Settings	Pressure Spring Part No.
3 PSI (0.21 Bar)	5104-653
6 PSI (0.41 Bar)	5104-656
9 PSI (0.62 Bar)	5104-659

Pressure springs are available from 1 PSI (0.07 Bar) to 9 PSI (0.62 Bar)

PLEASE NOTE!

The locking bracket can only be used at pressures of 9 PSI and below. For greater pressures, a valve without the locking bracket is required. (See REL019 & REL020)

TABLE 2

Common Vacuum Setting	Vacuum Spring Part No.
1" Hg (0.03 Bar)	5104-671

Vacuum springs are available from 0.5"Hg (0.02 Bar) to 7"Hg (0.24 Bar)

TABLE 3 - See NOTE

Seal Material	Pressure O ring	Vacuum O Ring
Viton	5005-552	20361
EPDM	5005-651	5005-652
Perfluoroelastomer	5005-585	5005-586
Silicone	5005-615	5005-614

TABLE 4

Seal Material	Pressure plate with o ring
Viton	179/0040VS
EPDM	179/0040ES
Perfluoroelastomer	179/0040PERS
Silicone	179/0040SS

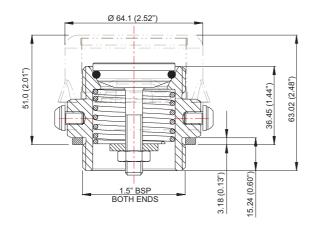


1½" BSP Pressure Only Uniact Relief Valve



Fitting Details

Example shown 47/XXX00A



Associated Parts

Part No.	Associated Parts
600/1010	1½" tank weld-in socket
176/2660	50mm DIN 11851 milk fitting socket
176/2670	50mm DIN 11851 milk fitting nut
10217/1	Pressed stainless steel cap
10217/1GZ	Pressed stainless steel cap with gauze

PORT VALE

1½" BSP Uniact Relief Valve - 1½" BSP male connection. Suitable for a pressure range of between 1 - 72 PSI (0.07 - 4.97 bar). Single acting valve - pressure only. Contact parts manufactured in 316 stainless steel fitted with Fortyt seal (FEP encapsulated silicone O ring) as standard. Complete with CNAF tank seal.

Options - vacuum only version. 1¼" and 2" BSP versions. Milk fitting version for hygienic applications. Also available with flanged connection. Viton, Perfluoroelastomer, EPDM and High Temperature Fortyt O rings available. Hastelloy valve. PTFE tank seal option.

Specification

Weight

ppecification

In-house test certificates confirming valve settings and serial numbers are supplied as standard.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.



C SPANNER - 400/3000

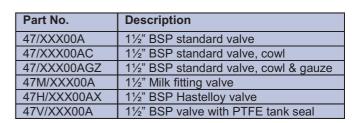
0.8 Kg

For relief valve fitting and removal. Size range 1½" to 3"

ORT WILE

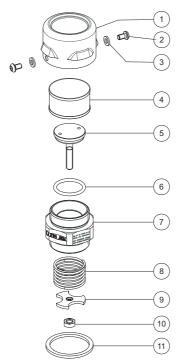
ORT VALE

Range



Parts Drawing





Item	Description	Part No.
1	Cap	10217/1
2	M6 button screw (2)	5111-611
3	M6 spring washer (2)	5113-008
4	Gauze ring	10204
5	Poppet	10983V
6	O ring (see table 2)	5005-XXX
7	Body	10213
8	Spring (see table 1)	5104-XXX
9	Spring pad	10215
10	M8 half nut	5112-004
11	CNAF gasket tank seal	5005-011

 Pressure Setting
 Pressure Spring

 30 PSI
 5104-630

Table 2	O ring Material	Temp. Range	Pressure Seal
	Viton	-20°C to +200°C	5005-107
	Fortyt	-55°C to +200°C	5005-108H
	Perfluoroelastomer	-15°C to +260°C	5005-764
	EPDM	-20°C to +150°C	5005-255
	High Temp. Fortyt	-55°C to +260°C	5005-108HPFA



1½" BSP Vacuum Only **Uniact Relief Valve**



47/X00XXAGZ illustrated

TORT VALL

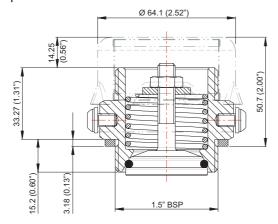
11/2" BSP Uniact Relief Valve - 11/2" BSP male connection. Suitable for a vacuum range of between 0.5" - 26" Hg (-0.02 to -0.9 Bar). Single acting valve - vacuum only. Contact parts manufactured in 316 stainless steel fitted with Fortyt seal (FEP encapsulated silicone O ring) as standard. Complete with stainless steel gauzed cap and CNAF tank seal.

Options - pressure only version. 11/4" and 2" BSP versions. Milk fitting version for hygienic applications. Also available with flanged connection. Viton, Perfluoroelastomer, EPDM and High Temperature Fortyt O rings available. Hastelloy valve. PTFE tank seal option.

Fitting Details



Example shown 47/X00XXA



Associated Parts

Part No.	Associated Parts	
600/1010	1½" tank weld-in socket	
176/2660	50mm DIN 11851 milk fitting socket	
176/2670	50mm DIN 11851 milk fitting nut	
10217/1	Pressed stainless steel cap	
10217/1GZ	Pressed stainless steel cap with gauze	

Specification



Weight

0.8 Kg

In-house test certificates confirming valve settings and serial numbers are supplied as standard.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.



C SPANNER - 400/3000 For relief valve fitting and removal. Size range 11/4" to 3".

Range

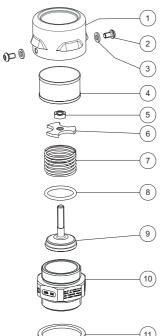


FORT VALE

Part No.	Description
47/X00XXA	1½" BSP standard valve
47/X00XXAC	1½" BSP standard valve, cowl
47/X00XXAGZ	1½" BSP standard valve, cowl & gauze
47/X00XXVBA	1½" BSP valve with manual vent button
47M/X00XXA	1½" milk fitting valve
47H/X00XXAX	1½" BSP Hastelloy valve
47V/X00XXAX	1½" BSP valve with PTFE tank seal

Parts Drawing





Item	Description	Part No.
1	Cap	10217/1
2	M6 button screw (2)	5111-611
3	M6 spring washer (2)	5113-008
4	Gauze ring	10204
5	M8 half nut	5112-004
6	Spring pad	10215
7	Spring (see table 1)	5104-XXX
8	O ring (see table 2)	5005-XXX
9	Poppet	10983V
10	Body	10213
11	CNAF gasket	5005-011

Table 1 Vacuum Setting Vacuum Spring 1" Hg 5104-601

Table 2	O ring Material	Temp. Range	Vacuum Seal
	Viton	-20°C to +200°C	5005-107
	Fortyt	-55°C to +200°C	5005-108H
	Perfluoroelastomer	-15°C to +260°C	5005-764
	EPDM	-20°C to +150°C	5005-255
	High Temp. Fortyt	-55°C to +260°C	5005-108HPFA



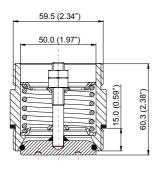
2" BSP Uniact Relief Valve



Fitting Details

FORT VALE

Example shown: 85/XXXXXA





2" BSP Uniact Relief Valve - 2" BSP male connection. Suitable for a vacuum setting of between 0.5" - 29" Hg (0.02 - 0.98 bar) or a pressure setting of between 1 - 60 PSI (0.07 - 4.14 bar). Single acting valve. Contact parts manufactured in 316 stainless steel fitted with Fortyt seal as standard. Complete with PTFE tank seal.

Options - pressure or vacuum only versions. 1½" BSP version. Milk fitting version for hygienic applications. Available with pneumatic actuator. Stainless steel cap with/without gauze. Valve may be fitted with Viton seal.

Specification

FORT VALE

Weight (standard valve) 1.2 Kg Fortyt seal temperature range -55°C to

Fortyt seal temperature range -55°C to +200°C Viton seal temperature range -20°C to +200°C

Range



Part No.	Description
85/XXXXXA	Standard 2" BSP Uniact Relief Valve
85M/XXXXXA	2" BSP Uniact with DIN 11851 milk
	fitting tank connection
85/XPNXXA	2" BSP Uniact with pneumatic actuator

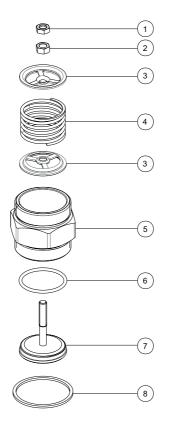
Associated Parts



Part No.	Description
600/1017	2" Tank weld-in socket
176/2645	65mm DIN 11851 milk fitting socket
176/2630	65mm DIN 11851 milk fitting nut
10218GZ	Stainless steel gauzed cap
10218	Stainless steel cap – no gauze

Parts Drawing





Item	Description	Part No.
1	M8 half nut	5112-004
2	M8 full nut	5112-001
3	Spring pad (2)	85/1003
4	Vacuum spring Part no. varies	5104-XXX
5	Body	85/1000
6	Fortyt main O ring	5005-118
7	Poppet	85/1015
8	PTFE tank seal	5005-575



C SPANNER - PART NUMBER 400/3000

For relief valve fitting and removal. Size range 11/4" to 3".

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

In-house test certificates confirming valve settings and serial numbers are supplied as standard.



1½" BSP Pressure/Vacuum Twinact Relief Valve



1½" BSP Twinact Relief Valve - 1½" BSP male connection. Suitable for a pressure range of between 1 - 64 PSI (0.07 - 4.41 Bar) and a vacuum range of between 0.5" - 28" Hg (0.02 - 0.94 Bar). Contact parts manufactured in 316 stainless steel fitted with Fortyt (FEP encapsulated silicone O ring) seals as standard. Complete with manual vent button and CNAF tank seal.

Options - pressure only version. Milk fitting version for hygienic applications. Viton seals available. Flameproof gauze available. Other seal materials available.

Specification



Weight 0.76 Kg

Fortyt seal Temperature Range -55°C to +200°C Viton seal Temperature Range -20°C to +200°C

In-house test certificates confirming valve settings and serial numbers are supplied as standard.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

Range



Part No.	Description	
30/XXXXX	Standard pressure/vacuum valve	
30/XXX00	Standard pressure only valve	
3M/XXXXX	1½" Milk fitting Twinact	
30/XXXXXH	1½" Twinact with Hastelloy wetted parts	

Associated Parts

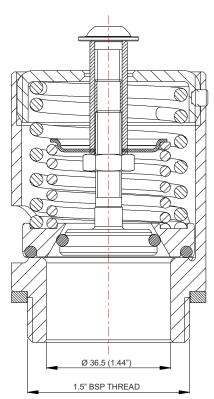


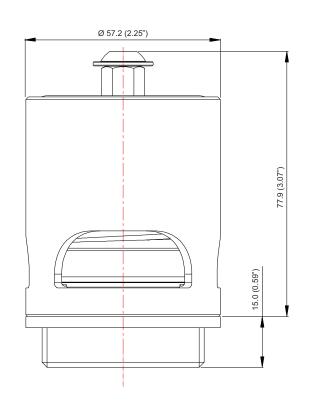
FORT VALE

Part No.	Associated Parts	
600/1010	1½" Tank weld-in socket	
200/5000	1½" clamped gauze ring	
5005-012	PTFE tank seal	

Fitting Details

Example shown: 30/XXXXX

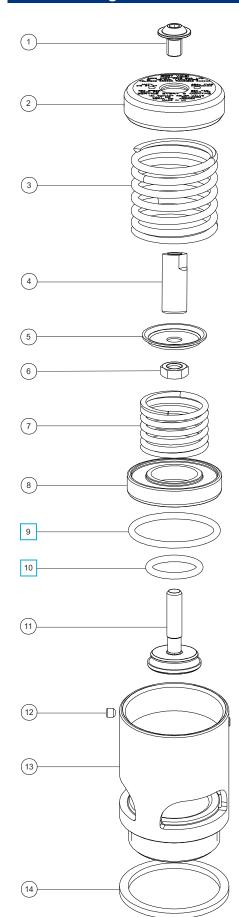




1½" BSP Pressure/Vacuum Twinact Relief Valve

Parts drawing





Item	Description	Part No.	
item	Description	i dit ito.	
1	Flanged button screw	5111-9812	
2	Top cap	11004	
3	Pressure spring See Table 1	5104-XXX	
4	Spring stem	10984	
5	Spring pad	11006XX	
6	M8 half nut	5112-004	
7	Vacuum spring See Table 2	5104-XXX	
8	Pressure plate See NOTE	11002X	
9	Vacuum o ring See Table 3	5005-XXX	
10	Pressure o ring See Table 3 & NOTE	5005-XXX 🔲	
11	Vacuum poppet	11003	
12	Grubscrew	5121-001	
13	Body assembly	11001	
14	CNAF tank seal	5005-011	

SEAL KIT - contains all parts marked □
Part number **30/1PVSK** contains Fortyt O rings
Part number **30/0PVSK** contains Viton O rings

NOTE

Please note that additional tooling is required to peen the pressure o ring into the pressure plate. When a pressure plate needs replacing, Fort Vale strongly recommends the purchase of a pressure plate with a factory-fit pressure o ring. (See Table 4)

TABLE 1

Common Pressure Settings	Pressure Spring Part No
3 PSI (0.21 Bar)	5104-703
29 to 32 PSI (2.0 – 2.21 Bar)	5104-730

Pressure springs are available from 1 PSI (0.07 Bar) to 64 PSI (4.41 Bar)

TABLE 2

Common Vacuum Settings	Vacuum Spring Part No
0.5" Hg (0.02 Bar)	5104-760
1" Hg (0.03 Bar)	5104-761
3" Hg (0.10 Bar)	5104-765

Vacuum springs are available from 0.5"Hg (0.02 Bar) to 28"Hg (0.94 Bar)

TABLE 3 - See NOTE

Seal Material	Pressure o ring	Vacuum o ring
Fortyt	5005-118	5005-114
Viton	5005-110	5005-112

TABLE 4

Seal Material	Pressure plate with o ring
Fortyt	11002F
Viton	11002V



C SPANNER - PART NUMBER 400/3000

For relief valve fitting and removal. Size range $1\frac{1}{4}$ " to 3".



1½"BSP Pressure Only Twinact Relief Valve



1½" BSP Twinact Relief Valve - 1½" BSP male connection. Suitable for a pressure range of between 1 - 64 PSI (0.07 - 4.41 bar). Contact parts manufactured in 316 stainless steel fitted with Fortyt (FEP encapsulated silicone O ring) seal as standard. Complete with CNAF tank seal.

Options - combined pressure/vacuum version. Milk fitting version for hygienic applications. Viton seal available. Other seal materials available.

Specification



Weight 0.7 Kg

Fortyt Seal Temperature Range -55°C to +200°C Viton Seal Temperature Range -20°C to +200°C

In-house test certificates confirming valve settings and serial numbers are supplied as standard.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

Range



Part No.	Description
30/XXX00	Standard pressure only valve
30/XXXXX	Standard pressure/vacuum valve
3M/XXXXX	1½" Milk Fitting Twinact

Associated Parts

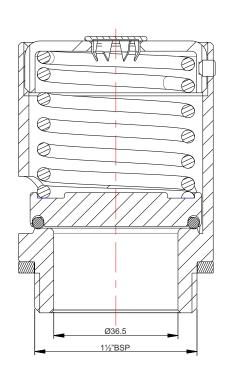


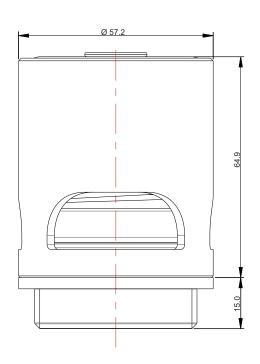
Part No.	Description
600/1010	1½" tank weld-in socket
200/5000	1½" clamped gauze ring
5005-012	PTFE tank seal

Fitting Details



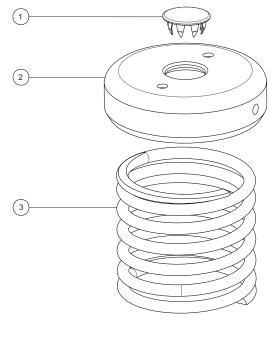
Example shown: 30/XXX00





Fitting Details







NOTE

Please note that additional tooling is required to peen the pressure o ring into the pressure plate. When a pressure plate needs replacing, Fort Vale strongly recommends the purchase of a pressure plate with a factory-fit pressure o ring. (See Table 2)

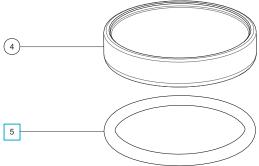


TABLE 1

Common Pressure Settings	Pressure Spring Part No
3 PSI (0.21 Bar)	5104-703
29 to 32 PSI (2.0 to 2.21 Bar)	5104-730

Pressure springs are available from 1 PSI (0.07 Bar) to 64 PSI (4.41 Bar)

TABLE 2 - See NOTE

Seal Material	Pressure o ring	Pressure plate with o ring
Fortyt	5005-118	11002/2F
Viton	5005-110	11002/2V



C SPANNER - PART NUMBER 400/3000

For relief valve fitting and removal. Size range 1½" to 3".

7	0
8	



1½" Milk Fitting Pressure/Vacuum Twinact Relief Valve



1½" Milk Fitting Twinact Relief Valve - DIN 11851/50mm connection. Suitable for a pressure range of between 1 - 64 PSI (0.07 - 4.41 Bar) and a vacuum range of between 0.5" - 28" Hg (0.02 - 0.94 bar). Contact parts manufactured in 316 stainless steel fitted with Fortyt (FEP encapsulated silicone O ring) seals as standard. Complete with manual vent button.

Options - Pressure only version. Valve also available with Viton seals. Other seal materials available, including high temperature option. Flameproof gauze available. Full range of BSP valves.

Specification FORT WIE

Weight 0.96 Kg

Fortyt Seal Temperature Range -55°C to +200°C Viton Seal Temperature Range -20°C to +200°C

In-house test certificates confirming valve settings and serial numbers are supplied as standard.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

Range

Part No.	Description
3M/XXXXX	Standard milk fitting 1½" Twinact, pressure/ vacuum
3M/XXX00	Standard milk fitting 1½" Twinact, pressure only

Associated Parts



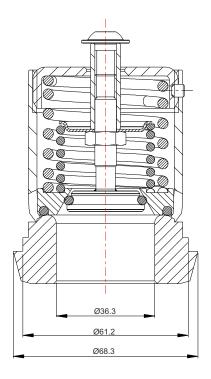
FORT VALE

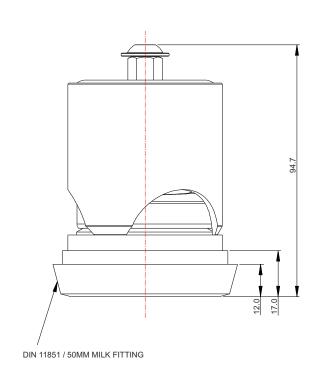
DRT VALK

Part No.	Associated Parts
176/2660	50mm DIN 11851 milk fitting socket
176/2670	50mm DIN 11851 milk fitting nut
176/2675S	50mm DIN 11851 silicone seal
200/5000	1½" clamped gauze ring

Fitting Details

Example shown: 3M/XXXXX

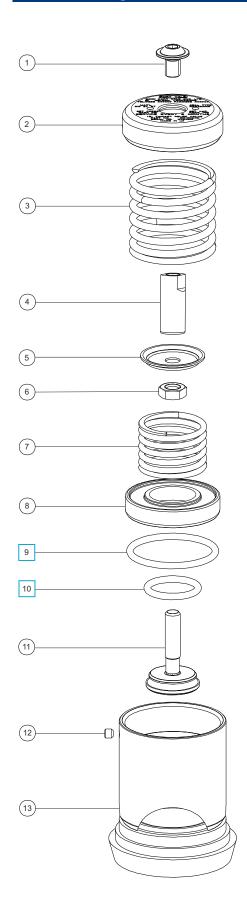




1½" Milk Fitting Pressure/ Vacuum Twinact Relief Valve

Parts drawing





Item	Description	Part No.
1	Flanged button screw	5111-9812
2	Top cap	11004
3	Pressure spring See Table 1	5104-XXX
4	Spring stem	10984
5	Spring pad	11006XX
6	M8 half nut	5112-004
7	Vacuum spring See Table 2	5104-XXX
8	Pressure plate See NOTE	11002XX
9	Pressure o ring See Table 3 & NOTE	5005-XXX
10	Vacuum o ring See Table 3	5005-XXX
11	Vacuum poppet	11003
12	Grubscrew	5121-001
13	Body	10990

SEAL KIT - contains all parts marked □
Part number **30/1PVSK** contains Fortyt O rings
Part number **30/0PVSK** contains Viton O rings

NOTE

Please note that additional tooling is required to peen the pressure o ring into the pressure plate. When a pressure plate needs replacing, Fort Vale strongly recommends the purchase of a pressure plate with a factory-fit pressure o ring. (See Table 4)

TABLE 1

Common Pressure Settings	Pressure Spring Part No
3 PSI (0.21 Bar)	5104-703
29 to 32 PSI (2.0 – 2.21 Bar)	5104-730

Pressure springs are available from 1 PSI (0.07 Bar) to 64 PSI (4.41 Bar)

TABLE 2

Common Vacuum Settings	Vacuum Spring Part No
0.5" Hg (0.02 Bar)	5104-760
1" Hg (0.03 Bar)	5104-761
3" Hg (0.10 Bar)	5104-765

Vacuum springs are available from 0.5"Hg (0.02 Bar) to 28"Hg (0.94 Bar)

TABLE 3 - See NOTE

Seal Material	Pressure o ring	Vacuum o ring
Fortyt	5005-118	5005-114
Viton	5005-110	5005-112

TABLE 4

Seal Material	Pressure plate with o ring
Fortyt	11002F
Viton	11002V



C SPANNER - PART NUMBER 400/3000

For relief valve fitting and removal. Size range 1½" to 3".



2½" BSP Pressure/Vacuum Twinact Relief Valve



 $2\frac{1}{2}$ " BSP Twinact Relief Valve - $2\frac{1}{2}$ " BSP male connection. Suitable for a pressure range of between 1 - 63 PSI (0.07 - 4.34 bar) and a vacuum range of between 0.5" - 28" Hg (0.02 - 0.94 bar). Contact parts manufactured in 316 stainless steel fitted with Fortyt (FEP encapsulated silicone O ring) seals as standard. Complete with manual vent button and rubber/PTFE tank seal.

Options - pressure only version. Milk fitting version for hygienic applications. Nickel plated version. Other seal materials available.

Specification

Weight 1.48 Kg

Fortyt Seal Temperature Range -55°C to +200°C Viton Seal Temperature Range -20°C to +200°C

In-house test certificates confirming valve settings and serial numbers are supplied as standard.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

Range



Part No.	Description
20/XXX00	Standard pressure only valve
20/XXXXX	Standard pressure / vacuum valve
2N/XXXXX	2½" Nickel plated valve, pressure/
	vacuum
2M/XXXXX	2½ Milk Fitting valve

Associated Parts

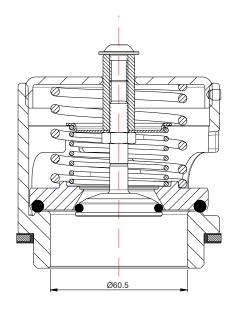


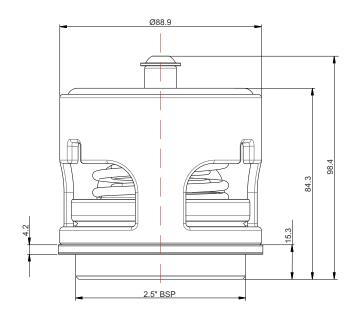
Part No.	Description
600/1000	2½" Tank weld-in socket
176/3150	2½" Tank weld-in flange
130/5000	2½" Clamped type gauze ring
5005-046	Rubber/PTFE tank seal
5005-026	CNAF tank seal (high temp. application)

Fitting Details



Example shown: 20/XXXXX

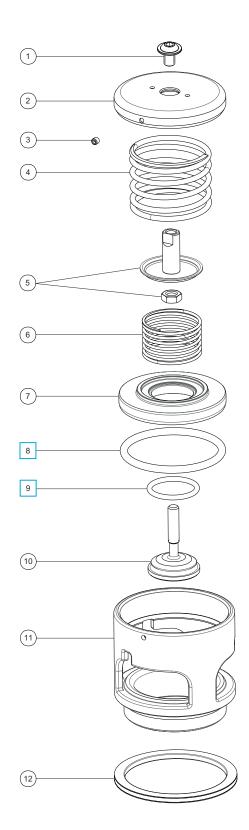




2½" BSP Pressure/Vacuum Twinact Relief Valve

Parts drawing





Item	Description	Part No.
1	Flanged button screw	5111-9812
2	Top cap	10967/1
3	Grub screw	5121-001
4	Pressure spring See Table 1	5104-XXX
5	Spring pad assembly	130/0010
6	Vacuum spring See Table 2	5104-XXX
7	Pressure plate See NOTE	175/00XXX
8	Pressure o ring see Table 3 & NOTE	5005-XXX 🔲
9	Vacuum o ring see Table 3	5005-XXX 🔲
10	Vacuum poppet	10983V
11	Body	10951
12	Rubber/PTFE envelope gasket	5005-046

SEAL KIT - contains all parts marked □ Part no. **20/1PVSK** contains Fortyt O rings Part no. **20/0PVSK** contains Viton O rings

NOTE

Please note that additional tooling is required to peen the pressure o ring into the pressure plate. When a pressure plate needs replacing, Fort Vale strongly recommends the purchase of a pressure plate with a factory-fit pressure o ring. (See Table 4)

TABLE 1

Common Pressure Settings	Pressure Springs
28 to 30 PSI (1.93 Bar to 2.07 Bar)	5104-529

Pressure springs are available from 1 PSI (0.07 Bar) to 63 PSI (4.34 Bar)

TABLE 2

Common Vacuum Settings	Vacuum Springs
0.5" Hg (0.02 Bar)	5104-560
1" Hg (0.03 Bar)	5104-561
3" Hg (0.10 Bar)	5104-563

Vacuum springs are available from 0.5"Hg (0.02 Bar) to 28"Hg (0.94 Bar)

TABLE 3 - See NOTE

Seal Material	Pressure o ring	Vacuum o ring
Fortyt	5005-101	5005-108H
Viton	5005-102	5005-107

TABLE 4

Seal Material	Pressure plate	Pressure plate	
		with o ring	
Fortyt	175/0061	175/0061F	
Viton	175/0031	175/0031V	



C SPANNER - PART NUMBER 400/3000

For relief valve fitting and removal. Size range 11/4" to 3".



2½" BSP Pressure Only Twinact Relief Valve



2½" BSP Twinact Relief Valve - 2½" BSP male connection. Suitable for a pressure range of between 1-63 PSI (0.07-4.34 bar). Contact parts manufactured in 316 stainless steel fitted with Fortyt (FEP encapsulated silicone O ring) seal as standard. Complete with rubber/PTFE tank seal.

Options - combined pressure/vacuum version. Milk fitting version for hygienic applications. Nickel plated version. Other seal materials available.

Specification



Weight 1.44 Kg

Fortyt Seal Temperature Range -55°C to +200°C Viton Seal Temperature Range -20°C to +200°C

In-house test certificates confirming valve settings and serial numbers are supplied as standard.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

Range



Part No.	Description	
20/XXX00	Standard pressure only valve	
20/XXXXX	Standard pressure/vacuum valve	
2N/XXXXX	2½" Nickel plated valve, pressure/ vacuum	
2M/XXXXX	2½" Milk Fitting valve	

Associated Parts

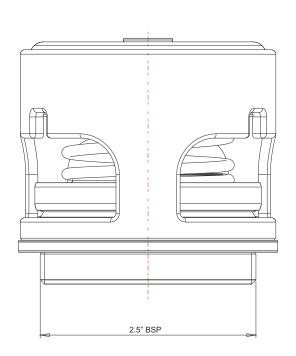


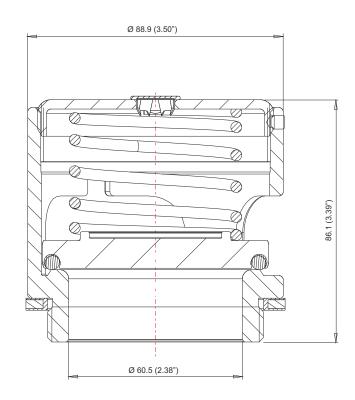
FORT VALE

Part No.	Description	
600/1000	2½" Tank weld in socket	
176/3150	2½" Tank weld in flange	
130/5000	2½" Clamped type gauze ring	
5005-027	PTFE tank seal	
5005-026	CNAF tank seal	

Fitting Details

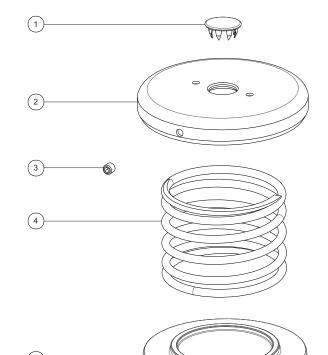






Fitting Details





item	Description	Part No.
1	Stainless steel plug	10978
2	Top cap	10967/1
3	Grub screw	5121-001
4	Pressure spring See Table 1	5104-XXX
5	Pressure plate See NOTE	175/XXXX
6	Pressure o ring See Table 2 & NOTE	5005-XXX 🔲
7	Body assembly	10951
8	Rubber/PTFE envelope gasket	5005-046
CEAL	VIT	

SEAL KIT - contains all parts marked □
Part number 20/1PSK contains Fortyt O ring
Part number 20/0PSK contains Viton O ring

NOTE

Please note that additional tooling is required to peen the pressure o ring into the pressure plate. When a pressure plate needs replacing, Fort Vale strongly recommends the purchase of a pressure plate with a factory-fit pressure o ring. (See Table 3)

TABLE 1

Common Pressure Settings	Pressure Springs
28 to 30 PSI (1.93 Bar to 2.07 Bar)	5104-529

Pressure springs are available from 1 PSI (0.07 Bar) to 63 PSI (4.34 Bar)

TABLE 2 - See NOTE

Seal Material	Pressure o ring	
Fortyt	5005-101	
Viton	5005-102	

TABLE 3

Seal Material	Pressure Plate	Pressure plate with o ring
Fortyt	175/0111	175/0111F
Viton	175/0121	175/0121V



C SPANNER - PART NUMBER 400/3000

For relief valve fitting and removal. Size range 11/4" to 3".

8	



2½" Milk Fitting Pressure/Vacuum Twinact Relief Valve



2½" Milk Fitting Twinact Relief Valve - DIN 11851/80mm connection. Suitable for a pressure range of between 1 - 63 PSI (0.07 - 4.34 bar) and a vacuum range of between 0.5" - 28" Hg (0.02 - 0.94 bar). Contact parts manufactured in 316 stainless steel fitted with Fortyt (FEP encapsulated silicone O ring) seals as standard. Complete with manual vent button.

Options - pressure only version. Other seal materials are available. Full range of BSP valves.

Specification

Weight 1.91 Kg

Fortyt Seal Temperature Range -55°C to +200°C Viton Seal Temperature Range -20°C to +200°C

In-house test certificates confirming valve settings and serial numbers are supplied as standard.

Visual inspection and service (where necessary) is recommended on a 6 monthly basis.

Range



Part No.	Description
2M/XXXXX	Standard milk fitting 2½" Twinact, pressure/vacuum
2M/XXX00	Standard milk fitting 2½" Twinact, pressure only

Associated Parts

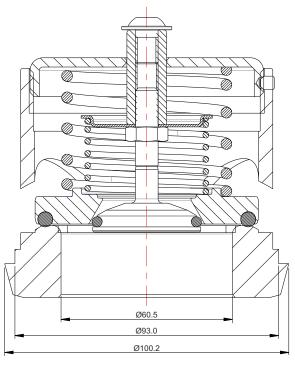


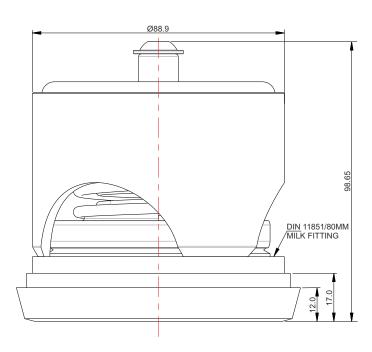
Part No.	Associated Parts	
176/2550	80mm DIN 11851 milk fitting socket	
176/2650	80mm DIN 11851 milk fitting nut	
176/2685S	80mm DIN 11851 silicone seal	
130/5000	2½" clamped gauze ring	

Fitting Details

FORT VALE

Example shown: 2M/XXXXX

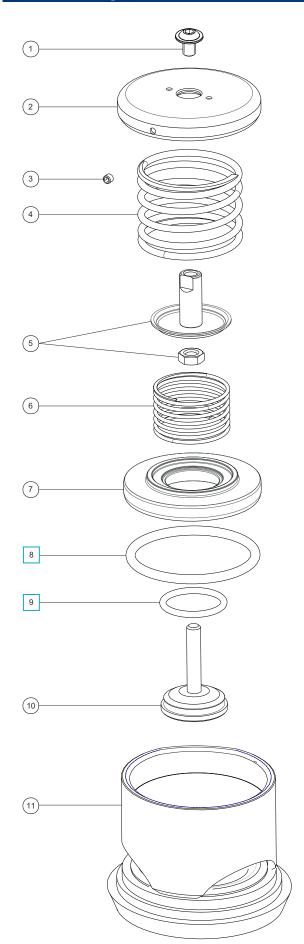




2½" Milk Fitting Pressure/ Vacuum Twinact Relief Valve

Parts drawing





Item	Description	Part No.
1	Flanged button screw	5111-9812
2	Top cap	10967/1
3	Grubscrew	5121-001
4	Pressure spring See Table 1	5104-XXX
5	Spring pad assembly	130/0010
6	Vacuum spring See Table 2	5104-XXX
7	Pressure plate See NOTE	175/00XX
8	Pressure o ring See Table 3 & NOTE	5005-XXX 🔲
9	Vacuum o ring See Table 3	5005-XXX 🔲
10	Vacuum poppet	10983V
11	Body	11021

SEAL KIT - contains all parts marked □ Part no. **20/1PVSK** contains Fortyt O rings Part no. **20/0PVSK** contains Viton O rings

NOTE

Please note that additional tooling is required to peen the pressure o ring into the pressure plate. When a pressure plate needs replacing, Fort Vale strongly recommends the purchase of a pressure plate with a factory-fit pressure o ring. (See Table 4)

TABLE 1

Common Pressure Settings	Pressure Spring
28 to 30 PSI (1.93 to 2.07 Bar)	5104-529

Pressure springs are available from 1 PSI (0.07 Bar) to 63 PSI (4.34 Bar)

TABLE 2

Common Vacuum Settings	Vacuum Spring
0.5" Hg (0.02 Bar)	5104-560
1" Hg (0.03 Bar)	5104-561
3" Hg (0.10 Bar)	5104-563

Vacuum springs are available from 0.5"Hg (0.02 Bar) to 28"Hg (0.94 Bar)

TABLE 3 - See NOTE

Seal Material	Pressure o ring	Vacuum o ring
Fortyt	5005-101	5005-108H
Viton	5005-102	5005-107

TABLE 4

Sea	al Material	Pressure plate	Pressure plate with o ring
For	tyt	175/0061	175/0061F
Vito	n	175/0031	175/0031V



C SPANNER - PART NUMBER 400/3000

For relief valve fitting and removal. Size range 1½" to 3".



DIN 11851 Socket & Nut





The DIN 11851 milk fitting is suitable for all hygienic applications and consists of a male socket and compatible nut.

It is available in three sizes - 50mm, 65mm and 80mm, designed for use with our $1\frac{1}{2}$, 2" and $2\frac{1}{2}$ " relief valves.

Both components are manufactured in 316 stainless steel.

Description	Part No.
50mm socket	176/2660
50mm nut	176/2670
65mm socket	176/2620
65mm nut	176/2630
80mm socket	176/2550
80mm nut	176/2650

Flameproof Gauzes





Clamped type flameproof gauze rings are available for our 1", 1½" and 2½" relief valves and are designed to be clamped around the valve body when transporting inflammable cargoes.

The gauze is constructed from 316 stainless steel wire of 300 microns with holes no greater than 500 microns mean diameter.

Fitting a clamped gauze ring to a Minnow or a Twinact relief valve reduces the flow rate by 12%.

Fitting clamped gauze ring 176/2900 to a 65mm Super Maxi relief valve reduces the flow rate by 1%.

Description	Part No.
1" clamped gauze ring – Minnow valves	179/0300
1½" clamped gauze ring – Twinact valves	200/5000
2½" clamped gauze ring – Twinact valves	130/5000
2½" clamped gauze ring – Super Maxi valves	176/2900

Burst Disc Adaptor





The burst disc adaptor assembly is designed to hold a 65mm burst disc between the tank and a 2½" BSP relief valve. It is designed for use in conjunction with the Fort Vale manometer to monitor the integrity of the disc. (burst disc not included)

Description	Part No.
Burst disc adaptor	176/7020
Burst disc	862/####

Twinact Relief Valve Ancillaries

Weld-in Sockets & Weld-in Nipple





Tank Weld-in Sockets are available in four sizes - 1", 1½", 2" and 2½". The Tank Weld-in Nipple is available in one size only to accommodate a 1" Minnow relief valve with female thread. All are heavy duty and the sockets have oversized threads to alleviate the need for re-tapping after welding. Contact parts manufactured in 316 stainless steel.

Description	Part No.
1" weld-in nipple	600/1026
1" weld-in socket	600/1025
1½" weld-in socket	600/1010
2" weld-in socket	600/1017
2½" weld-in socket	600/1000

Pressure Gauge





The pressure gauge is designed to be used for pressure readings of tanks. It may be fitted either above or below a burst disc. All models have a 63mm ($2\frac{1}{2}$ ") stainless steel casing, are oil damped and have dual markings in Bar and PSI from 0 - 7 Bar (0-100 PSI). The gauge has a $\frac{1}{4}$ " BSP male connection ($\frac{1}{4}$ " NPT available). We offer a choice of rear entry or bottom entry and brass or stainless steel internal parts.

Description	Part No.
0-7 Bar / 0-100 PSI pressure gauge,	921/07BBSP
bottom entry, brass internal parts	
0-7 Bar / 0-100 PSI pressure gauge, rear	921/07RBSP
entry, brass internal parts	
0-7 Bar / 0-100 PSI pressure gauge,	920/07BBSP
bottom entry, stainless steel internal parts	

Relief Valve Maintenance





The special tools necessary for satisfactory maintenance and refurbishment of Fort Vale Twinact relief valves are available as a universal kit, part number **400/2000**.

Description	Part No.
C spanner (1½" & 2½")	400/3000
O ring sleeve (2½")	400/8135
Vacuum assembly C clamp (1½" & 2½")	400/8310
Vacuum poppet tool (2½")	400/8320
Top cap assembly tool (1½" & 2½")	400/8330
Pressure plate lift spacer (2½")	400/8335
O ring sleeve (2½")	400/8350
Vacuum poppet O ring press (2½")	400/8351
Vacuum poppet tool (1½")	400/8420
Pressure plate lift spacer (1½")	400/8435
O ring sleeve (1½")	400/8450
Vacuum poppet O ring press (1½")	400/8451









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REV06 06.08.12









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