INDEX

INDEX

Design and Development of Planning

CANLE	DESIGN & DEVELOPMENT PLANNING	PROJECT NO. 01.

Product : 100 x 80 mm Ball Valve (Jacketed), 80 x 150 mm Jacketed Ball valve, Single piece, Flanged End, ASME B16.5

Type : 1pc, Full Bore, Jacketed. Project Started On : 20.07.2020.

S. No.	Activity	Responsibility	Target	Completed On	Remarks
1.	Design Input Finalisation	Design Engineer	25.7.2020.	24.07.2020	
2.	Design Output Finalization	Design Engineer	28.7.2020.	27.7.2020	
2.1.	Drawing Preparation & Approval	Design Engineer	27.07.2020.	28.07.2020.	
2.2.	Bill Of Material	Design Engineer	06.08.2020.	05.08.2020	
2.3.	Quality Plan, Testing Procedure	QC Engineer	05.08.2020	05.08.2020	
3.	Design And Development Review	Design Engineer	10.08.2020.	11.08.2020.	
4.	Raw Material Procurement	Purchase Dept	10.09.2020.	7.09.2020.	
5.	Fabrication of all Parts	Production In charge	21.09.2020	15.09.2020.	
6.	Design And Development Verification	Design Engineer	26.09.2020.	16.09.2020	
7.	Design And Development Validation Conducting Trial, Analyse the Results And Taking Corrective Action	Design Engineer.	26.09.2020	17.09.2020	
	Trial Results :				
8.	Design And Development Changes : Based On Trial	Design Engineer.	-	-	
	Re – Trial Results :				

Project To Be Completed on : 28.09.2020. Actual Completion Date : 17.09.2020

Design & Development In Charge

Design and Development of Input

CANLE	PRODUCT DESIGN & DEVELOPMENT INPUT	PROJECT NO. 01.

Product Drg. No : 1107. Model No : JKV 80mm.
Component Name : Jacketed Ball valve.

Functional Requirements :

80 x 100 mm Jacketed Ball valve, 150#, Flanged End, Design According to BS 5351, For Industrial Service Application.

Performance Requirements :

* withstand Pneumatic Requirement As Per BS 6755 Part I
* Ball should be ~~Pne~~ Mirror finished.
* Smooth open & close Operation.

Previous Similar Design References :

New Development.

Statutory & Regulatory Requirements :

* Manufacturing Standard As Per BS 5351, wall Thickness
* Testing Standard As Per BS 6755 Part I. As per B16.34.
* Flange Standard As Per ASME B16.5, Flat B16.10

Standards / Codes Of Practice If Any :

BS 5351, BS 6755 Part I., ASME B 16.5,
ASME B 16.10, As. ASME B 16.34.

Expected Potential Consequences Of Failure Due To Of Product :

Rejected Products :

Resend to foundary it will be used as a raw Material which will be demelted in furnace for melting to Produce new casting.

Date : 24.07.2020.

G.B.J.

Prepared By
By

Reviewed & Accepted

Canle Valves Private Limited

No. 52, SIDCO Industrial Est[illegible] Pollachi Main Road,
Coimbatore - 641021, Tamil Nadu
E Mail marketing@canlevalve.com
Mobile +91 936 336 5973

Customer Name	M/s. Jubilant Life Sciences Limited
Kind Attn	Mr. Abhishek Kumar Sharma, Assistant
Canle Quotation No	CQ274-RU/20-21 Rev. 4
Customer Enq. No	ejBuy/Abhishek/RFQ 13526 & Discussion on 13.07.20

Revised Quotation

Enq Date

Sl. NO.	Valve Type	Operator	End Connection	Size (NB)	Pre. Rating	MOC						Standards				Qty	Unit Price (INR)	Total Price (INR)	
						Body, Bonnet, Cover	Ball, Disc, Flap, Wedge	Seat	Seal / Gasket	Packing	Stem/ Button	Mfg.	Testing	Flgs. Drilling	Face to Face				
1	Jacketed Ball Valve, Jacket - CS	Lever	Flanged	80x100	150#	CF3	CF3	Metal Seated	PTFE	CFT	SS 304L	BS 5351	BS 6755 Part 1	B16.5	Mfg. Std	4	36000.00	144000.00	
2	Jacketed Ball Valve, Jacket - CS	Lever	Flanged	80x150	150#	CF3	CF3	Metal Seated	PTFE	CFT	SS 304L	BS 5351	BS 6755 Part 1	B16.5	Mfg. Std	4	41000.00	164000.00	- ✓
3	Jacketed Ball Valve, Jacket - CS	Lever	Flanged	100 x 150	150#	CF3	CF3	Metal Seated	PTFE	CFT	SS 304L	BS 5351	BS 6755 Part 1	B16.5	Mfg. Std	3	61000.00	183000.00	-
4	Jacketed Ball Valve, Jacket - CS	Lever	Flanged	50 x 80	150#	CF3	CF3	Metal Seated	PTFE	CFT	SS 304L	BS 5351	BS 6755 Part 1	B16.5	Mfg. Std	11	18000.00	198000.00	- ✓
5	Jacketed Ball Valve, Jacket - CS	Lever	Flanged	40 x 80	150#	CF3	CF3	Metal Seated	PTFE	CFT	SS 304L	BS 5351	BS 6755 Part 1	B16.5	Mfg. Std	5	16000.00	80000.00	- ✓

Commercial Terms & Conditions :

Prices	: Up to Site	Canle GST No	: 33AABCC5192K1ZM
Freight Charges	: Paid Basis	HSN.Code	: 8481.80.30
Delivery Schedule	: 8 to 9 Weeks	IGST / UGST / (CGST + SGST)	: 18% Extra
Payment Terms	: 30 Days from the date of material receipt at site		
Validity of Offer	: 30 Days from the date of our offer		
Warranty	: 12 months from the date of Commissioning OR 18 months from the date of Despatch		
Special Notes	: In case of any changes in the above Technical specifications, the Price and Delivery schedule may vary.		

BILL TO ADDRESS:
JUBILANT LIFE SCIENCES LIMITED
BHARTIAGRAM DISTT. AMROHA
GAJRAULA,UTTAR PRADESH-244223

State : 09 Uttar Pradesh
GSTIN : 09AABCV0200H1ZU

COMPANY :915 PROJECT - GAJRAULA

JUBILANT LIFESCIENCES

PURCHASE ORDER

PO No. : 664228 Order Dt: 20-07-2020 Project : AB0673	Delivery Date : 28-09-2020 Buyer : AbhisheK Kumar Reference A : AB0673/GQCS-13681	Transaction Type :Domestic Inter State Nature of Transaction :From Registered Vendor Reference B :
Supplier/Vendor: FC0384	Ship From :FC0384 S01	Ship To :
Canle Valves Private Ltd No.52, SIDCO Industrial Estate Coimbatore Pincode : 641021 State : 33 Tamil Nadu GSTIN : 33AABCC5192K1ZM Email : marketing@canlevalve.com	Canle Valves Private Ltd No.52, SIDCO Industrial Estate Coimbatore Pincode : 641021 State : 33 Tamil Nadu GSTIN : 33AABCC5192K1ZM Email :	JUBILANT LIFE SCIENCES LIMITED BHARTIAGRAM DISTT. AMROHA GAJRAULA UTTAR PRADESH-244223 Pincode : State : 09 Uttar Pradesh GSTIN : 09AABCV0200H1ZU

Dear Sir,
Please supply the following goods as per the terms and conditions stipulated below and overleaf.

Item Code Description	HSN	Quantity	UOM	Unit Price	Basic Amount	Disc. Amt	Other Charges1 /	Other Charges2 /	Taxable Value	Integrated Tax Amount	Total Amount
5446051555E BALL VLV,JKTD,SS304L,50x80 MM	84818090	11.000	NO	18000.000	198000.000	0.00 (0.00%)	0.00	0.00	198000.00	35640.00 (18.00%)	233640.000
5410250545E BALL VLV,JKT,SS304,#150,100X80	84811000	4.000	NO	36000.000	144000.000	0.00 (0.00%)	0.00	0.00	144000.00	25920.00 (18.00%)	169920.000
5410250555E BALL VLV,JKT,SS304,#150,150X80	84811000	4.000	NO	41000.000	164000.000	0.00 (0.00%)	0.00	0.00	164000.00	29520.00 (18.00%)	193520.000

Terms and Conditions:

1. Delivery Destination is Gajraula
2. Scope of Supply- JACKETED BALL VALVES, SS304L, ASA 150#, MOC OF JACKETE-CS/MS as mentioned in order. Note- Valve Required in Single Piece.
3. Payment terms : 100% of the P.O. value along with GST shall be paid within 30 days of material receipt at Site
4. Delivery: within 8-10 weeks from PO date.
5. LD Clause applicable after 10 weeks from PO date @ 0.5 % per week to max of 5 % of basic PO value.
6. Warranty: 18 months from date of Supply or 12 months from installation, whichever is earlier, Vendor must replace valve @ no cost on Jubila
7. Packing Charges : Inclusive
8. Freight charges : Inclusive upto Gajraula site.
9. GST :18%
10. Price Basis : FOR, Gajraula Site
11. TPI- Third Party Stage wise Inspection may be done (TPI Charges in JLSL Scope only.)

GQCS-13681

1) JBE050X080 - BEDA 9/12 H
2) 100X080
3) 150X080

JUBILANT LIFESCIENCES

Approved Copy

BILL TO ADDRESS:
JUBILANT LIFE SCIENCES LIMITED
BHARTIAGRAM DISTT. AMBIKA
GAJRAULA,UTTAR PRADESH-244223

COMPANY GST PROJECT - GAJRAULA

State : 09 Uttar Pradesh
GSTIN : 09AABCV0210H1ZU

Dear Sir,
Please supply the following goods as per the terms and conditions stipulated below and overleaf

Item Code Description	HSN	Quantity	UOM	Unit Price	Basic Amount	Disc. Amt	Other Charges1	Other Charges2	Taxable Value	Integrated Tax Amount	Total Amount

Grand Total : (INR) (FIVE LAKHS NINETY SEVEN THOUSAND EIGHTY ONLY) 597080.00

INTEGRATED TAX : (INR) 91080.00 (NINETY ONE THOUSAND EIGHTY ONLY
Reverse Charge Payable : NO
TDS Applicable(1%)(Yes/No):

Delivery Terms:D06 DAP - DELIVERED AT PLACE Payment Terms:V06 30days from material recpt dt

INDENTOR
1.State our Order and Item Number on all invoices
2.All columns of E-way bill to be filled.
3.Time is the essence of this Purchase Order
4.In case of Material rejection,Jubilant will send back/book the consignment on "To Pay" basis at supplier risk and the copy of lorry receipt of the Transporter will be consider as a proof of material.

Place :GAJRAULA Date : 20-07-2020 FOR JUBILANT LIFE SCIENCES LIMITED

Prepared By Checked By AUTHORIZED SIGNATORY

THIS IS A COMPUTER GENERATED PURCHASE ORDER AND HENCE DOES NOT REQUIRE ANY SIGNATURE.

Toy 83

...mail

Canle Valves Marketing <marketing@canlevalve.com>

...ffline Requote from CAPEX for RFQ(ejBuy/Abhishek/RFQ-13526) of Valves

Tue, Jul 14, 2020 at 6:28 PM

Abhishek kumar Sharma <noreply@ej-buy.com>
Reply-To: Abhishek kumar Sharma <abhishek.sharma11@jubl.com>
To: marketing@canlevalve.com

JUBILANT LIFESCIENCES

eJ - BUY | USER

Update Profile Form **Update Company Details** **Update Prices** **Update Category Catalogue**

M/s Canle valves Pvt Ltd
Kind Attn. Abhilash

CAPEX has sent an "Offline Revised Quotation" for Valves on your behalf as per your offline discussion on terms subject to mutual consent. This mail is for your records.

Offline Requote -Details

Click here to Requote

Click here to Connect with Buyer

Company:JUBILANT INGREDIENTS
Account: CAPEX
Account Code:A001
Recipient: Abhishek kumar Sharma
Designation: Assistant Manager-Procurement

Address:
Phone: (O) (M)919818442986
Email: abhishek.sharma11@jubl.com
Country: India

Offline Requote No.	CQ274-RU/20-21 Rev. 4
RFQ Ref. No.	ejBuy/Abhishek/RFQ-13526
Quotation Ref. No.	CQ274-RU/20-21 Rev.3/11.07.20
Date	14/07/20 IST
Date of Quotation	11/07/20 IST
Validity	15/07/20 IST
Time	18:26:30 IST
Reference	CQ274-RU/20-21 Rev. 4
Category Code	Valves
Category Name	**Valves**
Specifications	**Files: 0** View Specifications
Delivery State	9-Uttar Pradesh
Delivery Location	Gajraula-JOL05
Price Basis (Incoterms 2000) *	D06-DAP - DELIVERED AT PLACE
Late delivery Penalty - Supply / Services	Shall be applicable @0.5% per week of delay upto max 5% of the basic order value
Export Incentive	No
Performance Guarantee	

Warranty

Either or BOTH of the given may be applicable	1. Deductible :- WCT on Job work applicable. 2. Deductible :- TDS on Services % as applicable
P and F Charges	Included
P and F % (Before Tax)	
Frieght Charges	Inclusive
Freight Before Tax (If Applicable)	per n/a
Product Category *	

BALL VLV,JKT,SS304,#15 0, 80 X 100

Specifications	**Files : 0** View Specifications
Item Description	
HSN Code	8481.80
Item/Service	Item
Make or Manufacturer *	Canle
Quantity * OR No. of Items *	4 NO
Basic Price *	36000 per NO ✓
Discount Type	
Discount	
Discount Before Tax %	n/a
Discount Amount	0 per NO
Other Charges	
Other Charges Amount	per NO
GST Transition Type * (Select IntraState when your dispatch state = destination of delivery state. Select InterState when your dispatch state is different than destination of delivery state.)	InterState
GST % *	18
Delivery Period	From PO Date
Delivery Days *	30
Total Cost	42480 per NO Details

BALL VLV,JKT,SS304,#15 0, 80 X 150

Specifications	**Files : 0** View Specifications
Item Description	
HSN Code	8481.80

Page 8 of 23.

Item	
Manufacturer *	Canle
Quantity * OR No. of Items *	4 NO
Basic Price *	41000 per NO
Discount Type	
Discount	
Discount Before Tax %	n/a
Discount Amount	0 per NO
Other Charges	
Other Charges Amount	per NO
GST Transition Type * (Select IntraState when your dispatch state = destination of delivery state. Select InterState when your dispatch state is different than destination of delivery state.)	InterState
GST % *	18
Delivery Period	From PO Date
Delivery Days *	30
Total Cost	48380 per NO Details

BALL VLV,JKTD,100x150, SS304L

Specifications	**Files : 0** View Specifications
Item Description	
HSN Code	8481.80
Item/Service	Item
Make or Manufacturer *	Canle
Quantity * OR No. of Items *	3 NO
Basic Price *	61000 per NO
Discount Type	
Discount	
Discount Before Tax %	n/a
Discount Amount	0 per NO
Other Charges	
Other Charges Amount	per NO
GST Transition Type * (Select IntraState when your dispatch state = destination of delivery state. Select InterState when your dispatch state	InterState

is different than destination of delivery state.)	
GST % *	18
Delivery Period	From PO Date
Delivery Days *	30
Total Cost □	71980 per NO Details

BALL VLV,JKTD,SS304L,50x80 MM

Specifications	**Files : 0** View Specifications
Item Description	
HSN Code	8481.80
Item/Service	Item
Make or Manufacturer *	Canle
Quantity * OR No. of Items *	11 NO
Basic Price * □	18000 per NO
Discount Type	
Discount	
Discount Before Tax %	n/a
Discount Amount □	0 per NO
Other Charges	
Other Charges Amount □	per NO
GST Transition Type * (Select IntraState when your dispatch state = destination of delivery state. Select InterState when your dispatch state is different than destination of delivery state.)	InterState
GST % *	18
Delivery Period	From PO Date
Delivery Days *	30
Total Cost □	21240 per NO Details

BALL VLV.JKT,SS304L,150#,40X80

Specifications	**Files : 0** View Specifications
Item Description	
HSN Code	8481.80
Item/Service	Item
Make or Manufacturer *	Canle

[illegible] *	5 NO
[illegible]	16000 per NO
[illegible]	
[illegible]	
[illegible] Before Tax %	n/a
[illegible] Amount	0 per NO
Other Charges	
Other Charges Amount	per NO
GST Transition Type * (Select IntraState when your dispatch state = destination of delivery state. Select InterState when your dispatch state is different than destination of delivery state.)	InterState
GST % *	18
Delivery Period	From PO Date
Delivery Days *	30
Total Cost	18880 per NO Details
Payment Days *	30
Payment Terms *	V06-30days from material recpt dt
Packing Instructions	
Attachment (Max. file size 2 MB)	CQ_274_RU_20-21_Jubilant_Life.xlsx
Remark	
Terms and conditions	Details

Vendor: Canle valves Pvt Ltd
Vendor Code: FC0384
Sender: Abhilash
Designation:
Industry Type: MSME

Address:
Phone: (O) (M)919363365973
Email: marketing@canlevalve.com
Country: India

Click here to Requote

Thank you.

CAPEX
abhishek.sharma11@jubl.com

Powered by VENDX
support@mavenvista.com 91-9033034314
Copyright 2000-2020 MavenVista Technologies Pvt. Ltd. All Rights Reserved

Co 274

Page copy 83.

Techno-Commercial Offer Required for Jacket Ball Valves_Gajraula Unit

Abhishek Kumar Sharma <abhishek.sharma11@jubl.com> Tue, Jul 7, 2020 at 11:50 PM
To: Canle Valves Marketing <marketing@canlevalve.com>
Cc: CS NAIDU <canlemd1997@gmail.com>, Naveen <canlebd@gmail.com>, Canle Purchase <canlepurchase@gmail.com>

Dear Sir,

With reference to trail mail Techno-Commercial Offer of Jacketed Ball Valves , you are requested to confirm on below enabling us to proceed further with ordering process:

1 You have completely understood our requirement technically and will supply as our requirement only. OK

2. Scope of Supply:
   Complete Scope of Supply shall be made as per offer and in line with the confirmations and discussions held with our User/Design Dept. OK
   - Size- 40X80, 5 Nos.
   - Size- 50X80, 11 Nos.
   - Size- 80X100, 4 Nos.
   - Size- 80X150, 4 Nos.
   - Size- 100X150, 3 Nos.

   Note- Valve Require in Single Piece
3. Payment Terms: 100 % within 30 days of material receipt at Site. OK
4. Delivery: Most Urgently required at Site, Please confirm earliest delivery from PO date. 8 to 10 Weeks
5. Late Delivery Penalty: Applicable after agreed delivery date from PO date@ 0.5% per week to max of 5% of Basic. OK
6. Drawing Submission: Vendor to submit drawings within 7 days from PO date. OK
7. Warranty/ Guarantee Clause: 18 months from date of delivery or 12 months from commissioning, whichever is earlier, Vendor must replace valve @ no cost on jubilant , if any leakage found within 2 years of operation. OK
8. P&F: Inclusive. OK
9. Freight: Inclusive. OK
10. Delivery Destination is Gajraula Site. OK
11. Price Basis: FOR Basis (Gajraula Site). OK
12. GST: Please confirm. 18%
13. Manufacturing progress report is provided as and when required/sought by Jubilant in the form of photographs and details. OK
14. Third Party Inspection will be done (TPI Charges in JLSL Scope only.) OK
15. Please confirm your quoted vs Final No regret FOR-Site prices against each line item below
    - Size- 40X80, 5 Nos. 10/-
    - Size- 50X80, 11 Nos.
    - Size- 80X100, 4 Nos.
    - Size- 80X150, 4 Nos.
    - Size- 100X150, 3 Nos.

mail Sent on 8/7/20

Regards,

Abhishek Kumar Sharma | Assistant Manager-Procurement

SALES ORDER

CVPL/SA/F03

Customer	JUBILANT LIFE SCIENCE LIMITED, GAJRAULA	**Canle Ref.**	CQ274 Rev.4/14.07.20
P.O. No.	664228	**OA No.**	24136
Date	20-Jul-2020	**Date**	21-Jul-2020

Sl.No	Item Description	Qty	MFG Standard	Testing Standard	Face To Face	Valve Item Code	Valve Sl.No.	Remarks
1	JACKETED BALL VALVE 050X080F 150# CF3 SS 304L FLANGED TO ANSI B 16.5 ASA 150# SEAT-METAL SEATED / BALL-CF3 / SEAL-PTFE / PACKING-CFT HAND WHEEL / LEVER	11.000 (CV)	BS 5351	BS 6755 Part 1	Mfg. Std.	JBC050X080FBEDA912H	Y-5106 – Y-5114	Jacket-CS
2	JACKETED BALL VALVE 100X080F 150# CF3 SS 304L FLANGED TO ANSI B 16.5 ASA 150# SEAT-METAL SEATED / BALL-CF3 / SEAL-PTFE / PACKING-CFT HAND WHEEL / LEVER	4.000 (CV)	BS 5351	BS 6755 Part 1	Mfg. Std.	JBC100X080FBEDA912H	Y-5115 – Y 5118	Jacket-CS
3	JACKETED BALL VALVE 150X080 150# CF3 SS 304L FLANGED TO ANSI B 16.5 ASA 150# SEAT-METAL SEATED / BALL-CF3 / SEAL-PTFE / PACKING-CFT HAND WHEEL / LEVER	4.000 (CV)	BS 5351	BS 6755 Part 1	Mfg. Std.	JBC150X080BEDA912H	Y-5119 – Y 5122	Jacket-CS

17/9/20

PRICE DETAILS

Sl.No	SIZE(MM)	Unit Price	Qty	Dis(%)	Dis Amt	Total Rs.
1	50MM X 80mm	18000.00	11	0.000%	0.00	198000.00
2	100MM X 80mm	36000.00	4	0.000%	0.00	144000.00
3	150MM X 80mm	41000.00	4	0.000%	0.00	164000.00
TOTAL Rs.			19			506000.00

SPECIAL INSTRUCTION

Material Code : 1) 544605155E, 2) 541025054E, 3) 541025055E

1) Valve required in Single Piece.
2) Third Party Stage wise Inspection may be done (TPI Charges in JLSL scope only)

CUSTOMER ADDRESS

M/s.JUBILANT LIFE SCIENCE LIMITED, GAJRAULA , BHARTIAGRAM, GAJRAULA, DIST - AMROHA, ,

,UTTARPRADESH-244223,GAJRAULA,,India,

~~Tin No~~ : GSTIN: 09AABCV0200H1ZU,

~~Cst No~~ :

~~ECC No~~ :

IGST	18%	91080.00	CDD : 28-Sep-2020
Round Off		0.00	LD Clause : LD applicable after 10 weeks from PO date @ 0.5% per week to max. of 5% of basic PO Value
GRAND TOTAL		597080.00	
Excise Duty	NIL - AGAINST CT3 FORM		

TAX

Destination	F.O.R SITE, Gajraula - Door Delivery
Transporter	ARC
Freight	PAID
Payment Terms	100% within 30 days of material receipt at site.

21/7/20 21/7/20 21/7/20 21/7/20

Gmail

Page 11 of 83.

varun v <canledesign@gmail.com>

Fwd: Purchase Order Detail-664229 & 664229 - AB0673 - Jacketed valves for Jubilant Gajraula

Anoop Gupta <Anoop.Gupta@jubl.com> Mon, Aug 10, 2020 at 9:45 AM
To: Canle Valves Marketing <marketing@canlevalve.com>
Cc: Nirupam Biswas <nirupam.biswas@jubl.com>, Vikas Gupta <Vikas.Gupta1@jubl.com>, Abhishek Kumar Sharma <abhishek.sharma11@jubl.com>, CS NAIDU <canlemd1997@gmail.com>, Naveen <canlebd@gmail.com>, Canle Purchase <canlepurchase@gmail.com>, Farook <canledesign@gmail.com>

Approved ...

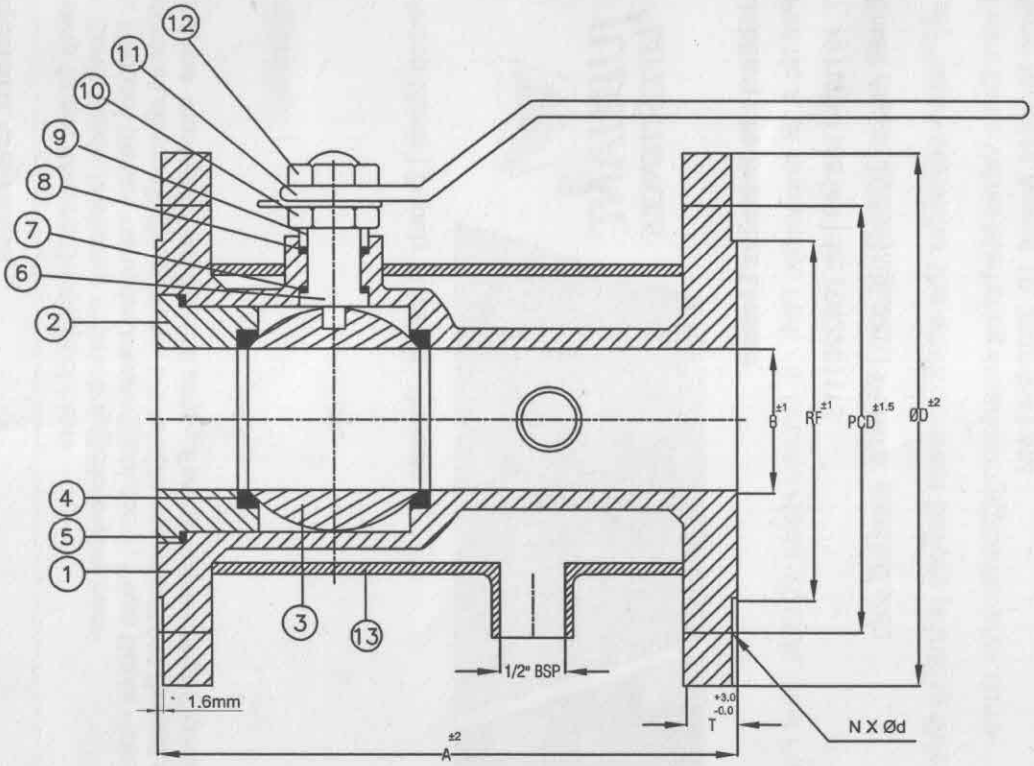
Anoop Gupta | Deputy Manager - Projects

JUBILANT LIFESCIENCES

Jubilant Life Sciences Limited
Plot No.# 15, Knowledge Park - II, Greater Noida, 201306, Uttar Pradesh, India
T: +91120-7186148 | M: 7042261115
Email: Anoop.Gupta@jubl.com | Website: www.jubl.com

Please consider the environment before printing this email

From: Canle Valves Marketing <marketing@canlevalve.com>
Sent: Monday, August 10, 2020 9:43 AM
To: Anoop Gupta <Anoop.Gupta@jubl.com>
Cc: Nirupam Biswas <nirupam.biswas@jubl.com>; Vikas Gupta <Vikas.Gupta1@jubl.com>; Abhishek Kumar Sharma <abhishek.sharma11@jubl.com>; CS NAIDU <canlemd1997@gmail.com>; Naveen <canlebd@gmail.com>; Canle Purchase <canlepurchase@gmail.com>; Farook <canledesign@gmail.com>
[Quoted text hidden]
[Quoted text hidden]
[Quoted text hidden]



Bill of Materials

P. NO	PART NAME	MATERIAL
01	Body	ASTM A 351 Gr.CF3
02	Insert	ASTM A 351 Gr. CF3
03	Ball	ASTM A 351 Gr. CF3
04	Seat Ring	Metal Seated
05	Body Seal	PTFE
06	Stem	ASTM A 276 SS304L
07	Stem Seal	CFT
08	Gland Packing	CFT
09	Gland Bush	ASTM A 276 SS 304L
10	Gland Nut	SS
11	Lever	SS
12	Nut	SS
13	Jacket	SS

Technical Specification

Construction	Jacketed Ball Valve, Flanged End
Manufacturing Standard	BS 5351
Testing Standard	BS 6755 Part-1
Face to Face	Manufacturing Standard
End Connection	Flanged TO ANSI B16.5 150 RF
Pressure Rating	150#

Testing Pressure in kg/cm²	
Hydrostatic Shell	30
Hydrostatic Seat	22
Pneumatic Seat	7

All Dimensions Are In mm

Sl.no	Size	A	B	ØD	RF	PCD	T	N X Ød	Qty
1	50X80	178	50	190	127	152	19	4 X 19	11
1	80x100	203	75	229	157	191	24	8 X 19	4
2	80x150	203	75	279	216	241	26	8 X 22	4

Canle Valves Private Limited

An ISO: 9001:2015 Company / IBR Approved Valves Maker

No.52, SIDCO Industrial Estate, Pollachi Main Road, Coimbatore - 641021, Tamil Nadu.
Phone: +91 422 427082 / E Mail: marketing@canlevalve.com

Product Title	: Jacketed Ball Valve, Full Bore, Flanged End, 150#						
Customer Name	: M/s. Jubilant Life Science Limited, Gajraula						
DRAWN	PS		Customer Ref No	: 664228		Date	20.07.2020
CHECKED	MF		All Dimensions are in 'mm' Unless Otherwise Specified			Canle Ref	OA 24136
APPROVED	GV		SIZE	: Refer Table	CLASS : 150#	TYPE	: Jacketed BLV
SCALE	NOT TO SCALE		MATERIAL :			DWG NO.	: 1107
DATE	08.08.2020		ASTM A 351 Gr. CF3			REV : 01	SHEET: 1 OF 1

Design and Development of Output

CANLE	Design & Development Output Record	PROJECT NO. 01.

Customer Name : M/s Jubilant Life Sciences limited, Gajraula.

Product Code / Model No : 80x100mm Jacketed Ball valve, 150#, 80x150mm Jacketed Ball Valve, 150#.

Product Description : Single piece, 150#, Flanged End.

1. Requirements Met Details (Attach Supporting Doc. If Required)

Input Requirements	Output Requirements
* Valve Pressure Rating 150#	* With stand Pressure & No leakage.
* Valve MOC meet ASTM A351 (CF3)	* MOC meet Chemical & mechanical As per the Standard.
* Valve Casting should be in no Cracks & pin Holes & Blow holes	* CP Test conducted, No cracks & surface defects Observed.
* Valve Port design Full Bore.	* Port dimension meet As per the Standard Dimension.
* Ball should be Precisously Machined	* Ball Buffing Process done & got mirror finished.
* Valve Wall thickness to be maintained Sustained Pressure Rating.	* Valve Wall thickness obtained as per the Standard.
* Flang & Valve FtoF meet the Standard Dimensions.	* Flange & FtoF dimension meet as Standard dimens

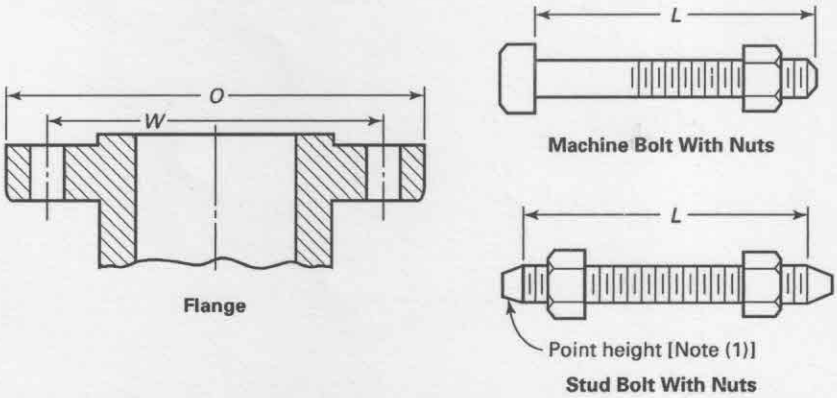
2. Documents Required For Monitoring And Measurements, Ref :
(Eg : Quality Plan / Test Certificates etc) Pl Mention and Attach Along With This Form

In Process Quality Plan -CVPL-QAD-P-03, In Process Quality Plan -CVPL-QAD-P-04, Final Internal Inspection = CVPL-QAD-P-05, Value Inspection & Testing Procedure, ~~AFC~~ ~~AD~~ MTC - Guarantee Certificate.

3. Specific Characteristics Essential For Operation & Safe Operation Ref
(Mention The Documents And Attach Like User Manual, NSDS etc.)

Installation, operation & Maintenance guide for Flanged End, 1 pc Jacketed Ball Valve.

Table 7 Templates for Drilling Class 150 Pipe Flanges and Flanged Fittings (20)



1	2	3	4	5	6	7	8	9
						Length of Bolts, *L* (4)		
		Drilling (2), (3)				Stud Bolts (1)		Machine Bolts
Nominal Pipe Size	Outside Diameter of Flange, *O*	Diameter of Bolt Circle, *W*	Diameter of Bolt Holes, in.	Number of Bolts	Diameter of Bolts, in.	1.5-mm Raised Face	Ring Joint	1.5-mm Raised Face
½	89	60.5	⅝	4	½	55	...	50
¾	99	69.8	⅝	4	½	65	...	50
1	108	79.2	⅝	4	½	65	75	55
1¼	117	88.9	⅝	4	½	70	85	55
1½	127	98.6	⅝	4	½	70	85	65
2	152	120.6	¾	4	⅝	85	95	70
2½	178	139.7	¾	4	⅝	90	100	75
3	190	152.4	¾	4	⅝	90	100	75
3½	216	177.8	¾	8	⅝	90	100	75
4	229	190.5	¾	8	⅝	90	100	75
5	254	215.9	⅞	8	¾	95	110	85
6	279	241.3	⅞	8	¾	100	115	85
8	343	298.4	⅞	8	¾	110	120	90
10	406	362.0	1	12	⅞	115	125	100
12	483	431.8	1	12	⅞	120	135	100
14	533	476.2	1⅛	12	1	135	145	115
16	597	539.8	1⅛	16	1	135	145	115
18	635	577.8	1¼	16	1⅛	145	160	125
20	693	635.0	1¼	20	1⅛	160	170	140
22	749	692.2	1⅜	20	1¼	170	185	150
24	813	749.3	1⅜	20	1¼	170	185	150

GENERAL NOTES:

(a) Dimensions are in millimeters, except for diameters of bolts and bolt holes, which are in inches.

(b) For other dimensions, see Tables 8 and 9.

NOTES:

(1) The length of the stud bolt does not include the height of the points (see para. 6.10.2).

(2) For flange bolt holes, see para. 6.5.

(3) For spot facing, see para. 6.6.

(4) Bolt lengths not shown in the table may be determined in accordance with Nonmandatory Appendix C (see para. 6.10.2).

MANDATORY APPENDIX VI
BASIS EQUATIONS FOR MINIMUM WALL THICKNESS

VI-1 MINIMUM WALL THICKNESS EQUATIONS

Minimum wall thickness requirements may be satisfied by compliance with either the values shown in Table 3A or Table 3B as applicable or the use of the equations listed in this Appendix (see Tables VI-1 and VI-2). Refer to para. 1.2.5 concerning valid units.

VI-2 DESIGN VALUES

The wall thickness values obtained from Table 3A, Table 3B, or the equations given in this Appendix are not to be interpreted as design values. They are, in basic terms, minimum requirements that must be met in order to be in conformance with this Standard.

(17)

Table VI-1 Basis Equations for Minimum Wall Thickness, mm

Class P_c	Diameter, d, mm	Metric Equation, t_m, mm	Round
150	$3 \le d < 50$	$t_m\ (150) = 0.064d + 2.34$	off, one decimal
150	$50 \le d \le 100$	$t_m\ (150) = 0.020d + 4.50$	off, one decimal
150	$100 < d \le 1\ 500$	$t_m\ (150) = 0.0163d + 4.70$	off, one decimal
300	$3 \le d < 25$	$t_m\ (300) = 0.080d + 2.29$	off, one decimal
300	$25 \le d \le 50$	$t_m\ (300) = 0.07d + 2.54$	off, one decimal
300	$50 < d \le 1\ 500$	$t_m\ (300) = 0.033d + 4.40$	off, one decimal
600	$3 \le d < 25$	$t_m\ (600) = 0.086d + 2.54$	off, one decimal
600	$25 \le d \le 50$	$t_m\ (600) = 0.058d + 3.30$	off, one decimal
600	$50 < d \le 1\ 500$	$t_m\ (600) = 0.0675d + 2.79$	off, one decimal
900	$3 \le d < 25$	$t_m\ (900) = 0.15d + 2.29$	off, one decimal
900	$25 \le d \le 50$	$t_m\ (900) = 0.059d + 4.83$	off, one decimal
900	$50 < d \le 1\ 300$	$t_m\ (900) = 0.10449d + 2.54$	off, one decimal
1500	$3 \le d \le 1\ 300$	$t_m\ (1500) = 0.18443d + 2.54$	off, one decimal
2500	$3 \le d \le 1\ 300$	$t_m\ (2500) = 0.34091d + 2.54$	off, one decimal
4500	$3 \le d \le 1\ 300$	$t_m\ (4500) = 0.78488d + 2.54$	off, one decimal

GENERAL NOTES:
(a) For t_m, see para. 6.1.1.
(b) For d, see para. 6.1.2.

Section 2. Design and materials

8 Design

NOTE Typical ball valve constructions are given in Appendix C.

8.1 General

Bodies shall be of one piece or split construction (see Figure 2(a) and Appendix C). In the case of split body valves, the minimum design strength of the split body joint or joints shall be equivalent to that of the body end flange of a flanged body, or the appropriate equivalent flange for a butt-weld-end, socket-weld-end, or threaded-end body.

Bolted covers shall be provided with not less than four bolts, stud-bolts, studs or socket head cap or hexagon headed screws.

NOTE 1 If the purchaser requires any particular design feature to prevent over-pressurization of the body cavity, e.g. pressure equalizing seats, this should be stated on the enquiry or order (see Appendix A).

NOTE 2 For ball valves designed to relieve pressures above normal working pressure that may build up in trapped cavities due to thermal expansion or evaporation of liquid, provision can be made for a pressure relief hole or passage or other means, e.g. pressure relieving seats, to relieve pressure in the bonnet and body cavities. The means adopted will be determined by the manufacturer unless the purchaser exercises his option in accordance with Appendix A.

8.2 Shell wall thickness

The minimum wall thickness of the pressure-containing shell shall be as given in Table 10. Drilling of, pinning to, or spot welding the wall of a pressure-containing part, e.g. for nameplate fixing, is not permissible where it would reduce the effective thickness below the permitted value.

Table 10 — Shell thickness

Nominal size	Minimum shell thickness							
(DN)	PN 10	PN 16	Class 150	PN 25	PN 40	Class 300	Class 600	Class 800[a]
	mm	mm	mm	mm	mm	mm	mm	mm
8	—	—	—	—	—	—	—	3.3
10	—	—	—	—	—	—	—	3.5
15	4.0	4.0	4.0	4.0	4.0	4.0	5.0	4.0
20	4.0	4.0	4.0	4.0	4.0	4.0	5.0	4.3
25	5.0	5.0	5.0	5.0	5.0	6.0	6.0	5.0
(32)	6.0	6.0	6.0	6.0	6.0	7.0	7.0	5.6
40	6.0	6.0	6.0	6.0	6.0	7.0	7.0	5.6
50	6.5	6.5	7.0	7.5	8.0	8.0	8.0	6.1
(65)	6.5	7.0	7.0	7.5	8.0	8.0	9.0	—
80	6.5	7.0	7.0	7.5	8.0	9.0	10.0	—
100	7.5	7.5	8.0	8.0	9.0	10.0	12.0	—
150	8.0	9.0	9.0	9.0	11.0	12.0	16.0	—
200	9.0	10.0	10.0	11.0	13.0	14.0	20.0	—
250	9.5	11.0	11.0	12.0	14.0	16.0	23.0	—
300	11.0	12.0	12.0	13.0	16.0	18.0	27.0	—
350	11.0	12.5	13.0	14.0	17.5	20.0	29.0	—
400	12.0	14.0	14.0	16.0	19.0	22.0	32.0	—

NOTE See Table 1 for equivalent nominal size (in).
[a] Applies to forged or bar stock bodies only.

Licensed Copy: Kerry Pritchard, Brown & Root, 21-Oct-00, Uncontrolled Copy. © BSI

Table 7 — Socket-weld-end details

Nominal size (DN)	Minimum depth of socket	Bore of socket		Outside diameter of body end at weld	
	mm	mm		mm	
15	10	21.8	+0.25 −0	29	+0 −0.25
20	13	27.4		35	
25	13	34.1		43	
(32)	13	42.7		54	
40	13	49.0		58	
50	16	61.0		71	

NOTE See Table 1 for equivalent nominal size (in).

7.5 Threaded-end valves

7.5.1 The outside diameter of the end of threaded-end valves shall be as given in Table 8.

7.5.2 Valve ends shall have internal taper threads in accordance with ANSI/ASME B1.20.1 or BS 21.

Table 8 — Threaded-end details

Threaded-end size	Minimum outside dimension of body end
	mm
¼	22
⅜	26
½	33
¾	38
1	46
(1¼)	56
1½	62
2	75

7.6 Minimum body port diameters

The minimum inside diameters of the body ports for both full and reduced bore valves shall be as given in Table 9.

NOTE The minimum port diameters for lined valves are not covered by this standard.

7.7 Minimum ball port diameters

Minimum ball port diameters shall be as given in Table 9.

7.8 Bolting

Bolting threads shall be in accordance with ISO metric or Unified inch standards. The dimensions and finish of bolting shall comply with the following standards, as appropriate:

metric	inch
BS 3692	BS 1768 (below ½ in)
BS 4168 (cap head)	BS 1769
BS 4190	BS 2470 (cap head UNC)
BS 4439	BS 2693-1
BS 4882	BS 4882

Table 9 — Minimum ball and body port diameters PN 10, PN 16, Class 150, PN 25, PN 40, Class 300, Class 600 and Class 800

Nominal size (DN)	Minimum diameter		
	Reduced bore valves PN 10 up to and including PN 40 and Classes 150 to 800	Full bore valves	
		PN 10 up to and including PN 40 and Classes 150 and 300	Classes 600 and 800
	mm	mm	mm
8	6	6	6
10	6	9	9
15	9.0	12.5	12.5
20	12.5	17	17
25	17	24	24
(32)	23	30	30
40	28	37	37
50	36	49	49
(65)	50	64	64
80	57	75	75
100	75	98	98
150	98	148	148
200	144	198	198
250	187	248	245
300	228	298	295
350	266	335	325
400	305	380	375

NOTE See Table 1 for equivalent nominal size (in).

Licensed Copy: Kerry Pritchard, Brown & Root, 21-Oct-00, Uncontrolled Copy. © BSI

© BSI 02-1999

Table 1. Maximum permissible seat test leakage rates

Test	Rate A	Rate B	Rate C	Rate D
Hydrostatic test	No visually detectable leakage for the duration of the test time as given in the appropriate valve product standard or appendix B, as appropriate	mm^3/s 0.01 x DN	mm^3/s 0.03 x DN	mm^3/s 0.1 x DN
Pneumatic test	No visually detectable leakage for the duration of the test time as given in the appropriate valve product standard or appendix B, as appropriate	0.3 x DN	3.00 x DN	30 x DN

NOTE 1. Equivalent leakage rates for ISO 5208 and BS 5146 : Part 2 are given in appendix A.
NOTE 2. No visually detectable leakage may be demonstrated during a pneumatic test in accordance with 4.3.
NOTE 3. The leakage rates only apply when discharging to ambient conditions.
NOTE 4. No visual leakage is accepted as being within the requirements of rates A, B, C and D.
NOTE 5. See note to table 5 for large size Class rated valves.

Table 2. Maximum permissible back seat test leakage rates

Test	Rate A	Rate B	Rate C	Rate D
Hydrostatic test	mm^3/s 0.03 x DN	mm^3/s 0.03 x DN	mm^3/s 0.03 x DN	mm^3/s 0.1 x DN
Pneumatic test	3.00 x DN	3.00 x DN	3.00 x DN	30 x DN

NOTE 1. The rate or rates of each test leakage for each valve type are specified in the appropriate valve product standard.
NOTE 2. The leakage rates only apply when discharging to ambient conditions.
NOTE 3. No visual leakage is accepted as being within the requirements of rates A, B, C and D.
NOTE 4. See note to table 5 for large size Class rated valves.

Appendices

Appendix A. Equivalent leakage rates

Equivalent leakage rates for this Part of BS 6755, BS 5146 : Part 2 and ISO 5208 are given in table 3.

Table 3. Equivalent leakage rates

This Part of BS 6755*	BS 5146 : Part 2	ISO 5208
A	3	3
B	2	2
C	1A	—
D	1	1

* See table 1.

Appendix B. Test durations

Table 4, which is for guidance only, may be used where an appropriate valve product standard does not exist or where test times are not specified in a standard. In those cases where the appropriate valve product standard specifies different minimum test durations than those given in table 4, the requirement of that valve product standard applies.

Table 4. Test durations

Nominal valve size DN	Minimum test durations: hydrostatic or pneumatic			
	Shell test	Seat test		Back seat test
		Metal seated	Elastomeric or polymeric seated	
	s	s	s	s
Up to and including DN 50	15	15	15	10
DN 65 up to and including DN 200	60	30	15	15
DN 250 up to and including DN 450	180	60	30	20
DN 500 and greater	180	120	60	30

VALVES QUALITY Coimbatore

FOR REFERENCE ONLY

D.2 Test fluid

The test fluid used for applying the test pressure shall be one of the following.

(a) Liquid: water, treated with a corrosion inhibitor when necessary, or other liquid whose viscosity at ambient temperature is equal to, or less than, that of water, or kerosene.

NOTE 1. Unless otherwise specified on the enquiry and/or order for the valve, water will be used as the test fluid.

NOTE 2. Attention is drawn to the need to control the chloride content of test water in contact with austenitic stainless steel valves. If a purchaser requires a particular limit on the chloride content of the test water, this should be stated on the enquiry and/or order for the valve.

or

(b) Gas: air or inert gas.

WARNING. Pneumatic pressure testing is potentially a much more dangerous operation than hydrostatic pressure testing. Attention is drawn to the following.

(1) The adequacy of protection for personnel carrying out the testing in the event of failure of a valve, connection or equipment during the test.

(2) The extent of the test area cleared for safety purposes.

Attention is drawn to the fact that if the gas pressure is reduced to the valve under test from high pressure storage, its temperature will fall. The test arrangement should be such that the gas entering the valve does not lower the temperature so as to affect the validity of the test.

D.3 General conditions of test

The following general conditions of test shall apply.

(a) Valves and connections shall be purged of air when testing with a liquid.

(b) To avoid the risk of freezing when the test medium is water the minimum temperature of the water, valve or ambient air during the test shall be not less than 7 °C.

(c) No valve undergoing pressure testing shall be subject to any form of shock loading.

(d) Valves shall not be painted or coated before shell pressure tests are completed. Pressure containing components shall not be impregnated for the purpose of preventing leakage.

NOTE. This does not preclude the use of surface treatments to prevent corrosion during manufacture and storage.

Internal linings or coatings that form a design feature of the valve are permitted.

D.4 Test pressures

D.4.1 Shell test

For the shell test the test pressures shall be as follows.

(a) The hydrostatic shell test pressure shall be 1.5 tir the maximum permissible working pressure at 20 °C

NOTE. For weld end valves which are designed solely for elevated temperature duties where the concept of a maximu permissible working pressure at 20 °C may not be appropria the test pressure requirements given in 26.2.1.3 of BS 759 : Part 1 : 1984 may be applied.

(b) The pneumatic shell test pressure shall be 6 bar t 7 bar.

D.4.2 Butterfly valve disk strength test

The hydrostatic disk test pressure shall be 1.5 times the maximum permissible working pressure at 20 °C*.

D.4.3 Seat test and back seat test

For the seat test and the back seat test the test pressure shall be as follows.

(a) The hydrostatic seat and back seat test pressure shall be 1.1 times the maximum permissible working pressure at 20 °C*.

(b) The pneumatic seat and back seat test pressure sl be 6 bar to 7 bar.

The following limitations shall apply.

(1) Valves with a seat rating less than the maximum permissible working pressure at 20 °C shall be seat tested at a pressure of 1.1 times* the maximum seat rating, or subject to a maximum of 6 bar pneumatic

(2) Valves which have obturators and/or actuating devices that would be damaged if the seat test pressu required by (a) or (b) were applied, shall be seat test at a pressure of 1.1 times* the maximum operating differential pressure, or subject to a maximum of 6 l pneumatic.

D.5 Applicability of pneumatic tests

The applicability of the 6 bar pneumatic tests shall be a specified in the valve product standards, subject to the following.

(a) The pneumatic shell test performed as an alterna to the hydrostatic shell test shall be limited to sizes to and including DN 50† for all pressure ratings up t and including PN 40 and up to and including Class 3

However, before a pneumatic test is undertaken, the manufacturer shall have previously subjected a

* The actual test pressure may be rounded to the next higher 1 bar increment.

† DN designations refer to valves having flanged ends. A table of equivalent sizes for valves having threaded ends and capillary or compression ends is given in appendix C.

REFERENCE ONLY

production sample of the valve model and size to a hydrostatic shell test to a pressure at least 2.25 times the maximum permissible working pressure without any leakage or permanent deformation of any component.

(b) The pneumatic seat test performed as an alternative to the hydrostatic seat test shall be limited to:

(1) sizes up to and including DN 80 for all pressure ratings;

(2) sizes above DN 80 and up to and including DN 200 for pressure ratings up to and including PN 40 and up to and including Class 300.

However, before a pneumatic test is undertaken, the manufacturer shall have previously subjected a production sample of the valve model and size to a hydrostatic seat test to the pressure specified in D.4.3.

(c) Where a pneumatic seat test is the only seat test specified in a valve product standard or is performed as an additional test to the hydrostatic seat test, there shall be no limit to any size or pressure rating.

(d) Where appropriate, the manufacturer shall additionally carry out a low-pressure pneumatic test on the seats for valves intended for low differential pressure or vacuum service.

NOTE. Where this test is required, it should be requested on the enquiry and/or order for the valve and the test pressure should be stated.

(e) Where both a hydrostatic and pneumatic seat test is to be carried out, the hydrostatic seat test shall always be satisfactorily completed before attempting to prove the valve by the pneumatic seat test.

D.6 Shell test

D.6.1 Principle

The shell test assesses the pressure containing capability of the valve shell including the packing chamber.

D.6.2 Procedure

For all types of valve, except where the design or service conditions preclude it, carry out the following.

(a) Blank off the ends of the assembled valve.

(b) Ensure that the obturator is positioned such that the body cavity, if any, is fully pressurized with test fluid.

(c) Apply the test pressure specified in D.4.1 and maintain the pressure for the period specified in the appropriate valve product standard (see appendix B).

If, however, the design or service conditions of the valve precludes the hydrostatic testing of the assembled valve at the pressure detailed in (c), then it is permissible to test, before assembly, the pressure-containing components at this pressure, and to test the assembled valve at a pressure equal to that for the seat test (see D.4.3).

D.6.3 Sealed bonnet test for diaphragm valves

For the sealed bonnet test, fit a slave diaphragm, which is a diaphragm with its centre removed, into the test valve. Test the valve in accordance with D.6.2, both the sealed bonnet and the body being tested together for the minimum duration specified in BS 5156. Check that the leakage rate complies with 4.4.

Remove the slave diaphragm and replace it with the diaphragm required for the complete valve assembly. Test this complete valve in accordance with D.6.2.

D.7 Butterfly valve disk strength test

D.7.1 Principle

The valve disk strength test assesses the structural integrity of the butterfly valve disk.

D.7.2 Conditions of test

The side of the disk to which the pressure is applied shall be the direction in which the disk is weaker.

NOTE. This direction is determined by the manufacturer, based on type testing on the disk in both directions.

D.7.3 Procedure

Close the valve in the normal manner, and apply the test pressure specified in D.4.2 to one side of the disk with the other side open to atmosphere, and maintain the pressure for the period specified in BS 5155.

D.8 Seat test

D.8.1 Principle

The seat leakage test assesses the sealing capability of the valve seat(s) in the direction(s) for which the valve is designed.

D.8.2 Conditions of test

Any valve designed for use as a unidirectional flow valve, other than check valves or globe stop and check valves, shall be tested in the specified flow direction only.

D.8.3 Procedure

NOTE. If the seat test is a pneumatic test where the valve is immersed in clean water, the valve should be so mounted to allow the free release of any bubbles from the valve seat area and so that bubbles are readily observable.

D.8.3.1 *Preparation.* Using a clean dry cloth wipe the seats clean and free from oil or grease except for valves in which a lubricant or sealing compound is the primary means of sealing. However, if necessary to prevent galling, it is permissible to coat the seats with a film of oil of viscosity not greater than that of kerosene.

TABLE 2 Chemical Requirements

NOTE 1—CE8MN and CD3MWCuN have been deleted from this specification and added to Specification A995/A995M as Grades 2A and 6A respectively. CD4MCu has also been removed. Specification A995/A995M Grade 1B, CD4MCuN, is an acceptable substitute

	Element, % (max, except where range is given)											
Material Grade	Carbon	Manganese	Silicon	Sulfur	Phosphorus	Chromium	Nickel	Molybdenum	Columbium (Niobium)[D]	Vanadium	Nitrogen	Copper
CE20N J92802	0.20	1.50	1.50	0.040	0.040	23.0–26.0	8.0–11.0	0.50	...	...	0.08–0.20	...
CF3, CF3A J92700	0.03	1.50	2.00	0.040	0.040	17.0–21.0	8.0–12.0	0.50	...	...	...	...
CF8, CF8A J92600	0.08	1.50	2.00	0.040	0.040	18.0–21.0	8.0–11.0	0.50	...	...	...	...
CF3M, CF3MA J92800	0.03	1.50	1.50	0.040	0.040	17.0–21.0	9.0–13.0	2.0–3.0	...	...	...	...
CF8M J92900	0.08	1.50	1.50	0.040	0.040	18.0–21.0	9.0–12.0	2.0–3.0	...	...	...	...
CF3MN J92804	0.03	1.50	1.50	0.040	0.040	17.0–21.0	9.0–13.0	2.0–3.0	...	...	0.10–0.20	...
CF8C J92710	0.08	1.50	2.00	0.040	0.040	18.0–21.0	9.0–12.0	0.50	[A]	...	...	...
CF10 J92950	0.04–0.10	1.50	2.00	0.040	0.040	18.0–21.0	8.0–11.0	0.50	...	...	...	...
CF10M J92901	0.04–0.10	1.50	1.50	0.040	0.040	18.0–21.0	9.0–12.0	2.0–3.0	...	...	...	...
CF10MC	0.10	1.50	1.50	0.040	0.040	15.0–18.0	13.0–16.0	1.75–2.25	[B]	...	...	...
CF10SMnN J92972	0.10	7.00–9.00	3.50–4.50	0.030	0.060	16.0–18.0	8.0–9.0	...	...	...	0.08–0.18	...
CG3M J92999	0.03	1.50	1.50	0.04	0.04	18.0–21.0	9.0–13.0	3.0–4.0	...	...	...	...
CG6MMnN J93790	0.06	4.0–6.0	1.00	0.030	0.040	20.5–23.5	11.5–13.5	1.50–3.00	0.10–0.30	0.10–0.30	0.20–0.40	...
CG8M J93000	0.08	1.50	1.50	0.04	0.04	18.0–21.0	9.0–13.0	3.0–4.0	...	...	...	...
CH8 J93400	0.08	1.50	1.50	0.040	0.040	22.0–26.0	12.0–15.0	0.50	...	...	...	...
CH10 J93401	0.04–0.10	1.50	2.00	0.040	0.040	22.0–26.0	12.0–15.0	0.50	...	...	...	...
CH20 J93402	0.04–0.20	1.50	2.00	0.040	0.040	22.0–26.0	12.0–15.0	0.50	...	...	...	...

TABLE 3 Tensile Requirements

Material Grade	Tensile strength, min, ksi [MPa]	Yield strength,[A] min, ksi [MPa]	Elongation in 2 in. or 50 mm,[B] min, %
CE20N J92802	80 [550]	40 [275]	30
CF3 J92700	70 [485]	30 [205]	35
CF3A J92700	77 [530]	35 [240]	35
CF8 J92600	70 [485]	30 [205]	35
CF8A J92600	77 [530]	35 [240]	35
CF3M J92800	70 [485]	30 [205]	30
CF3MA J92800	80 [550]	37 [255]	30
CF8M J92900	70 [485]	30 [205]	30
CF3MN J92804	75 [515]	37 [255]	35
CF8C J92710	70 [485]	30 [205]	30
CF10 J92950	70 [485]	30 [205]	35
CF10M J92901	70 [485]	30 [205]	30
CF10MC	70 [485]	30 [205]	20
CF10SMnN J92972	85 [585]	42.5 [295]	30
CG3M J92999	75 [515]	35 [240]	25
CG6MMnN J93790	85 [585]	42.5 [295]	30
CG8M J93000	75 [515]	35 [240]	25
CH8 J93400	65 [450]	28 [195]	30
CH10 J93401	70 [485]	30 [205]	30
CH20 J93402	70 [485]	30 [205]	30
CK20 J94202	65 [450]	28 [195]	30
CK3MCuN J93254	80 [550]	38 [260]	35
CN3MN J94651	80 [550]	38 [260]	35
CN7M N08007	62 [425]	25 [170]	35
CT15C N08151	63 [435]	25 [170]	20

CANLE	DESIGN DEVELOPMENT OUTPUT	PROJECT NO : 01.

Product : 80x100mm Jacketed Ball valve, Flanged End. Size : 80x100mm.
Type : Single Piece, Jacketed. Project Started On :

S.No.	Description	Drawing No	Rev. No	No. of Sheet	Remarks
	BOM.				
1.	Assembly Drawing	IIDT.	01.	1 of 1.	
2.	Body (Casting)	TKV 80X100FBD55A (c)	01.	2 of 2.	
3.	Insert (Casting)	TKV 80X100FBD55H(C)	01.	2 of 2.	
4.	Body (machining)	TKV80X100FBD55H(m)	00.	1 of 1.	
5.	Insert (machining)	TKV80X100FBD55H(m)	00.	1 of 1.	
6.	Ball.	BV3080F14B-Am.	00.	1 of 1.	
7.	Seat	BV3000F17B39AM	00.	1 of 1.	
8.	Body Seal.	BV3000F21B39AM	00.	1 of 1.	
9.	Stem.		00.	1 of 1.	
10.	Stem Packing.	BLV-F28B33/M	00.	1 of 1.	
11.	Gland		00.	1 of 1.	
12	Gland Packing.	BLV-F28B33/M.	00.	1 of 1.	

Date : 07.08.2020.

Prepared By

Reviewed & Accepted By

CVPL/DD/R/04/00

CANLE	DESIGN DEVELOPMENT OUTPUT	PROJECT NO : 01.

Product : 80X150mm Jacketed Ball Valve, Flanged End. Size : 80X150mm.
Type : Single Piece, Jacketed. Project Started On :

S.No.	Description	Drawing No	Rev. No	No. of Sheet	Remarks
	BOM:				
1.	Assembly Drawing	1107.	01.	1 of 1.	
2.	Body (Casting)	JKV80X150FBD5TH (c).	01.	2 of 2.	
3	Insert (Casting)	JKV80X150FBD5TH (c)	01.	2 of 2.	
4.	Body (Machining)	JKV80X150FBD5TH (m)	00.	1 of 1.	
5.	Insert (machining)	JKV80X150FBD5TH (m)	00.	1 of 1.	
6.	Ball.	BV3080F14B-AM	00.	1 of 1.	
7.	Seat.	BV3000F17B39AM	00.	1 of 1.	
8.	Body Seal.	BV3000F21B39AM	00.	1 of 1.	
9.	Stem.		00.	1 of 1	
10.	Stem Packing.	BLV-F28B33/m.	00.	1 of 1.	
11.	Gland.		00.	1 of 1.	
12.	Gland Packing.	BLV-F28B33/M	00.	1 of 1.	

Date : 01.08.2020.

G. Bhat.
Prepared By

Reviewed & Accepted By

BOM FOR JACKETED BALL VALVE

JACKETED BALL VALVE, FLANGED END, SIZE 150X80mm – 150# CF3

SL. NO.	DESCRIPTION	DRAWING	MATERIALS	QUANTITY	REMARKS
*	80x150mm Jacketed Assembly	1107.			
1.	Body.	JKV 80X150FBD58H (m).	CF3	1.	
2.	Insert	JKV 80X150FBD58H (m).	CF3.	1.	
3.	Seat.	BV3000F/14B-AM	Metal Seated (304L)	2.	
4.	Stem Seal.	BLV-F28B33/M.	CFT.	1.	
5.	Stem.		SS 304L	1.	
6.	Ball.	BV3080F14B-AM.	CF3.	1.	
7.	Body Seal.	BV3000F21B39AM.	PTFE	2.	
8.	Gland Packing.	BLV-F28B33/M.	CFT	3.	
9.	Gland *		SS 304L	1.	
10.	Jacket.		SS304L.	1.	

G. B.
Prepared By

Approved By

CAVALE VALVES QUALITY CONTROL Coimbatore-21

BOM FOR JACKETED BALL VALVE

JACKETED BALL VALVE, FLANGED END, SIZE 100X80mm – 150# CF3

SL. NO.	DESCRIPTION	DRAWING	MATERIALS	QUANTITY	REMARKS
	80X100mm Jacketed Assembly	1107.			
1.	Body.	JKV80X100FBD55H(W).	CF3	1.	
2.	Insert.	JKV80X100FBD56H(W)	CF3.	1	
3.	Seat	BV300DF17B39AM.	Metal Seated (304L)	2.	
4.	Stem Seal.	BLV-F28B33/AM.	CFT	1.	
5.	Stem.		SS 304L	1.	
6.	Ball.	BV300DF16B-AM.	CF3.	1	
7.	Body seal	BV300DF17B39AM.	PTFE.	2.	
8.	Gland Packing.	BLV-F28B33/AM.	CFT	3.	
9.	Gland.		SS304L	1.	
10.	Jacket.		SS304L.	1.	

G.B.J.
Prepared By

Approved By

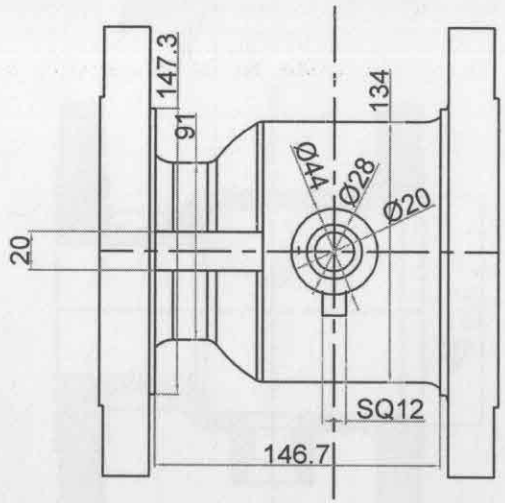
Page 27 of 83.

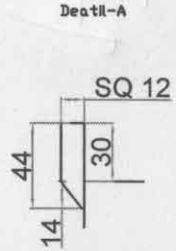
BODY–CASTING

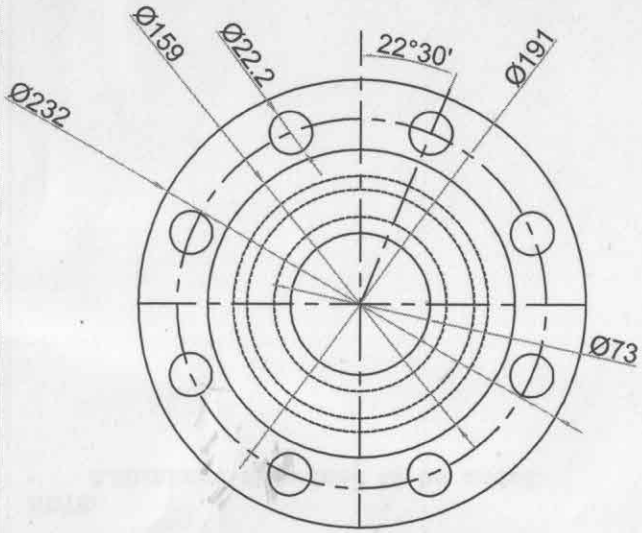
80x100mm Jacketed Ball Valve Body

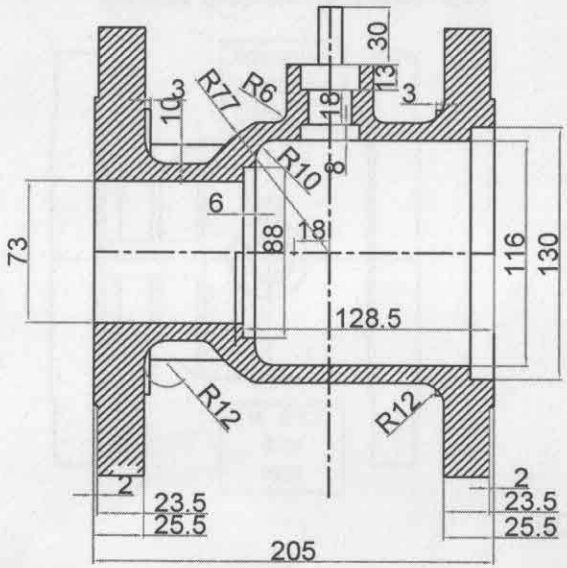
NOTE:

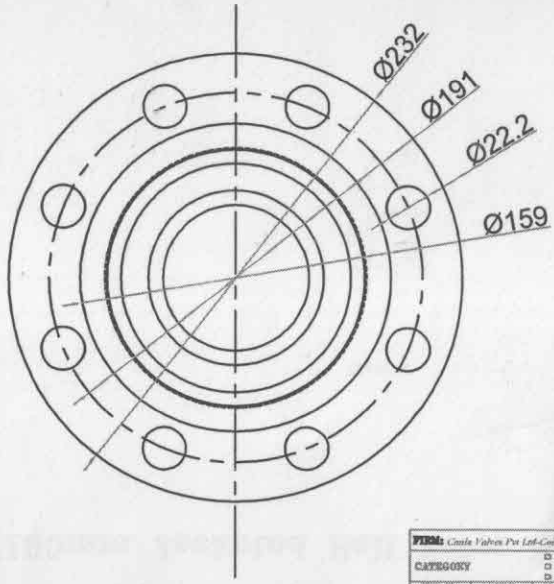
2.Shinkage allowance to be added.











FIRM: Cauvery Valves Pvt Ltd-Coimbatore			
CATEGORY	☐ PRELIMINARY ☐ FOR APPROVAL ☐ AS FITTED		
DRAWN BY	NARESH	DATE : 25/05/2020	
CHECKED BY	RAJA	DATE : 25/05/2020	
APPROVED BY	VENU	DATE : 25/05/2020	
Jacketed Ball Valve			
SIZE: 80x100mm		CLASS: 150#	
Drawing No: JKV80x100FBD5SH (C)		Rev No: 00	
		SCALE: -	
ALL DIMENSIONS ARE IN mm.			

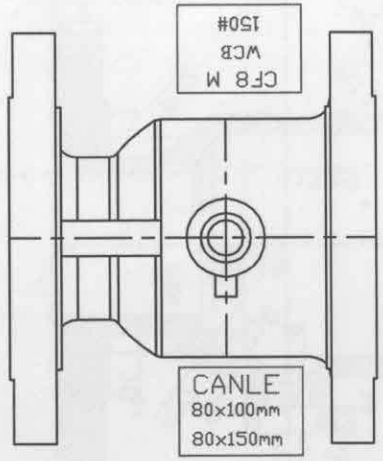
Page 32 of 33

BODY–CASTING

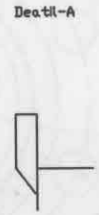
80x100mm Jacketed Ball Valve Body

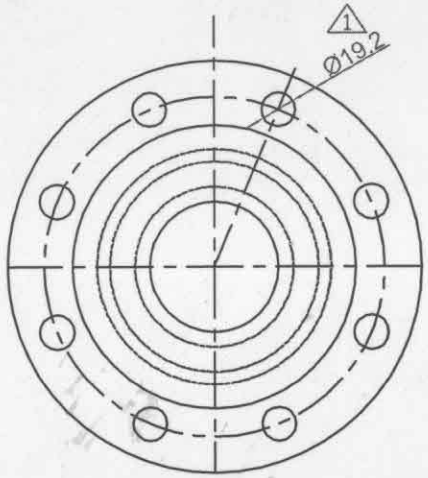
NOTE:

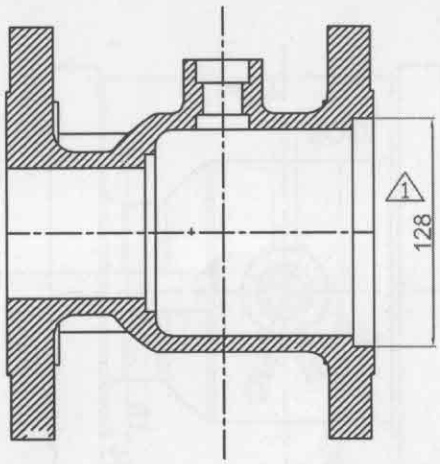
2.Shinkage allowance to be added.

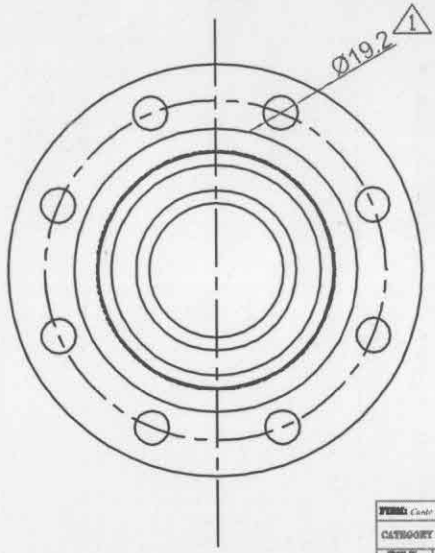


Provide Suitable lettering size









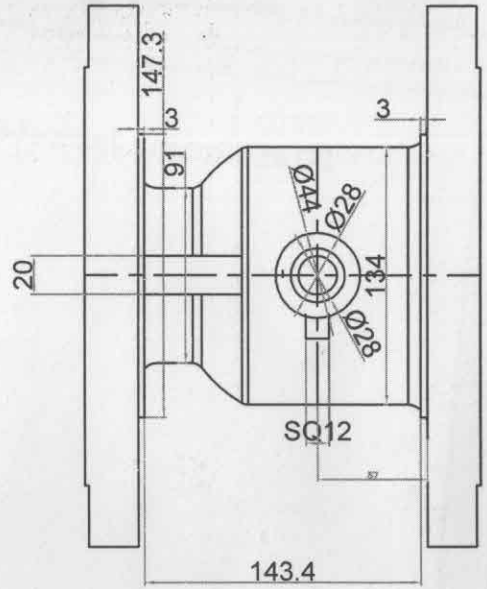
CATEGORY		☐ PRELIMINARY ☐ FOR APPROVAL ☐ AS BUILT	Jacketed Ball Valve		
			SIZE		CLASS
			Material		GRADE
			Drawing No	Rev No	01
				SCALE	–

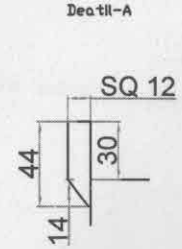
BODY-CASTING

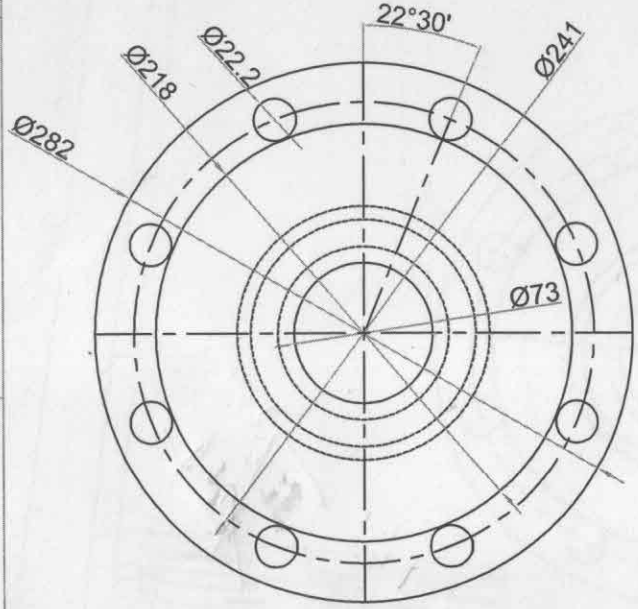
80x150mm Jacketed Ball Valve Body

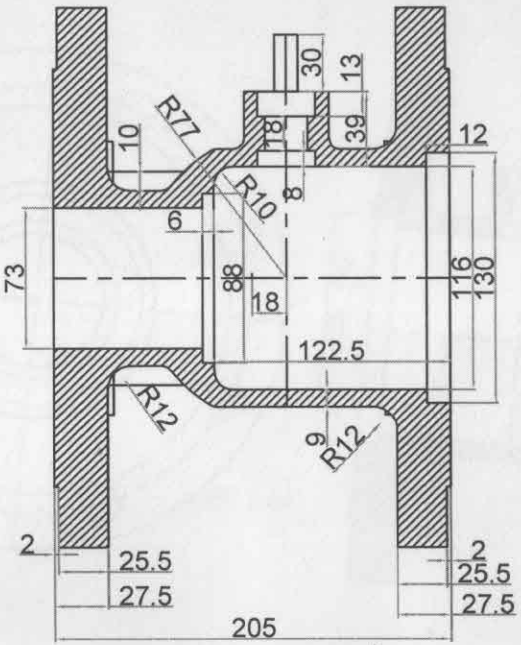
NOTE:

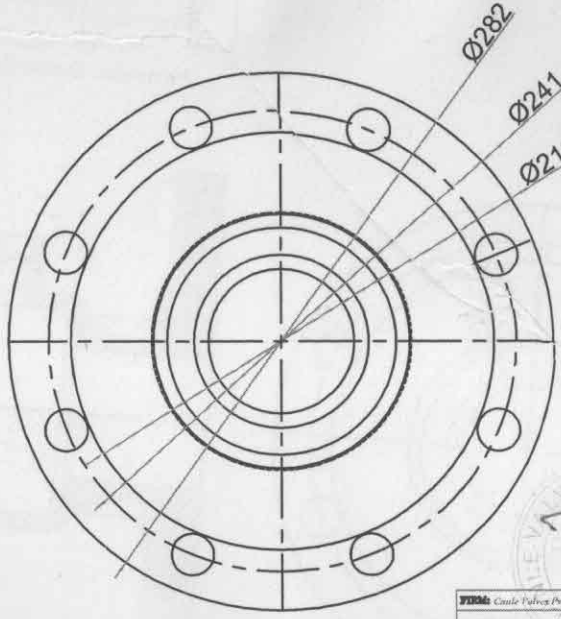
2.Shinkage allowance to be added.











FIRM: Caudle Valves Pvt Ltd Coimbatore		Jacketed Ball Valve	
CATEGORY	☐ PRELIMINARY ☐ FOR APPROVAL ☒ AS PATTERN	SIZE	CLASS
DRAWN BY		80x150mm	150#
CHECKED BY		Drawing No.	Rev No.
APPROVED BY		JKV80x150FBD57H(C)	SCALE
JKV80x150FBD57H (C)			AL DIMENSIONS ARE IN mm.

Page 30 of 83

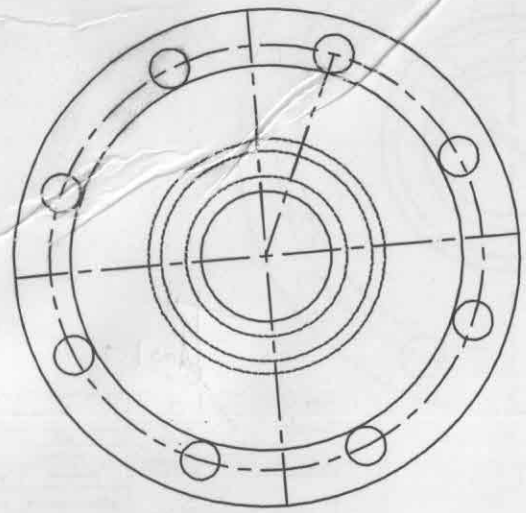
80x150mm Jacketed Ball Valve Body

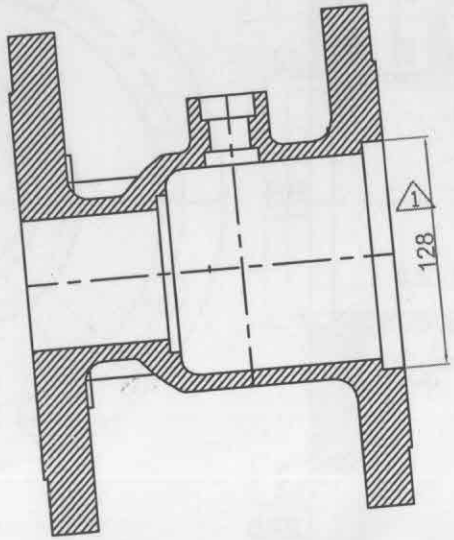
BODY-CASTING

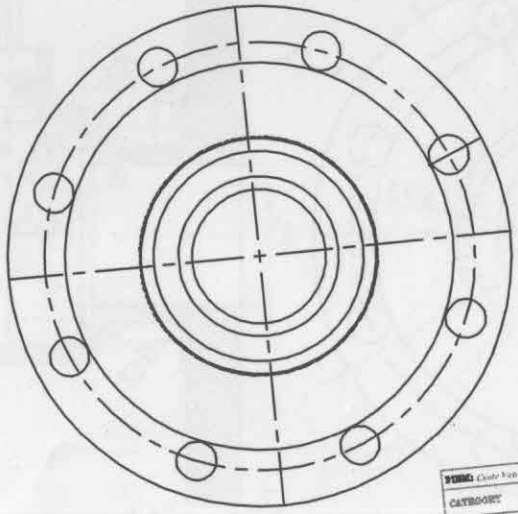
NOTE:
2.Shinkage allowance to be added.

Provide Suitable lettering size

Detail-A



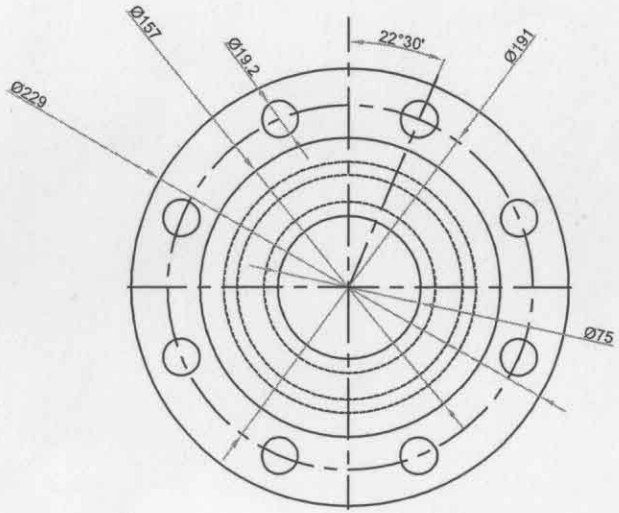


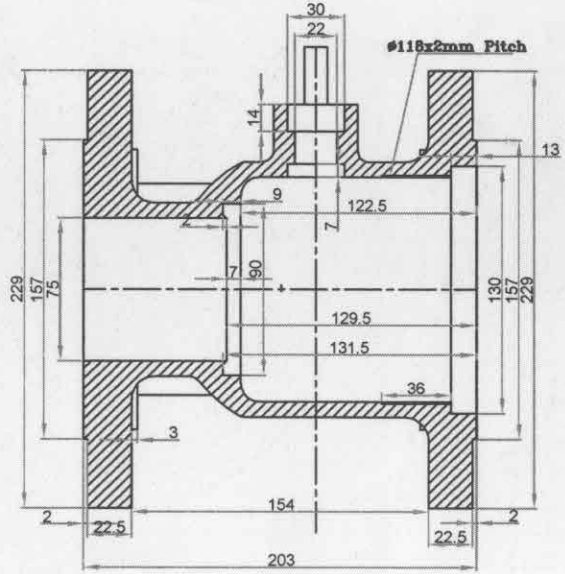


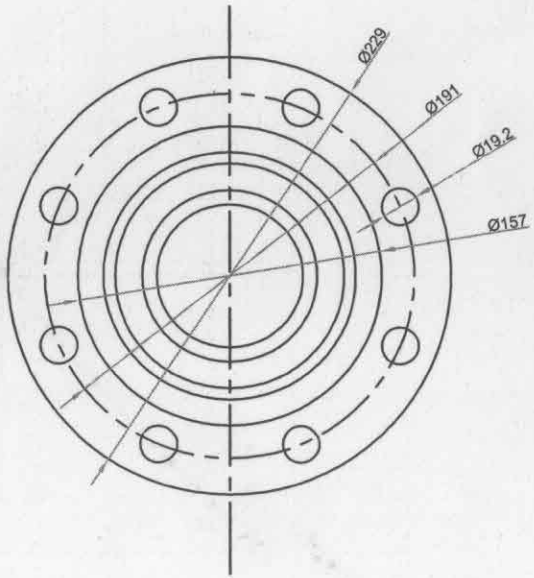
Page 31 of 82

BODY–Machining

80x100mm Jacketed Ball Valve Body



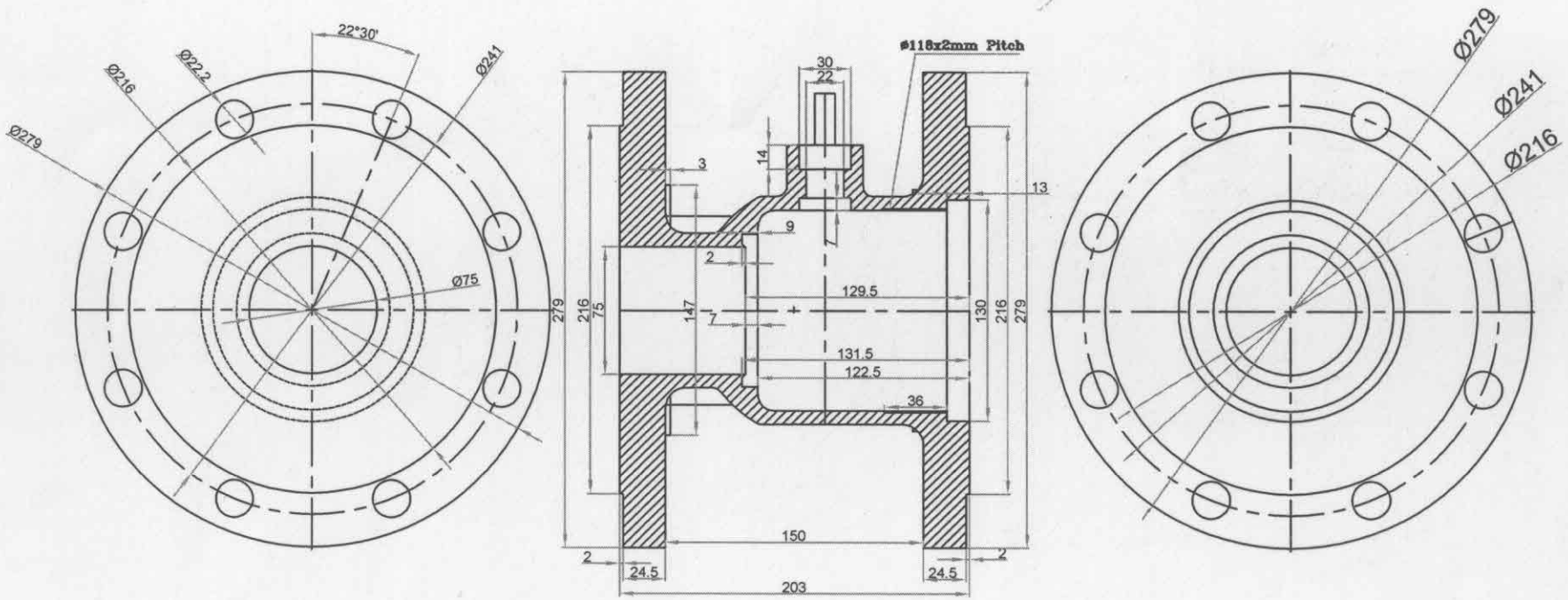




FIRM: Castle Valves Pvt Ltd Coimbatore			
CATEGORY			
DRAWN BY			
CHECKED BY			
APPROVED BY			
JKV80x100FBD55H (M)			

BODY–Machining

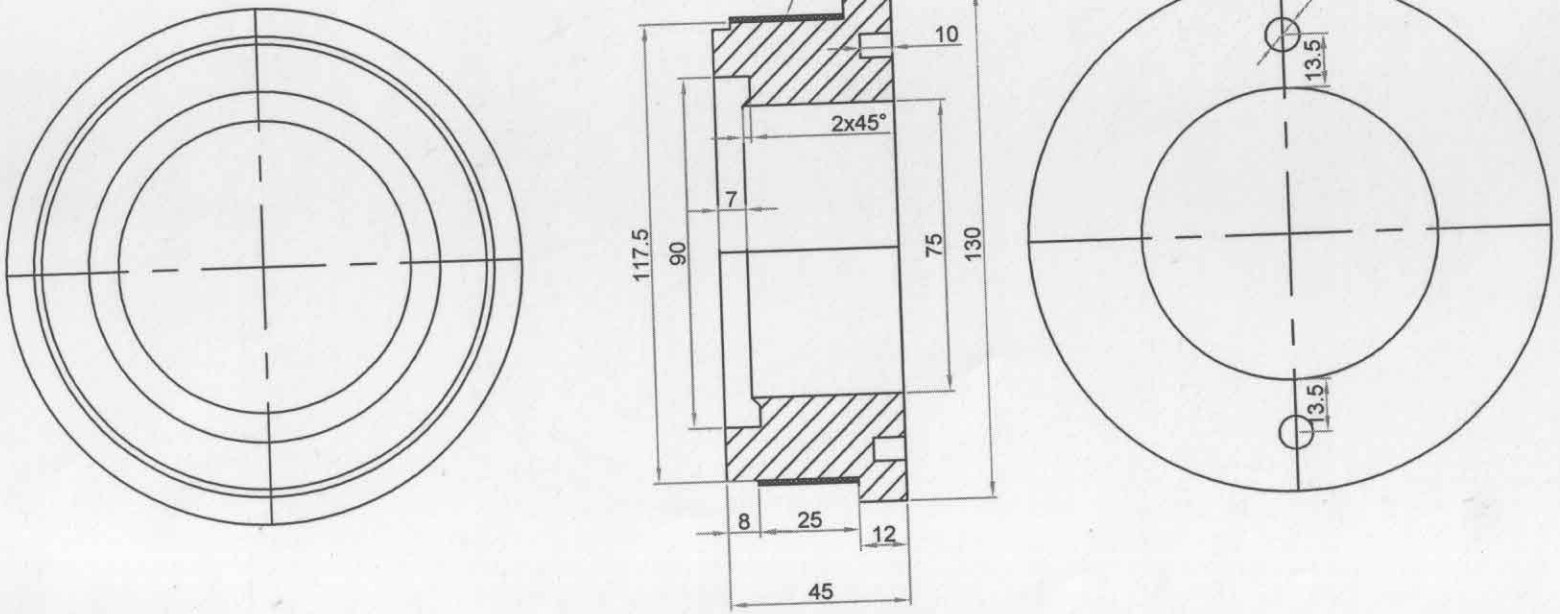
80x150mm Jacketed Ball Valve Body



FIRM: Cavis Valves Pvt Ltd-Coimbatore			Jacketed Ball Valve
CATEGORY	☐ PRELIMINARY ☐ FOR APPROVAL ☐ AS BUILT	SIZE	CLASS
DRAWN BY		80x150mm	150#
CHECKED BY		Drawing No	Rev No: 00
APPROVED BY		JKV80x150FBD57H(M)	SCALE: -
JKV80x150FBD57H (M)			ALL DIMENSIONS ARE IN mm.

Page 33 of 83

Insert–Machining

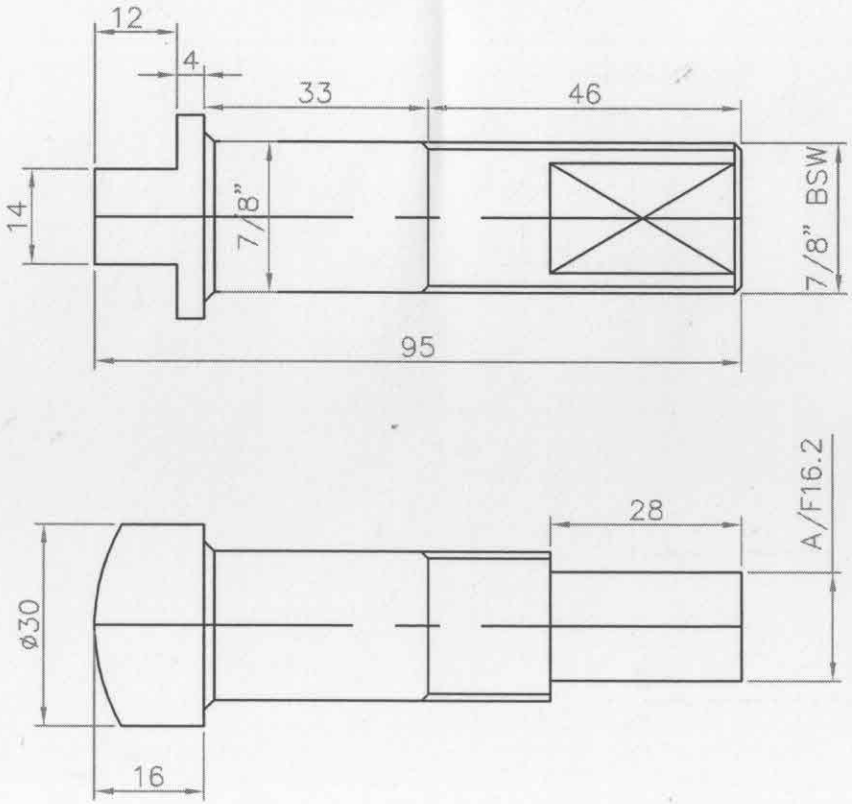


80x100mm Jacketed Ball Valve Insert

80x150mm Jacketed Ball Valve Insert

FIRM: Canle Valves Pvt Ltd-Coimbatore		Jacketed Ball Valve
CATEGORY	☐ PRELIMINARY ☐ FOR APPROVAL ☐ AS FITTED	SIZE: 80x100mm & 80x150mm; CLASS: 150#
DRAWN BY: M.PANDIK — DATE : 21/07/2020		Drawing No: JKLVD80x150FBDRA11C; Rev No: 00
CHECKED BY: BALA — DATE : 21/07/2020		SCALE: –
APPROVED BY: THANK — DATE : 21/07/2020		ALL DIMENSIONS ARE IN mm.
JKV80x150FBD56H (M)		

80 x 100mm & 80 x 150mm

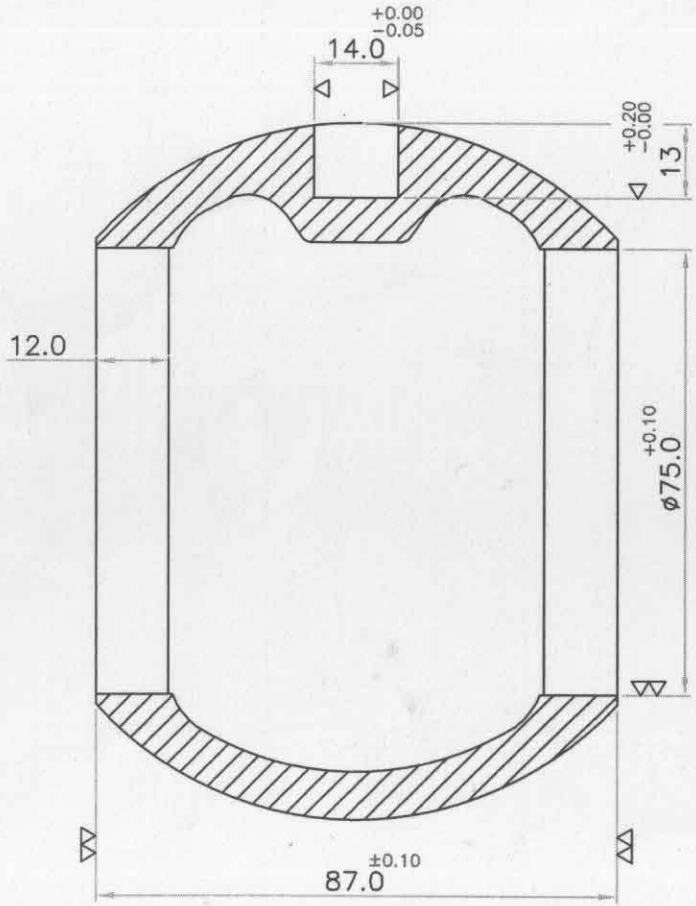


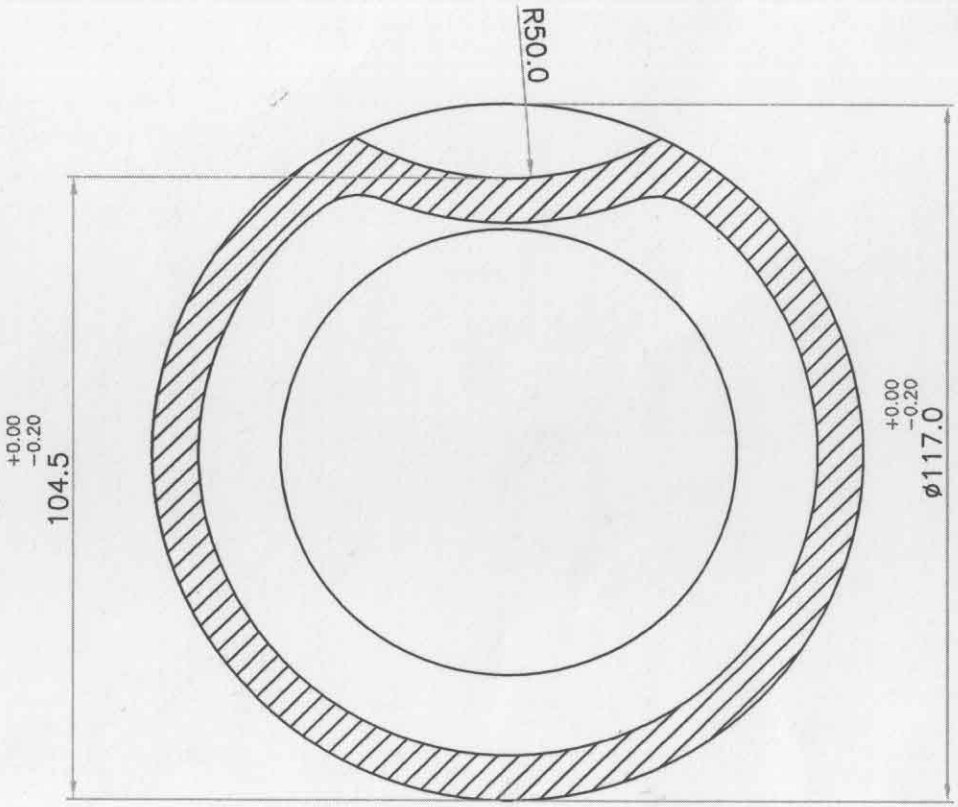
Canle Valves Private Limited

An ISO: 9001:2015 Company / IBR Approved Valves Maker

No.52, SIDCO Industrial Estate, Pollachi Main Road, Coimbatore - 641021, Tamil Nadu.
Phone: +91 422 427082 / E Mail: marketing@canlevalve.com

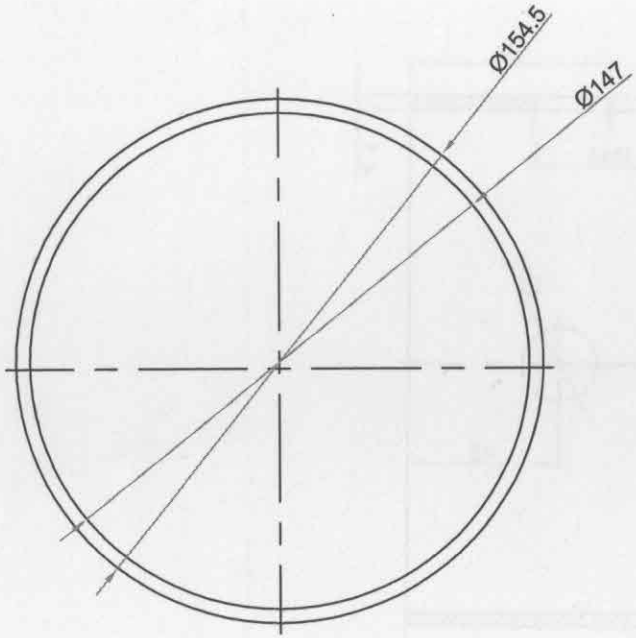
Product Title		: Jacketed Ball Valve Stem					
Customer Name		: ----------					
DRAWN	Bhuvanesh	Customer Ref No	: ----------			Date	27.07.2020
CHECKED	Farook M	All Dimensions are in 'mm' Unless Otherwise Specified				Canle Ref	----------
APPROVED	Varun G	SIZE	: 80 mm	CLASS	: 150	TYPE	: JBLV
SCALE	NOT TO SCALE	MATERIAL :				DWG NO.	:JBLV080FBDBA15M
DATE	23.04.2021	----------				REV : 01	SHEET: 1 OF 1

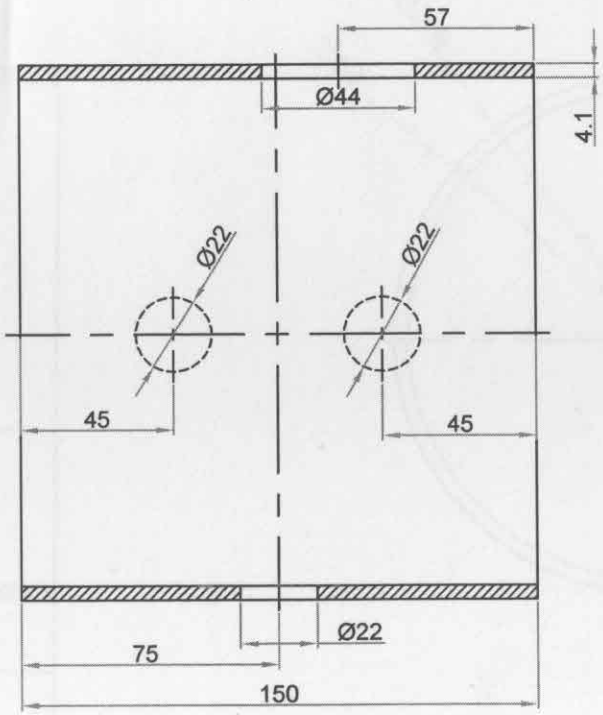




CANLE VALVES PVT LTD COIMBATORE			TITLE : **80mm SOLID BALL M/C DRG**					
DRG. No.: **BV3080F14B_AM**	Rev.No.: 00	2013	SIGN	DATE		CLASS - 150		END - _
		DRN	VARUN	24/7/2013		RM	FIN	SHEET No.:- 1 of 1
MAT.:- CF8M&CF8		CHD	BALA	ALL DIMENSIONS ARE IN mm				A4
		APR	TARAK	SCALE :- N.T.S				

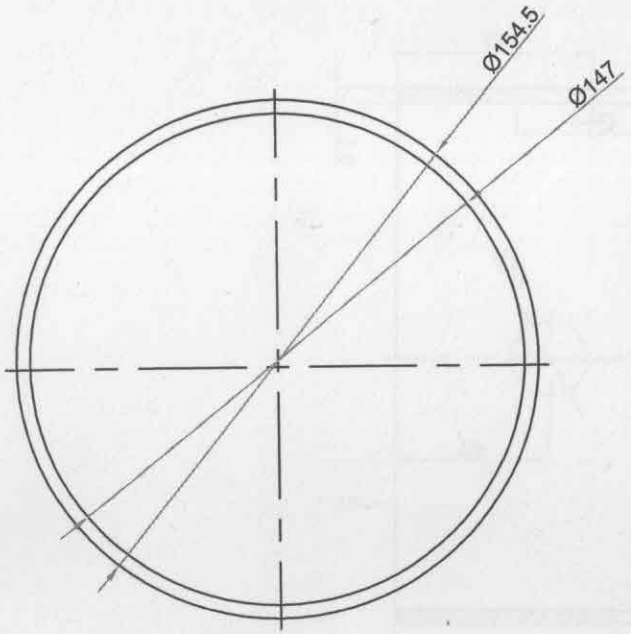
80 x 150mm

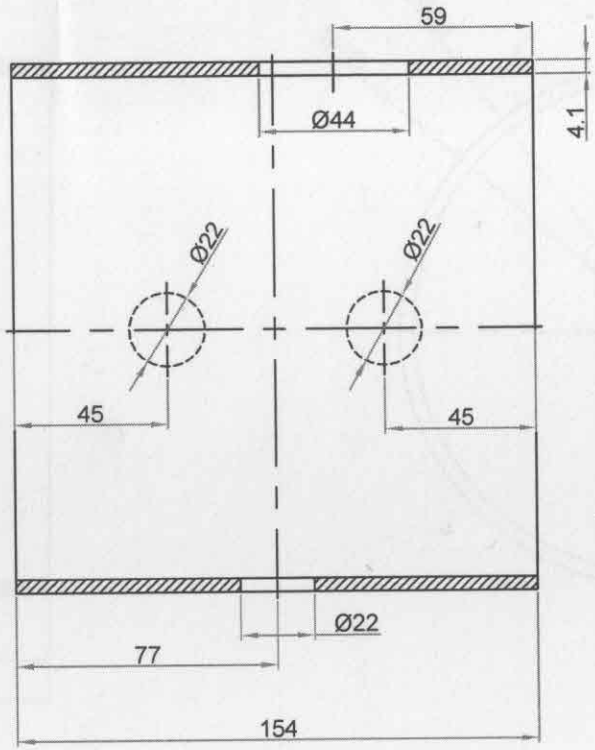




CANLE	**Canle Valves Private Limited** An ISO: 9001:2015 Company / IBR Approved Valves Maker No.52, SIDCO Industrial Estate, Pollachi Main Road, Coimbatore - 641021. Tamil Nadu. Phone: +91 422 427082 / E Mail: marketing@canlevalve.com						
Product Title	: Jacketed Ball Valve Pipe						
Customer Name	:						
DRAWN	Bhuvanesh	Customer Ref No	:			Date	27.07.2020
CHECKED	Farook M	All Dimensions are in 'mm' Unless Otherwise Specified				Canle Ref	.....
APPROVED	Varun G	SIZE	: 80 x 150mm	CLASS	: 150	TYPE	: JBLV Pipe
SCALE	NOT TO SCALE	MATERIAL :				DWG NO.	: JBLV-80-150-SDRAWING
DATE	14.08.2020	.....				REV : 01	SHEET: 1 OF 1

80 x 100mm





CANLE	**Canle Valves Private Limited** An ISO: 9001:2015 Company / IBR Approved Valves Maker No.52, SIDCO Industrial Estate, Pollachi Main Road, Coimbatore - 641021, Tamil Nadu. Phone: +91 422 427082 / E Mail: marketing@canlevalve.com						
Product Title	: Jacketed Ball Valve Pipe						
Customer Name	: ----------						
DRAWN	Bhuvanesh	Customer Ref No	:			Date	27.07.2020
CHECKED	Farook M	All Dimensions are in 'mm' Unless Otherwise Specified				Canle Ref	.....
APPROVED	Varun G	SIZE	: 80 x 100mm	CLASS	: 150	TYPE	: JBLV Pipe
SCALE	NOT TO SCALE	MATERIAL :				DWG NO.	CLV/JBLV/2020/0084/SM
DATE	14.08.2020	----------				REV : 01	SHEET: 1 OF 1

Wall Thickness Calculation

Size : 80mmx100mm Jacketed Ball Valve – INSERT

Size : 80mmx150mm Jacketed Ball Valve – INSERT

Material : CF3

Pressure Rating : 150#

Basic Equation For Minimum Wall Thickness-mm as per ASME B 16.34

tm (150) = 0.020d + 4.50

Where tm-Minimum Wall Thickness.

d-Inner Diameter

tm (150) = 0.020*75 + 4.50

tm (150) = 1.5 + 4.50

tm = 6mm

Acceptance Criteria:

Calculated Wall Thickness – 6mm

Standard Wall Thickness - 7mm

Actual Wall thickness - 13.5mm

Conclusion:

Acceptable

Prepared By

Accepted By

Wall Thickness Calculation

Size : 80mmx100mm Jacketed Ball Valve – BODY

Size : 80mmx150mm Jacketed Ball Valve – BODY

Material : CF3

Pressure Rating : 150#

Basic Equation For Minimum Wall Thickness-mm as per ASME B 16.34

$$tm\ (150) = 0.020d + 4.50$$

Where tm-Minimum Wall Thickness.

d-Inner Diameter

$$tm\ (150) = 0.020*75 + 4.50$$

$$tm\ (150) = 1.5 + 4.50$$

$$tm = 6mm$$

Acceptance Criteria:

Calculated Wall Thickness – 6mm

Standard Wall Thickness - 7mm

Actual Wall thickness - 8mm

Conclusion:

Acceptable

Prepared By

Accepted By

CANLE	Quality Plan - In process Inspection	Doc No : CVPL-QAD-D-03 Rev No : 00 Rev Date : 05-08-2020
	Product Name : Jackedted Ball Valve	Page : 1 of 2

Sno	Component	Parameters	Acceptance Criteria		Method / Instruments /o be used	Sample Size	Record Ref
			Min	Max			
1	Body	Total Length	As per Drawing		Visual & Measuring by Vernier	10%	Job card cum Inprocess Inspection cum Inspection Report (J I I R)
		Bore Dia					
		Gland Seating Dia					
		Stem Seating Dia					
		internal Crack	ASTM Standards		Liquid Penetrate test	10%	
2	Ball	Out side Dia	As per Drawing		Visual & Measuring by Vernier , Depth Vernier	10%	Job card cum Inprocess Inspection cum Inspection Report (J I I R)
		Nominal Bore					
		Stem Seating Groove Length					
		Stem Seating Groove Width					
		Stem Seating Groove Depth					
		internal Crack	ASTM Standards		Liquid Penetrate test	2 Nos Per Heat	
3	Insert	internal Crack	ASTM Standards		Liquid Penetrate test	10%	Job card cum Inprocess Inspection cum Inspection Report (J I I R)
		Total Length	As per Drawing		Visual & Measuring by Vernier , Depth Vernier	10%	
		Flange Out side Dia					
		Flange Thickness					
		Nominal Bore					
		Nominal Bore Length					
		Seat Seating Dia					
		Seat Seating Depth					

Prepared by

Approved by

Page 41 of 83.

CANLE	Quality Plan - Materials Inward Inspection			Doc No : CVPL-QAD-D-02 Rev No : 00 Rev Date : 05.08.20 Page : 2 of 2	

Sno	Material Name	Parameters	Acceptance Criteria		Instruments / Method to be used	Sample Size	Record Ref
			Min	Max			
4	Fasteners	Size	As per P.O / As per drawing		Measuring by Vernier	10%	GRN / Material Inward Note (M I N)
		Length					
		Qty			Counted By Mannualy	100%	
5	Finished / Machined Parts from sub contractor	Visual & Dimensional Check	As per P.O / As per drawing		Measuring by Vernier	10%	GRN / Material Inward Note (M I N)
		Qty			Counted By Mannualy	10%	
		Chemical	ASTM Standards		PMI	10%	
6	Seats, seals , gland packing	Size	As per P.O / As per drawing		Measuring by Vernier	10%	GRN / Material Inward Note (M I N)
		Qty			Counted By Mannualy	100%	
7	Full Assemby / Sub Assembly from sub contractor	Visual & Dimensional Check	As per Final Internal Inspection Quality Plan		Measuring by Vernier , Scale	10%	GRN / Material Inward Note (M I N)
		Qty			Counted By Mannualy	100%	
ONE LOT EQUAL TO 200 No.s							
Prepared by:Farook			Approved by:Varun				

CANLE	Quality Plan - In process Inspection	Doc No : CVPL-QAD-D-03 Rev No : 00 Rev Date : 05-08-2020
	Product Name : Jackedted Ball Valve	Page : 1 of 2

Sno	Component	Parameters	Acceptance Criteria		Method / Instruments /o be used	Sample Size	Record Ref
			Min	Max			
1	Body	Total Length	As per Drawing		Visual & Measuring by Vernier	10%	Job card cum Inprocess Inspection cum Inspection Report (J I I R)
		Bore Dia					
		Gland Seating Dia					
		Stem Seating Dia					
		internal Crack	ASTM Standards		Liquid Penetrate test	10%	
2	Ball	Out side Dia	As per Drawing		Visual & Measuring by Vernier , Depth Vernier	10%	Job card cum Inprocess Inspection cum Inspection Report (J I I R)
		Nominal Bore					
		Stem Seating Groove Length					
		Stem Seating Groove Width					
		Stem Seating Groove Depth					
		internal Crack	ASTM Standards		Liquid Penetrate test	2 Nos Per Heat	
3	Insert	internal Crack	ASTM Standards		Liquid Penetrate test	10%	Job card cum Inprocess Inspection cum Inspection Report (J I I R)
		Total Length	As per Drawing		Visual & Measuring by Vernier , Depth Vernier	10%	
		Flange Out side Dia					
		Flange Thickness					
		Nominal Bore					
		Nominal Bore Length					
		Seat Seating Dia					
		Seat Seating Depth					

Prepared by	Approved by

CANLE	Quality Plan - Final Internal Inspection	Doc No : CVPL-QAD-D-04
		Rev No : 00
	Product Name : Jacketed Ball Valve Flanged ,	Rev Date : 05-08-2020
		Page : 1 of 2

Sno	Description	Parameters	End Connection Type	Acceptance Criteria		Method / Instruments /o be used	Sample Size	Record Ref
				Min	Max			
1	Assembly Dimensional Check	Valve Face to Face	Flanged	As per Drawing		Measuring By Vernier ,Micro meter , Depth Vernier, Thread Plug Gauge, Pitch Gauge	10 % Inspection	Final Internal Inspection Report (F I I R)
		Flange OD						
		Flange Thick						
		R.F.D						
		R.F.D Height						
		P.C.D						
		No. of Holes						
		Hole Dia						
2	Testing Inspection	Body Hydro	For All Type	As per Drawing		Testing By Pressure Gauge	10 % Inspection	Final Internal Inspection Report (F I I R)
		Seat Hydro						
		Seat Pneumatic						
		Hydro Jacket						

Prepared by

Approved by

CANLE	Quality Plan - Materials Inward Inspection				Doc No : CVPL-QAD-D-02 Rev No : 00 Rev Date : 05.08.20 Page : 1 of 2	
Sno	**Material Name**	**Parameters**	**Acceptance Criteria**	**Instruments / Method to be used**	**Sample Size**	**Record Ref**
			Min / **Max**			
1	Bars	Dimensional Check	As per P.O / As per drawing	Measuring by Vernier	10%	GRN / Material Inward Note (M I N)
		Length		Measuring by Scale		
		Qty		Counted By Mannualy	100%	
		Chemical	ASTM Standards	PMI	10%	
2	Castings	Dimensional Check	As per P.O / As per drawing	Measuring by Vernier	10%	GRN / Material Inward Note (M I N)
		Qty		Counted By Mannualy	100%	
		Chemical	ASTM Standards	PMI	10%	
		Hidden flaws, defects	ASTM Standards	Radiography by X-ray machine	5%	Agengy Inspection Report
3	Forgings	Dimensional Check	As per P.O / As per drawing	Measuring by Vernier	10%	GRN / Material Inward Note (M I N)
		Qty		Counted By Mannualy	100%	
		Chemical	ASTM Standards	PMI	10%	
		Hidden flaws, defects	ASTM Standards	Radiography by X-ray machine	5%	Agengy Inspection Report
ONE LOT EQUAL TO 200 No.s,						

Design and Development of Review

CANLE	DESIGN & DEVELOPMENT REVIEW RESULTS	PROJECT NO. : 01.

Customer Name : M/S Jubilant Life Sciences limited, Gajraula. Serial No: JBC 100 X 80 F BE D A 912 H
JBC 150 X 080 BE DA 912 H.

Product Name : 80x100mm Jacketed Ball Valve. 80x150mm Jacketed Ball Valve

Review Date	Review Description	Team Members	Review Points	Review Status	Review Change Details	Target Date	Responsibility	Sign
~~11.08.2020.~~ 28.07.2020.	Assembly & Part Drawing. are checked Finalised, QAP Finalize.	Design Engg. Production Eg Qc Engg.	Drawing are Checked with standard & dimension. Machining Processed & dimension, Testing. inspected as per. Approved drawing & QAP	Drawing Approved and issued to all departments. Approved Quality plan issued to Quality Inspectas.		27.07.2020	Design Engineer. Purchase Purchase Engineer. Production Engineer.	G.B.7. Ch Balu
8.08.2020.	Raw Material Procurement.	Purchase Incharge.	Purchased by BOM Checked with Purchased According the Customers BOM. casting & Toim Parts. Procured with Approved drawing.	Inspection Report found ok. Purchase Order. reviewed and released to supplier.		06.08.2020.	Quality Engineer.	Pooh
16.09.2020. ~~28.09~~	Testing & Dimension	Quality Engg production Eg	Valve hydro Tested and Final Dimension Checked.	Valve No leakage. Dimension moe to Approved drawing.		28.09.2020		

CVPL-DD-R-03

Design and Development of Verification Record

PURCHASE ORDER

CVPL/PU/F02
15/07/2020

CANLE PO.NO-CVPL: YK:165:2020-21.

TO,
M/s.YKS ALLOYS INDIA PVT LTD,
S.F.NO.21/2B,SundaraPuram
Madukarai Market road,
Madukarai Post,
Coimbatore-641 105.

Dear Sir,
Kindly arrange to deliver the following castings at our works.

SIZE&ITEM	MATERIAL	QTY (NOS)	RATE PER KG (RS)
50X80FB Jacketed 1PC Body 150#	CF3	12	340/-
50X80FB Jacketed Insert	CF3	12	340/-
40X80FB Jacketed 1PC Body 150#	CF3	6	340/-
40X80FB Jacketed Insert	CF3	6	340/-
80X100FB Jacketed 1PC Body 150#	CF3	5	340/-
80X100FB Jacketed Insert	CF3	5	340/-
80X150FB Jacketed 1PC Body 150#	CF3	5	340/-
80X150FB Jacketed Insert	CF3	5	340/-
100X150FB Jacketed 1PC Body 150#	CF3	4	340/-
100X150FB Jacketed Insert	CF3	4	340/-
100FB Solid Ball	CF3	4	340/-
80FB Solid Ball	CF3	10	340/-

NOTE : MTC MUST REQUIRED, HEAT NO. TO BE PUNCHED ON CASTINGS .
TERMS AND CONDITIONS:

DELIVERY	**: VERY URGENT**
CGST	: 9%
SGST	: 9%
Payment Terms	: 60 DAYS CREDIT

Thanking you,
Yours faithfully,
For **CANLE VALVES PVT LIMITED,**
VARUN.G. Mob:(+919364595440)

PURCHASE ORDER

CVPL/PU/F02
30/07/2020

CANLE PO.NO-CVPL:J.O:194:2020-21.

To,
M/S MG ALLOYS
1ST FLOOR, 30/34 GOKULDHAM CHS, KIKA STREET
OFFICE NO. 7, NR GULALWADI CIRCLE,
MUMBAI.

Dear Sir,
Kindly arrange to dispatch the following ITEMS through **VNMS TRANSPORT.**

SL.NO	SIZE	MOC	QTY	Price Per Kg
1	Ø65X48X300MM LENGTH SEAMLESS PIPE	SS304L	1 NO	300/-
2	Ø52X36X150MM LENGTH SEAMLESS PIPE	SS304L	1 NO	300/-
3	Ø30X800 LENGTH Round Rod	SS304L	1 NO	220/-
4	Ø25X1000 LENGTH Round Rod	SS304L	1 NO	220/-
5	Ø22X500 LENGTH Round Rod	SS304L	1 NO	220/-

NOTE : MATERIAL TO BE SUPPLIED AS PER OUR REQUIREMENT,IF ANT DEVIATION MATERIAL WILL BE REJECTED.

TERMS AND CONDITIONS

DELIVERY : VERY URGENT (INFORM TO TRANSPORT PERSON ALSO)
Prices : F.O.R.MUMBAI
IGST : 18%
Paymentterms : BEFORE DISPATCH

Yours faithfully,
*For **CANLE VALVES PRIVATE LIMITED***
VARUN.G
Mob:(+91 9364595440)

NOTE: KINDLY SEND ORIGINAL, DUPLICATE, EXTRA INVOICE COPY THROUGH COURIER.

OUR BILLING ADDRESS:-
CANLE VALVES PVT LTD.NO.52,SIDCO INDUSTRIAL ESTATE,COIMBATORE-641021
TAMILNADU,INDIA

CANLE VALVES PRIVATE LTD.,

(AN ISO 9001 COMPANY)

No.52, Sidco Industrial Estate, COIMBATORE - 641 021

MATERIAL RECEIPT CUM INSPECTION REPORT

1.	Raw Material
2.	Casting
3.	Consumable Stores
4.	Teflon
5.	Labour Charges
6.	Packing Material
7.	Printing & Stationery
8.	Others
I.	IMPORTED
L.	LOCAL
R.	REGD. DEALER
U.	UN REGD. DEALER

SALES TAX CODE

GRN. No.	DATE	P.O. No.	DATE	P.R. No.	DATE
354	7/9/20	131,146,148 165,169,199	30/6/20, 6/7/20 9/7/20, 17/7/20	-	-

NAME OF SUPPLIER YKS Alloys India pvt ltd

	PARTY CODE	CASH MEMO		CHALLAN No.	-
-	-	BILL No.	120		
		DATE	31/8/20	DATE	-
CARRIER	-	CLEARED BY	-	MODE OF RECEIPT	Direct
CLEARANCE REF	-	DATE	-	No. of CASES	-
				GROSS WT.	

SUPPLIER

NET AMOUNT	3,73,107.15
IGST	-
CGST 9%	33,579.65
SGST 9%	33,579.65
	-
DISC	-
FORWARDING CHARGES	-
ROUNDED OFF	60.45
GROSS AMOUNT	4,40,266.00

SR. No.	MAT. CODE	DESCRIPTION	UNIT	QUANTITY RECD.	REJ.	ACCEPT	QTY. BAL IN ORDER	REASON FOR REJECTION
		CF3: 40x80 Jacketed Valve Body	NOS	8	-	8		
		CF3: 50x80 Jacketed Valve Body	NOS	1	-	1		
		CF3: 80x100 Jacketed Valve Body	NOS	1	-	1		
		CF3: 80x100 Jacketed Valve Insert	NOS	1	-	1		
		CF8: 25FB: 150# Round Body	NOS	8	-	8		
		CF8: 25RB: 150# Scrd end	NOS	102	-	102		
		CF8: 50FB: 150# Flange end	NOS	4	-	4		
		CF8: 40FB: 150# 2pc Body	NOS	2	-	2		
		CF3: 100mm: 150# Solid Ball	NOS	1	-	1		
		WCB: 50FB: 150# Weld Flange	NOS	32	-	32		
		CF8m: 80mm: 150# Hallow Ball	NOS	6	-	6		

FORWARDING INSTRUCTION	PREPARED BY	INSPECTED	ENTERED IN		STORES REJ. DISPOSAL	FINAL VERIFICATION
			SFC	KARDEX	REJ. NOTE No.	
19/9/20 STORES OFFICE	DATE 7/9/20	DATE	DATE	DATE	DATE	DATE 19/9/20

Page 51 of 83

CANLE VALVES PRIVATE LTD.,

(AN ISO 9001 COMPANY)

No.52, Sidco Industrial Estate, COIMBATORE - 641 021

1.	Raw Material
2.	Casting
3.	Consumable Stores
4.	Teflon
5.	Labour Charges
6.	Packing Material
7.	Printing & Stationery
8.	Others
I.	IMPORTED
L.	LOCAL
R.	REGD. DEALER
U.	UN REGD. DEALER
	SALES TAX CODE

MATERIAL RECEIPT CUM INSPECTION REPORT

GRN. No.	DATE	P.O. No.	DATE	P.R. No.	DATE
354	4/9/20	131, 146, 148, 165, 169, 199	30/6/20, 6/7/20, 9/7/20, 14/7/20	–	–

NAME OF SUPPLIER YKS Alloys India pvt ltd.

	PARTY CODE	CASH MEMO / BILL No. / DATE		CHALLAN No. / DATE	
–	–	BILL No.	120	No.	–
		DATE	31/8/20	DATE	–
CARRIER	–	CLEARED BY	–	MODE OF RECEIPT	Direct
CLEARANCE REF	–	DATE	–	No. of CASES	–
				GROSS WT.	

SUPPLIER	
NET AMOUNT	
IGST	
CGST	
SGST	
DISC	
FORWARDING CHARGES	
ROUNDED OFF	
GROSS AMOUNT	

SR. No.	MAT. CODE	DESCRIPTION	UNIT	QUANTITY RECD.	QUANTITY REJ.	QUANTITY ACCEPT	QTY. BAL IN ORDER	REASON FOR REJECTION
		CF8m: 15FB: 150# Flangeend	Nos	26	–	26		
		CF8m: 50FB: 150# Flangeend	Nos	4	–	4		
		CF8m: 40FB: 150# Flangeend new	Nos	4	–	4		
		CF8m: 25FB: 150# Flangeend	Nos	23	–	23		
		CF8m: 25FB: 150# 2pc Body	Nos	10	–	10		
		CF8m: 40FB: 150# 2pc Body	Nos	1	–	1		
		CF3m: 40mm: 150# Solid Ball	Nos	331	–	331		
		CF3m: 50mm: 150# Solid Ball	Nos	160	–	160		
		CF3M: 80mm: 150# Hallow Ball	Nos	30	–	30		
		CF3m: 50FB: 150# Flangeend	Nos	88	–	88		
		CF3: 80FB: 150# Set Ring	Nos	23	–	23		

FORWARDING INSTRUCTION	PREPARED BY	INSPECTED	ENTERED IN		STORES REJ. DISPOSAL	FINAL VERIFICATION
			SFC	KARDEX	REJ. NOTE No.	
9/9/20 STORES OFFICE	DATE 9/9/20	DATE 10/9/20	DATE	DATE	DATE	DATE 10/9/20

Page 52 of 83

CANLE VALVES PRIVATE LTD.,

(AN ISO 9001 COMPANY)

No.52, Sidco Industrial Estate, COIMBATORE - 641 021

SUPPLIER

MATERIAL RECEIPT CUM INSPECTION REPORT

1.	Raw Material
2.	Casting
3.	Consumable Stores
4.	Teflon
5.	Labour Charges
6.	Packing Material
7.	Printing & Stationery
8.	Others
I.	IMPORTED
L.	LOCAL
R.	REGD. DEALER
U.	UN REGD. DEALER

SALES TAX CODE

GRN. No.	DATE	P.O. No.	DATE	P.R. No.	DATE
353	7/9/20	100,101,121 127,131,142	19/6/20, 20/6/20 26/6/20, 30/6/20	–	–

NAME OF SUPPLIER YKS Alloys India pvt ltd. Coimbatore

	PARTY CODE	CASH MEMO		CHALLAN No.	–
–	–	BILL No.	116	DATE	–
CARRIER	–	CLEARED BY	–	MODE OF RECEIPT	Direct
CLEARANCE REF	–	DATE	–	No. of CASES	–
				GROSS WT.	

NET AMOUNT	
IGST	
CGST	
SGST	
DISC	
FORWARDING CHARGES	
ROUNDED OFF	
GROSS AMOUNT	

SR. No.	MAT. CODE	DESCRIPTION	UNIT	QUANTITY RECD.	QUANTITY REJ.	QUANTITY ACCEPT	QTY. BAL IN ORDER	REASON FOR REJECTION
		CF8m: 50FB: 150# Flangeend	No's	59	–	59		
		CF8m: 40FB: 150# Flangeend	No's	12	–	12		
		CF8m: 50FB: 150# 2pc Body	No's	6	–	6		
		CF8m: 40FB: 150# 2pc Body	No's	11	–	11		
		CF8m: 25FB: 150# 2pc Body	No's	2	–	2		
		CF8m: 15FB: 150# Serdend	No's	10	–	10		
		CF8m: 15FB: 150# Flangeend	No's	3	–	3		
		CF3m: 50mm: 150# Solid Ball	No's	219	–	219		
		CF3m: 40mm: 150# Solid Ball	No's	138	–	138		
		CF3m: 80mm: 150# Hallow Ball	No's	92	–	92		
		CF3: 80x100 Jacketed Body	No's	5	–	5		
		CF3: 100x150 Jacketed Body	No's	6	–	6		

FORWARDING INSTRUCTION	PREPARED BY	INSPECTED	ENTERED IN		STORES REJ. DISPOSAL	FINAL VERIFICATION
			SFC	KARDEX	REJ. NOTE No.	
9/9/20 STORES OFFICE	DATE	DATE 9/9/2020	DATE	DATE	DATE	DATE 9/9/20

CANLE VALVES PRIVATE LTD.,

(AN ISO 9001 COMPANY)

No.52, Sidco Industrial Estate, COIMBATORE - 641 021

1.	Raw Material
2.	Casting
3.	Consumable Stores
4.	Teflon
5.	Labour Charges
6.	Packing Material
7.	Printing & Stationery
8.	Others
I.	IMPORTED
L.	LOCAL
R.	REGD. DEALER
U.	UN REGD. DEALER

SALES TAX CODE

MATERIAL RECEIPT CUM INSPECTION REPORT

GRN. No.	DATE	P.O. No.	DATE	P.R. No.	DATE
353	7/9/20	100, 101, 121, 127, 131, 142	19/6/20, 30/6/20 26/6/20, 30/6/20	-	-

NAME OF SUPPLIER YKS Alloys India pvt ltd.

	PARTY CODE	CASH MEMO		CHALLAN No.	-
-	-	BILL No.	116		
		DATE	31/8/20	DATE	-
CARRIER	-	CLEARED BY	-	MODE OF RECEIPT	Direct
CLEARANCE REF	-	DATE	-	No. of CASES	-
				GROSS WT.	

SUPPLIER

NET AMOUNT	4,56,631.88
IGST	-
CGST 9%	41,096.88
SGST 9%	41,096.88
	-
DISC	-
FORWARDING CHARGES	-
ROUNDED OFF	0.36
GROSS AMOUNT	5,38,826.00

SR. No.	MAT. CODE	DESCRIPTION	UNIT	QUANTITY RECD.	REJ.	ACCEPT	QTY. BAL IN ORDER	REASON FOR REJECTION
		CF3: 100mm: 150# Solid Ball	Nos	2	-	2		
		CF3: 80x100 Jacketed Insert	Nos	3	-	3		
		CF3: 40x80 Jacketed Insert	Nos	8	-	8		
		CF8: 50mm: 150# Solid Ball	Nos	22	-	22		
		CF8: 25mm: 150# Round Body	Nos	6	-	6		
		CF8: 15FB: 150# Round Body Mounting Pad	Nos	11	-	11		
		CF8: 40FB: 150# Flangeend old	Nos	9	-	9		
		CF8: 50FB: 150# Flangeend	Nos	8	-	8		
		CF8: 15FB: 150# 2pc Body	Nos	3	-	3		
		WCB: 50FB: 150# Weldflange	Nos	43	-	43		
		WCB: 50mm: 150# 2pc weld Body	Nos	1	-	1		
		WCB: 40mm: 150# 2pc weld Body	Nos	2	-	2		
		CF8: 15FB: 150# Sexdend	Nos	1	-	1		

Page 54 of 83

FORWARDING INSTRUCTION	PREPARED BY	INSPECTED	ENTERED IN		STORES REJ. DISPOSAL	FINAL VERIFICATION
			SFC	KARDEX	REJ. NOTE No.	
19/9/20.	K. Jayan					
STORES OFFICE	DATE 7/9/20	DATE 19/9/2020	DATE	DATE	DATE	DATE 19/9/20

CANLE VALVES PRIVATE LTD.,

(AN ISO 9001 COMPANY)

No.52, Sidco Industrial Estate, COIMBATORE - 641 021

SUPPLIER

1. Raw Material
2. Casting
3. Consumable Stores
4. Teflon
5. Labour Charges
6. Packing Material
7. Printing & Stationery
8. Others

I. IMPORTED
L. LOCAL
R. REGD. DEALER
U. UN REGD. DEALER

SALES TAX CODE

MATERIAL RECEIPT CUM INSPECTION REPORT

GRN. No.	DATE	P.O. No.	DATE	P.R. No.	DATE
327	31/8/20	22, 27, 60, 64, 100, 108	18/5/20, 20/5/20, 4/6/20, 19/6/20	-	-

NAME OF SUPPLIER Y.K.S Alloys India pvt ltd.

	PARTY CODE	CASH MEMO / BILL No.		CHALLAN No.	
-	-	BILL No.	109		-
		DATE	25/8/20	DATE	-
CARRIER	-	CLEARED BY	-	MODE OF RECEIPT	Direct
CLEARANCE REF	-	DATE	-	No. of CASES	-
				GROSS WT.	

NET AMOUNT	
IGST	
CGST	
SGST	
DISC	
FORWARDING CHARGES	
ROUNDED OFF	
GROSS AMOUNT	

SR. No.	MAT. CODE	DESCRIPTION	UNIT	QUANTITY RECD.	QUANTITY REJ.	QUANTITY ACCEPT	QTY. BAL IN ORDER	REASON FOR REJECTION
		CF8m: 50FB: 150# Round Body	No's	8	-	8		
		CF8m: 15FB: 150# Flangeend	No's	8	-	8		
		CF8m: 50FB: 150# Flangeend	No's	1	-	1		
		CF8m: 50FB: 150# 2pc Body	No's	21	-	21		
		CF3: 80x150 Jacketed Insert	No's	5	-	5		
		CF3: 80x100 Jacketed Insert	No's	5	-	5		
		CF8: 50x80 Jacketed Insert	No's	11	-	11		
		CF8: 40FB: 150# Flangeend Old	No's	103	-	103		
		CF8: 50FB: 150# Flangeend	No's	46	-	46		
		CF8: 40FB: 150# Flangeend ND10	No's	4	-	4		
		CF8: 15FB: 150# 2pc Body	No's	5	-	5		

FORWARDING INSTRUCTION	PREPARED BY	INSPECTED	ENTERED IN		STORES REJ. DISPOSAL	FINAL VERIFICATION
			SFC	KARDEX	REJ. NOTE No.	
5/9/20	K Jayan					5/9/20
STORES OFFICE	DATE 31/8/20	DATE 5/9/2020	DATE	DATE	DATE	DATE

1578 flange end (Cf8m)

OD	ID	O'	ID	D	Tl.
89-88.5	11.5	28.4	21	2.	45

5078 flange end (Cf8m)

OD	ID	OD	ID	D	Tl.
63	49	80.6	62.5	6	64

5078 2pc Body (Cf8m)

OD	ID	ID	D	ID	ID	D.
53.5	47.3	78.5	57.3	23.5	18	8.5

100% Dimension checked
100% Visual checked.

CANLE VALVES PRIVATE LTD.,

(AN ISO 9001 COMPANY)

No.52, Sidco Industrial Estate, COIMBATORE - 641 021

SUPPLIER

1.	Raw Material
2.	Casting
3.	Consumable Stores
4.	Teflon
5.	Labour Charges
6.	Packing Material
7.	Printing & Stationery
8.	Others
I.	IMPORTED
L.	LOCAL
R.	REGD. DEALER
U.	UN REGD. DEALER

SALES TAX CODE

MATERIAL RECEIPT CUM INSPECTION REPORT

GRN. No.	DATE	P.O. No.	DATE	P.R. No.	DATE
300	25/8/20	194	30/7/20	–	–

NAME OF SUPPLIER M-G-Alloys, Mumbai.

	PARTY CODE	CASH MEMO / BILL No.		CHALLAN No.	
–	–	BILL No.	056		–
		DATE	18/8/20	DATE	–
CARRIER	D V N M S	CLEARED BY	–	MODE OF RECEIPT	Topay
CLEARANCE REF	–	DATE	–	No. of CASES	–
				GROSS WT.	

NET AMOUNT	2400.00	
IGST 18%	432.00	
CGST	–	
SGST	–	
	–	
DISC	–	
FORWARDING CHARGES	–	
ROUNDED OFF	–	
GROSS AMOUNT	2832.00	

SR. No.	MAT. CODE	DESCRIPTION	UNIT	QUANTITY RECD.	QUANTITY REJ.	QUANTITY ACCEPT	QTY. BAL IN ORDER	REASON FOR REJECTION
		SS pipe CF3/304L						

FORWARDING INSTRUCTION	PREPARED BY	INSPECTED	ENTERED IN		STORES REJ. DISPOSAL	FINAL VERIFICATION
			SFC	KARDEX	REJ. NOTE No.	
29/8/20.	K. Jayan	Jayaraj				
STORES OFFICE	DATE 25/8/20	DATE 29/08/2020	DATE	DATE	DATE	DATE 29/8/20

YKS ALLOYS INDIA PRIVATE LIMITED

S.F. No. 21/2, Sundarapuram to Madukkarai Market Main Rd.,
Madukkarai Post, Coimbatore - 641 105.
Ph. : 0422 - 3253071, 6452853, Fax : 0422 - 2679982, E-mail : yksalloys@rediffmail.com

TÜV INDIA
DIN EN ISO 9001: 2000
Cert : QM 0900033

MATERIAL TEST CERTIFICATE
AS PER EN 10204-3.1

Customer: M/s. CANLE VALVES PVT LTD
Material: ASTM A351 Gr CF3
Order No: 165

Certificate: YKS/TC/741
Date: 25.08.2020

CHEMICAL COMPOSITION %

Specified Min	C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu
	-	-	-	-	-	17.000	8.000	-	-	-
Max	0.030	2.000	1.500	0.040	0.040	21.000	12.000	0.500	-	-
Heat No:T672	0.024	0.923	0.947	0.021	0.019	17.503	8.736	0.299	-	-

Melting Process:	Induction Melting
Heat Treatment:	Heated upto 1050°C and water quenched

MECHANICAL PROPERTIES

Specified Min	Tensile strength Mpa	Yield Strength Mpa	%Elongation In 2 in(50mm)	Hardness(HRB)
	485	205	35	70
Max	–	–	–	96
Heat No:T672	532	285	44	80

S.No	Heat No	Item Description	Drg.No	Qty (Nos)
1	T672	80x100mm FB Jacketed Body 150#	-	5
2	T672	80x150mm FB Jacketed Body 150#	-	5
3	T672	80x100mm FB Jacketed Insert 150#	-	5
4	T672	80x150mm FB Jacketed Insert 150#	-	5
5	T672	80mm Ball	-	30
6	T672	80mm Seat Ring	-	23

Certified that the above castings confirms to **ASTM.A351 Grade CF3** and is as per Customer's requirements and specifications

Prepared by

Approved by

QC Checked
OK

MICROLAB
AN IS/ISO/IEC 17025 METALLURGICAL SERVICES
Accredited by NABL, Dept. of Science & Technology, Govt. of India.
10A,Sai Nagar, 2nd Cross, Opp. Krishnar temple, Sidco Industrial Estate, Coimbatore – 641 021
Phone: 0422 - 2674872. Email: Coimbatore@microlabchennai.com, web: www.microlabchennai.com

TC-5848

TEST REPORT

Customer: ***M/s. Canle Valves Pvt Ltd*** *No 52, Sidco Industrial Estate* *Coimbatore -21*	ULR-TC584820000002536F	
	Report No / Date	ML/G2213/2/20-21/ Dt: 09.09.2020
	Your ref./ Date	Ref: Letter/ 20-21/ Dt: 08.09.2020
	Our ref./ Date	TOCR: G2213/20-21/ Dt: 08.09.2020
	Nature of test	Chemical Analysis (OES)
	Test Reference	ASTM E 1086:2014
	Date of Testing	09.09.2020
	Sample Draw By	Customer
	Sample Description	*Sample – 2* *Material Grade: SS304L – Pipe* *Qty: 1No.*

1. Chemical Analysis:

Elements	Symbol	Unit	Specified Values	Observed Values
Carbon	C	%	0.030 Max	0.022
Silicon	Si	%	1.00 max	0.503
Manganese	Mn	%	2.00 max	0.592
Phosphorus	P	%	0.045 max	0.044
Sulphur	S	%	0.030 max	0.010
Chromium	Cr	%	18.0 - 20.0	18.649
Nickel	Ni	%	8.0 – 11.0	9.360
Titanium	Ti	%	-	-

Remarks: The above chemical composition **meet** the requirements of AISI 304L

Verified by:
For **MICROLAB**

S. Venkateshwaran
Authorized Signatory

----------END OF THE REPORT ----------

Note: This report relates only to the particular sample submitted for test ✻ any correction in the report will invalidate this report ✻ Sample will be destroyed after 15 days from the date of completion of tests unless informed by the customer✻ Any complaints about this report should be communicated in writing within 7 days of the issue of this report✻ This report cannot reproduced except in full ✻Sample descriptions is given as described by the customers✻Sampling is not carried laboratory.
Format No: ML/5.10/AD/TR/01.

MICROLAB
AN IS/ISO/IEC 17025 METALLURGICAL SERVICES
Accredited by NABL, Dept. of Science & Technology, Govt. of India.
10A,Sai Nagar, 2nd Cross, Opp. Krishnar temple, Sidco Industrial Estate, Coimbatore – 641 021
Phone: 0422 - 2674872. Email: Coimbatore@microlabchennai.com, web: www.microlabchennai.com

TC-5848

TEST REPORT

Customer:	ULR-TC584820000002536F	
M/s. Canle Valves Pvt Ltd	Report No / Date	ML/G2213/1/20-21/ Dt: 09.09.2020
No 52, Sidco Industrial Estate	Your ref./ Date	Ref: Letter/ 20-21/ Dt: 08.09.2020
Coimbatore -21	Our ref./ Date	TOCR: G2213/20-21/ Dt: 08.09.2020
	Nature of test	Chemical Analysis (OES)
	Test Reference	ASTM E 1086:2014
	Date of Testing	09.09.2020
	Sample Draw By	Customer
	Sample Description	*Sample – 1* *Material Grade: SS304L – Rod* *Qty: 1No.*

1. Chemical Analysis:

Elements	Symbol	Unit	Specified Values	Observed Values
Carbon	C	%	0.030 Max	0.015
Silicon	Si	%	1.00 max	0.459
Manganese	Mn	%	2.00 max	1.730
Phosphorus	P	%	0.045 max	0.025
Sulphur	S	%	0.030 max	0.010
Chromium	Cr	%	18.0 - 20.0	18.528
Nickel	Ni	%	8.0 – 11.0	8.292

Remarks: The above chemical composition **meet** the requirements of AISI 304L

Verified by:
For **MICROLAB**

S. Venkateshwaran
Authorized Signatory

----------END OF THE REPORT ----------

Note: This report relates only to the particular sample submitted for test * any correction in the report will invalidate this report * Sample will be destroyed after 15 days from the date of completion of tests unless informed by the customer* Any complaints about this report should be communicated in writing within 7 days of the issue of this report* This report cannot reproduced except in full *Sample descriptions is given as described by the customers *Sampling is not carried laboratory.
Format No: ML/5.10/AD/TR/01.

CANLE	DESIGN AND DEVELOPMENT VERIFICATION RECORD	Project No. 01.	Date. 06.08.2020
Customer Name: M/S Jubilant. Life Sciences limited, Gajoraula.		Page No : 1 OF 1	
Product Name :		OA No. OA 24136.	
Supplier / Sub contractor Name: 80x10mm Jacketed Ball Valve, 80x150mm Jacketed Ball valve		Components : Casting & finished Items.	
Product Type : Flanged Type. ASME B 16.5 150# RF		QTY : 4 No. + 4 NO.	
Assembly Drawing No:		Sample Size:	
Inspection Type: Dimension & Material.		MOC : CF3.	

Sr. No	Component ID No / Heat No.	Parameter	Required Specification with Tolerance	Specification Observed	OK	Re work	Rej	Remark / NCR Ref If any.
Casting Inspection								
1	T612	Body	As Per Drawing	IR Attached.	Ok.	-	-	-
2	T612	Insert Liner piece.	As Per Drawing.	IR Attached.	Ok.	-	-	-
3	T612.	Ball.	As Per Drawing.	IR Attached	Ok.	-	-	-
4								
Components Inspection								
1.		Body.	As Per Drawing	IR Attached.	Ok	-	-	-
2.		Insert	As Per Drawing	IR Attached	Ok	-	-	-
3.		Ball.	As Per Drawing.	IR Attached.	Ok	-	-	-
4.		Finished Components.	As Per Drawing	IR Attached.	Ok	-	-	-
5.		Standard Items.	As Per BOM.	IR Attached.	Ok	-	-	-

Inspection Type	Material Inward	Inspection Procedure
Dimension :	Component Dimension , Assembly Dimension & Visual	As per Drawing
Certificate :	Material Test certificate	Attached

QTY Inspected	QTY Accepted	QTY Reworked	QTY Rejected
4 + 1.	4+4.	-	-

QC Engineer G.B.J.

Design Engineer

Page 59 of 83.

CANLE	INSPECTION REPORT	DATE : 9.09.2020

Part Name : 80×150mm. Body (casting) Heat No : T672. Valve Size : 80×150mm, 150#
Drg No :
Customer Name : M/s Jubilant Life Sciences limited. Lot size : 4 NO's
Sample Size : 1 NO's

S.No	DESCRIPTION	Required Dimension	Observed dimension			Remarks
			1	2	3	
1.	OD.	ϕ 282.	ϕ282.4.	ϕ282.3.		
2.	ID.	ϕ 73.	ϕ72.8	ϕ72.6		
3.	RF x Depth.	ϕ218×2.	ϕ218.3×1.8	ϕ218×2.3.		
4.	PCD. x N x D.	ϕ241×8×ϕ22.2	ϕ239.8×8×ϕ22.3	ϕ241.3×8×ϕ22.2.		
5.	Flange Thickness.	25.5	25.6.	25.7		
6.	Seat ID.	ϕ.88	ϕ87.6.	ϕ87.8		
7.	2nd side Depth.	122.5	122.6.	122.3.		
8.	2nd side Depth (seat).	6.	6.2.	6.1.		
9.	1st ID (Stem part).	ϕ20.	ϕ19.7.	ϕ19.8.		
10.	2nd ID (Stem part)	ϕ28.	ϕ27.9.	ϕ27.6.		
11.	Depth (Stem part).	ϕ12.	12.9.	12.7.		
12.	Body overall length.	205	205.3.	205.5		
13.	3rd ID (Ball part).	ϕ116.	ϕ115.8	ϕ115.4.		
14.	ID (Inset part)	ϕ130.	ϕ129.8.	ϕ129.7.		

Commands-

Prepared By

Checked By

Accepted By

CVPL-QAD-D-04

CANLE	INSPECTION REPORT	DATE : 9.09.2020

Part Name : Body (Casting) 80x100mm. Heat NO: T672. Valve Size : 80x100mm, 150#
Drg No :
Customer Name : M/S. Jubilant Life Sciences Limited, Lot size : 4 NO'S
Sample Size : 1 NO'S.

S.No	DESCRIPTION	Required Dimension	Observed dimension			Remarks
			1	2	3	
1.	OD	ϕ232.	ϕ232.3	ϕ232.1.		
2.	ID.	ϕ73.	ϕ72.6.	ϕ72.9.		
3.	RF x Depth.	ϕ159x2	ϕ159.2x1.8	ϕ159.3x 2.3.		
4.	PCD x N x D	ϕ191x8x22.2	ϕ191.1x8xϕ22.3	ϕ191.2x8x ϕ22.1.		
5.	Flange Thickness	23.5	24	23.9.		
6.	Seat ID.	ϕ88.	ϕ87.8.	ϕ87.6.		
7.	2nd side Depth.	128.5	129.	128.6.		
8.	2nd side Seat Depth.	6.	6.1	6.2.		
9.	1st ID. (Stem part)	ϕ20.	ϕ20.2	ϕ20.2.		
10.	2nd ID. (Stem part)	ϕ28.	ϕ27.6.	ϕ27.8.		
11.	Depth (Stem part)	13.	13.2.	13.1.		
12.	Body Overall length.	205	205.2.	205.6		
13.	3rd ID (~~Stem~~ Ball. Part)	ϕ116.	ϕ115.8.	ϕ116.2.		
14.	ID Insert Part.	ϕ120.	ϕ129.8.	ϕ129.7		

Commands-

Prepared By

Checked By

Accepted By

CVPL-QAD-D-04

CANLE	INSPECTION REPORT	DATE : 9.09.2020

Part Name : Insert (casting) Heat No : Tb 72. Valve Size : 80x100mm & 80x150mm
Drg No : Lot size : 8 NO's
Customer Name : M/S Jubilant Life Sciences Pvt Ltd, Sample Size : 3 NO's

S.No	DESCRIPTION	Required Dimension	Observed dimension			Remarks
			1	2	3	
1.	OD	ϕ132.	ϕ132.1	ϕ132.2		
2.	ID.	ϕ73.	ϕ72.8	ϕ72.6.		
3.	Ist Depth.	14.	14.3.	14.2.		
4.	IInd Depth.	33.	33.2.	33.1		
5.	seat ID.	ϕ88.	ϕ87.6.	ϕ87.8		
6.	seat Depth.	6	6.2	6.3.		
7.	Total length.	47.	47.2.	47.3.		

Commands-

G.By
Prepared By

OK
Checked By

OK
Accepted By

CANLE	INSPECTION REPORT	DATE : 9.09.2020.

Part Name : Body (Machining) Heat No : T672. Valve Size : 80x100mm Jacket
Drg No : Lot size : 4 NO'S
Customer Name : M/s Jubilant Ingrevia Sciences Ltd Sample Size : 1 NO'S

S.No	DESCRIPTION	Required Dimension	Observed dimension 1	2	3	Remarks
1.	OD.	ϕ229.	ϕ229.1	ϕ229.2.		
2.	ID.	ϕ75	ϕ74.8	ϕ74.6.		
3	RF x Depth.	ϕ157 x 2.	ϕ157.1 x 1.9.	ϕ157.2x18		
4.	PCD x N x D.	ϕ191 x 8 x ϕ192	ϕ191.1x8 x ϕ19.3.	ϕ191.2 x 8 ϕ19.2.		
5.	Flange Thickness.	22.5	22.8	22.6.		
6.	Seat ID.	ϕ90.	ϕ90.1.	ϕ89.9.		
7.	2nd side Depth.	131.5	131.6.	131.8.		
8.	2nd side Seal Depth.	9	9.3.	9.2.		
9.	1st ID (Stem Port)	ϕ22.	ϕ21.9.	ϕ21.8.		
10.	2nd ID (Stem Port)	ϕ30.	ϕ29.8	ϕ29.7.		
11.	Depth (Stem Port).	14.	14.3	14.1.		
12.	Body Overall Length.	203.	203.2	203.3.		
13.	3rd ID (Ball Port).	ϕ117.	ϕ116.9	ϕ117.2.		
14.	ID Insert Port.	ϕ130.	ϕ130.3	ϕ130.4.		

Commands-

Prepared By

Checked By

Accepted By

CANLE	INSPECTION REPORT	DATE : 9.09.2020

Part Name : Body (machining). Heat No : T672. Valve Size : 80x150mm gacket
Drg No :
Customer Name : M/S Jubilant Life Sciences Ltd
Lot size : 4 No's
Sample Size : 1 No's.

S.No	DESCRIPTION	Required Dimension	Observed dimension			Remarks
			1	2	3	
1.	OD	ϕ279.	ϕ279.2	ϕ279.1.		
2.	ID.	ϕ75	ϕ74.8	ϕ74.6.		
3.	RF x Depth.	ϕ216 x 2.	ϕ216.1 x 1.8	ϕ216 x 2.		
4.	PCD x N x D.	ϕ241.2 8 x ϕ22.2	ϕ241.1 x 8 x ϕ22.2	ϕ241 x 8 x ϕ22.2.		
5.	Flange Thickness.	24.5	24.7.	24.8.		
6.	Seat ID.	ϕ90.	ϕ89.8	ϕ89.9.		
7.	2nd Side Depth.	131.5	131.9.	131.6.		
8.	2nd Side Depth (seat)	9	9.4	9.3.		
9.	1st ID (Stem Port)	ϕ22.	ϕ21.9.	ϕ21.7.		
10.	2nd ID (Stem Port)	ϕ30.	ϕ29.7	ϕ29.8.		
11.	Depth (Stem port)	14.	14.2	14.3.		
12.	Body overall length	203.	205	204		
13.	3rd ID (Ball Port)	ϕ117	ϕ117.2	ϕ117.3.		
14.	ID (Insert Port).	ϕ130.	ϕ129.6.	ϕ129.8.		

Commands-

Prepared By

Checked By

Accepted By

CANLE	INSPECTION REPORT	DATE : 9.09.2020.

Part Name : Insert (machining) Heat No : T672. Valve Size : 80X 100mm. Jacketed 80x150mm Jacketed
Drg No :
Customer Name : M/s Jubilant Life Sciences limited. Lot size : 8 NO'S
Sample Size : 2 NO'S

S.No	DESCRIPTION	Required Dimension	Observed dimension			Remarks
			1	2	3	
1.	OD.	ϕ130.	ϕ130.2.	ϕ130.1.		
2.	ID	ϕ75	ϕ74.8	ϕ74.9.		
3.	Ist Depth. (Thread)	25	25.2	24.8.		
4.	IInd Depth.	12.	12.2.	12.1.		
5.	Seat ID	ϕ90.	ϕ89.8	ϕ89.9.		
6.	Seat Depth.	7	7.2	7.1.		
7.	Total length.	45.	45.2	45.3.		
8.	Tap Dia	ϕ8.5	ϕ8.5	ϕ8.4.		
9.	Tap Depth	10.	10.5	10.3.		
10.	IIIrd Depth	8.	8.1.	8.2.		

Commands-

Prepared By

Checked By

Accepted By

CANLE	INSPECTION REPORT	DATE : 9.09.2020.

Part Name : Stem. Heat No : - Valve Size : 50X100mm Jacket, 80X150mm Jacket.
Drg No : -
Customer Name : M/s Jubilant life Sciences Ltd. Lot size : 8 NOS
Sample Size : 2 Nos.

S.No	DESCRIPTION	Required Dimension	Observed dimension 1	2	3	Remarks
1.	OD	Φ22.2.	Φ22.2	Φ22.2.		
2.	Total Length.	95	95.3	95.4.		
3.	Slot Depth Ist side	16.	16.2	16.1.		
4.	Ist side slot width.	14.	14.3	14.2.		
5.	Thread length.	46.	46.1	46.3.		
6.	IInd side slot length.	28.	28.2	28.9.		

Commands-

Prepared By

Checked By

Accepted By

CANLE	INSPECTION REPORT	DATE : 9.09.2020.

Part Name : Solid Ball. Heat No : T672. Valve Size : 80x100mm Jacketed 80x150mm Jacketed
Drg No : Lot size : 8 No's
Customer Name : M/S Jubilan Life Sciences Ltd. Sample Size : 2 No's.

S.No	DESCRIPTION	Required Dimension	Observed dimension			Remarks
			1	2	3	
1.	OD.	ϕ117.	ϕ117.2.	ϕ117.1.		
2.	I D.	ϕ75	ϕ74.8	ϕ74.6.		
3.	Total length.	87	87.3	87.2.		
4.	Slot width.	14.	14.2.	14.3.		
5.	Slot Depth.	13.	13.3.	13.4.		

Commands-

Prepared By Checked By Accepted By

CANLE	INSPECTION REPORT	DATE : 9.09.2020

Part Name : Packing. Heat No : Valve Size : 80x100mm 80x150mm.
Drg No : Lot size :
Customer Name : M/S Jubilant Life Sciences Ltd. Sample Size :

S.No	DESCRIPTION	Required Dimension	Observed dimension			Remarks
			1	2	3	
1.	Body Seat :					
1.	OD.	90	90.1	90.3		
2.	ID	75	74.8	74.9.		
3.	Thickness	9.5	9.7	9.6.		
2.	Seat Ring :					
1.	OD.	126.	126.2	126.3.		
2.	ID.	118	117.8	117.6.		
3.	Thickness.	2.	2.2	2.3.		
3.	Gland Packing					
1.	OD.	ϕ30	ϕ30.1	ϕ30.2.		
2.	ID.	ϕ22.2	ϕ22.	ϕ22.1.		
3.	Thickness.	4.	4.2	4.3.		
4.	Stem Seal					
1.	OD.	ϕ30.	ϕ30.2	ϕ30.1		
2.	ID.	ϕ22.2	ϕ22.	ϕ22.1.		
3.	Thickness	3.	3.2	3.1.		

Commands-

Prepared By
By

Checked By

Accepted

CVPL-QAD-D-04

Valve Inspection & Testing

Valve are mechanical devices specially designed to direct, start, stop, mix or regulate the flow, pressure or temperature of pressure fluid.
Below the standard for inspection & testing based on API 598 & BS 6755 Part-1.

A. VISUAL

- Check Casting of Body & Side Piece (no damage, Heat No).
- Check Ball (no damage, Heat No).
- Check Dimensional.

B. TESTING REQUIREMENT

TESTING EQUIPMENT

1. Check calibration certificate
2. Check Equipment
3. Performance of equipment.

TEST REQUIRED

Test Description	Floating Ball	Butterfly & Trunnion-mounted ball
Shell	Required	Required
Backseat	N/A	N/A
Low Pressure Closure	Required	Required
High Pressure Closure	Optional	Optional

No. 52, SIDCO Industrial Estate, Pollachi Main Road, Coimbatore - 641 021, Tamil Nadu, India. Phone: +91-4278072 Mobile: +91-9363365973
E-mail: marketing@canlevalve.com Visit our website: www.canlevalve.com

C.TEST FLUID:

1. For shell, high-pressure backseat, and high-pressure closure tests, the test fluid shall be air, inert gas, kerosene, water, or a non corrosive liquid with a viscosity not higher than that of water.

2.For the low-pressure closure and low pressure back-seat test, the test fluid shall air or inert gas.

3. When air or gas is used for closure, shell, or backseat tests, the valve manufacturer shall be capable of demonstrating the adequacy of the method of leakage detection.

4. Water used for any test may contain a water-soluble oil or a rust inhibitor. When specified by the purchaser, a wetting agent shall be included in the water. For testing of austenitic stainless steel valves, water with chloride content not exceeding 100 parts per million shall be used. The valve manufacturer shall be able to document the chloride content.

SHELL TEST PRESSURE

Valve type	Class	Shell Test Pressure (Minimum)	
		Psi	Bar
Steel Valves Flange & butt-weld Screwed & socket-weld	150-2500 800	a b	

NOTE
a. Per API 598 ,BS 6755 Part-1 & ASME B16.34
b. For class 800 valves, the shell test pressure shall be 1½ times the pressure rating at 100°F (38°C), Rounded off to the next higher increment of 25 Pounds per square inch gauge (or 1 bar)

D. **TESTING PROCEDURE**

SHELL TEST

The shell test shall be performed by applying the pressure inside the assembled valve with the valve ends close, the valve partially open, and any packing gland tight enough to maintain the test pressure, thereby, except for bellows seal valves, testing the stuffing box. Nonadjustable shaft seals (O rings, single rings, and the like) shall not leak during the shell test.

LOW PRESSURE CLOSURE

The low-pressure closure test shall be performed with the sealing surfaces clean and free from oil, grease, and sealant, If necessary to prevent galling, the sealing surfaces may be coated with a film of oil that is not heavier than kerosene. This requirement does not apply to a valve that uses a lubricant as its primary seal (for example, lubricated plug valves).

HIGH PRESSURE CLOSURE

The procedure for the high-pressure closure test shall be the same as the procedure for the low-pressure closure test except that, in the case of a liquid test, leakage shall be detected when drops.

Duration of Required Test Pressure

Valve Size		Minimum Test Duration (Seconds) [a]			
DN	NPS	Shell	Backseat (for Valves with Backseat Feature)	Closure Check Valves (API 594)	Closure Other Valves
≤ 50	≤ (2)	15	15	60	15
65 to 150	(2 1/2 to 6)	60	60	60	60
200 to 300	(8 to 12)	120	60	120	120
≥ 350	≥ (14)	300	60	120	120

[a] The test duration is the period of inspection after the valve is fully prepared and is under full pressure.

Maximum Allowable Leakage Rates:

Valve Size		All Resilient Seated Valves	Metal Seated Valves Except Check		Metal Seated Check Valves		
DN (mm)	NPS (in.)		Liquid Test [a] (drops/ minute)	Gas Test (bubbles/ minute)	Liquid Test (cc/min)	Gas Test (m^3/h)	Gas Test (ft^3/h)
≤ 50	≤ 2	0	0 [b]	0 [b]	6	0.08	3
65	2 1/2	0	5	10	7.5	0.11	3.75
80	3	0	6	12	9	0.13	4.5
100	4	0	8	16	12	0.17	6
125	5	0	10	20	15	0.21	7.5
150	6	0	12	24	18	0.25	9
200	8	0	16	32	24	0.34	12
250	10	0	20	40	30	0.42	15
300	12	0	24	48	36	0.50	18
350	14	0	28	56	42	0.59	21
400	16	0	32	64	48	0.67	24
450	18	0	36	72	54	0.76	27
500	20	0	40	80	60	0.84	30
600	24	0	48	96	72	1.01	36
650	26	0	52	104	78	1.09	39
700	28	0	56	112	84	1.18	42
750	30	0	60	120	90	1.26	45
800	32	0	64	128	96	1.34	48
900	36	0	72	144	108	1.51	54
1000	40	0	80	160	120	1.68	60
1050	42	0	84	168	126	1.76	63
1200	48	0	96	192	144	2.02	72

[a] For the liquid test, 1 mL is considered equivalent to 16 drops.

[b] There shall be no leakage for the minimum specified test duration (see Table 5). For liquid test, 0 drops means no visible leakage per minimum specified test duration. For gas test, 0 bubbles means less than 1 bubble per minimum specified test duration.

No. 52, SIDCO Industrial Estate, Pollachi Main Road, Coimbatore - 641 021, Tamil Nadu, India. Phone: +91-4278072 Mobile: +91-9363365973

E-mail: marketing@canlevalve.com Visit our website: www.canlevalve.com

CANLE

Installation, Operation, and Maintenance Guide

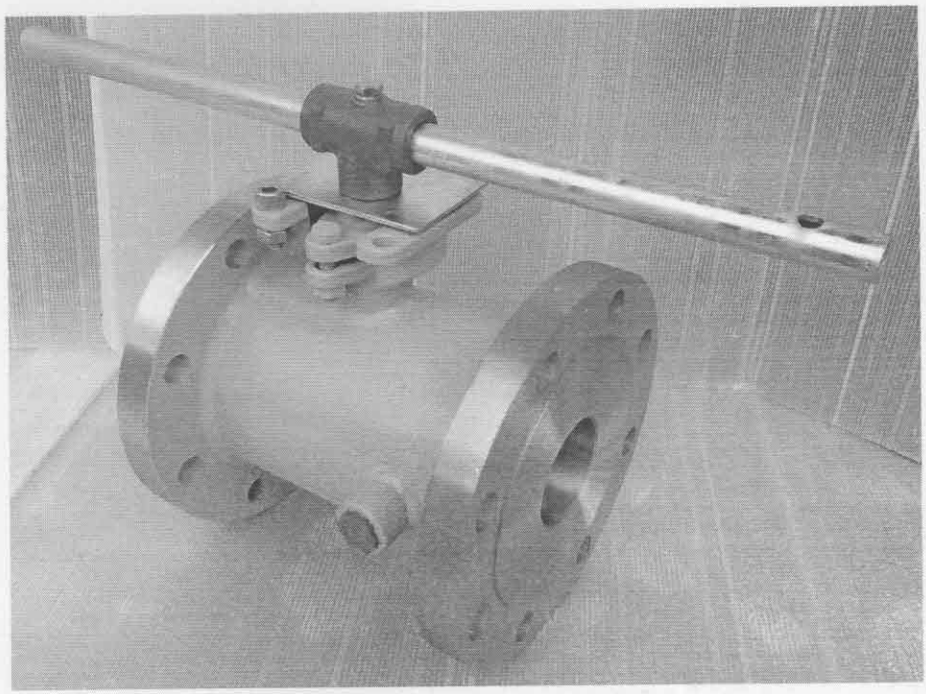
For Canle Jacketed Ball Valves:

1 PIECE DESIGN FLANGED END JACKETED BALL VALVES.

CANLE VALVES PRIVATE LIMITED
NO 52, SIDCO Industrial Estate, Coimbatore – 641 021, Tamil Nadu, INDIA

E-mail : marketing@canlevalve.com

INSTALLATION, OPERATION AND MAINTENANCE OF CANLE BALL VALVES



Jacketed Ball valve

Valves must be installed in piping systems that comply to the applicable A.N.S.I. B 31 Standard. Special considerations must be a taken with respect to pipe line expansions and contractions and the media expansions and contractions within the piping system.

FLANGED ENDS INSTALLATION

1. **Before installation, ensure that the valve end protectors are removed & gasket is placed for Flanged end valves. Clean the valve ends & bore.**
2. **Clean the pipeline to avoid damage of the soft seat due to debris, scaling, etc.**
3. **Keep the valve in fully open condition.**
4. **Never install the Valve with the lever, Gear or Actuator on the underneath side in the pipeline.** (Figure 1)
5. **Do not use flange bolts to correct misalignments.**
6. **Over-tightening flange studs can cause damage and/or leakage at the flanges or body-to-body end joints.**

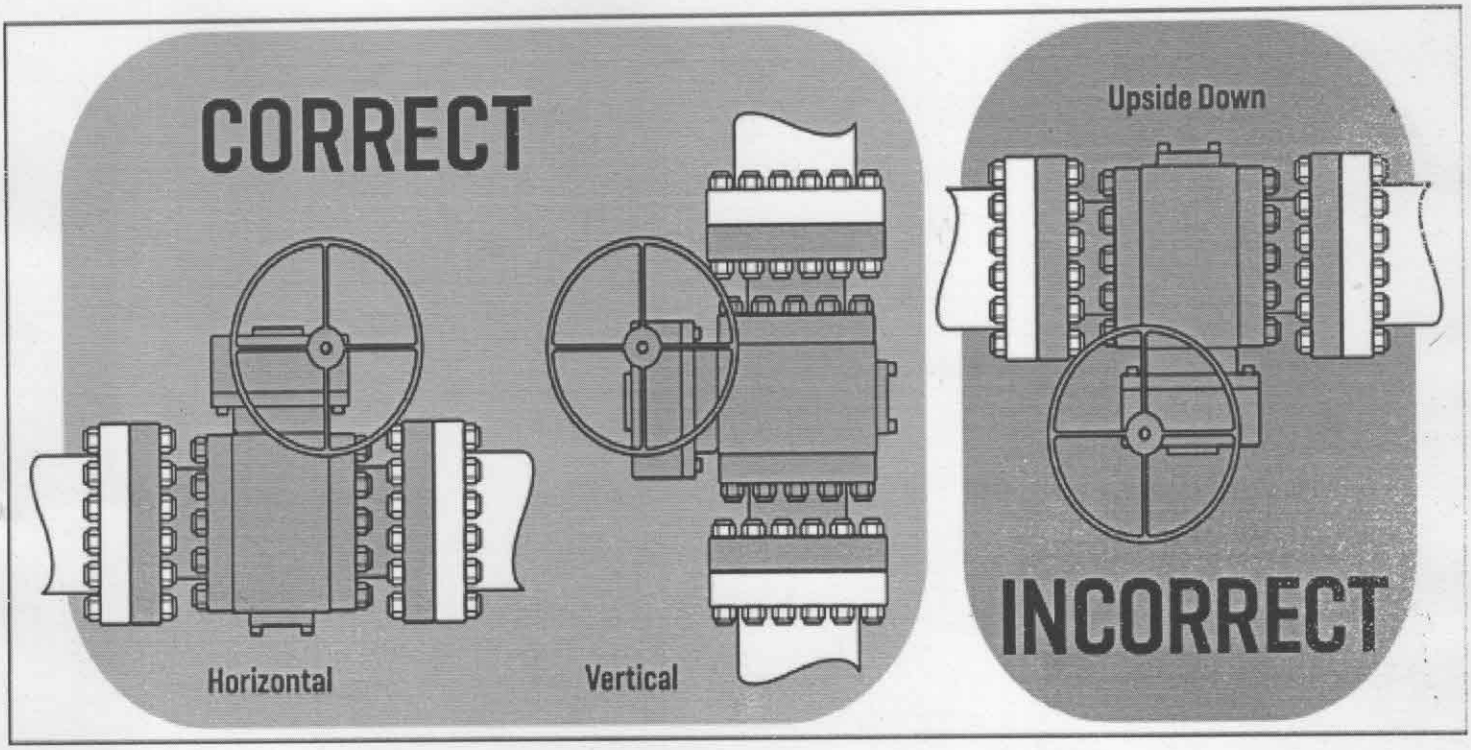


Figure-1

OPERATION

The valve is marked showing proper rotation direction for "ON and OFF" positions. Rotation is clockwise for "OFF" and counterclockwise for "ON"

MAINTANANCE

1. **Periodical check for any damage to valve Seats, Ball & Stem of the valve.**
2. **While doing periodical checks, it is recommended the seats, gasket seals and Gland packing should be replaced with Canle replacement Parts.**
3. **A repaired valve is always subjected to set of test before installation.**

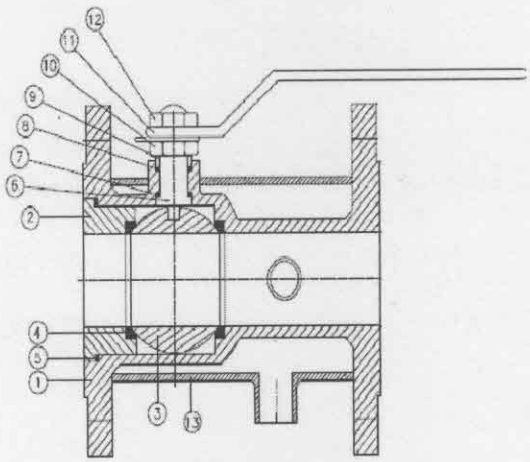
CAUTION : *Do not disassemble valve while under pressure nor with entrapped hazardous fluids therein.*

GENERAL REPAIR OF THE VALVE CAN BE MADE BY:

1. **Close valve.**
2. **Remove the Body (Centre Piece) by removing the fasteners.**
3. **Push ball out of body with finger.**
4. **Remove packing gland nut by turning counterclockwise and push stem down into body to remove.**

5. **Remove all seats and seals.**
6. **Replace all seats and seals. Inspect the ball and stem excessive wear or damage and replace if necessary.**
7. **Reverse the above procedure to reassemble.**

NOTE: ALWAYS TEST VALVE AND SYSTEM BEFORE PUTTING THE SYSTEM INTO SERVICE.



P. NO	PART NAME
01	Body
02	Insert
03	Ball
04	Seat Ring
05	Body Seal
06	Stem
07	Stem Seal
08	Gland Packing
09	Gland Bush
10	Gland Nut
11	Lever
12	Nut
13	Jacket

Jacketed Ball Valve

TROUBLE SHOOTING

SYMPTOMS	POSSIBLE FAULT	ACTIONS
Leakage through a closed Valve	Damaged ball surface	Replace the ball.
	Damaged Seats	Replace seats.
	Ball might not be closed fully	Check ball Open/Close settings.
Irregular Ball Movement	Impurities between the ball and seats or Ball – Body cavity and Ball seats	Flush the Ball from Inside
		Clean the sealing surface and seat.
Valve too hard operate / Valve torque too high	Damaged Seats	Replace the seats
	High application pressure / Temperature	Confirm the application pressure / Temperature rating
	Foreign particles in valve	Clean the internals
Water hammer or noisy Operation	Error in valve sizing or flow of fluid with high velocity	Confirm valve sizing with respect to flow.
Leakage through stem	Gland Nut Loose	Tighten Gland nut
	Damaged stem, stem sealing surface	Replace the stem
	Damaged stem seal	Replace the stem seal

Design and Development of Validation Record

Page 77 of 83.

CANLE	DESIGN AND DEVELOPMENT VALIDATION RECORD	Project No. 01.	Date. 17.09.2020.
Customer: M/S. Jubilant Life Sciences Ltd,		OA No. OA 24136.	Page 1 OF 1
Product Type: 80x150mm Jacketed Ball valve, 150#			MOC : CF3.
Machine :		Inspection Type: Dimension & Hydro Test.	
Operator:		Assembly :	
Drawing No. / Procedure : 1107.		Component : Jacketed Ball valve, 1 Pc.	Sample Size: 2 NO's

Sr. No	Component ID No / Heat No.	Parameter	Required Specification with Tolerance	Specification Observed	OK	Re work	Rej	Any Design Change Details and Refr	Validated By	REMARK / NCR Ref If any
Assembly dimension										
1	Tb72.	Face to Face.	203	203.5	Ok	-	-			
2		Flange Thickness.	26.	ϕ74.6, 26.3	ok	-	-			
3		ID.	ϕ75	ϕ216 ϕ74.7	Ok	-	-			
4		RF	ϕ216	ϕ216.3	Ok	-	-			
5		PCD.	ϕ241.	ϕ241.5	Ok	-	-			
6		NXD	8x ϕ22.	8 x ϕ22.2	Ok	-	-			
7		Flange OD.	ϕ279.	ϕ279.3	Ok	-	-			
8										
Hydro , Pneumatic Pressure Testing										
1		Body Hydro Test.	30	NO Leak	Ok	-	-			
2		Seat Hydro Test.	22	NO Leak	Ok	-	-			
3		Seat Pneumatic Test	7.	No Leak	Ok	-	-			

Inspection Type :	Component Inspection	Assembly Inspection	Inspection Procedure
Dimension :		Assembly Dimension	As per Drawing
Leak Test :		Hydro , Pneumatic ,	GQAP / Final Internal inspection Quality Plan

Produced QTY:	Inspected QTY	Accepted QTY	Rework QTY	Rejected QTY
4.	2.	4.		

QC Engineer

Design Engineer

CVPL-DD-R-06

Page 78 of 83.

CANLE	DESIGN AND DEVELOPMENT VALIDATION RECORD	Project No. 01.	Date. 17.09.2020.
Customer: M/s. Jubilant Life Sciences Ltd,		OA No. OA 24136.	Page 1 OF 1
Product Type: 80x100 mm Jacketed Ball Valve, 150#			MOC : CF3.
Machine : Flanged Type ASME B 16.5 150 RF		Inspection Type: Dimension & Hydro Test.	
Operator:		Assembly :	
Drawing No. / Procedure : 1107.		Component : Jacketed Ball Valve, 1 PC.	Sample Size: 2 Nos

Sr. No	Component ID No / Heat No	Parameter	Required Specification with Tolerance	Specification Observed	OK	Re work	Rej	Any Design Change Details and Ref	Validated By	REMARK / NCR Ref If any
Assembly dimension										
1	T672.	Face to Face.	ϕ 203.	203.2.	Ok	-	-			
2		Flange Thickness	24.	24.3.	Ok	-	-			
3		ID.	ϕ 75.	ϕ 74.8.	Ok	-	-			
4		RF	ϕ 157	ϕ 157.3.	Ok	-	-			
5		PCD.	ϕ 191.	ϕ 191.2.	Ok	-	-			
6		NxD	8 x ϕ19.	8 x ϕ19.2.	Ok	-	-			
4		Flange OD	ϕ229.	ϕ 229.3.	Ok	-	-			
5										
Hydro , Pneumatic Pressure Testing										
1		Body Hydro Test.	30	No leak	Ok	-	-			
2		Seat Hydro Test.	22	No leak.	Ok	-	-			
3		Seat Pneumatic Test	7	no leak	Ok.	-	-			

Inspection Type	Component Inspection	Assembly Inspection		Inspection Procedure
Dimension :		Assembly Dimension		As per Drawing
Leak Test :		Hydro , Pneumatic ,		GQAP / Final Internal inspection Quality Plan
Produced QTY: 4	Inspected QTY 2.	Accepted QTY 4.	Rework QTY	Rejected QTY

QC Engineer G. Brij

Design Engineer

CANLE QUALITY MANUAL

CVPL-DD-R-06

Page 79 of 83.

CANLE

Final Inspection Report

Canle Valve Private Limited
No.62,Sidco Industrial Estate
Coimbatore -641 021

TÜV SÜD

Client	: M/s. Jubilant Life Sciences Limited, Gajraula.	Mfg Std : BS 5351	FIIR NO : 242
P.O. No.	: 664228	Po.Date. : 20.07.2020	Testing Std : BS 6755 Part-1	Date : 17.09.2020
O.A.No.	: 24136	OA.Date. : 21.07.2020	F TO F : Manufacturer's Standard	Page : 1 of 1
Inspected by	: Manimegalai	Inspected Date. : 29.07.2021	Ends : Flanged Ends to ASME B16.5 RF,125AARH	Size : 80x100mm
Valve Type	: Jacketed Ball Valve, 1PC, Full Bore,	Pressure Rating : 150#	Drg. No. : 1107 Rev : 01	Qty : 04 Nos

Sr No	Valves Sr. No	Heat No.			Dimension								Hydro & pneumatic test in Kg/cm^2			Remarks
		Body	Side Piece	Ball	Valve F TO F(B)	ID(NB)	ϕD	ϕE	Flange Thickness(T)	PCD	No.of Holes(N)	Hole Dia(ϕd)	Shell	Seat	Pneumatic Seat	
Required Dimensions in mm					203	75	229	157	24	191	8	19	30	22	7	
1	Y-5115	T672	T672	T672	203.5	74.9	229.1	156.6	24.5	191.3	8	19.2	30	22	7	OK
2	Y-5116	T672	T672	T672	203.3	74.5	229.2	156.5	24.3	191.5	8	19.2	30	22	7	OK
3	Y-5117	T672	T672	T672	203.8	74.6	229	157.2	24	191	8	19.2	30	22	7	OK
4	Y-5118	T672	T672	T672	202.6	74.4	229.1	157	23.8	190.5	8	19.2	30	22	7	OK

Nomenclature	Material
Body	ASTM A 351 Gr.CF3
Sidepiece	ASTM A 351 Gr.CF3
Ball	ASTM A 351 Gr.CF3
Stem	ASTM A 276 Type SS304L
Seat	Metal Seated (SS304L)

Note:

1. All Dimensions are in mm
2. Valve Open & Close operation checked and Found Satisfactory.
3. Valve Tested at 2 minutes duration and no leakeges found.
4. Valve Serial Number engraved on valve Flanges.

CVPL QC Engineer Sign

QC Sign

CANLE

Final Inspection Report

Ca[illegible] Valve Private Limited
NO.[illegible],Sidco Industrial Estate
Coimbatore -641 021

TÜV SÜD ISO 9001

Client	: M/s. Jubilant Life Sciences Limited, Gajraula.	Mfg Std : BS 5351	FIIR NO : 242
P.O. No.	: 664228	Po.Date. : 20.07.2020	Testing Std : BS 6755 Part-1	Date : 17.09.2020
O.A.No.	: 24136	OA.Date. : 21.07.2020	F TO F : Manufacturer's Standard	Page : 1 of 1
Inspected by	: Manimegalai	Inspected Date. : 29.07.2021	Ends : Flanged Ends to ASME B16.5 RF,125AARH	Size : 80x150mm
Valve Type	: Jacketed Ball Valve, 1PC, Full Bore,	Pressure Rating : 150#	Drg. No. : 1107 Rev : 01	Qty : 04 Nos

Sr No	Valves Sr. No	Heat No.			Dimension								Hydro & pneumatic test in Kg/cm^2			Remarks
		Body	Side Piece	Ball	Valve F TO F(B)	ID(NB)	ϕD	ϕE	Flange Thickness(T)	PCD	No.of Holes(N)	Hole Dia(ϕd)	Shell	Seat	Pneumatic Seat	
Required Dimensions in mm					203	75	279	216	26	241	8	22	30	22	7	
1	Y-5119	T672	T672	T672	203.8	74.4	279.1	216.6	26.3	240.8	8	22	30	22	7	OK
2	Y-5120	T672	T672	T672	203.3	74.5	279.4	216.5	26.5	240.7	8	22	30	22	7	OK
3	Y-5121	T672	T672	T672	203.5	74.6	279	216.3	26	241	8	22	30	22	7	OK
4	Y-5122	T672	T672	T672	202.6	74.8	279.1	216	25.8	241.2	8	22	30	22	7	OK

Nomenclature	Material	Note:
Body	ASTM A 351 Gr.CF3	1. All Dimensions are in mm
Sidepiece	ASTM A 351 Gr.CF3	2. Valve Open & Close operation checked and Found Satisfactory.
Ball	ASTM A 351 Gr.CF3	3.Valve Tested at 2 minutes duration and no leakeges found.
Stem	ASTM A 276 Type SS304L	4.Valve Serial Number engraved on valve Flanges.
Seat	Metal Seated (SS304L)	

CVPL QC Engineer Sign

QC Sign

Page 81 of 83.

Canle Valves Private Limited

"Where Quality is our Passion"

(An ISO 9001:2015 Company - IBR Approved Valves Maker)

LIQUID PENETRANT TEST REPORT

PO.NO-664228 **PO.Date: 20.07.2020**

I. MAKE	BATCH No.	MFG.DT	EXP.DT
Z-CHECK-CR MAKE CLEANER	604894	JUL-2020	JUL-2021
Z-CHECK-PT MAKE PENETRANT	601778	JUL-2020	JUL-2021
Z-CHECK-DL MAKE DEVELOPER	601139	JUL-2020	JUL-2021

II. DWELL TIME - 15 MIN
III. DEVELOPING TIME - 10MIN
IV. REF/ACCEPTANCE STD - ASTM E165 /ASME Sec VIII Dev.1& ASME B16.34
V. DATE OF TEST - 10.09.2020

Item	Qty	Material	Heat Number	Surface	Remarks
80x100mm Jacketed Ball Valve Body	04	ASTM A 351 Gr.CF3	T672	Body Surface	No surface defect observed
80x150mm Jacketed Ball Valve Body	04	ASTM A 351 Gr.CF3	T672	Body Surface	No surface defect observed
Insert	08	ASTM A 351 Gr.CF3	T672	Surface	No surface defect observed
Solid Ball	08	ASTM A 351 Gr.CF3	T672	BALL OD SURFACE (Machined)	No surface defect observed

OBSERVATION &RESULT: No surface defect observed

Quality Control Dept

Client

No. 52, SIDCO Industrial Estate, Pollachi Main Road, Coimbatore - 641 021, Tamil Nadu, India
+91-422-4278072, +91-9363365973 marketing@canlevalve.com www.canlevalve.com
GST No. : 33AABCC5192K1ZM

Canle Valves Private Limited

"Where Quality is our Passion"

(An ISO 9001:2015 Company - IBR Approved Valves Maker)

Test Cum Guarantee Certificate

Test Certificate No	: 479	**Date**	: 17.09.2020	**Canle Ref No**	: OA 24136
Customer Name	: M/s. Jubilant Life Science Limited, Gajraula				
Customer PO No	: 664228			**PO Date**	:20.07.2020
Valve Description	: Jacketed Ball Valve, Full Bore, Flange End to B16.5				

PO. Sl. No	Size (mm)	Pressure Ratting	Qty (Nos)	Valve Serial No.	Material Code
01	50X80mm	150#	11	Y5104-Y5114	JBC050X080FBEDA912H
02	100X80mm	150#	04	Y5115-Y5118	JBC100X080FBEDA912H
03	150X80mm	150#	04	Y5119-Y5122	JBC150X080FBEDA912H
-	-	-	-	-	
-	-	-	-	-	-

Bill of Materials

Description of Parts	MOC Specification	Remarks
Body	ASTM A 351 Gr. CF3	-
Side Piece	ASTM A 351 Gr. CF3	-
Ball	ASTM A 351 Gr. CF3	-
Stem	ASTM A 276 SS304L	-
Gland	ASTM A 276 SS304L	-
Seating	Metal Seat	-
Body Seal	PTFE	-
Gland Packing	CFT	-
Stud & Nut	SS	-

Pressure Tests

Type of Test	Testing Pressure	Testing Method	Test Duration	Result
Hydraulic Shell	30 kg/cm^2	Hydrostatic	2 Minutes	No Leak Found
Hydraulic Seat	22 kg/cm^2	Hydrostatic	2 Minutes	No Leak Found
Pneumatic Seat	7 kg/cm^2	Air	2 Minutes	No Leak Found

Remarks: Valves are tested and found ok for the pressure mentioned above. Valves are tested in accordance with the pressure and duration of BS6755 Part-1.

We hereby certify that the products are listed above have been manufactured from materials conforming to the specifications mentioned and that they have been tested according to the pressure tests shown.

Releasing authority for and on behalf of Canle Valves Private Limited

G.B.T.

Prepared By

Head - Quality Control

Guarantee certificate

We shall Guarantee the supply including the material and workmanship for a period of 12 months from the commencement of operation or 18 Months from the date of dispatch whichever is earlier.

For Canle Valves Private Limited,

Director

No. 52, SIDCO Industrial Estate, Pollachi Main Road, Coimbatore - 641 021, Tamil Nadu, India

+91-422-4278072, +91-9363365973 marketing@canlevalve.com www.canlevalve.com

GST No. : 33AABCC5192K1ZM