Australian Fire Technologies

# *iFlow*® Fire Suppression Systems

## *iFlow*® System Hardware

# Available Agents

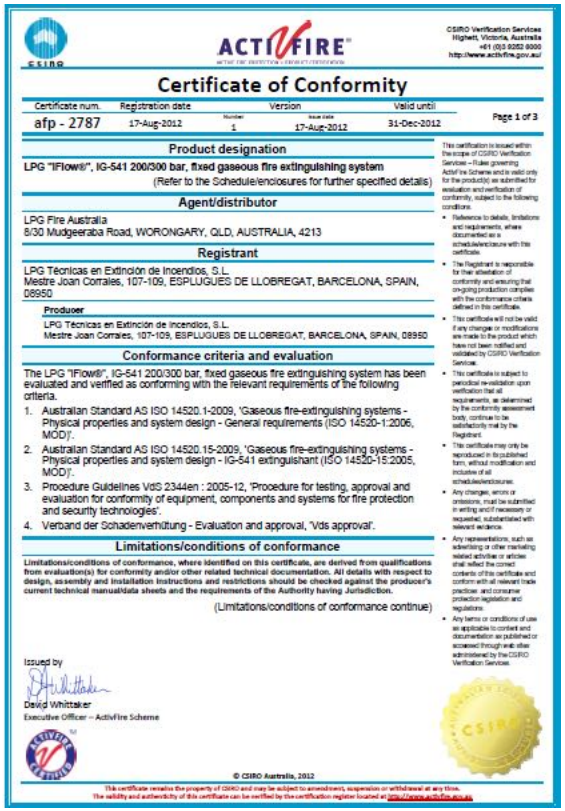
Australian Fire Technologies



| Agent | Nitrogen | Argon | CO2 |
|---|---|---|---|
| IG-01 (Argon) | --- | 100% | --- |
| IG-55 | 50% | 50% | --- |
| IG-100 (Nitrogen) | 100% | --- | --- |
| IG-541 (Inergen®) | 52% | 40% | 8% |

## SYSTEM APPROVALS

300 bar ***IFLOW***® systems – CSIRO® Australia **ACTIVFIRE** Approvals. IG-541 & IG-55



ACTIVFIRE

CSIRO Verification Services
Highett, Victoria, Australia
+61 (0)3 8052 8000
http://www.activfire.gov.au/

**Certificate of Conformity**

| Certificate num. | Registration date | Version Number | Version Issue date | Valid until | |
|---|---|---|---|---|---|
| afp - 2787 | 17-Aug-2012 | 1 | 17-Aug-2012 | 31-Dec-2012 | Page 1 of 3 |

**Product designation**

LPG "IFlow®", IG-541 200/300 bar, fixed gaseous fire extinguishing system
(Refer to the Schedule/enclosures for further specified details)

**Agent/distributor**

LPG Fire Australia
8/30 Mudgeeraba Road, WORONGARY, QLD, AUSTRALIA, 4213

**Registrant**

LPG Técnicas en Extinción de Incendios, S.L.
Mestre Joan Corrales, 107-109, ESPLUGUES DE LLOBREGAT, BARCELONA, SPAIN, 08950

**Producer**

LPG Técnicas en Extinción de Incendios, S.L.
Mestre Joan Corrales, 107-109, ESPLUGUES DE LLOBREGAT, BARCELONA, SPAIN, 08950

**Conformance criteria and evaluation**

The LPG "IFlow®", IG-541 200/300 bar, fixed gaseous fire extinguishing system has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS ISO 14520.1-2009, 'Gaseous fire-extinguishing systems - Physical properties and system design - General requirements (ISO 14520-1:2006, MOD)'.
2. Australian Standard AS ISO 14520.15-2009, 'Gaseous fire-extinguishing systems - Physical properties and system design - IG-541 extinguishant (ISO 14520-15:2005, MOD)'.
3. Procedure Guidelines VdS 2344en : 2005-12, 'Procedure for testing, approval and evaluation for conformity of equipment, components and systems for fire protection and security technologies'.
4. Verband der Schadenverhütung - Evaluation and approval, 'Vds approval'.

**Limitations/conditions of conformance**

**Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.**

(Limitations/conditions of conformance continue)

This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

Issued by

David Whittaker
Executive Officer – ActivFire Scheme

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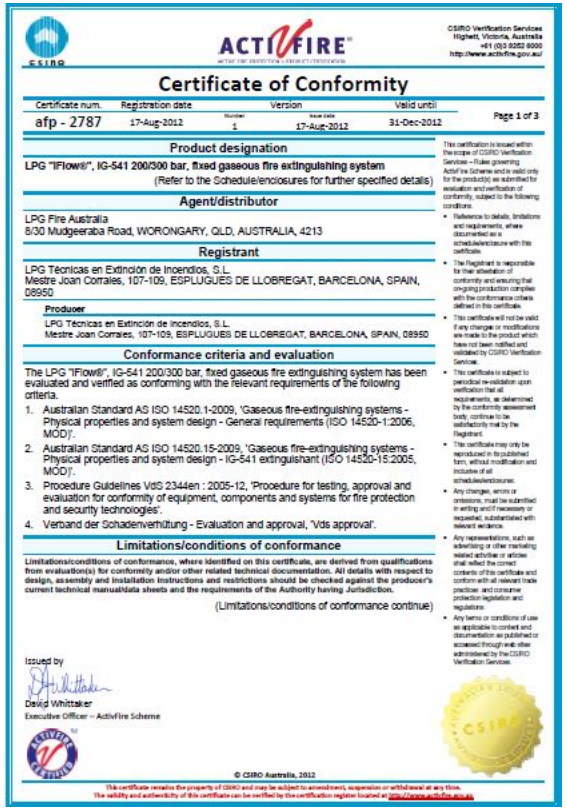
The validity and authenticity of this certificate can be verified by the certification register located at http://www.activfire.gov.au



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# System Approval

Australian Fire Technologies

# Introduction

## SYSTEM APPROVALS

300 bar ***IFLOW***® systems – **VdS** Approvals. IG-541 & IG-55

Zertifikat Certificate

Anerkennung
von Bauteilen und Systemen
Approval
of Components and Systems

VdS

Inhaber der Anerkennung
Holder of the Approval
LPG Técnicas en Extinción de Incendios S.A.
Mestre Joan Corrales, 107-109
ES-08950 Esplugues de Llobregat, Barcelona

| Anerkennungs-Nr. Approval No. | Anzahl der Seiten No. of pages | gültig vom valid from | gültig bis valid until |
|---|---|---|---|
| S 311008 | 16 | 22.06.2011 | 21.06.2015 |

Gegenstand der Anerkennung
Subject of the Approval
IG-541 – Feuerlöschsystem/ IG-541 - fire extinguishing system
"iFlow"

Verwendung
Use
in ortsfesten IG-541-Hochdruck - Feuerlöschanlagen
in fixed IG-541 - high pressure fire extinguishing systems

Anerkennungsgrundlagen
Basis of the Approval
VdS 2344:2005-12
VdS 2454:1998-12

Köln, den 22.06.2011

Reinermann
Geschäftsführer
Managing Director

i. V. Hesels
Leiter der Zertifizierungsstelle
Head of Certification Body

Die Anerkennung
umfasst nur das angegebene Bauteil/System in der zur Prüfung eingereichten Ausführung
- mit den Bestandteilen nach Anlage 1,
- dokumentiert in den technischen Unterlagen nach Anlage 2,
- zur Verwendung in den angegebenen Einrichtungen der Brandschutz- und Sicherungstechnik.

Bei der Anwendung des Gegenstandes der Anerkennung sind die Hinweise nach Anlage 3 zu beachten.

Das Zertifikat darf nur unverändert und mit sämtlichen Anlagen vervielfältigt werden. Alle Änderungen der Voraussetzungen für die Anerkennung sind der VdS-Zertifizierungsstelle – mitsamt den erforderlichen Unterlagen - unverzüglich zu übermitteln.

This Approval
is valid only for the specified component/system as submitted for testing
- together with the parts listed in enclosure 1
- documented in the technical documents according to enclosure 2
- for the use in the specified fire protection and security installations.

When using the subject of the approval the notes of enclosure 3 shall be observed.
This certificate may only be reproduced in its present form without any modifications including all enclosures. All changes of the underlying conditions of this approval shall be reported at once to the VdS certification body including the required documentation.

VdS Schadenverhütung GmbH
Zertifizierungsstelle
Amsterdamer Str. 174
D-50735 Köln

Ein Unternehmen des Gesamtverbandes der Deutschen Versicherungswirtschaft e. V. (GDV), akkreditiert als Zertifizierungsstelle für die Bereiche Brandschutz und Sicherungstechnik von der Deutschen Akkreditierungsstelle Technik (DAT)

A company of the German Insurance Association (GDV) accredited by "Deutsche Akkreditierungsstelle Technik (DAT)" as a certification body for fire protection and security

Zertifikat Certificate

Anerkennung
von Bauteilen und Systemen
Approval
of Components and Systems

VdS

Inhaber der Anerkennung
Holder of the Approval
LPG Técnicas en Extinción de Incendios S.A.
Mestre Joan Corrales, 107-109
ES-08950 Esplugues de Llobregat, Barcelona

| Anerkennungs-Nr. Approval No. | Anzahl der Seiten No. of pages | gültig vom valid from | gültig bis valid until |
|---|---|---|---|
| S 311006 | 16 | 22.06.2011 | 21.06.2015 |

Gegenstand der Anerkennung
Subject of the Approval
IG-55 - Feuerlöschsystem/ IG-55 - fire extinguishing system
"iFlow"

Verwendung
Use
in ortsfesten IG-55-Hochdruck - Feuerlöschanlagen
in fixed IG-55 - high pressure fire extinguishing systems

Anerkennungsgrundlagen
Basis of the Approval
VdS 2344:2005-12
VdS 2454:1998-12

Köln, den 22.06.2011

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Geschäftsführer
Managing Director

i. V. Hesels
Leiter der Zertifizierungsstelle
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# Agent Cylinder

Australian Fire Technologies

Introduction

**AGENT CYLINDERS** 300 bar ***IFLOW***® systems

Seamless Carbon Steel Container

Sizes:-

- 80 & 140 litre Australian **WORKCOVER** approvals.
- 300 Bar Working Pressure.
- 450 Bar Test Pressure.
- Green Shoulder RAL 8018.
- Red Body RAL 3000.
- Local Filling of IG-541 and IG-55 in Australia and New Zealand via **SupaGas.**

# Agent Cylinder

Australian Fire Technologies



## Cylinder Sizes and Fill Quantities [1]

| Storage Pressure | 300 bar | | | |
|---|---|---|---|---|
| Cylinder Size | 80 litre | | 140 litre | |
| IG-01 (Argon) | 23.8 m³ | 40.2 kg | 41.7 m³ | 70.5 kg |
| IG-55 | 22.3 m³ | 32.1 kg | 39.1 m³ | 56.3 kg |
| IG-100 (Nitrogen) | 21.0 m³ | 25.0 kg | 36.7 m³ | 43.7 kg |
| IG-541 (Inergen®) | 23.0 m³ | 33.2 kg | 40.2 m³ | 57.9 kg |

[1] Fill quantities @ 15°C

# Agent Cylinder

Australian Fire Technologies

Introduction

## Cylinder Dimensions

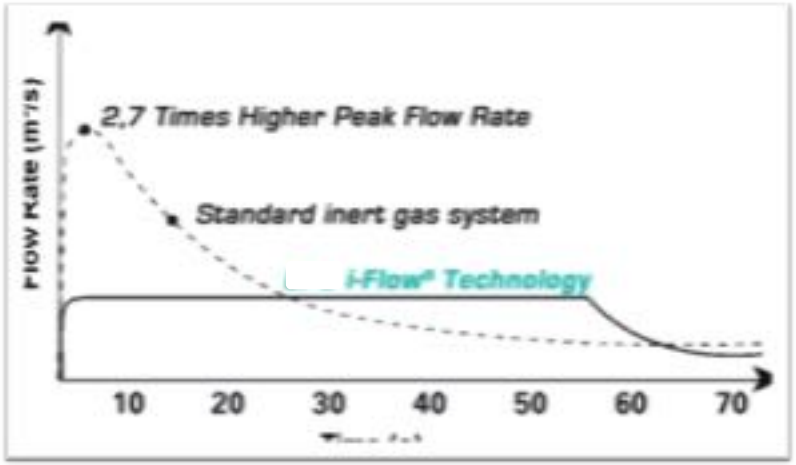
| Cylinder Size | 80 litre | | 140 ltr | |
|---|---|---|---|---|
| Storage Pressure | 300 bar | | 300 bar | |
| Diameter (mm) | 267 mm | | 358 mm | |
| Height (mm) (1) | 2055 | 2130 | 2100 | 2260 |
| Weight (kg) (2) | 76 | 109 | 154 | 221 |

(1) Height including discharge hose

(2) Empty cylinder assembly

Australian Fire Technologies

# Introduction




## IFLOW® ADVANTAGES

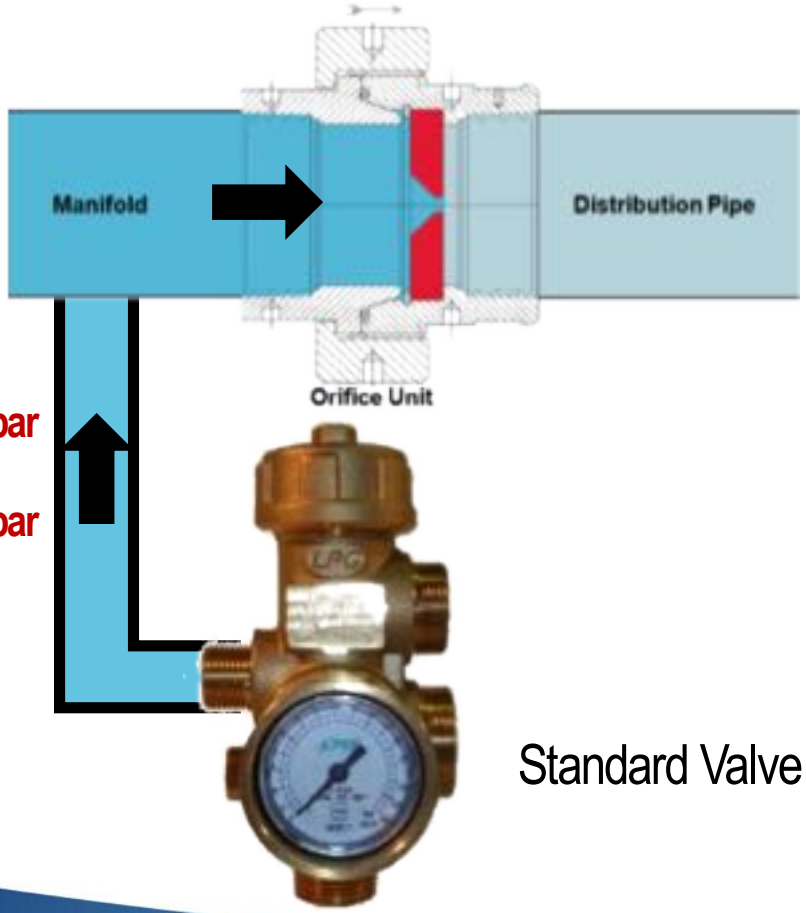
# Standard vs *iFlow*®

Australian Fire Technologies

Introduction

## Standard System

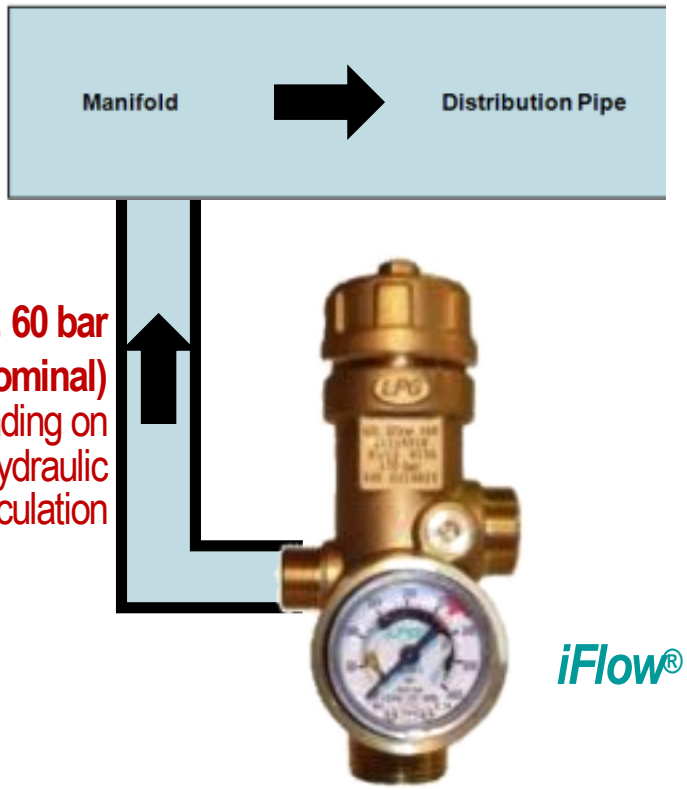
### Orifice System




Standard Valve

## *iFlow*® System

### Constant Flow System




*iFlow*® Valve

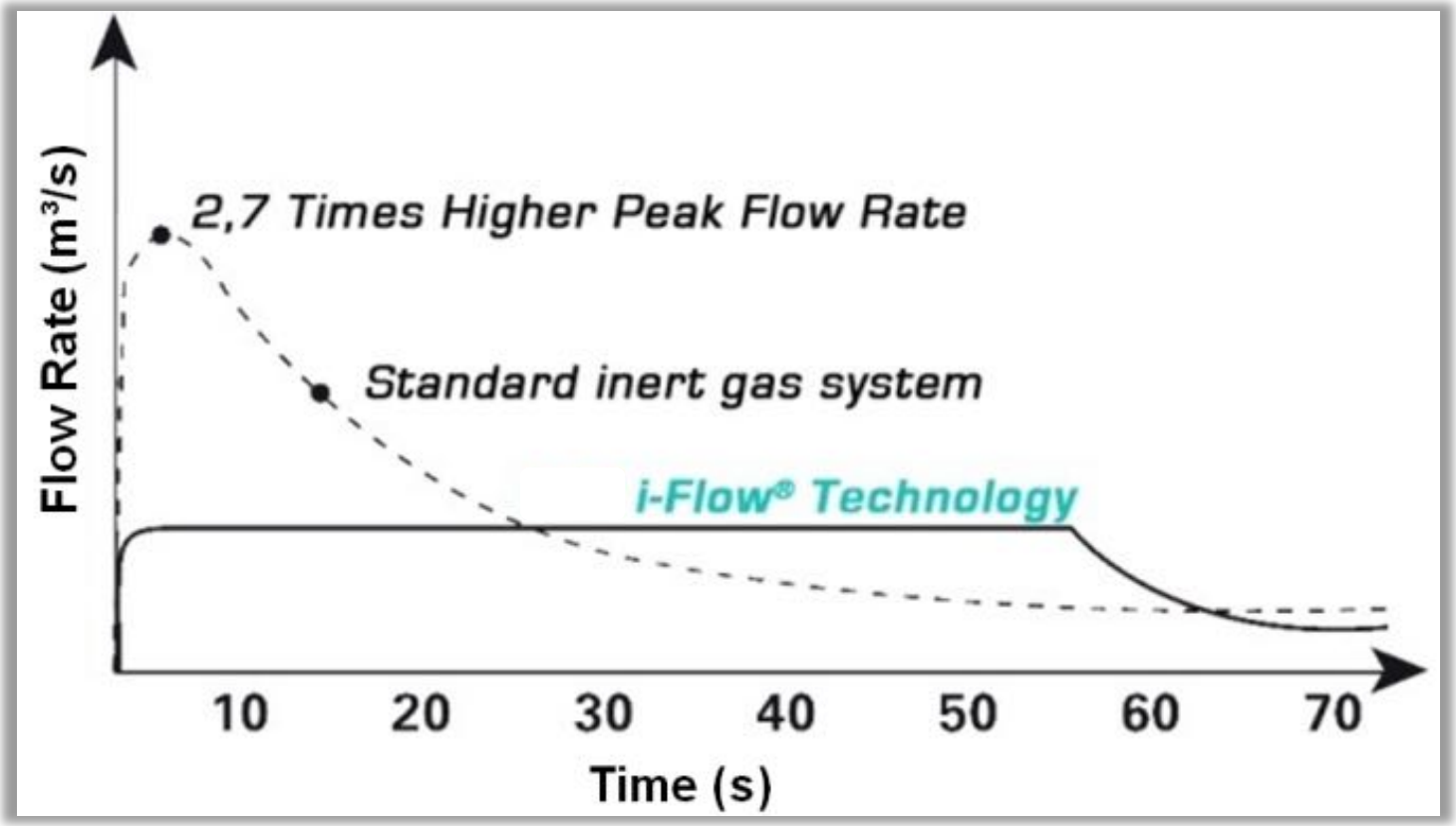
# *iFlow*® Advantages

Australian Fire Technologies



- Low pressure downstream of the cylinder valve is approx 60 bar nominal.
- Low pressure components.
    - Discharge hose.
    - Manifold and Check Valve.
    - Selector Valves.
    - Pipework and Fittings (Schedule 40)
- Valve closes automatically if the downstream pressure is greater than 80 bar.
- Smaller distribution pipework compared to standard orifice systems.
- Systems with up to eight (8) x 80 litre cylinders can be installed without a manifold

- Constant flow (no peak flow)



# *iFlow*® Advantages

Australian Fire Technologies



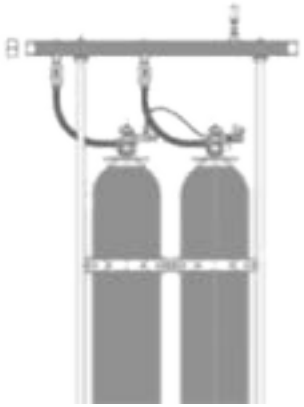
- Smaller free vent area

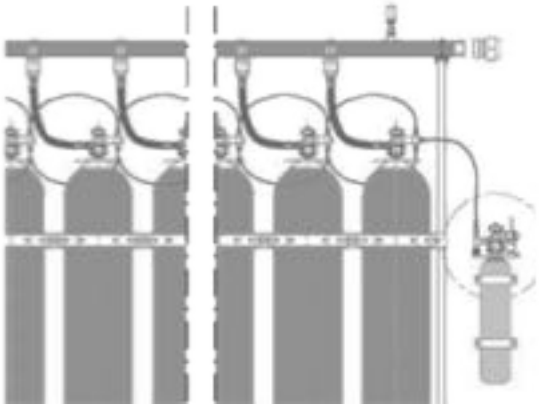
$$A = \frac{M_{Agent} \times S_{Agent}}{\sqrt{P \times s_H}}$$

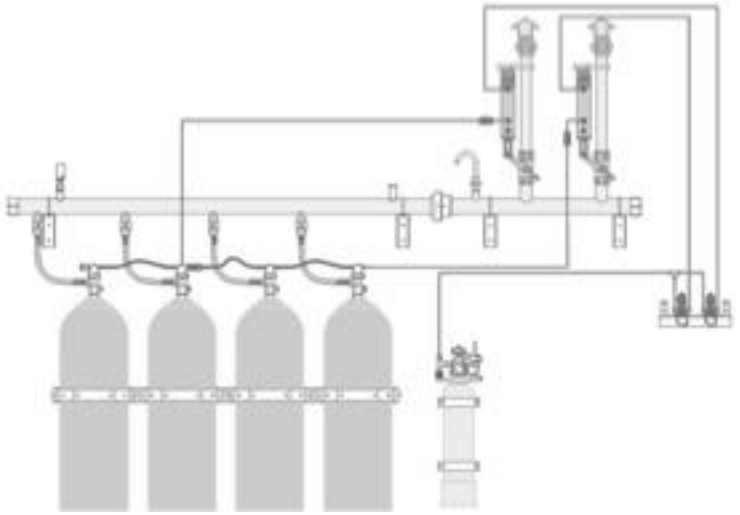
| Agent | Venting Area | |
|---|---|---|
| NOVEC 1230 | 1.0 | |
| IG-100 (Nitrogen) | 5.5 | 1.8 |
| IG-01 (Argon) | 6.2 | 3.1 |
| IG-55 | 5.7 | 1.9 |
| IG-541 (Inergen®) | 5.6 | 1.8 |
| | Orifice | *iFlow*® |

Australian Fire Technologies

# Introduction

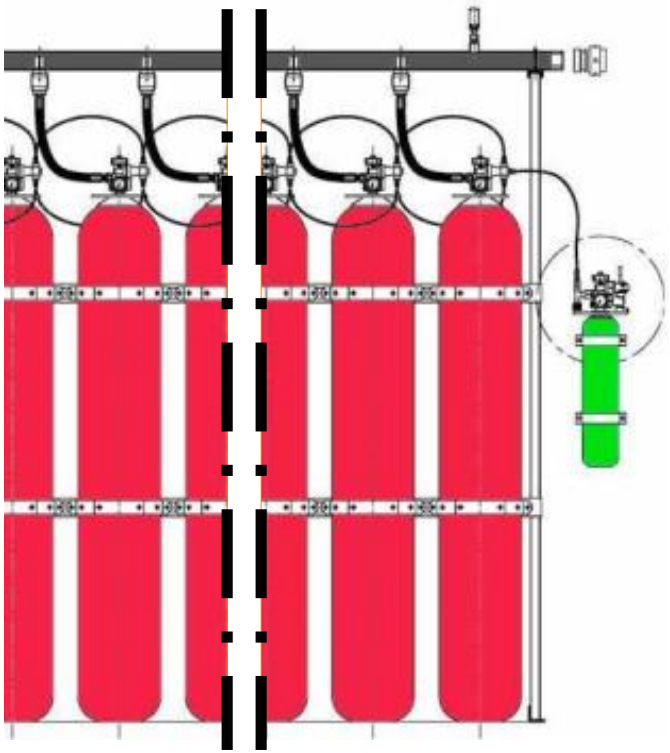




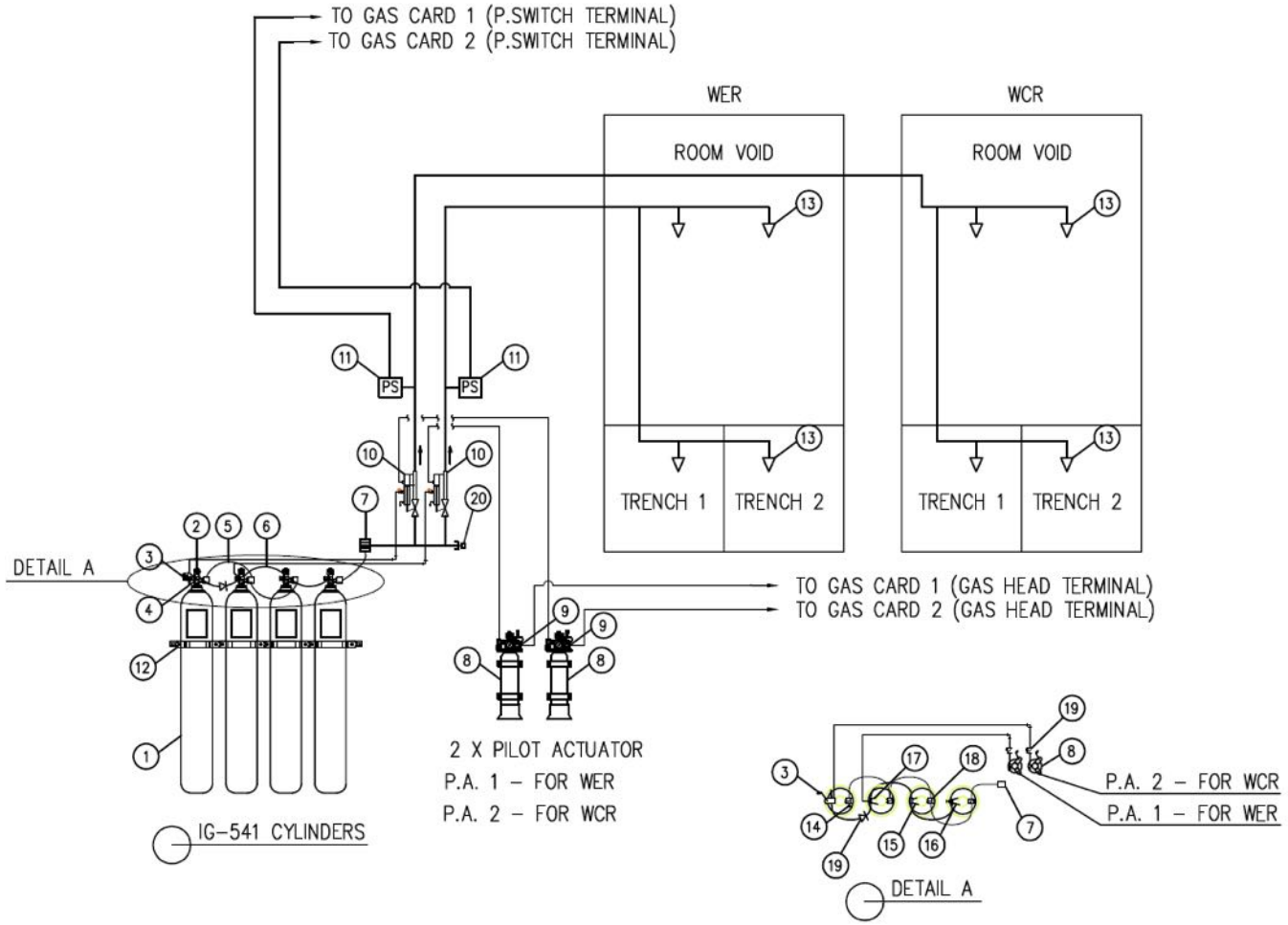


# SYSTEM SETUP

## Pilot Cylinder operation



## Directional Valve System - 1 step operation



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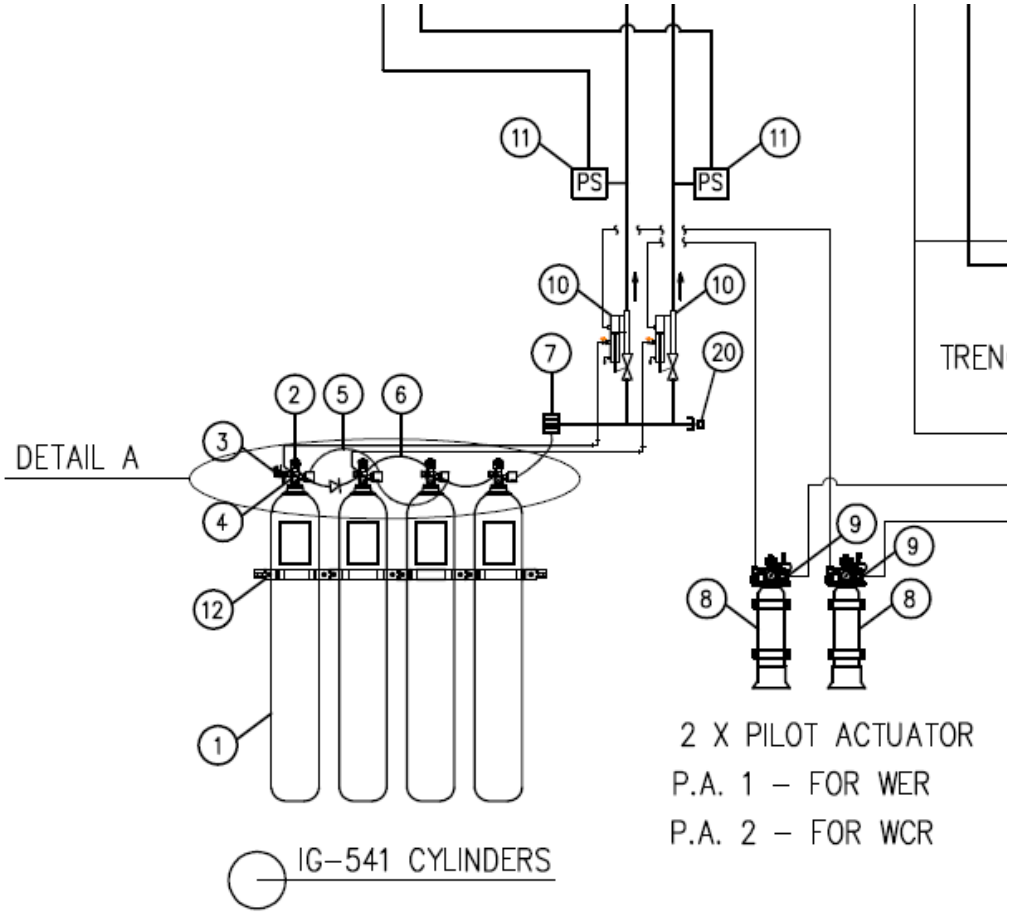


Australian Fire Technologies

# Introduction

## VALVES

# Valve Types

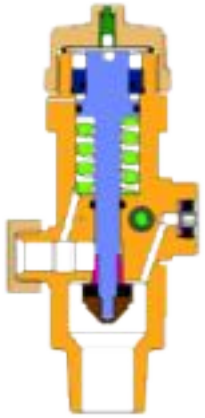
Australian Fire Technologies



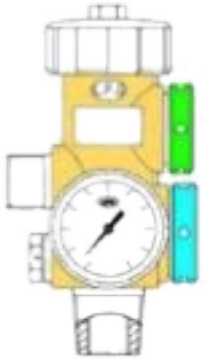
| Pressure | Valve Type | Solenoid Port | Comment |
|---|---|---|---|
| | | | |
| ***iFlow*® Cylinder** | | | |
| 300 bar | *VRG | No | Actuation via release disc |
| | | | |
| **Pilot Cylinder** | | | |
| 100 bar | 128-90 | Yes | Actuation via release disc or solenoid |

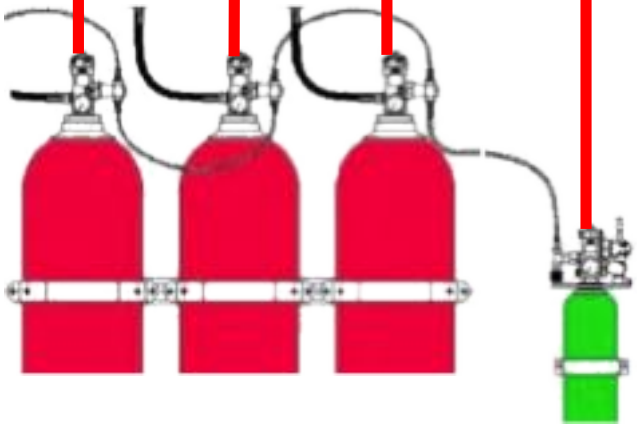
*** VRG = Valve Regulated**

*iFlow*® Valve
- pneumatic



**128-90**
- manual
- electric
- pneumatic





Cylinder Bank

Pilot Cylinder

Australian Fire Technologies

# Introduction

IFLOW VALVE

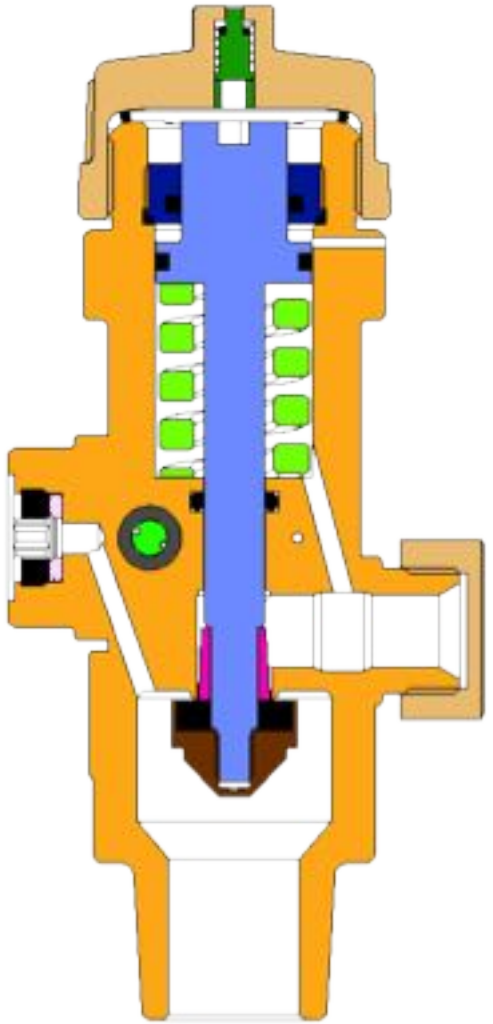
# *iFlow*® Valve VRG

Australian Fire Technologies

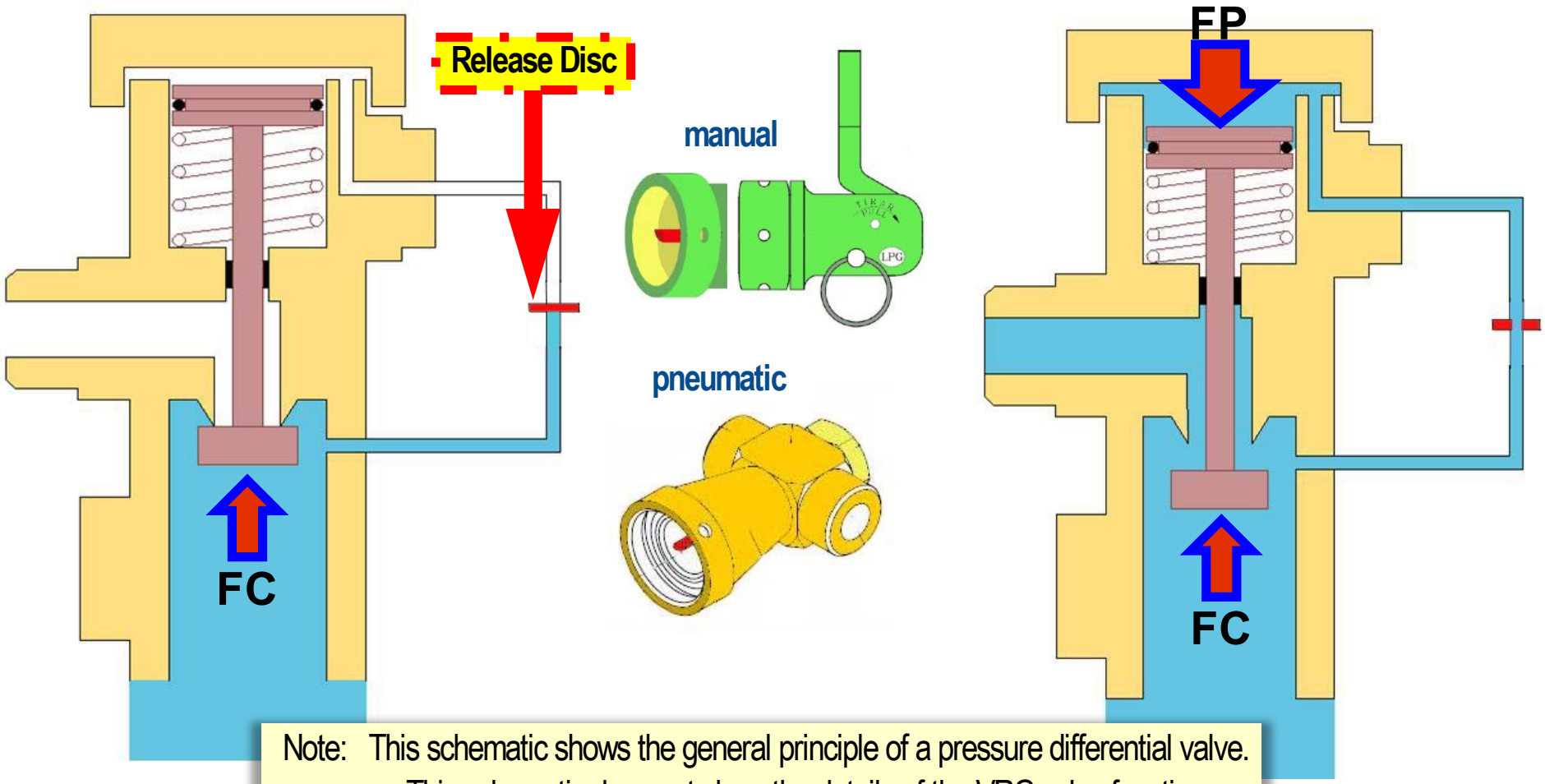
## Introduction

Features:-

- Pressure differential
- Constant discharge pressure
- Closes automatically if the backpressure in the distribution pipework exceeds 80 bar



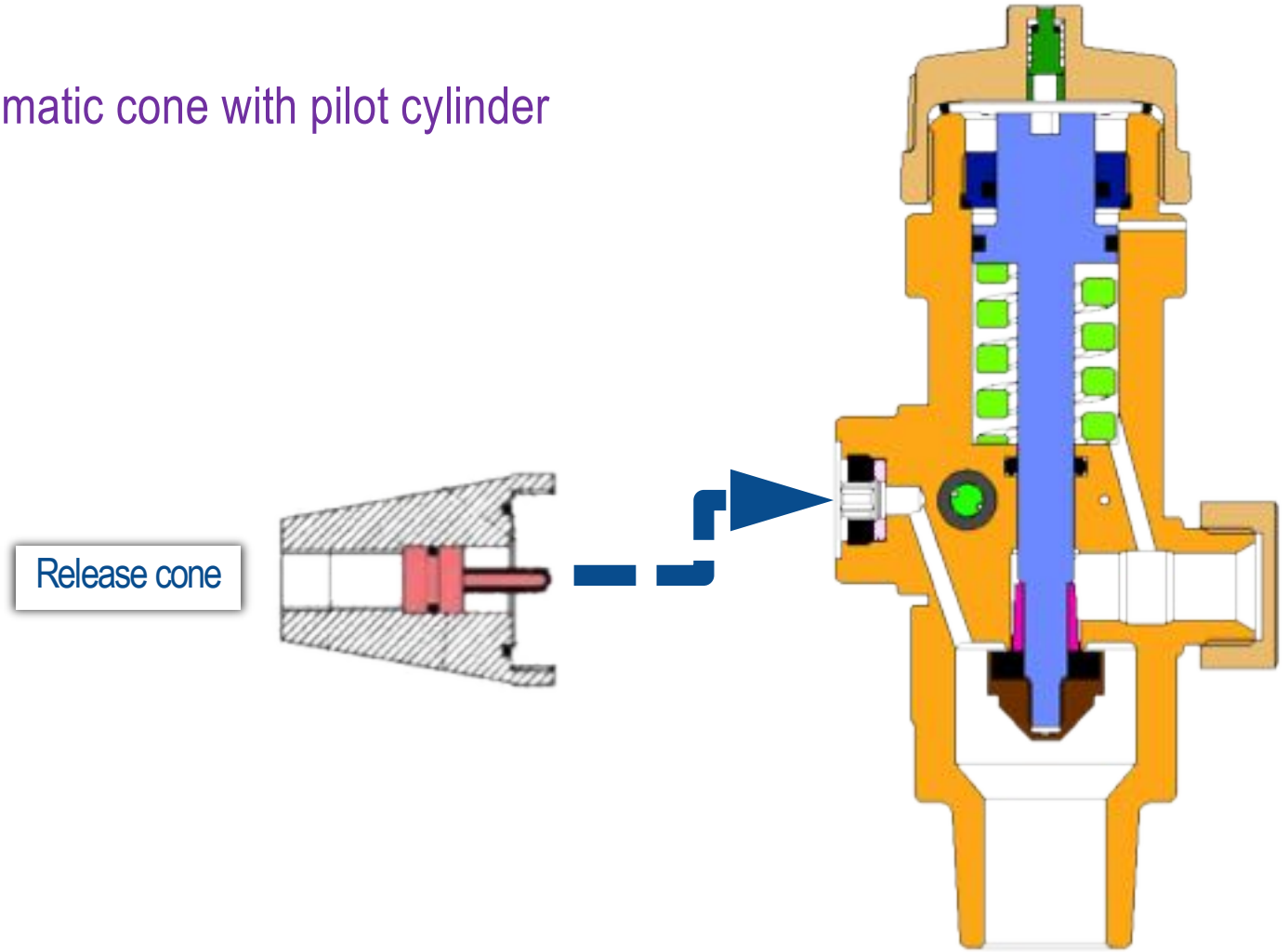
## Pressure Differential




Note: This schematic shows the general principle of a pressure differential valve.
This schematic does not show the details of the VRG valve function.

## Actuation

- release disc via pneumatic cone with pilot cylinder

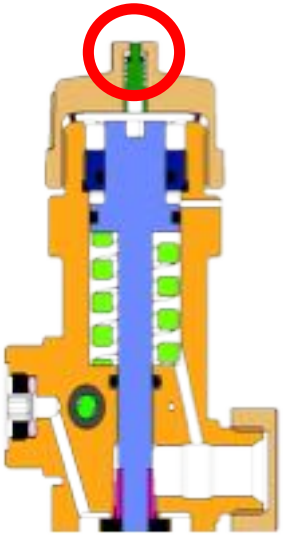


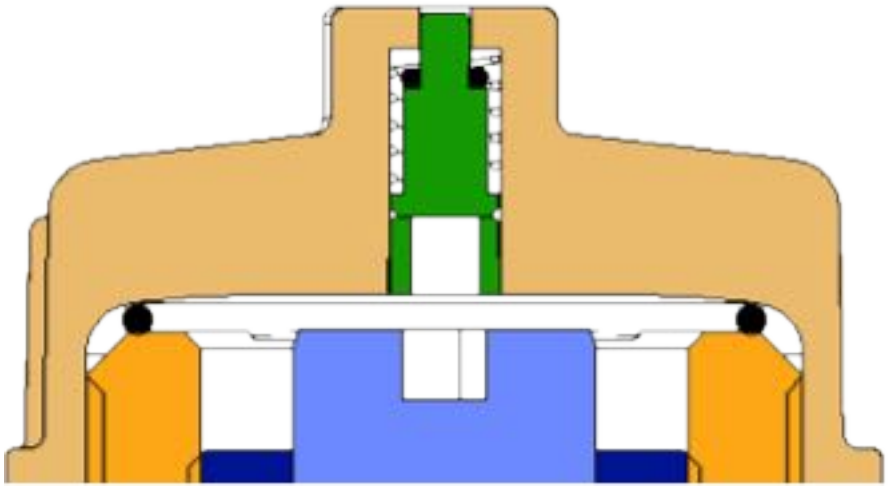
# *iFlow*® Valve VRG

Australian Fire Technologies

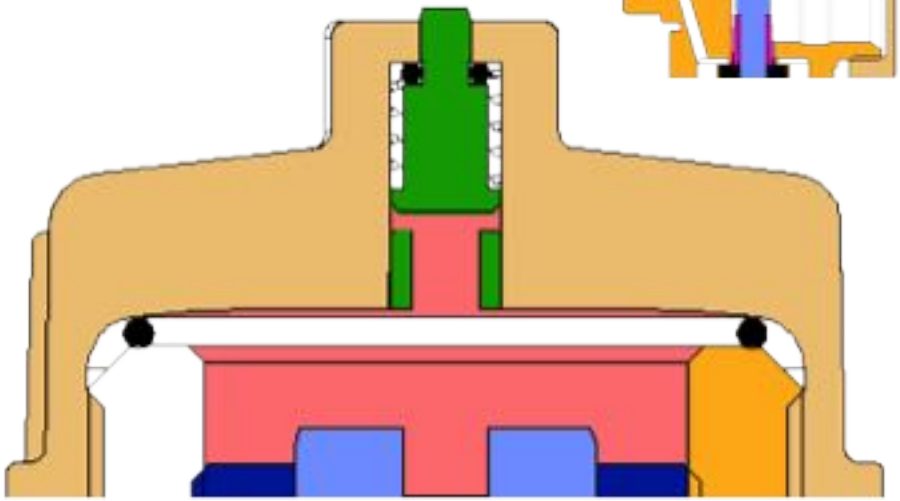
## Introduction

- bleed valve in cap prevents false discharge if release disc seat leaks





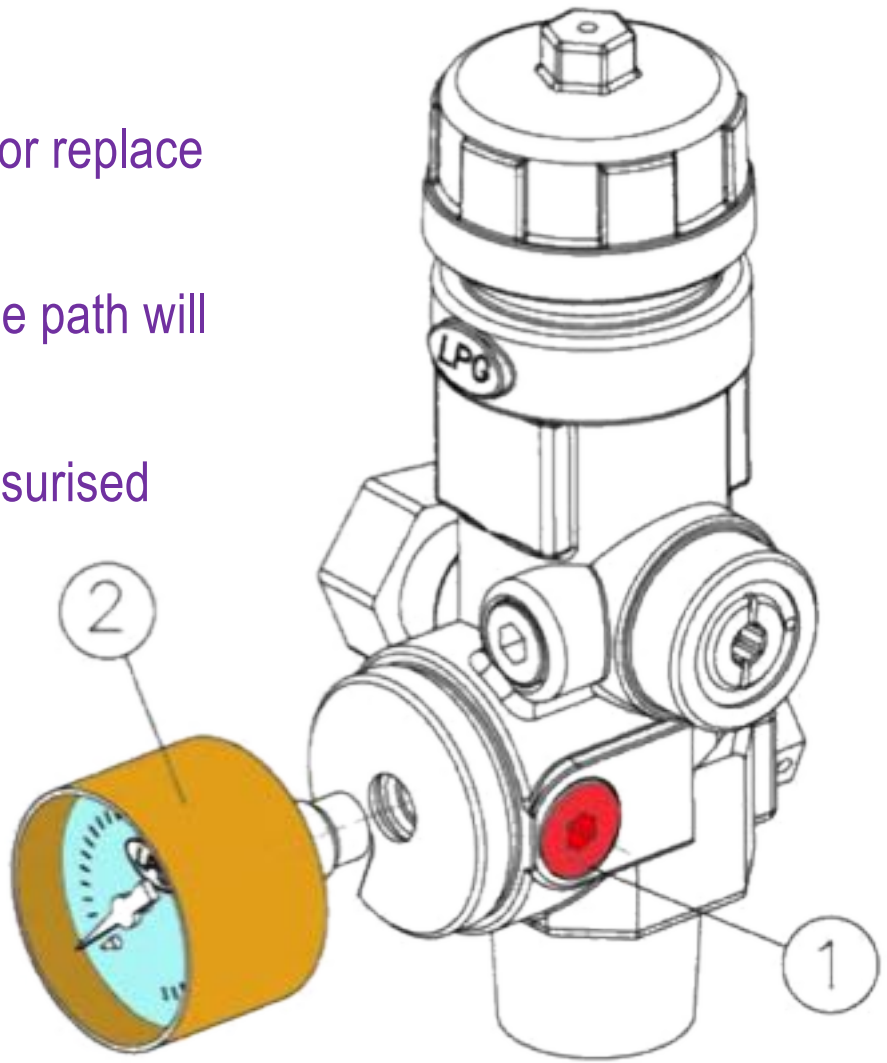
Normal: bleed valve **open**



Actuation: bleed valve **closed**

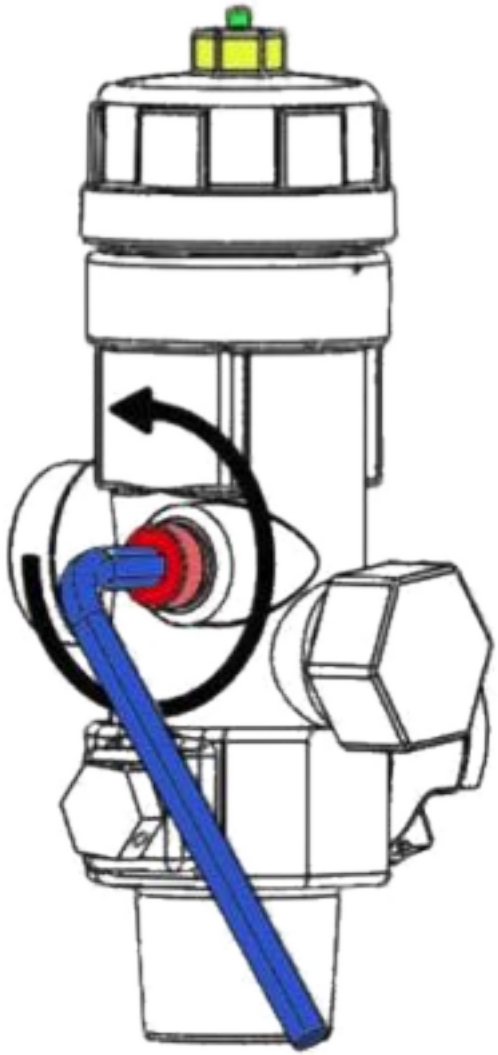
## Pressure Gauge Installation & Testing

- decompression system to easily test or replace the pressure gauge
- loosen (1) ➔ pressure from the gauge path will be released
- tighten (1) ➔ gauge path will be pressurised



Valve Head Decompression After Actuation

- loosen decompression screw
- remaining gas under valve cap relieved
- (green) indicator not more visible
- tighten decompression screw before refilling



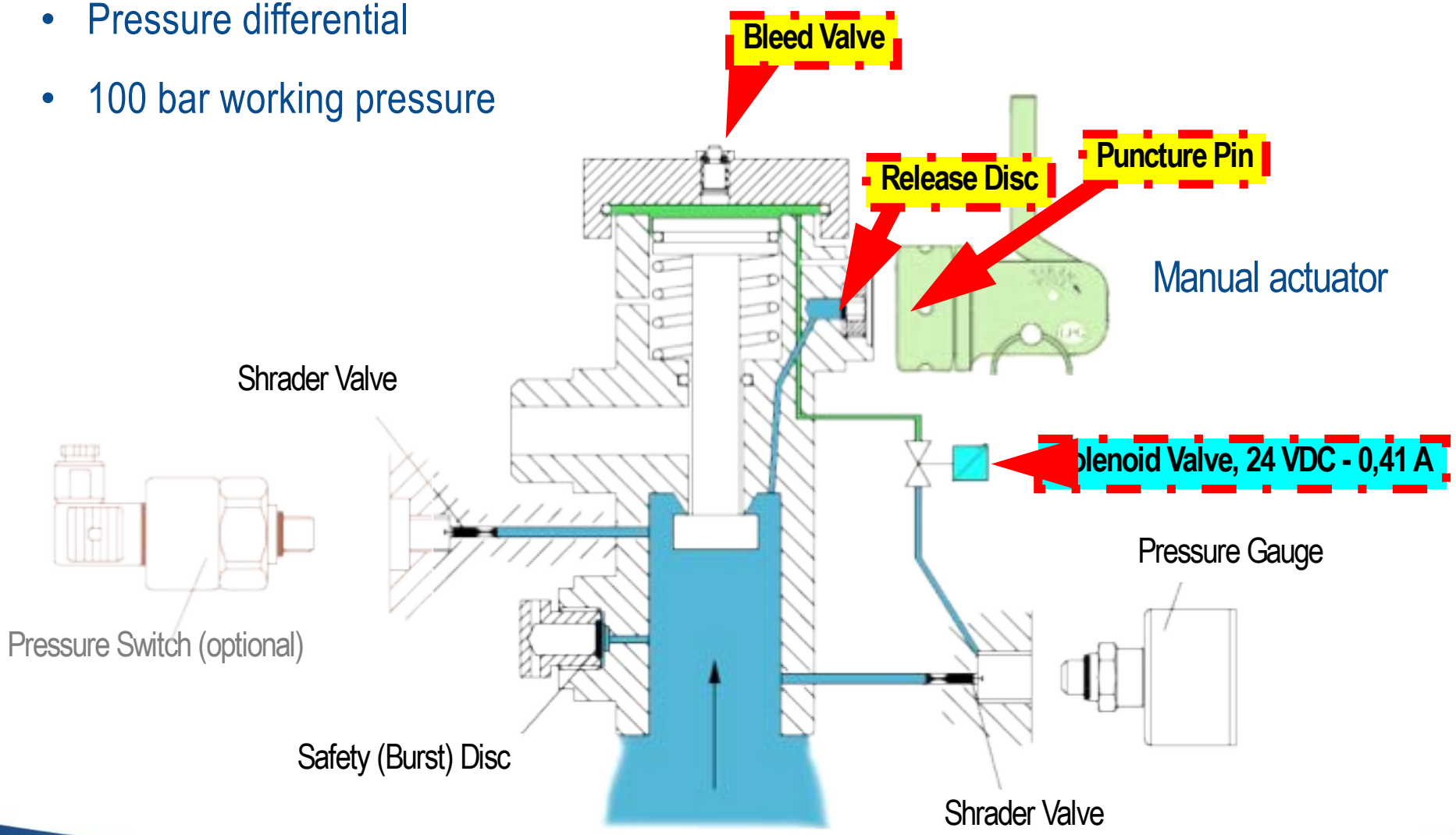
# PILOT CYLINDER VALVE

# Valve 128-90

Australian Fire Technologies

# Introduction

- Pressure differential
- 100 bar working pressure

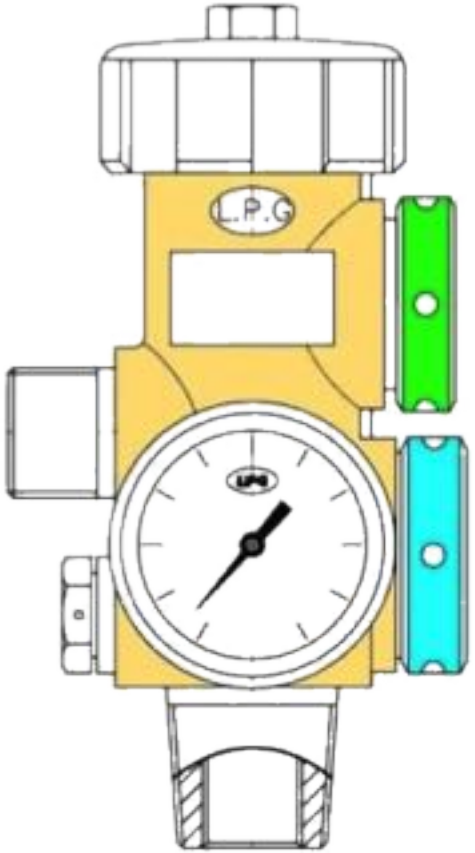


# Valve 128-90

Australian Fire Technologies

# Introduction

## Actuation

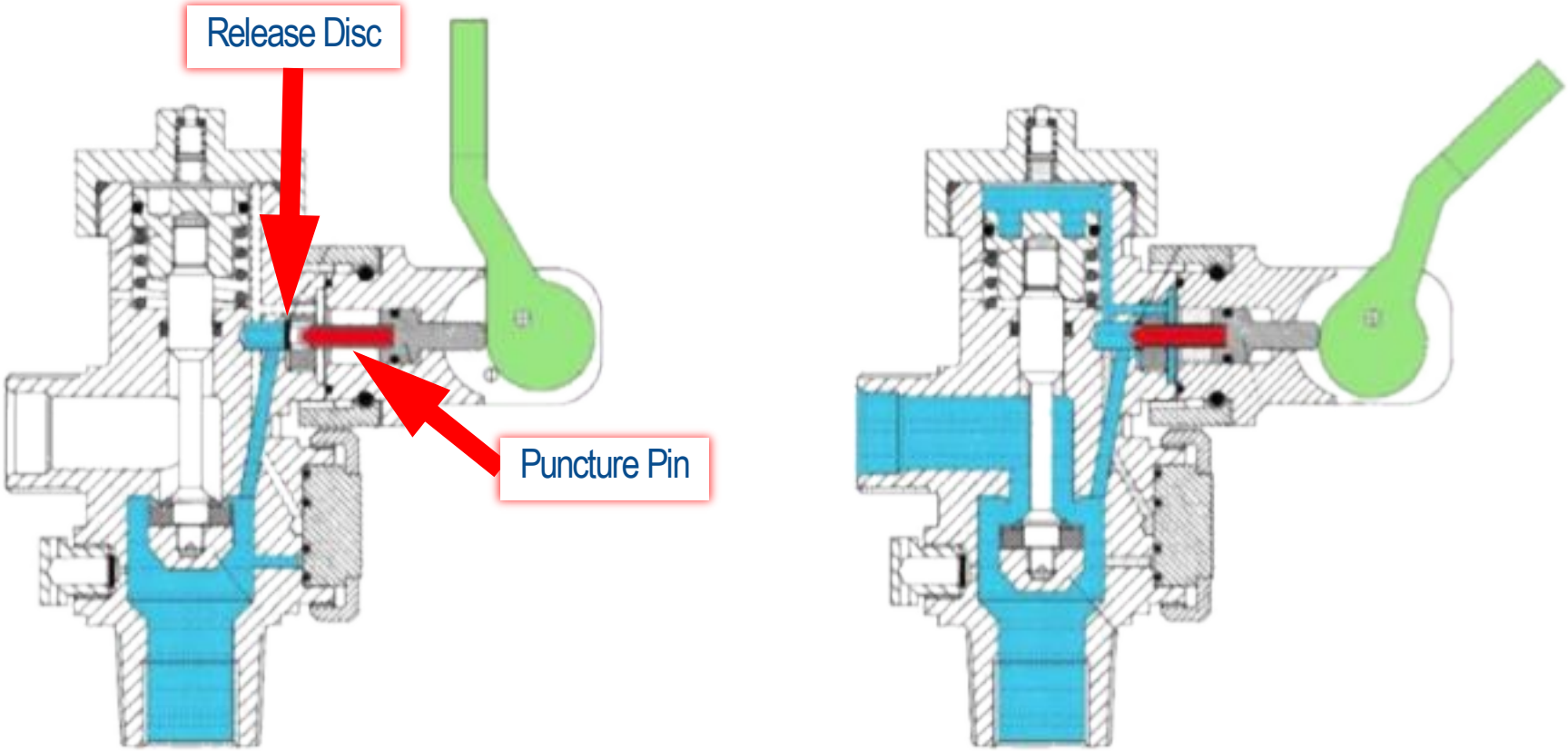


# Valve 128-90

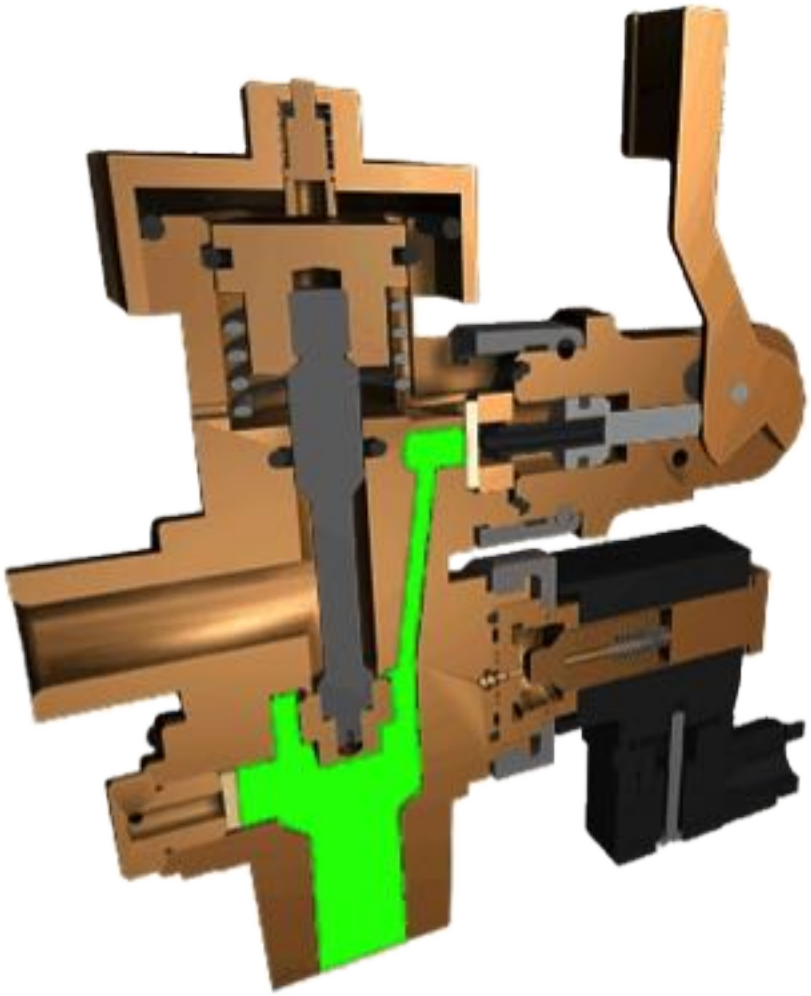
Australian Fire Technologies

# Introduction

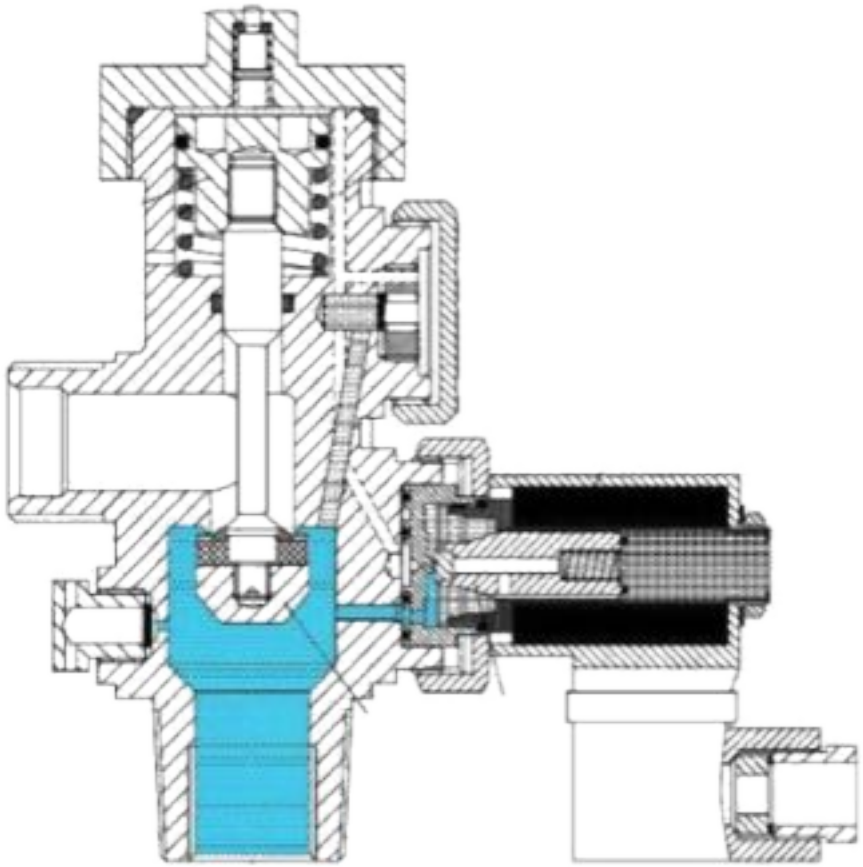
## Manual Actuation

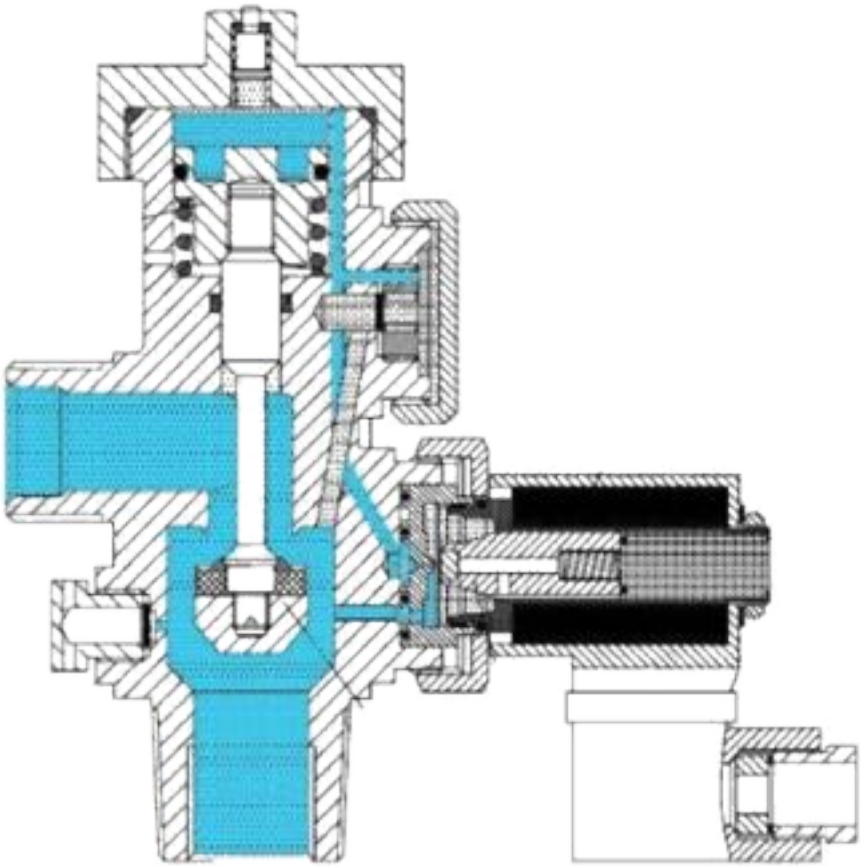


## Manual Actuation



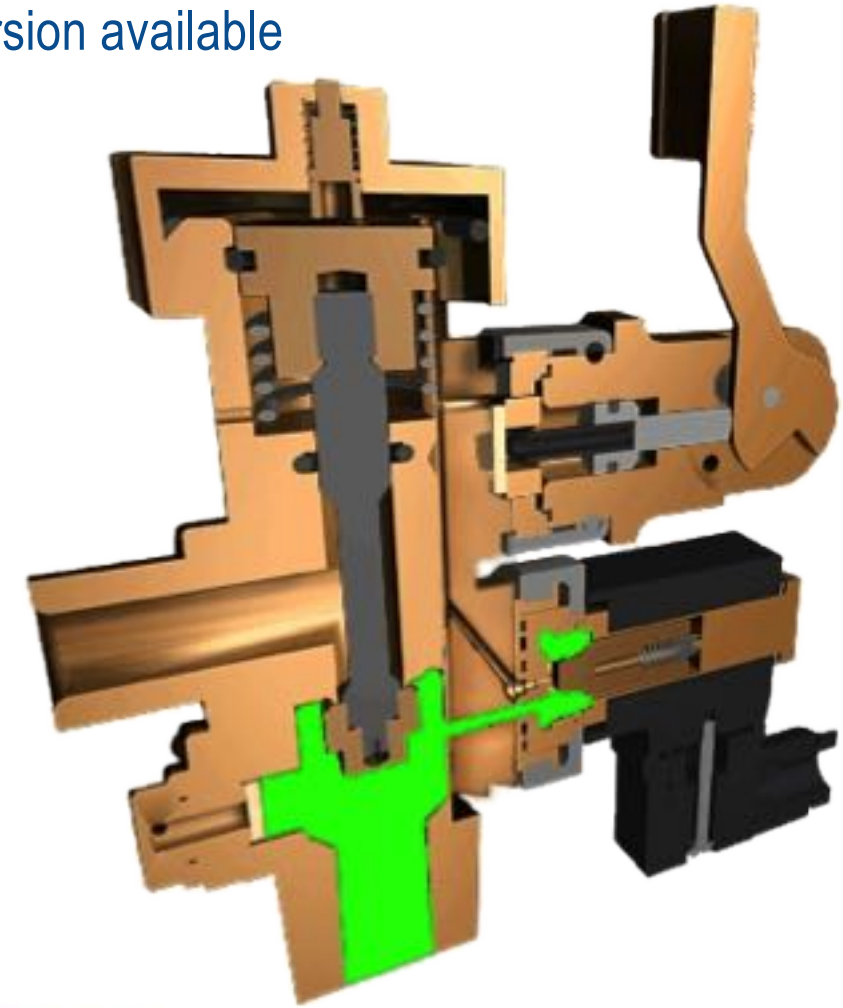
## Electric Actuation (Solenoid 24 VDC/0.41 A)





## Electric Actuation (Solenoid)

- ATEX version available



Solenoid
24 VDC / 0,41 A

# Cylinder Assembly

Australian Fire Technologies

## Introduction

- 100 bar Nitrogen

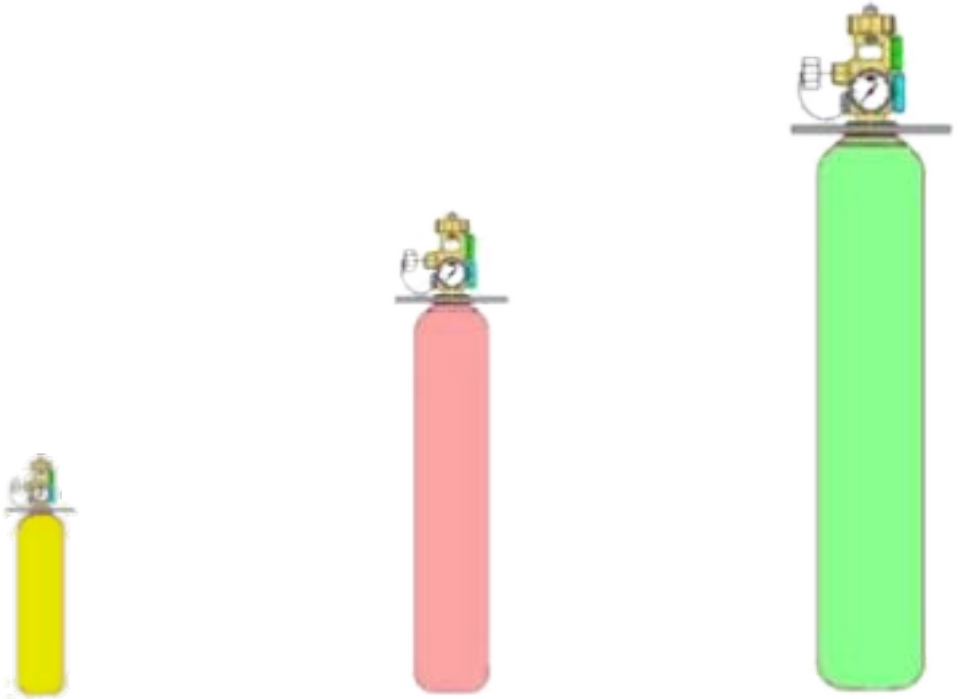
# Pilot Cylinder Sizes

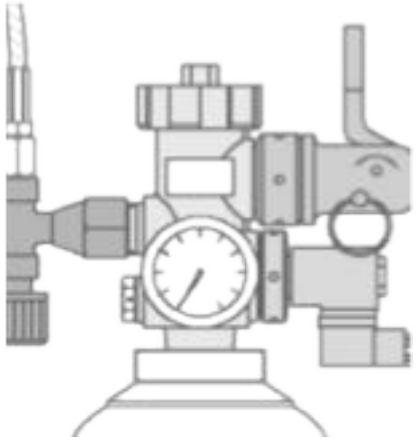
Australian Fire Technologies



## Pilot Cylinder Sizes and Limits

| | 3 litre | 13 litre | 50 litre |
|---|---|---|---|
| Max. no. of cylinders | 40 cylinder | 150 cylinder | 250 cylinder |
| Max. pilot line length | 60 m | 250 m | 1300 m |



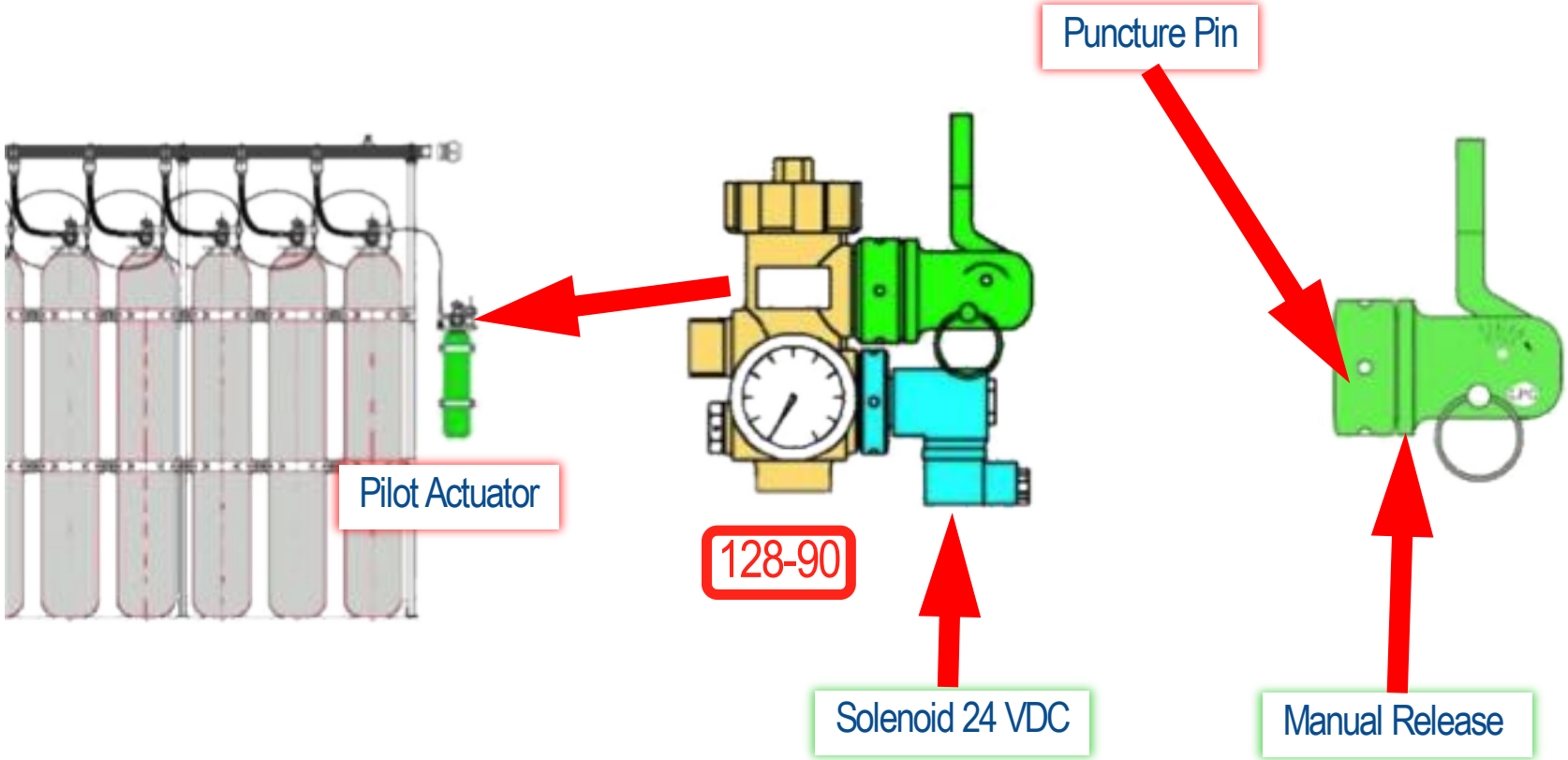


# PILOT CYLINDER ACTUATION

# Pilot Cylinder System

Australian Fire Technologies

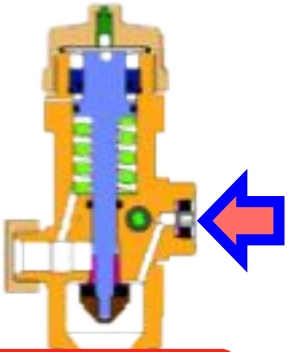
## Introduction



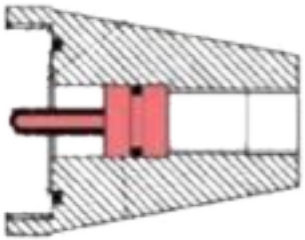
# Pilot Cylinder System

Australian Fire Technologies

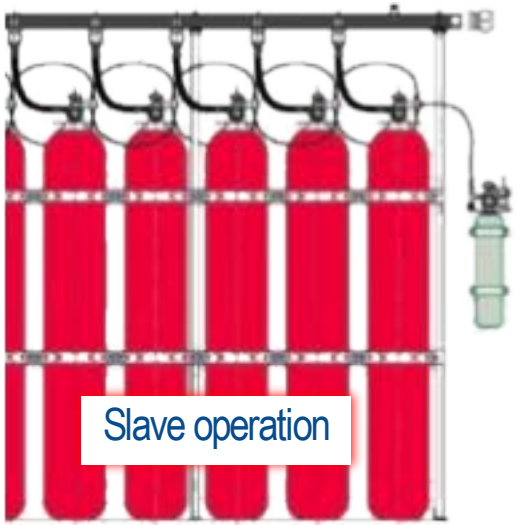
## Introduction



*iFlow*® Valve



Pneumatic Cone



Slave operation

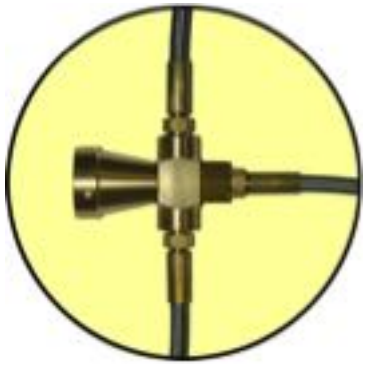
# SLAVE CYLINDER ACTUATION

## PNEUMATIC DEVICES ( PNEUMATIC CONE )

The pneumatic cone is provided with an internal piston fitted with a hammer / puncture pin. When the piston is pneumatically activated with the gas from the pilot cylinder the needle bursts a disk housed on the valve body of the auxiliary cylinder, discharging the extinguishing agent contained in the cylinder.

1 way

2 way



3 way

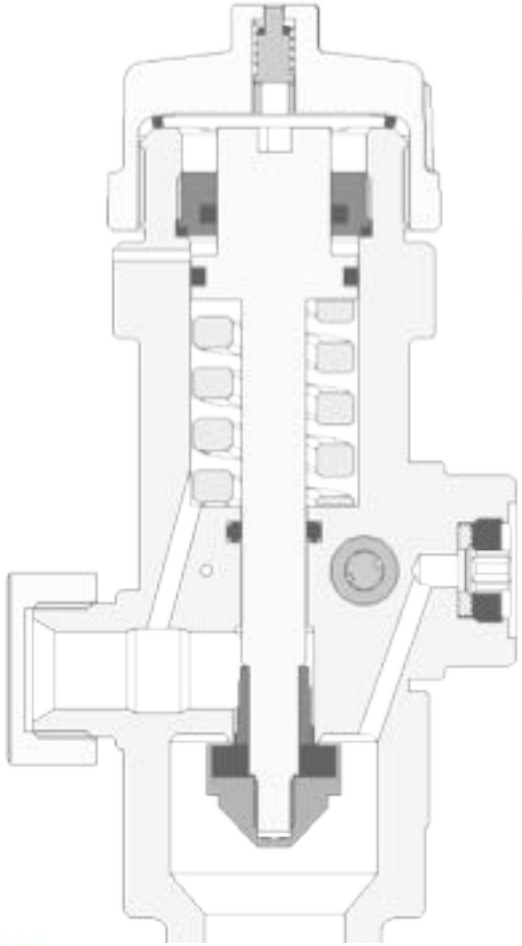
1 way + Decompression Screw

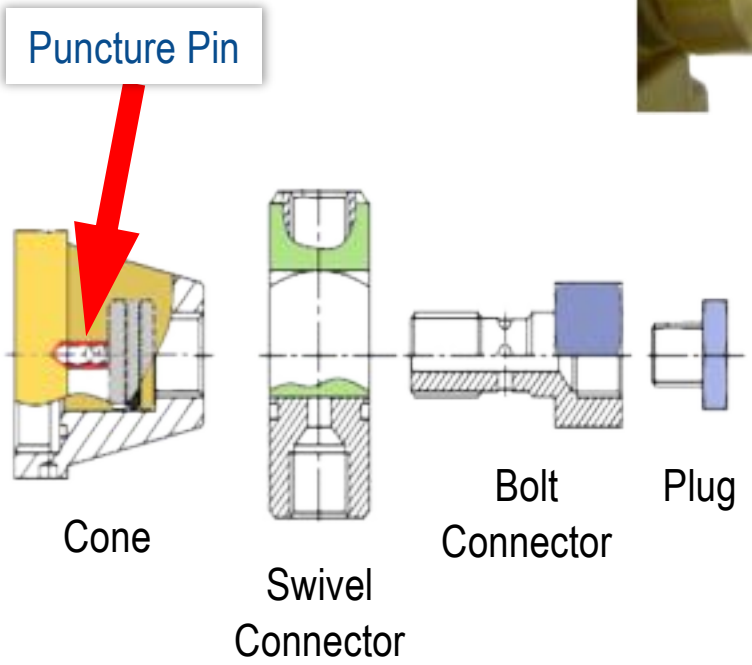
# Slave Actuation

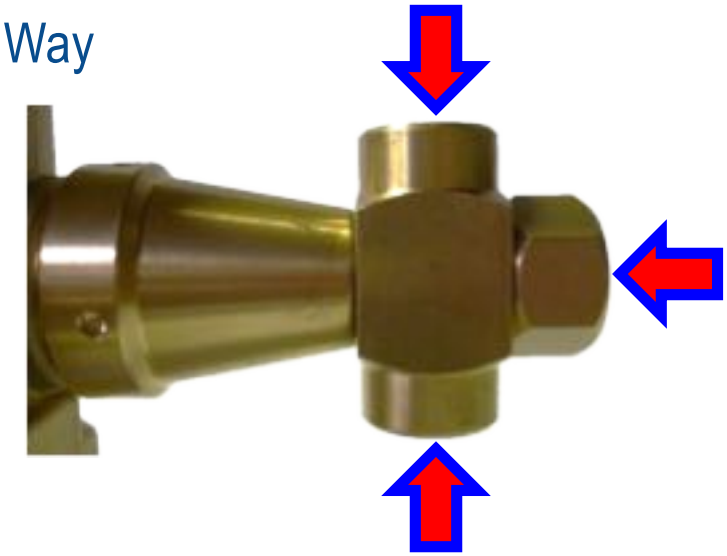
Australian Fire Technologies

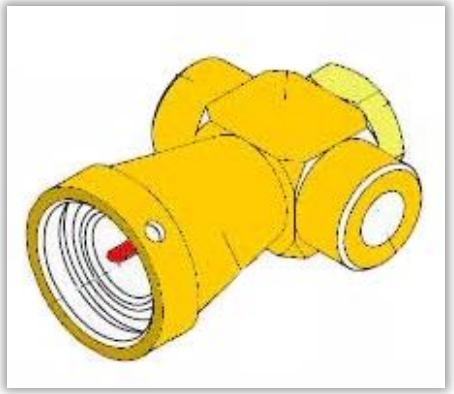
# Introduction

## Pneumatic Cone - 3 Way





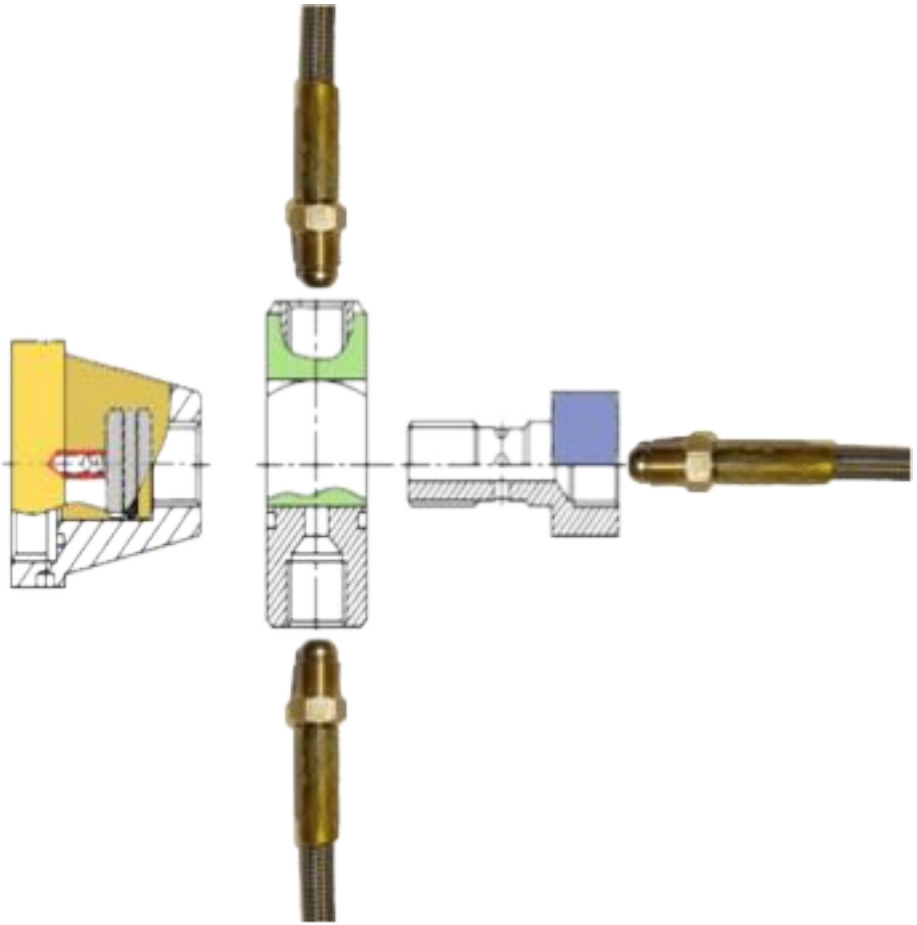


# Slave Actuation

Australian Fire Technologies

# Introduction

## Actuation Hose 1/4" x 350/580/700 mm



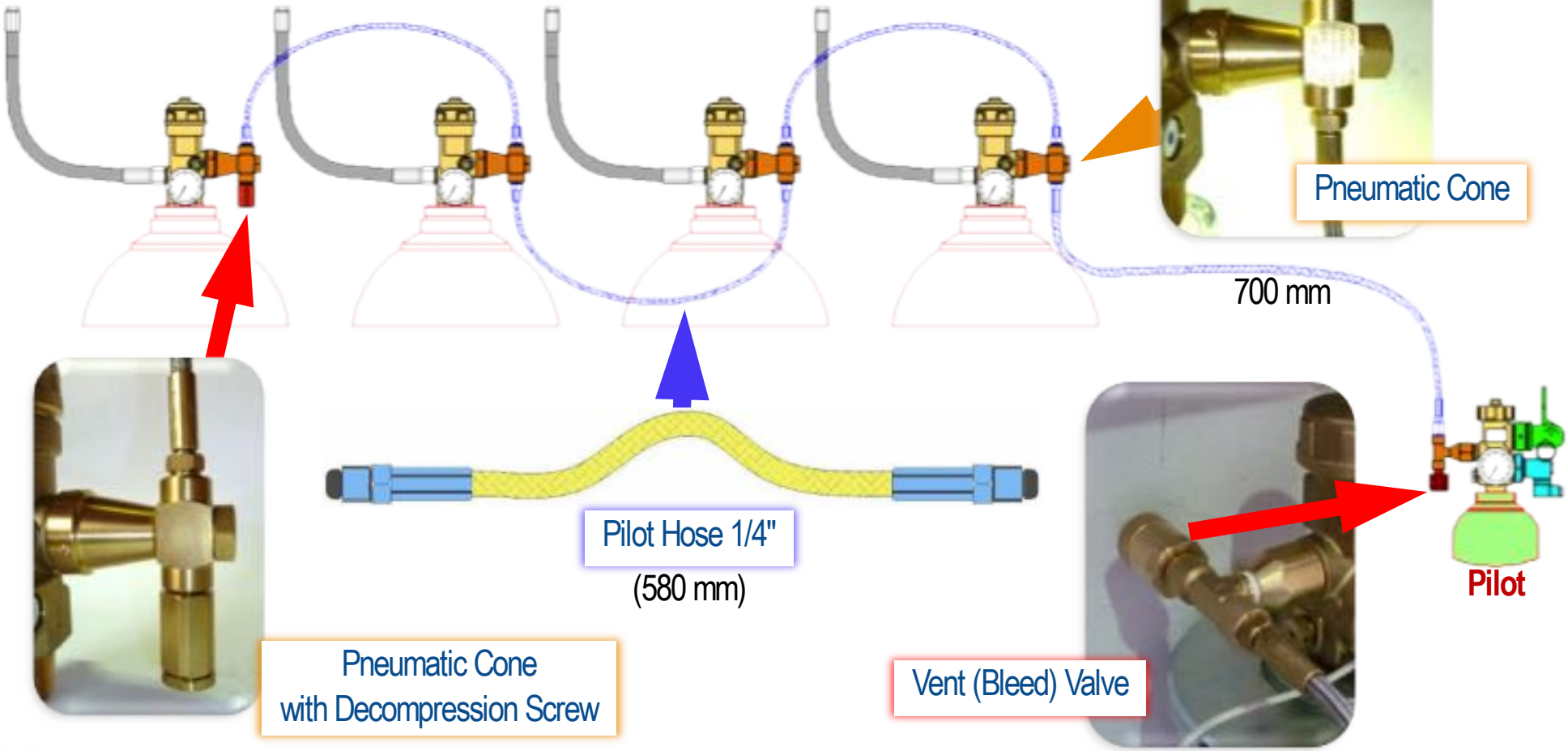
Connector
Hose to Hose

# Slave Actuation

Australian Fire Technologies

# Introduction

## Pilot Cylinder - Single Row

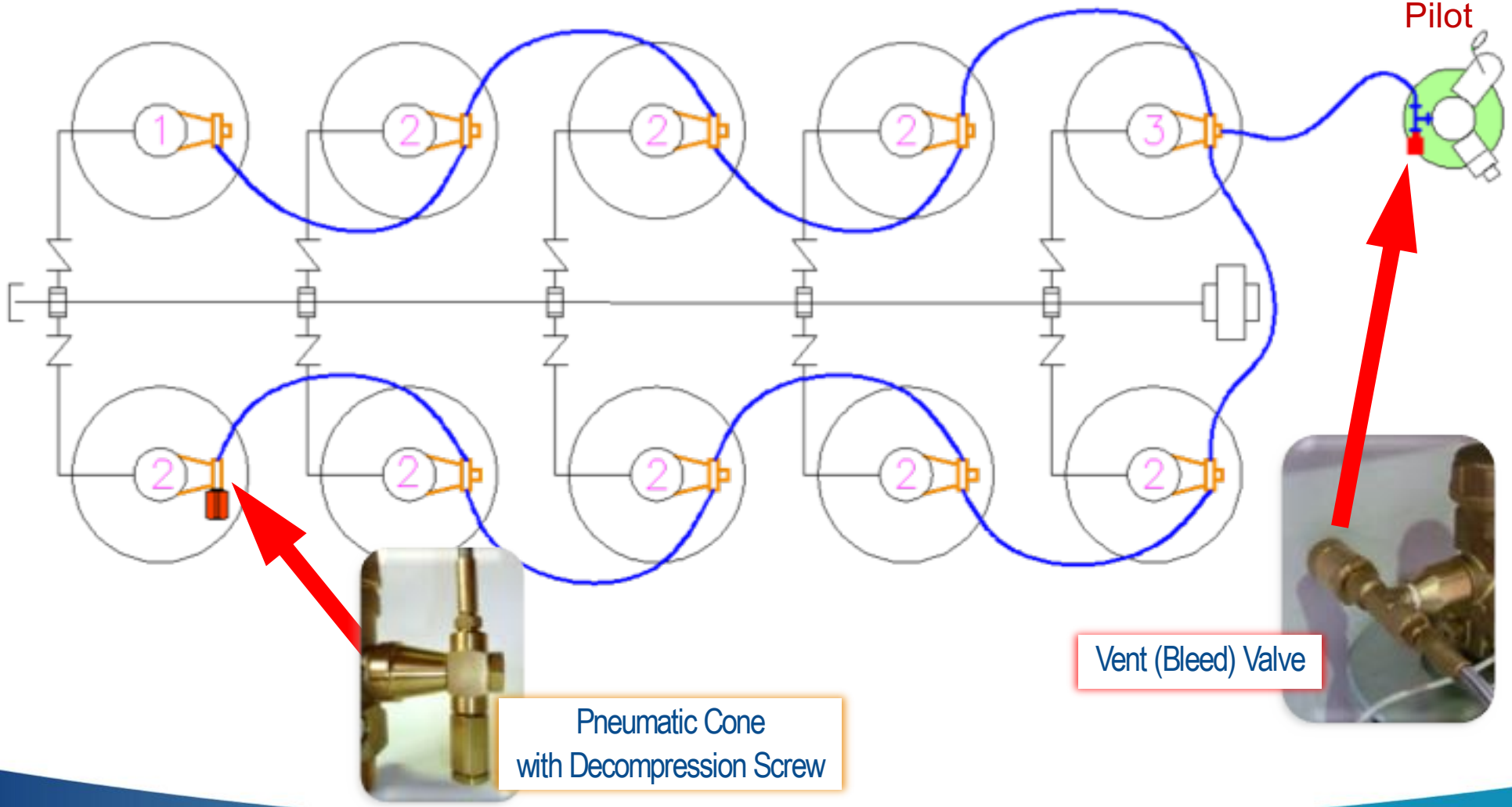


# Slave Actuation

Australian Fire Technologies

# Introduction

## Pilot Cylinder - Double Row



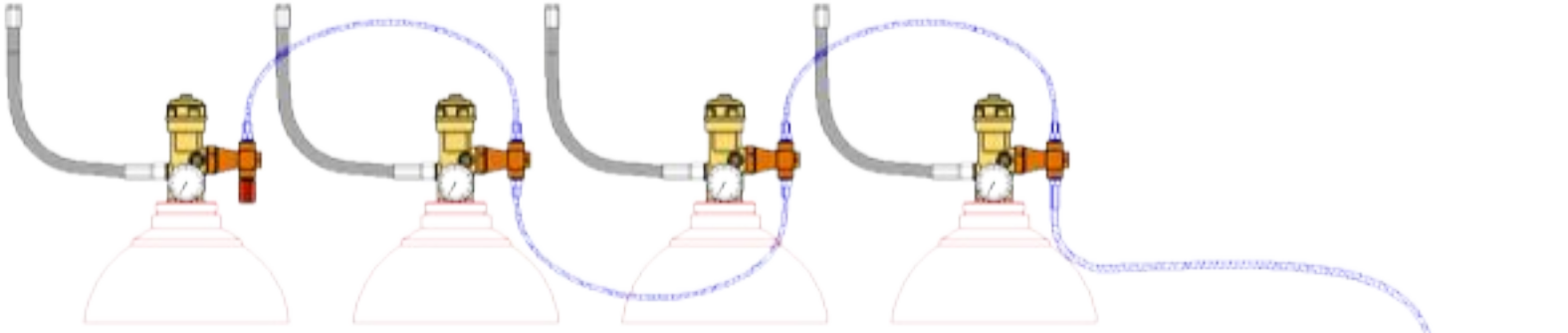
# Slave Actuation

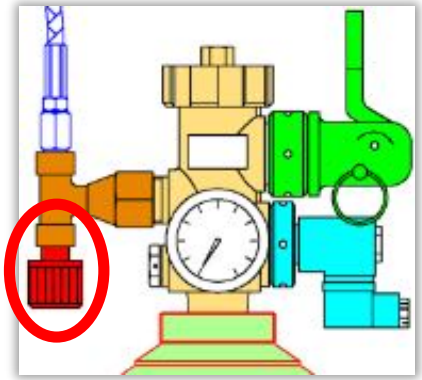
Australian Fire Technologies

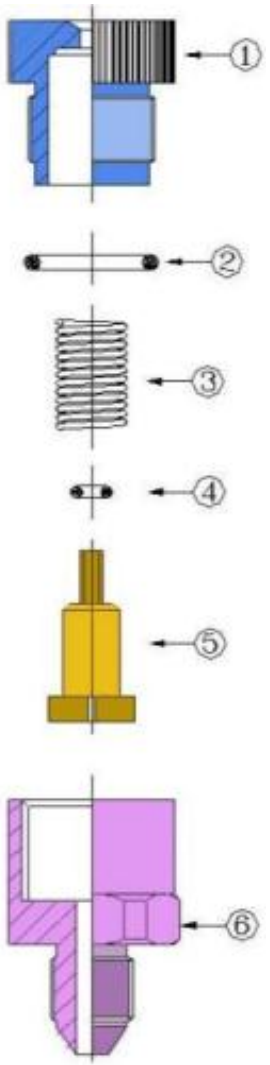
Introduction

## Vent (Bleed) Valve

- avoids accidental discharge due to pressure build-up from leakage in the pilot cylinder
- installed anywhere in the pilot line







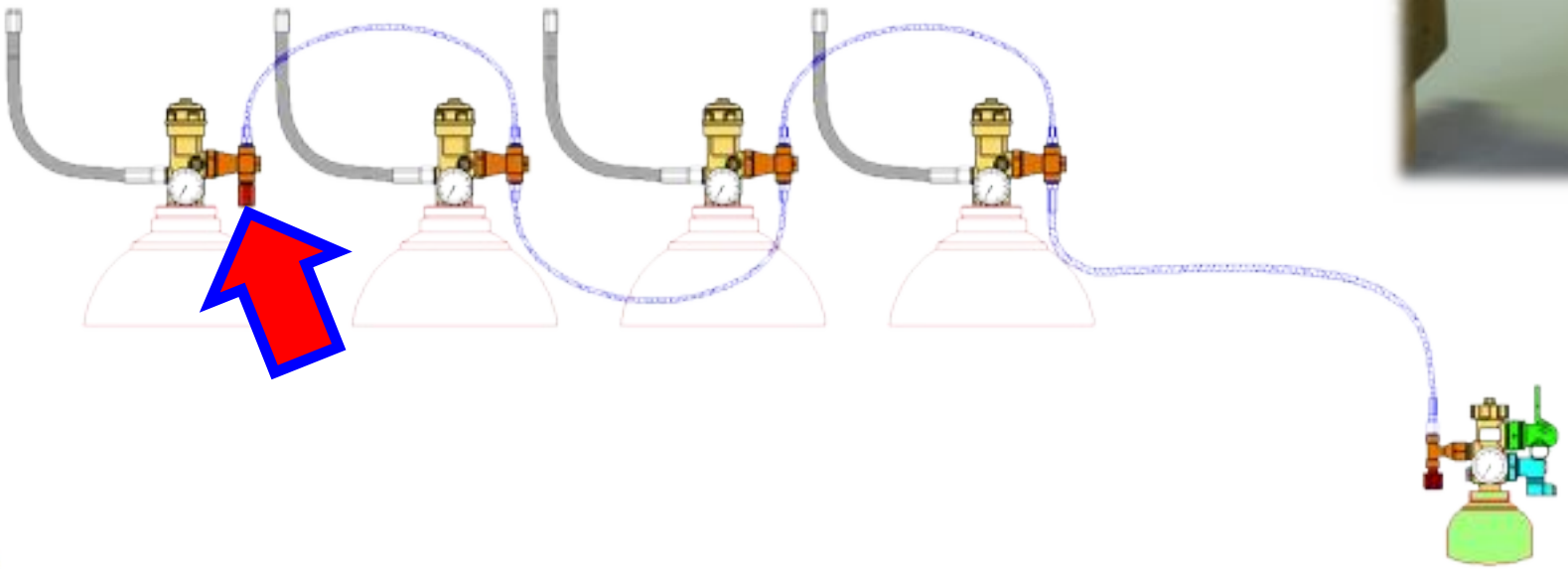
# Slave Actuation

Australian Fire Technologies

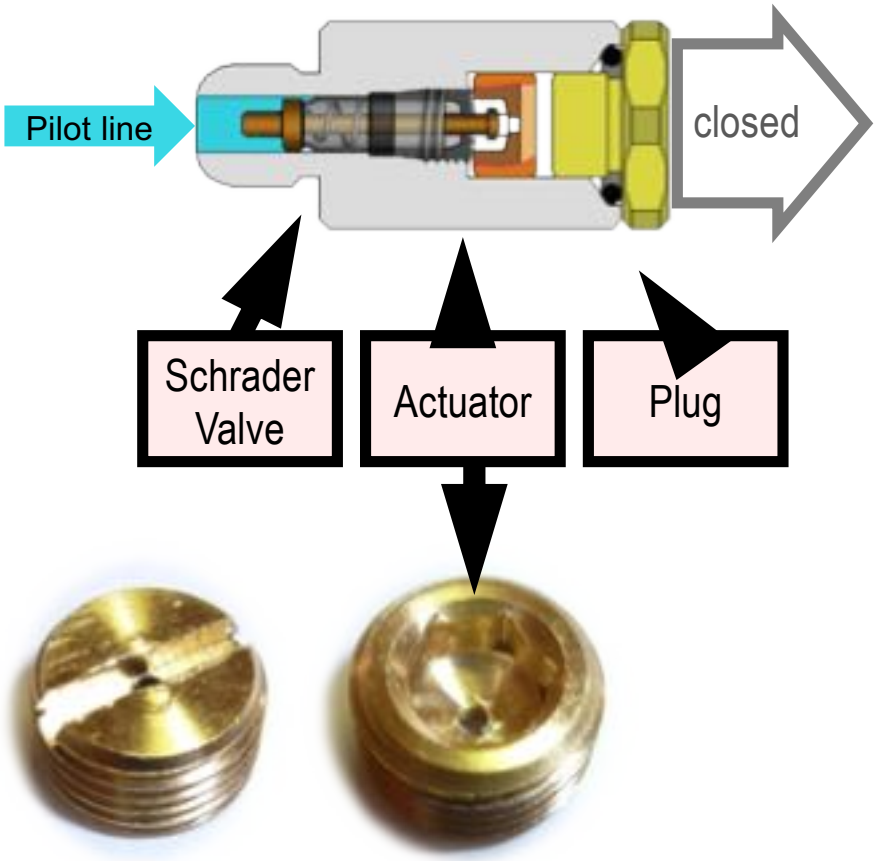


## Decompression Screw

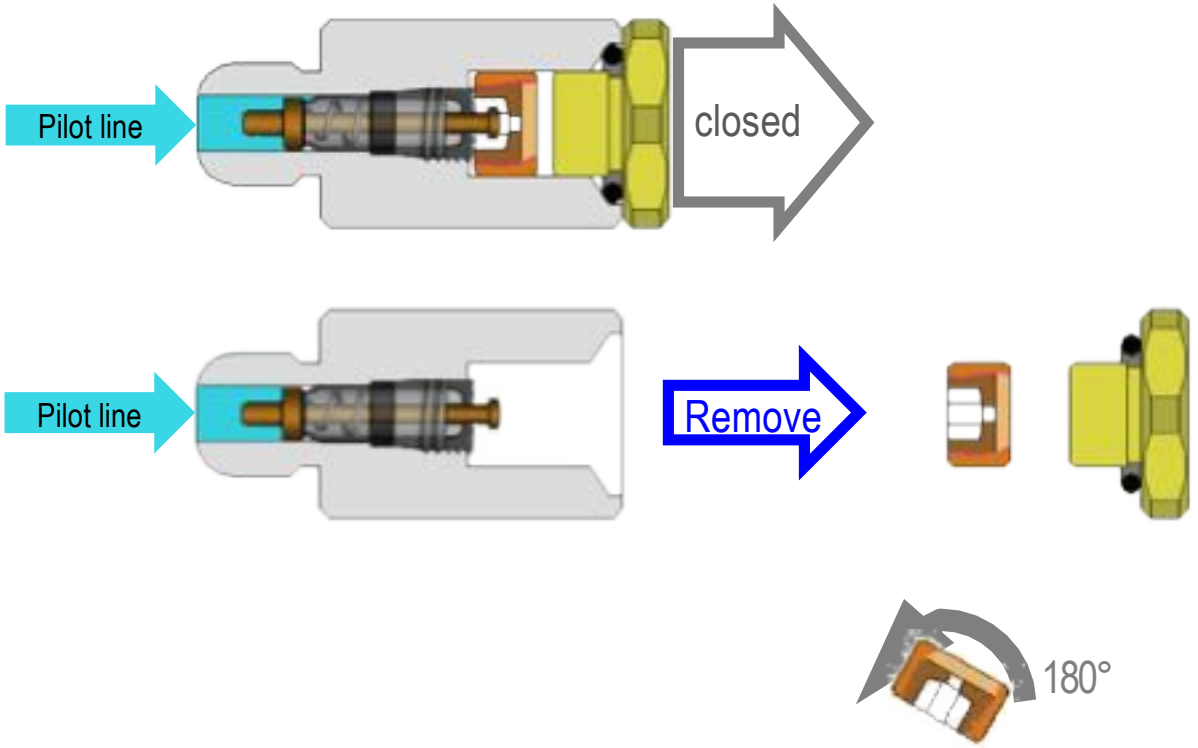
- to release remaining pressure from the pilot line after a discharge
- with internal *Schrader* valve



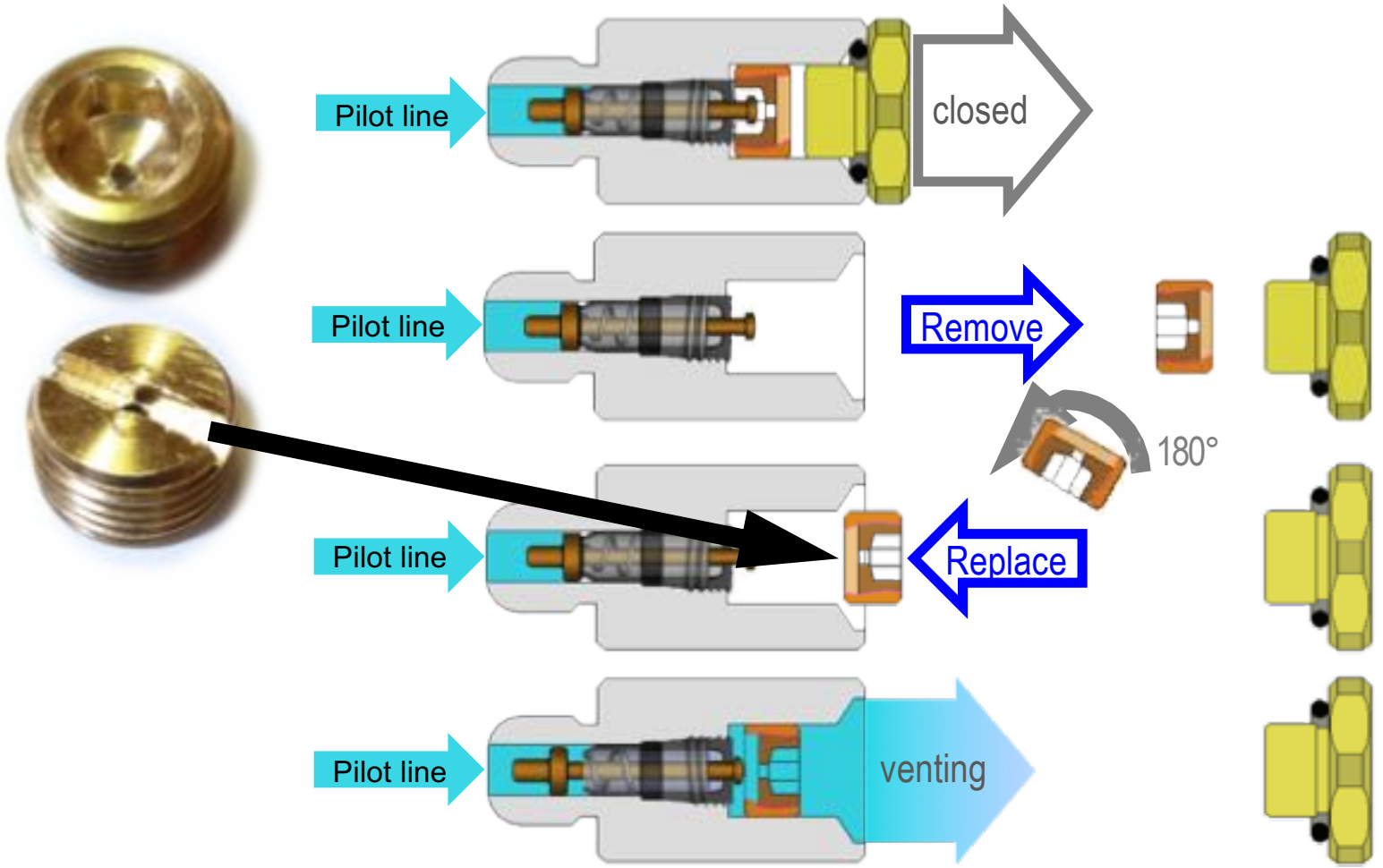
## Decompression Screw Function



## Decompression Screw Function



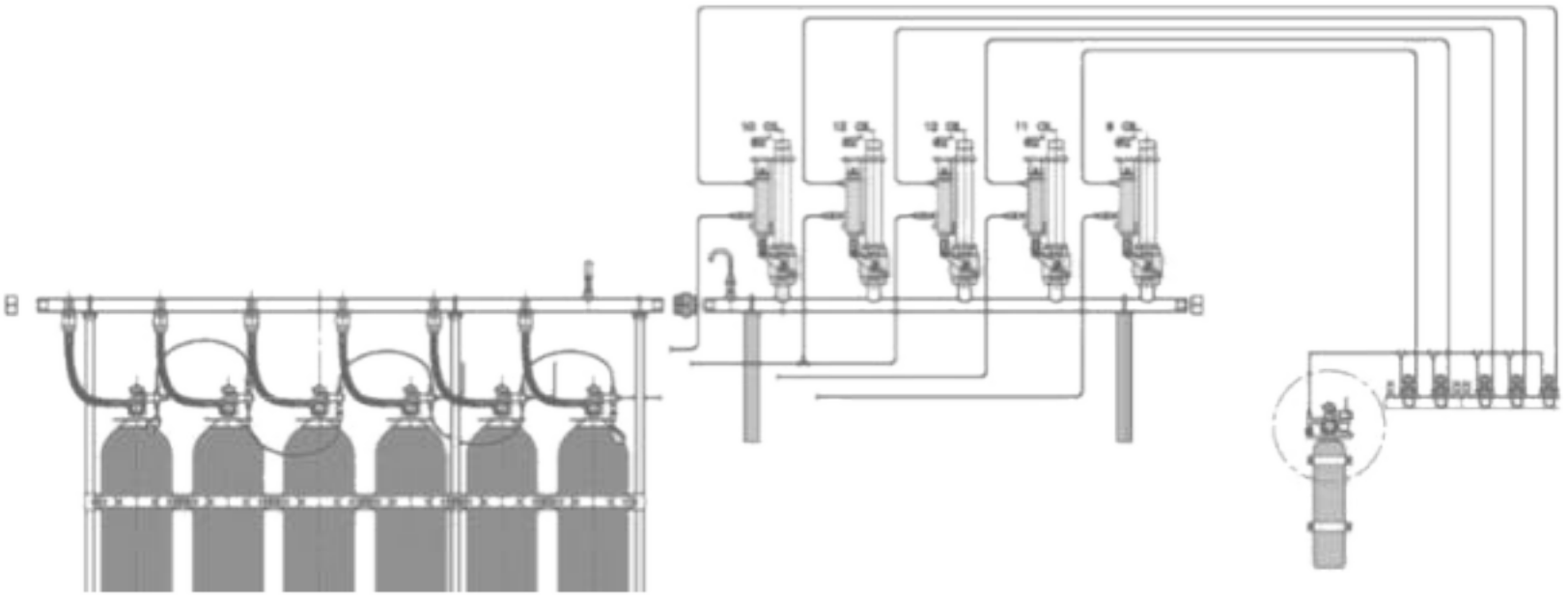
## Decompression Screw Function



## Decompression Screw and Vent Valve Installation (examples)

Australian Fire Technologies

# Introduction



# SELECTOR VALVE SYSTEMS

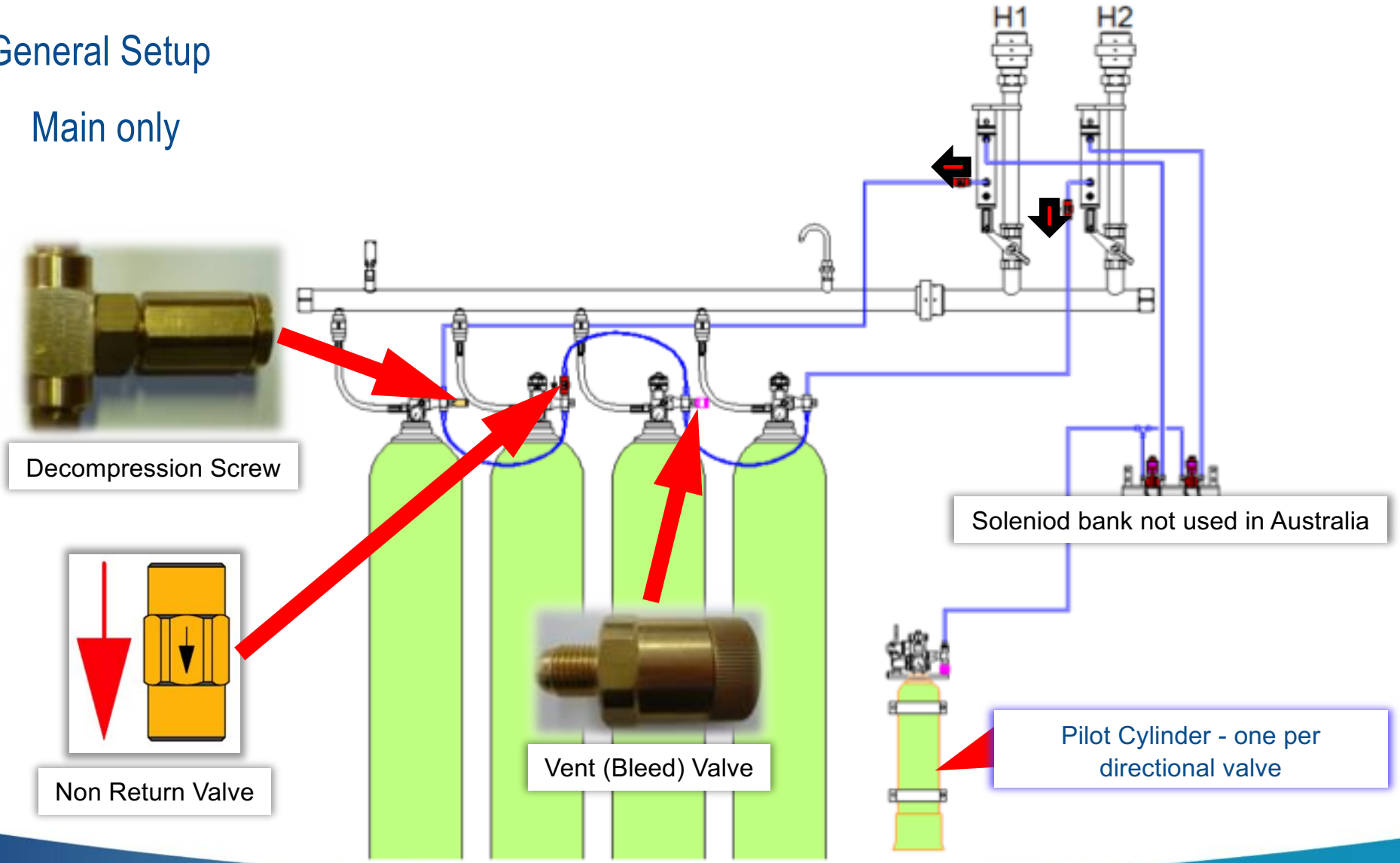
# Selector Valve

Australian Fire Technologies

# Introduction

## General Setup

- Main only



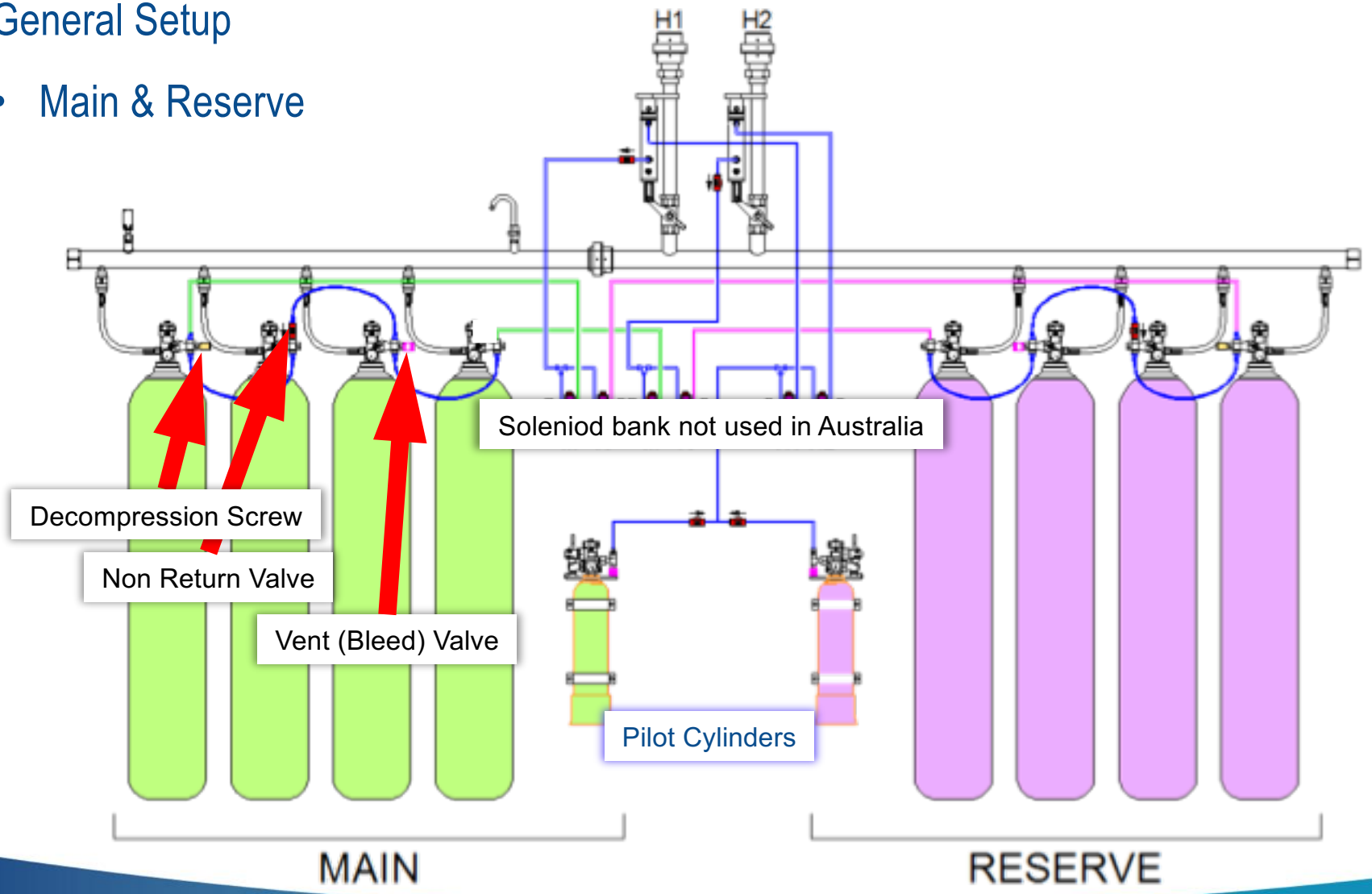
# Selector Valve

Australian Fire Technologies



## General Setup

- Main & Reserve



# Selector Valve

Australian Fire Technologies

Introduction

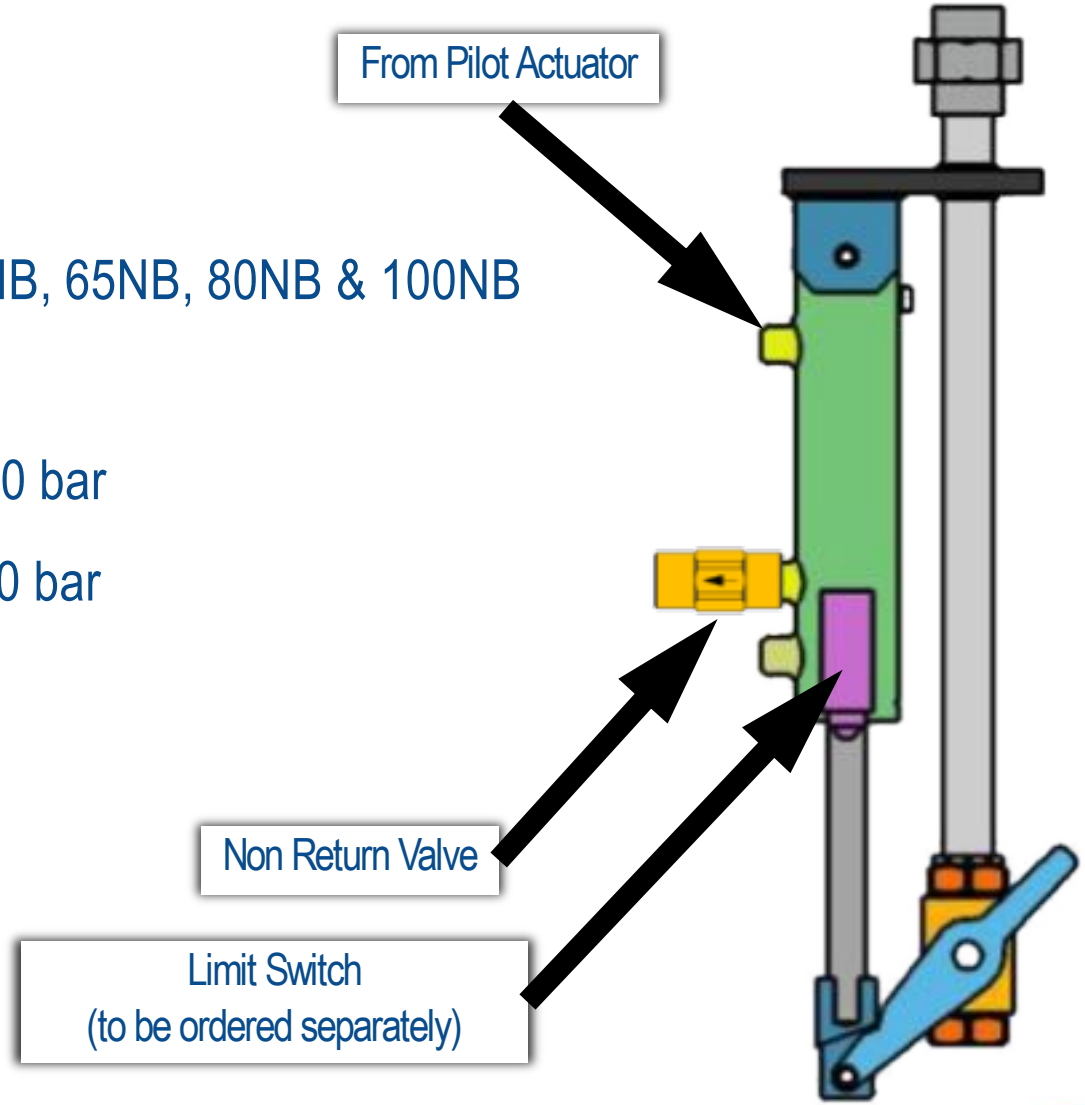
Selector Valve Assembly

Available sizes (300 bar):

- 20NB, 25NB, 32NB, 40NB, 50NB, 65NB, 80NB & 100NB

Pneumatic cylinder

- Maximum working pressure: 140 bar
- minimum operating pressure: 60 bar
- limit switch optional

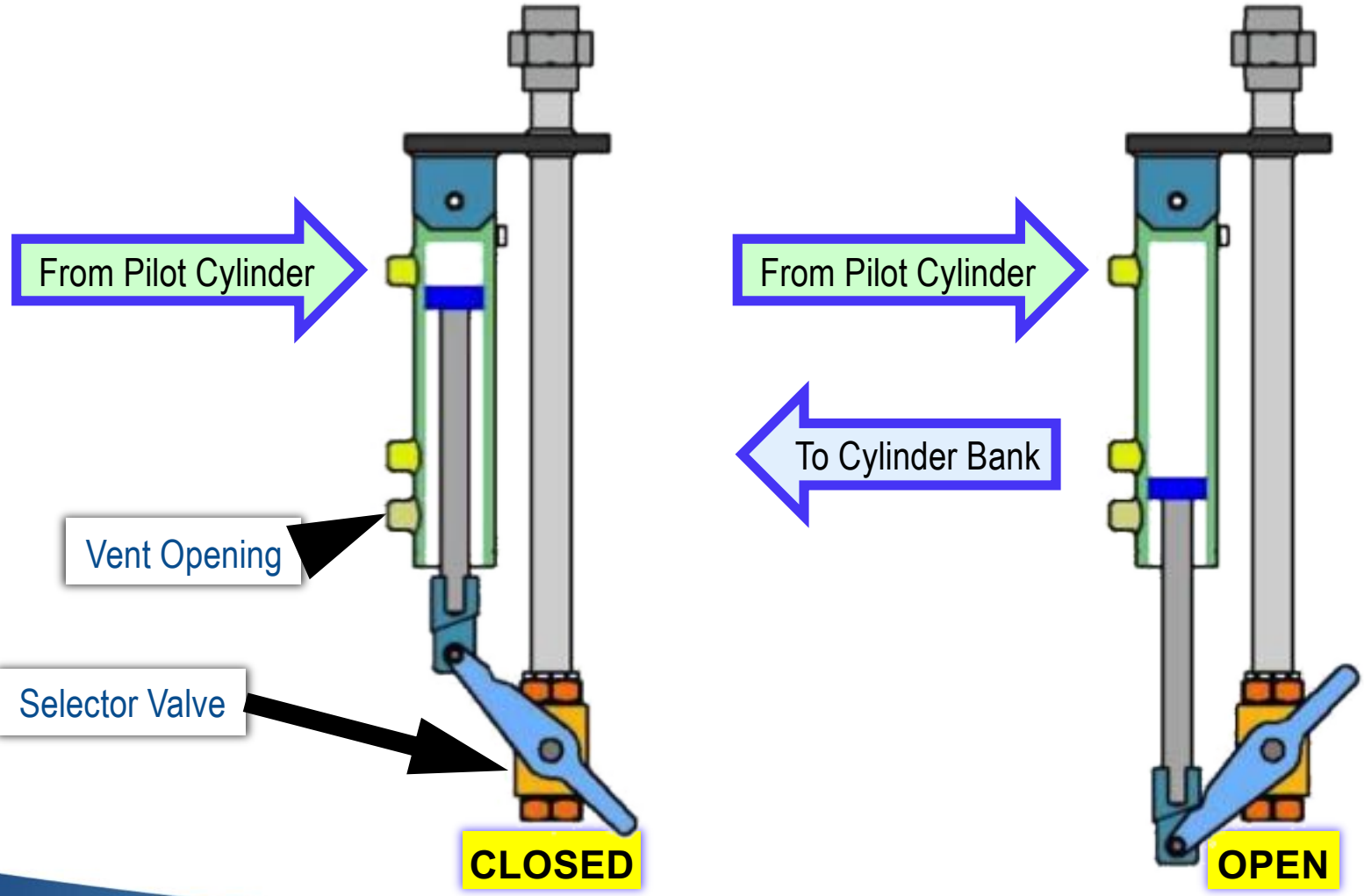


# Selector Valve

Australian Fire Technologies

Introduction

## Selector Valve Assembly



# Selector Valve

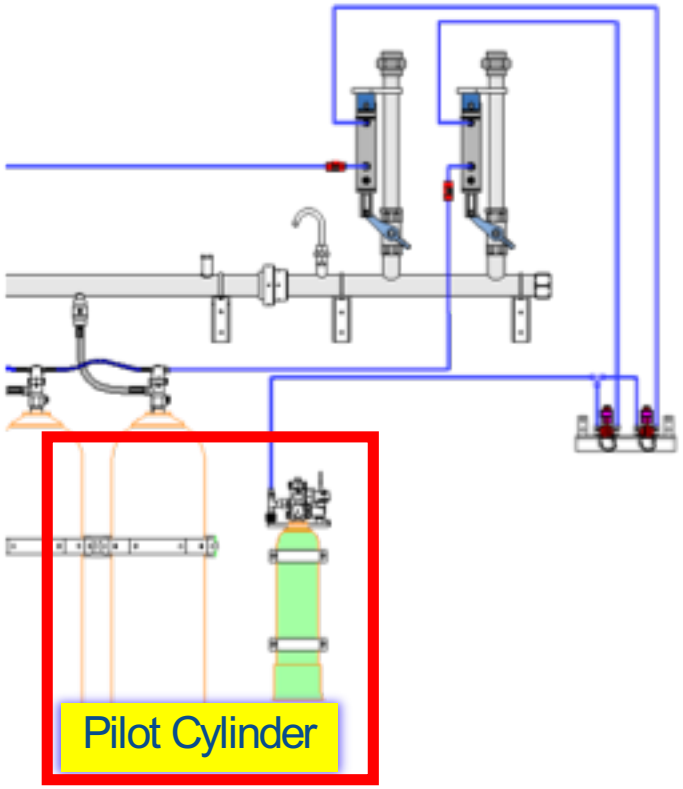
Australian Fire Technologies

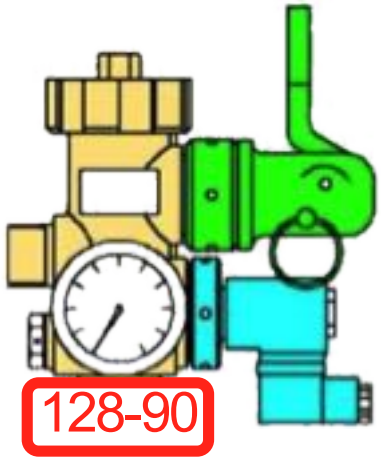
# Introduction

## Limit Switch

- Indicates valve open/closed
- to be ordered separately

## Pilot Cylinder Actuation




Manual

Solenoid 24 VDC

Australian Fire Technologies

# Introduction

## *iFlow®* MATRIX CONCEPT

## Main Characteristics

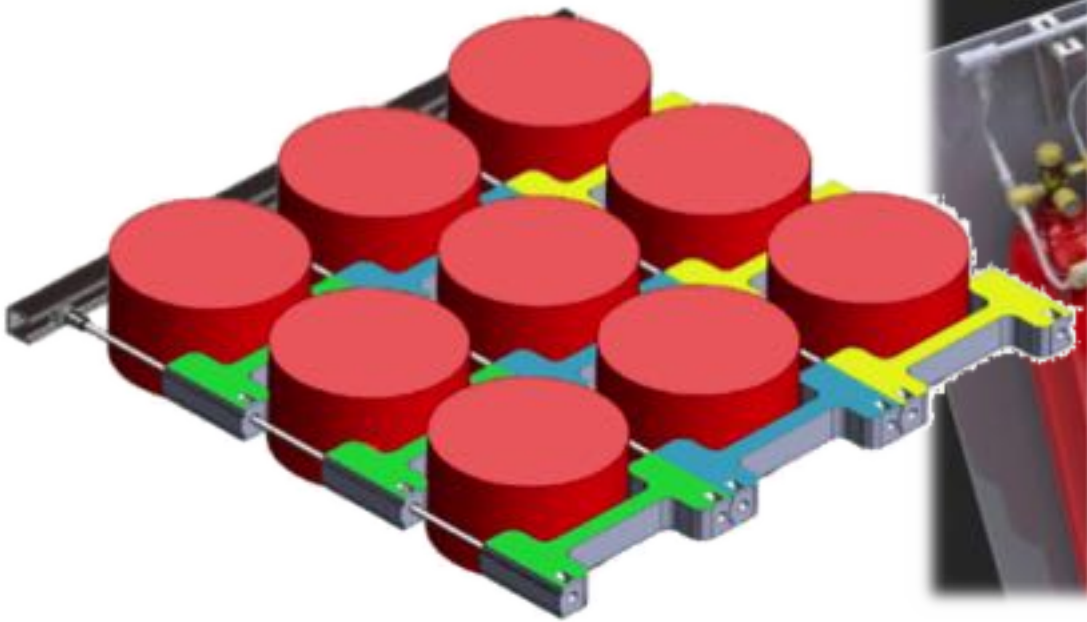
- ***iFlow***® constant flow valve
- ***iFlow***® horizontal check valve
- ***Matrix*** bracket concept for 80 litre. cylinders
- 80 litre cylinder 300 bar 1 / 2 / 3 / 4 rows
- 140 litre cylinder 300 bar 1 or 2 rows
- Directional valve systems available

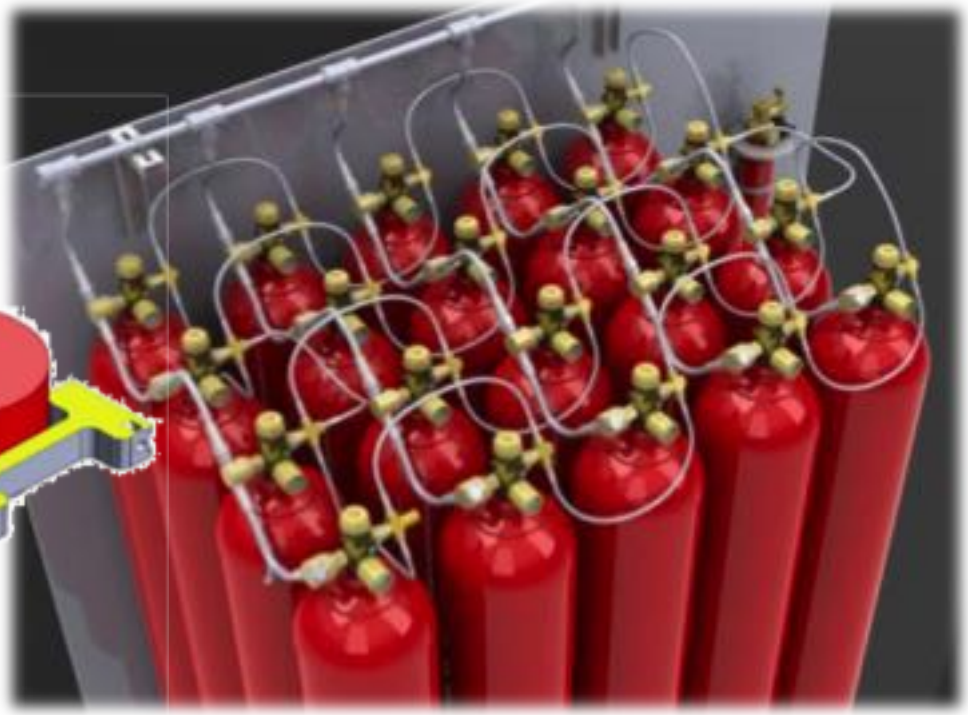
# *Matrix* System

Australian Fire Technologies

# Introduction

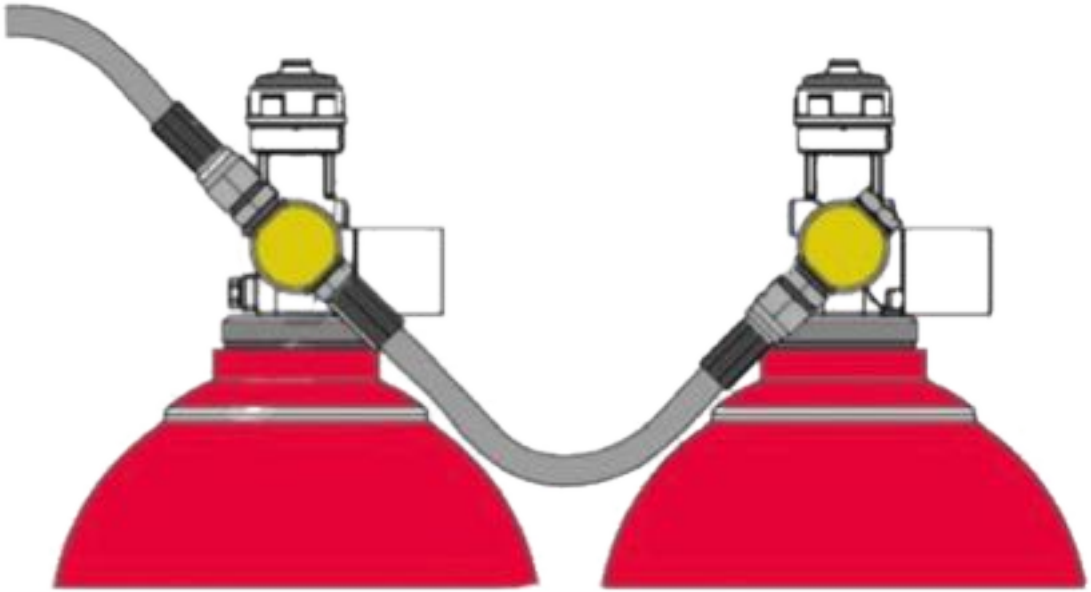
- Horizontal check valve
- Matrix Brackets for 80 litre cylinders





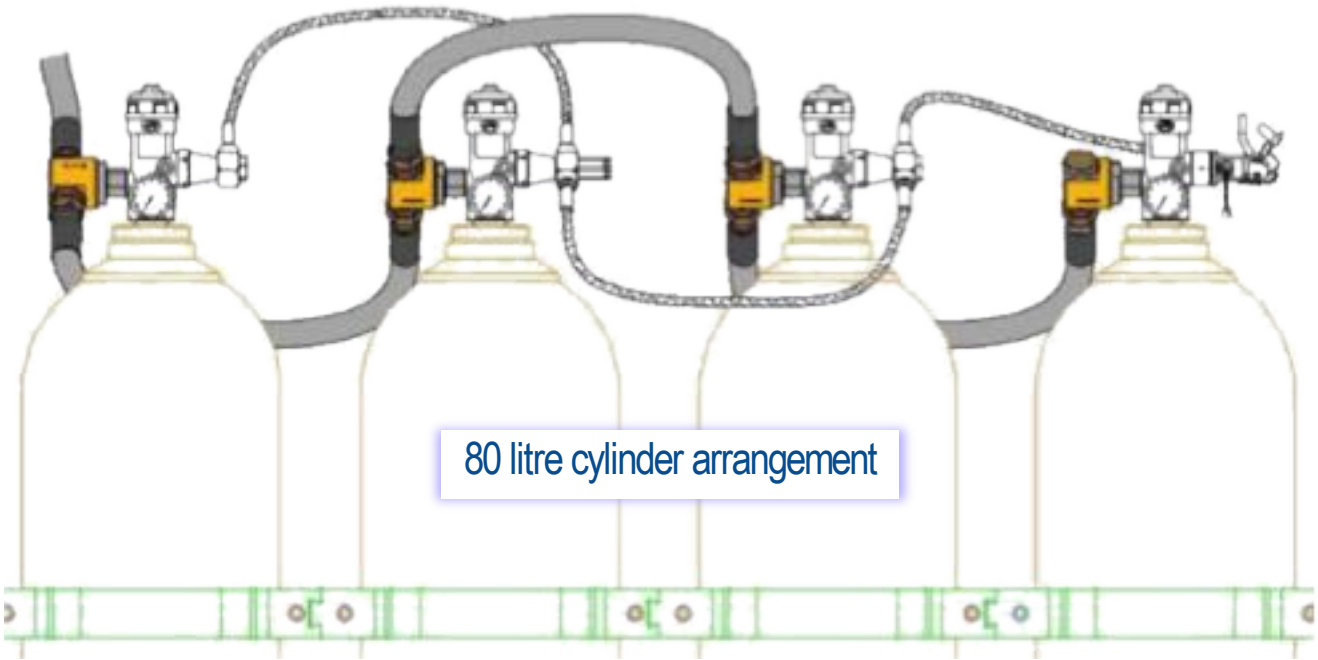
## Horizontal check valve

- allows connection of cylinders without a manifold



## Horizontal check valve

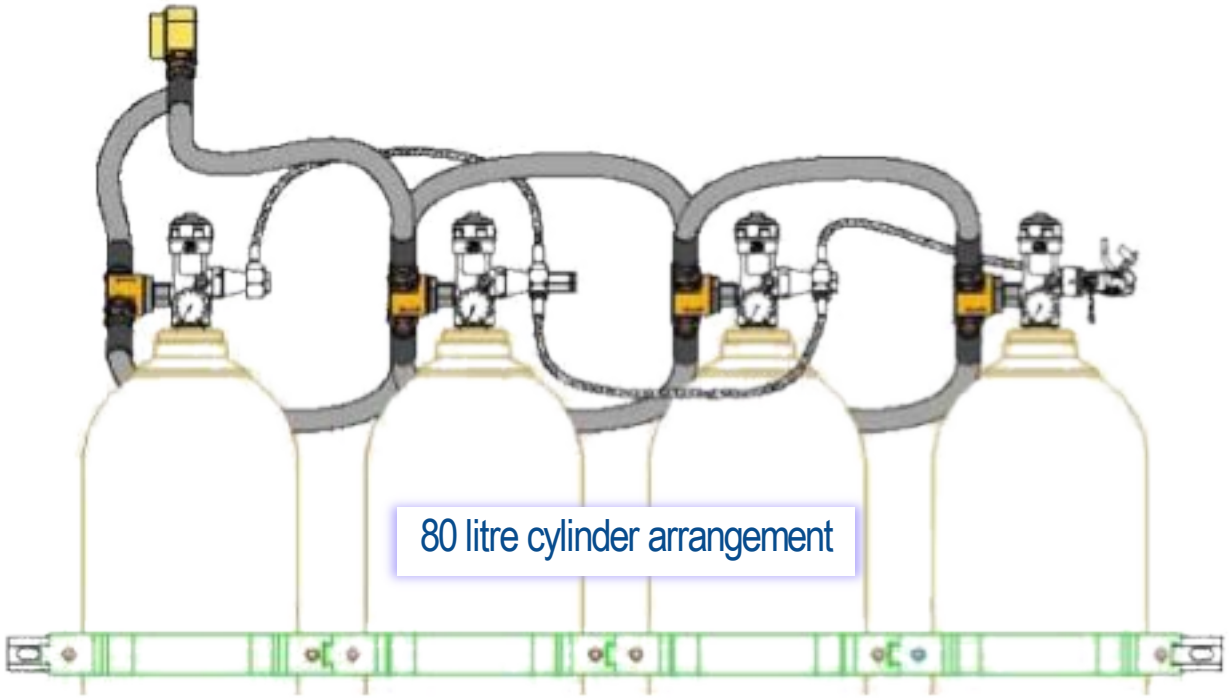
- **Single row** = 2 x 140 litre or 4 x 80 litre cylinders without a manifold
- Pilot cylinder actuation



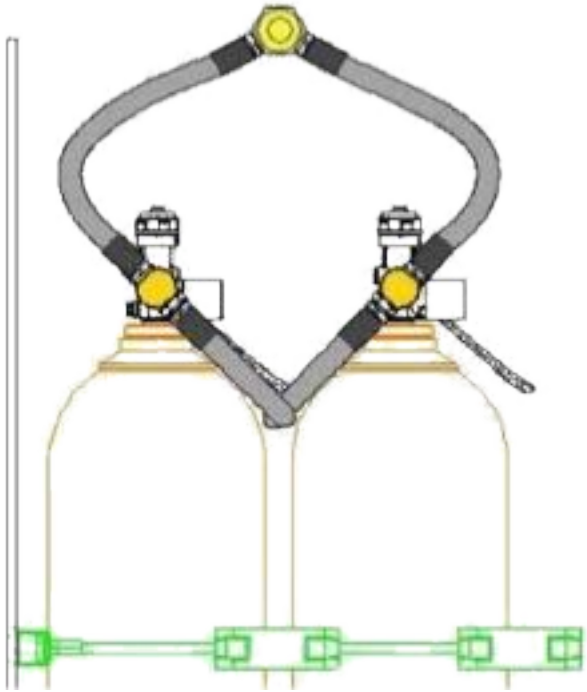
80 litre cylinder arrangement

## Horizontal check valve

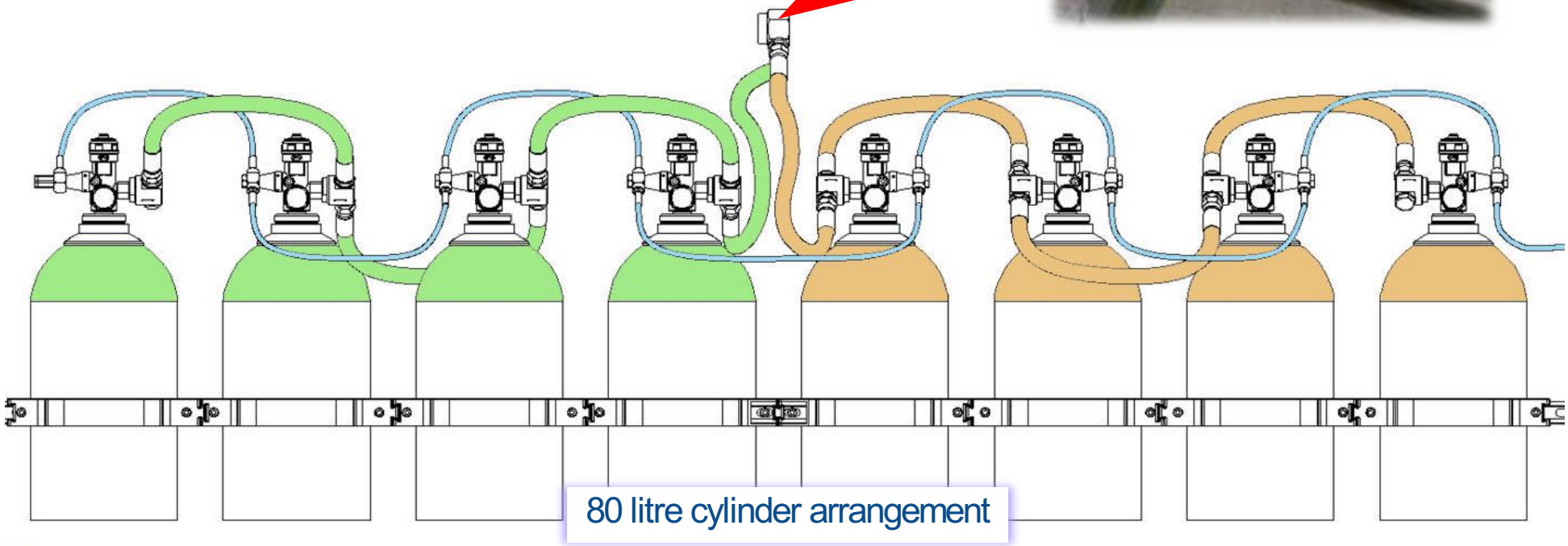
- **Double row** = 4 x140 litre or 8 x 80 litre cylinders without a manifold
- Pilot cylinder actuation



80 litre cylinder arrangement



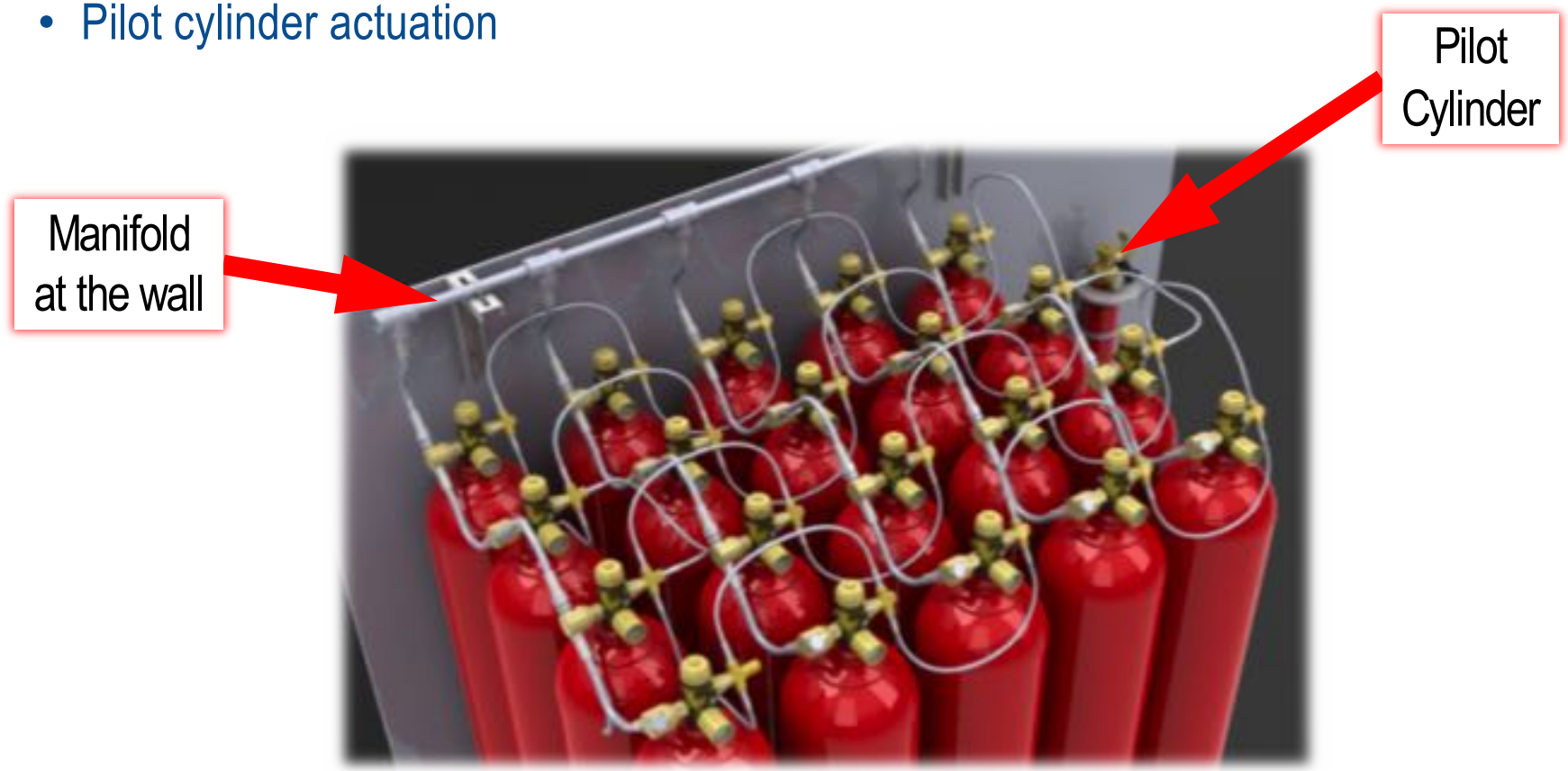
## Single row - 80 litre cylinders 4 x 4



80 litre cylinder arrangement

## Horizontal check valve

- Systems greater than 8 cylinders with a manifold
- Pilot cylinder actuation

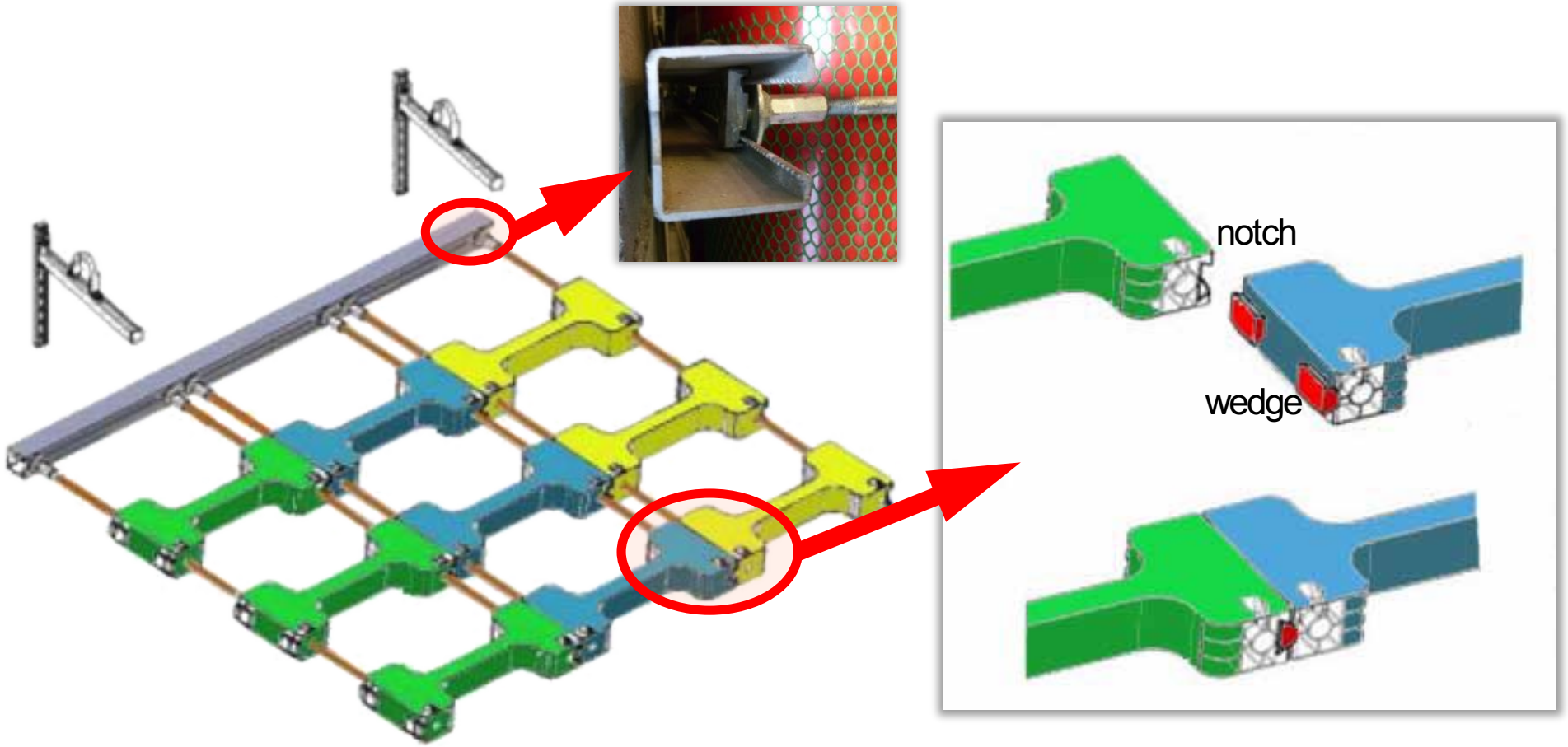


# Cylinder Brackets

Australian Fire Technologies

## Introduction

- polyamide/glass fiber ➔ light and strong

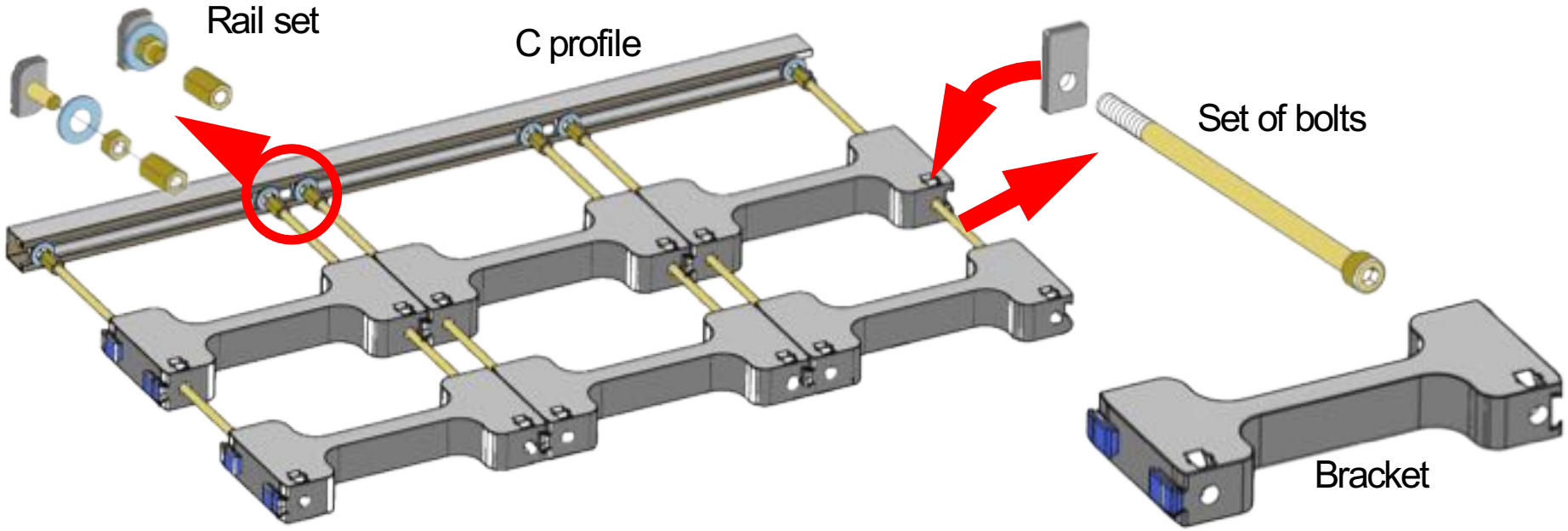


# Cylinder Brackets

Australian Fire Technologies

## Introduction

- polyamide/glass fiber ➔ light and strong

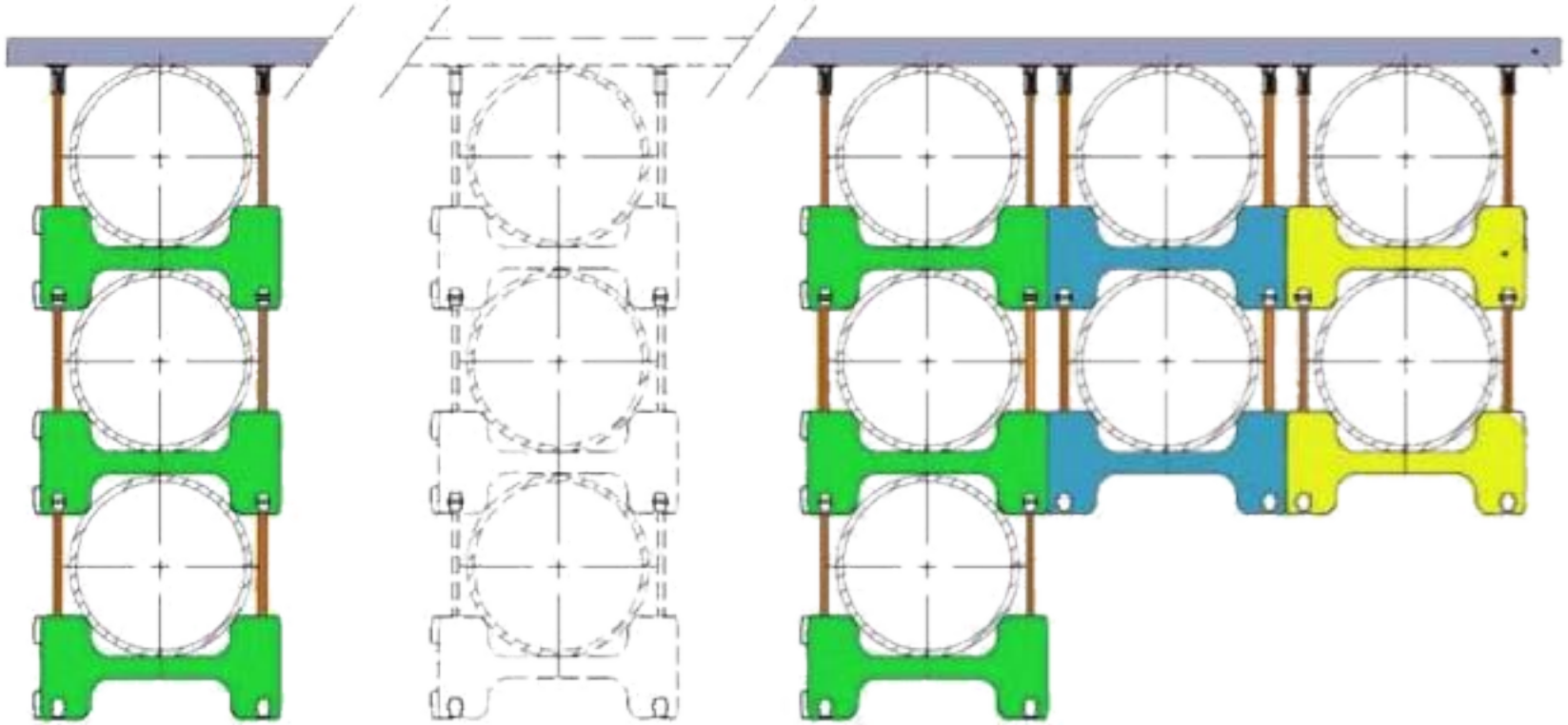


# Cylinder Brackets

Australian Fire Technologies

## Introduction

- flexible cylinder arrangement

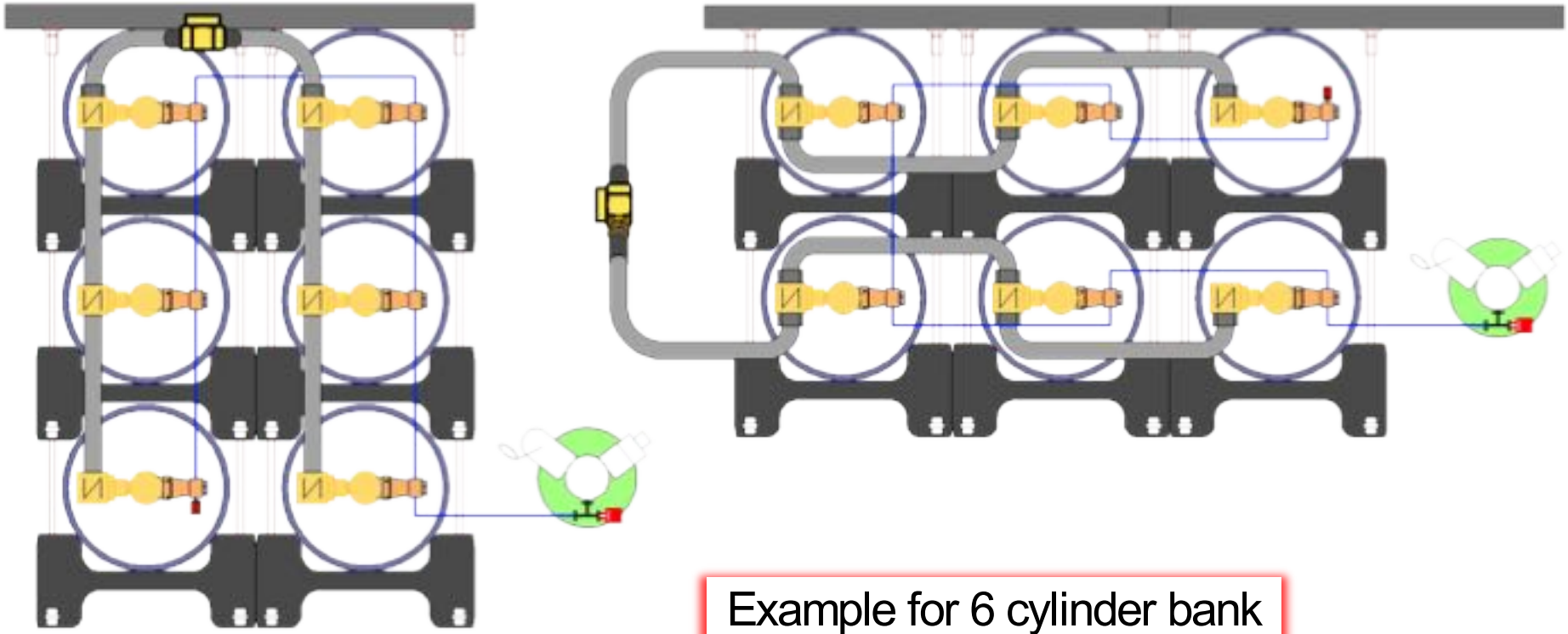


# Cylinder Brackets

Australian Fire Technologies

## Introduction

- flexible cylinder arrangement



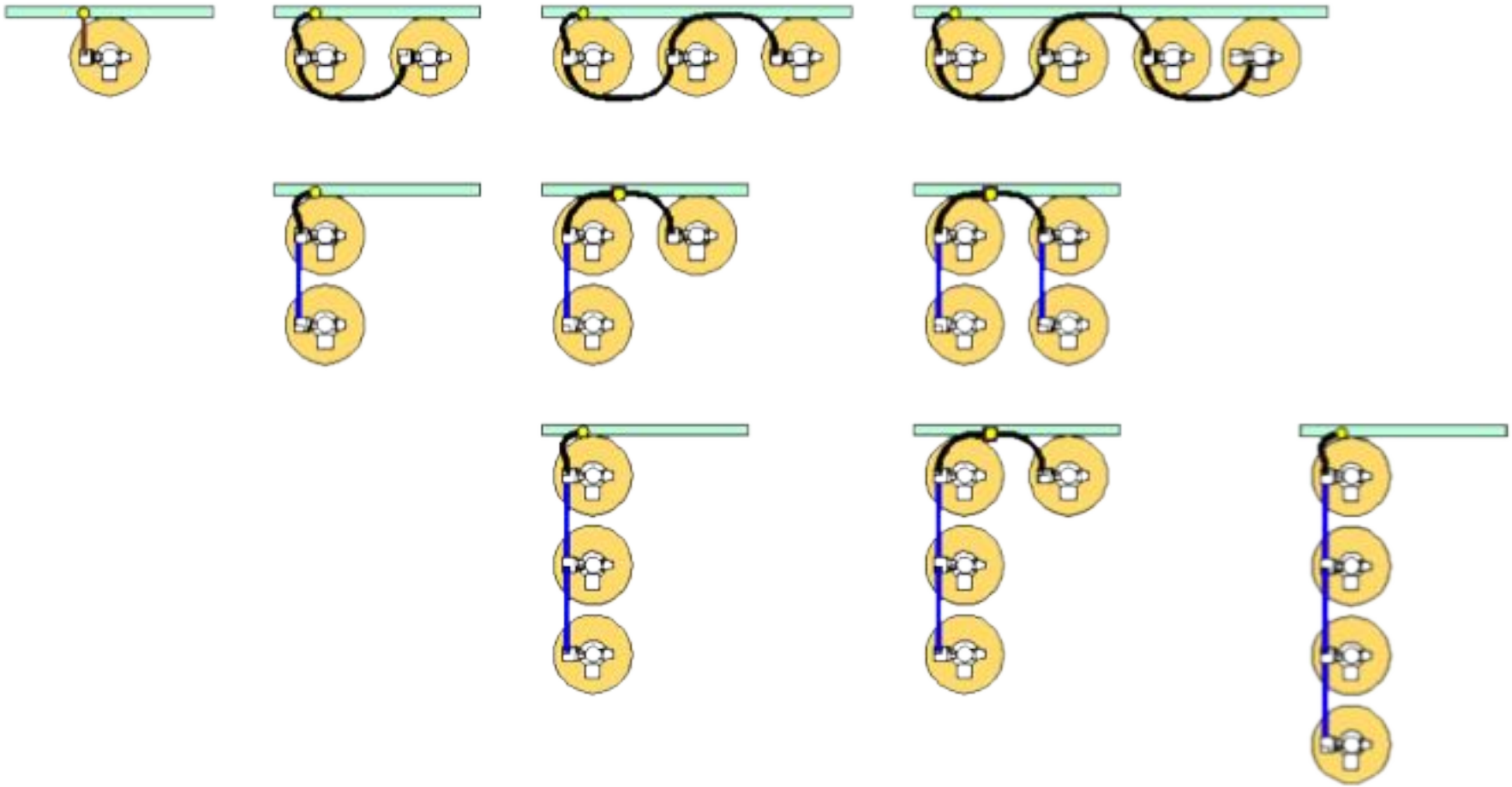
Example for 6 cylinder bank

# Cylinder Brackets

Australian Fire Technologies

Introduction

## Arrangement 1 to 4 cylinder / 1 row to 4 row

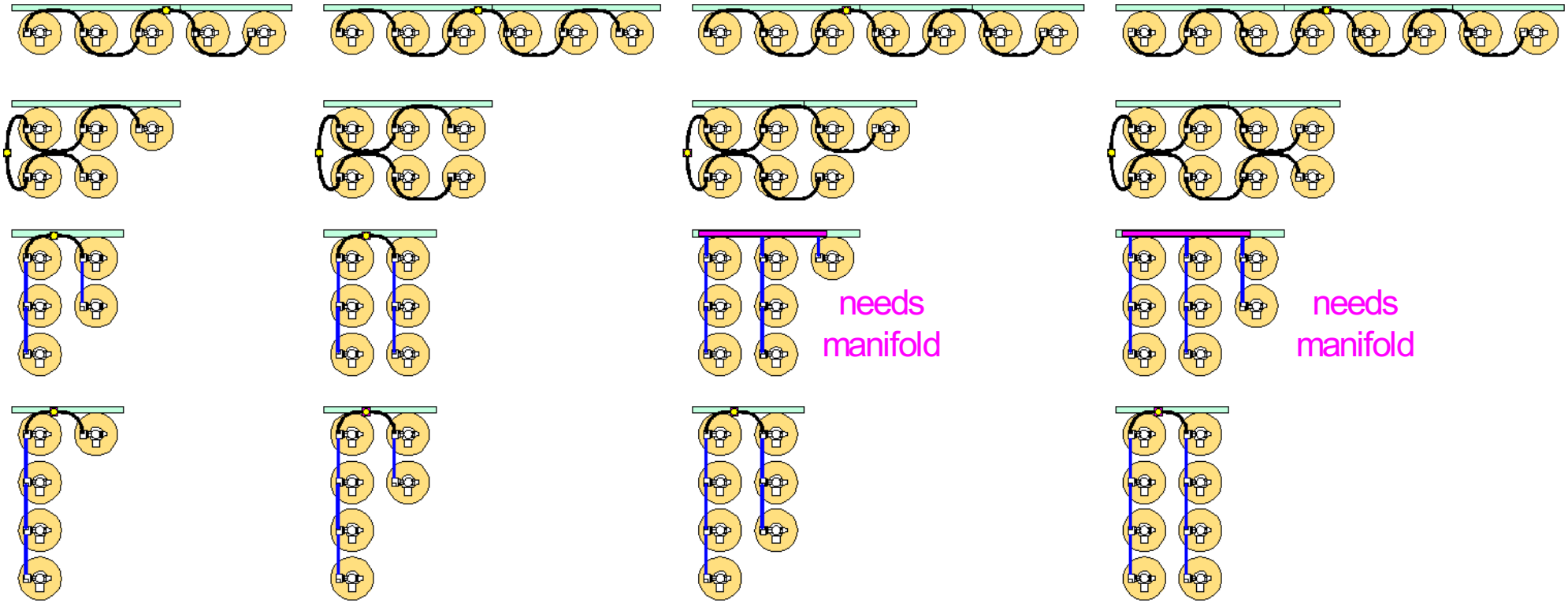


# Cylinder Brackets

Australian Fire Technologies

# Introduction

## Arrangement 5 to 8 cylinder / 1 row to 4 row

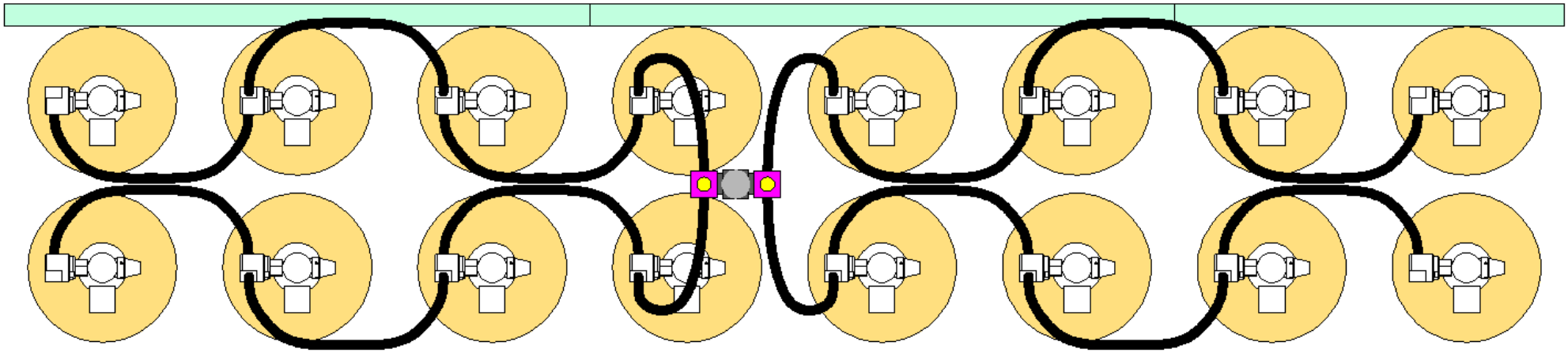


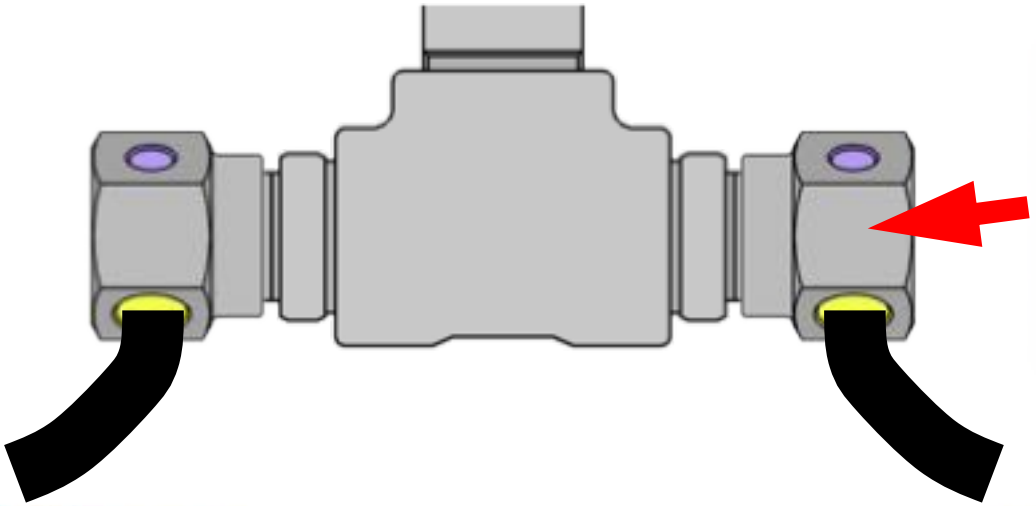
# Cylinder Brackets

Australian Fire Technologies

# Introduction

## Arrangement 9 to 16 cylinder / 2 row





Hose Tee
3/4" - 1 1/4" - 3/4"

# Cylinder Brackets

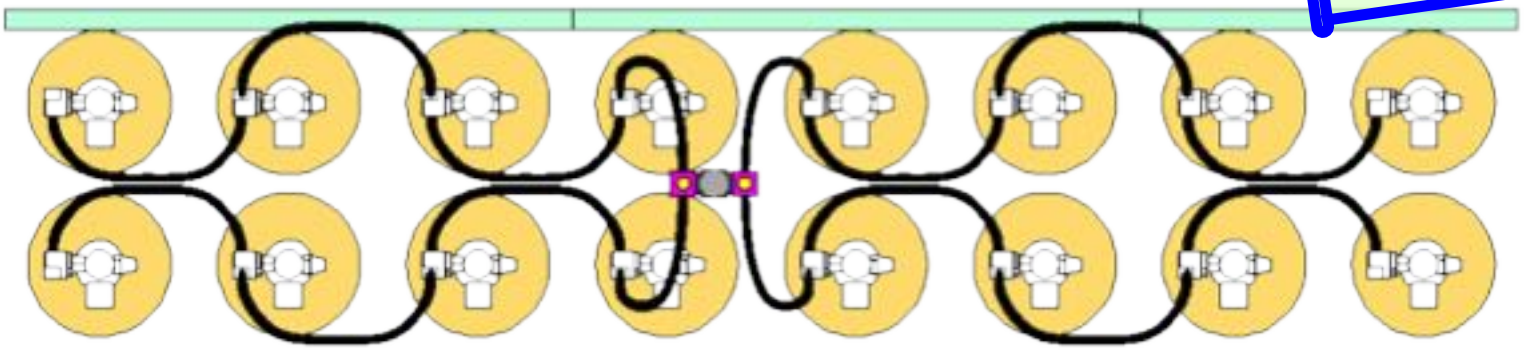
Australian Fire Technologies

## Introduction

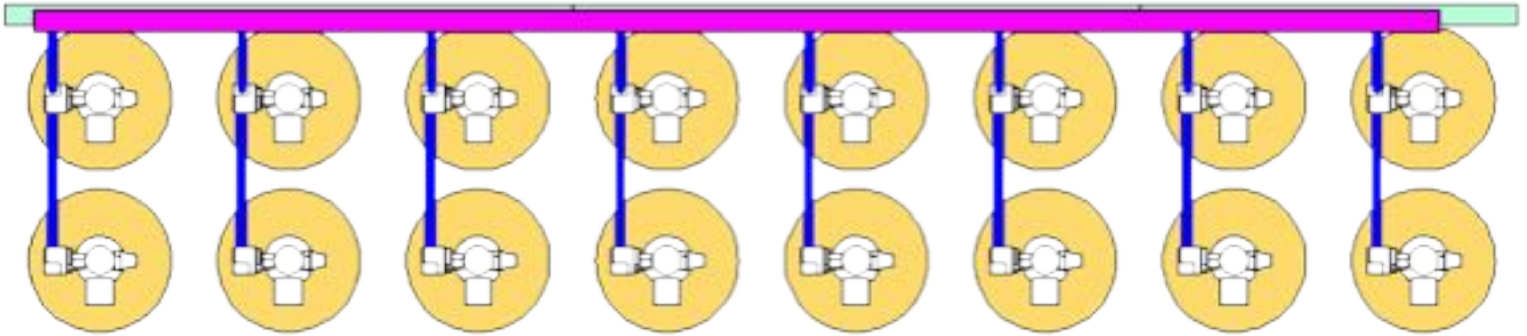
### Arrangement 16 cylinder without / with manifold

16 container 2-row without manifold

cost saving



16 container 2-row with manifold

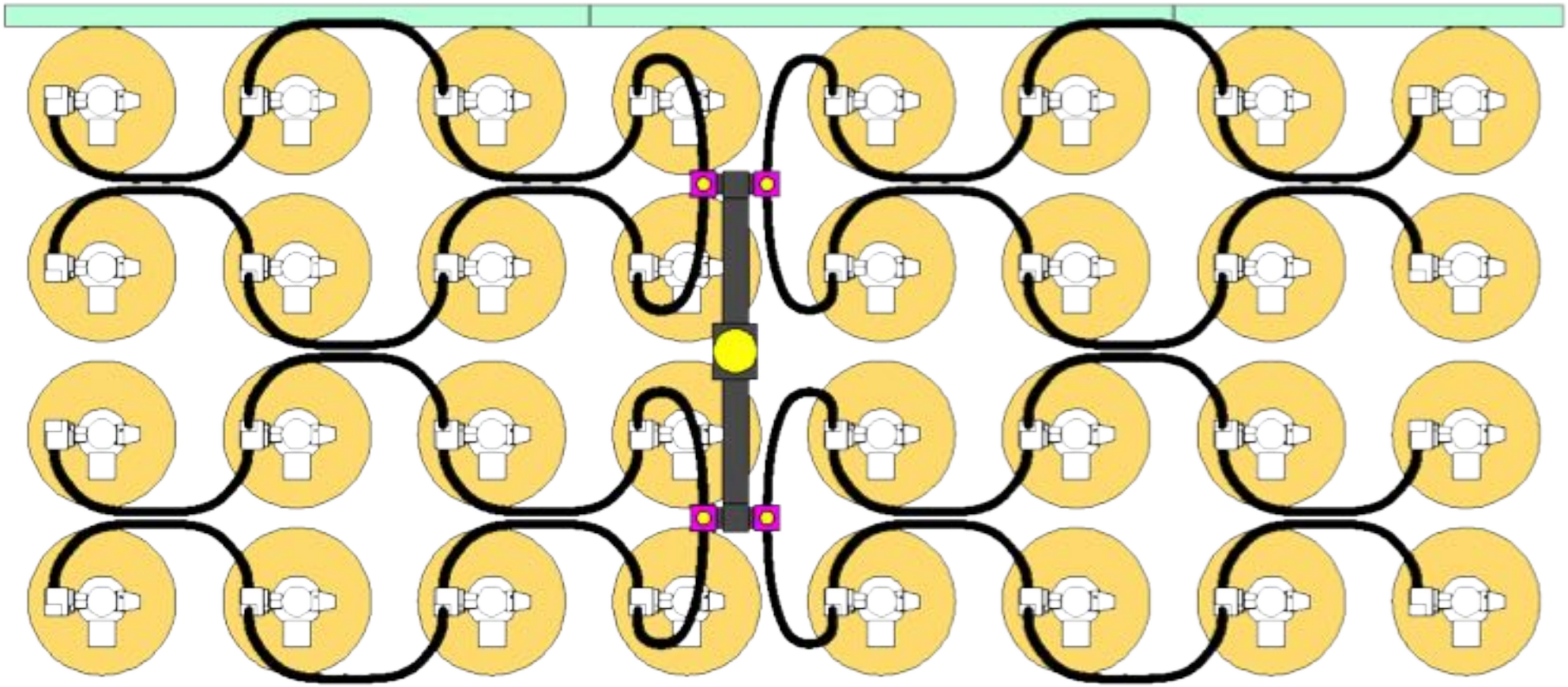


# Cylinder Brackets

Australian Fire Technologies

# Introduction

## Arrangement 17 to 32 cylinder / 4 row

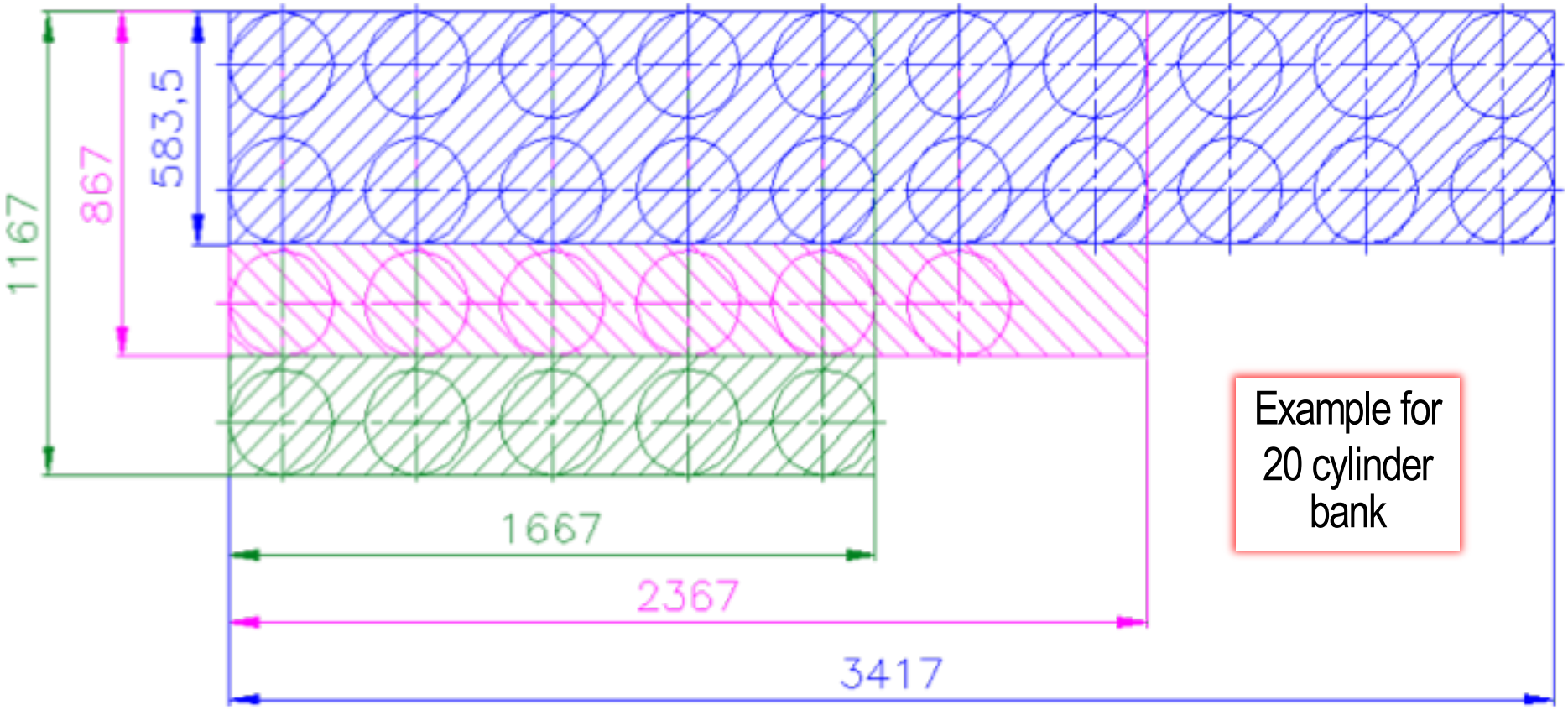


# Cylinder Brackets

Australian Fire Technologies

## Introduction

- flexible cylinder arrangement

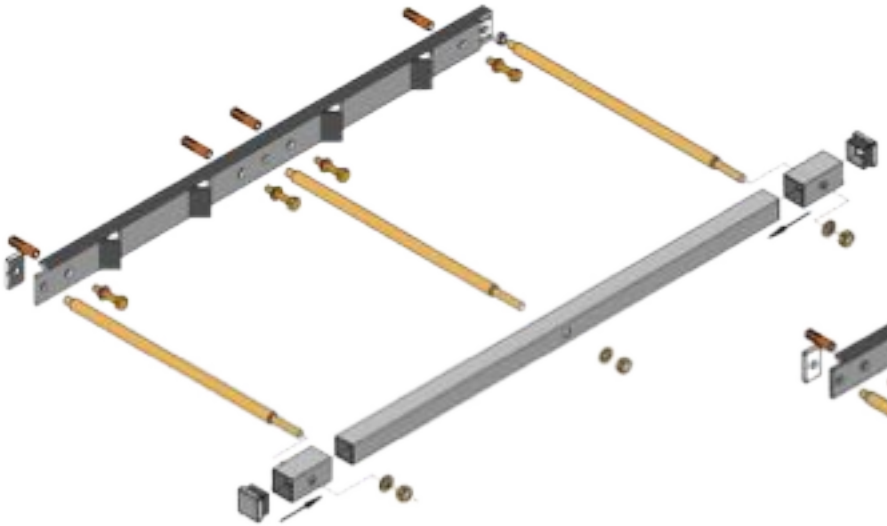


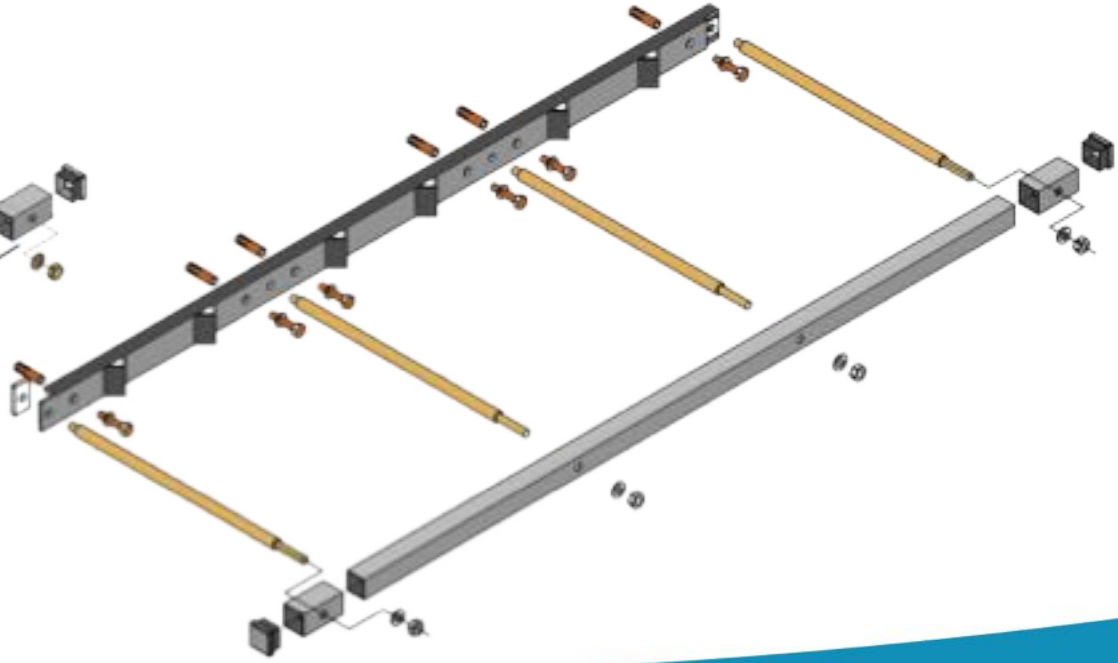
# 140l Cylinder Brackets

Australian Fire Technologies

## Introduction

- steel, black powder coated
- modular (single) cylinder
- single row - 2 or 3 cylinders
- double row - 2 or 3 cylinders
- wall mounting only



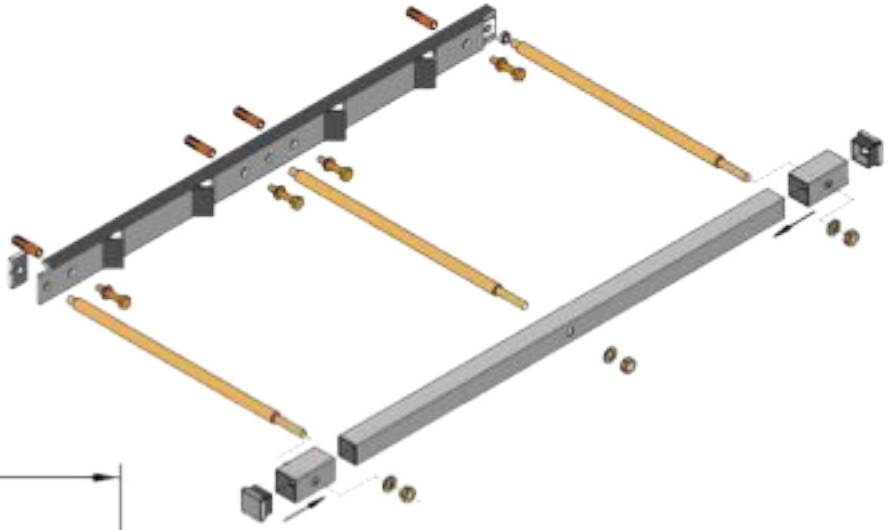


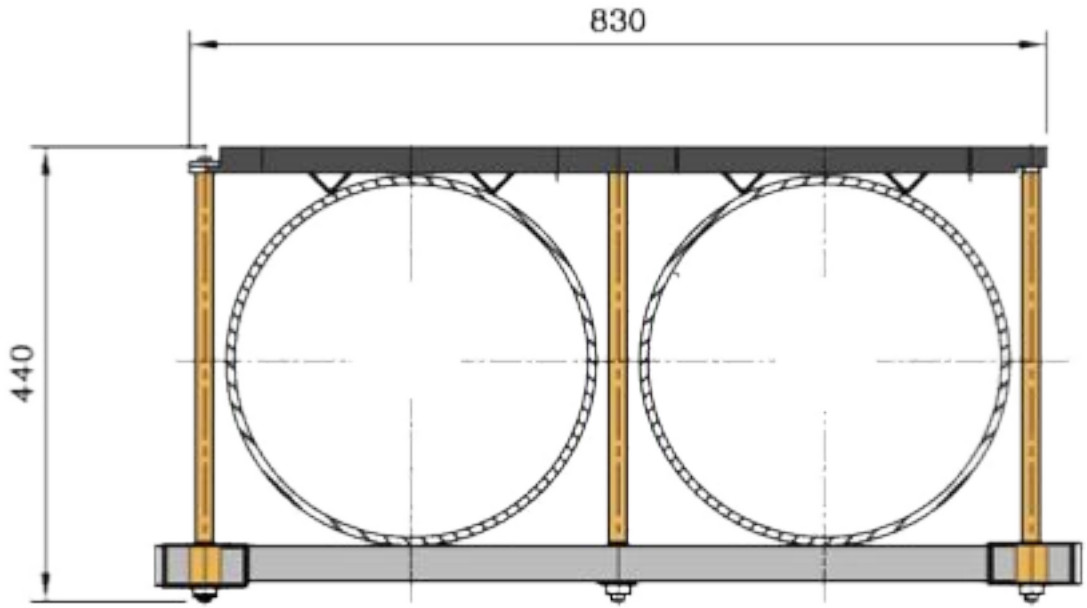
# 140l Cylinder Brackets

Australian Fire Technologies

## Introduction

- single row - 2 cylinder



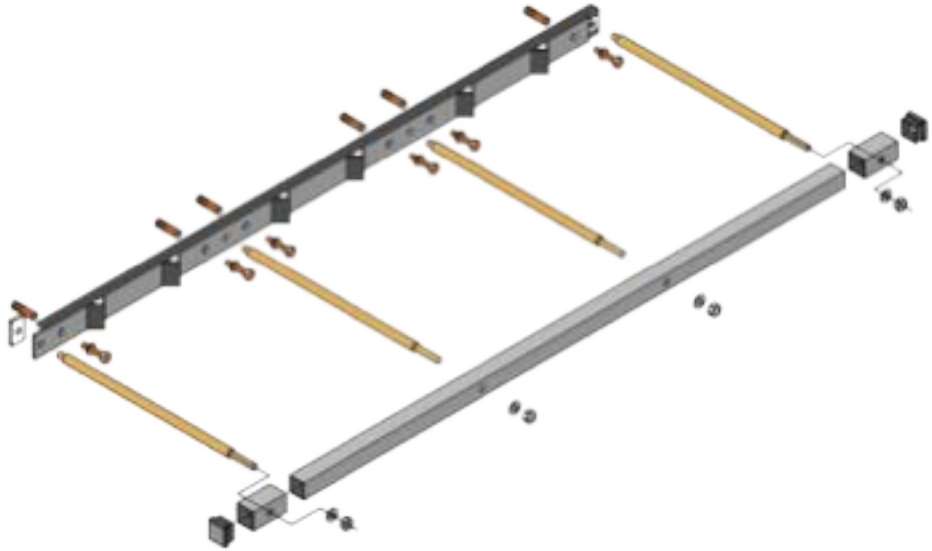


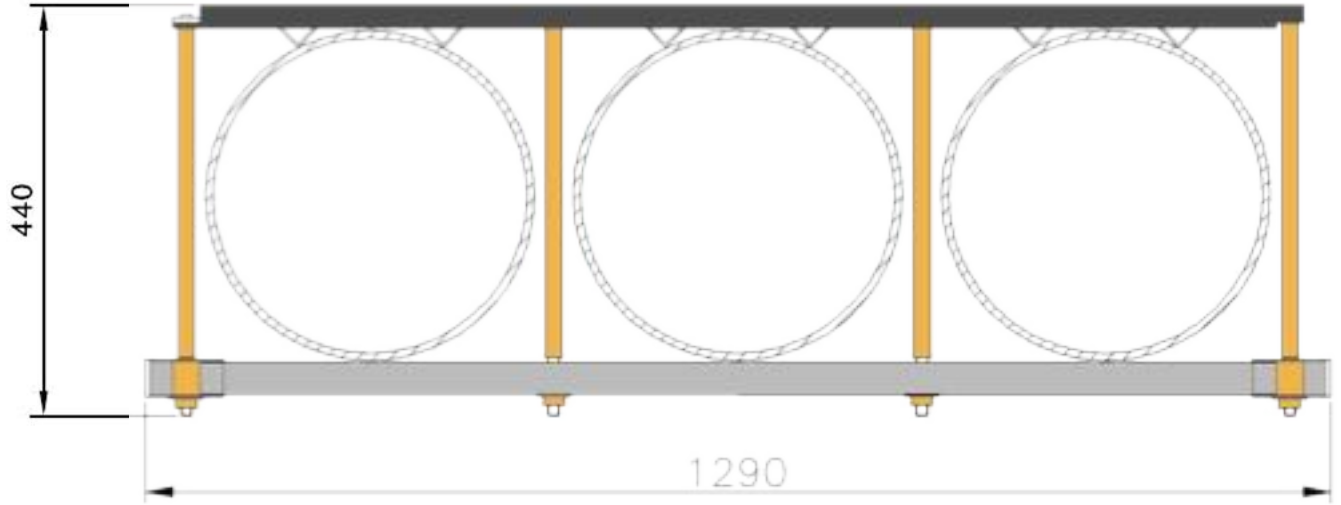
# 140l Cylinder Brackets

Australian Fire Technologies

## Introduction

- single row - 3 cylinder



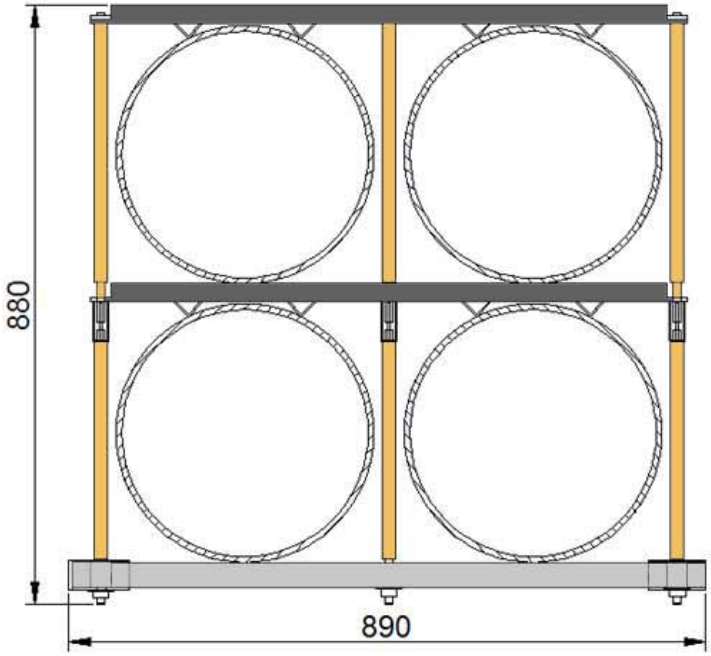


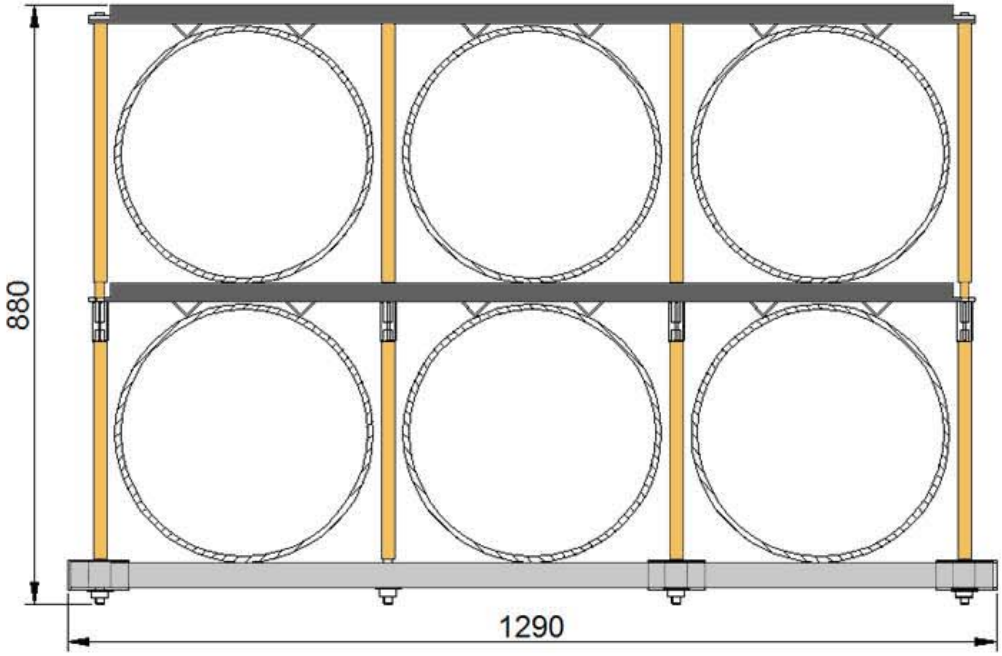
# 140l Cylinder Brackets

Australian Fire Technologies

## Introduction

- double row - 4 / 6 cylinder



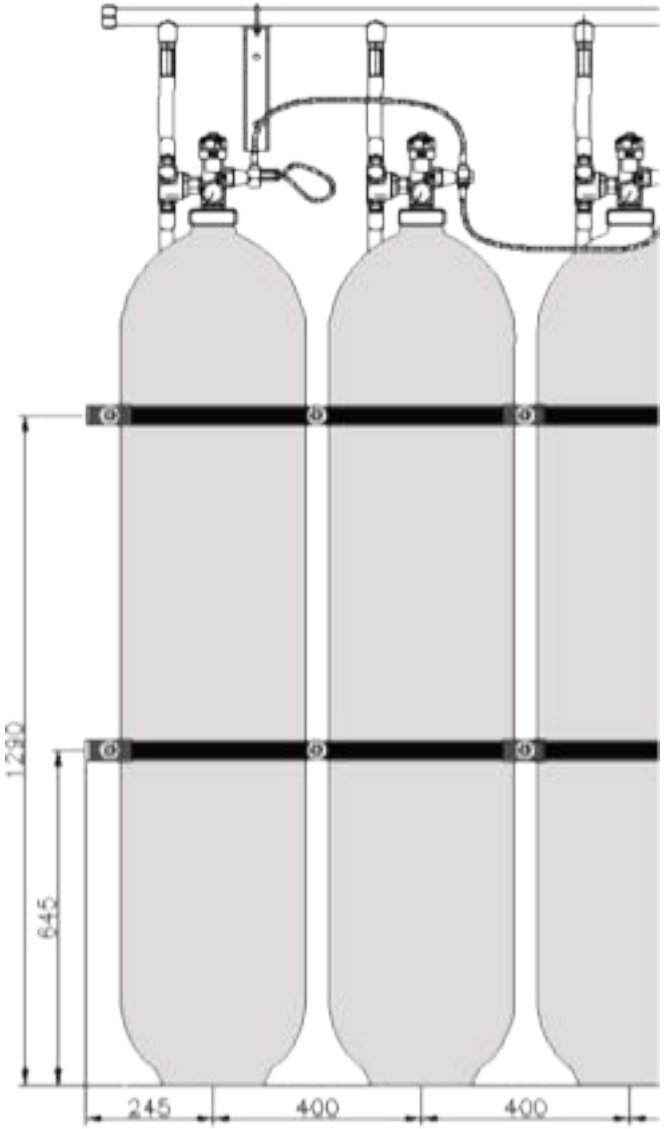



# 140l Cylinder Brackets

Australian Fire Technologies

## Introduction

- cylinder height requires 2 brackets



# Discharge Hose

Australian Fire Technologies

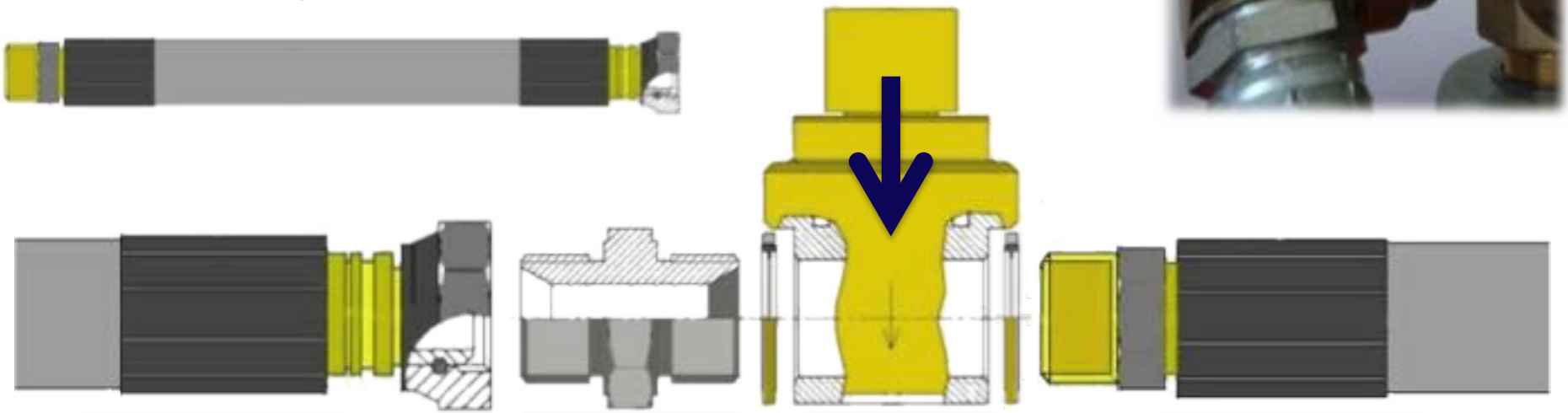
## Introduction

80 litre cylinder

- 3/4" x 350 mm and 3/4" x 590 mm

140 litre cylinder

- 3/4" x 450 mm and 3/4" x 690 m
- working pressure 155 bar

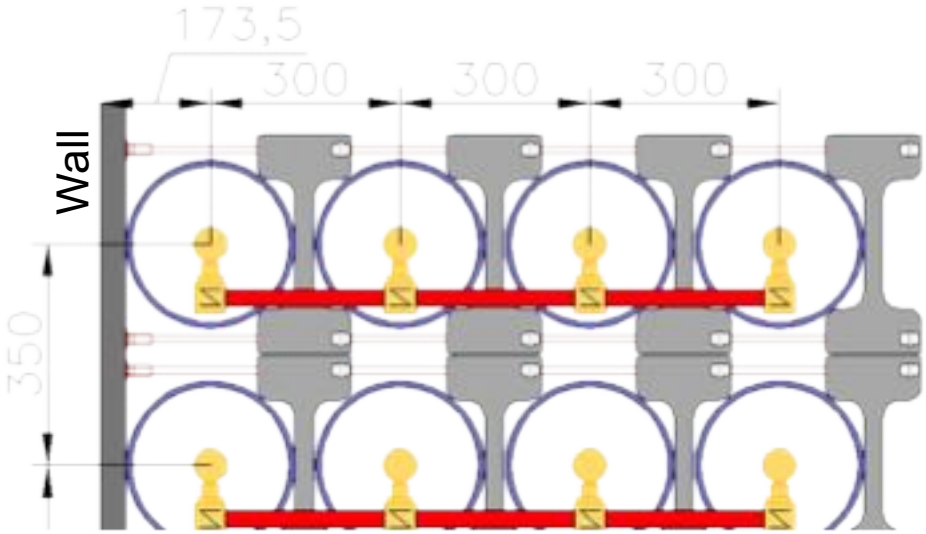


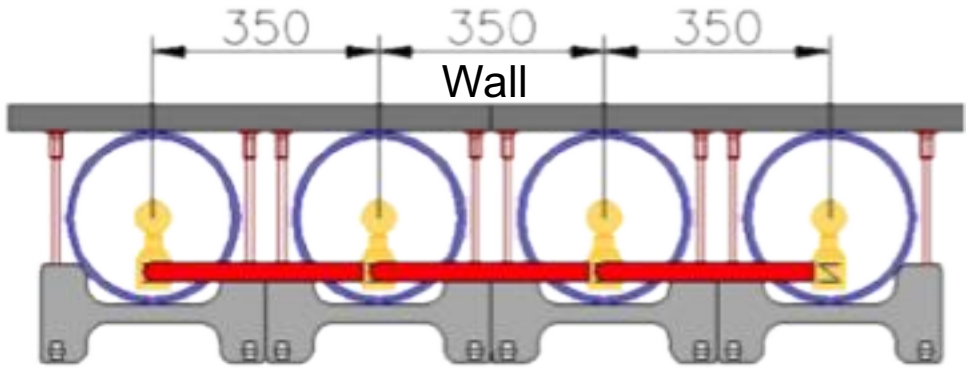
# Discharge Hose

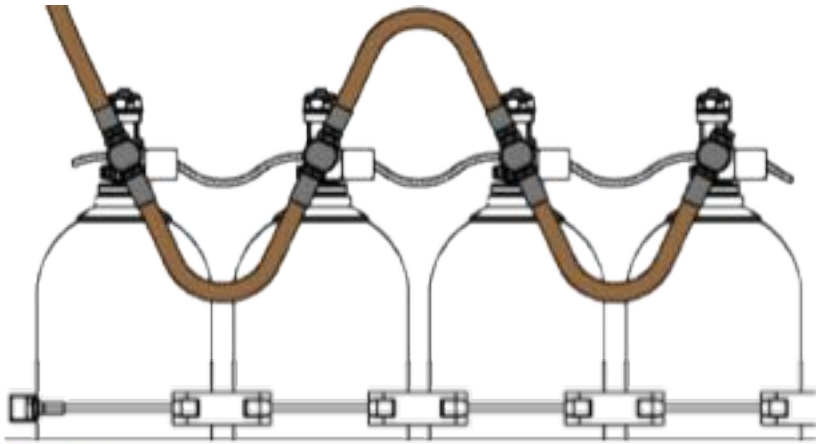
Australian Fire Technologies

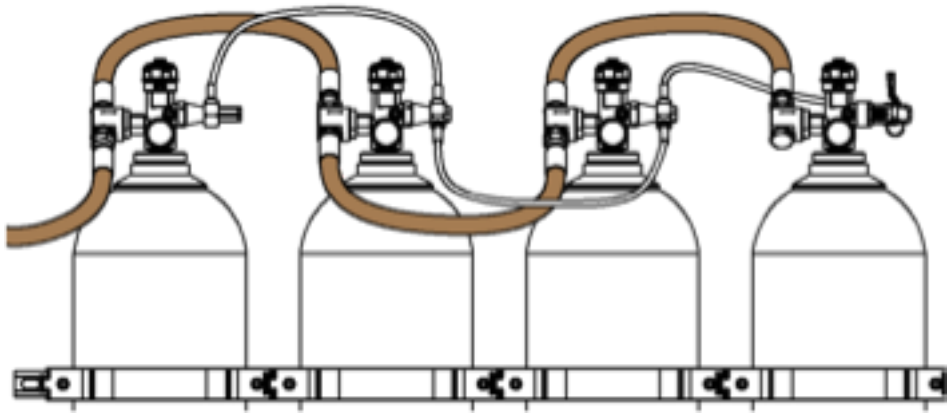
# Introduction

**350 mm length** **vs.** **590 mm length**



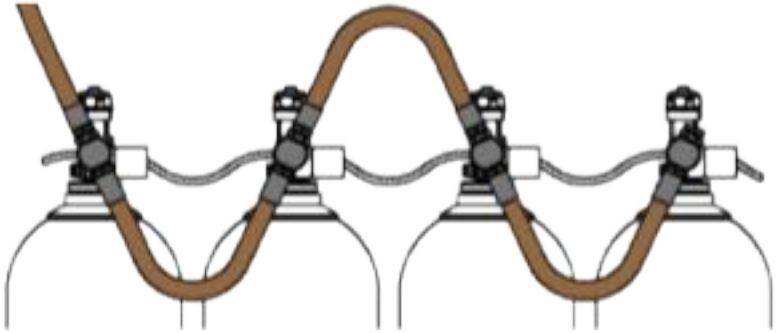


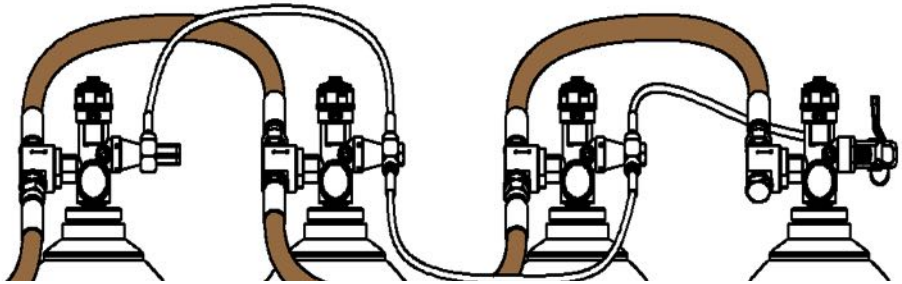
# Discharge Hose

Australian Fire Technologies

# Introduction

**350 mm length** **vs.** **590 mm length**



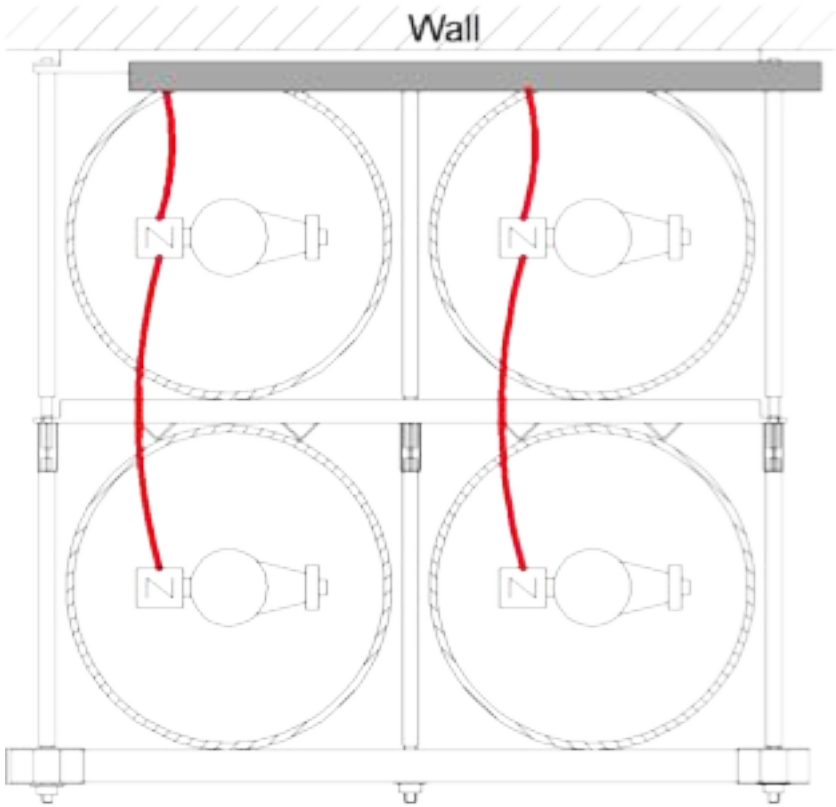


# Discharge Hose
# 40 litre

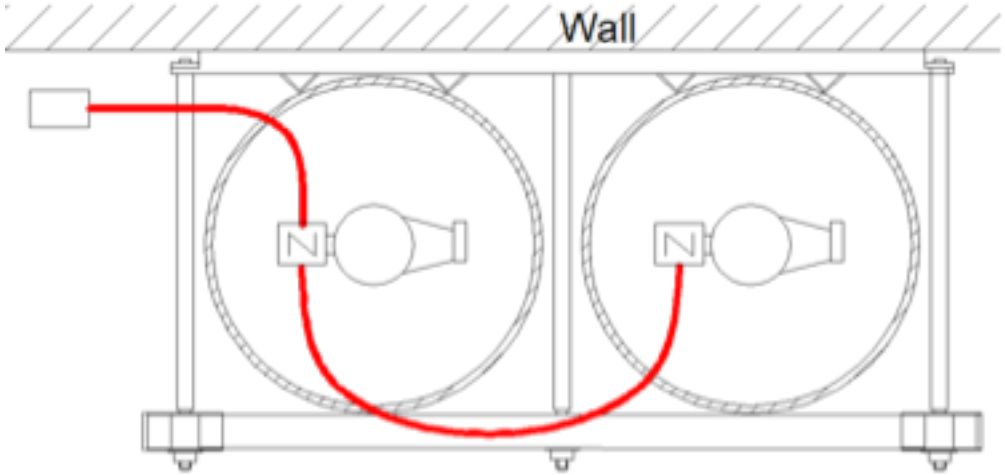
Australian Fire Technologies

## Introduction

**450 mm length** **vs.** **690 mm length**




with manifold




without manifold

# Discharge Hose 140 litre.

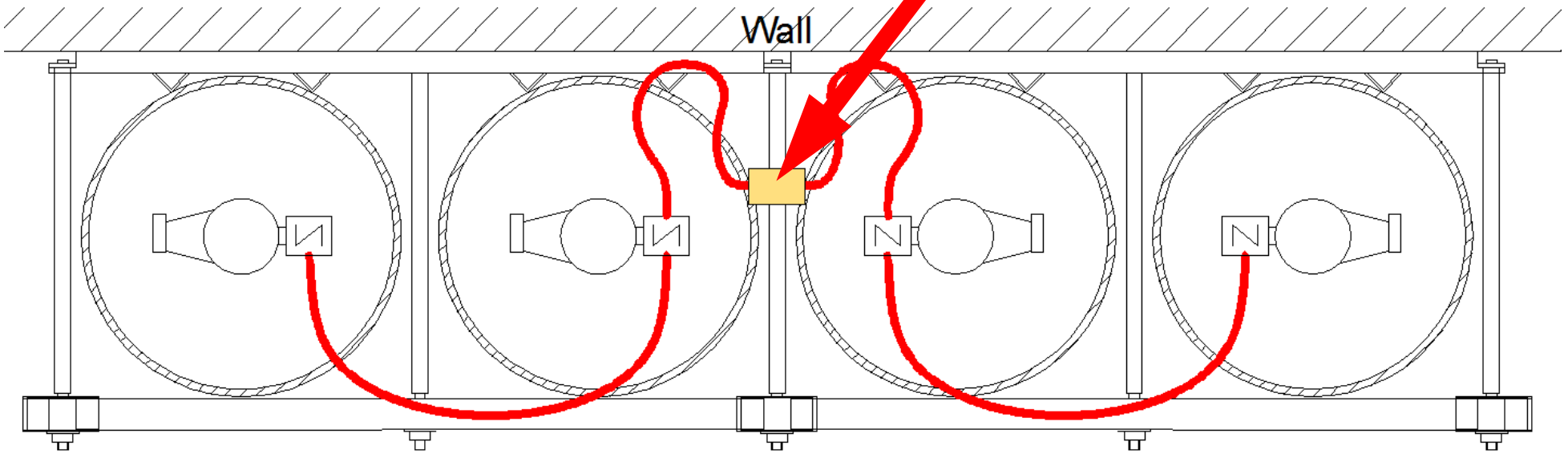
Australian Fire Technologies

## Introduction

Single row - 140 litre - 2+2

- hose length 690 mm
- no manifold

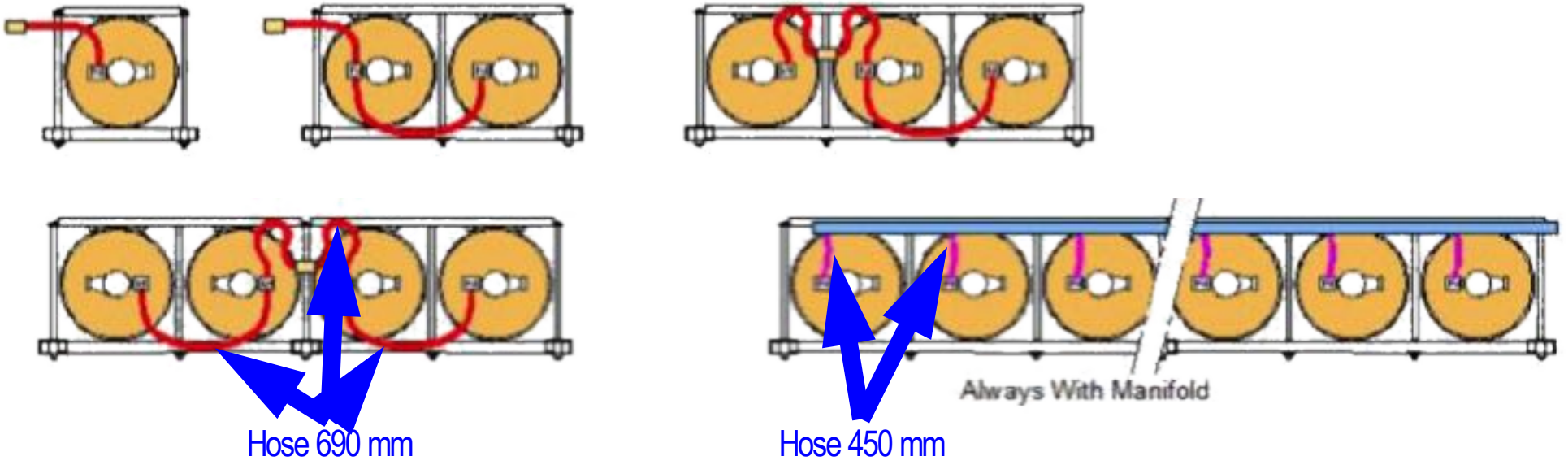
Hose Tee
3/4" - 1 1/4" - 3/4"

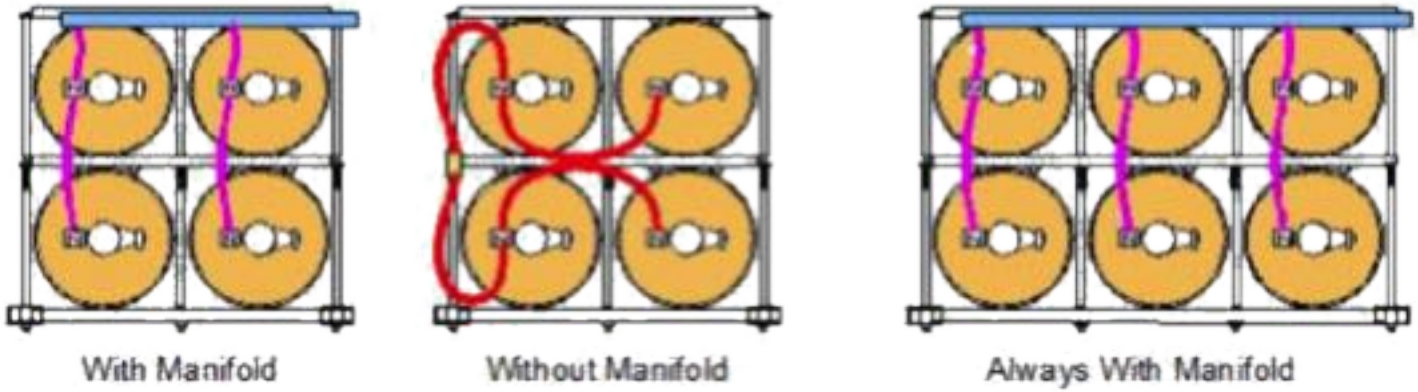


# 140 litre Container Arrangement

Australian Fire Technologies



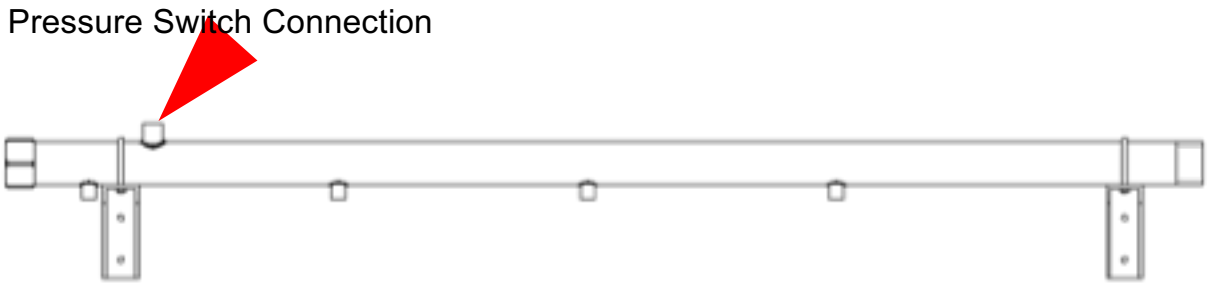


# MANIFOLDS & ACCESSORIES

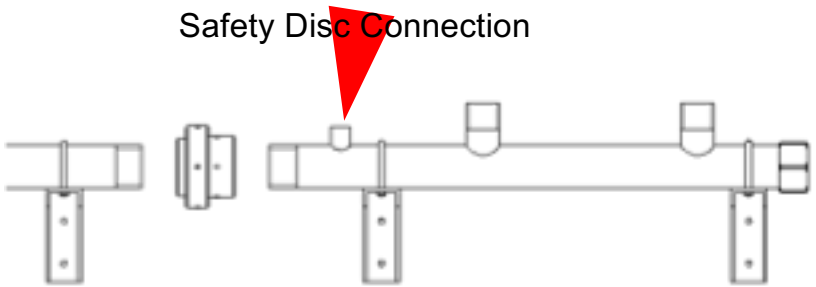
## Discharge Pressure Switch

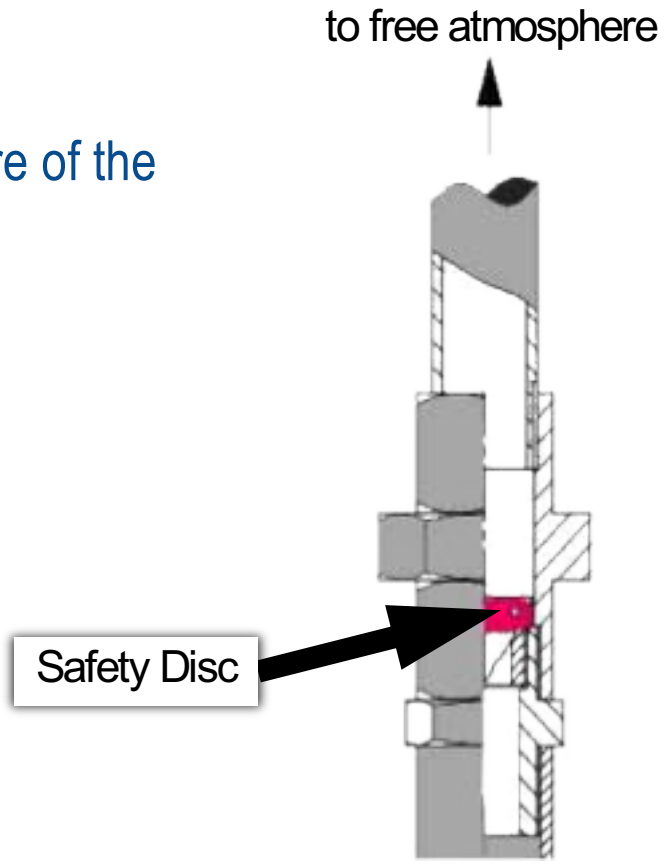
- changeover N/O and N/C
- latching, manual reset
- 250 VAC 6 A / 400 VAC 4 A
- maximum working pressure 370 bar
- minimum activation pressure 10 bar
- ATEX version available



## Safety Disc Assembly

- for selector valve systems
- disc rating according to maximum working pressure of the manifold



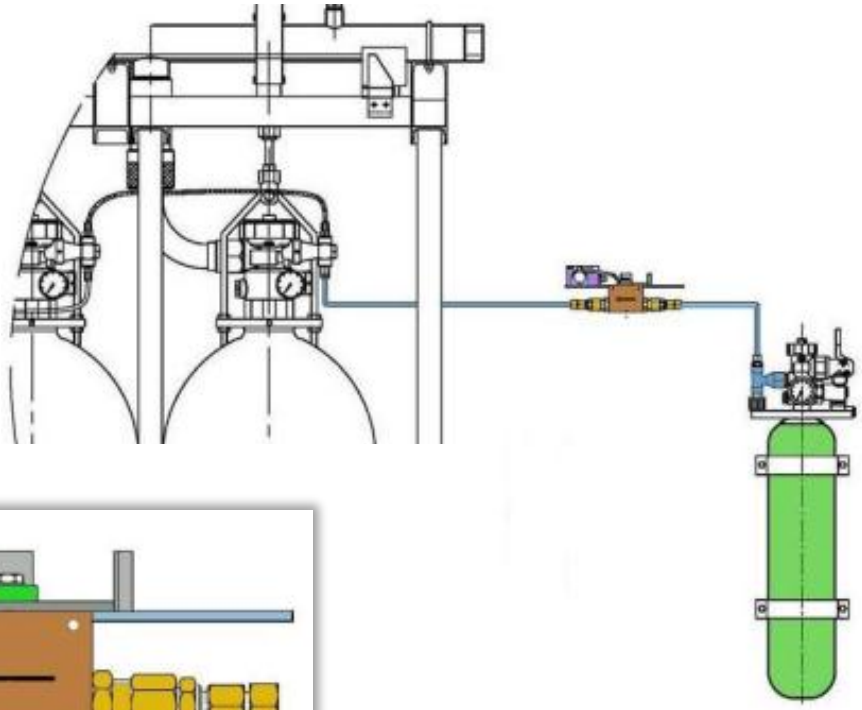
# Lock-Off Unit

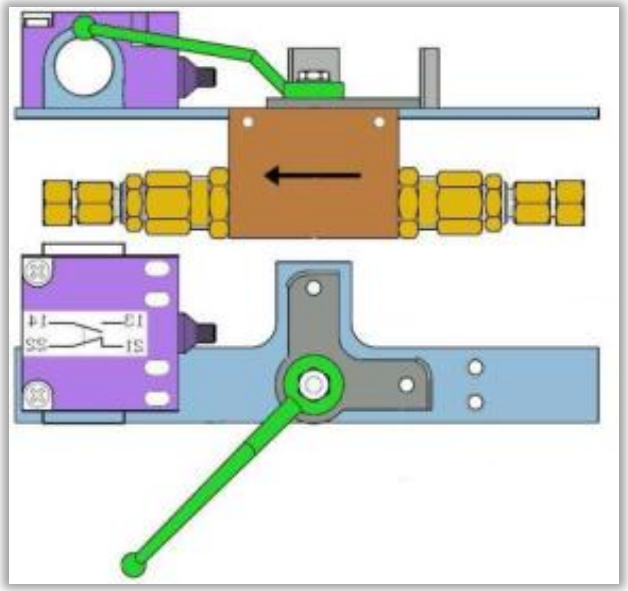
Australian Fire Technologies

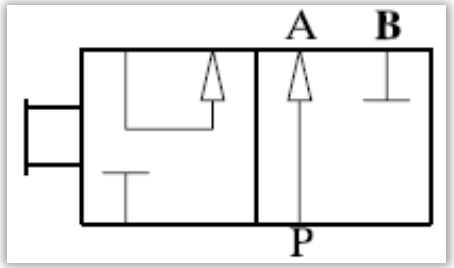
# Introduction

## Pilot Line Lock-Off

- 2-way ball valve for 6 mm pilot line
- padlock optional
- limit switch  1 NC / 1 NO





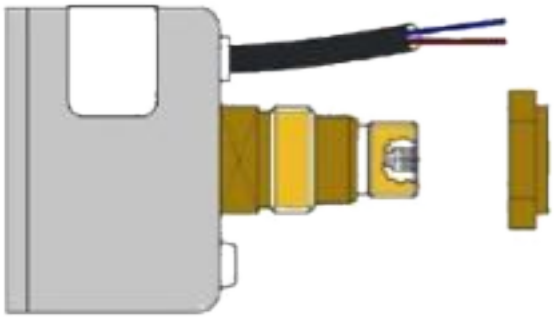


# Pressure Monitoring

Australian Fire Technologies

## Introduction

- Gauge with electric contacts (NO)
- factory set
- can be removed on site for replacement/testing.



# Pressure Monitoring

Australian Fire Technologies

## Introduction

Gauge with electric contacts

customer option

- on-site installation (standard valve protection cap)
- factory installed (extra large valve protection cap)

Standard Cap

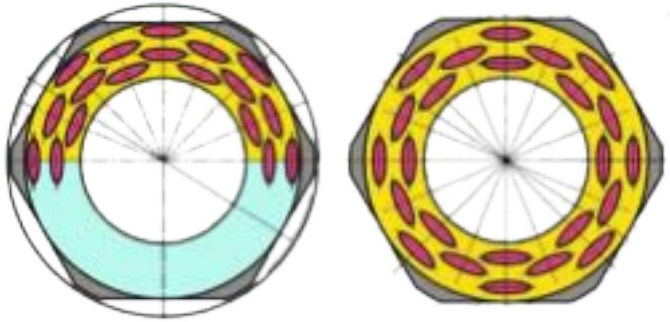
XL Cap

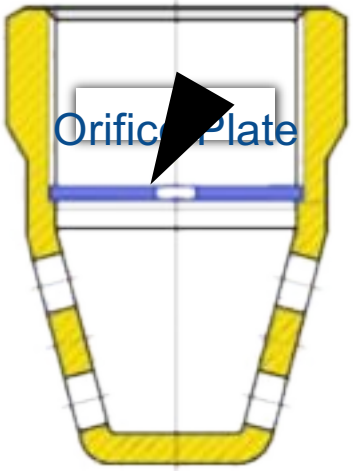
# Nozzles

Australian Fire Technologies

## Introduction

- Chrome plated steel
- 180° and 360° discharge pattern
- 7m x 7m coverage. Maximum Height 5m.
- 3/8" (10 mm) to 2" (50 mm) size
- Pipe thread = ISO 228 (BSPP)





# Hinged Pin Wrench

Australian Fire Technologies

## Introduction

- to fix certain ***iFlow***®components

# Hinged Pin Wrench

Australian Fire Technologies

Introduction

- Hinged Pin Wrench

| Part Number | Description |
|---|---|
| 35017401 | pneumatic cones, solenoid and manual release |

Weatherproof Cat Flap (CF)

# PRESSURE RELIEF DAMPERS

PUMA PRODUCTS LIMITED

# Overpressure Vents

Australian Fire Technologies

# Introduction

**PUMA** Products PRD

- 2 hour fire resistance. Tested to BS EN 1634-1 2008.
- Wall installation
- Telescopic Duct for wall depths over 175mm to 340mm
- Cat Flap section fitted with weather seal
- Anti Intrusion Security Bar available

Telescopic Duct (TD)

Anti Intrusion Security Bar

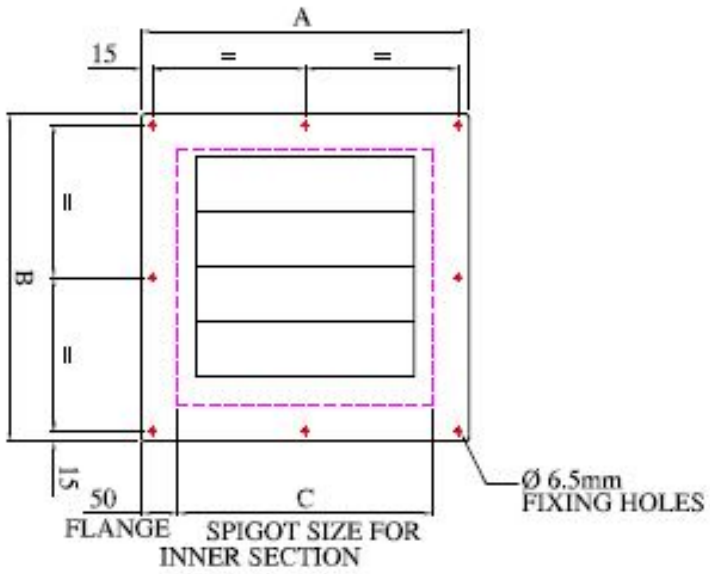
# Overpressure Vents

Australian Fire Technologies

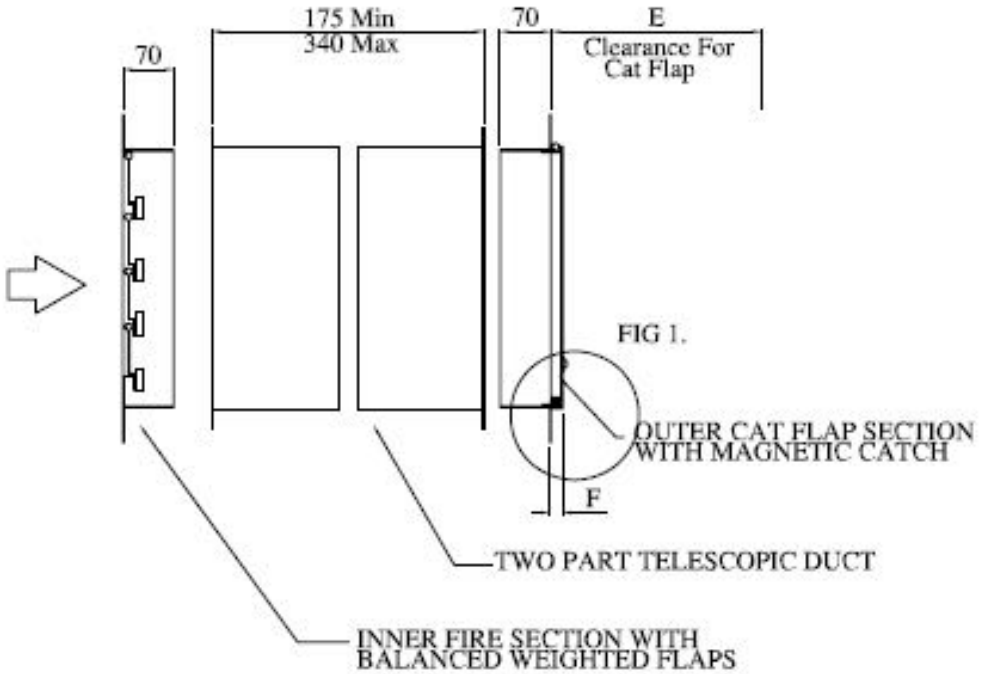
# Introduction

## **PUMA** Products PRD

- 2 hour fire resistance




END VIEW (INTAKE)




SECTIONAL SIDE VIEW

## **PUMA** Products PRD

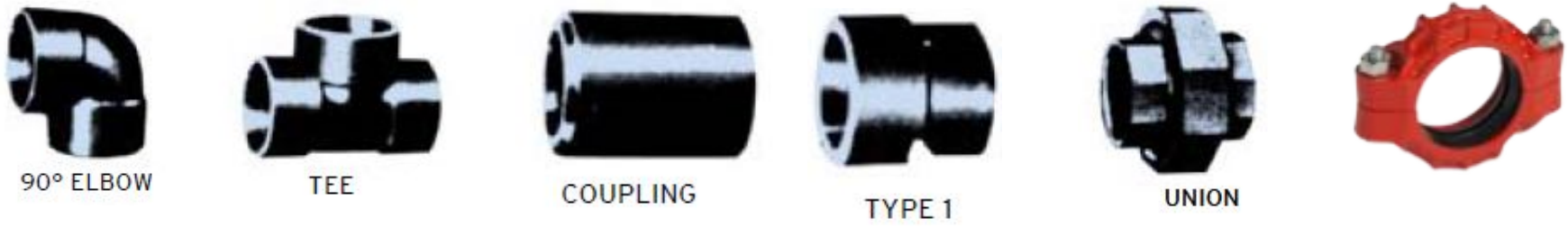
### Twelve Vent Sizes Available

| Model Number | Free Vent Area in m² | Hole Cut-out for FIS Only | Weight kg | Hole Cut-out for FIS & CF or CF Only | Weight kg | Hole Cut-out for FIS, TD/ WS & CF | Weight kg | Weather Louvre Free Vent Area in m² |
|---|---|---|---|---|---|---|---|---|
| | | Width x Height | | Width x Height | | Width x Height | | |
| **PRD 150** | **0.021** | 205 x 205 | 4.35 | 215 x 215 | 6.9 | 225 x 225 | 12 | 0.02 |
| **PRD 225** | **0.042** | 280 x 280 | 6.0 | 290 x 290 | 10.0 | 300 x 300 | 16 | 0.04 |
| **PRD 300** | **0.079** | 355 x 355 | 7.4 | 365 x 365 | 12.4 | 375 x 375 | 20 | 0.072 |
| **PRD 375** | **0.124** | 430 x 430 | 8.75 | 440 x 440 | 14.25 | 450 x 450 | 23 | 0.104 |
| **PRD 450** | **0.178** | 505 x 505 | 12.0 | 515 x 515 | 17.25 | 525 x 525 | 28 | 0.143 |
| **PRD 525** | **0.252** | 580 x 580 | 16.35 | 590 x 590 | 26.1 | 600 x 600 | 31.2 | 0.188 |
| **PRD 600** | **0.317** | 655 x 655 | 20.6 | 665 x 665 | 32.45 | 675 x 675 | 45 | 0.24 |
| **PRD 675** | **0.417** | 730 x 730 | 25.0 | 740 x 740 | 40.0 | 750 x 750 | 52 | 0.297 |
| **PRD 750** | **0.515** | 805 x 805 | 31.85 | 815 x 815 | 47.85 | 825 x 825 | 64 | 0.36 |
| **PRD 825** | **0.623** | 880 x 880 | 34.5 | 890 x 890 | 52.5 | 900 x 900 | 72 | 0.43 |
| **PRD 900** | **0.741** | 955 x 955 | 37.0 | 965 x 965 | 57.5 | 975 x 975 | 76 | 0.51 |
| **PRD 975** | **0.870** | 1030 x 1030 | 39.5 | 1040 x 1040 | 62.5 | 1050 x 1050 | 81.5 | 0.59 |

# PIPES AND FITTINGS

## Pipe and Fittings

- Schedule 40 Hot Dip Galvanised pipe for ***iFlow***® systems
- 3000lb Galvanised Steel Screwed BSP fittings for ***iFlow***®
- **YELLOW** Gas Grade Teflon Tape for all threaded connections up to 50NB
- Roll Grooved Couplings are acceptable 65NB and above (Victaulic Style 07 & 77 or similar)



# QUESTIONS ?