

FORM III C

CERTIFICATE OF MANUFACTURE AND TEST OF BOILER MOUNTINGS AND FITTINGS. (Regulation 4G)

TC No.	484	Date	17/10/2020
Intended Working Pressure in Kg/Cm ² (g)	105.4	Hydraulic Test Pressure in Kg/Cm ² (g)	159
Name of Parts :- CAST ALLOY STEEL GLOBE TYPE CONTROL VALVE	Main Dimensions		8" Class 600
Maker's Name and Address : SEVERN GLOCON INDIA PRIVATE LIMITED F 96 & 97 SIPCOT INDUSTRIAL ESTATE, CHENNAI - 602 117	Body Material		ASTM A217 Gr.WC6
	Assembly Drawing No.		SGI/IBR-280

Customer Name And Address : Indian Oil Corporation Limited, BS VI Project, PO Paradip Refinery, Jagatsingpur, Odisha, Paradip- 754141

MAXIMUM PARAMETERS OF MEDIA FOR WHICH THE VALVE / FITTINGS CAN BE USED

INTENDED WORKING TEMP. OF MEDIA IN °C	38	100	150	200	250	300	350	375	400		
PERMISSIBLE MAX WORKING PRESSURE IN Kg/Cm ² (g)	105.4	105	101.5	97.8	94.5	87.4	82	79.1	74.7		

HEAT No./ CODE	% CHEMICAL COMPOSITION								PHYSICAL TEST RESULT			Valve Serial No.	Qty
	C	Mn	Si	P	S	Cr	Mo	Ni	UTS Mpa	% E GL : 50mm	Bend Test AT 120°		
F2450	0.162	0.616	0.456	0.011	0.003	1.258	0.534	0.271	531	31.84	Passed	7714-003-001	1

TOTAL No. OF VALVES One

Other Tests :-

Raw Material:

Process of manufacture: Induction Melting

Fully Killed / Rimmed :-

Heat No	TC No. and Date	Specification	Name of the maker	Name on the Inspecting Authority
F2450	PKC/F2450/SG521 /1 01/02/2020	ASTM A217 Gr.WC6	Peekay Steel Castings (P) Ltd	Well Known foundry

CERTIFIED that the particulars entered herein by us are correct. The valve have been designed and constructed to comply with the INDIAN BOILER REGULATIONS for a working pressure of 105.4 Kg / cm² (g) and maximum temperature of 400°C and satisfactorily withstood a Hydraulic test using water or kerosene or any other suitable liquid to a pressure of 160 Kg / cm² (g) on the 17th Oct 2020 in the presence of our responsible representative whose signature is appended hereunder.



K.RAMESH KUMAR
DGM - Quality

Maker's Representative
(Name and Signature)



S.MANIVANNAN
General Manager - Operations

Maker
(Name and Signature)

IDENTIFICATION MARK :

The Parts have been stamped with the inspecting authority's official Stamp thus.



on the body / cover flange.

We have satisfied ourselves that valve / fitting has been constructed and tested in accordance with the requirements of the INDIAN BOILER REGULATIONS, 1950. We further certify that the particulars entered herein are correct.



Name and Signature of the
Inspecting Officer
who witnessed the tests

Place : Chennai
Date : 17/10/2020



Name & Signature of the
Inspecting Authority

Note: In case of valve chest made and tested by well known foundries or forges recognised by the central boiler board in the manner as laid down in regulation 4A to 4H listed in 'Appendix K', particulars regarding the material as certified by them, in any form shall be noted in the appropriate columns or paragraphs in the Certificates and in case certificates from well known foundries or forges is produced, such certificates may be accepted in lieu of the Certificates from Inspection Authority in so far as it relates to the testing of material specified in the form.

Strike out which is not applicable



PEEKAY STEEL CASTINGS (P) LTD

4/242 Chinnamaddampalayam, Billichy Post, Coimbatore - 641 019

Email: info@pkcbe.co.in, Phone: 04254 - 271610

Form III F

Certificate of Manufacture and test of Castings (Regulations 73 to 80)

Customer:	Order No and Date	PO Line No	TCNo	PKC/F2450/SG521/1
Severn Glocon India Pvt Ltd	PO1918088 / 11/12/2019	2	Date	01-Feb-2020
F.P. No	Part Name	Item Code / Part No		
SG521	BODY CASTING, 8" 600# RF GLOBE	2G99047-A1010-IBR1		
Drawing No	No. of pieces			
2G99047 ISS 1	2			
Specification /Material	No. of pieces			
ASTM A217 Gr.ASTM A217 Gr.WC6 2014 & PTS RM004 ISS 1 & A1010	2			
Poured Date : 14/01/2020				

Heat treatment	Melting Process	State of Delivery
Normalising at 920°C soaked for 7 hours then open air cooled. HT Cycle No:HT2256 Dt:23/01/2020 Tempering at 720°C soaked for 7 hours then open air cooled. HT Cycle No:E7328 Dt:24/01/2020	INDUCTION	Unmachined

Chemical Composition (%)

Element	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	W	Res					
Min. Specified	0.050	0.500	...	...	...	1.000	...	0.450	...	...	...	...	...	...	...	...
Max. Specified	0.200	0.800	0.600	0.035	0.035	1.500	0.500	0.650	0.500	0.100	1.000	...	...	...	...	...
Heat No																
F2450	0.162	0.616	0.456	0.011	0.003	1.258	0.271	0.534	0.033	0.001	0.305					

Heat Sinos: 3,4

Mechanical Properties	Yield Strength	Tensile Strength	% of Elongation		Reduction of Area	Hardness	Bend Test Angle at 120°	Impact value ISO V at 0°C in Joules			
			GL=50 mm	GL=62.5 mm				Single Value		Average	
Min	275	485	20	...	35	...	D=3t				
Max	...	655	...	...	...	225					
Heat No	Mpa	Mpa	%	%	%	HBW		1	2	3	Avg
F2450	359	531	31.84	-	56.97	163.00	PASSED	...	...	...	...

Remarks:

Material confirm to :ASTM A217 Gr.WC6 2014 & PTS RM004 ISS 1 & A1010 & NACE MR 0175/NACE MR0103/ISO 15156.

Castings are NO major welding carried out.

Test bar as per Specification :ASTM A1067.

Test as per specification :ASTM A370.

MPI testing carried out as per ASTM E709 & ASME B16.34 App.II,ASME Sec VIII Div.1 App.6 /MSS SP 53.

Visual inspection of casting: Satisfactory According to MSS-SP-55 & SGI/OP/130.

Dimensional inspection: Satisfactory According to Approved Drawing

Certified that the products supplied is free from Radioactive element or contamination

Foundry Identification : PKC



We hereby declare that the items mentioned above have been tested and inspected in our presence and are found to be in accordance with drawings, specifications and satisfy the requirements of the INDIAN BOILER REGULATIONS 1950

K. Vijaya Kumar
Asst. Manager (QA)

Makers Representative

Peekay Steel Castings (P) Ltd., Coimbatore - 19



Thilagarajan D
Manager (Production)
Makers

Peekay Steel Castings (P) Ltd., Coimbatore - 19

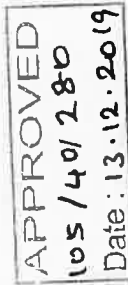
IBR WELLKNOWN FOUNDRY upto 1500 Kg/piece CBB No.310 Dated 13-Sep-2013, valid upto 10-Jul-2023

Registered office : Nallalam, Calicut, Kerala, India - 673027. Ph: 0495-2422500. Email: info@peekaysteel.com

Selvaku
SELVAKUMAR S
Assistant Manager - Product Engg & Design
Savern Glocon India Pvt.Ltd
F96 & 97, SIPCOT Industrial Park,
Irungattukottai - 602 117

Temperature	Working Pressure for 150g WCB	Hydro Pressure
°C	Kg/Cm ² (g)	Kg/Cm ² (g)
-20 to 38		159
100	105.0	-
150	101.5	-
200	97.8	-
250	94.5	-
300	87.4	-
350	82.0	-
375	79.1	-
400	74.7	-

Body Casting No	2G89047
Body Machining No	2G01039



SEVERN
GLOCON • INDIA

GENERAL ARRANGEMENT DRAWING

SEVERN
GLOCON GROUP PLC

SGUFRIDE0188 - 158 1

NOTES :
1. DESIGN,MANUFACTURING,INSPECTION ARE AS PER IBR 1950.
2. ALL DIMENSIONS ARE IN INCHES

SHELL THICKNESS CALCULATION AS PER IBR 290-D

$$T = (WP \times D) / (2f + WP) + C$$

Where

T = Shell Thickness
 WP= Allowable Maximum Pressure for Service Temperature of Material
 D= Outside Chest Diameter of Valve Body
 F= Allowable Stress for material to be taken from ASME SEC. II - D for corresponding temperature in degree C
 C= Minimum Positive Tolerance for cast Steel = 5 mm

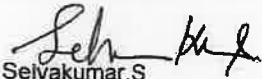
Chest Diameter 242.3 mm

Temp	Working Pressure for WC6 in	Allowable Strees Value f in	Shell Thickenss T	Thickness as per drawing in
°C	Kg/cm ² (g)	(Kg/cm ²)	(mm)	mm
38	105.4	11.26	15.8	19.6
100	105.0	11.26	15.8	19.6
150	101.5	11.26	15.4	19.6
200	97.8	11.26	15.1	19.6
250	94.5	11.26	14.8	19.6
300	87.4	11.26	14.1	19.6
350	82.0	11.26	13.5	19.6
375	79.1	11.26	13.2	19.6
400	74.7	11.09	12.9	19.6

Valve Size : 8"
 Drawing No : 2G99047
 IBR No : IBR 280
 Body 8inch 600# Flanged

Rating : 600 #

For Severn Glocon India Pvt Ltd,


 Selvakumar.S
 Assistant Manager - Product Engineering & Design

APPROVED
 105/40/280
 Date : 13.12.2019



SHELL THICKNESS CALCULATION AS PER IBR 290-D

$$T = (WP \times D) / (2f + WP) + C$$

Where

T = Shell Thickness
 WP= Allowable Maximum Pressure for Service Temperature of Material
 D= Outside Chest Diameter of Valve Body
 F= Allowable Stress for material to be taken from ASME SEC. II - D for corresponding temperature in degree C
 C= Minimum Positive Tolerance for cast Steel = 5 mm

Chest Diameter 339.3 mm

Temp	Working Pressure for WC6 in	Allowable Strees Value f in	Shell Thickenss T	Thickness as per drawing in
°C	Kg/cm ² (g)	(Kg/cm ²)	(mm)	mm
38	105.4	11.26	20.2	30.0
100	105.0	11.26	20.1	30.0
150	101.5	11.26	19.6	30.0
200	97.8	11.26	19.1	30.0
250	94.5	11.26	18.7	30.0
300	87.4	11.26	17.7	30.0
350	82.0	11.26	16.9	30.0
375	79.1	11.26	16.5	30.0
400	74.7	11.09	16.1	30.0

Valve Size : 8"
 Drawing No : 2G99047
 IBR No : IBR 280
 Body 8inch 600# Flanged

Rating : 600 #

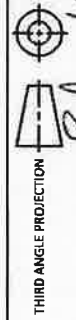
For Severn Glocon India Pvt Ltd,


 Selvakumar.S
 Assistant Manager - Product Engineering & Design

APPROVED
 105/40/ 280
 Date : 13-12-2019



DRAWING NO
2G99047



THIRD ANGLE PROJECTION - IF IN DOUBT ASK

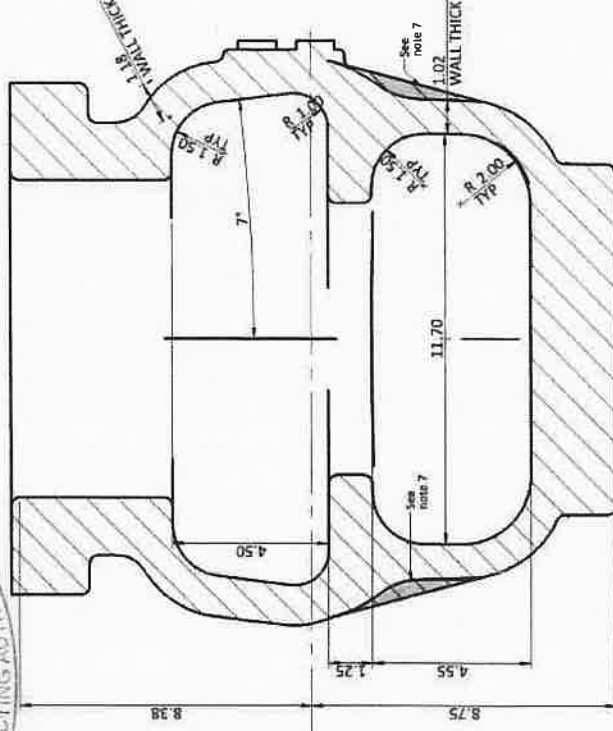
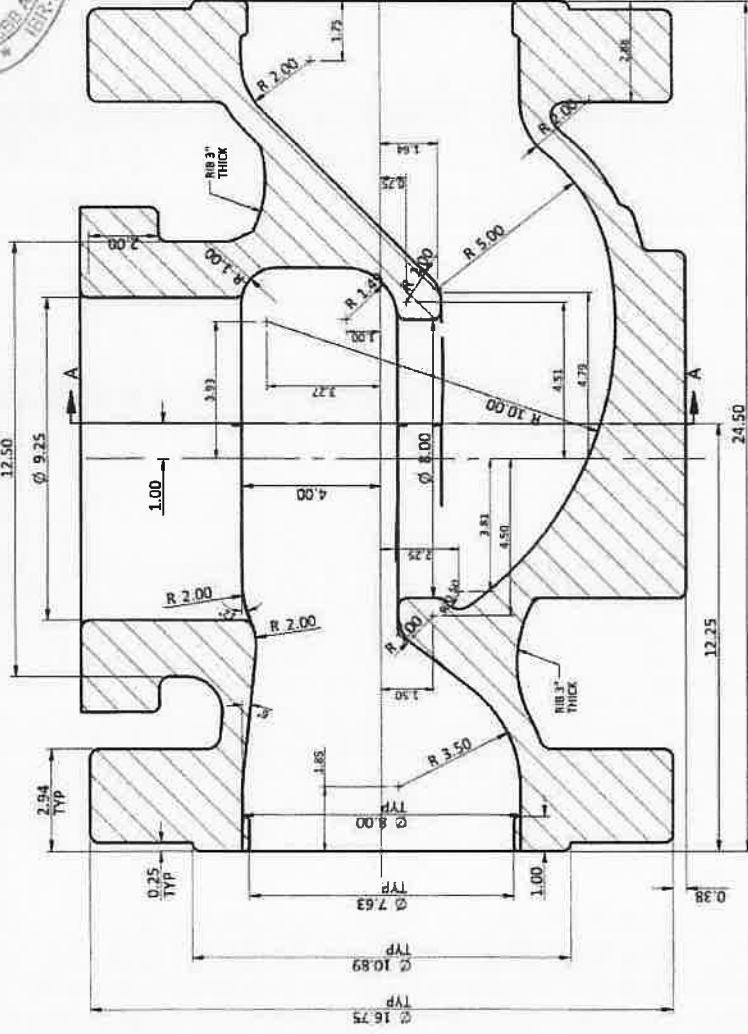
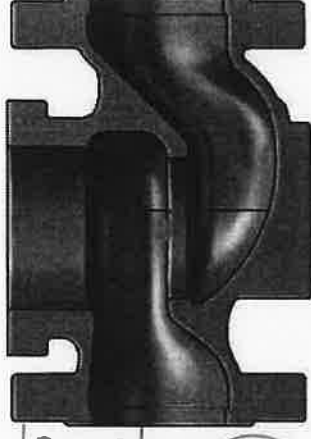
DO NOT SCALE THIS PRINT

NOTES:

1. FOR WALL THICKNESS REFER SECTION A-A, B-B AND SECTION F-F.
2. CASTING TO BE FREE FROM BLOW HOLES
3. CORE SHOULD BE BLEND SMOOTHLY
4. GENERAL CASTING RADII IS 0.125 ins.
5. CASTING SHOWN ON THIS SHEET IS FOR ANSI 600 FLANGED VERSION (RAISED FACE).
6. PLACE OF TRANSITION OF THICKNESS, CONNECT SMOOTHLY.
7. CONNECTING PORTION - BLEND SMOOTHLY.
8. FOR IFR REQUIREMENTS REFER DRAWING NO G0831002 ISSUE NO 1

SEVERN GLOCON INDIA PVT. LTD.
F 96 & 97, SIPCOT Industrial Estate,
Irungattukottai, Srirampuruthur TK,
Kanchipuram Dist. - 602 117
Ph : 044 - 4710 4200. Fax: 044 - 4710 4503

APPROVED
105 / 40 / 280
Date : 13-12-2020



SECTION A-A

SEVERN GLOCON GROUP PLC
 OLYMPIUS PARK, QUEDGELEY,
 GLOUCESTER, GL1 4NF,
 UNITED KINGDOM.
 TEL: +44 (0)845 223 2040

THIS DRAWING IS THE PROPERTY OF SEVERN GLOCON LIMITED AND MUST NOT BE USED IN ANY WAY DETRIMENTAL TO THEIR INTERESTS

UNLESS OTHERWISE STATED

X	± 0.06	ALL DIMENSIONS IN INCHES
.XX	± 0.02	REMOVE SHARP EDGES
.XXX	± 0.005	ALL MACHINED SURFACES
ANGULAR	± 0.5°	

SEVERN GLOCON-INDIA
 F-96&97, SIPCOT INDUSTRIAL PARK,
 IRUNGATTUKOTTAI, SRIRAMPURTHUR,
 TAMIL NADU, INDIA.
 TEL: +91 (0)44 47104200

TITLE									
Body Casting, 8" 600# FF/RF Globe									
1	NEW	NAS	ADK	21.04.2018	DRAWN	MASREEN	SIZE	SIMILAR TO	
ISS	ECO No	DRN	CKD	DATE	DATE	21.04.2018	A4	G0831002	
CHANGE RECORD									
PERFORM ALL CHANGES ON CAD									
SOLID EDGE									
WEIGHT									
2800.60 kg									
DATE									
21.04.2018									

DRAWING NO

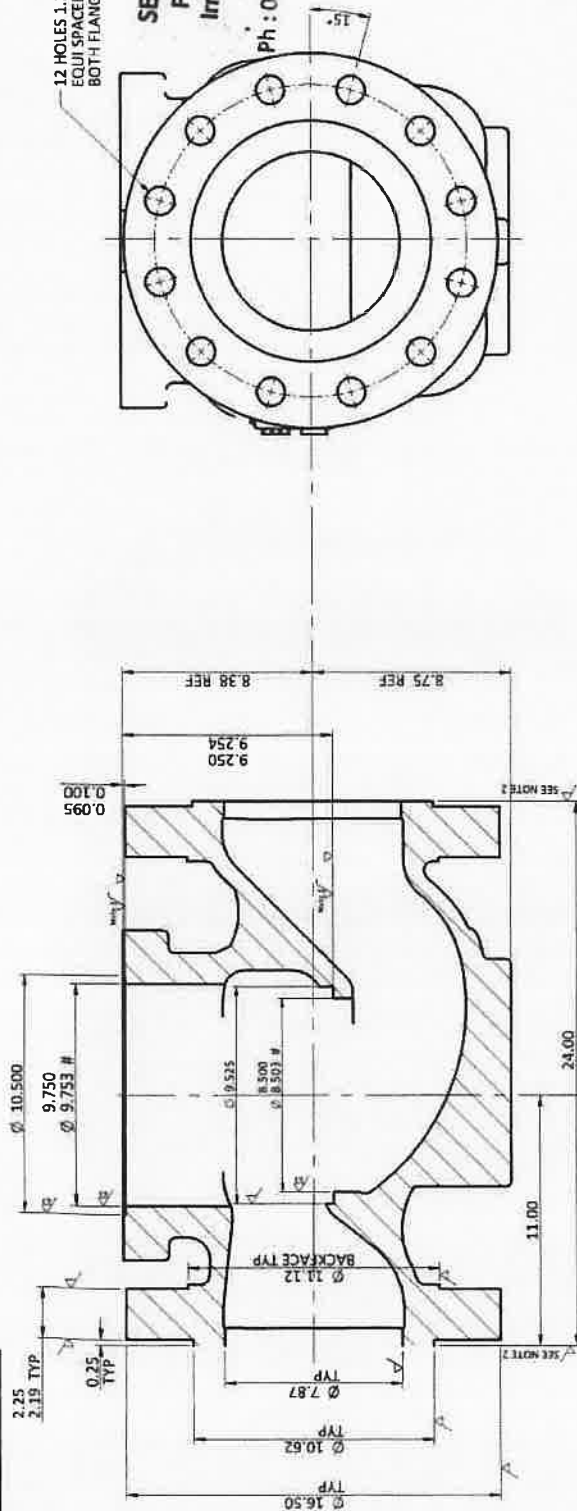
2G01039

THIRD ANGLE PROJECTION



IF IN DOUBT ASK

DO NOT SCALE THIS PRINT



16 HOLES EQUI SPACED OFF
MAIN ϕ ON 12.750 PCD
DRILL 0.88" DIA x 1.25" DEEP MAX.
TAP 1"-8 UNC x 1.000" MIN. FULL THREAD

APPROVED
105/401280
Date: 13.12.2019

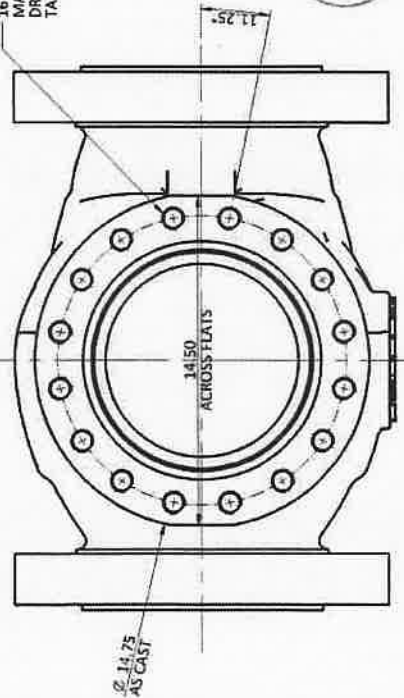


TABLE-1

Part Code	Serration
2G01039/1	63-125 Ra
2G01039/2	125-250 Ra

NOTES:

1. M/C FROM CASTING 2G98047.
2. THESE FACES TO BE SERRATED WITH A CONTINUOUS SPIRAL GROOVE GENERATED USING A 0.06" R. ROUND NOSED TOOL AT A FEED OF APPROX. 0.02" PER REV. RESULTANT TEXTURE = REFER TABLE-1.
3. THESE FACES TO BE SERRATED WITH A CONTINUOUS SPIRAL GROOVE GENERATED USING A 0.06" R. ROUND NOSED TOOL AT A FEED OF APPROX. 0.02" PER REV. RESULTANT TEXTURE = 63/125 Ra.
4. DIAMETERS MARKED THUS # TO BE CONCENTRIC WITHIN 0.002" TIR.
5. DIAMETERS MARKED THUS # TO BE SQUARE TO FACES ∇ WITHIN 0.002" TIR.
6. KEEP MINIMUM FLANGE THICKNESS TO PREVENT NUT FOULING.
7. FOR IIR REQUIREMENTS REFER DRAWING G0831103 ISSUE 2



THIS DRAWING IS THE PROPERTY OF SEVERN GLOCON LIMITED AND MUST NOT BE USED IN ANY WAY DETRIMENTAL TO THEIR INTERESTS

UNLESS OTHERWISE STATED

X	± 0.06	ALL DIMENSIONS IN INCHES
.XX	± 0.02	REMOVE SHARP EDGES
.XXX	± 0.005	ALL MACHINED SURFACES
ANGULAR	$\pm 0.5^\circ$	

SEVERN GLOCON GROUP PLC
OLYMPUS PARK, QUEDGELEY,
GLOUCESTER, GL2 4NF,
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SEVERN GLOCON INDIA
F-96&97, SIPCOT INDUSTRIAL PARK,
IRUNGATTUKOTTAI, SRIPERUMBUDUR,
TAMIL NADU, INDIA.
TEL: +91 (0)44 47104200

TITLE

Body M/C, 8" 600# RF Globe

1	NEW	NAS	ADK	DATE	DRAWN	NASREEN	SIZE	SIMILAR TO
ISS	ECO No	DRN	CKD	DATE	CKD	KUMAR	A4	G0831103
CHANGE RECORD								
PERFORM ALL CHANGES ON CAD								
SOLID EDGE			WEIGHT	SCALE	DATE	APP	DATE	DRAWING NO
			2392.85 kg	NTS	21.04.2018	SELVA	21.04.2018	65 1
								2G01039

12 HOLES 1.25" DIA
EQUI SPACED OFF MAIN ϕ ON 13.75" PCD
BOTH FLANGES

SEVERN GLOCON INDIA PVT. LTD.
F 96 & 97, SIPCOT Industrial Estate,
Irungattukottai, Sriperumbuthur TK
Kanchipuram Dist. - 602 117
Ph : 044 - 4710 4200. Fax : 044 - 4710 4103