

SERVING THE GAS INDUSTRY WORLDWIDE

Technical Description

SERVICE GOVERNOR MODULES



Introduction

Bryan Donkin RMG, have successfully engineered Gas Pressure Reducing and Metering Stations for over 40 years embodying the extensive range of gas control equipment manufactured by the Company and RMG Group of Companies.

Skid mounted, pre-packaged units are designed and built to meet individual customer requirements and specifications. Units range from Domestic Meter Boxes to High Pressure Class 600 stations.

Units have been supplied worldwide to a range of industries including Gas, Steel, Process and Chemical etc. All designs take account of modern practices in the control of gases and incorporate safety features to provide a unit of high integrity. Factory built units are pre-tested giving a high level of Quality Assurance, whilst simplifying on-site installation/ commissioning and providing considerable savings in manpower.

Service Governor Modules:

The Service Governor Modules (SGM) contained in this publication are a space saving range of standard designs for use on District, Industrial and Commercial services for pressures up to 7 barg, providing the flexibility to meet the requirements of IGE/TD 13 and T/SP/E34.

Features:

- Inlet & Outlet Isolating Valves
- Regulator
- Safety Cut-Off Valve
- Creep Relief Valve
- Above & Below Ground Options

Benefits:

- Pre-Packaged Ready to Install.
- Minimum Labour
- Easy to Handle
- Pre-Tested

TECHNICAL DETAILS		
Description	SGM 5S to 8S	SGM 9S to 29F
Isolating Valves	Orseal Ball Valves or equivalent	Screwed: Orseal Ball Valves or Equiv. Flanged: Bryan Donkin Fig 555 wedge gate. Bryan Donkin Fig 50 Ball Valve
Filters	Series 127 Top Hat Filter 50/200 micron	Series 124 Angle Type - 50/200 micron
Regulators	Series 240LR - 309LP OPCO	Series 270MK2-R-309LP OPCO
Slamshut Valves	Integral on regulator	Integral on regulator
Creep Relief Valve	Integral on regulator	Integral on regulator
Stream Discrimination	n/a	Series 580 'Waferchek' - (28/29 FB1) Series 590 'Rollchek' - (26S)
Screwed Pipework	BS 1387 (heavy wall)	BS 1387 (heavy wall)
Fabrications	n/a	BD-RMG Specifications: PS 636 1
Joining	n/a	BS 4865 - asbestos free
Connections	Screwed to BS 21	Flanged to BS EN 1092 (PN16)
Screwed Fittings	BS 1256 or BS 143	BS 1256 or BS 143
Impulse Pipe	BS 3605 18 SWG or ASTM-A-269	BS 3605 18 SWG or ASTM-A-269
Painting	BD-RMG MI2953 & top coat to BS4800-10-E53 (Canary Yellow)	BD-RMG MI2953 & top coat to BS4800-10-E53 (Canary Yellow)
Kiosk	Reinforced fibre-glass	Reinforced fibre-glass
Pit Housing	Reinforced fibre-glass/Mild steel pit cover	Reinforced fibre-glass/Mild steel pit cover

SERVICE GOVERNOR MODULES

Quick Selection Guide

Inlet Pressure: Up to 2 barg

ACTIVE/SLAM								
Model	Connection Size/Type	Single Stream		Twin Stream		Installation		Page Number
		Std.	With by-pass	Std.	S.D.	Above Ground	Below Ground	
SGM 5S	3\4" SC	✓				✓		5
SGM 5SB	3\4" SC		✓			✓		6
SGM 6S	32mm PE	✓					✓	7
SGM 6SB	32mm PE		✓				✓	8
SGM 7S	3\4" SC			✓		✓		9
SGM 8S	32mm PE			✓			✓	10
SGM 9S	2" SC	✓				✓		11
SGM 9SB	2" SC		✓			✓		12
SGM 10S	63mm PE	✓					✓	13
SGM 10SB	63mm PE		✓				✓	14
SGM 10 S-T-PE*	63mm PE			✓			✓	15
SGM 11S	2" SC			✓		✓		16
SGM 13 S-T-PE*	63mm PE				✓		✓	17
SGM 15FB	DN50		✓			✓		18
SGM 16F	DN50	✓					✓	19
SGM 17F	DN50			✓		✓		20
SGM 26S	2" SC				✓	✓		21
SGM 28 FB-1	DN50				✓	✓		22
SGM 29 FB-1	DN50/DN80				✓	✓		23

* Optional Single Stream version available on request, (SGM 10 S-S-PE and SGM 13 S-S-PE)

Inlet Pressure: Up to 7 barg

ACTIVE/SLAM						
Model	Connection Size/Type	Single Stream		Installation		Page Number
		Std.	With by-pass	Above Ground	Below Ground	
SGM 5SFB-7B	DN20 / 3/4" sc		✓	✓		25
SGM 6SFB-7B	DN20 / 32mm		✓		✓	26
SGM 9SFB-7B	DN25 / 2" sc		✓	✓		27
SGM 10SFB-7B	DN25 / 63mm		✓		✓	28
SGM 15SFB-7B	DN50		✓	✓		29

Key: Std. = Standard Unit, S.D. = Stream Discrimination Valves

Options:

- Space saving Kiosk for above ground installations (page 30)
- Vent Stack Type 'VS3' for SGM 10S-T-PE & SGM 13S-T-PE (page 31)

SERVICE GOVERNOR MODULES
Capacity Selection Guide
Inlet Pressure: Up to 2 barg

OUTLET PRESSURE : 30 mbarg							
Model	Type	Inlet Pressure in Barg/Capacity in smch (SG 0.6)					
		0.14	0.21	0.35	0.7	1.0	2.0
SGM 5 & 5SB	S/S	6	12	9	14	20	23
SGM 6S & 6SB	S/S	6	12	9	14	20	23
SGM 7S* & 8S	T/S	6	12	9	14	20	23

* Can be used with both streams working, ie capacity x2

OUTLET PRESSURE : 50 mbarg							
Model	Type	Inlet Pressure in Barg/Capacity in smch (SG 0.6)					
		0.14	0.21	0.35	0.7	1.0	2.0
SGM 9S & 9SB	S/S	100	150	201	250 iv	290 iv	290 ov
SGM 10S & 10SB	S/S	100	150	201	250 iv	290 iv	290 ov
SGM 10S-T-PE	T/S	100	150	201	250 iv	290 iv	290 ov
SGM 11S	T/S	100	150	201	250 iv	290 iv	290 ov
SGM 13S-T-PE	T/S	100	150	201	250 iv	290 iv	290 ov
SGM 15FB	S/S	100	150	201	250 iv	290 iv	290 ov
SGM 16F	S/S	100	150	201	250 iv	290 iv	290 ov
SGM 17F	T/S	100	150	201	250 iv	290 iv	290 ov
SGM 26S	T/S	100	150	201	250 iv	290 iv	290 ov
SGM 28FB1	T/S	100	150	201	250 iv	290 iv	290 ov
SGM 29FB1	T/S	100	150	201	250 iv	290 iv	290 iv

Key: iv/ov = Inlet/Outlet pipework velocity restrictions (20 m/sec inlet/40 m/sec Outlet)

Inlet Pressure: Up to 7 barg

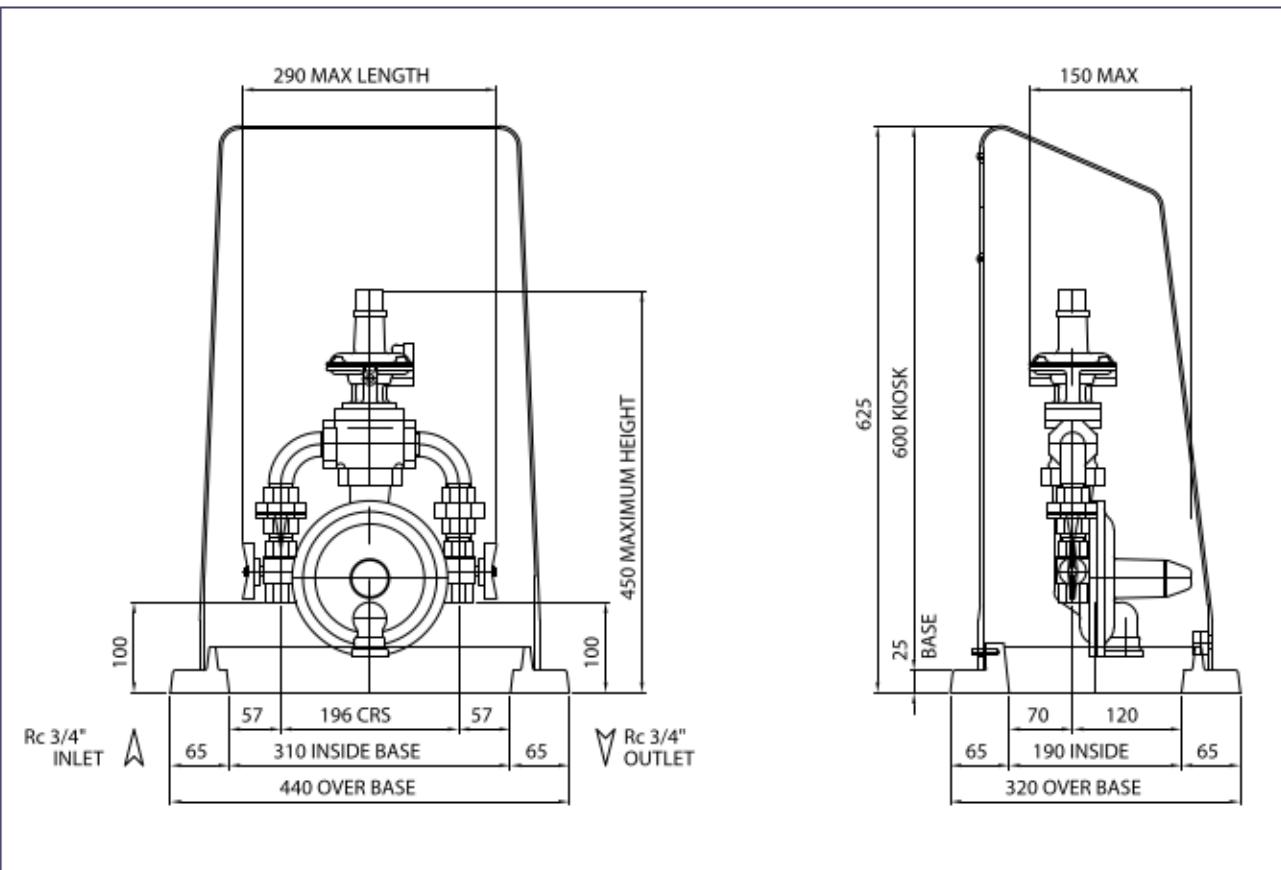
OUTLET PRESSURE : 30 mbarg							
Model	Type	Inlet Pressure in Barg/Capacity in smch (SG 0.6)					
		2.0	2.7	3.5	5.0	6.0	7.0
SGM 5SFB-7B	S/S	16	18	19	21	22	23
SGM 6SFB-7B	S/S	16	18	19	21	22	23

OUTLET PRESSURE : 50 mbarg							
Model	Type	Inlet Pressure in Barg/Capacity in smch (SG 0.6)					
		2.0	2.7	3.5	5.0	6.0	7.0
SGM 9SFB-7B	S/S	85	105	125	160	175	190
SGM 10SFB-7B	S/S	85	105	125	160	175	190
SGM 15SFB-7B	S/S	85	105	125	160	175	190

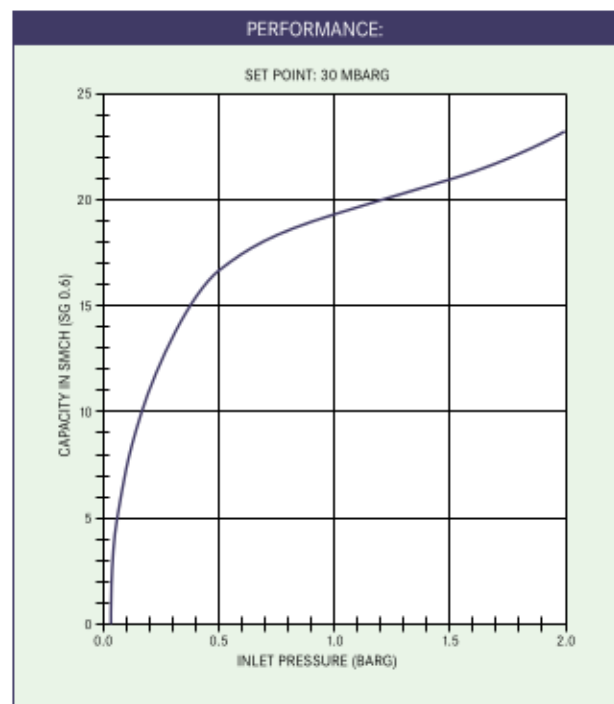


INLET PRESSURES:

Up to 2 barg

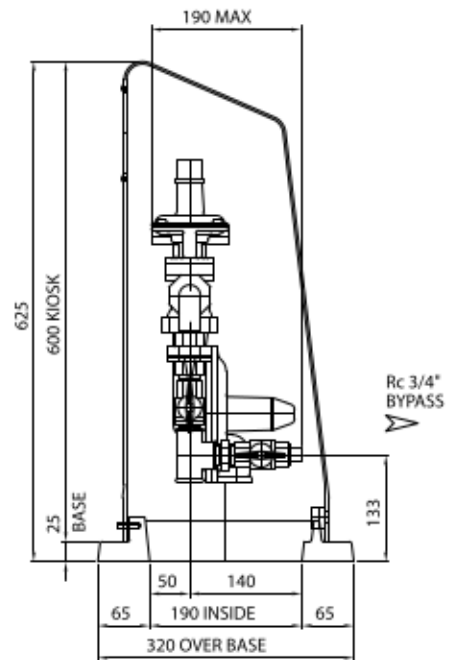
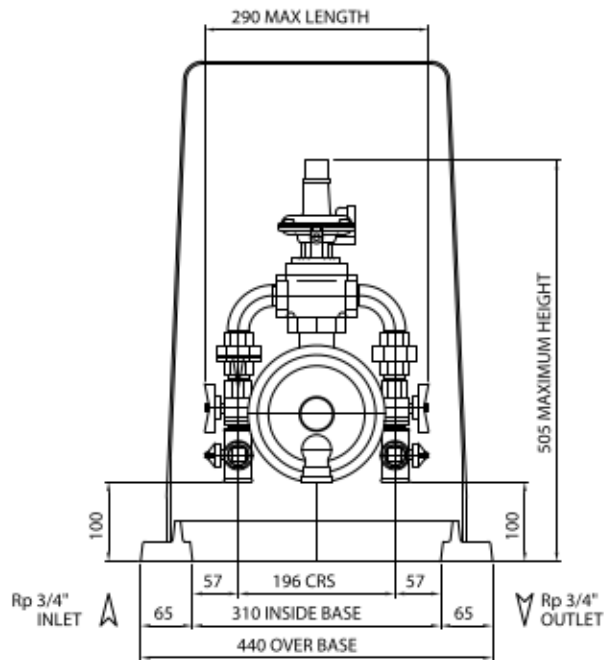


TECHNICAL DETAILS:	
Type	Active / Slam Single Stream
Installation	Above Ground
Connections	INLET - 3/4" Screwed OUTLET - 3/4" Screwed
Housing	Kiosk No. 1
Weights	Module 7KG Kiosk & Base 7KG



SERVICE GOVERNOR MODULES

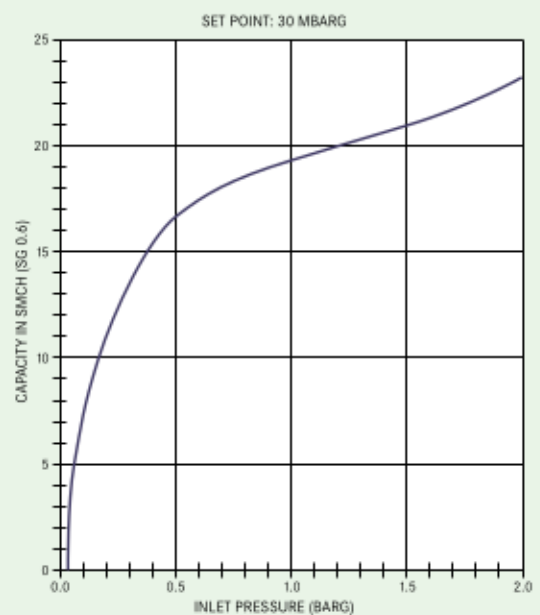
SGM 5SB



TECHNICAL DETAILS:

Type	Active / Slam Single Stream With By-Pass
Installation	Above Ground
Connections	INLET - 3/4" Screwed OUTLET - 3/4" Screwed
Housing	Kiosk No. 1
Weights	Module 7KG Kiosk & Base 7KG

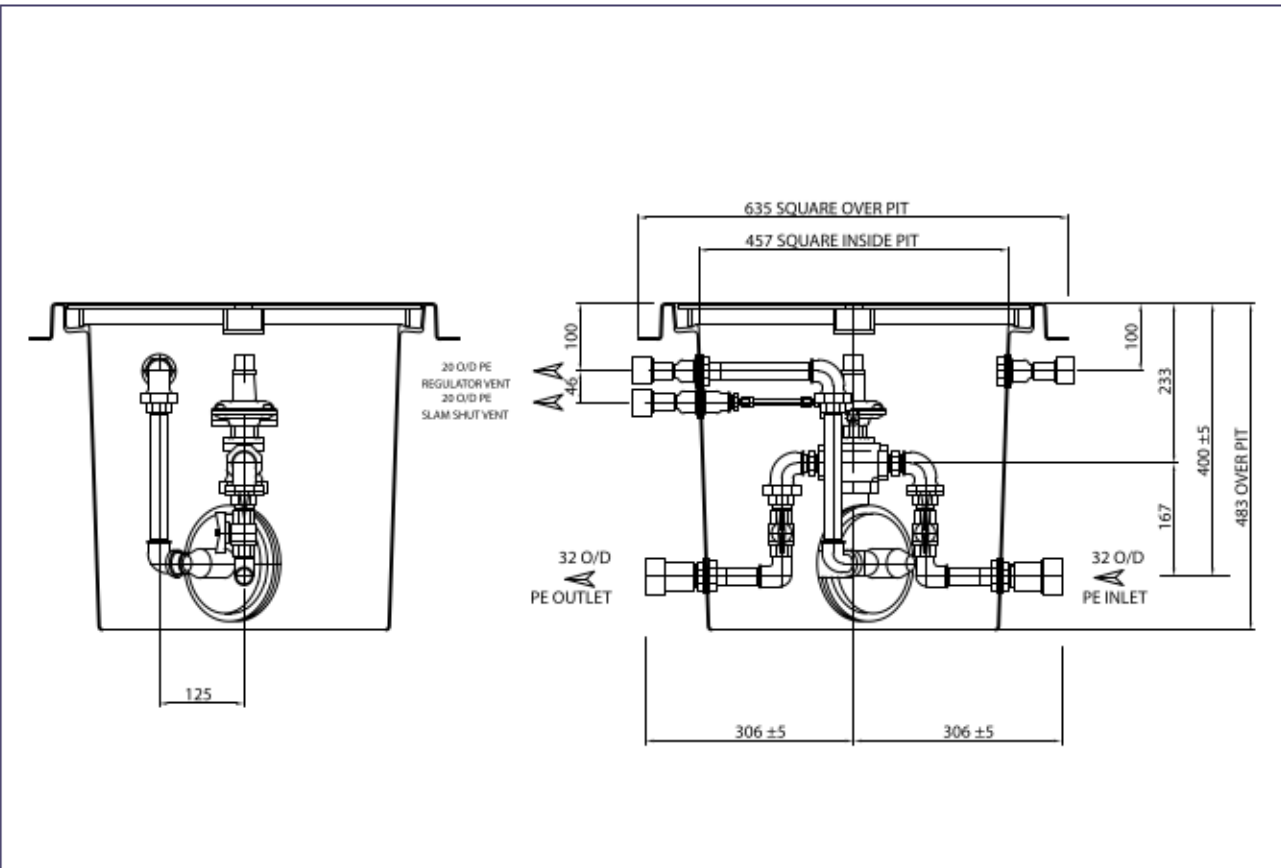
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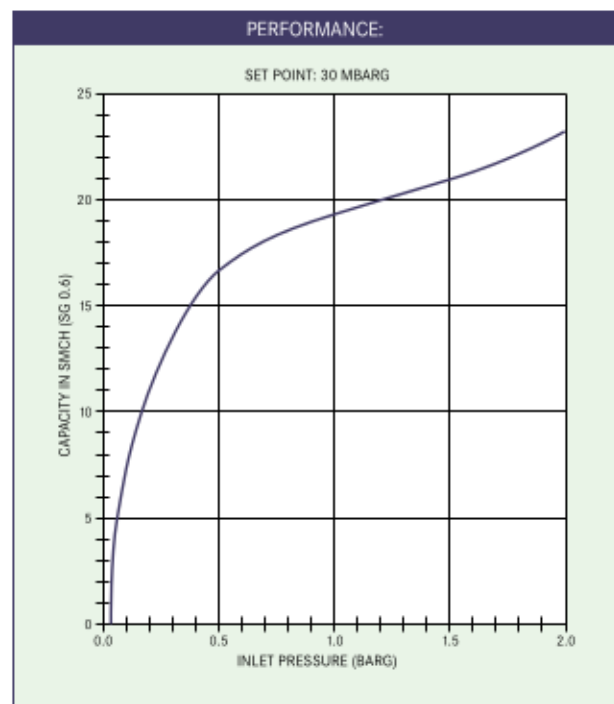


SERVICE GOVERNOR MODULES

SGM 6S-PE

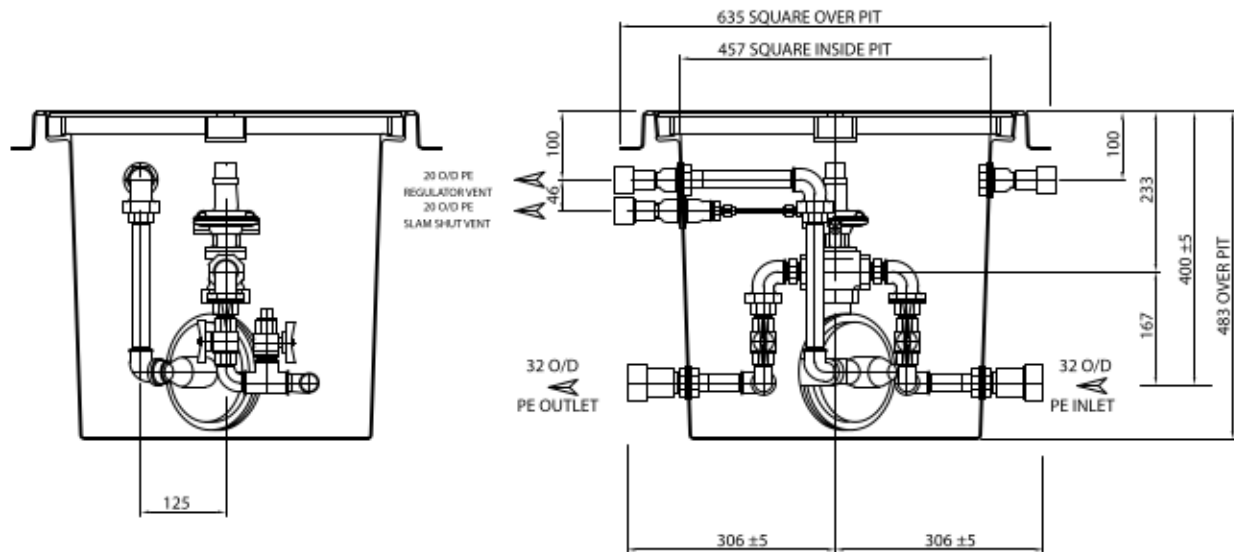


TECHNICAL DETAILS:	
Type	Active / Slam Single Stream
Installation	Below Ground
Connections	INLET - 32mm O/D PE OUTLET - 32mm O/D PE
Housing	Pit No. 1 & Cover
Weights	Module 9KG Pit & Cover 19KG
Options	Vent Stack VS3



SERVICE GOVERNOR MODULES

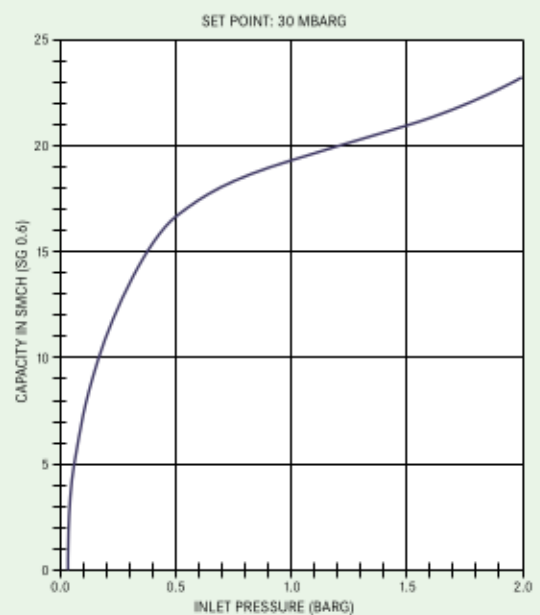
SGM 6SB-PE



TECHNICAL DETAILS:

Type	Active / Slam Single Stream With By-Pass
Installation	Below Ground
Connections	INLET - 32mm O/D PE OUTLET - 32mm O/D PE
Housing	Pit No. 1 & Cover
Weights	Module 10KG Pit & Cover 19KG
Options	Vent Stack VS3

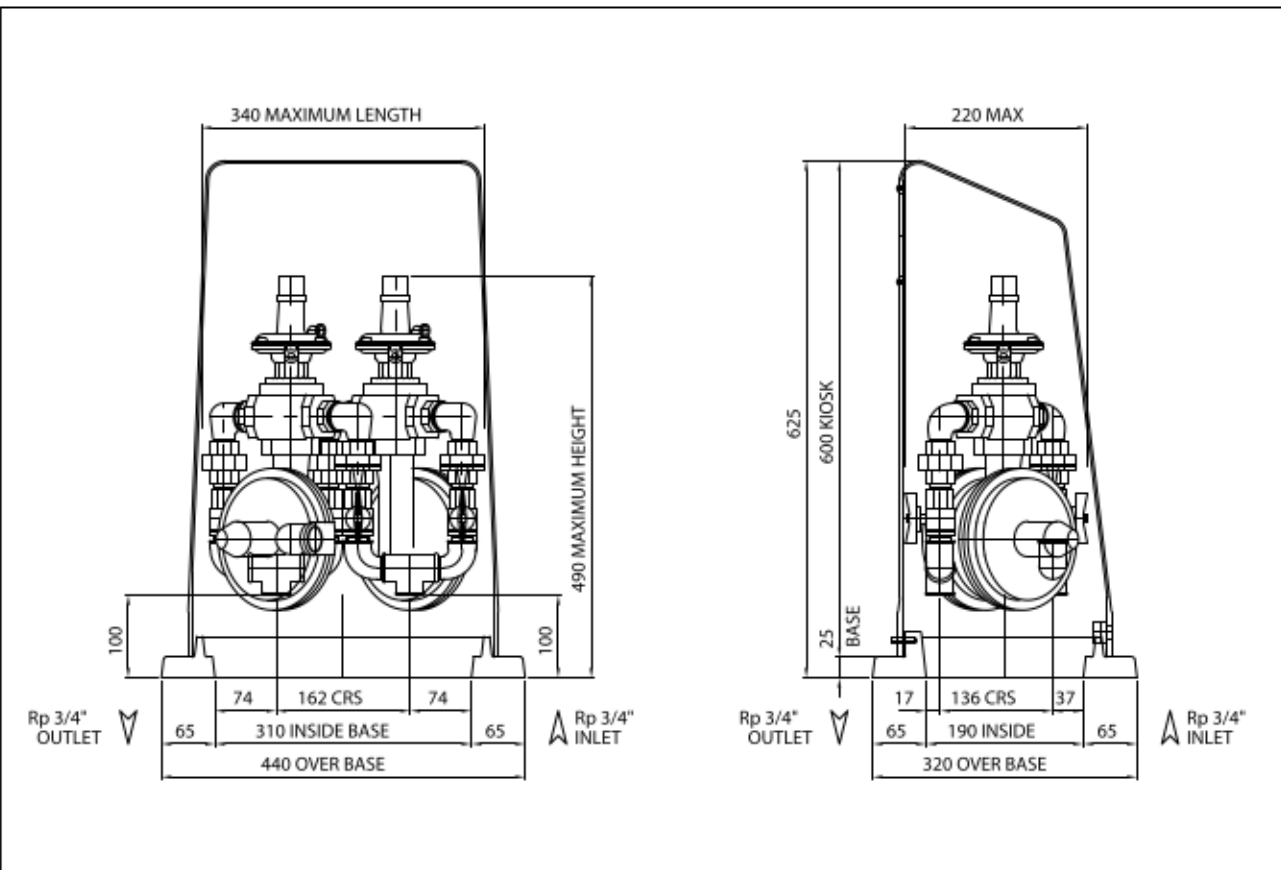
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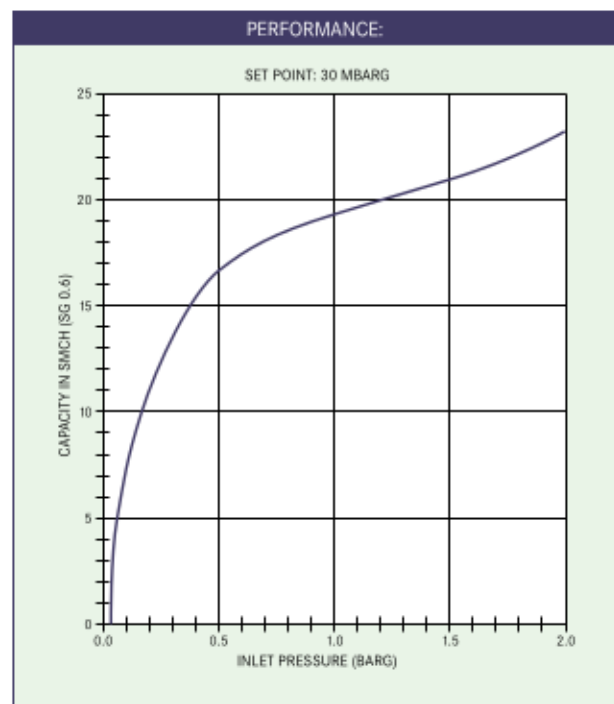


SERVICE GOVERNOR MODULES

SGM 7S

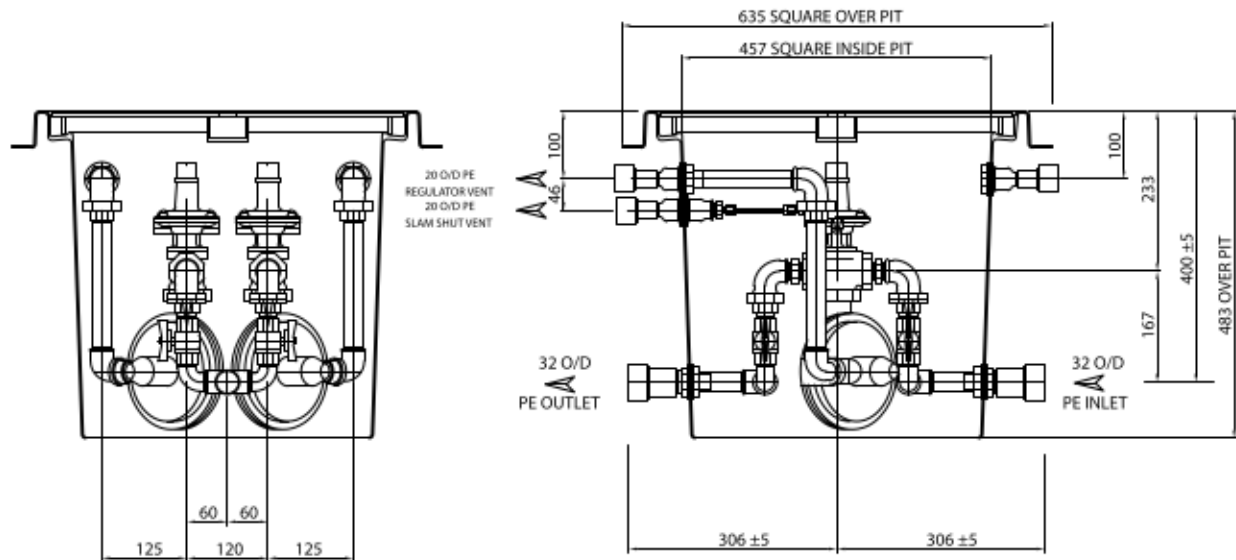


TECHNICAL DETAILS:	
Type	Active / Slam Twin Stream
Installation	Above Ground
Connections	INLET - 3/4" Screwed OUTLET - 3/4" Screwed
Housing	Kiosk No. 1
Weights	Module 15KG Kiosk & Base 7KG



SERVICE GOVERNOR MODULES

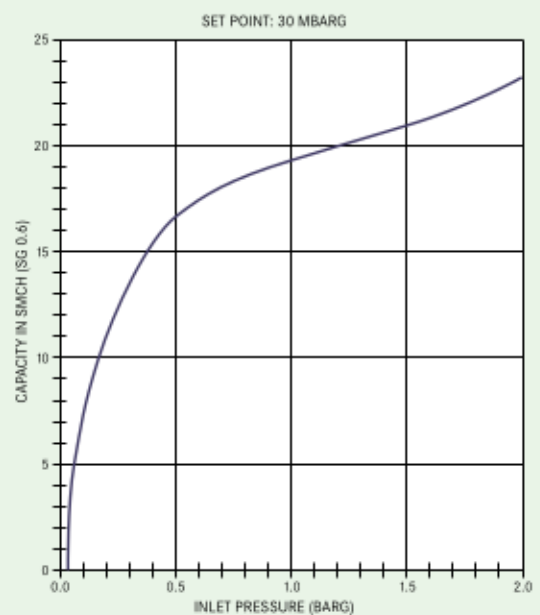
SGM 8S-PE

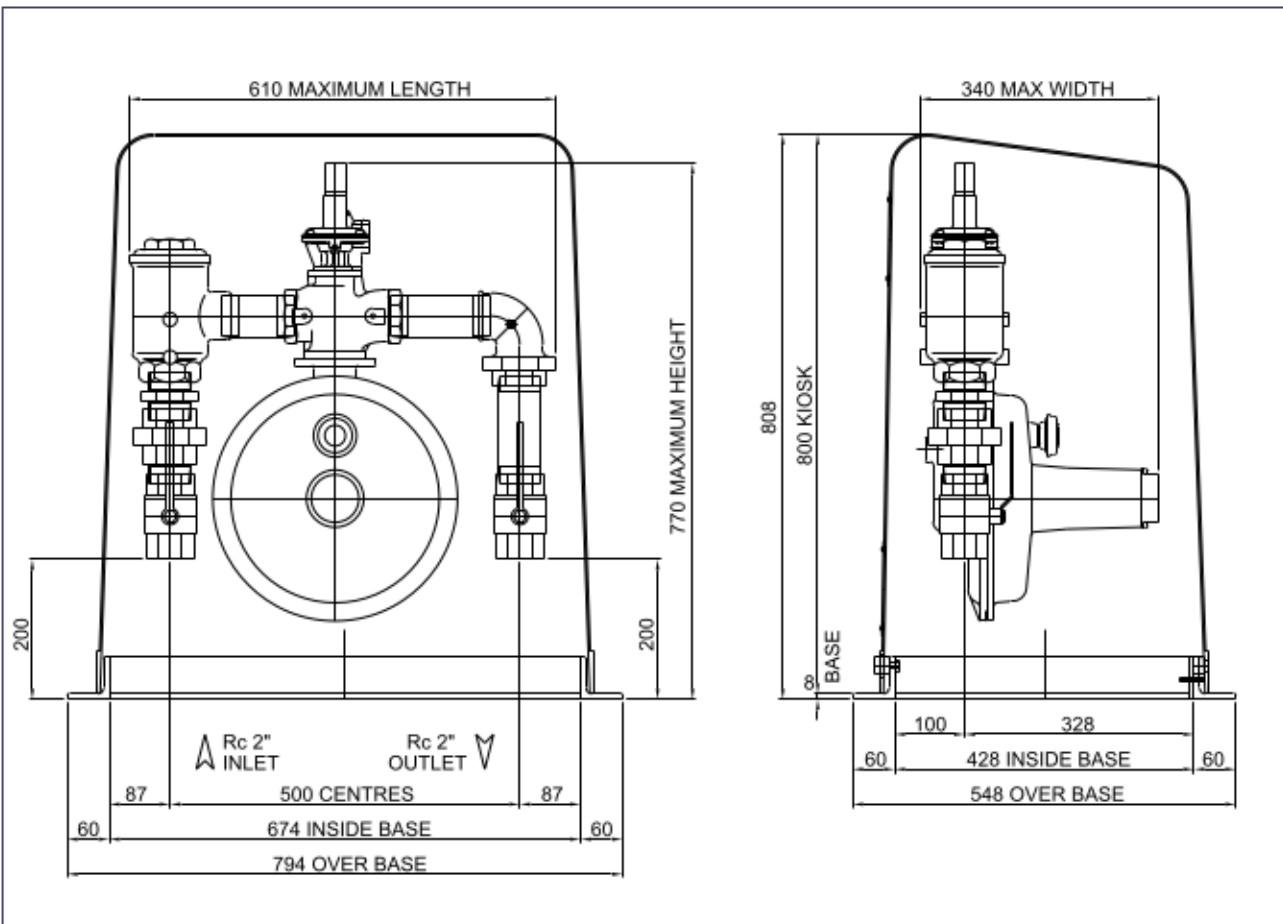


TECHNICAL DETAILS:

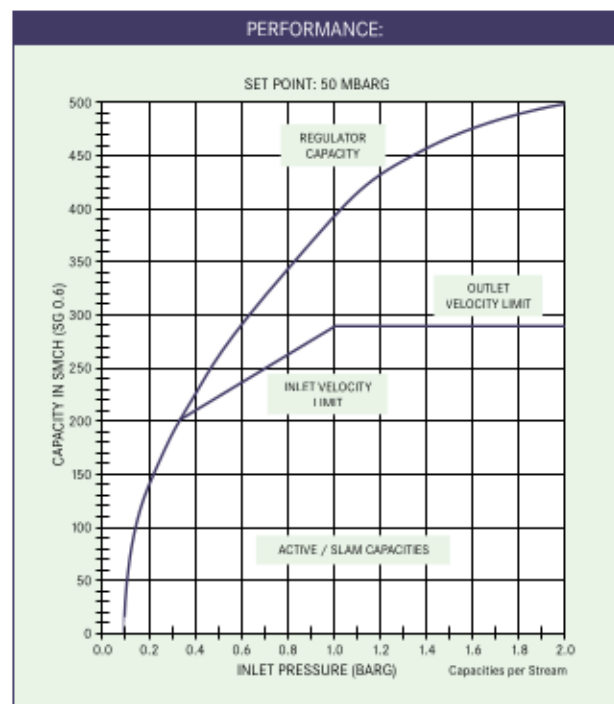
Type	Active / Slam Twin Stream
Installation	Below Ground
Connections	INLET - 32mm O/D PE OUTLET - 32mm O/D PE
Housing	Pit No. 1 & Cover
Weights	Module 21KG Pit & Cover 19KG
Options	Vent Stack VS3

PERFORMANCE:



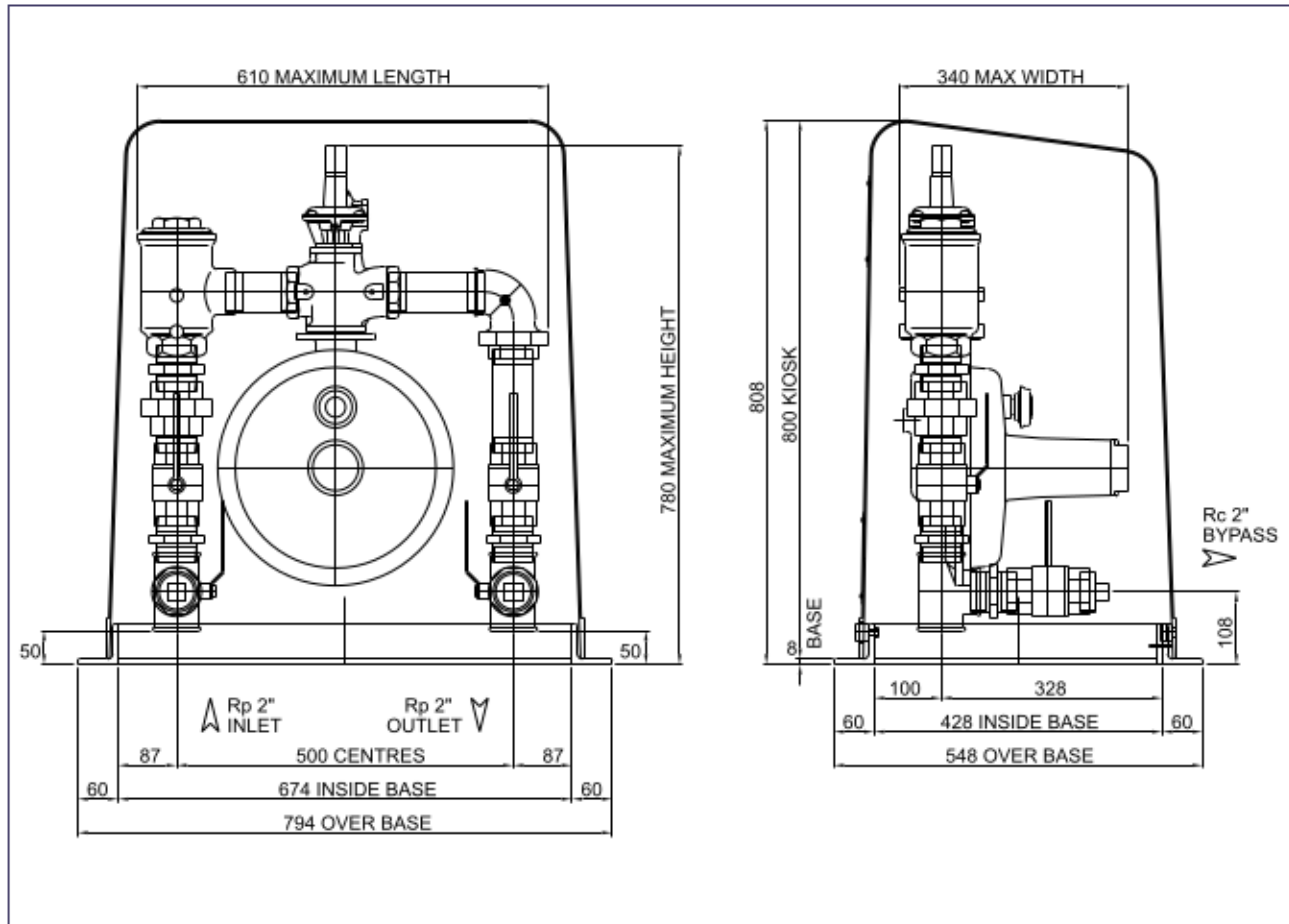


TECHNICAL DETAILS:	
Type	Active / Slam Single Stream
Installation	Above Ground
Connections	INLET - 2" Screwed OUTLET - 2" Screwed
Housing	Kiosk No. 2
Weights	Module 35KG Kiosk & Base 27KG



SERVICE GOVERNOR MODULES

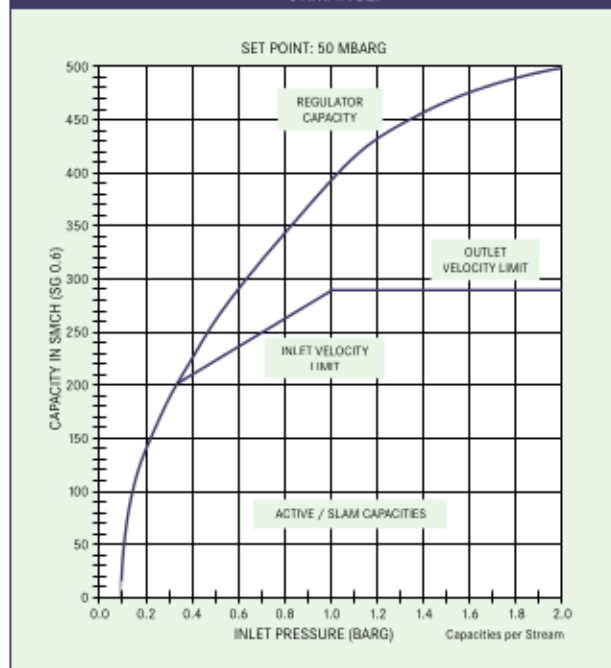
SGM 9SB



TECHNICAL DETAILS:

Type	Active / Slam Single Stream With By-Pass
Installation	Above Ground
Connections	INLET - 2" Screwed OUTLET - 2" Screwed
Housing	Kiosk No. 2
Weights	Module 43KG Kiosk & Base 27KG
Options	With Supports

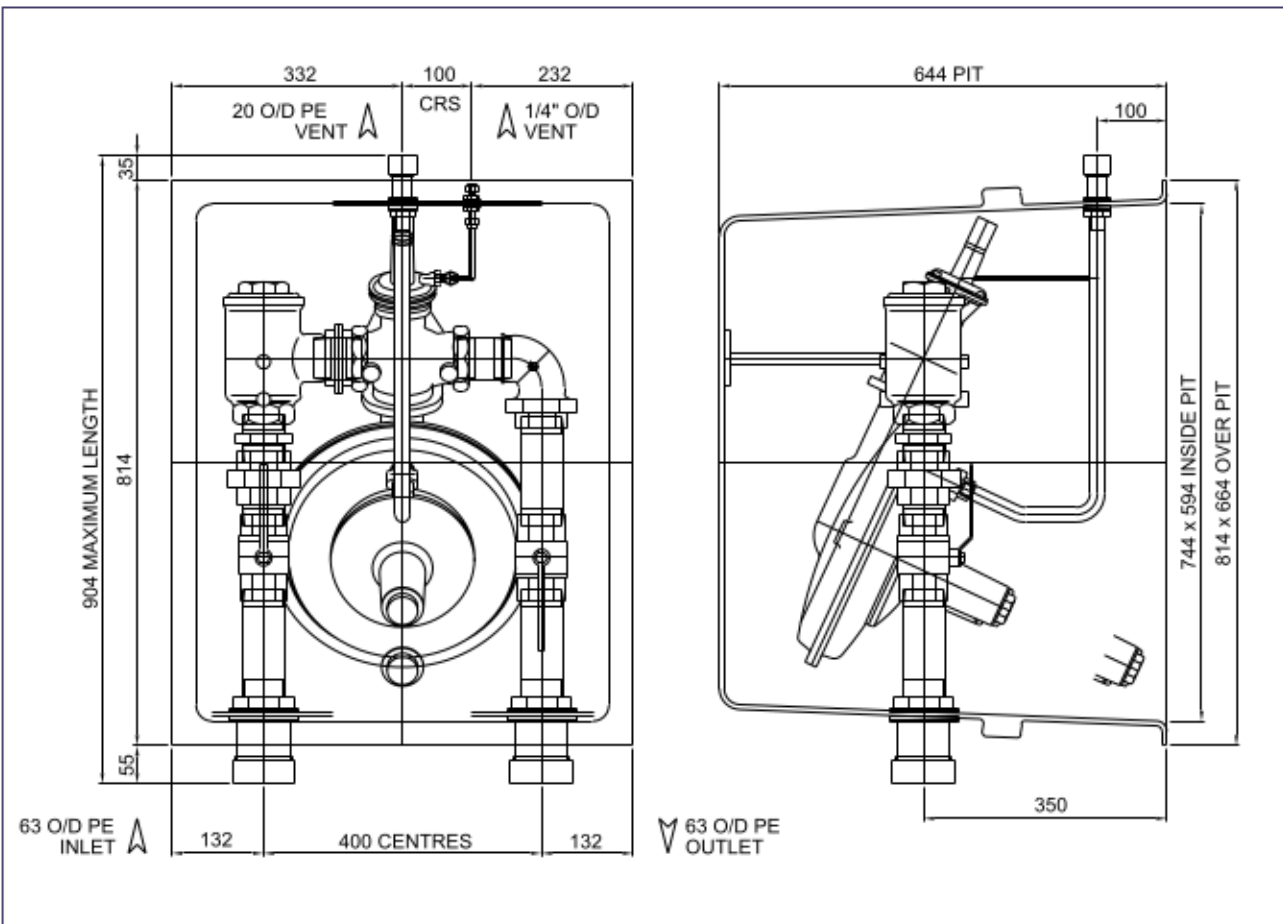
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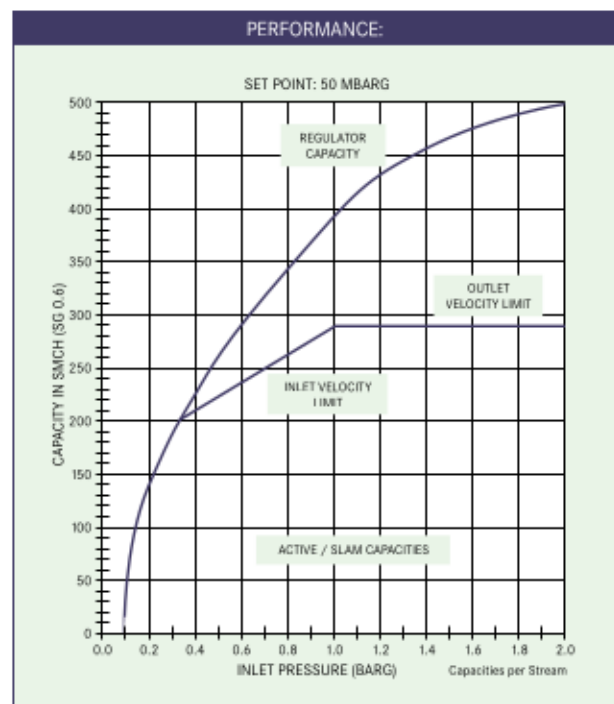


SERVICE GOVERNOR MODULES

SGM 10S-PE

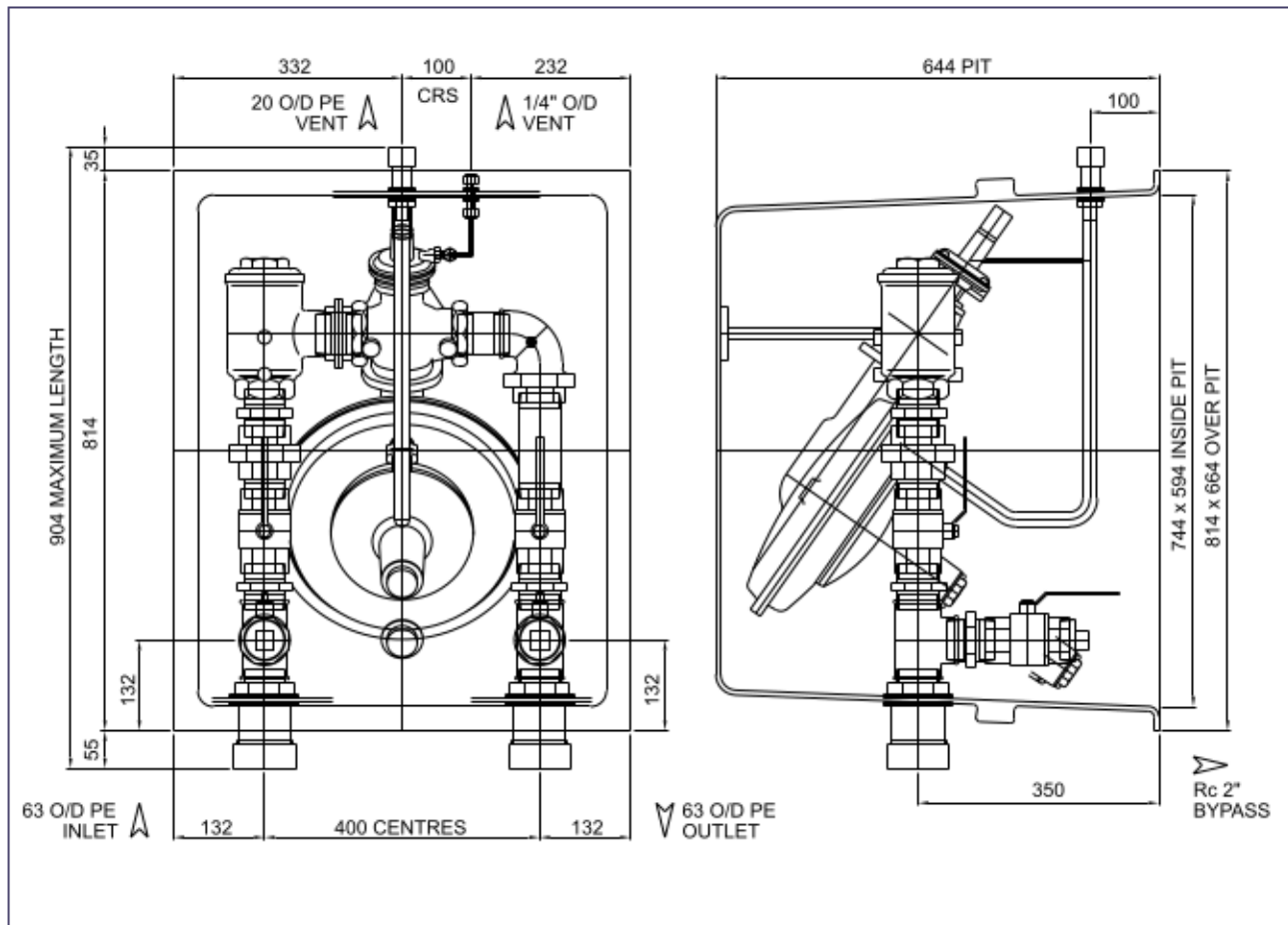


TECHNICAL DETAILS:	
Type	Active / Slam Single Stream
Installation	Below Ground
Connections	INLET - 63mm O/D PE OUTLET - 63mm O/D PE
Housing	Pit No. 2 & Cover
Weights	Module 37KG Pit & Cover 44KG
Options	Vent Stack VS3

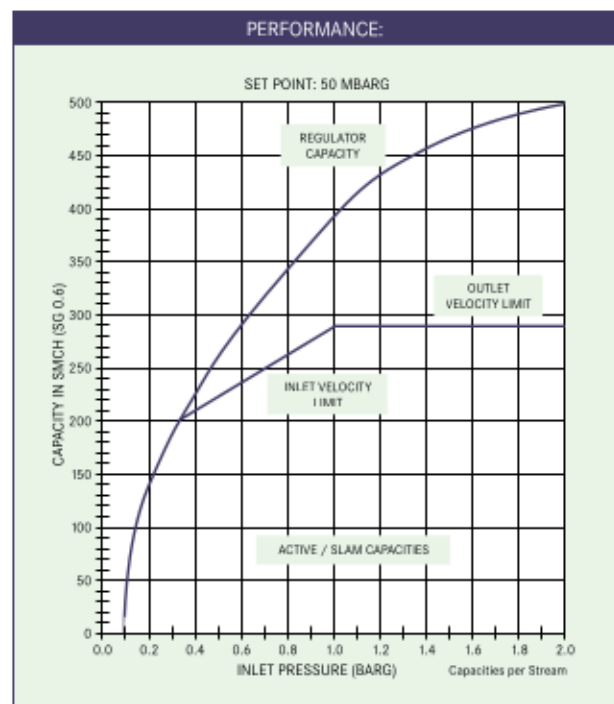


SERVICE GOVERNOR MODULES

SGM 10SB



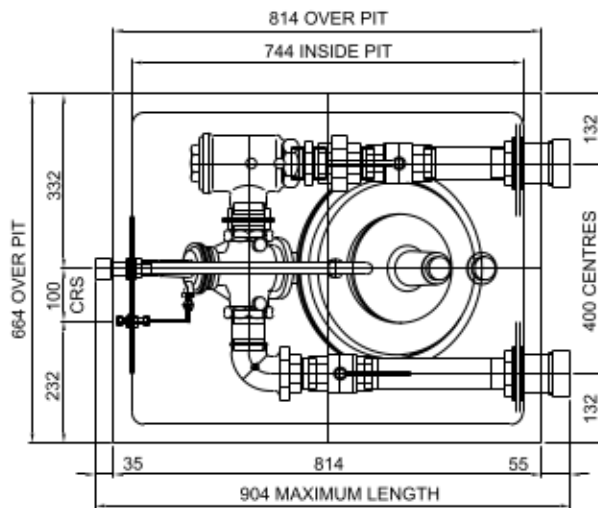
TECHNICAL DETAILS:	
Type	Active / Slam Single Stream With By-Pass
Installation	Below Ground
Connections	INLET - 63mm O/D PE OUTLET - 63mm O/D PE
Housing	Pit No. 2 & Cover
Weights	Module 45KG Pit & Cover 44KG
Options	Vent Stack VS3



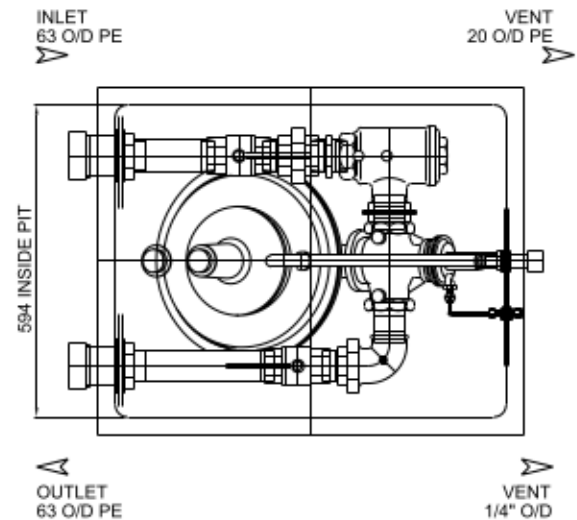


SERVICE GOVERNOR MODULES

SGM 10S-T-PE



Overall Pit Depth 675mm
(including Pit Lid)

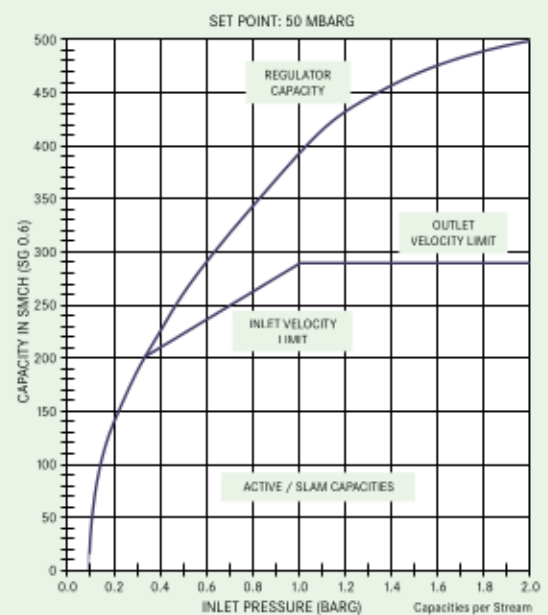


TECHNICAL DETAILS:

Type	Active / Slam Twin Stream* W/O Stream Selection
Installation	Below Ground
Connections	INLET - 63mm O/D PE OUTLET - 63mm O/D PE
Housing	Pit No. 2 (x2) & Cover
Weights	Module 90KG Pit & Cover 88KG
Options	Vent Stack VS3

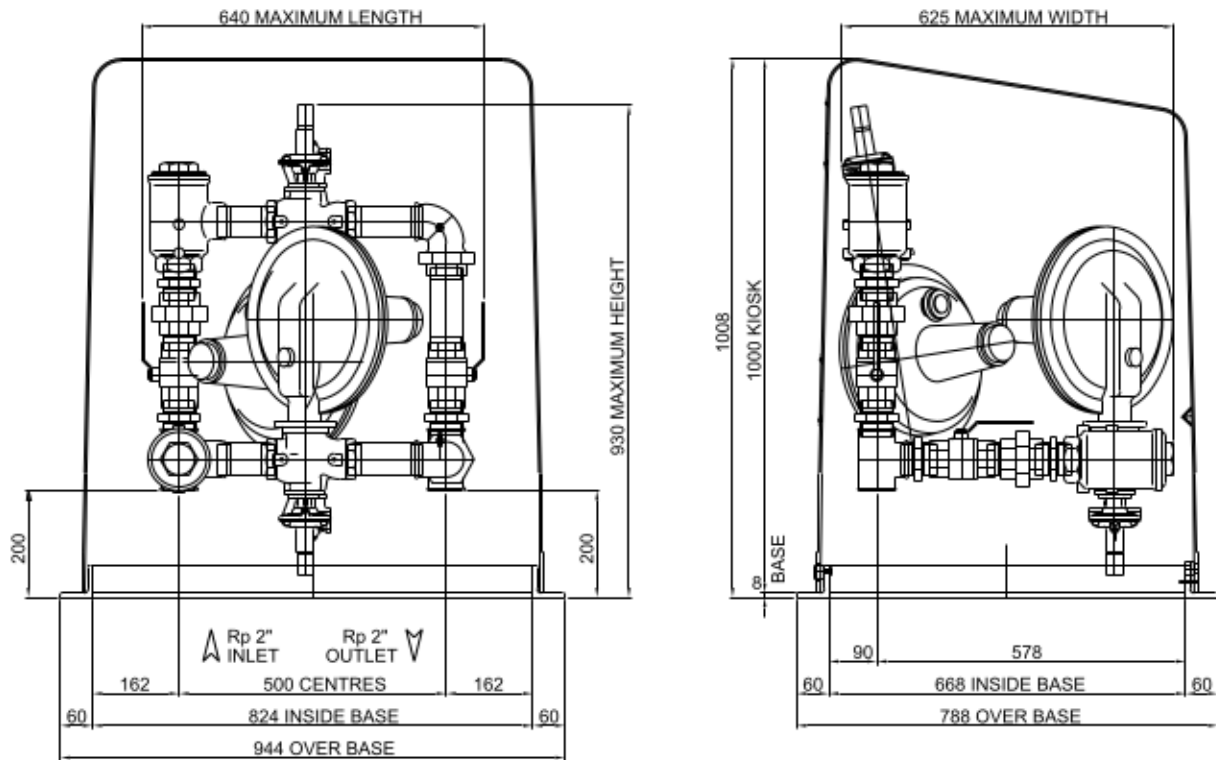
* 2 x Single streams, excluding inlet
& outlet manifolds

PERFORMANCE:



SERVICE GOVERNOR MODULES

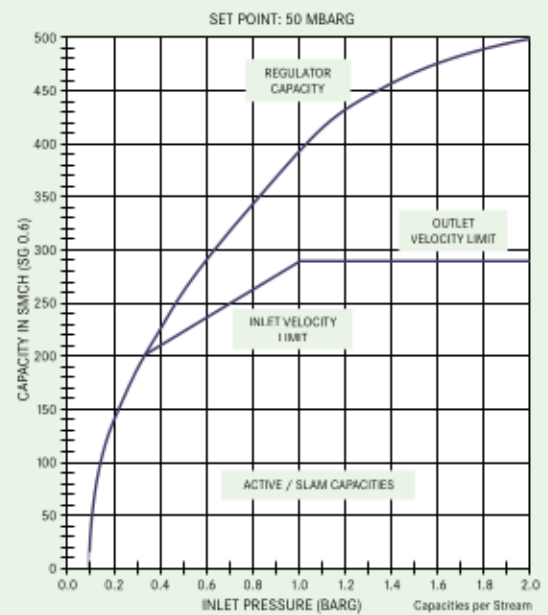
SGM 11S



TECHNICAL DETAILS:

Type	Active / Slam Twin Stream
Installation	Above Ground
Connections	INLET - 2" Screwed OUTLET - 2" Screwed
Housing	Kiosk No.3A
Weights	Module 64KG Kiosk & Base 40KG
Options	With Supports

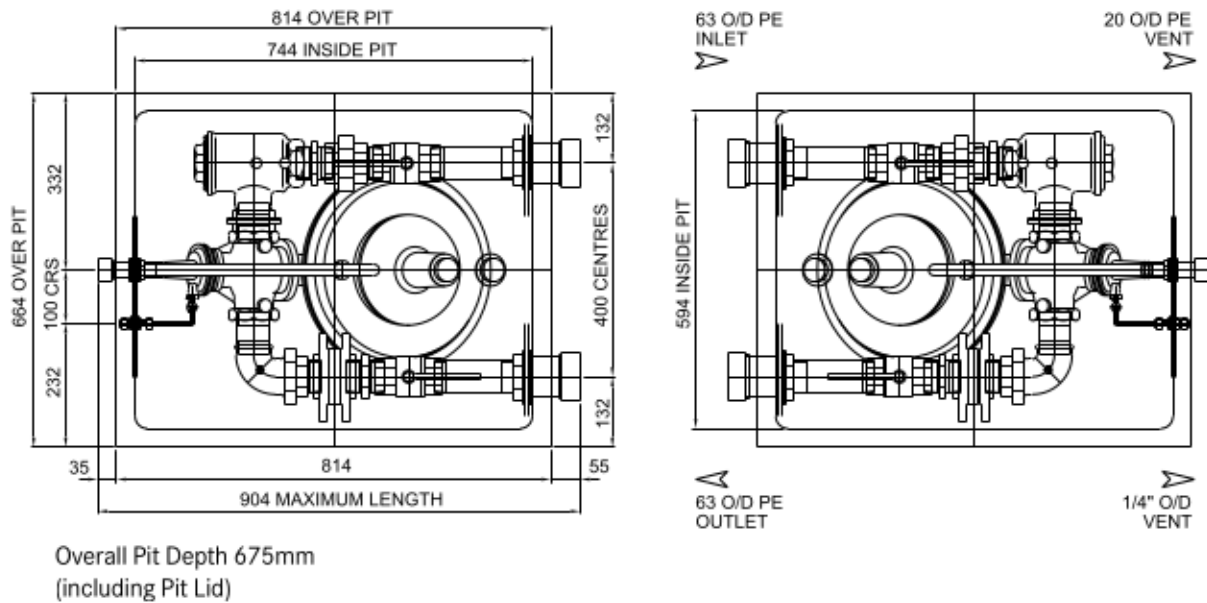
PERFORMANCE:





SERVICE GOVERNOR MODULES

SGM 13S-T-PE



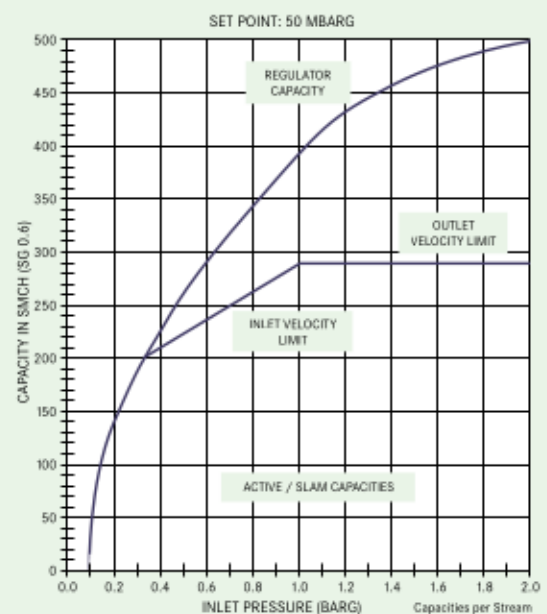
Overall Pit Depth 675mm
(including Pit Lid)

TECHNICAL DETAILS:

Type	Active / Slam Twin Stream* With Stream Discrimination
Installation	Below Ground
Connections	INLET - 63mm O/D PE OUTLET - 63mm O/D PE
Housing	Pit No. 2 (x2) & Covers
Weights	Module 110KG Pit & Cover 88KG
Options	Vent Stack VS3

* 2 x Single streams, excluding inlet
& outlet manifolds

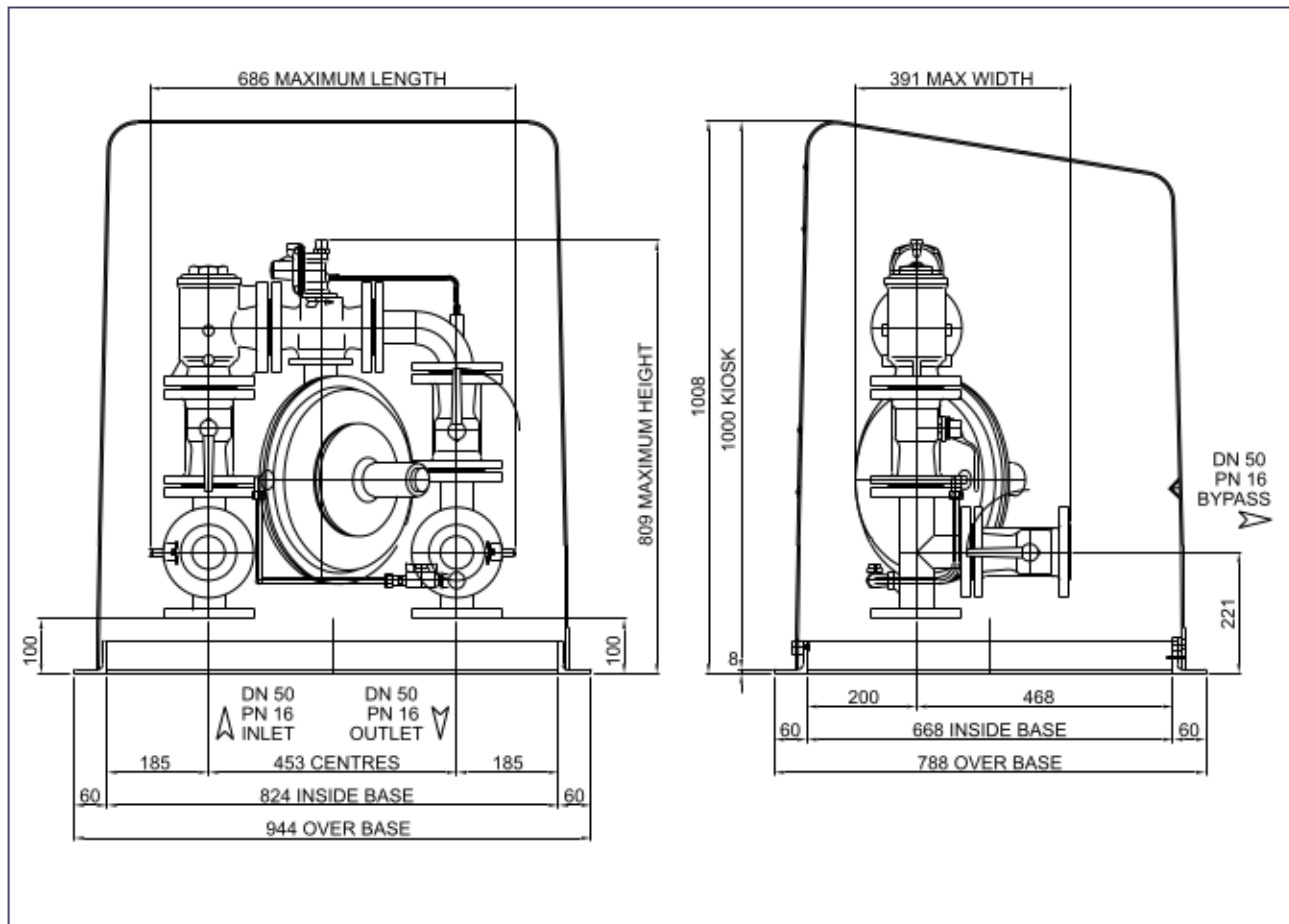
PERFORMANCE:





SERVICE GOVERNOR MODULES

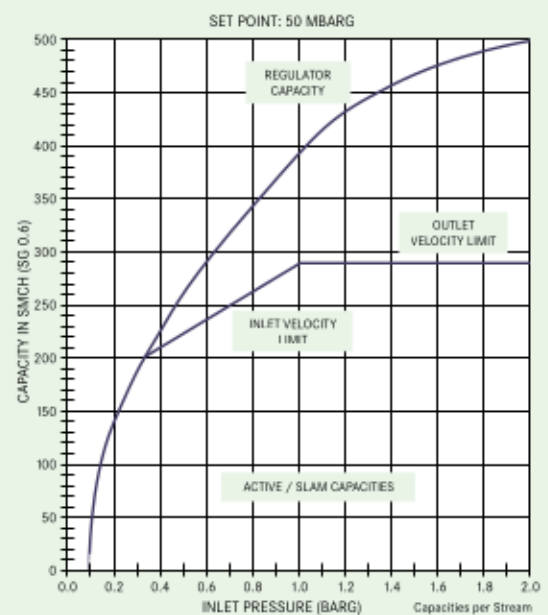
SGM 15FB

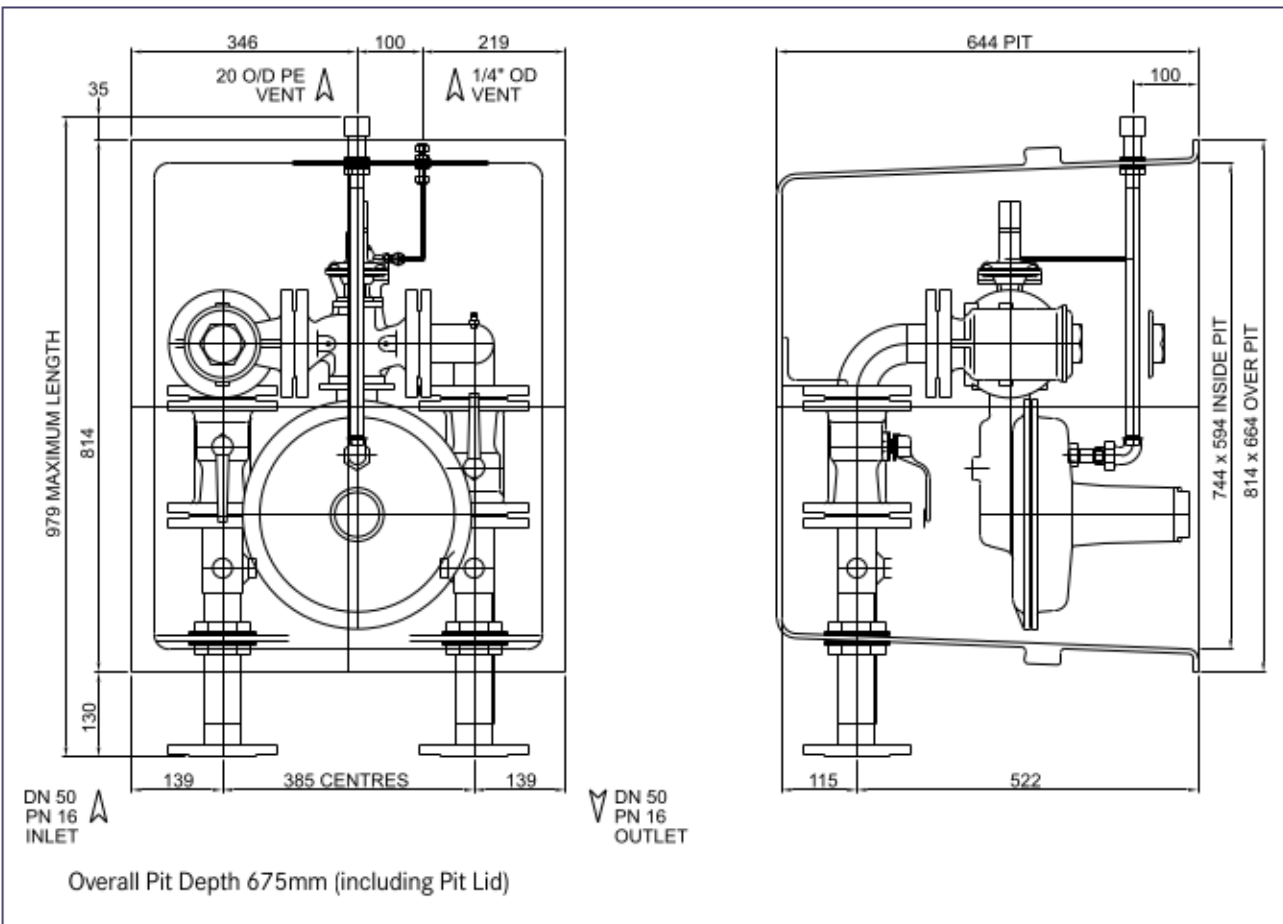


TECHNICAL DETAILS:

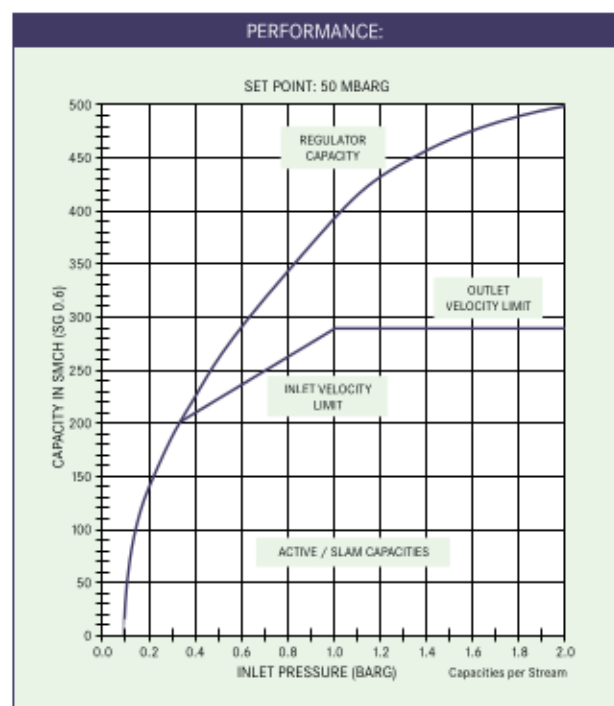
Type	Active / Slam Single Stream With By-Pass
Installation	Above Ground
Connections	INLET - DN50 OUTLET - DN50
Housing	Kiosk No.3A
Weights	Module 70KG Kiosk & Base 40KG

PERFORMANCE:



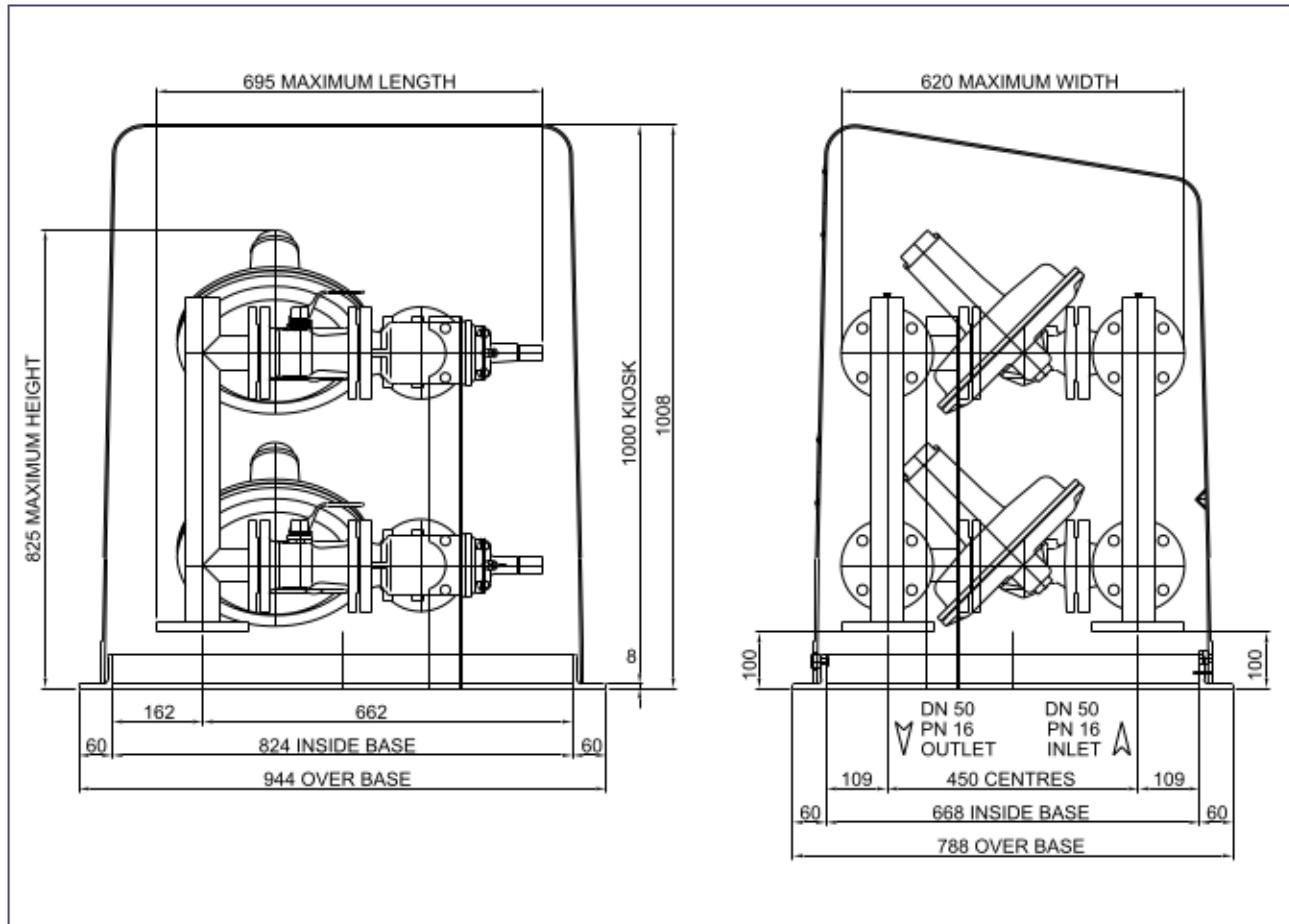


TECHNICAL DETAILS:	
Type	Active / Slam Single Stream
Installation	Below Ground
Connections	INLET - DN50 OUTLET - DN50
Housing	Pit No. 2 & Cover
Weights	Module 60KG Pit & Cover 44KG
Options	Vent Stack VS3



SERVICE GOVERNOR MODULES

SGM 17F

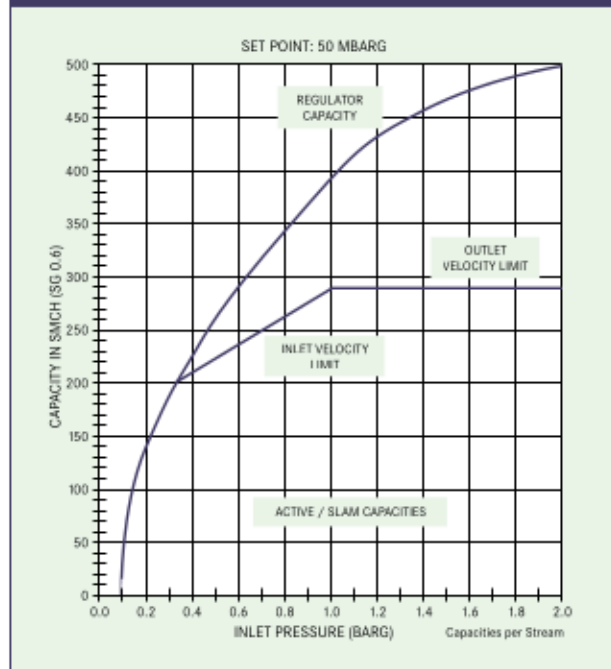


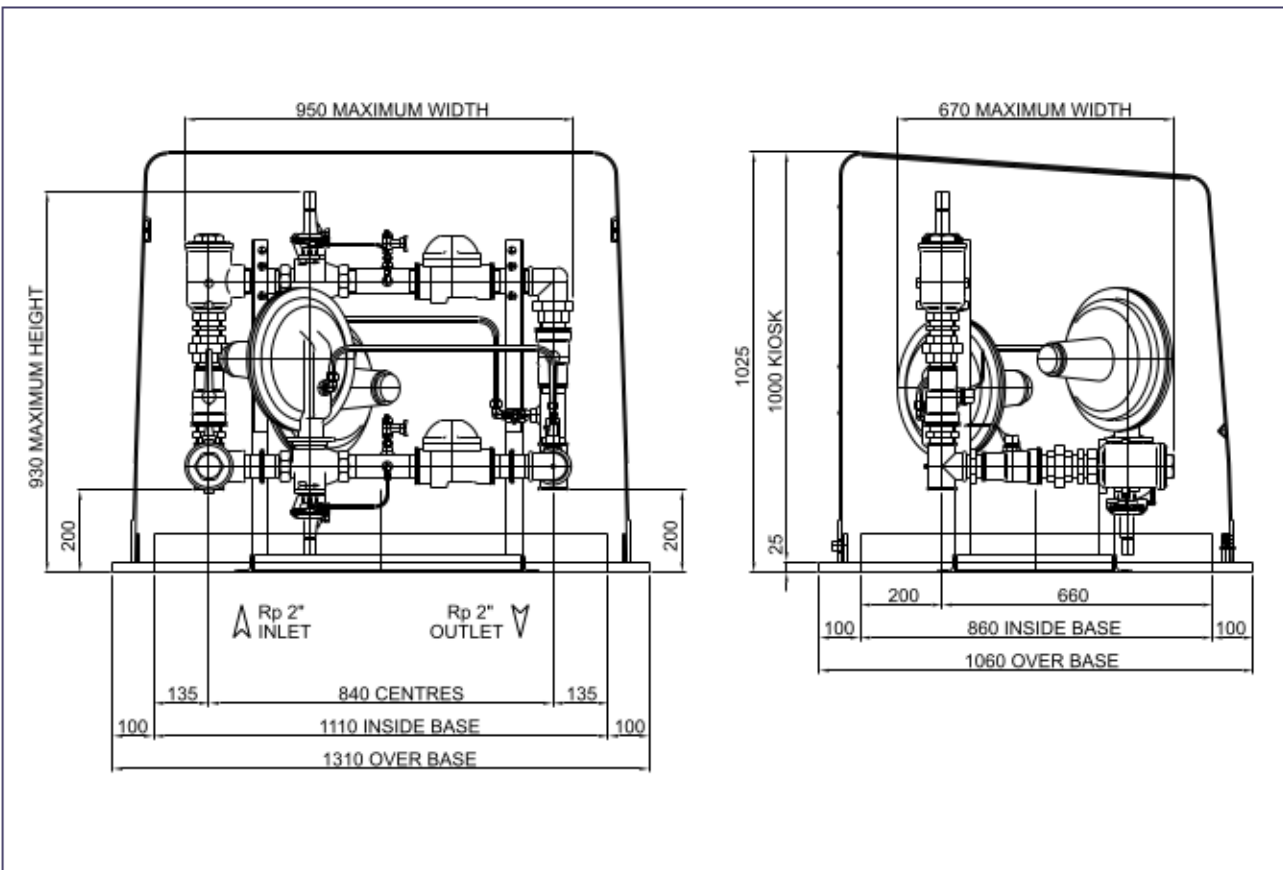
TECHNICAL DETAILS:

Type	Active / Slam Single Stream
Installation	Above Ground
Connections	INLET - DN50 OUTLET - DN50
Housing	Kiosk No.3A
Weights	Module 130KG Kiosk & Base 40KG

This unit is supplied with supports as standard

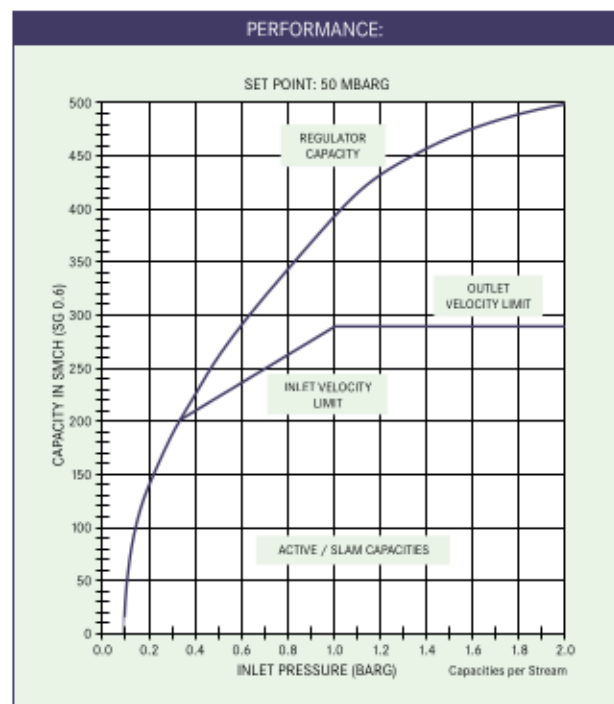
PERFORMANCE:





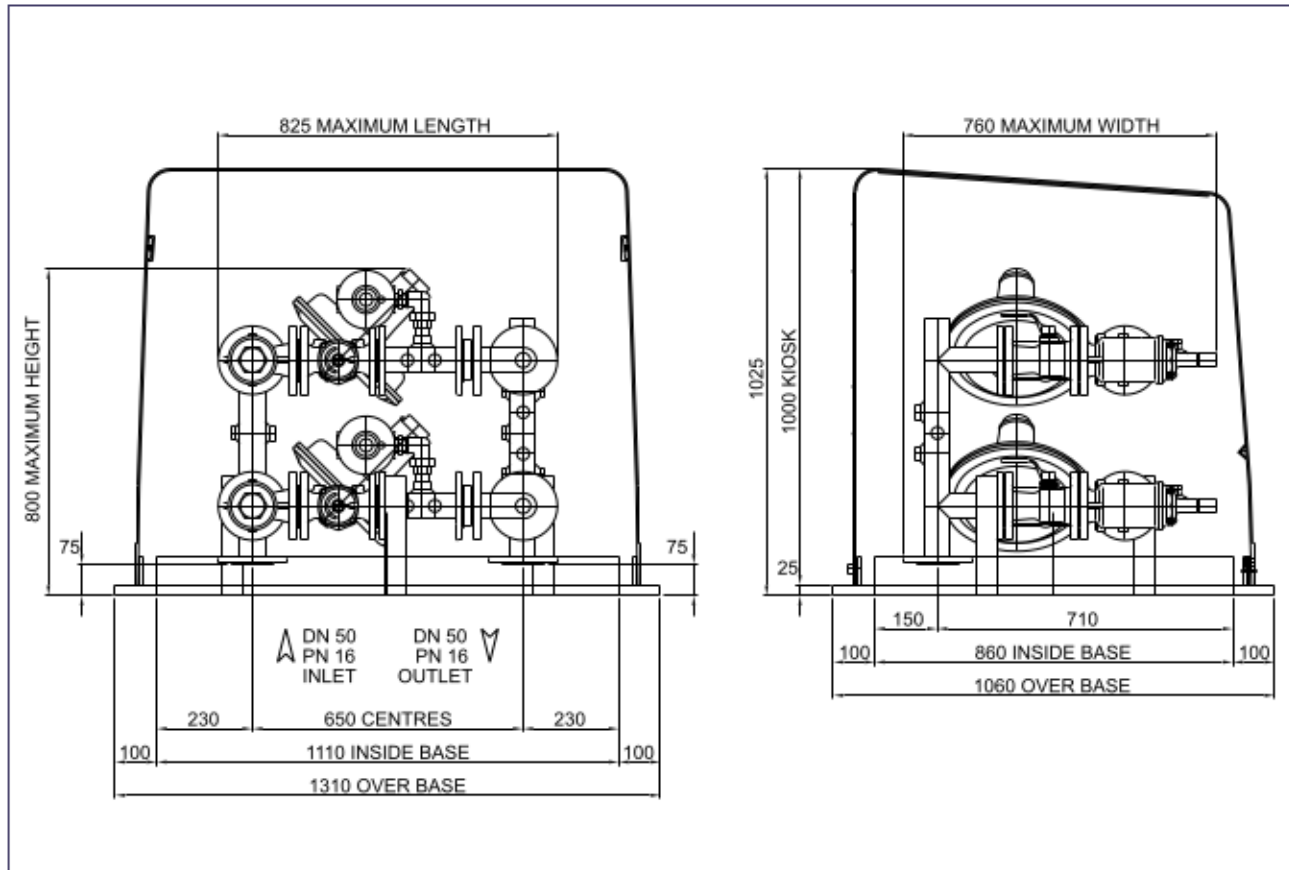
TECHNICAL DETAILS:	
Type	Active / Slam Twin Stream With Stream Discrimination
Installation	Above Ground
Connections	INLET - 2" Screwed OUTLET - 2" Screwed
Housing	Kiosk No. 4A
Weights	Module 91KG Kiosk & Base 160KG

This unit is supplied with supports as standard



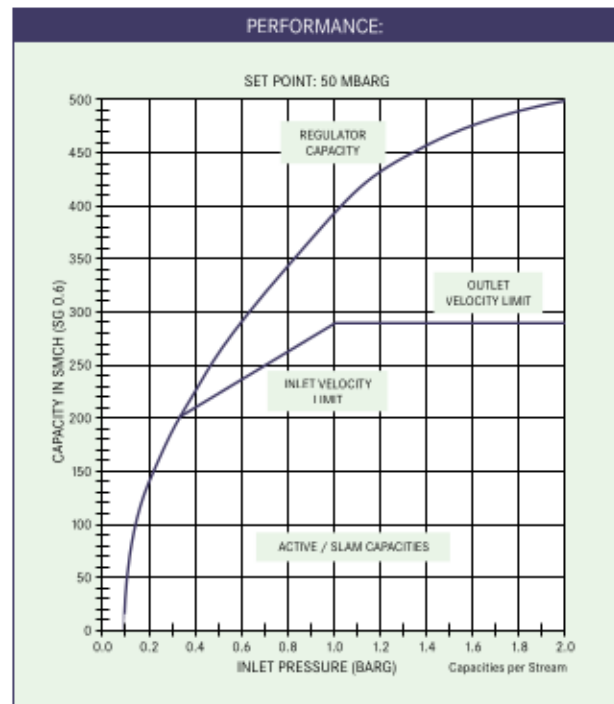
SERVICE GOVERNOR MODULES

SGM 28FB-1



TECHNICAL DETAILS:	
Type	Active / Slam Twin Stream With Stream Discrimination
Installation	Above Ground
Connections	INLET - DN50 OUTLET - DN50
Housing	Kiosk No. 4A
Weights	Module 176KG Kiosk & Base 160KG

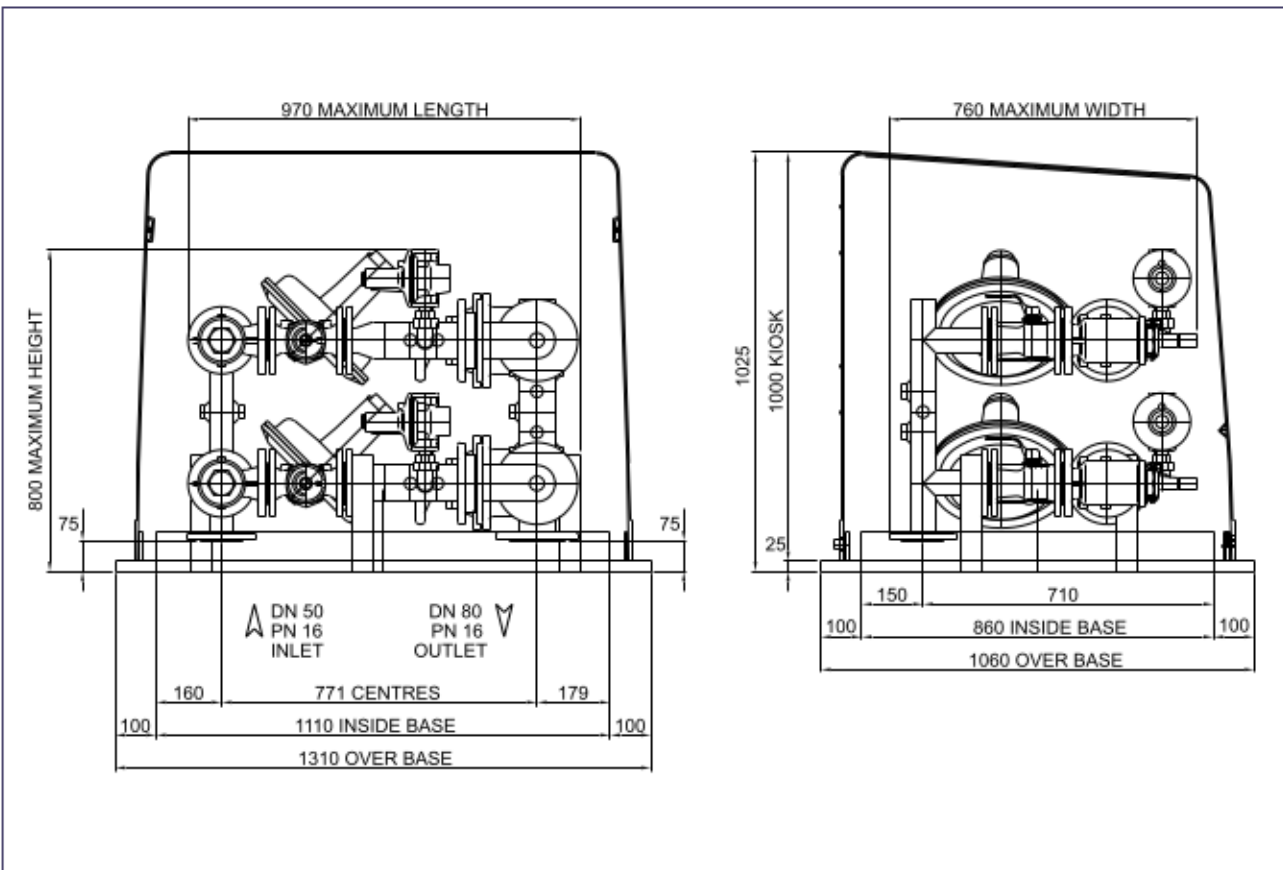
This unit is supplied with supports as standard





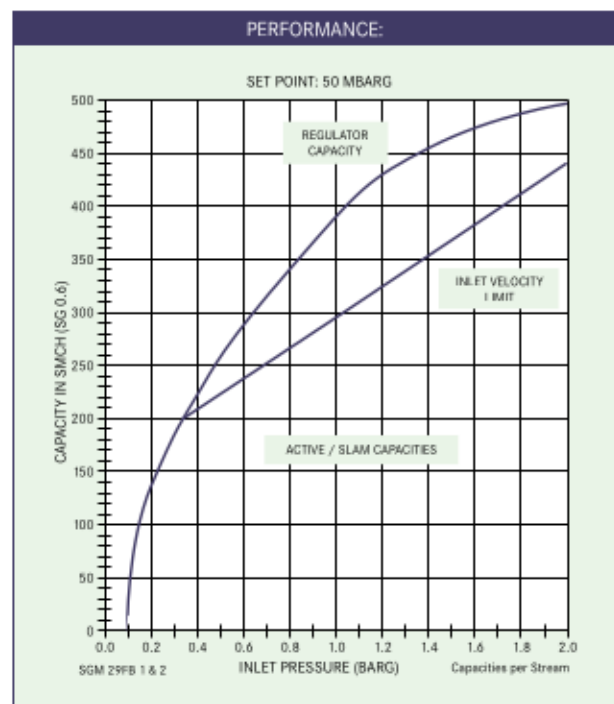
SERVICE GOVERNOR MODULES

SGM 29FB-1



TECHNICAL DETAILS:	
Type	Active / Slam Twin Stream With Stream Discrimination
Installation	Above Ground
Connections	INLET - DN50 OUTLET - DN80
Housing	Kiosk No. 4A
Weights	Module 225KG Kiosk & Base 160KG

This unit is supplied with supports as standard





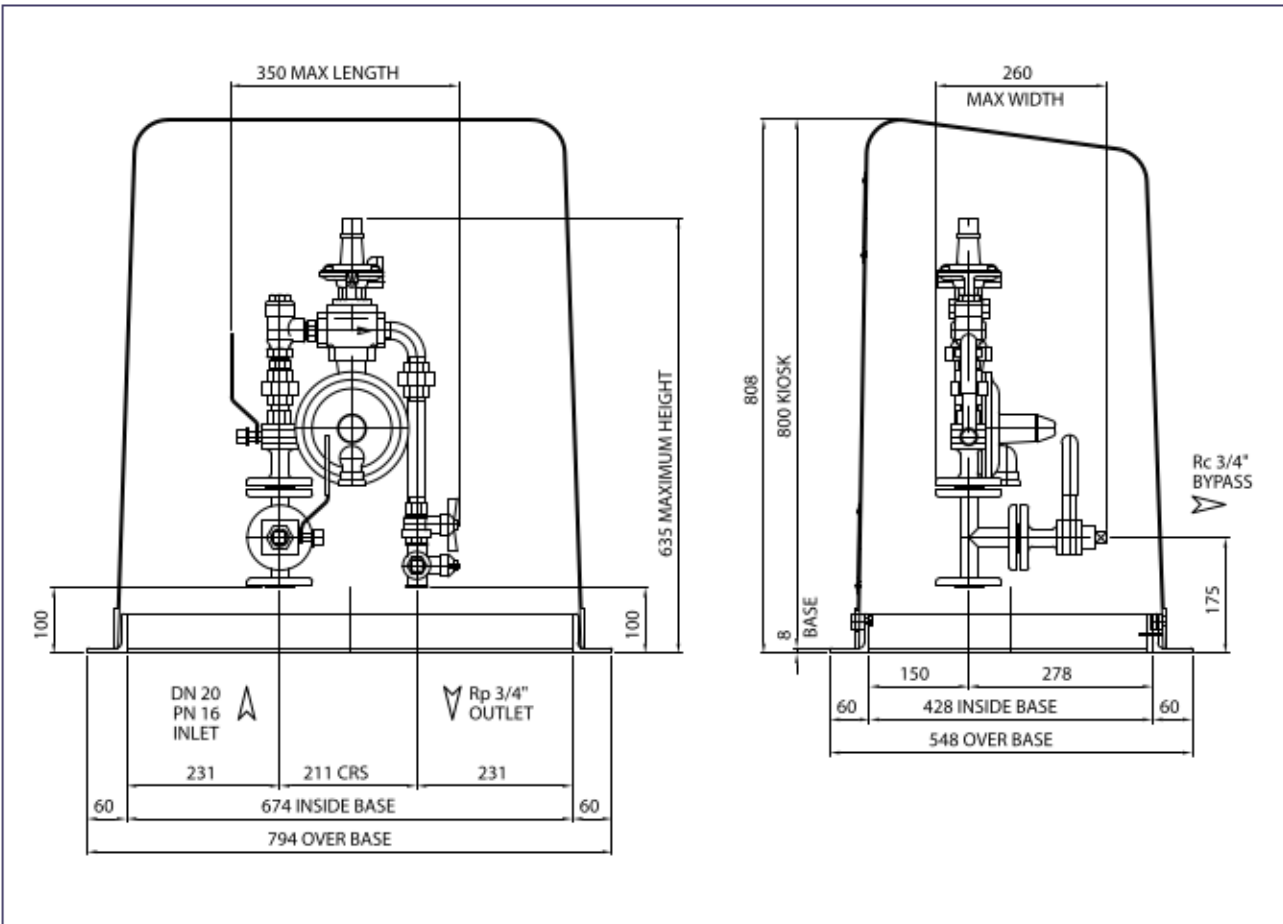
INLET PRESSURES:

Up to 7 barg

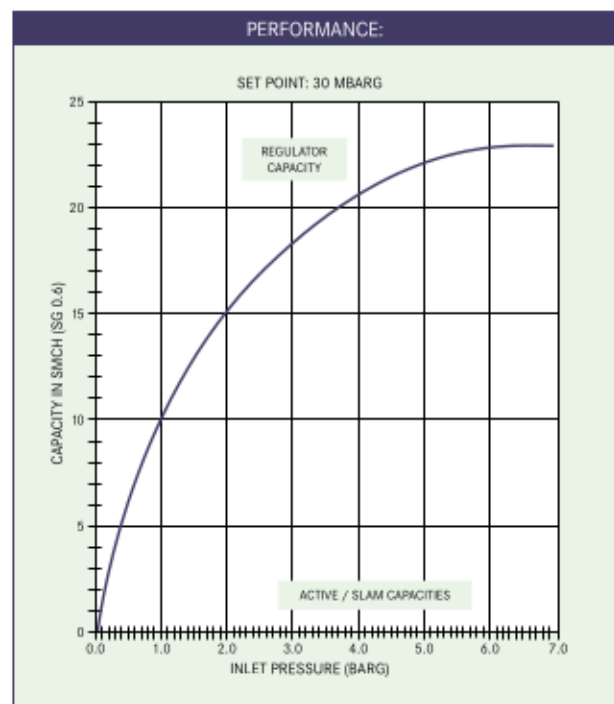


SERVICE GOVERNOR MODULES

SGM 5SFB-7B

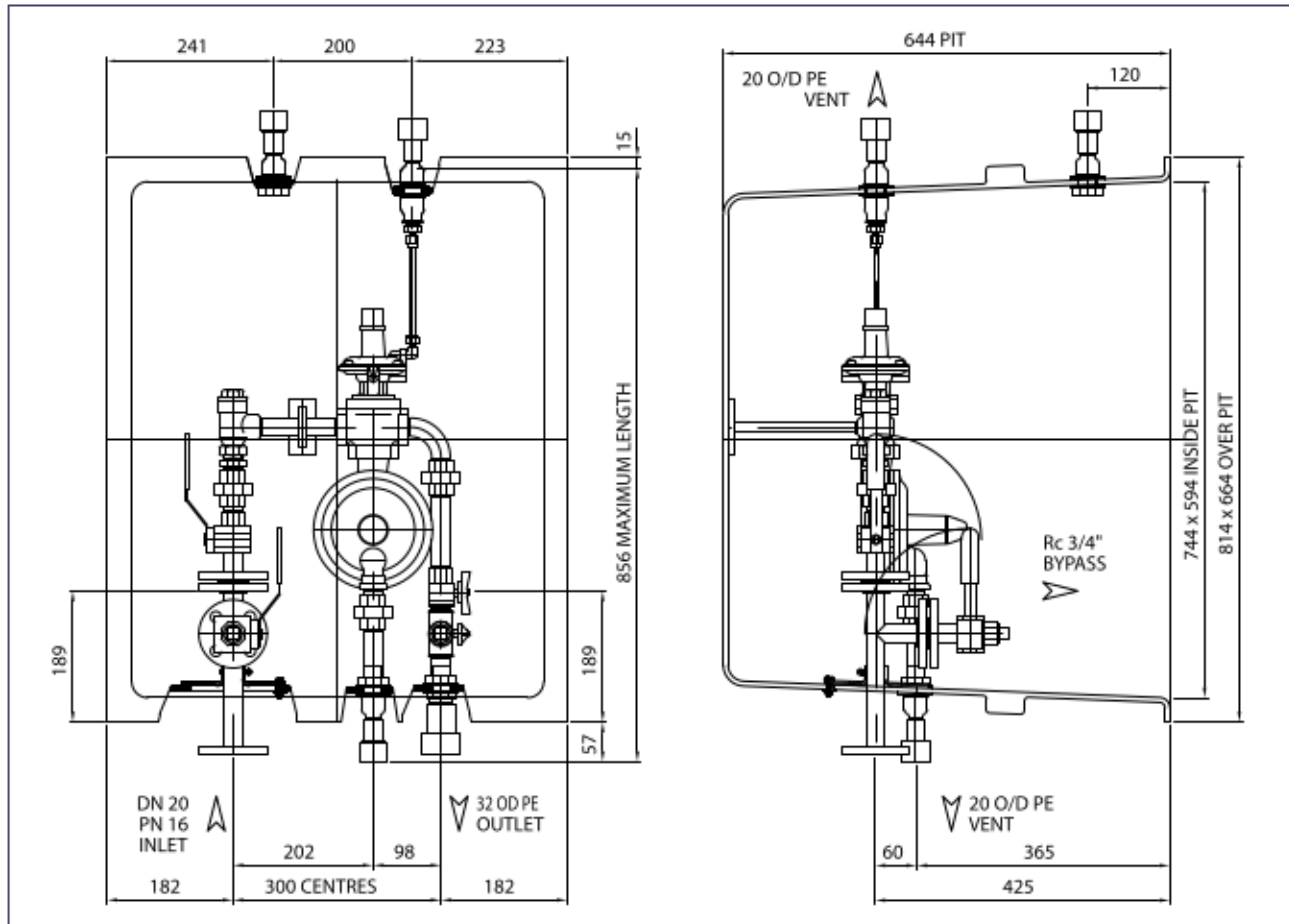


TECHNICAL DETAILS:	
Type	Active / Slam Single Stream With By-Pass
Installation	Above Ground
Connections	INLET - DN20 OUTLET - 3/4" Screwed
Housing	Kiosk No. 2
Weights	Module 13KG Kiosk & Base 27KG



SERVICE GOVERNOR MODULES

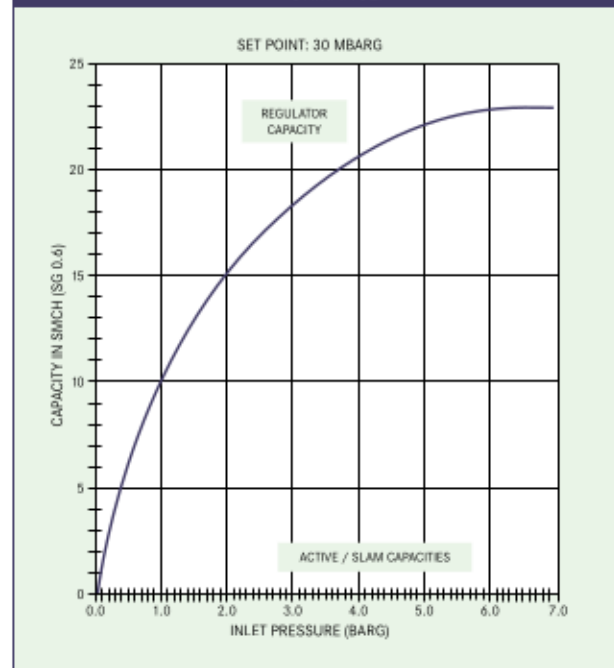
SGM 6SFB-7B



TECHNICAL DETAILS:

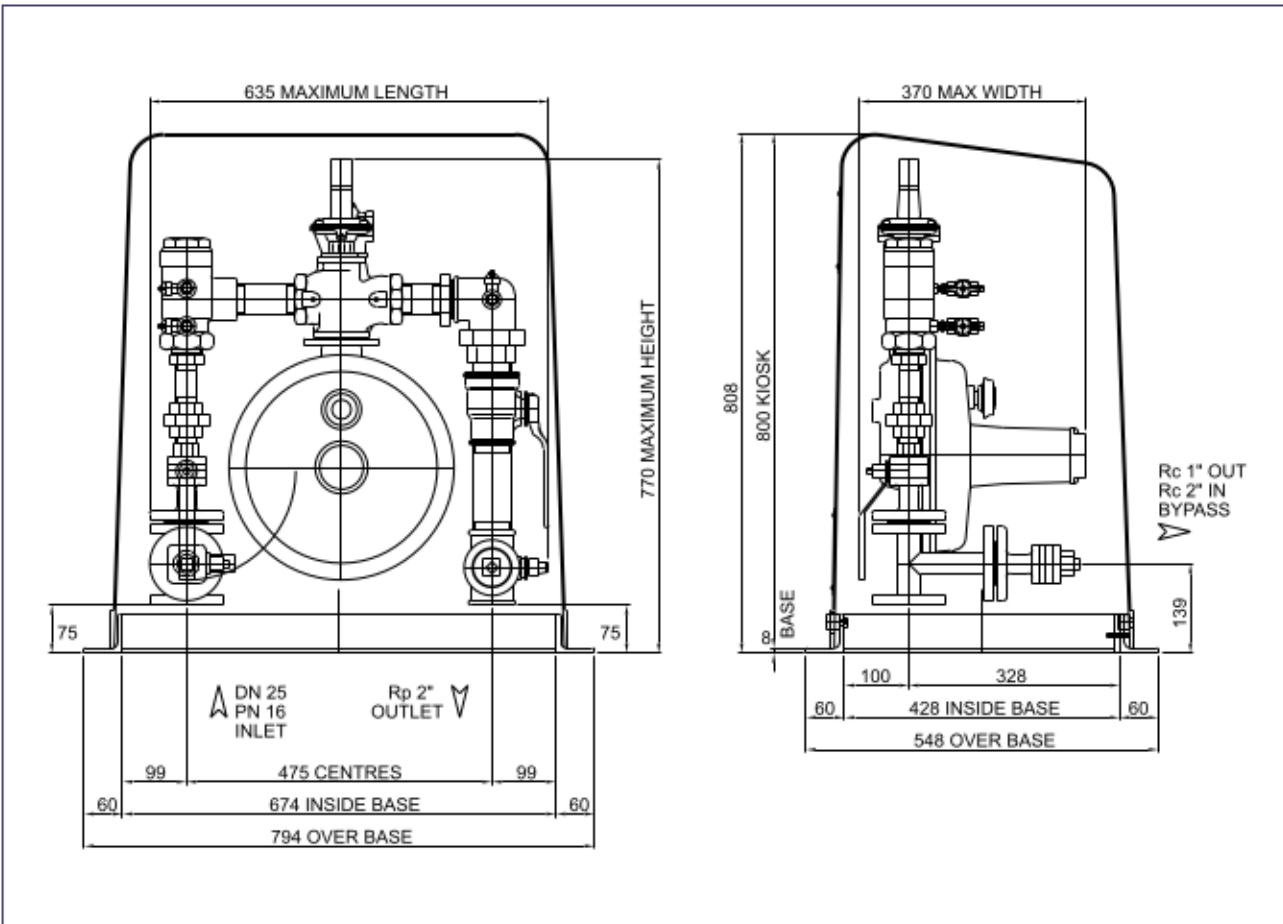
Type	Active / Slam Single Stream With By-Pass
Installation	Below Ground
Connections	INLET - DN20 OUTLET - 32mm O/D PE
Housing	Pit No. 2 & Cover
Weights	Module 15KG Pit & Cover 44KG
Options	Type VS3 Vent Stack

PERFORMANCE:

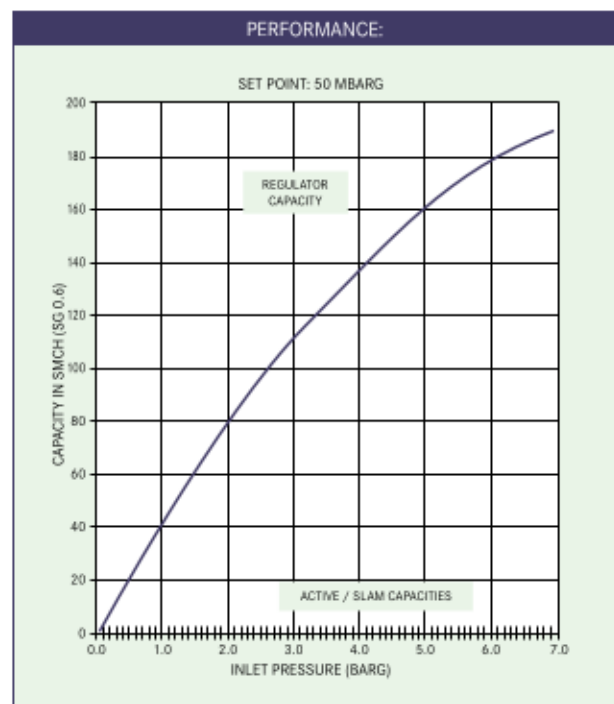


SERVICE GOVERNOR MODULES

SGM 9SFB-7B

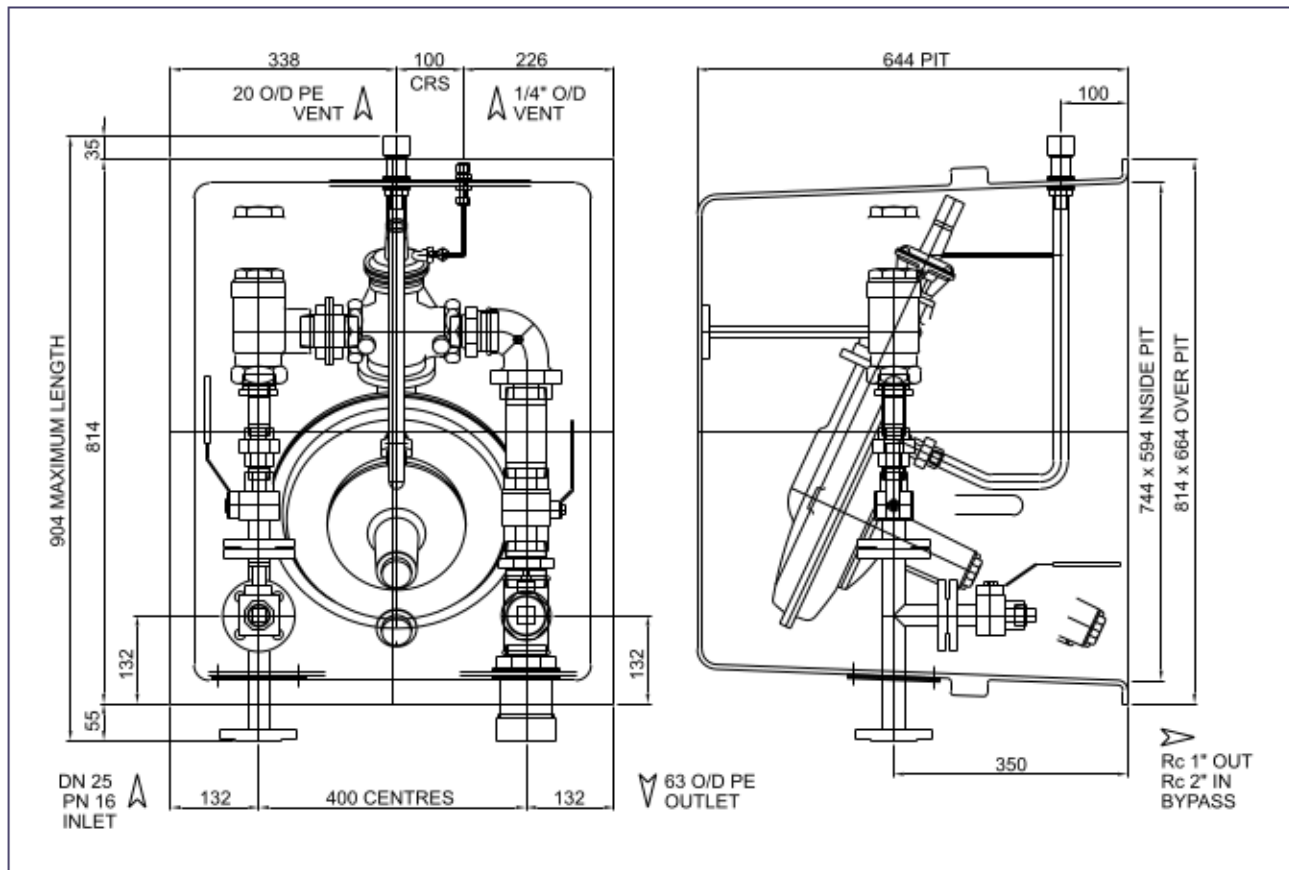


TECHNICAL DETAILS:	
Type	Active / Slam Single Stream With By-Pass
Installation	Above Ground
Connections	INLET - DN25 OUTLET - 2" Screwed
Housing	Kiosk No. 2
Weights	Module 43KG Kiosk & Base 27KG

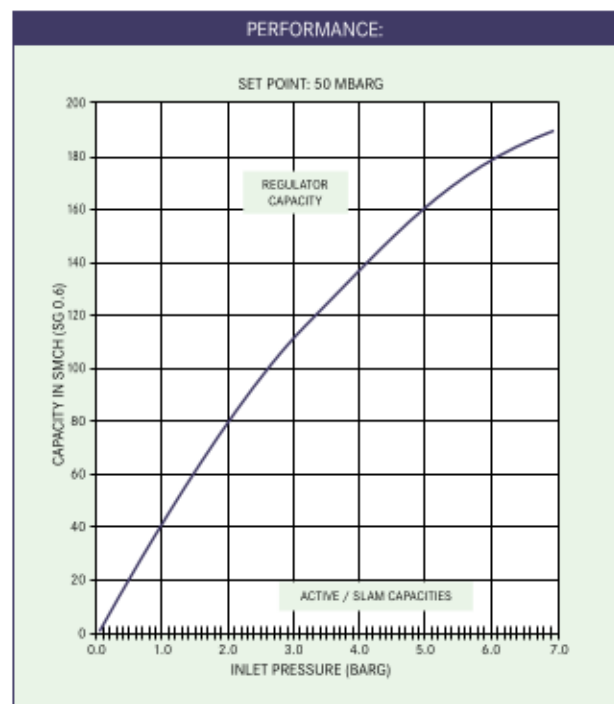


SERVICE GOVERNOR MODULES

SGM 10SFB-7B



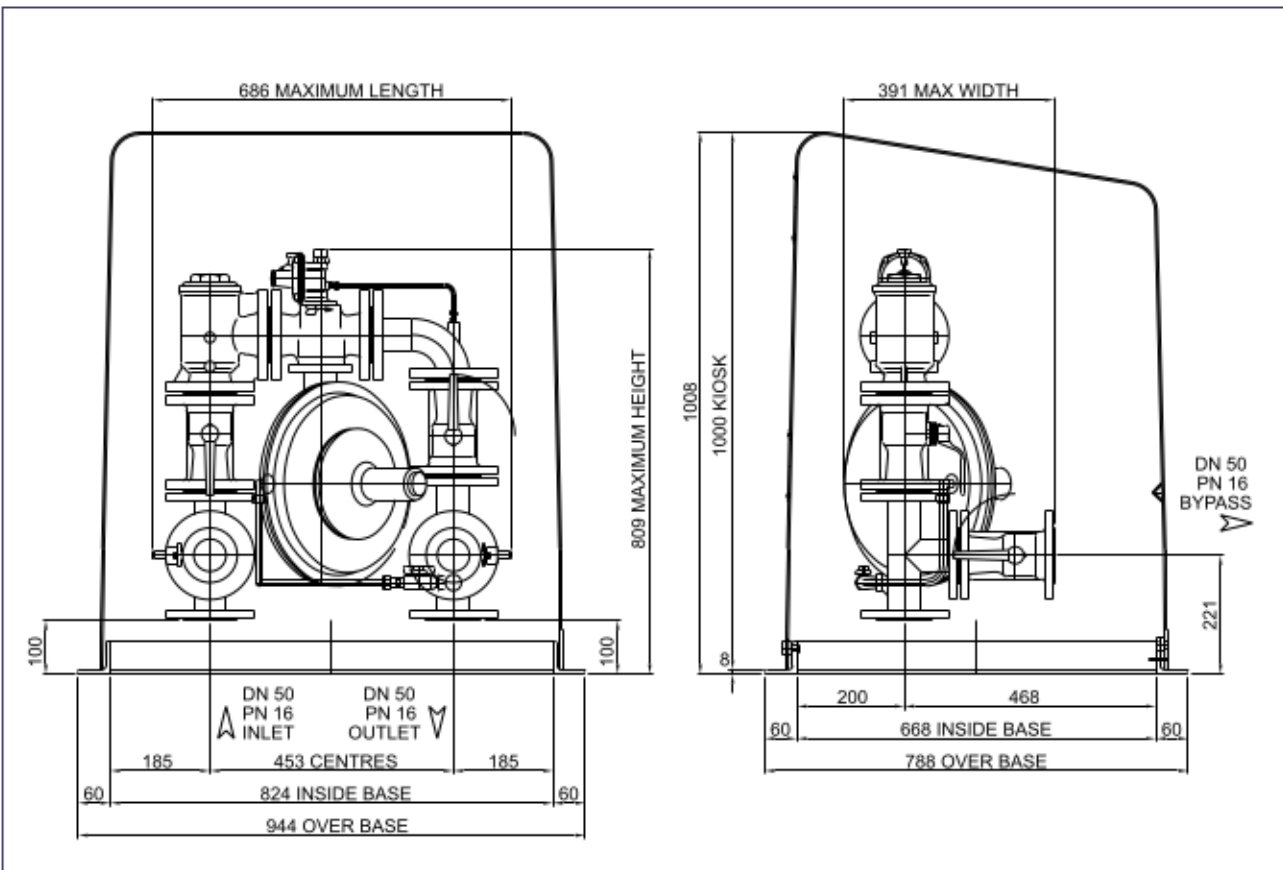
TECHNICAL DETAILS:	
Type	Active / Slam Single Stream With By-Pass
Installation	Below Ground
Connections	INLET - DN25 OUTLET - 63mm O/D PE
Housing	Pit No. 2 & Cover
Weights	Module 55KG Pit & Cover 44KG
Options	Vent Stack VS3



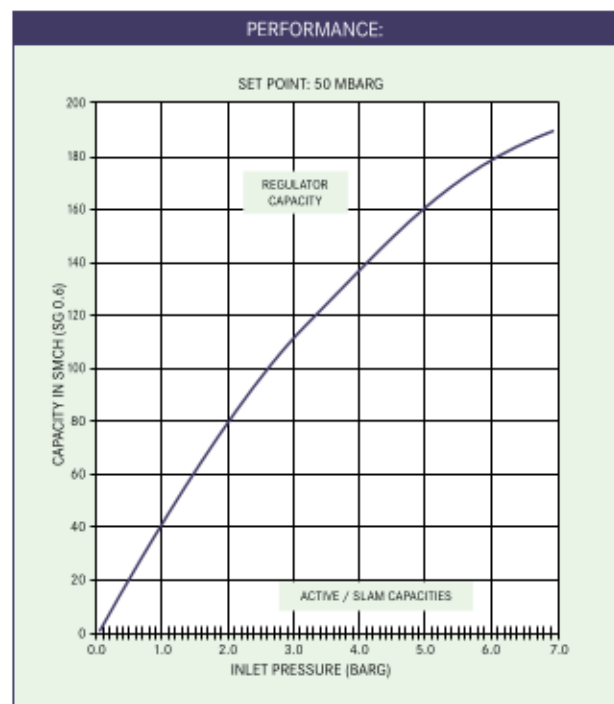


SERVICE GOVERNOR MODULES

SGM 15FB-7B

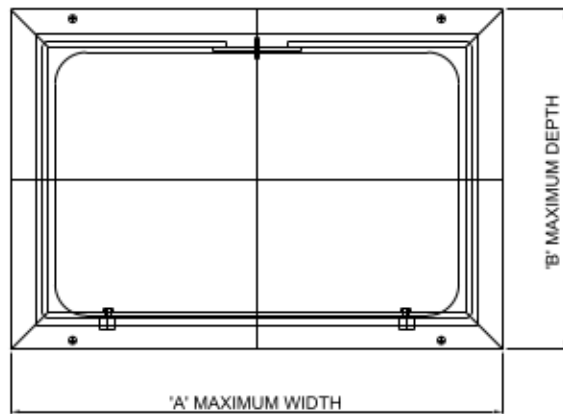
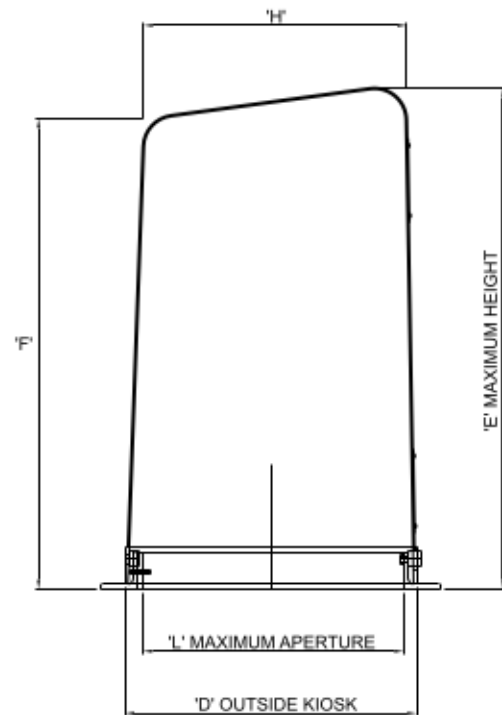
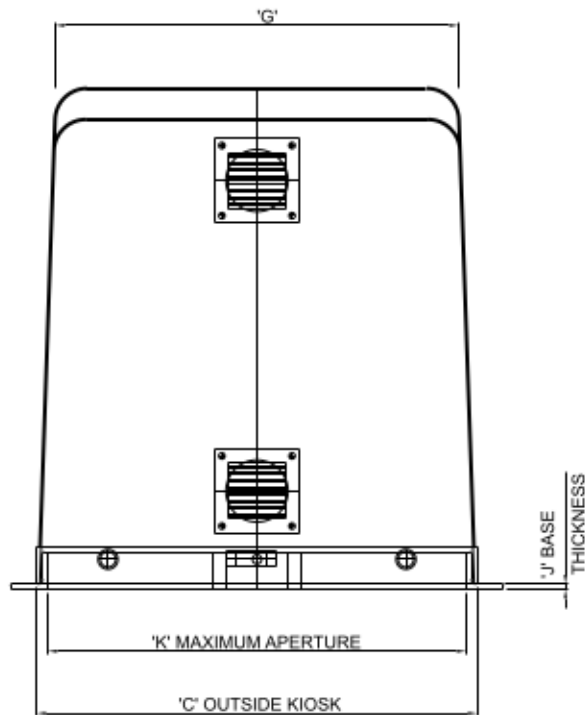


TECHNICAL DETAILS:	
Type	Active / Slam Single Stream With By-Pass
Installation	Above Ground
Connections	INLET - DN50 OUTLET - DN50
Housing	Kiosk No. 3A
Weights	Module 70KG Kiosk & Base 40KG



SERVICE GOVERNOR MODULES

Kiosks & Bases



VENTS	
No. 1	1 Vent Hole
No. 2	2 Vent Holes
No. 3A	4 Vent Holes
No. 4A	8 Vent Holes

LOCKS	
No.s 1, 2 & 3A	1 Lock Set
No. 4A	2 Lock Sets

KIOSKS & BASES											
Kiosk	A	B	C	D	E	F	G	H	J	K	L
1	440	320	375	258	625	550	330	200	25	310	190
2	794	548	710	470	808	758	650	425	8	674	428
3A	944	788	862	712	1008	908	820	670	8	824	668
4A	1310	1060	1216	966	1025	965	1150	900	25	1110	860

All Dimensions in mm

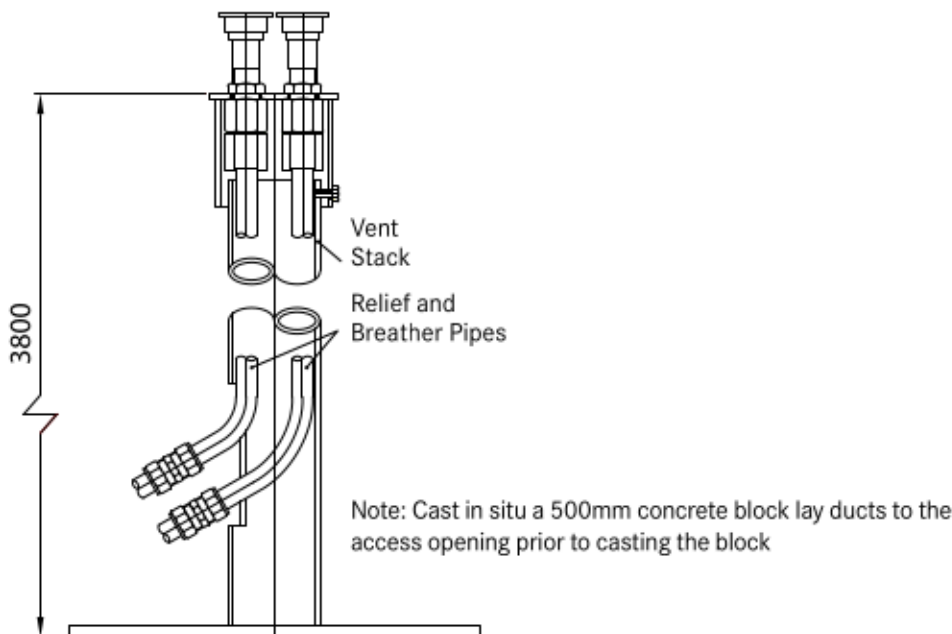


SERVICE GOVERNOR MODULES

Vent Stack - Type VS3

Application

- The VS3 vent stack is designed to carry relief valve outlet pipes and other breather pipes from underground pressure reduction installations to a high above ground location.
- The underground installation may be a buried module or a pit mounted module.
- The installed height of the stack is approximately 3 meters, it has a weather proof cap to prevent the ingress of water or blockage with insects etc.
- The inside diameter of the stack is approximately 80 mm, from a single or twin stream installation it will accommodate the relief valve outlet (32 mm pe pipe) together with, if required, breathers from the regulator, slamshut and relief valve.



Site Selection

The vent stack may be the only visible above ground part of the pressure reduction installation.

- Locate away from roadways and possible vehicular traffic, a fenced compound is preferred but not essential.
- Locate away from areas liable to prolonged overhead water drips during winter thaws, this will help prevent icing.
- Locate reasonably close to the station to shorten lengths of pipe runs but away from buildings where any vented gas would cause problems.

Installation

These recommendations are not intended to over ride the requirements of any applicable code of practice or any regional code. If an operation is covered by an approved code then that code should be followed.

Run the vent and breather pipes to the top of the stack cutting the ends at 45 degrees as shown in the illustration.

Small breather pipes will normally be installed within a length of 20 or 32 mm (PE) ducting entered up inside the stack.

Prop the stack vertically and cast around the base a 500 mm square of concrete approximately 300 mm deep or as the site dictates for stability. The base elbow should be incorporated within the concrete to provide an anchorage and prevent rotation.

Corrosion Protection

The VS3 stack is supplied galvanised to BS 729 at 85 micron min. thickness and normally requires no further above ground protection. The buried portion may, if desired, be over coated with bitumastic for additional protection.