

Project: FIRE TEST FOR SOFT-SEATED
BALL VALVE

Certificate No.: 157/06 - 9587

Client: J.C. FÁBRICA DE VÁLVULAS, S.A.

Office: Sant Joan Despí (BCN)

Client's Order No.: —

Date: 25.04.05

Inspection dates

First: 03.04.06

Order Status: Complete

Final: 03.04.06

This certificate is issued to

Messrs. **J.C. FABRICA DE VÁLVULAS, S.A.**, upon their request that the undersigned Suveryor to this Society did attend their premises at their works in Sant Boi de Llobregat - Barcelona (Spain) for the purpose of witnessing the FIRE TEST in accordance with the requirements specified in ISO 10497:2004, on the following type of valve:

A manually operate soft seated ball valve of 2" bore 2", symetric Valve as per fig. 515 AIT class 150#.

Body and Connector material A216 Gr WCB

Seats: SEE DRAWING 5593

Ball material: SEE DRAWING 5593

Stem: SEE DRAWING 5593

Marks:

- BODY : Col. E9005
- CONNECTOR : Col. D2614

The test conducted on the valve previously subject to hydraulic pressure was as follows:

The valve in the closed position, filled with water under test pressure, was put in a box and exposed to flames with an environmental temperature in the region 750° C for a period of 30 minutes and established the leakage trough the seat and external to atmosphere during this period. The temperature was checked and recorded every two minutes, while leakages were determined using containers collecting the water leaked during burn period. Afterwards cool-down to 100° C. The valve seat and external hydrostatically tested to the appropriate test pressure and leakages recorded accordingly. Subsequently manually opened up under test pressure differential and finally the valve was fully hydrottested and leakages recorded.

All the following values were determined and recorded together with temperatures, times and pressures as shown on manufacturers Fire Safe Test Report nº C157/06

SGS Tecnos, S.A.

1. Through-valve leakage during burn period - SATISFACTORY.
2. External leakage during burn and cool-down period - SATISFACTORY.
3. Through-valve leakage during operational test - SATISFACTORY.
4. External leakage during operational test - SATISFACTORY.
5. Operatibility to full open position and external leakage - SATISFACTORY.

The valve was subject to a visual examination with satisfactory results and subsequently dismantled in order to verify that valves components comply with the drawing and parts list supplied by the manufacturer, while seat rings were found completely destroyed.

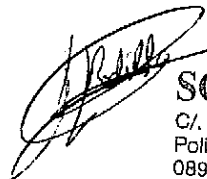
The manufacturers Fire Safe Test Report nº C157/06 and drawing 5593 herewith attached were satisfactory checked and signed.

The above is considered in accordance with the mentioned specifications requirements, therefore the subject valve has satisfactory passed the prescribed fire test and can be also qualified as follows.

<u>DN</u>	<u>CLASS RATING</u>	<u>PN RATING</u>
50 AND BELOW; 65; 80; 100	150# , 300#	10; 16; 25; 40

Surveyor José Luis Rodilla

DOCUMENTS ATTACHED:
Sheets reviewed and stamped
Accordingly.

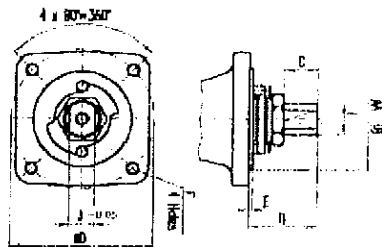
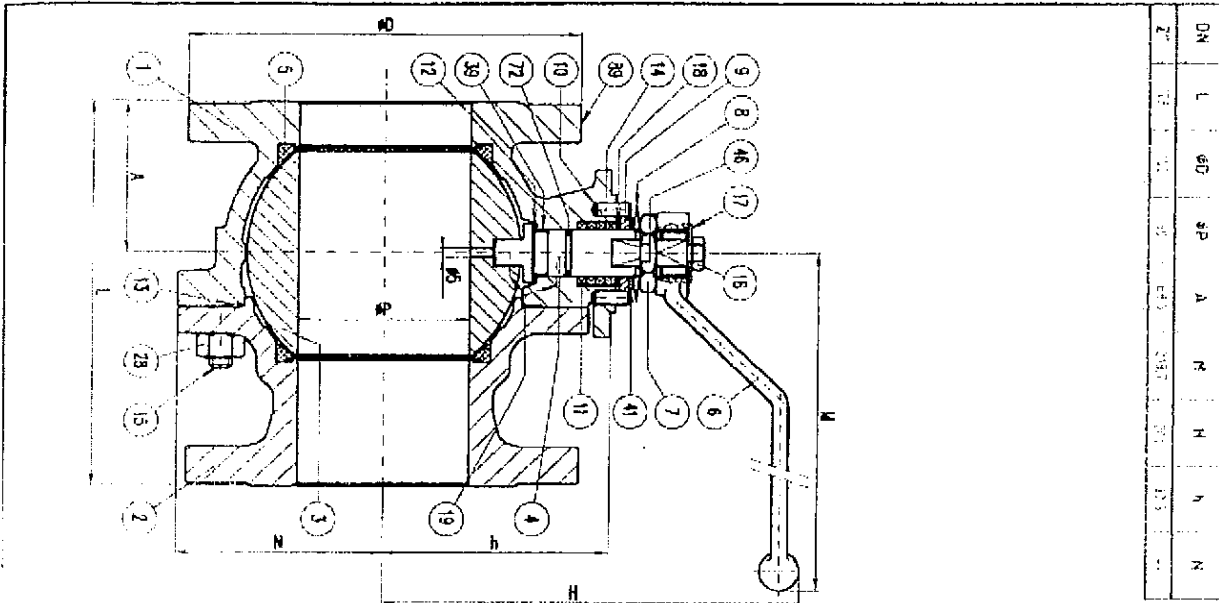


SGS Tecnos, S.A.

C/. Las Planas nº 1, Nave B
Poligono Industrial Font Santa
08970 Sant Joan Despí (Barcelona)
Tel.: (34) 93 477 01 71 - 93 477 01 69
Fax.: (34) 93 373 15 00

24-ABR-2001 11:23 DE J.C. FABRICA DE VALVULAS A 303933731500

P.02/03
5593



DN	L	ØD	SP	A	N	N	N	N

BALL VALVES STEM DIMENSIONS									
ØA	B	C	Ø6	E	F	F1	J	K	L

(P) RECOMMENDED SPARE PARTS

POS.	QTY.	DESCRIPTION	MATERIAL	DRAWING-N°	REV.	DATE
68	2	PLATE CAP	PLASTIC			
72	1	IDENTIFY F AIR	BRASS			
46	1	INDICATOR WASHER	BRASS			
14	1	SCREW	AINI 316			
18	1	STEM SOLENOID	CARBON STEEL			
28	6	NUT DN=ØA - DN=ØI	A 164 - 2 - 2MM			
18	2	RESISTOR DEVICE	STAINLESS ST.			
13	1	IMPELLER WADLER	25% GF + PTFE			
13	1	MIXER	ZINC PLATED CARBON STEEL			
16	1	SOLENOID	DN=ØJ1, 5,9 (ZINC PLATED)			
32	2	STOP RING	CARBON ST.			
34	1	EGON CONNECTOR STEEL	AISI 316L + PTFE + Ø24P114			
37	1	STEM HOOPER SEAL	25% GF + PTFE			
31	2	GLAND PACKING	GRAPHITE			
10	1	GLAND	AISI 303			
8	1	STEM PLATE	CARBON STEEL			
7	2	DISK SPRING	ZINC PLATED CARBON STEEL			
1	1	BRANCH	WOLFRAM			
5	2	SEAL RING	PTFE			
4	1	STEM	A 419 - 16.316			
1	1	BEAD	A 281 - 16.316			
1	1	BEAD CONNECTOR	A 278 - 16.316			
1	1	BEAD	A 276 - 16.316			

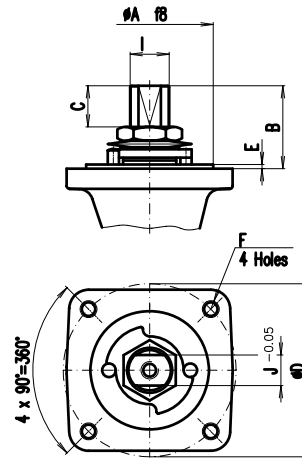
JC Ball Valves
JC Fabrica de Valvulas S.A.
 C/El Nido, s/n - 08850 Sant Joan Despi (Barcelona)
 T. +34 935 33 15 00 - F. +34 935 33 15 01
 www.sgstechnos.com

JC Ball Valves
 Appr. Eng. J.C. Ball Valves
 Scale: $\frac{1}{2}$
 FIG. 518.017 DN=2 CLASS 150/18° FB

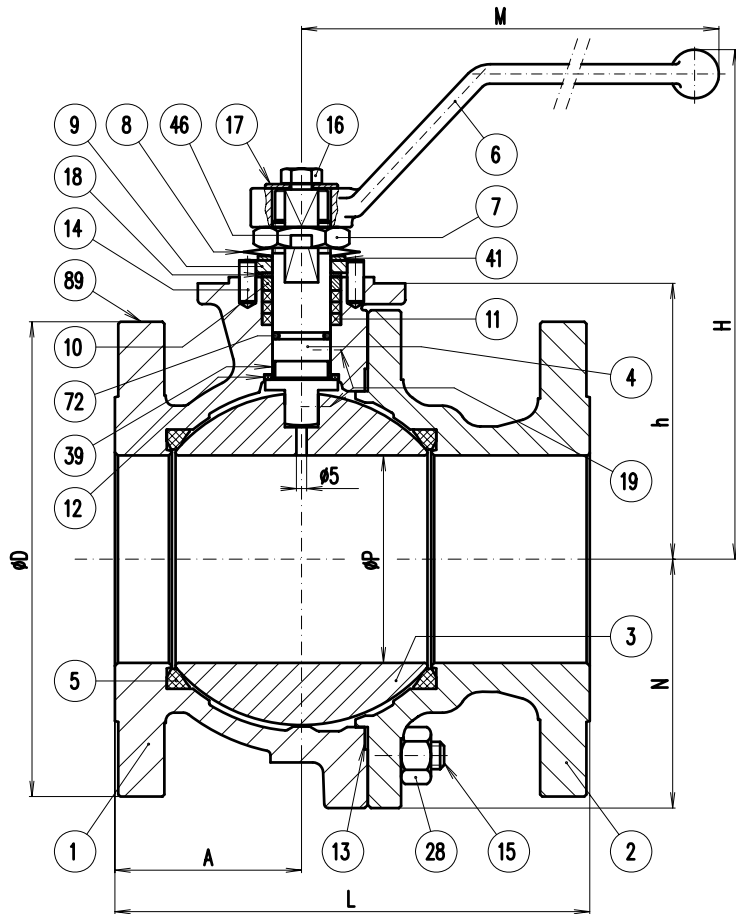
Drawing n°: 5593

5593

DN	L	φD	φP	A	M	H	h	N
2"	178	152	50	68,5	213,7	201	83,5	--



BALL VALVES STEM DIMENSIONS									WEIGHT (Kg.)	QUANTITY	ITEM
DN	φA	B	C	φD	E	F	I	J			
2"	55	41,5	17,6	70	3	M8	M18x1,5	13	11		



(*) RECOMMENDED SPARE PARTS

POS.	QUAN.	DENOMINATION	MATERIAL	DRAWING N°.	REV	DATE
	2	PLASTIC CAP	PLASTIC	2" CLASS 150		
89	1	IDENTIFICATION PLATE	STAINLESS ST.	100 x 13		
72	1	"O" RING	FKM	* ø12,37 x 2,62		
46	1	LOCKING WASHER	AISI 304	* 5240/46	0	3-86
41	1	SPACER	CARBON STEEL	200040/41	0	6-86
39	1	STEM BUSHING	25% G.F. + TFM	ø17,5 x 16,5 x 12,5		
28	6	NUT (DN=3/4" ~ DN=6")	A 194 Gr. 2HM	5150/28	0	6-85
19	2	ANTISTATIC DEVICE	STAINLESS ST.	5115/20	0	12-86
18	1	THRUST WASHER	25% G.F. + PTFE	* ø25,7 x 18 x 2		
17	1	WASHER	ZINC PLATED CARBON STEEL	5130/17	0	12-86
16	1	BOLT	DIN-933 5.6 ZINC PLATED	DIN 933 M6 x 12		
15	6	STUD	A 193 Gr. B7M	S53050	M2	6-85
14	2	STOP PIN	CARBON ST.	DIN 6325 6 x 16		
13	1	BODY CONNECTOR SEAL	AISI 316L + PTFE + GRAPHITE	* JCL050TG	0	3-06
12	1	STEM THRUST SEAL	25% G.F. + PTFE	* ø25,7 x 19 x 2		
11	2	GLAND PACKING	GRAPHITE	* ø26 x 18 x 5		
10	1	GLAND	AISI 303	5140/10-1	0	12-86
9	1	STOP PLATE	CARBON STEEL	00400930	0	7-92
8	2	DISK SPRING	CARBON STEEL	DIN 2093 B35,5		
7	1	GLAND NUT	ZINC PLATED CARBON STEEL	00400710	0	1-89
6	1	WRENCH	NODULAR IRON	M40ND	M1	3-93
5	2	SEAT RING	PTFE	* 00500530	0	1-90
4	1	STEM	A 479 Tp.316	EPI50Q	1	2-02
3	1	BALL	A 351 Gr. CF8M	00500311	1	6-89
2	1	BODY CONNECTOR	A 216 Gr. WCB (C ≤ 0.25%)	0515050LN	0	1-05
1	1	BODY	A 216 Gr. WCB (C ≤ 0.25%)	0515050CN	3	1-05

Rev.	Modification	Date	Nam.	Approv.
0	First issue	3-06	RB	

Dimensions	Drawn	27-03-06	RB	JC Ball Valves	JC Fábrica de válvulas, s.a. 08830 Sant Boi de Llobregat (Spain) Tel. + (34) 936 54 86 86 // Fax + (34) 936 86 87 e.mail: technical@jc-ballvalves.com
mm.	Checked	27-03-06	JR		
Weight:	Appr. Eng.				
Substitutes:	Scale:	GENERAL DIMENSIONS			Ref.:
Substitutes by:		FIG. 515 AIT DN-2" CLASS 150 RF FB			Drawing n°.: 5593

This drawing is our property. It is strictly forbidden to use the drawing, to give it to third parties or to reproduce it totally or partially without our permission.

**Project: FIRE TEST FOR SOFT-SEATED
BALL VALVE**

Certificate No.: 186/06 - 9587

Client: J.C. FÁBRICA DE VÁLVULAS, S.A.

Office: Sant Joan Despí (BCN)

Client's Order No.: ---

Date: 17.05.05

Inspection dates

First: 12.05.06

Order Status: Complete

Final: 12.05.06

This certificate is issued to

Messrs. **J.C. FABRICA DE VÁLVULAS, S.A.**, upon their request that the undersigned Suveyor to this Society did attend their premises at their works in Sant Boi de Llobregat - Barcelona (Spain) for the purpose of witnessing the FIRE TEST in accordance with the requirements specified in ISO 10497:2004, on the following type of valve:

A manually operate soft seated ball valve of 6" bore 6", symetric Valve as per fig. 515 A.I.T class 150# with valve actuator
Body and Connector material A-216 WCB
Seats: SEE DRAWING 5595
Ball material: SEE DRAWING 5595
Stem: SEE DRAWING 5595

Marks:

- BODY : Col. 41DC
- CONNECTOR : Col. 41W2

The test conducted on the valve previously subject to hydraulic pressure was as follows:

The valve in the closed position, filled with water under test pressure, was put in a box and exposed to flames with an environmental temperature in the region 750° C for a period of 30 minutes and established the leakage trough the seat and external to atmosphere during this period. The temperature was checked and recorded every two minutes, while leakages were determined using containers collecting the water leaked during burn period. Afterwards cool-down to 100° C. The valve seat and external hydrostatically tested to the appropriate test pressure and leakages recorded accordingly. Subsequently manually opened up under test pressure differential and finally the valve was fully hydrottested and leakages recorded.

All the following values were determined and recorded together with temperatures, times and pressures as shown on manufacturers Fire Safe Test Report nº C186/06

SGS Tecnos, S.A.

1. Through-valve leakage during burn period - SATISFACTORY.
2. External leakage during burn and cool-down period - SATISFACTORY.
3. Through-valve leakage during operational test - SATISFACTORY.
4. External leakage during operational test - SATISFACTORY.
5. Operability to full open position and external leakage - SATISFACTORY.

The valve was subject to a visual examination with satisfactory results and subsequently dismantled in order to verify that valves components comply with the drawing and parts list supplied by the manufacturer, while seat rings were found completely destroyed.

The manufacturers Fire Safe Test Report nº C186/06 and drawing 5595 herewith attached were satisfactory checked and signed.

The above is considered in accordance with the mentioned specifications requirements, therefore the subject valve has satisfactory passed the prescribed fire test and can be also qualified as follows.

<u>DN</u>	<u>CLASS RATING</u>	<u>PN RATING</u>
150; 200; 250; 300	150# , 300#	10; 16; 25; 40

Surveyor José Luis Rodilla

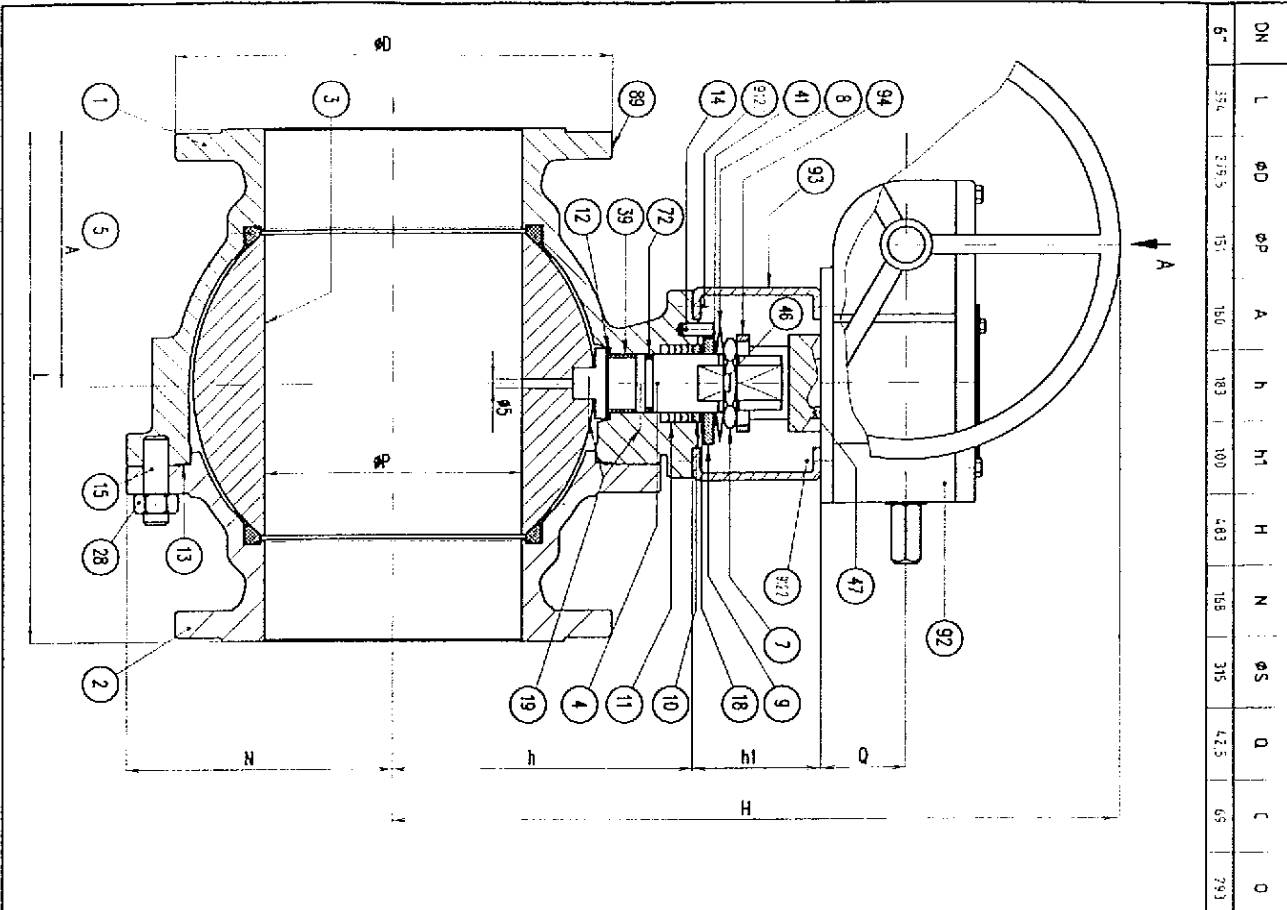


DOCUMENTS ATTACHED:
Sheets reviewed and stamped
Accordingly.

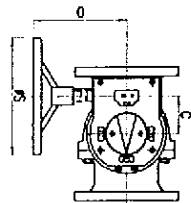
SGS Tecnos, S.A.

C/. Las Planas nº 1, Nave B
Polígono Industrial Font Santa
08970 Sant Joan Despí (Barcelona)
Tel.: (34) 93 477 01 71 - 93 477 01 69
Fax.: (34) 93 373 15 00

5595



DN	L	ØD	ØP	A	h	h1	H	N	ØS	Q	C	O
6"	354	275.5	151	150	183	100	483	158	315	42.5	65	293



VIEW A

(*) RECOMMENDED SPARE PARTS

REV	QUAN	DENOMINATION	MATERIAL	DRAWING NO.	REV	DATE
917/2	4	BOLT	9.8 ZINC PLATED	DN 912	M 6 x 25	
912/1	4	BOLT	B.8 ZINC PLATED	DN 912	M 12 x 22	
94	1	COUPLING	ZINC PLATED CARBON STEEL	40510/05	M	1-56
93	1	WORKING BRACKET	ZINC PLATED CARBON STEEL	CS1642100	M	5-52
92	1	WORM GEAR	PRO-GEAR	Q800 + P.315	0	
89	2	PLASTIC CAP	PLASTIC	6" CLASS 150		
72	1	IDENTIFICATION PLATE	STAINLESS SI	140 x 113		
47	1	TO RING	5M	322/52 x 325		
46	1	LOCKING WASHER	CARBON STEEL	DN 5955	A 14 x 9 x 56	
39	1	STEM BUSHING	CARBON STEEL	52833/46	0	3-86
28	12	NUT	25% Cr - TM	200160/41	0	6-82
19	2	ANTI-STATIC DEVICE	A 194 - Cr 2M	645.5 x 38.5 x 22	0	9-82
18	1	T-RUST WASHER	STAINLESS ST	51512/9	0	7-56
15	12	STOP PIN	25% Cr - PTFE	650 x 40 x 2	0	
14	1	BODY CONNECTOR SEAL	A 193 - Cr 2M	51831/5-2	0	6-82
13	1	STEM THERIST SEAL	CARBON ST	DN 5375	9 x 20	
12	1	CLAND PACKING	AS1 STEEL - PTFE - GRAPHITE	UC15010	0	3-03
11	1	GUANO	25% Cr - PTFE	650 x 40 x 2	0	
10	1	STOP PLATE	AS1 STEEL	650 x 40 x 2	0	
9	2	PIPE SHERRO	AS1 STEEL	650 x 40 x 2	0	
8	2	CLAND NUT	ZINC PLATED CARBON STEEL	51831/07	0	7-78
7	1	SEAL RING	PTFE	AL009/6	0	5-59
6	1	SEAL	PTFE	EP1500	1	4-01
5	1	SEAL	PTFE	EP1500	1	4-01
4	1	SEAL	PTFE	EP1500	1	4-01
3	1	SEAL	PTFE	EP1500	1	4-01
2	1	SEAL	PTFE	EP1500	1	4-01
1	1	SEAL	PTFE	EP1500	1	4-01

DN	WORM GEAR	WEIGHT (kg)	QUANTITY
6"	082C-P-315	96	

SGS Tecnos, S.A.

Dimensions: 27-03-06
 Checked: 27-03-06
 Weight: 28-03-06
 Scale: 1/1
 Substitutes by: JC
 Drawing n°: 5595

GENERAL DIMENSIONS
 FIG 516 AT DN 6" ANSI 150 PB
 WORM GEAR OPERATOR

JC
 Bait Valves
 JC Fabrica de válvulas S.A.
 C/ Sant Joan de les Abadesses, 10
 08200 Sant Joan de les Abadesses (BCN)
 Tlf: +34 93 54 86 86 o Fax: +34 93 54 86 97
 e-mail: tecnico@sgs.com.es

Rev: 0
 Modification: 27-03-06
 Drawn: 27-03-06
 Checked: 27-03-06
 Weight: 28-03-06
 Scale: 1/1
 Substitutes by: JC
 Drawing n°: 5595

JC
 Bait Valves
 JC Fabrica de válvulas S.A.
 C/ Sant Joan de les Abadesses, 10
 08200 Sant Joan de les Abadesses (BCN)
 Tlf: +34 93 54 86 86 o Fax: +34 93 54 86 97
 e-mail: tecnico@sgs.com.es

Rev: 0
 Modification: 27-03-06
 Drawn: 27-03-06
 Checked: 27-03-06
 Weight: 28-03-06
 Scale: 1/1
 Substitutes by: JC
 Drawing n°: 5595

Rev: 0
 Modification: 27-03-06
 Drawn: 27-03-06
 Checked: 27-03-06
 Weight: 28-03-06
 Scale: 1/1
 Substitutes by: JC
 Drawing n°: 5595

Rev: 0
 Modification: 27-03-06
 Drawn: 27-03-06
 Checked: 27-03-06
 Weight: 28-03-06
 Scale: 1/1
 Substitutes by: JC
 Drawing n°: 5595

Rev: 0
 Modification: 27-03-06
 Drawn: 27-03-06
 Checked: 27-03-06
 Weight: 28-03-06
 Scale: 1/1
 Substitutes by: JC
 Drawing n°: 5595

Rev: 0
 Modification: 27-03-06
 Drawn: 27-03-06
 Checked: 27-03-06
 Weight: 28-03-06
 Scale: 1/1
 Substitutes by: JC
 Drawing n°: 5595