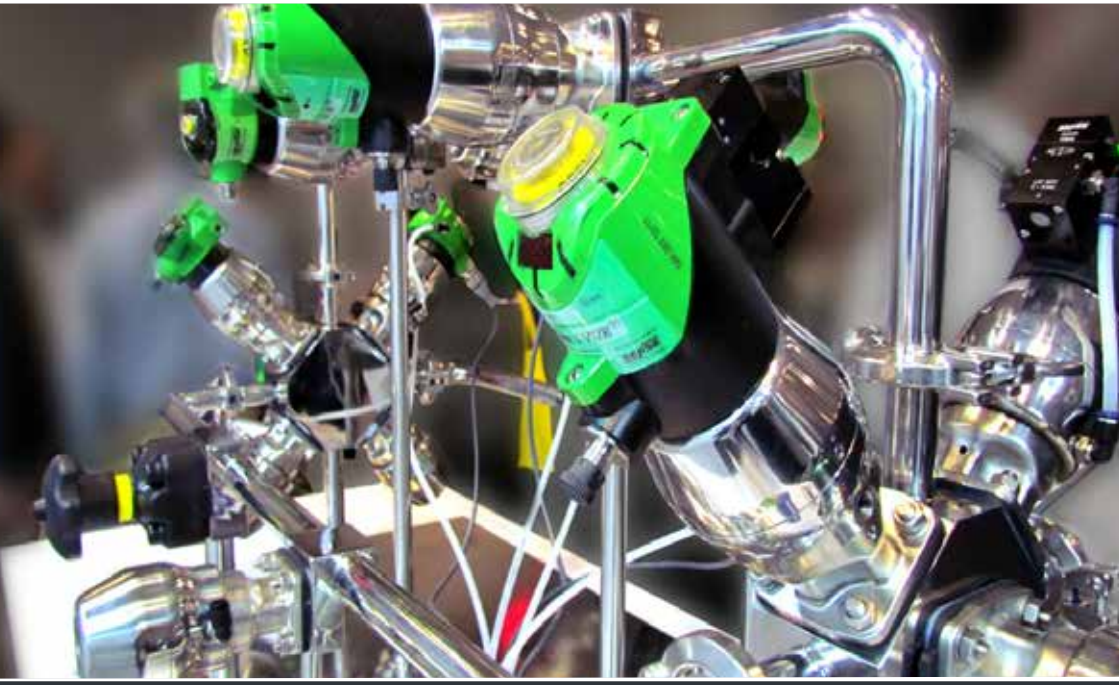
Saunders®
the science inside



EXCELLENCE IN COMPREHENSIVE PRODUCT BIO-PHARMA SOLUTIONS

BIO-BLOCK MANUAL

CRANE

www.cranecpe.com

Saunders®
the science inside

Interactive Web-Based Tools

Saunders® has developed interactive web-based tools to facilitate selection of standard and customized valves. This includes our Biotech Process Map which saves time and effort in valve selection in an industry driven by time to market. Our P&ID Table of Orientations provides key design information such as drawings and datasheets for over 100 different valve orientations based on P&ID configuration. Also available is our drawing library which makes 2D pdfs available to all site visitors and 2D dwg and 3D stp files readily available to registered users.

SELECT

BIO-BLOCK PROCESS APPLICATIONS

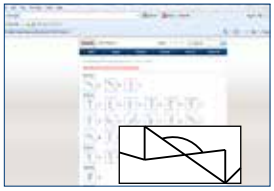
BIO-BLOCK PIPING AND INFORMATION DRAWINGS (P&ID)

HC4 DRAWING LIBRARY

Saunders® Maintenance Center

DISCOVER

Biotech Process Maps



Various P&ID Orientations

Download Engineering Drawings (2D and 3D)

SAUNDERS® MAINTENANCE CENTER

SOLVE

Solutions for Your Applications

Solutions For Your Bio-Block Process

Download Technical Datasheets

Up-to-date 3D product training videos and presentations for the installation and maintenance of Saunders® HC4 valves, switches, and sensors.

Index

Section 1 ..... Introduction

Section 2 ..... Bio-Block Selection

Section 3 ..... P & ID Overview & Coding Structure

Section 4 ..... AW Aseptic Weir

Section 5 ..... SW Serial Weir

Section 6 ..... MW Multi Weir

Section 7 ..... TW Tank Weir

Section 8 ..... Supplementary HC4 Overview

Introduction

PK Saunders® Invented the Diaphragm Valve Concept

PK Saunders® invented and patented the diaphragm valve concept long before the emergence of the Life Science industry. However, the design features present in the original weir type diaphragm valve remain the reasons the aseptic diaphragm valve is recognized as the valve of choice for aseptic applications.

History of Innovation

Saunders® has led the way in the development of the diaphragm valve to meet ever increasing demands for hygienic performance and regulatory compliance. These innovations have included the introduction of:

- Introduction of forged 316L stainless steel bodies
- First compact pneumatic actuators
- First traceable diaphragms
- First modified PTFE diaphragms
- First controlled sulfur stainless steel bodies
- First compact modular actuators
- First interactive Bio-Block selection guide

Global Compliance

Aseptic Diaphragm Valves are supplied into critical process applications in the world's most closely regulated industries. Full compliance to all relevant Global Standards is an essential element of the product and cannot be taken for granted. Saunders® complies with all applicable Global Standards for diaphragm valves in the Life Science market, including:

- FDA CFR 177.1550 (PTFE), 177.2600 (Elastomer)
- USP Class VI, <87>, <88>
- Traceable to EN 10204 3.1
- 3A Certification
- Animal Derived Component Free (ADCF)
- ASME BPE
- Testing to BS EN 12266-1
- ISO 9001
- CE and PED 97/23/EC
- TUV-Merkblatt HPO Qualification

Aseptic Diaphragm Key Products

Saunders® Standard 2 Ways

Saunders® Welded Tandems and Manifolds

Saunders® Standard Machined Block and Zero Dead Leg

Saunders® HC4 Bio-Blocks

Saunders® Actuation S360 & P345

Saunders® Controls

Saunders® HC4 Diaphragms

Focused Industries

BioPharm

API
(Active Pharmaceutical Ingredients)

CRANE ChemPharma, Saunders® is a global supplier to bio-tech, Pharmaceutical, and other related markets, including: Food and Beverage • Consumer Products • Paint • Silicon • Biofuel • Fermentation • Cosmetics.

Introduction

Bio-Block Compound Solutions

Bio-Block Valves

Bio-Block valves offer the foremost expression of aseptic diaphragm valve technology. Bio-Block designs are machined from solid bar or billet to create tee configurations or clusters of two or more weirs with shared chambers that result in a single design with reduced wetted area, optimum drainability and the highest level of integrity.

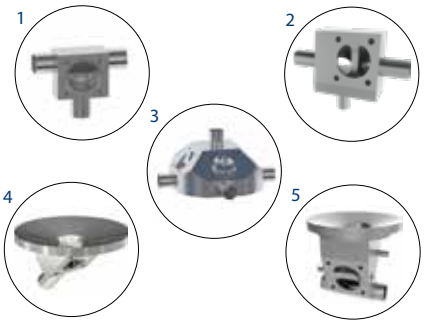
Bio-Block Compound Solutions

Almost every process system includes a unique piping challenge that does not lend itself to conventional solutions. Saunders® custom designed Bio-Block valves replace welded clusters, manifolds, and valve/fitting combinations and offer the most compact, minimum dead leg design for optimum process integrity.

Saunders® Sales and Engineering is pleased to work with you to identify and select the ideal valve design to optimize the performance of your system. Please contact your local distributor or CRANE ChemPharma sales office for support.

Bio-Block Categories Machined From Solid Options

1. Zerostatic Weir: Tee fitting and weir combined
2. Serial Weir: Two weirs sharing a common chamber
3. Multiple Weir: Three or more weirs with a common chamber
4. Tank Weir: Weir integrated into tank bottom
5. Compound Bio-Block: Combination of Bio-Block types into one assembly



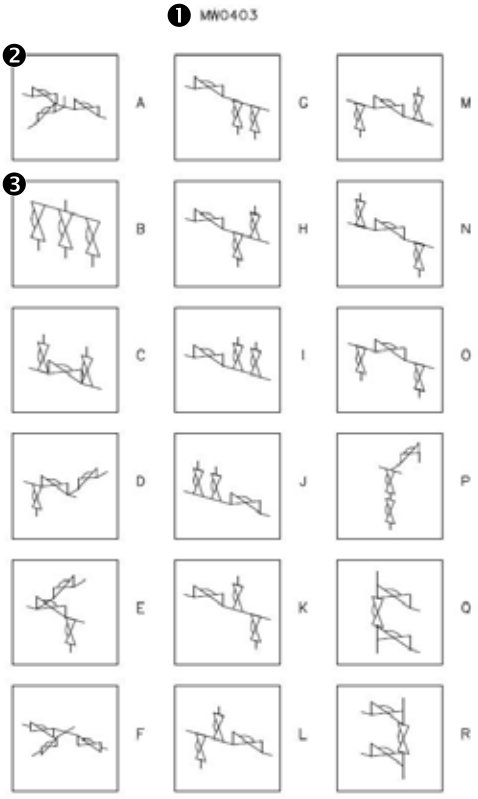
Please visit www.saundersdrawings.com for current library of drawings in PDF, 2D DWG, and 3D STP formats.

Bio-Block Selection

Using the Bio-Block Manual

Refer to P&ID image, sketch or other type of flow diagram:

Look through the P&ID Coding Index. Note that the selections are divided by basic categories into AW - Aseptic Weir, ZW - ZeroDeadleg Weir, SW - Serial Weir, MW - Multiple Weir and TW - Tank Weir

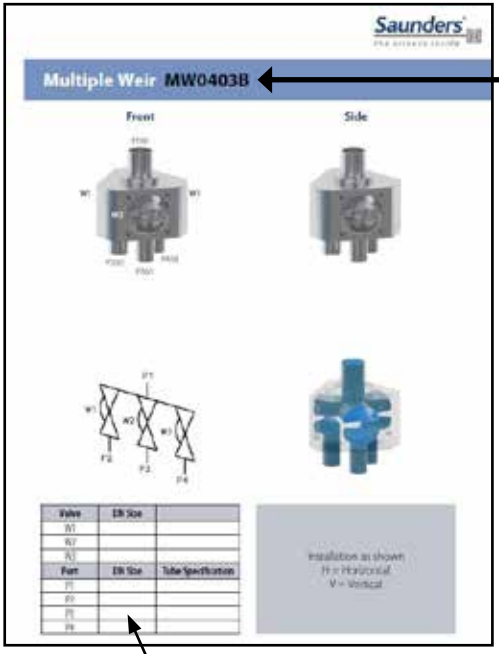


1. Compare flow diagram with examples in the P&ID Coding section of the Bio-Block Manual. It helps to search by basic type and configuration.

2. Each category of Bio-Blocks is organized by number of ports and number of weirs.

3. When a Bio-Block is found that corresponds to the requirement of the flow diagram, note the category, weir port numbers and orientation codes - in this case the category is MW (Multiple Weir), with 4 ports and 3 weirs, in the B orientation. The model number for this Bio-Block is MW0403B.

Bio-Block Selection



Information summarised in the table is required for bio-block design

4. Go to MW0403B in the Bio-Block Manual and confirm the selection. The example will include P&ID diagram, 3D image and sectioned views.

5. Note that the ports are identified by alpha-numeric codes. Complete Bio-Block data sheet by indicating size of ports and end connections, weir sizes and type of actuators required for each port and weir.

   In some designs, port and weir sizes may be different.

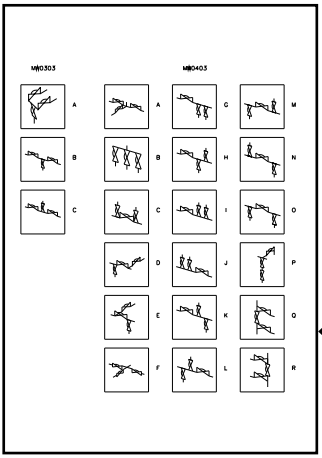
   The data sheet is complete when surface finish and diaphragm requirements are added.

Saunders application specialists are available to assist in the selection of the optimum Bio-Block design. Please contact your Saunders distributor or local Saunders Sales office.

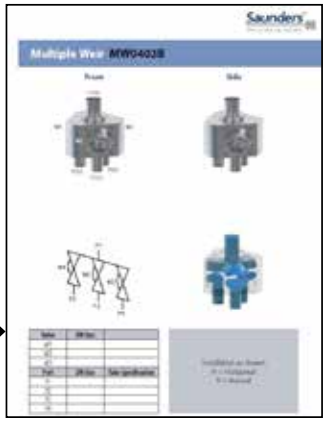
Bio-Block Selection and Ordering

Is the design in the Bio-Block Programme?

If yes proceed with the following steps, if not refer to the selection guide on the following page.



Bio-Block product codes are available on the P&ID Coding index and in the individual product sheets in the Bio-Block Manual.



1. Bio-Block Code

2. Line number, Size, End Type, Weir Number and Size and Topworks

Port Number	Line Size	End Type

Weir Number	Weir Size	Diaphragm Type	Topworks

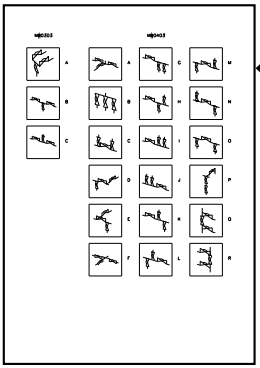
3. Surface Finish _____

4. Material Specification

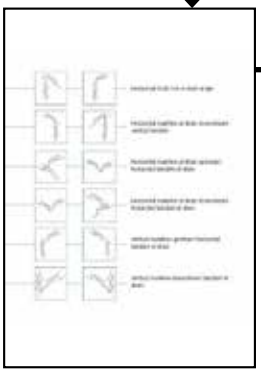
316L ☐
1.4435 ☐
Other - please specify _____

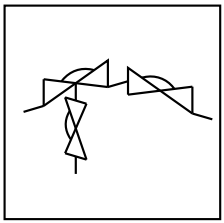
Bio-Block Selection and Ordering

Not every possible Bio-Block solution is listed in the Saunders Bio-Block Manual. Some designs are compound types that combine two or more existing types of configuration into a single Block. Other designs have orientations of weirs and or porting that is not currently catalogued. If you cannot identify the ideal solution to your application, contact your local Saunders distributor or sales office for assistance and to confirm that you are using the current release of the Saunders Bio-Block Manual.



It is also possible to use the Bio-Block symbol library, P&ID coding structure and standard examples to develop a custom flow diagram.





Confirm that the flow diagram does not exist in the P&ID Coding library in the Bio-Block Manual.

Key design elements must be considered when configuring a Bio-Block.

- Number of ports and weirs
- Piping orientation - vertical, horizontal or mixed
- Weir orientation - vertical, horizontal or mixed
- Which weirs share common chambers
- Do weirs have to fully drain
- Weirs located on the same or opposite side of centerline

Remember that not all proposed Bio-Block solutions can be manufactured. Refer to the Bio-Block preface for design rules and constraints.

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Bio-Block Selection and Ordering

Complete the following

1. Diaphragm type _____

2. Surface finish _____

3. Reference or tag number _____

4. Material Specification
   316L ☐
   1.4435 ☐
   Other - please specify _____

5. Method of operation

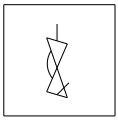
6. Attach any relevant drawings, sketches and/or flow diagrams.
If none is available, fill in flow diagram in following box. Refer to symbol glossary.

Saunders application specialists are available to assist in the selection of the optimum Bio-Block design. Please contact your Saunders distributor or local Saunders Sales office.

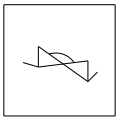
P & ID Overview & Coding Structure

AW0201


A


G


B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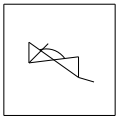
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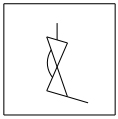
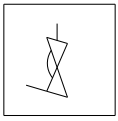

E

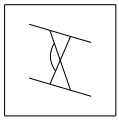

F

AW0301


A

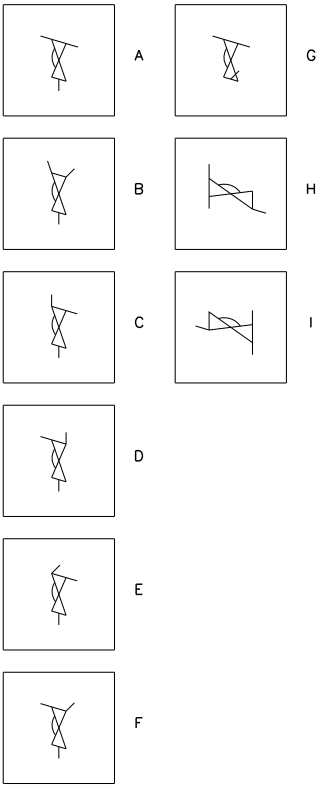

B

AW0401

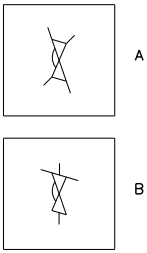

A

P & ID Overview & Coding Structure

ZW0301



ZW0401

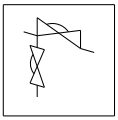


P & ID Overview & Coding Structure

SW0202

A

SW0302



A

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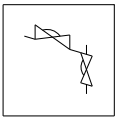
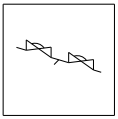


Q

B



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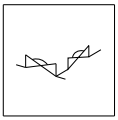

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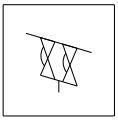

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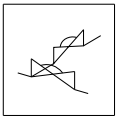
S



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N

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GH

O

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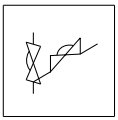
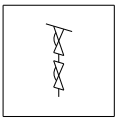


I J

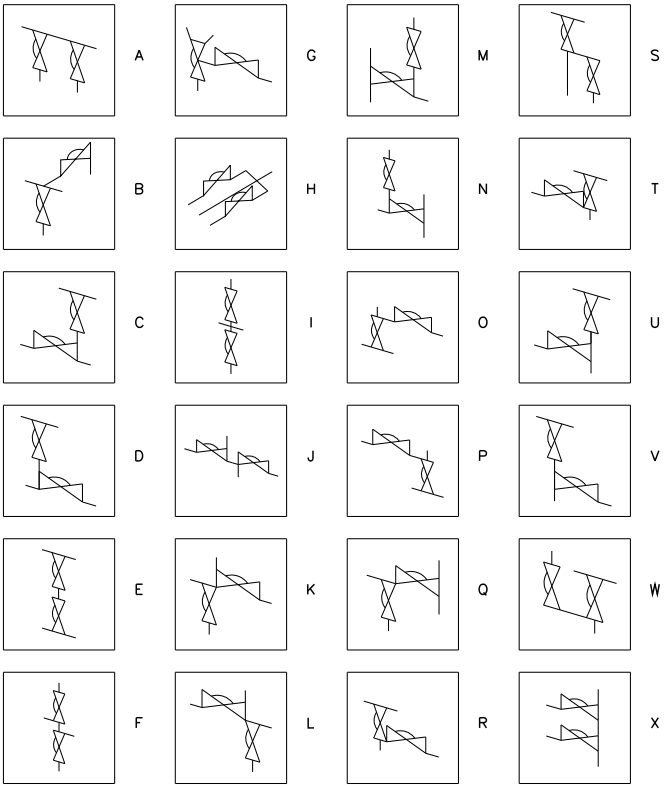
P



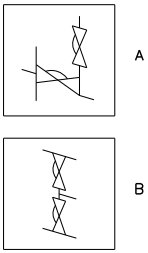
VW

P & ID Overview & Coding Structure

SW0402

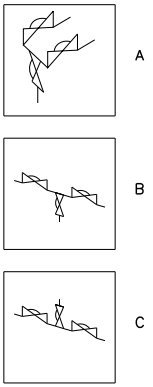


SW0502



P & ID Overview & Coding Structure

MW0303



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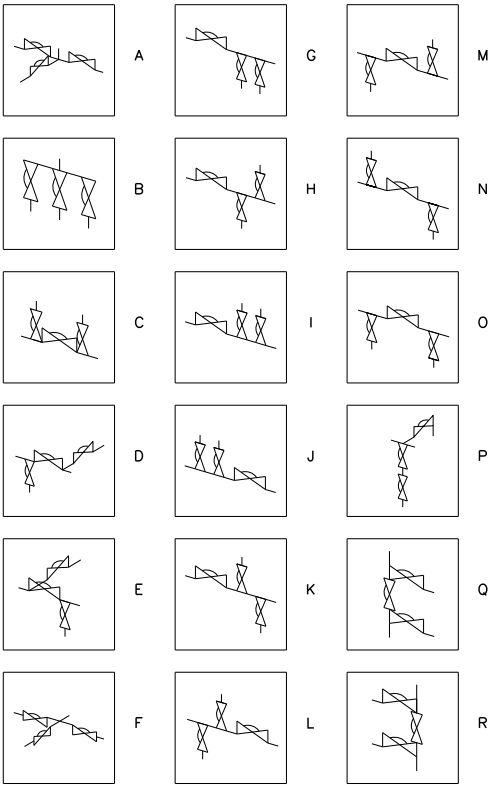
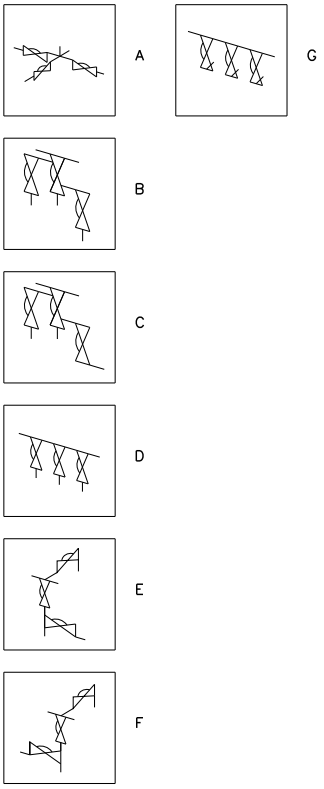


P & ID Overview & Coding Structure

MW0503



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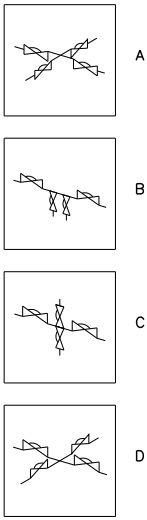
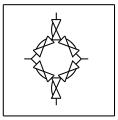


P & ID Overview & Coding Structure

MW0405

A

MW0406



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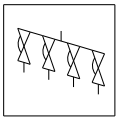

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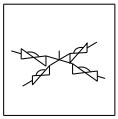

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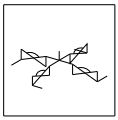
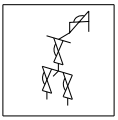


C

P & ID Overview & Coding Structure

MW0604



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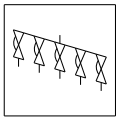
MW0605



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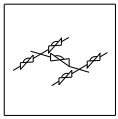
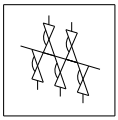


B

MW0705



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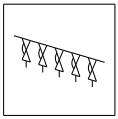

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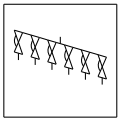
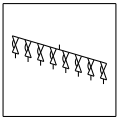
MW0706



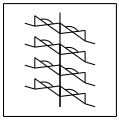
A

MW0908

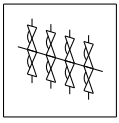


A

MW1008



A



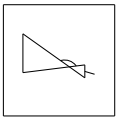
B

P & ID Overview & Coding Structure

TW0201

A

B



C

TW0301

A

B

C

D

TW0302

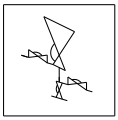
A

B

C

D

TW0504

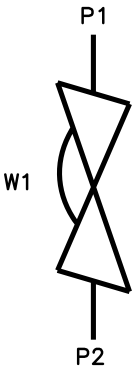


A

Aseptic Weir AW0201A

Front

Side



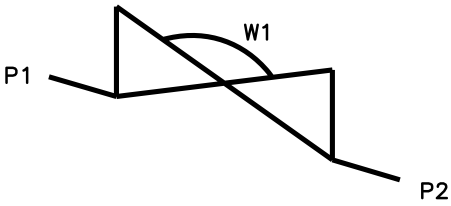
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		

Installation as shown
H = Horizontal
V = Vertical

Aseptic Weir AW0201B

Front

Side



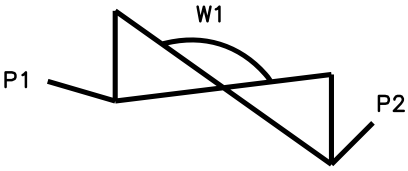
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		

Installation as shown
H = Horizontal
V = Vertical

Aseptic Weir AW0201C

Front

Side



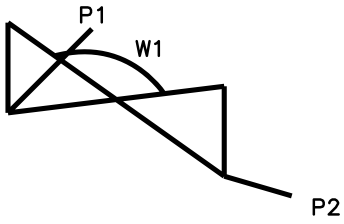
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		

Installation as shown
H = Horizontal
V = Vertical

Aseptic Weir AW0201D

Front

Side



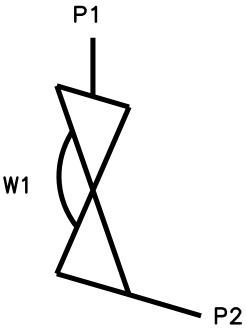
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		

Installation as shown
H = Horizontal
V = Vertical

Aseptic Weir AW0201E

Front

Side

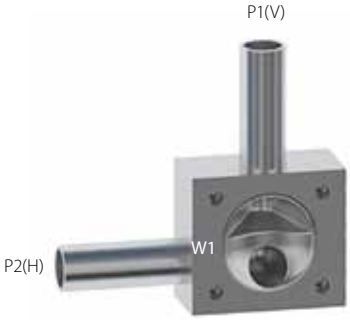


Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		

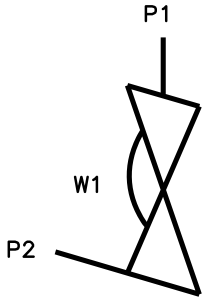
Installation as shown
H = Horizontal
V = Vertical

Aseptic Weir AW0201F

Front



Side



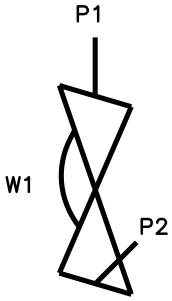
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		

Installation as shown
H = Horizontal
V = Vertical

Aseptic Weir AW0201G

Front

Side



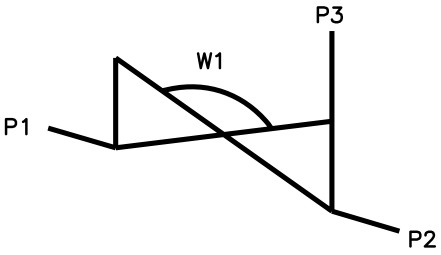
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		

Installation as shown
H = Horizontal
V = Vertical

Aseptic Weir AW0301A

Front

Side



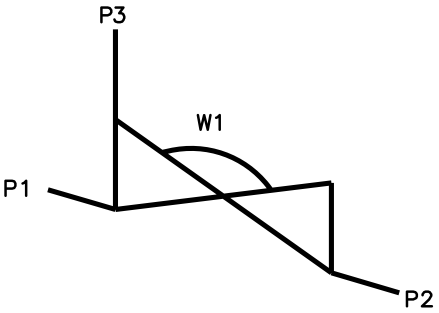
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Aseptic Weir AW0301B

Front

Side



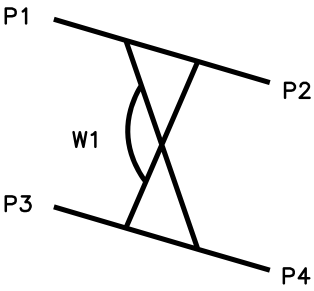
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Aseptic Weir AW0401A

Front

Side



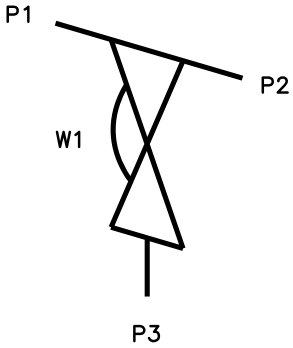
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Zero Static Weir ZW0301A

Front

Side



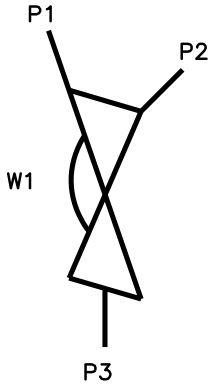
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Zero Static Weir ZW0301B

Front

Side



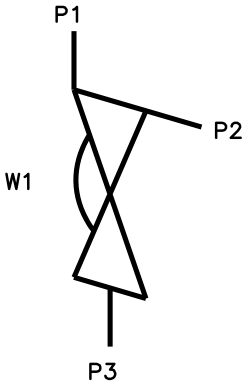
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Zero Static Weir ZW0301C

Front

Side



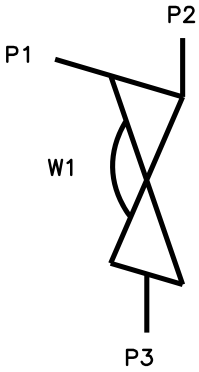
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Zero Static Weir ZW0301D

Front

Side



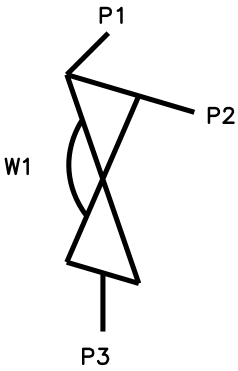
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Zero Static Weir ZW0301E

Front

Side



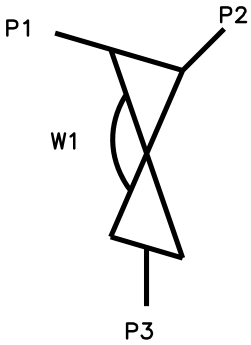
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Zero Static Weir ZW0301F

Front

Side



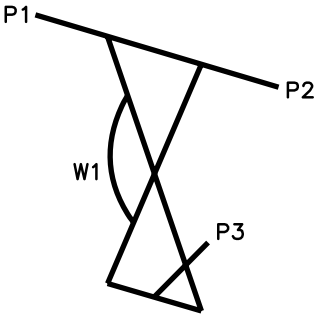
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Zero Static Weir ZW0301G

Front

Side



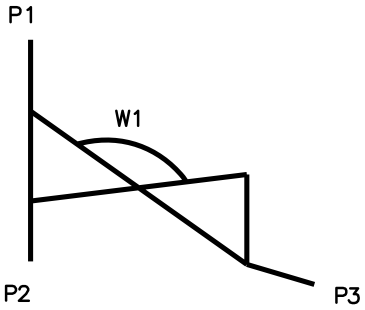
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Zero Static Weir ZW0301H

Front

Side



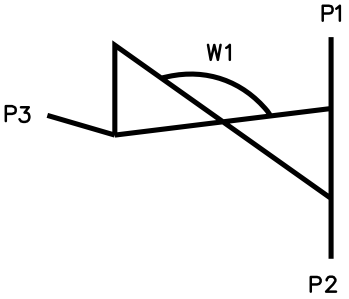
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Zero Static Weir ZW0301I

Front

Side



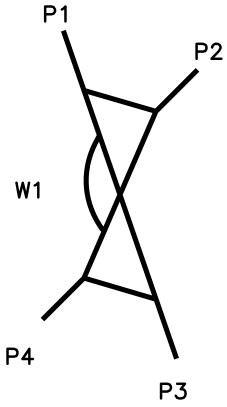
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Zero Static Weir ZW0401A

Front

Side

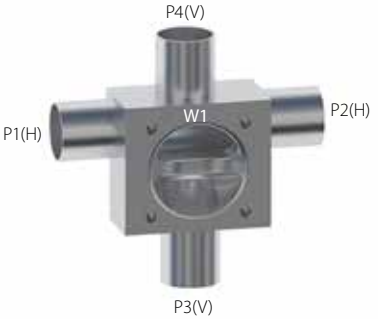


Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

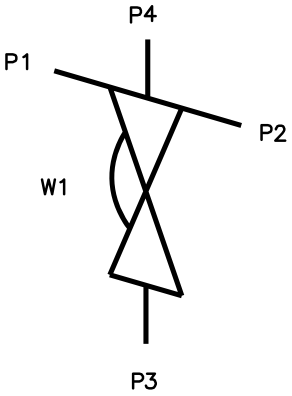
Installation as shown
H = Horizontal
V = Vertical

Zero Static Weir ZW0401B

Front



Side



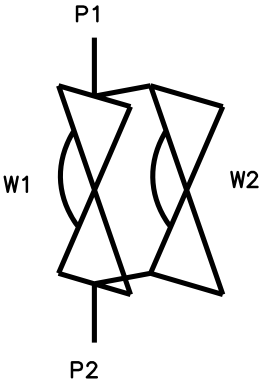
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0202A

Front

Back



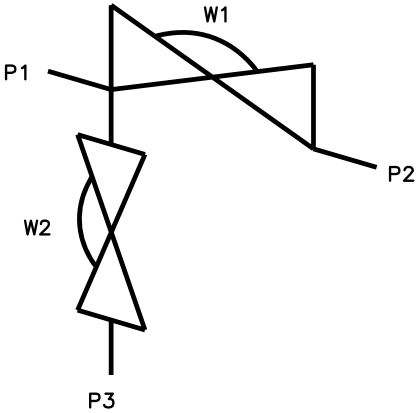
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302A

Front

Back



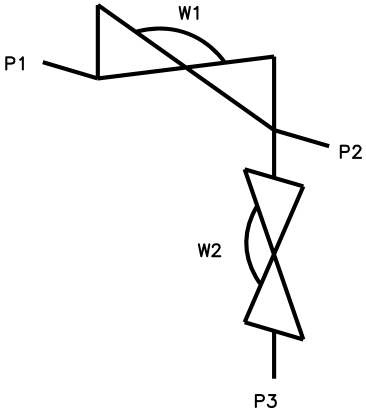
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302B

Front

Back

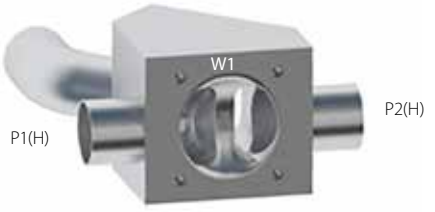


Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

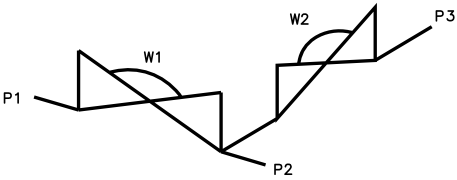
Installation as shown
H = Horizontal
V = Vertical

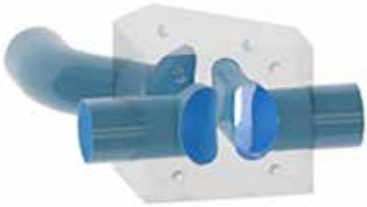
Serial Weir SW0302C

Front



Back





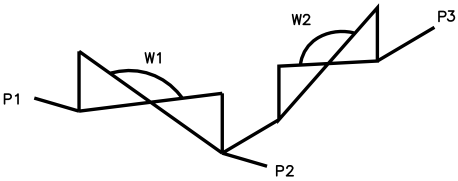
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302D

Front

Side



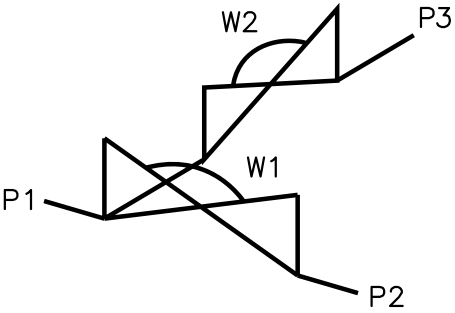
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302E

Front

Side



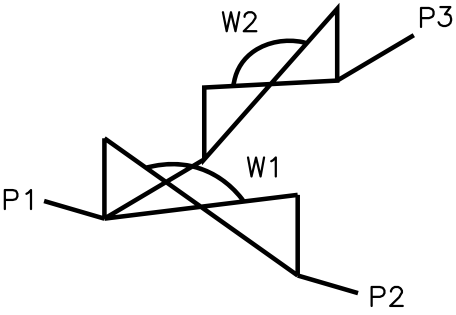
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302F

Front

Side



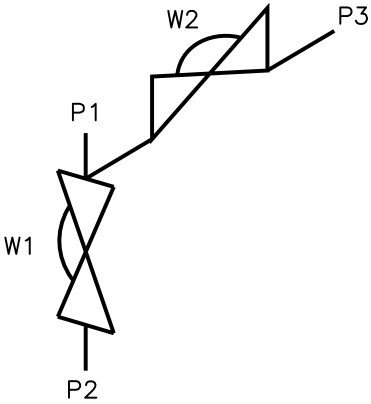
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302G

Front

Side



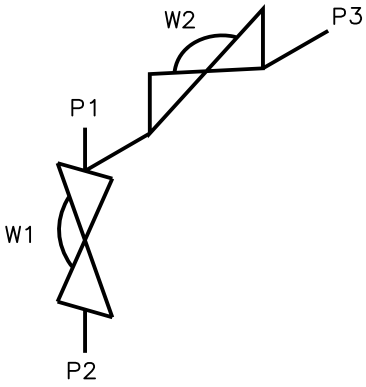
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302H

Front

Side



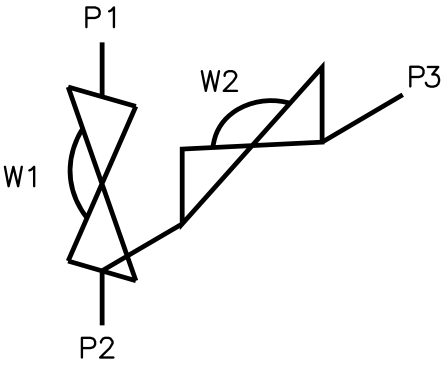
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302I

Front

Side



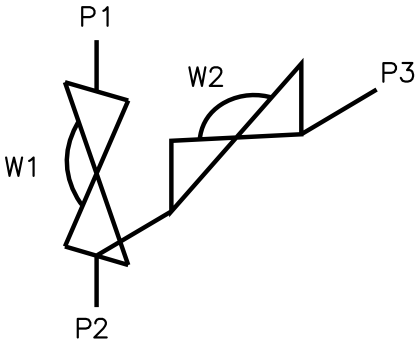
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302J

Front

Side



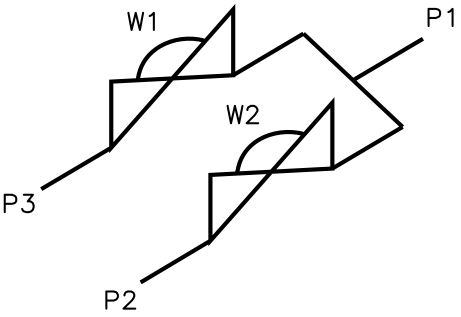
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302K

Front

Side



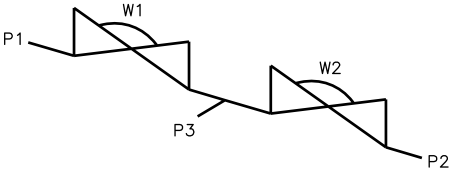
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302L

Front

Side



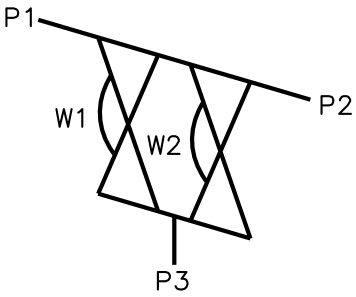
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302M

Front

Back



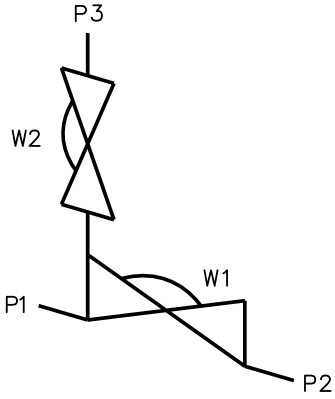
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302N

Front

Back



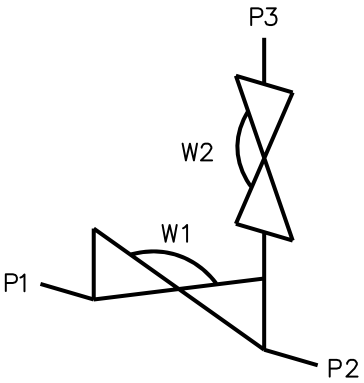
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

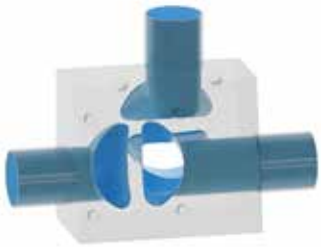
Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW03020

Front

Back





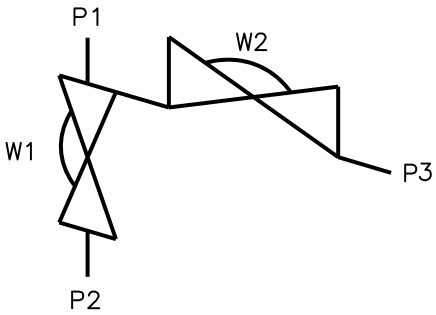
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302P

Front

Back



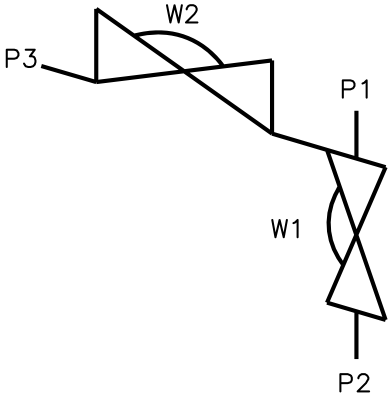
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302Q

Front

Back



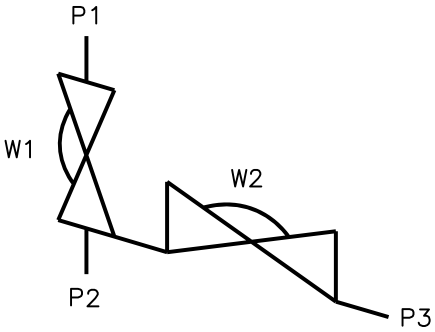
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302R

Front

Back



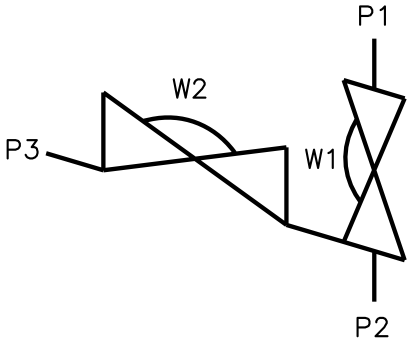
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302S

Front

Back



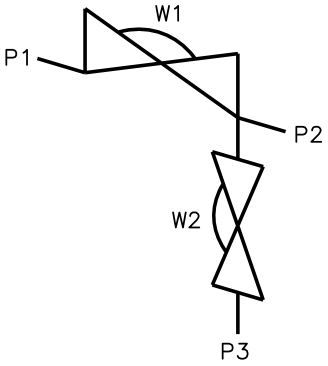
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302T

Front

Side



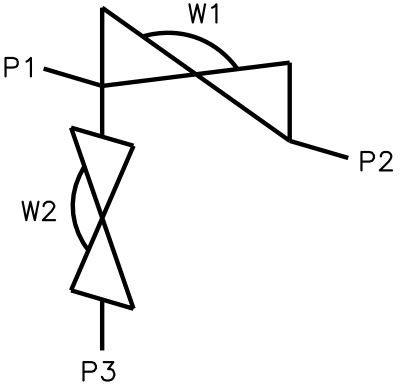
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302U

Front

Side



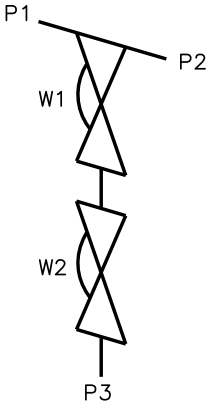
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302V

Front

Back



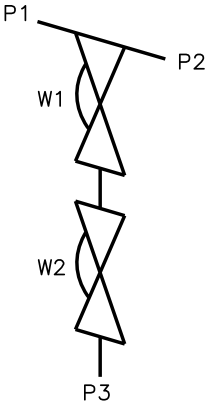
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0302W

Front

Side



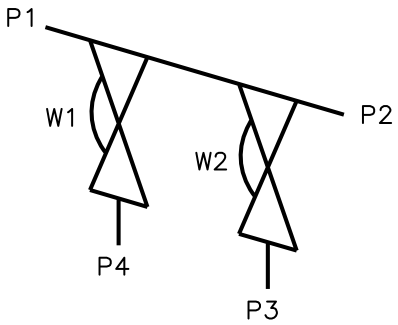
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402A

Front

Side



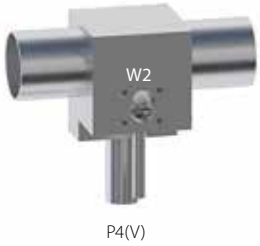
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

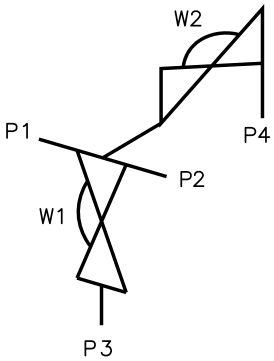
Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402B

Front

Back





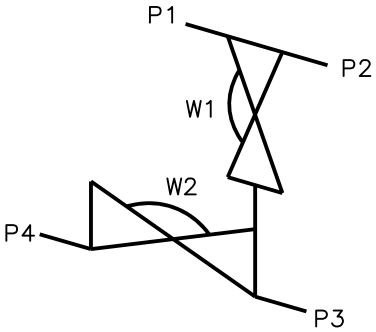
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402C

Front

Back



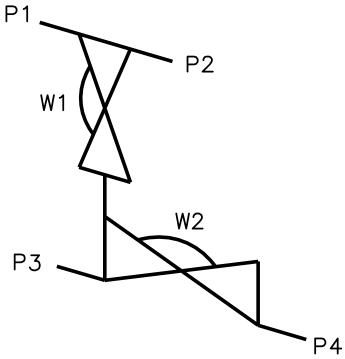
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

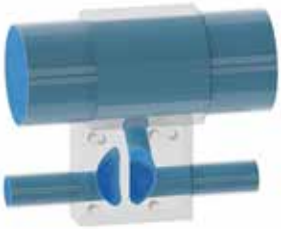
Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402D

Front

Back





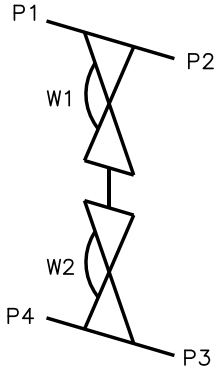
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

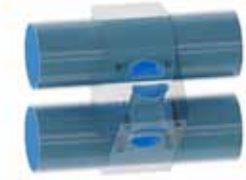
Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402E

Front

Side



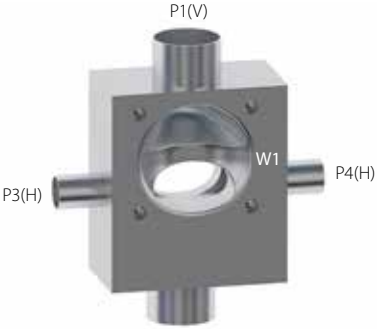


Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

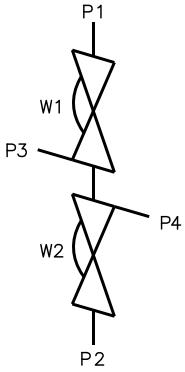
Installation as shown
H = Horizontal
V = Vertical

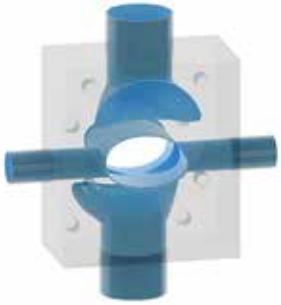
Serial Weir SW0402F

Front



Back





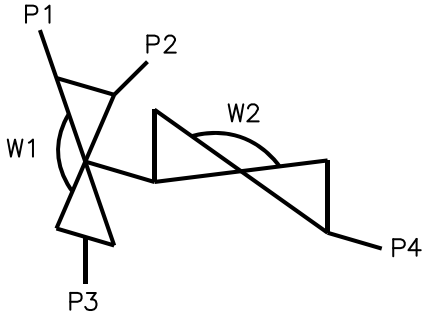
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402G

Front

Back



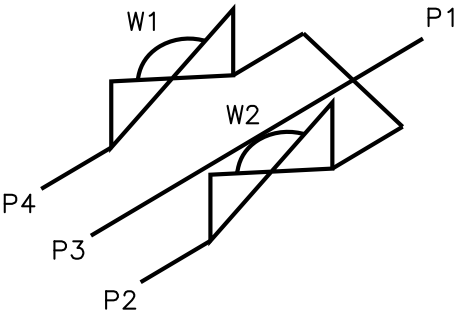
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402H

Front

Side

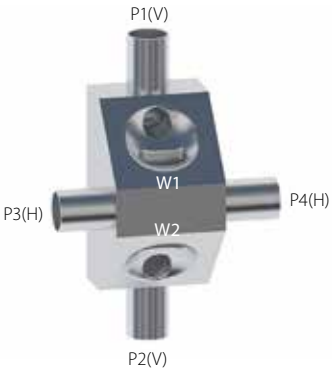


Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

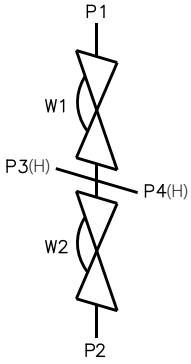
Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402I

Front



Side



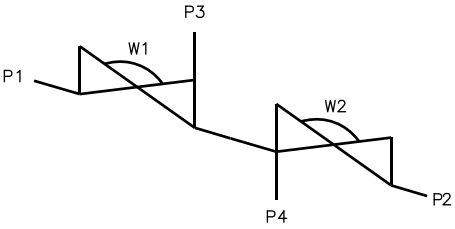
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

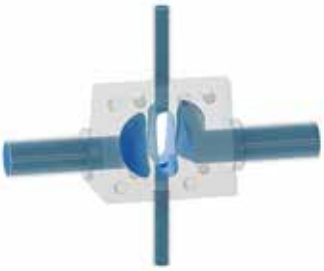
Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402J

Front

Side



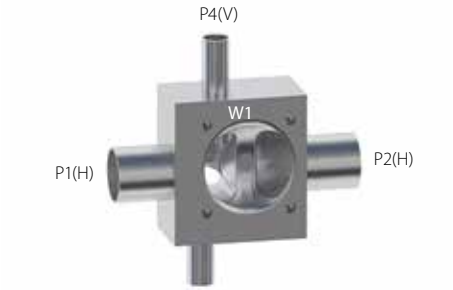


Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

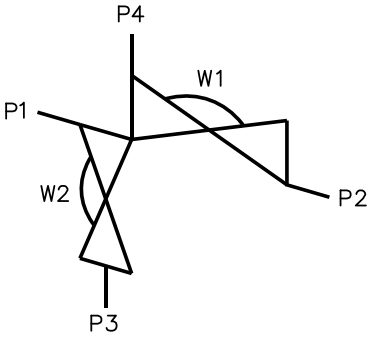
Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402K

Front



Back



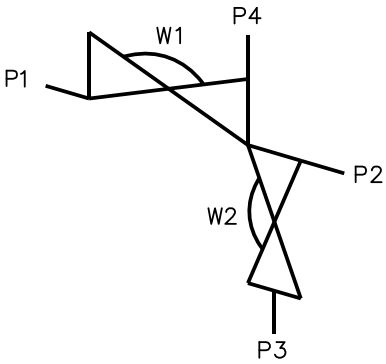
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402L

Front

Back



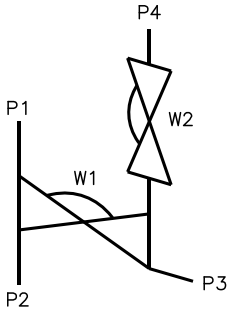
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402M

Front

Back



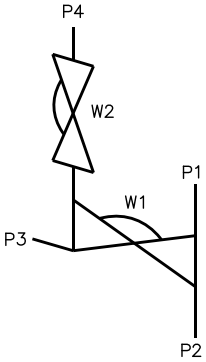
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402N

Front

Back



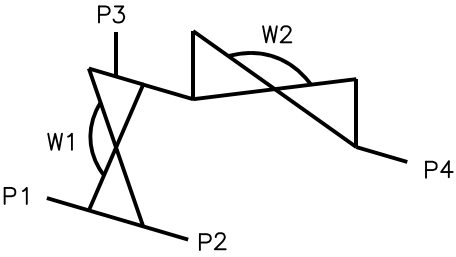
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW04020

Front

Back



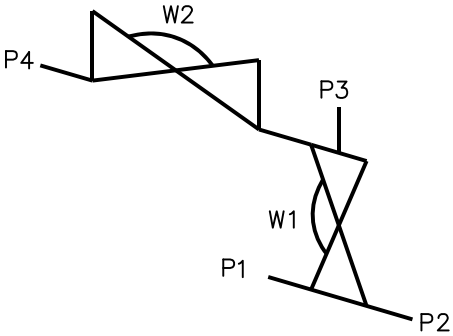
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402P

Front

Back



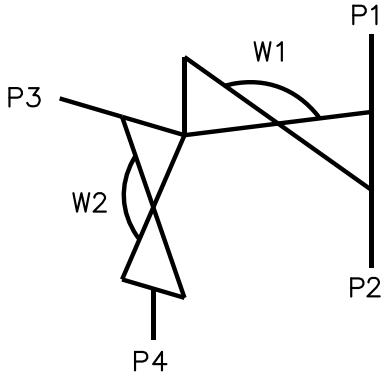
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402Q

Front

Back



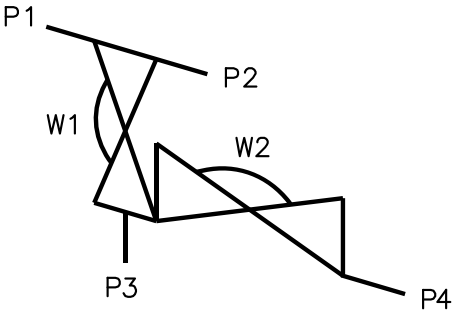
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402R

Front

Back



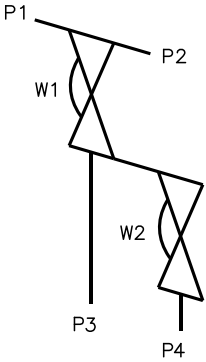
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402S

Front

Back



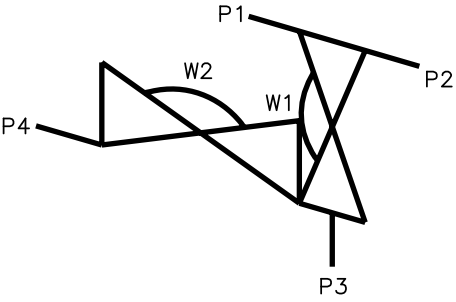
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402T

Front

Back



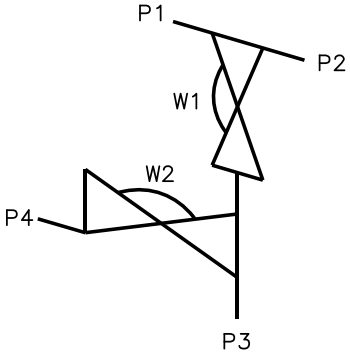
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402U

Front

Side



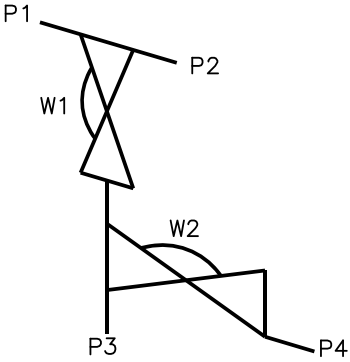
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402V

Front

Side



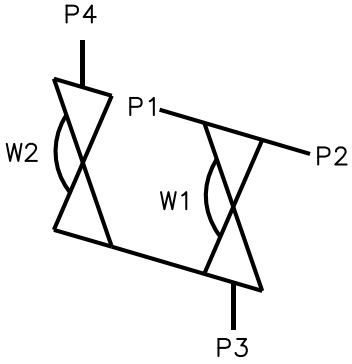
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

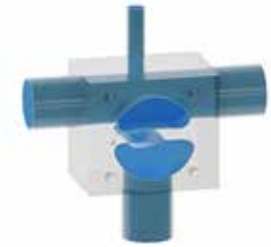
Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402W

Front

Back





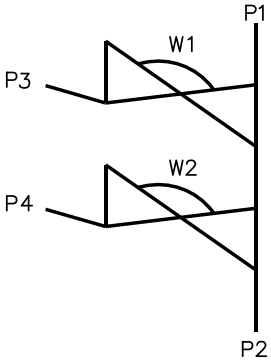
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0402X

Front

Back



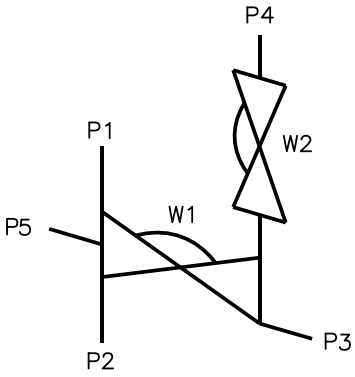
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0502A

Front

Back



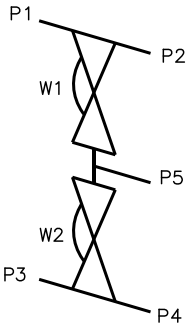
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

Installation as shown
H = Horizontal
V = Vertical

Serial Weir SW0502B

Front

Side



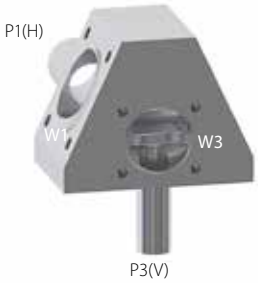
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

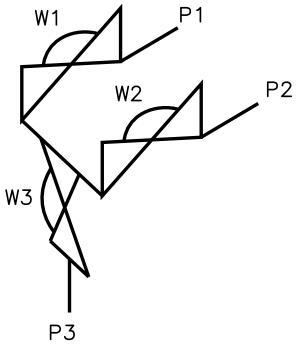
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0303A

Front

Side





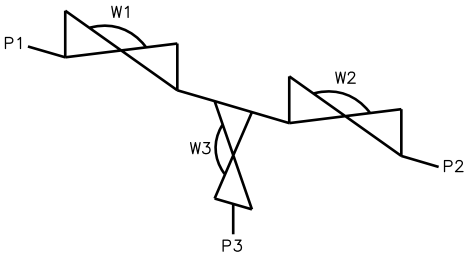
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0303B

Front

Back



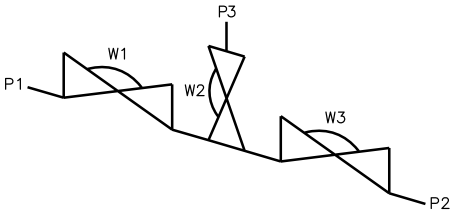
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0303C

Front

Back



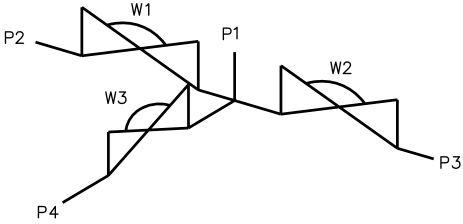
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0403A

Front

Side



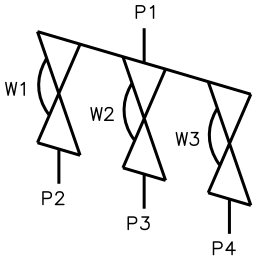
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0403B

Front

Side



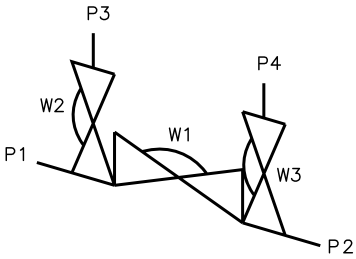
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

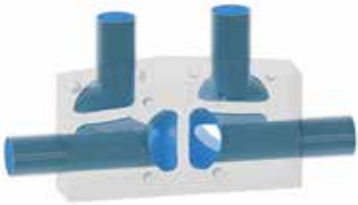
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0403C

Front

Back





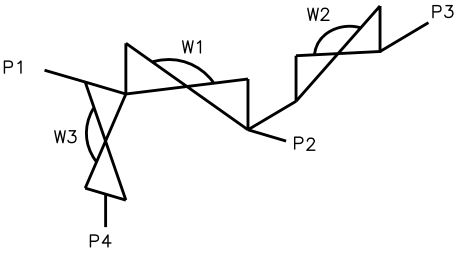
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0403D

Front

Side



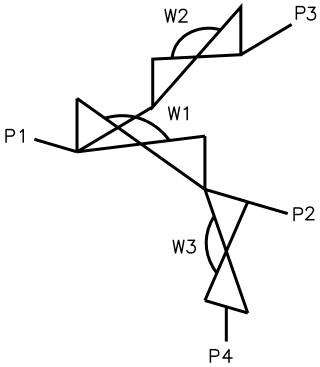
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0403E

Front

Side



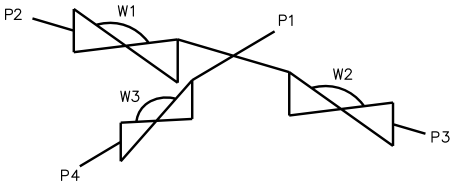
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

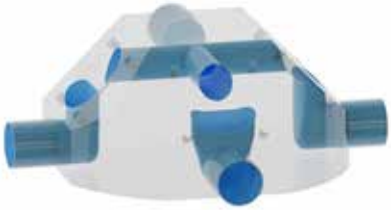
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0403F

Front

Side





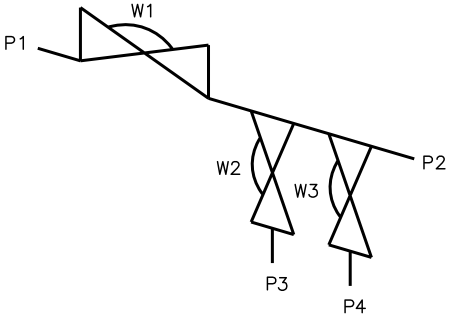
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0403G

Front

Back



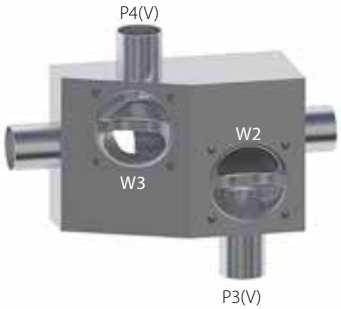
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

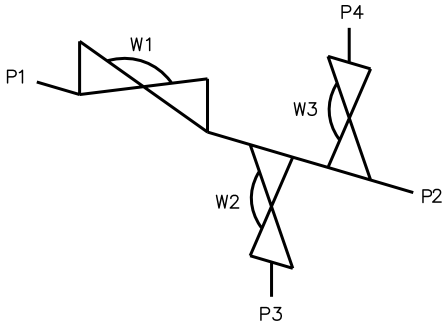
Installation as shown
H = Horizontal
V = Vertical

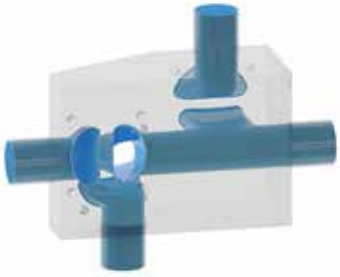
Multiple Weir MW0403H

Front

Back







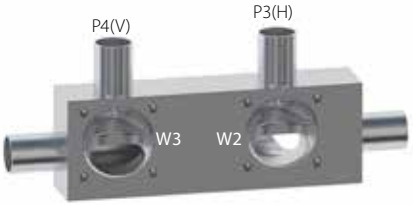
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

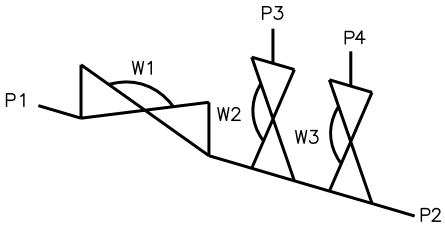
Installation as shown
H = Horizontal
V = Vertical

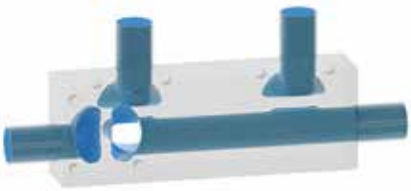
Multiple Weir MW0403I

Front

Back







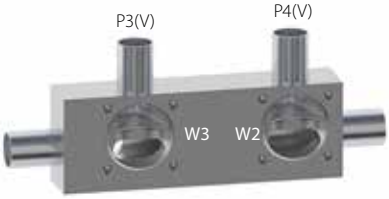
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

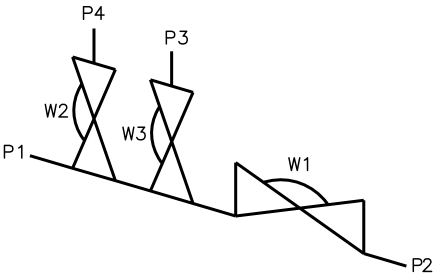
Installation as shown
H = Horizontal
V = Vertical

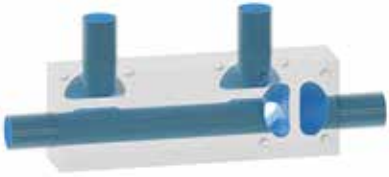
Multiple Weir MW0403J

Front

Back







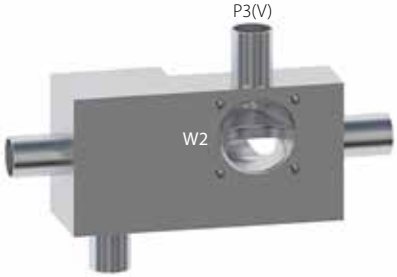
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

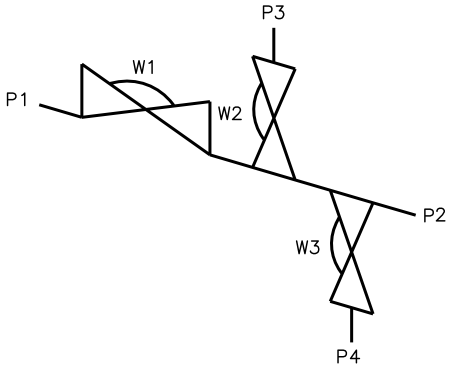
Installation as shown
H = Horizontal
V = Vertical

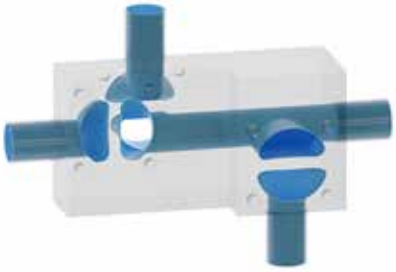
Multiple Weir MW0403K

Front

Back







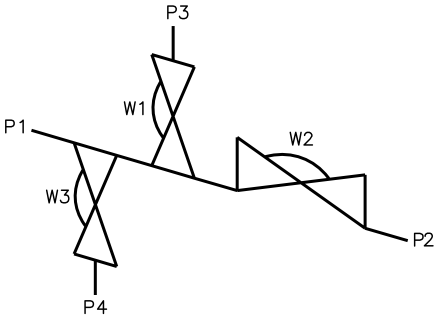
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

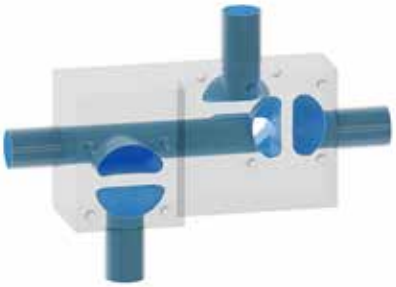
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0403L

Front

Back





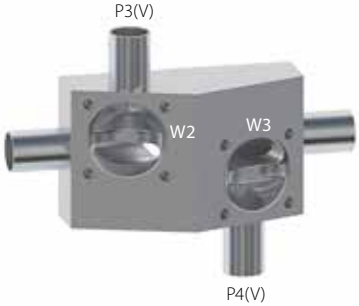
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

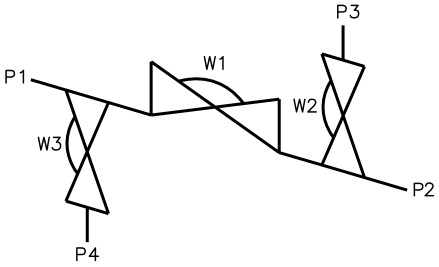
Installation as shown
H = Horizontal
V = Vertical

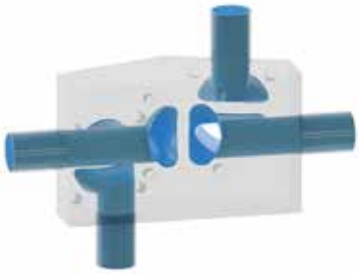
Multiple Weir MW0403M

Front

Back







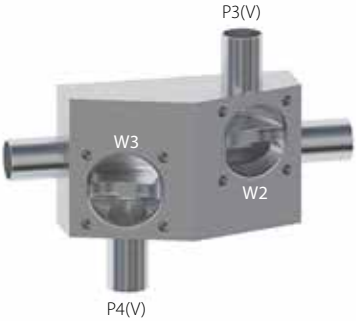
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

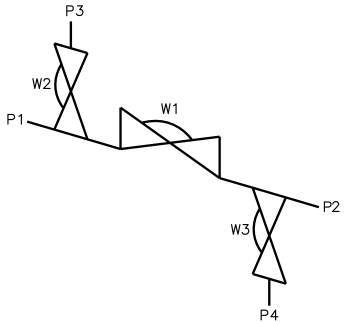
Installation as shown
H = Horizontal
V = Vertical

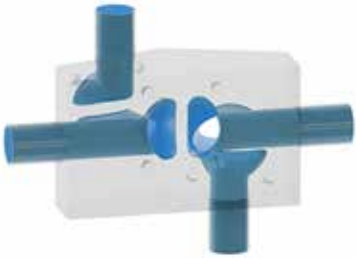
Multiple Weir MW0403N

Front

Back







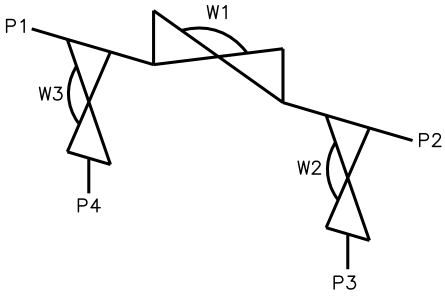
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW04030

Front

Back



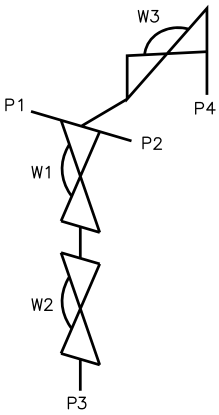
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0403P

Front

Back



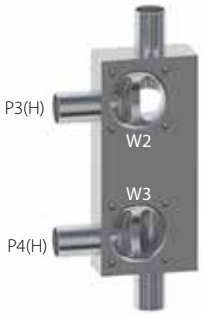
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

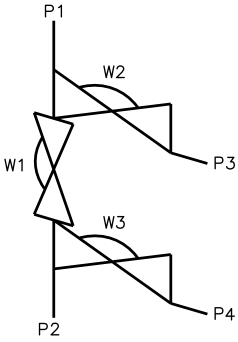
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0403Q

Front

Back





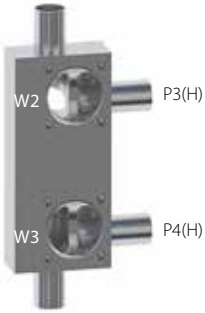
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

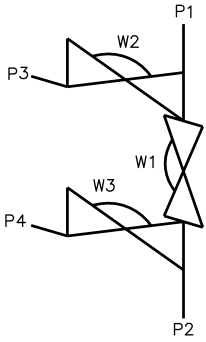
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0403R

Front

Back





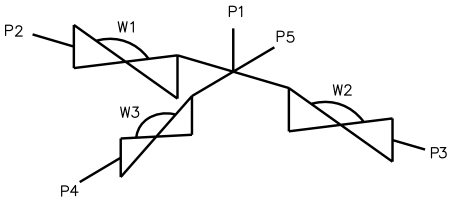
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0503A

Front

Side



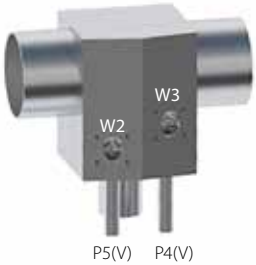
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

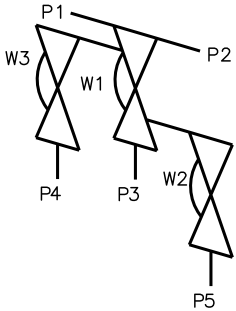
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0503B

Front

Back





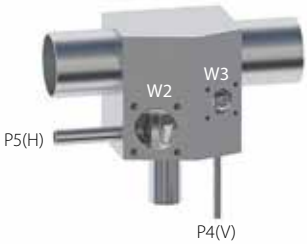
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

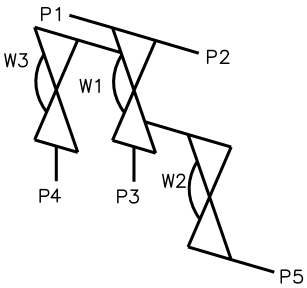
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0503C

Front

Back





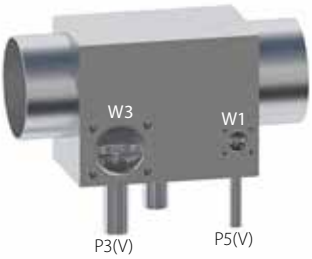
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

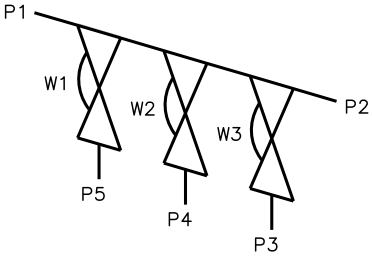
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0503D

Front

Back





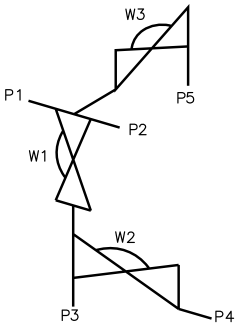
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0503E

Front

Back



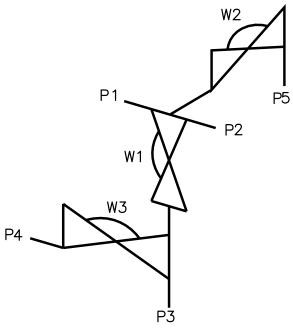
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0503F

Front

Back

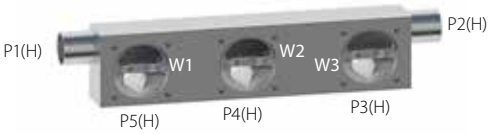


Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

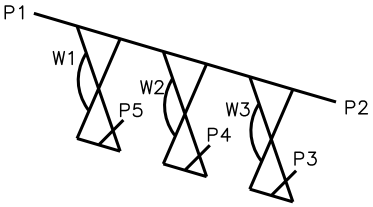
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0503G

Front



Side



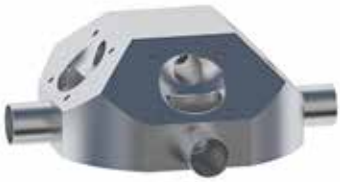
Valve	DN Size	
W1		
W2		
W3		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

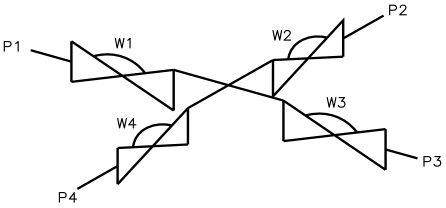
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0404A

Front

Side





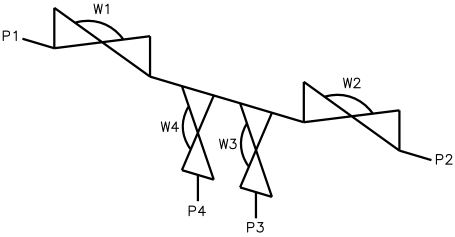
Valve	DN Size	
W1		
W2		
W3		
W4		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0404B

Front

Back



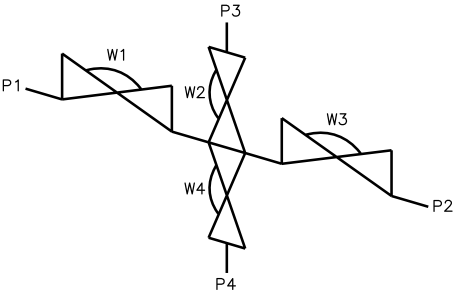
Valve	DN Size	
W1		
W2		
W3		
W4		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0404C

Front

Back

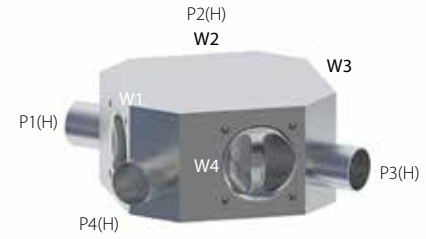


Valve	DN Size	
W1		
W2		
W3		
W4		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

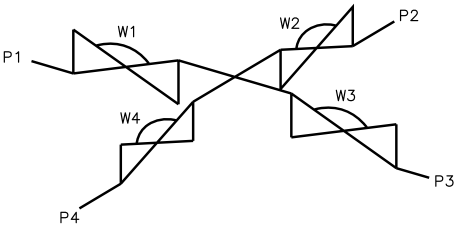
Installation as shown
H = Horizontal
V = Vertical

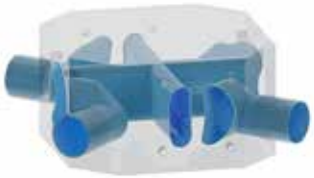
Multiple Weir MW0404D

Front



Side



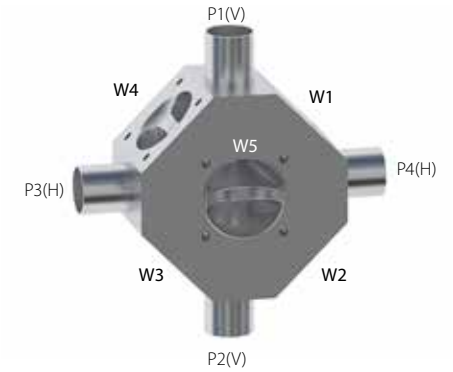


Valve	DN Size	
W1		
W2		
W3		
W4		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

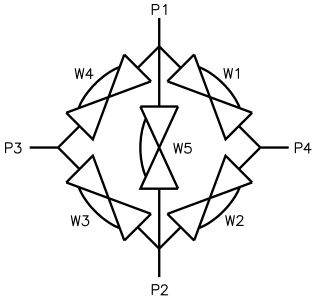
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0405A

Front



Side

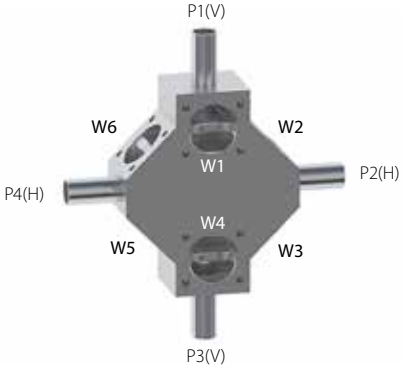


Valve	DN Size	
W1		
W2		
W3		
W4		
W5		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

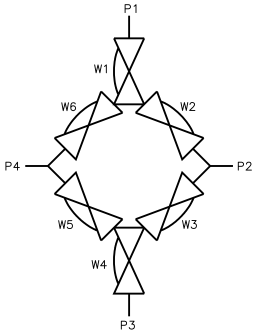
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0406A

Front



Side



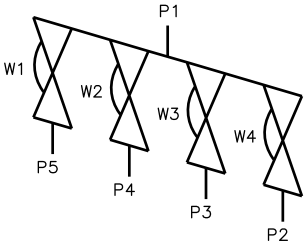
Valve	DN Size	
W1		
W2		
W3		
W4		
W5		
W6		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0504A

Front

Side



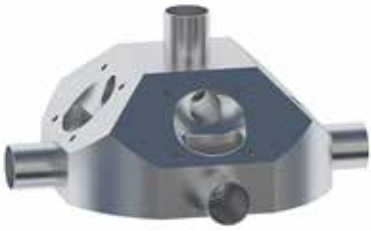
Valve	DN Size	
W1		
W2		
W3		
W4		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

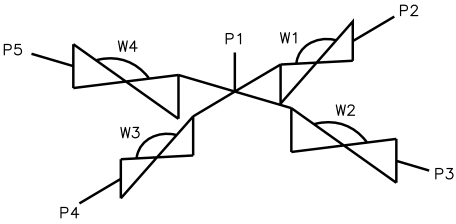
Installation as shown
H = Horizontal
V = Vertical

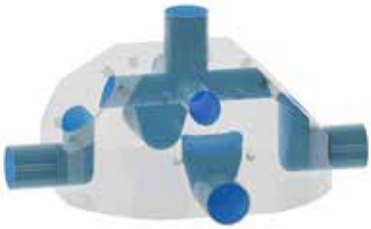
Multiple Weir MW0504B

Front

Side







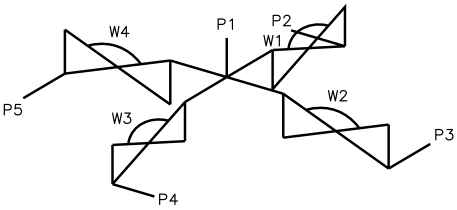
Valve	DN Size	
W1		
W2		
W3		
W4		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0504C

Front

Side



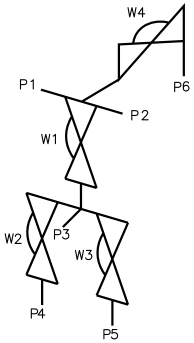
Valve	DN Size	
W1		
W2		
W3		
W4		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0604A

Front

Back



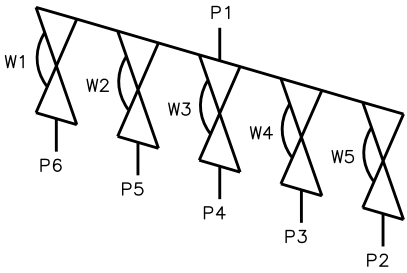
Valve	DN Size	
W1		
W2		
W3		
W4		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		
P6		

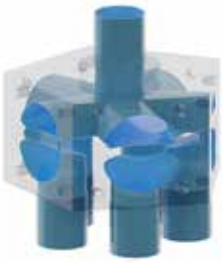
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0605A

Front

Side



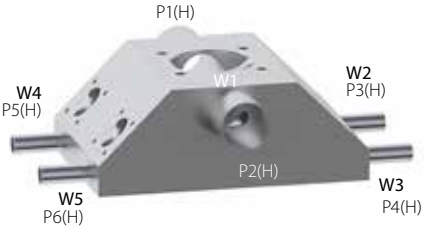


Valve	DN Size	
W1		
W2		
W3		
W4		
W5		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		
P6		

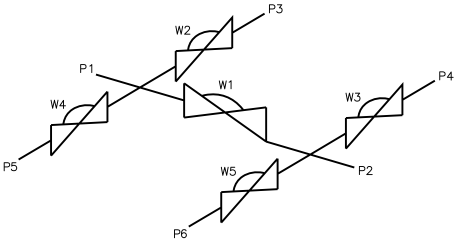
Installation as shown
H = Horizontal
V = Vertical

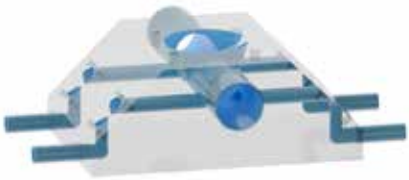
Multiple Weir MW0605B

Front



Side



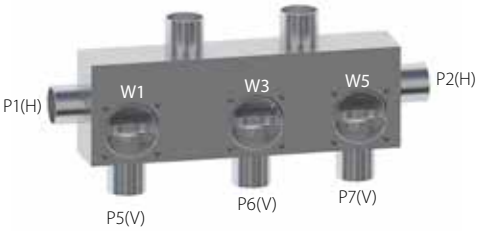


Valve	DN Size	
W1		
W2		
W3		
W4		
W5		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		
P6		

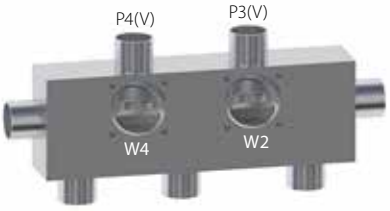
Installation as shown
H = Horizontal
V = Vertical

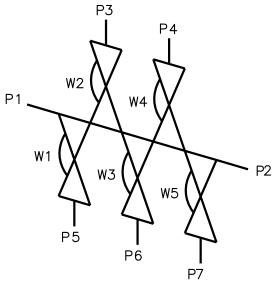
Multiple Weir MW0705A

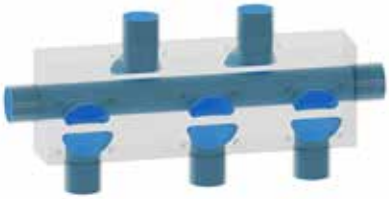
Front



Back





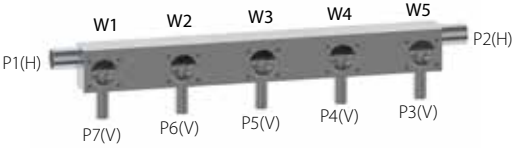


Valve	DN Size	
W1		
W2		
W3		
W4		
W5		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		
P6		
P7		

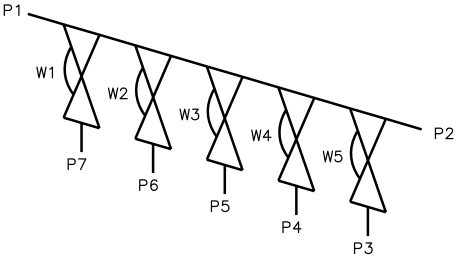
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0705B

Front



Side



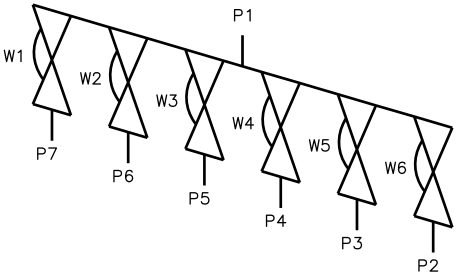
Valve	DN Size	
W1		
W2		
W3		
W4		
W5		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		
P6		
P7		

Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0706A

Front

Side



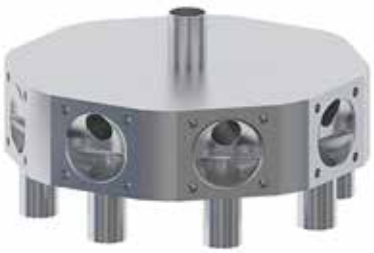
Valve	DN Size	
W1		
W2		
W3		
W4		
W5		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		
P6		
P7		

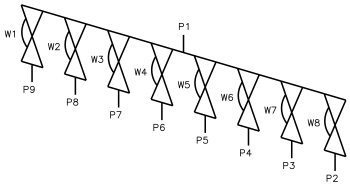
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW0908A

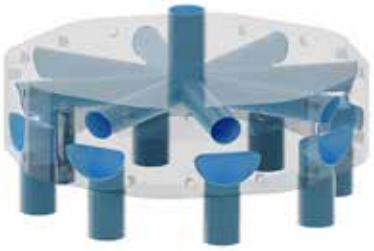
Front

Side





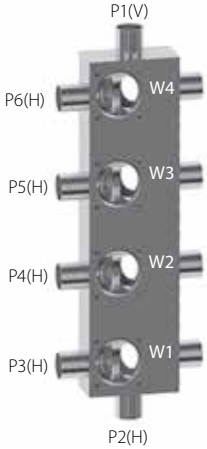
Valve	DN Size	
W1		
W2		
W3		
W4		
W5		
W6		
W7		
W8		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		
P6		
P7		
P8		
P9		



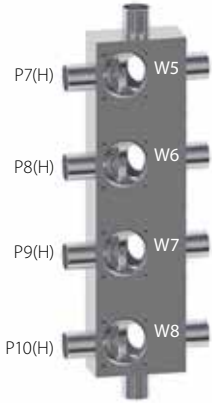
Installation as shown
H = Horizontal
V = Vertical

Multiple Weir MW1008A

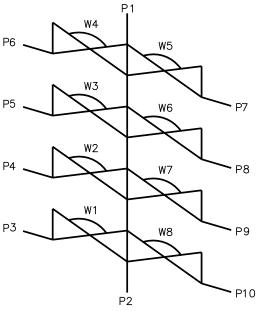
Front

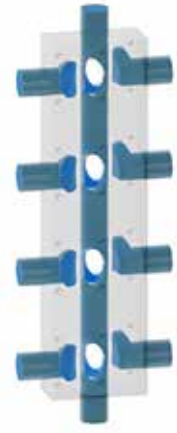


Back



Valve	DN Size	
W1		
W2		
W3		
W4		
W5		
W6		
W7		
W8		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		
P6		
P7		
P8		
P9		
P10		

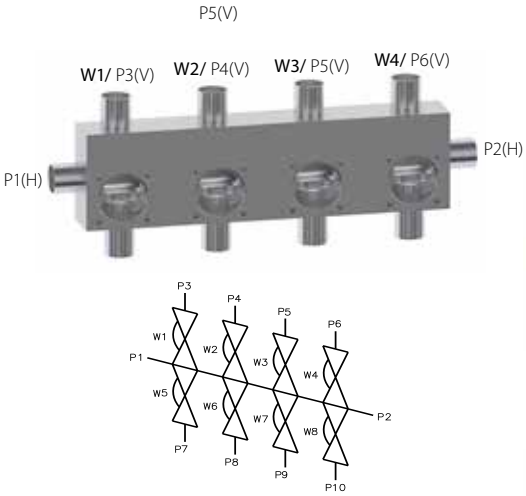




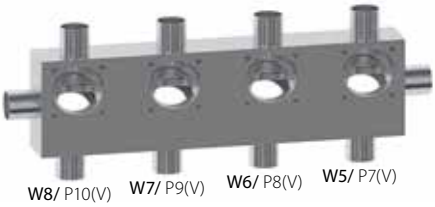
Installation as shown
H = Horizontal
V = Vertical

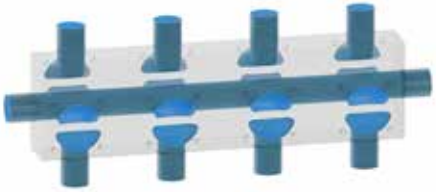
Multiple Weir MW1008B

Front



Back





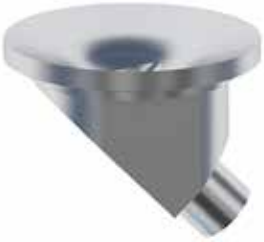
Valve	DN Size	
W1		
W2		
W3		
W4		
W5		
W6		
W7		
W8		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		
P6		
P7		
P8		
P9		
P10		

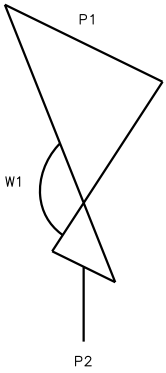
Installation as shown
H = Horizontal
V = Vertical

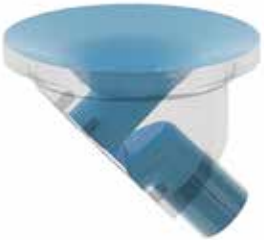
Tank Weir TW0201A

Front

Side







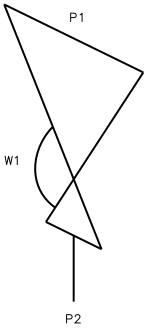
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		

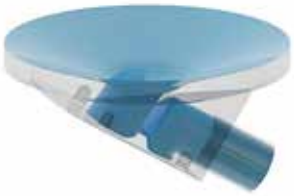
Installation as shown
H = Horizontal
V = Vertical

Tank Weir TW0201B

Front

Side





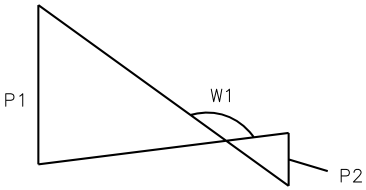
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		

Installation as shown
H = Horizontal
V = Vertical

Tank Weir TW0201C

Front

Side



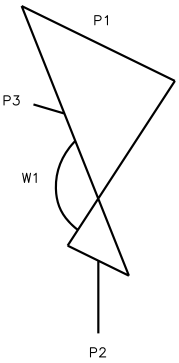
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
Tank Clamp Radius		
R1		

Installation as shown
H = Horizontal
V = Vertical

Tank Weir TW0301A

Front

Side



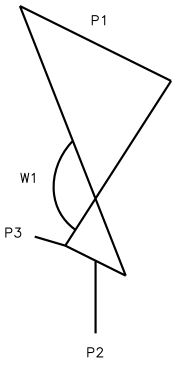
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Tank Weir TW0301B

Front

Side



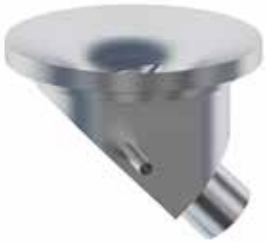
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

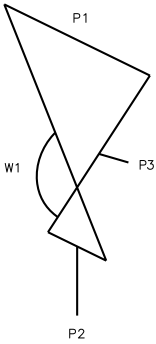
Installation as shown
H = Horizontal
V = Vertical

Tank Weir TW0301C

Front

Side





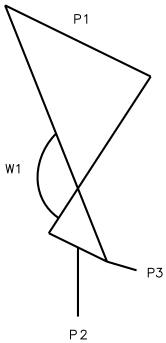
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

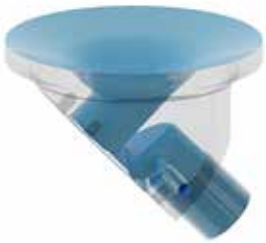
Installation as shown
H = Horizontal
V = Vertical

Tank Weir TW0301D

Front

Side





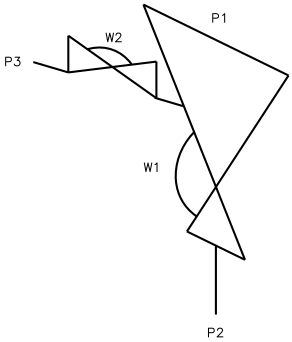
Valve	DN Size	
W1		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

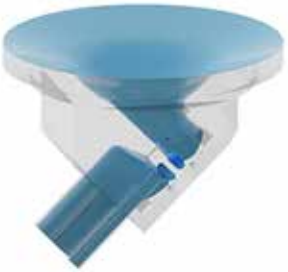
Installation as shown
H = Horizontal
V = Vertical

Tank Weir TW0302A

Front

Side





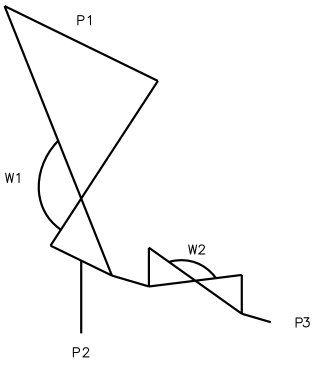
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Tank Weir TW0302B

Front

Side



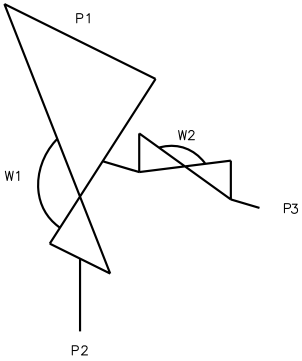
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Tank Weir TW0302C

Front

Side



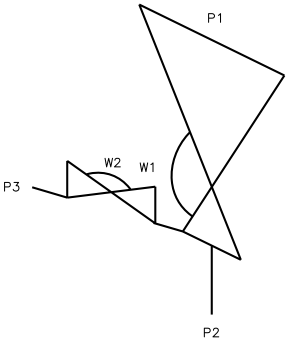
Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

Installation as shown
H = Horizontal
V = Vertical

Tank Weir TW0302D

Front

Side

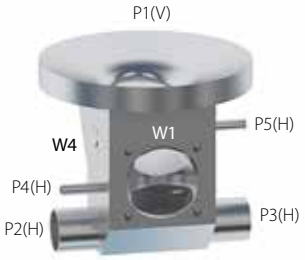


Valve	DN Size	
W1		
W2		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		

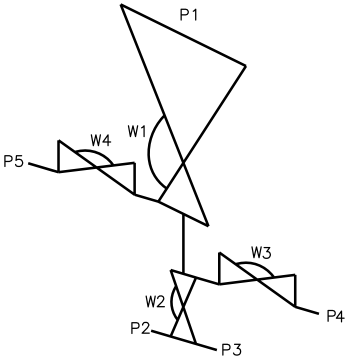
Installation as shown
H = Horizontal
V = Vertical

Tank Weir TW0504A

Front



Side



Valve	DN Size	
W1		
W2		
W3		
W4		
Port	**DN Size**	**Tube Specification**
P1		
P2		
P3		
P4		
P5		

Installation as shown
H = Horizontal
V = Vertical

Manual Bonnets Overview

Key Features

1. Clean external profile to facilitate wash down and cleaning regimes
2. Suitable materials, corrosion resistant polymer and stainless construction
3. FDA conforming lubricants
4. Compact design easily integrated into process system
5. Autoclavable types for valves subject to repeated autoclaving
6. Modular options including limit open and limit closed stops, padlocking device and switches

PES Performance Bonnet

Para Bonnet

Sealed Stainless Steel Bonnet

Stainless Steel Bonnet

Bonnet Type	Size Range	Shell MOC	Handwheel MOC	Compressor MOC	Autoclavable	SIP	Chemical Resistance
Stainless Steel	DN15 - DN150 (½" - 6")	Stainless Steel	PES (Polyethersulphone)	Stainless Steel	✓	✓	✓
Para	DN15 - DN50 (½" - 2")	PARA (Polyaryl Amide)	PARA (Polyaryl Amide)	Stainless Steel		✓	✓
PES Performance	DN15 - DN80 (½" - 3")	PES (Polyethersulphone)	PES (Polyethersulphone)	Stainless Steel	✓	✓	✓
Stainless Steel Sealed	DN15 - DN80 (½" - 3")	Stainless Steel	Stainless Steel	Stainless Steel	✓	✓	✓
Bioseal Polymer	DN8 (¼")	PPS (Polyphenylene Sulphide)	PPS (Polyphenylene Sulphide)	Stainless Steel	✓	✓	✓
Bioseal Stainless Steel	DN8 (¼")	Stainless Steel	PPS (Polyphenylene Sulphide)	Stainless Steel	✓	✓	✓

Diaphragm Range

Saunders full range of Biopharm diaphragms comply with all international test accreditations

- FDA compliant 21CFR
- Third party tested to USP Class VI <87>, <88> Comply with ASME BPE
- Certified ADCF (Animal Derived Component Free)
- Fully lot traceable to EN 10204

ER GRADE

OVERVIEW

- Saunders® ER grade diaphragm is manufactured from a specially formulated EPDM compound. The ER material is peroxide cured for optimum cross linking and to minimize extractables and leachable

DESIGN FEATURES

- One piece design utilises a threaded engagement to the valve compressor
- Fabric reinforcement positioned to provide support and optimise mechanical strength

MATERIALS OF CONSTRUCTION

- EPDM

SIZE RANGE

- DN8 (0.25") – DN200 (8.00")

TEMPERATURE RANGE

- -40 ^{0}C (-40 ^{0}F) to 110 ^{0}C (230 ^{0}F)
- Recommended for standard duty

PR GRADE

OVERVIEW

- Saunders® PR Pure Resilience diaphragms are robust two piece leaf type. The design incorporates a virgin PTFE wetted face backed with a fabric reinforced support diaphragm

DESIGN FEATURES

- Bayonet style attachment to permit "float" in compressor attachment and avoid point loading/mechanical stress

MATERIALS OF CONSTRUCTION

- 100% virgin PTFE wetted contact face with EPDM support backing

SIZE RANGE

- DN8 (0.25") – DN200 (8.00")

TEMPERATURE RANGE

- -20 ^{0}C (-4 ^{0}F) to 160 ^{0}C (320 ^{0}F)
- Recommended for mild sterilisation cycles

Diaphragm Range

Saunders® develops, compounds and manufactures all single piece elastomer and 2 piece leaf style PTFE faced diaphragms in-house from raw ingredient and has front to back ownership of all phases of development and manufacturing.

SR GRADE

OVERVIEW

- Saunders® SR Steam Resilience are robust two-piece leaf type. The design incorporates a Modified PTFE wetted face backed with a fabric-reinforced support diaphragm

DESIGN FEATURES

- Bayonet style attachment to permit "float" in compressor attachment and avoid point loading/mechanical stress

MATERIALS OF CONSTRUCTION

- Modified PTFE resin (TFM) wetted contact face with EPDM support backing

SIZE RANGE

- DN8 (0.25") – DN200 (8.00")

TEMPERATURE RANGE

- -20 ^{0}C (-4 ^{0}F) to 160 ^{0}C (320 ^{0}F)
- Recommended for "constant" steam conditions

EX GRADE

OVERVIEW

- Saunders® EX Endurance Diaphragm is a unique material combination which offers outstanding performance in applications exposed to prolonged sterilisation regimes, or higher temperature up to 175°C (347°F)

DESIGN FEATURES

- Bayonet style attachment to permit "float" in compressor attachment and avoid point loading/mechanical stress

MATERIALS OF CONSTRUCTION

- Modified PTFE resin (TFM) wetted contact face with Silicon support backing

SIZE RANGE

- DN8 (0.25") – DN200 (8.00")

TEMPERATURE RANGE

- -20 ^{0}C (-4 ^{0}F) to 175 ^{0}C (347 ^{0}F)
- Recommended for intermittent and constant steam conditions as well as to reduce retorquing maintenance

Acuator S360

Modular Design

The Saunders® S360 modular range delivers optimum dimensional envelope and closure performance. There are two different normally closed versions available; the S360 Lite and S360 Power actuator that delivers industry leading closure performance and allows complete flexibility to suit a wide range of pressure and flow conditions.

Size Range
- DN8 (0.25") – DN100 (4.00")

Modes of Operation
- Spring-to-Close
- Spring-to-Open
- Double Acting

Material of Construction
- Polymer Cover: Stainless Steel 1.4408
- Bonnet: Stainless Steel 1.4408

Temperature
- Max: 100°C
- Min: -10°C

Accessory Options
- Saunders-VUE Sensors (direct mount)
- Limit Open Stop (Spring-to-Close mode)
- Limit Close Stop (Spring-to-Open mode)
- Positioners

Diaphragm Interchangeability
- Unique compressor design that permits easy conversion of the compressor between rubber and PTFE Diaphragms

Diaphragm Interchangeability
- Catalogue Code
- Valve Size
- Mode of Operation
- Operating Pressure
- Date of Manufacturing

Saunders® S360 Lite

The S360 Lite range provides standard closure for normally closed applications in a very compact, lightweight package and is ideal for most applications. The S360 Lite fits into tight piping arrays – and its compact size can even help reduce block valve design and is available through sizes DN8 – DN100 (0.25" – 4.00").

Saunders® S360 Power

The Saunders® S360 Power range offers higher operating closure performance in a compact package for high operating pressure or atypical closing conditions with high pressure on both sides of the weir. The S360 Power normally closed actuator is available through sizes DN15 – DN50 (0.50" – 2.00").

Pneumatic Actuator P345

Pneumatic Actuator P345

Saunders P345 is a compact polymer pneumatic actuator designed to provide superior performance in Bioprocess applications and delivers operational savings in terms of plant efficiency and air consumption.

Key Features

1. 4.5 BAR OPERATING PRESSURE: LOWER TOTAL COST OF OWNERSHIP THROUGH REDUCED AIR CONSUMPTION
2. INDUSTRY LEADING CLOSURE PERFORMANCE: 10 BAR @100% ΔP FOR RUBBER & PTFE DIAPHRAGMS
3. LIGHT WEIGHT CONSTRUCTION: 30% LIGHTER COMPARED TO STAINLESS STEEL VARIANT
4. ZERO MAINTENANCE: MAINTENANCE FREE PLUG-N-PLAY RELIABLE OPERATION

Size Range
- DN8 (0.25") – DN50(2.00")

Modes of Operation
- Spring-to-Close

Material of Construction
- Polymer Cover: Polyamide
- Bonnet: Stainless Steel

Temperature
- Max: 100°C
- Min: -10°C

Accessory Options
- Saunders-VUE Sensors (direct mount)
- Limit Open Stop (Spring-to-Close mode)
- Positioners

Diaphragm Interchangeability
- Unique compressor design that permits easy conversion of the compressor between rubber and PTFE Diaphragms

Saunders®
the science inside

I-VUE Sensor

The Saunders® I-VUE has been engineered to compensate for the behavior of diaphragm valves under multiple processing conditions including: process, CIP and SIP, and varying operating air supply.

Valve Size Range	0.25"–4.00" (DN8-DN100)
Sensing Technology	Continuous sensing via five electro-magnetic coils
Target	Composite ferrous magnet
Sensitivity	Less than 0.2mm (0.008")
Position Indication	Green LEDs - Open Red LEDs - Closed Physical position indicator
Feedback Options	24VDC P2P AS-i version 2.0 standard access AS-i version 2.1 extended access AS-i version 3.0 extended access (optional) DeviceNet
Local Programming	Via magnetic key
Remote Programming	At control panel (Networking versions only)
Standard Connection	P2P with SOV:M12 5 pin P2P without SOV:M12 4 pin AS-i:M12 4 pin DeviceNet: Mini 5 pin
Approvals	NEMA 4x, IP66, CE, Class 1 Div 2 (FM approved), ATEX Zone 2

MATERIALS OF CONSTRUCTION

Module Housing	Polycarbonate
Connection Box	Polycarbonate
Target	Composite Ferrous Magnet
Seals	Buna N (Nitrile)

OPTIONAL INTEGRAL SOLENOID

Body	Anodized Aluminum or Stainless Steel
Type	Piloted, 3/2
Voltage	24VDC 0.6W
CV	0.9 (0, 8 Kv)
Flow Rate	400 Nl/m
Air Connections	1/8" BSP, 1/8" NPT
Manual Override	Standard design with lock out feature

M-VUE Sensor

Saunders® M-VUE has been engineered to compensate for the behavior of diaphragm valves under multiple processing conditions including process, CIP, SIP and varying operating air supply.

Valve Size Range	0.25"–2.00" (DN8-DN50)
Sensing Technology	Continuous sensing via five solid state reed sensors
Target	Composite ferrous magnet
Stroke	3-22mm
Sensitivity	Less than 0.3mm (0.012")
Position Indication	Green LEDs - Open Red LEDs - Closed Physical position indicator
Feedback Options	24VDC P2P AS-i version 2.0 standard access AS-i version 2.1 extended access AS-i version 2.0 extended access (optional) DeviceNet
Local Programming	Via magnetic key
Remote Programming	At control panel (networking versions only)
Standard Connection	P2P: M12 5 pin
Approvals	NEMA 4X, IP66, CE

MATERIALS OF CONSTRUCTION

Mounting Base	Glass Reinforced Polybutylene Terephthalate (PBT)
Electronics Module	Polycarbonate (PC)
Target	Composite Ferrous Magnet
Seals	Buna N (Nitrile)

OPTIONAL INTEGRAL SOLENOID

Solenoid Case	PBT
Type	3/2 way
Voltage	24VDC, 2.5W
Air Connections	1/8" BSP or 1/8" NPT
Optional	Solenoid exhaust block

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CPE-SAUNDERS-BIO_BLOCK_MANUAL-BU-EN-A5-2024_02_01