

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

**Certificate No.: 206/08 - 9587**

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

**Office: Sant Joan Despí (BCN)**

**Client's Order No.: ---**

**Date: 18.03.08**

**Inspection dates**

**First: 18.03.08**

**Order Status: Complete**

**Final: 18.03.08**

*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. 560 IIRTFM class 600#.

Body and Connector material CF8M (ASTM A-351)

Seats: SEE DRAWING 6095

Ball material: SEE DRAWING 6095

Stem: SEE DRAWING 6095

Marks:

- BODY : Col. J8023
- CONNECTOR : Col. J8023

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 C206/08

### **SGS Tecnos, S.A.**

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

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 C206/08 and drawing 6095 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	600# , 800#, 900#	100, 150

**SGS Tecnos, S.A.**

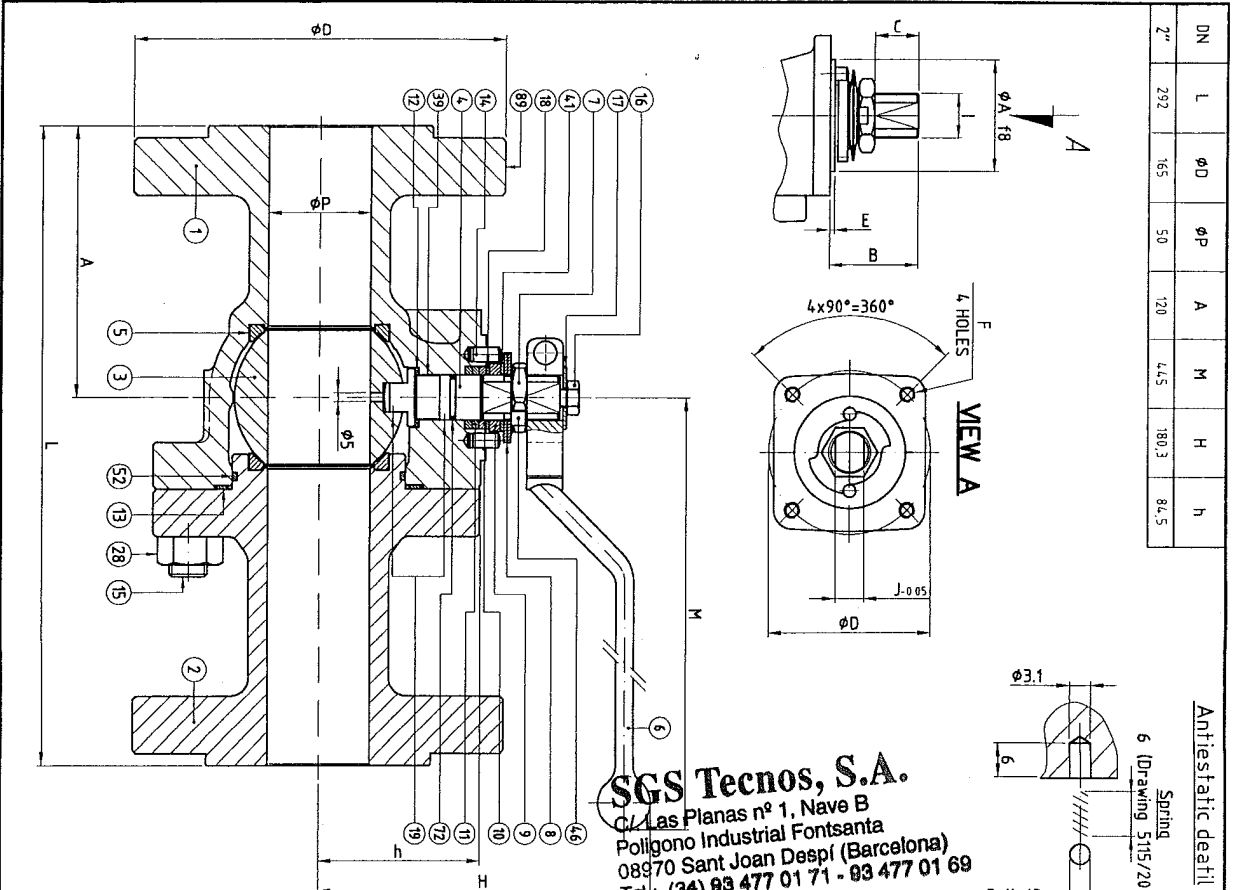
C/. Las Planas nº 1, Nave B  
Polígono Industrial Font Santa  
08970 Sant Joan Despi (Barcelona)  
Tel.: (34) 93 477 01 71 - 93 477 01 69  
Fax.: (34) 93 373 15 00

Surveyor      Javier Aranda García

**DOCUMENTS ATTACHED:**

Sheets reviewed and stamped  
Accordingly.

6095



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

DN	L	ØD	ØP	A	M	H	h
2"	292	165	50	120	4.5	180.3	84.5

Antiestatic deadfl  
 Spring  
 6 Drawing 5115/201

BALL VALVES STEM DIMENSIONS								WEIGHT (kg)	QUANTITY	ITEM
DN	ØA	B	C	ØD	E	F	J			
2"	70	4.5	19.2	102	3	M10	M25x15	18	29	--

(\*) RECOMMENDED SPARE PARTS

POS.	QUAN.	DENOMINATION	MATERIAL	DRAWING N°
2		PLASTIC CAP	PLASTIC	
89	1	IDENTIFICATION PLATE	STAINLESS ST.	
72	1	O' RING	FKM	*
52	1	O' RING	FKM	*
46	1	LOCKING WASHER	ASIS 304	*
41	1	SPACER	ASIS 304	*
39	1	STEM BUSHING	PITE + 25% G.F.	*
28	4	NUT	A 194 G. 2HM ZINC + BICR	*
18	1	ANTISTATIC DENICE	STAINLESS ST.	*
17	1	THRUST WASHER	25% G.F. + PITE	*
16	1	WASHER	ASIS 304	*
15	4	BOLT	DN-933 STAINLESS STEEL	*
14	2	STOP PIN	A 193 G. 87M ZINC + BICR	*
13	1	BODY CONNECTOR SEAL	STAINLESS STEEL	*
12	1	STEEL THRUST SEAL	ASIS 316L + GRAPHITE	*
11	2	GLAND PACKING	25% G.F. + PITE	*
10	1	GLAND	GRAPHITE	*
9	1	STOP PLATE	ASIS 316	*
8	2	DISK SPRING	ENP CARBON STEEL	*
7	1	GLAND NUT	ASIS 303	*
6	1	WRENCH	MODULAR IRON	*
5	2	SEAL RING	TFM - 1600 CAVITY RELIEF	*
4	1	STEM	A 479 16.316	*
3	1	BALL	A 351 G. CF8M	*
2	1	BODY CONNECTOR	A 351 G. CF8M	*
1	1	BODY	A 351 G. CF8M	*

0	First Issue			
Rev. Modification				
Drawn	11-03-08	J. Urano		
Checked	11-03-08	J. Rubio		
Weight				
Appr. Eng.				
Substitutes by:				

**GENERAL DIMENSIONS**  
 FIG. 560 LLRT DN 2" CLASS 800 RF PR

**JC Valves**  
 Fabrica de valvulas, s.a.  
 08930 Sant Joan Despi (Spain)  
 Tel: +34 93 56 86 86 / Fax: +34 93 56 86 87  
 e-mail: techinfo@jc-valves.com

Drawn: J.U.  
 Date: 03-08  
 Approved: J.C.  
 Ref: 6095

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.: 173/08 - 9587**

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

**Office: Sant Joan Despí (BCN)**

**Client's Order No.: ---**

**Date: 12.03.08**

**Inspection dates**

**First: 12.03.08**

**Order Status: Complete**

**Final: 12.03.08**

*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. 560 LIRTFM class 600#.

Body and Connector material ASTM A-352 Gr. LCC

Seats: SEE DRAWING 6096

Ball material: SEE DRAWING 6096

Stem: SEE DRAWING 6096

Marks:

- BODY : Col. J5268
- CONNECTOR : Col. J5297

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 C173/08

## **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

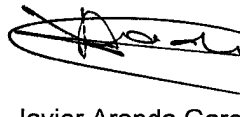

1. Through-valve leakage during burn period - SATISFACTORY.
2. External leakage during burn and cool-down period - SATISFACTORY.
3. Through-valve leakage during operational test - SATISFACTORY.
4. External leakage during operational test - SATISFACTORY.
5. Operability to full open position and external 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 C173/08 and drawing 6096 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	600# , 800#, 900#	100; 150;

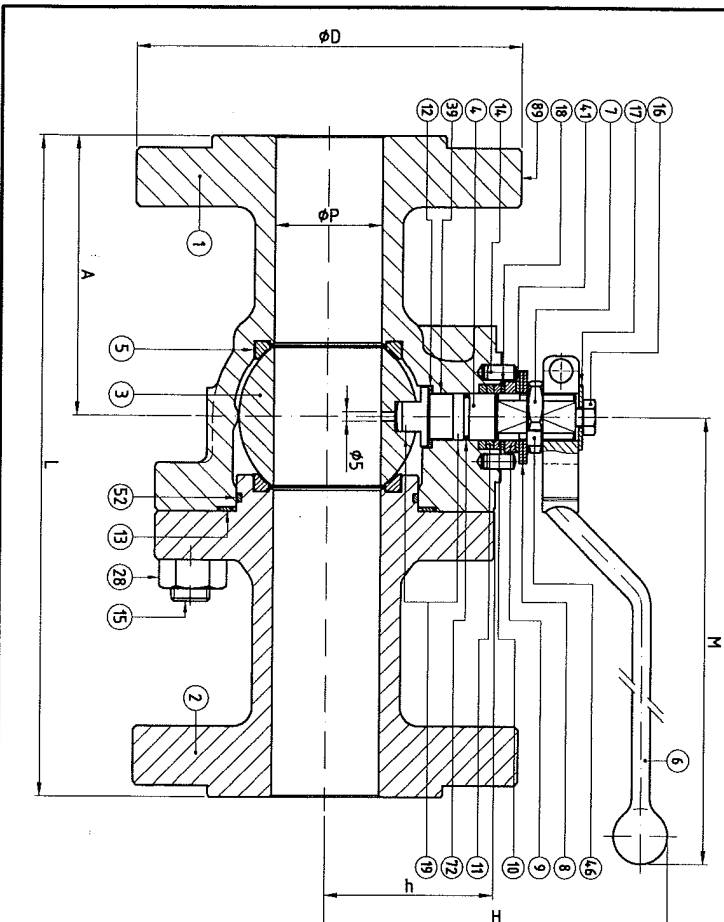
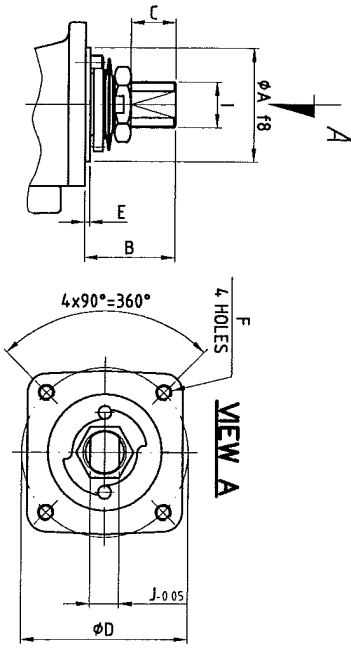
  


Surveyor Javier Aranda García

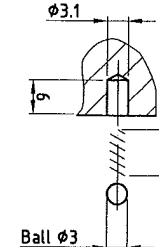
DOCUMENTS ATTACHED:  
Sheets reviewed and stamped  
Accordingly.

6096

DN	L	φD	φP	A	M	H	h
2"	292	165	50	120	4,45	180,3	84,5



Antistatic detail  
 Spring  
 6 (Drawing 5115/20)



BALL VALVES STEM DIMENSIONS										WEIGHT (kg)	QUANTITY	ITEM
DN	φA	B	C	φD	E	F	I	J				
2"	70	4,5	19,2	10,2	3	M10	M25x1,5	18	29			

Rev	Modification	Drawn	Date	Appr.
0	Final issue		03-08	JU

Pos.	QUAN.	DENOMINATION	MATERIAL
89	1	IDENTIFICATION PLATE	PLASTIC
72	1	"O" RING	STAINLESS ST.
52	1	"O" RING	FKM
46	1	LOOKING WASHER	FKM
41	1	SPACER	ANSI 304
39	1	STEM BUSHING	ANSI 304
28	4	NUT	PTFE + 25% G.F.
19	2	ANTISTATIC DEVICE	A 194 Gr. 2HM
18	1	THRUST WASHER	STAINLESS ST.
17	1	WASHER	25% G.F. + PTFE
16	1	BOLT	ANSI 304
15	4	STUD	DN-933 STAINLESS STEEL
14	2	STOP PIN	A 193 Gr. B7M
13	1	BODY CONNECTOR SEAL	STAINLESS STEEL
12	1	STEM THRUST SEAL	ANSI 316L + GRAPHITE
11	2	GLAND PACKING	25% G.F. + PTFE
10	1	GLAND	GRAPHITE
9	1	STOP PLATE	ANSI 316
8	2	DISK SPRING	ANSI 304
7	1	GLAND NUT	ENP CARBON STEEL
6	1	WRENCH	ANSI 303
5	2	SEAT RING	MODULAR IRON
4	1	STEM	FTL - 1600 CAVITY RELIEF
3	1	BALL	A 479 In. 316
2	1	BODY CONNECTOR	A 351 Gr. CF8M
1	1	BODY	A 352 Gr. LC
			A 352 Gr. LC

SGS Tecnos, S.A.

(\*) RECOMMENDED SPARE PARTS

Dimensions in mm.

Checked: 11-03-08 J. Rubio

Appr. Eng. J. Rubio

Scale: ---

Substitutes by: ---

GENERAL DIMENSIONS  
 FIG. 580 LRT. DN-2 CLASS 600 RF PR

Drawn: 11-03-08 J. Urbano

Date: 03-08

Appr. J.U.

Ref.: ---

Drawing n°: 6096

SGS Valves

SGS Fabrica de valvulas, S.A.  
 Tel: + (34) 088 54 80 80  
 Fax: + (34) 088 54 80 81  
 e-mail: technical@sgs-valves.com

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  
FLANGED BALL VALVE  
Certificate No.: BCL 500929/1  
Client: J.C. FABRICA DE VALVULAS, S.A.  
Office: BARCELONA  
Client's Order No.: -----  
Date: 19.03.96  
Inspection dates  
First: 18.01.96  
Order Status: Complete  
Final: 18.01.96

This certificate is issued to J.C. FABRICA DE VALVULAS, S.A. upon their request that the undersigned Surveyor to this Society did attend their premises at their works in RUBI - Barcelona (Spain) for the purpose of witnessing the FIRE TEST in accordance with the requirements specified in BS-6755: Part 2, 1987, API 6FA: 1994, and ISO-10497/92 on the following type of valve:

A manually operated soft seated flanged ball valve of 2" full bore, bi-directional as per fig. 560-A.I.N., class 600#. Body material A-216-WCB (cast steel). Seats: NYLON- 612. Ball material: A-351-CF8. Manufacturers identifying numbers: BODY: C560A50-M2. Bonnet: L560A50-M1 and Ball: B50 I560. Mass 28 Kg. Marks:


BODY: ADG & AEA  
BONNET: ADH

The test conducted on the valves 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 to 950 °C for a period of 30 minutes and established the leakage through 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 show on manufacturers Fire Safe Test Report n° 560-2-A and 560-2-B.

.. / ..





Certificate No: BCL 500929/1

Office : BARCELONA

Date : 19.03.96

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.

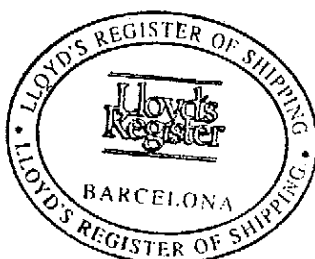
The valves were subject to a visual examination with satisfactory results and subsequently dismantled in order to verify that valves components comply with the drawing and parts list supplied by the manufacturer, while seat rings were found completely destroyed.

The manufacturers Fire Safe Test Report nº 560-2-A, 560-2-B and drawing nº 1304/560 AIN50 Rev. 0 herewith attached were satisfactory checked and signed.

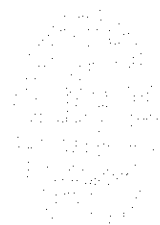
The above is considered in accordance with the mentioned specifications requirements, therefore the subject valve has satisfactory passed the prescribed fire test and can be also qualified as follows:

<u>NPS</u>	<u>CLASS RATING</u>	<u>PN RATING</u>
2", 2 1/2", 3" & 4"	600,800 & 900	---

J. Gil for N. Cano  
Surveyors to Lloyd's Register



DOCUMENTS ATTACHED:  
17 Sheets reviewed and stamped  
accordingly



NOTICE - This certificate is subject to the terms and conditions overleaf, which form part of this certificate.

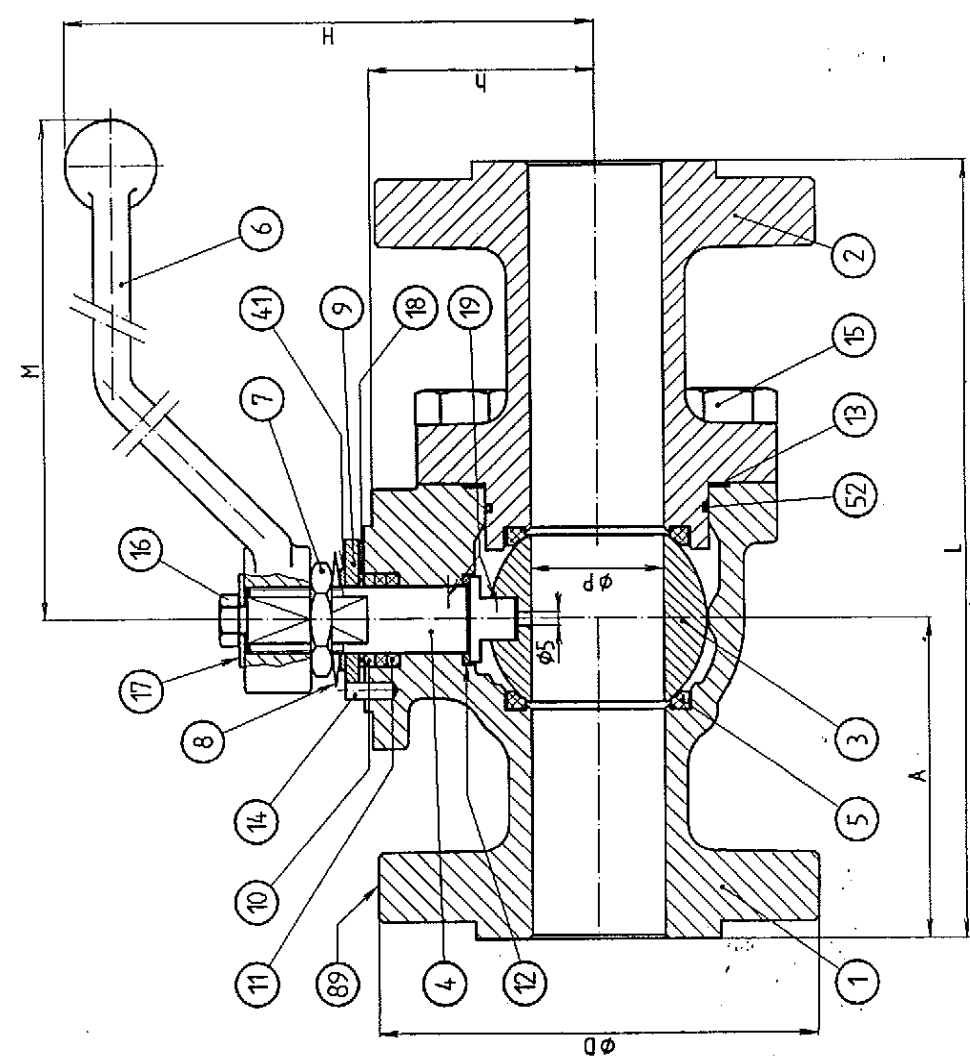
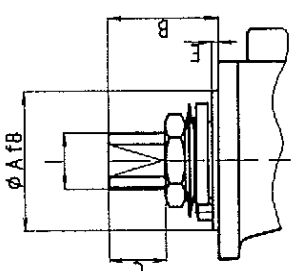
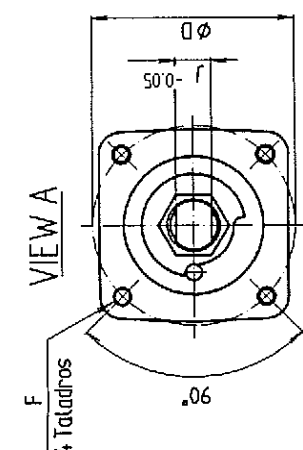


DN	L	ØD	ØP	A	M	H	h
2"	292	165	50	120	450	206	84.5

BALL VALVES-HEEL-SHERDIMENSIONS							
DN	ØA	B	C	ØD	E	F	J
2"	70	42	18	102	3	M10	M25x15 18

WEIGHT	QUANTITY	ITEM

NOTED AND FOUND CORRECT  
 ATTACHED TO R CERTIFICATE  
 NO. Rel. 50092/A  
 SHEET A OF 17



2	PLASTIC CAP	PLASTIC	A10	31-08-92
89	1 IDENTIFICATION PLATE	STAINLESS ST.		
52	1 "O" RING	VITON	75,87 x 2,62	
41	1 SPACER	CARBON ST.	200060/41	24-07-87
19	2 ANTISTATIC DEVICE	STAINLESS ST.		
18	1 THRUST WASHER	25% G.F. PIPE	35 x 25 x 2	
17	1 WASHER	ZINC PLATED CARBON ST.	5180/17	24-07-87
16	1 BOLT	DIN 933 5.6	M10 x 15	
15	4 BOLT	A 193 Gr. B7M	UNC 3/4" 10 x 1	
14	1 STOP PIN	CARBON ST.	8 x 18 DIN-6325	
13	1 BODY CONNECTOR SEAL	AISI-316L + GRAPHITE	JL50SP560	01-03-94
12	1 STEM THRUST SEAL	25% G.F. PIPE	32,7 x 26 x 2,5	22-09-94
11	2 GLAND PACKING	GRAPHITE	35 x 25 X 5	
10	1 GLAND	AISI 303	5180/10-1	24-07-87
9	1 STOP PLATE	CARBON ST.	00800930	23-07-92
8	2 DISK SPRING	CARBON ST.	DN80 B-50 DN2093	
7	1 GLAND NUT	CARBON ST.	5180/07	19-05-87
6	1 WRENCH	MODULAR IRON	M80ND	31-01-94
5	2 SEAT RING	NYLON	A50N-M2	4-94
4	1 STEM	AISI 304	E50560	26-04-93
3	1 BALL	A 351 Gr. CF8M	B50560	26-04-93
2	1 BODY CONNECTOR	A 216 Gr. WCB (C ≤ 0.25%)	L560A50-M1	21-02-94
1	1 BODY	A 216 Gr. WCB (C ≤ 0.25%)	L560A50-M2	22-09-94

Marca	Cont.	DESCRIPCION	MATERIAL	Nº DE PLANO	FECHA
mm		Dibujado	Victor F.		
Dimensiones		Comprobado			
Peso (kg)	28	V. 5º Ing.			
Sustituido por		Escala:			
Sustituye a					

<b>JC</b>		Fábrica de válvulas, S.A. Hospitalet de LL. (Barcelona)	
JC® BALL VALVE		Ref.	
FIG.560 A.I.N DN 2" ANSI 600 FB		Plano n.º	
		1304/560AIN5Q	