



Public Notice

U4POB The Reconditioned of Main Turbine Pneumatic Actuator

1. Scope of Supply

Purchasing U4POB The Reconditioned of Main Turbine Pneumatic Actuator

2. Bidding Type

- Domestic open bidding to select the lowest priced suppliers and evaluated by total price
- The quotation shall be submitted in one sealed envelope containing both the priced and unpriced proposals, addressed to Procurement Team, F&A Division PT. KPJB

3. Requirement for Qualification of Bidder

It is mentioned in document of INVITATION TO BID, Bidding Schedule of Purchasing U4POB The Reconditioned of Main Turbine Pneumatic Actuator, Attachment 5.

4. Aanwijzing will be held on 10.30 WIB, 20 May 2026 (via Zoom Application)

Topic: RFQ K19733 for U4POB The Reconditioned of Main Turbine Pneumatic Actuator

Time: May 20, 2026 10:30 AM Jakarta

Join Zoom Meeting

<https://us06web.zoom.us/j/81988256299?pwd=1MjEXNDKMxZrAdYxYYBCPvbIBgra9K.1>

Meeting chat link

<https://us06web.zoom.us/jc/81988256299>

Meeting ID: 819 8825 6299

Passcode: 802143

5. Bid Closing date and Time on 11.00 WIB, June 2, 2026

6. Invitation to Bid (ITB) and Additional Information

- Invitation to Bid (ITB) document copy or soft file is available in website PT. KPJB (www.kpjb.co.id); or
- Email : procurement34@kpjb.co.id

7. Bid submission

To : Procurement Team

Finance & Administration Division (K19733)

PT. Komipo Pembangunan Jawa Bali (KPJB)

PLTU Tanjung Jati B Unit 3 & 4,


Desa Tubanan, Kecamatan Kembang,

Kabupaten Jepara, Jawa Tengah, Indonesia 59453

Tel : 0291-4270493, Fax : 0291-4270601

8. Procedure for Submission Bid Document

- The bidding document shall be submitted in a sealed envelope by registered mail or direct submission after KPJB security's check not later than the bid closing date and time.
- Document title shall be marked in the envelope as "U4POB The Reconditioned of Main Turbine Pneumatic Actuator"

	PT. KOMIPO PEMBANGKITAN JAWA BALI PLTU TANJUNG JATI B UNIT 3&4	Doc. Ref	: KPJB-0951-02
		Form No.	: KPJB-0951-02-ZZ-FM-16
	TERM OF REFERENCE	Design Div.	: Finance and Administration
		Revision No.	: 00

1. Background

TOR Subject : Spare Parts OH U4 PO2026 for Inspection & Replacement
Pneumatic Actuator Repair Kits
 WO No : 171583
 WO Desc : U4 PO2026 CNI Main Turbine Replacement Spare Parts and
Calibration Pneumatic ON-OFF Valve

2. Spare Part Data

2.1. System :

- CRH : COLD REHEAT SYSTEM
- ES : EXTRACTION SYSTEM
- FW : FEEDWATER SYSTEM
- ATT : ATTEMPERATURE SYSTEM
- GSS : GLAND STEAM SEAL SYSTEM
- GST : BFPT STEAM SEAL SYSTEM
- IA : INSTRUMENT AIR SYSTEM
- HV : VENTILATION SYSTEM

2.2. Equipment : Pneumatic Cylinder Actuator

2.3. Spare Part Group :

- Overhaul
- PM & PdM
- Run to Failure
- Corrective Maintenance
- Strategic Equipment


2.4. Usage Plan : Part will be installed after delivery and good receipt in KPJB warehouse

2.5. Description

No	Item	Tag No	Description	Qty
1	224559-R	4CRH-PN002	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DB280, TRAVEL LENGTH 35MM, REF DWG NO: 10C2015/ ACEP102FBDE, MFC NAKAKITA	1
2	224560-R	4ES-PN003 4ES-PN004	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2016V/ ACEL366DBDE, MFC NAKAKITA	2
3	224561-R	4ES-PN007 4ES-PN008 4GST-PN001A 4GST-PN001B	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2018V/ ACEL366DBDE, MFC NAKAKITA	4
4	224562-R	4FW-PN001	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL RA280, TRAVEL LENGTH 25MM, REF DWG NO: 10C2022/ ACEL505DBRE, MFC NAKAKITA	1

Term of Reference

Sign		
	Staff	Leader

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5	224563-R	4ATT-PN001	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL RG160, TRAVEL LENGTH 12MM, REF DWG NO: 10C2023/ ACEL370DBRE, MFC NAKAKITA	1
6	224564-R	4GSS-PN001	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DA240, TRAVEL LENGTH 15MM, REF DWG NO: 10C2024/ ACEL584GBDE, MFC NAKAKITA	1
7	224565-R	4GSS-PN002	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DL335, TRAVEL LENGTH 75MM, REF DWG NO: 10C2025/ ACEP101DBDE, MFC NAKAKITA	1
8	224566-R	4GSS-PN003	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DA200, TRAVEL LENGTH 25MM, REF DWG NO: 10C2026/ ACEL516DBDE, MFC NAKAKITA	1
9	224567-R	4IA-PN001A 4IA-PN001B	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG160, TRAVEL LENGTH 12MM, REF DWG NO: 10C2036/ ACETO09DBDE, MFC NAKAKITA	2
10	224568-R	4HV-PN001	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2033V/ ACEL366DBDE, MFC NAKAKITA	1


3. Work Scope

3.1. The Vendor shall provide one complete set of all new materials for each pneumatic actuator cylinder, including repair kits, fastening components (bolts and nuts), and lubricating grease. All materials and components shall be new, unused, and technically equivalent in terms of component type, material grade, and dimensional tolerances, in accordance with specifications and the attached drawings.

No	Tag Number	Repair Kits	Consummable	Ref. DWG
1	4CRH-PN002	O-RING (4 pcs)	- Bolts and nuts (12 sets), - Grease	10C2015/ ACEP102FBDE
2	4ES-PN003 4ES-PN004	O-RING (3 pcs)	- Bolts and nuts (6 sets), - Grease	10C2016V/ ACEL366DBDE
3	4ES-PN007 4ES-PN008 4GST-PN001A 4GST-PN001B	O-RING (3 pcs)	- Bolts and nuts (6 sets), - Grease	10C2018V/ ACEL366DBDE
4	4FW-PN001	O-RING (8 pcs)	- Bolts and nuts (8 sets), - Grease	10C2022/ ACEL505DBRE
5	4ATT-PN001	O-RING (6 pcs)	- Bolts and nuts (6 sets), - Grease	10C2023/ ACEL370DBRE
6	4GSS-PN001	O-RING (4 pcs)	- Bolts and nuts (8 sets), - Grease	10C2024/ ACEL584GBDE

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7	4GSS-PN002	O-RING (4 pcs)	- Bolts and nuts (12 sets), - Grease	10C2025/ ACEP101DBDE
8	4GSS-PN003	O-RING (4 pcs)	- Bolts and nuts (8 sets), - Grease	10C2026/ ACEL516DBDE
9	4IA-PN001A 4IA-PN001B	O-RING (3 pcs)	- Bolts and nuts (6 sets), - Grease	10C2036/ ACETO09DBDE
10	4HV-PN001	O-RING (3 pcs)	- Bolts and nuts (6 sets), - Grease	10C2033V/ ACEL366DBDE

- 3.2. Work scope including test report, painting, packaging, mobilization from & to KPJB warehouse.
- 3.3. Remove and check all parts of the pneumatic actuator cylinder (include checking for scratches, corrosion, and wear material).
- 3.4. Repair minor scratches if found on the pneumatic actuator cylinder, while maintaining the original dimensions and materials, for example honing and re-chroming.
- 3.5. Install the new spare parts for all pneumatic actuator cylinders and re-assembly (install it as before).
- 3.6. Site Acceptance Test (SAT) provided and funded by PT.KPJB
- 3.7. Site Acceptance Test (SAT) report form by vendor with user approval. Acceptance test criteria as follows:
 - Perform pressure test and leak test on each pneumatic actuator cylinder that has been assembled using instrument air pressure of 10 bar(g) for at least for one hour, to ensure there is no leakage.
 - A functional test shall be conducted on each pneumatic actuator cylinder by subjecting the cylinder to full extend and retract operation for a minimum of ten (10) cycles. The cylinder shall demonstrate smooth, stable, and uninterrupted.

4. CSMS Risk Level


- 1. Low
- 2. Moderate
- 3. High
- 4. Very High
- 5. Extreme

5. Bidder Qualification

- 5.1. The vendors shall have a workshop facility capable of performing pneumatic actuator repair works, including pneumatic pressure testing facilities. Evidence of the workshop shall be provided as part of the bidding documents, including clear

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photographic documentation and a workshop layout plan, together with the complete workshop address.

- 5.2. The vendor should have experience in servicing, repairing pneumatic and hydraulic actuator cylinders of the same type and capacity or the other product actuator installed at steam power plants with a minimum capacity of 660 MW and shall not be substituted by experience from non-power plant industries. This experience must be supported by a copy of the purchase order, a copy of the actuator performance test results, and an actuator technical data sheet.

6. Delivery of material and/or services

- 6.1. The detailed work execution schedule will be communicated by the user at a later date.
- 6.2. Required date is 23 July 2026
- 6.3. The Vendor shall ensure that all repair, inspection, testing activities, including mobilization to and from the KPJB warehouse, are fully completed within a maximum period of twelve (12) days from the date of confirmation issued by the User.
- 6.4. Delivery point is KPJB's Warehouse, PLTU Tanjung Jati B Units 3&4, Jeparu, Central Java.

7. Requirement of Documents

Within delivery the materials, supplier should submit documents as follow:

- 7.1. Inspection report for each pneumatic actuator cylinder.
- 7.2. Document report for materials and specifications of seal kit pneumatic actuator cylinder.
- 7.3. A Site Acceptance Test (SAT) result report, including functional test results for each pneumatic actuator cylinder, shall be submitted.
- 7.4. Warranty letter for 1 year from supplier/vendor.


8. Technical Specification

- 8.1. All technical specifications should comply with determined specification, cannot be changed, no crack, should be new 100%, genuine, no defect, and can be used properly.
- 8.2. In the case PT KPJB declines the delivered material, the supplier should replace the material. If a supplier can't replace it, they will be penalized in accordance with the General Term & Condition (GTC) of the PO.

9. Acceptance Criteria

- 9.1. Delivery time is complied.
- 9.2. All delivered materials are according to PO requirement, specification and condition of the TOR.
- 9.3. All of the required documents are fulfilled.

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10. Standard of Quality

Quality of the material and/or services should comply with standard, code, manufacturer specification and user's requirement.

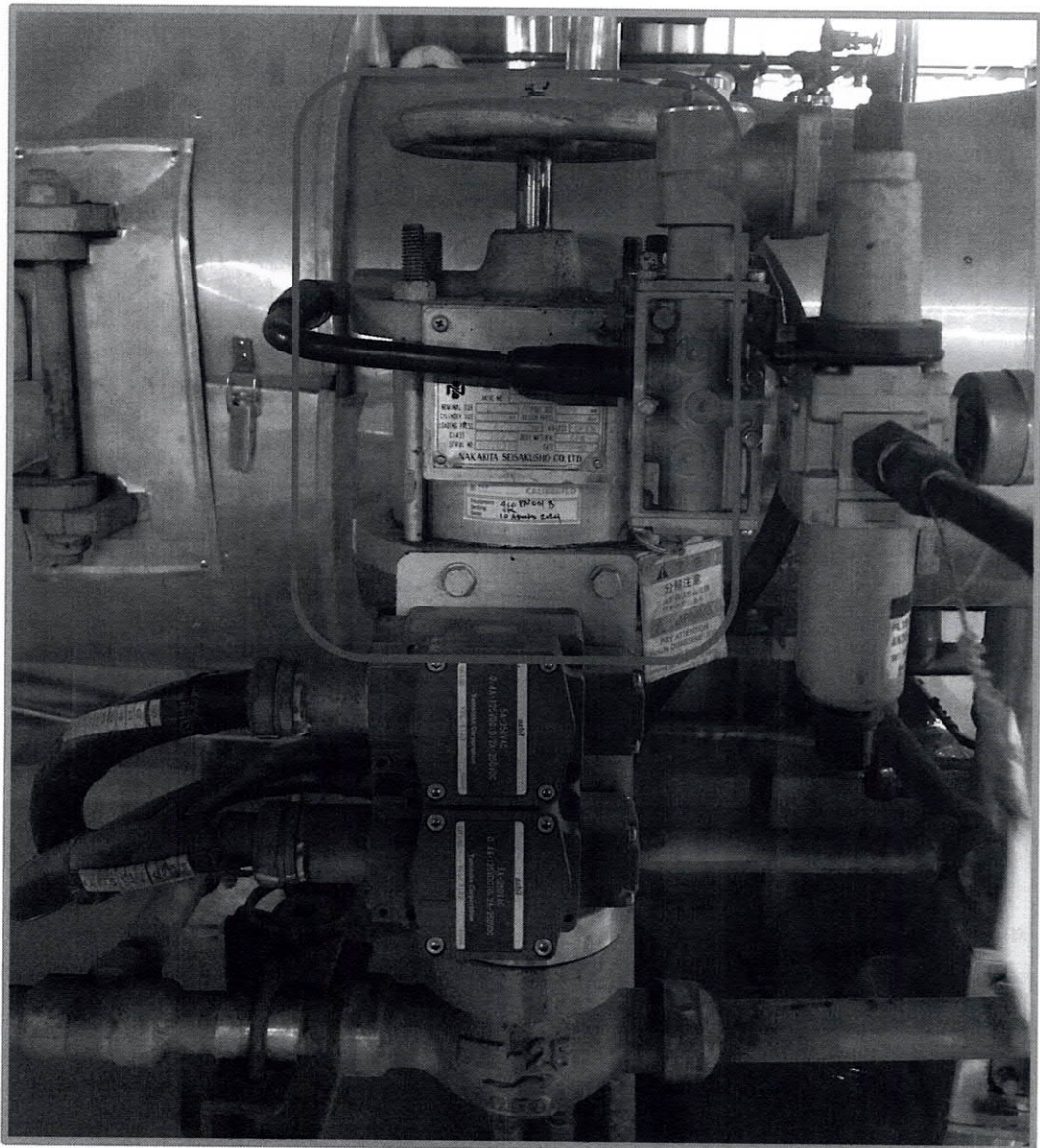
11. Warranty

Generally if there isn't another clause mentioned, the supplier should warrant the material for 1 year after material being received by PT. KPJB.

12. Material Technical Data Sheet


N/A

13. Picture



For the detailed specification, please refer the attachment files.

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14. Drawing




N/A

15. Others

15.1. Aanwijzing process needed

15.2. Attachment

- ▶ WO no 171583
- ▶ Proc and installation Plan
- ▶ Maintenance service instruction
- ▶ Specification and outline drawing Pneumatic Cylinder Actuator

Prepared by	Checked by	Approved by
		
<u>Lilik Pujiyanto</u> Staff	<u>Surya Nanda S</u> Leader	<u>Budi Santoso</u> Acting as Electrical Manager
Date :	Date :	Date :

Sign		
	Staff	Leader

5. Maintenance Service Instructions

See Table 1 for maintenance service instructions.

Table 1 Maintenance Check List

Maintenance Inspection Frequency	Inspection Item	Confirmation/Service
Monitoring under normal operation	<p>(1) Check whether the loads on the valve are within the specified ranges:</p> <p>(a) Fluid pressure (b) Actuating pressure</p> <p>(2) When the valve is provided with the hand operated device, make sure that the wheel is set on the auto operation position (see 4.1), and that it is securely fixed there.</p> <p>(3) Check whether the valve stroke is affected by the slackened hand wheel shaft due to vibration, etc.</p>	<p>(1) Confirm them with a pressure gauge.</p> <p>(2) Check the hand wheel indicator and the lift indicator of open/close, and then, adjust the wheel to the correct position.</p> <p>(3) Restore the hand wheel to the specified position and secure it. Then, check the stroke with the valve open/close indicator.</p>
Daily	<p>(1) Check for leakage from various parts contacting fluid, including the gland packing.</p> <p>(2) Check for air leakage from the seals of the actuator.</p>	<p>(1) Tighten the packing and gasket clamping parts.</p> <p>(2) Tighten the clamping bolts or replace the gasket.</p>
Weekly	<p>(1) Check for loose connections of the valve stem.</p> <p>(2) Make sure the valve stem moves smoothly.</p>	<p>(1) Tighten the clamping bolts.</p> <p>(2) Make sure the guide is free of dirt, scale, etc. If dirt or scale is present, remove them.</p>

Maintenance Inspection Frequency	Inspection Item	Confirmation/Service
Every one or two years	<p>(1) Check the degree of wear and aging of "O" rings, etc., of the sliding parts of the actuator.</p> <p>(2) Check the valve seat (disk and seat) for any abnormality.</p> <p>(3) Check the degree of aging of the gland packing.</p>	<p>(1) If inspection revealed leakage of actuating pressure medium, or deformation, hardening, swelling or crack of the ring, replace it with a new one. It is advisable to replace "O" rings every two years in principle.</p> <p>(2) Check the valve disc and seat for scars, pitting, deformation, adhesion of foreign matter, etc.</p> <p>When any of these abnormality is detected, carry out lapping.</p> <p>(3) When the gland packing shows shrinkage and hardening, add some packing or replace it:</p> <p>It is sufficient to replace it every 5 years in principle.</p>
At the time of disassembly	<p>(1) Check the degree of aging and presence of cracks of packings and gaskets.</p> <p>(2) Check the degree of deterioration of the spring of the actuator.</p> <p>(3) Check the threaded connection between the disc and the stem for slackness.</p>	<p>(1) When the valve is disassembled, replace all packings and gaskets with new ones.</p> <p>(2) When the spring shows corrosion, deformation, breakage, etc., replace it with a new one.</p> <p>Period of spring replacement:</p> <p>In the actuator, etc.</p> <p>Steel one ... Every 5 years</p> <p>Stainless steel, PBW Every 10 years</p> <p>(3) When the slackness is excessive, replace them with new ones. If tightening is not sufficient, tighten the thread to the specified position.</p>

Maintenance Inspection Frequency	Inspection Item	Confirmation/Service
At the time of disassem- bly	<p>(4) Check the interior of the valve body for erosion due to the fluid.</p> <p>(5) Check the degree of wear, corrosion or erosion on the sliding faces of the guided components in the valve.</p>	<p>(4) If the erosion of the interior is excessive, replace the body with a new one.</p> <p>If wear, corrosion or erosion is excessive, replace it with a new one.</p>

1

CYLINDER VALVE DATA SHEET

Tag No. *CRH-PN002
Mfr. Serial No. 10C2015A/B

				CYLINDER VALVE DATA SHEET				Tag No. *CRH-PN002			
								Mfr. Serial No. 10C2015A/B			
1	2	3	4	1	2	3	4	1	2	3	4
	1		Location	indoor	57			MFR.	NAKAKITA SEISAKUSHO CO.,LTD.		Model DB280
	2		Service	See Remarks	58			Pneumatic	<input checked="" type="checkbox"/> piston		
	3		Haz. area class.		59			Style			
	4		Ambient temp. min.	°C	max.	°C	60	Act. area	616cm ²		
	5		Allowable sound pressure level				61	Reqd. travel/angle	35		mm
	6		Pipe identification No.		62			Supply press. min.	6		max. 7 bar(g)
	7		DN / /	Sch /	63			Spring range	0.58-1.36		bar(g)
	8		Pipe material		64			Air consumption	35.36		ℓ(Nor.)/STROKE
	9		Pipe insulation		65			Air connection	<input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4		
	10				66			Other actuator			
	11		Pipe connection	BUTT WELD END	67						
	12		Process fluid	DRAIN	68			<input checked="" type="checkbox"/> Handle			
	13		Upstream condition	<input checked="" type="checkbox"/> liquid <input type="checkbox"/> vapour <input type="checkbox"/> gas	69						
	14		Des. press.	46 bar(g)	Des. temp.	348 °C	Backpress. NO	70			
	15			Min.	Norm.	Max.	Unit	71			
	16		Flow rate					72			
	17		Inlet press.	P1			45 bar(g)	73			
	18		Outlet press.	P2			bar(g)	74			
	19		Temperature	T1			348 °C	75			
	20							76			
	21							77			
	22							78			
	23							79			
	24							80			
	25							81			
	26							82			
	27		Shutoff press.	P1		P2		83			
	28		Air supply	min.	6		max. 7	84			
	29		Power failure pos.	<input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> hold				85			
	30							86			
	31		Calc. max. flow coef. Cv		Calc. nor. flow coef.			87			
	32		Calc. min. flow coef. Cv					88			
	33		Selected flow coef. Cv	102				89			
	34		Predicted sound pressure level					90			
	35		MFR.	NAKAKITA SEISAKUSHO CO.,LTD.	Model	NS650EPOL		91			
	36		Body type	<input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way				92			
	37		Flow direction	<input type="checkbox"/> FTD <input checked="" type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN				93			
	38		Pressure rating	600#				94			
	39		Nominal size	DN80				95			
	40		End conn.	<input type="checkbox"/> flgd. <input type="checkbox"/> s.welded <input checked="" type="checkbox"/> b.welded <input type="checkbox"/> thd.				96			
	41			BW				97			
	42		End extensions					98			
	43		Bonnet style	<input type="checkbox"/> standard <input type="checkbox"/> fin <input checked="" type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows				99			
	44		Mounting method					100			
	45		Body/bonnet matl.	A217 WC6				101			
	46		Trim	<input type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input checked="" type="checkbox"/> pilot <input type="checkbox"/> low noise				102			
	47		Characteristic	<input checked="" type="checkbox"/> quick opening				103			
	48		Plug/stem matl.	/				104			
	49		Guide/seat matl.	/				105			
	50							106			
	51		Seat style	<input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch				107			
	52		Trim coating	S. STEEL/STELLITE				108			
	53							109			
	54		Leakage specification	JEAC3706 Oml/1min(WATER)				110			
	55		Packing matl.	P#6711				111			
	56		gasket matl.	V#6590M				112			

PROCESS DATA RELEVANT FOR CONTROL VALVE SELECTION

Cv/SPL

VALVE BODY ASSEMBLY

ACTUATOR

POS. IND. SWITCH

SOLENOID VALVE

OTHERS

SPECIAL REQUIREMENTS

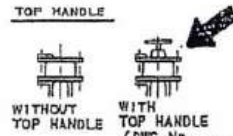
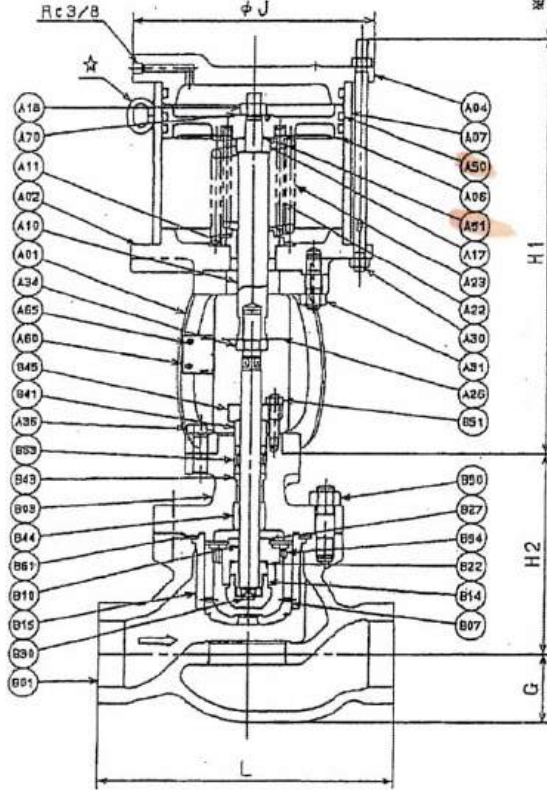
Remarks:
Service : COLD REHEAT CHECK VALVE OUTLET DRAIN VALVE
F.R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)
With WATER SEAL NOZZLE

	TAG No's *
XIT3	3
XIT4	4

Rev.	Date	Name	Rev.	Date	Name	Project	Dwg. Ref. No.
						P. O. No.	ACEP102FBDE
						Mat. Req. No.	
						Item No.	Qty 1

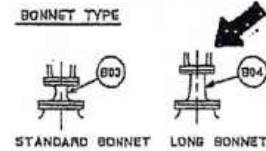
※ OVERHAULE SPACE FOR DISASSEMBLY LIKE USING CHAIN BLOCK IS NOT INCLUDED IN THIS DIMENSION.
 ※ 分解寸法には分解・組立作業（チェーンブロック取付等）に必要な寸法は含まれていません。

☆ WITH HOOK (2SETS)



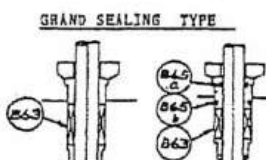
※1 STUD BOLT&NUT MATERIAL

No.	
B50	SNB18/A194 Gr.4



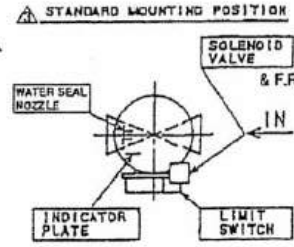
※2 GASKET MATERIAL

B61	V#B590M-L V#7590M V#6590M
-----	---------------------------------



※3 PACKING MATERIAL

B63	P#4519 P#6710+P#6616A P#6711
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△ BW SYMBOL:4C/3A

①

TAG No. : *CRH-PN002

PARTS No.	PARTS NAME	MATERIAL	Q'TY	REMARKS
B01	BODY	WC6	1	STELLITE FACED
B03	BONNET	WC6	1	
B04	LONG BONNET	WC6	1	
B07	DISC	SUS304	1	STELLITE FACED
B10	VALVE STEM	SUS403	1	HARD Cr PLATING
B14	PILOT DISC	SUS304	1	STELLITE FACED
B15	CYLINDER	SUS304	1	HARD Cr PLATING
B22	DISC STEM NUT	SUS403	1	TUFFTRIDE
B27	DISC STEM NUT	SUS403	1	TUFFTRIDE
B30	THRUST PLATE	SUS420J2	1	HEAT TREATED
B41	GLAND	SUS316	1	
B43	PACKING SEAT	SUS316	1	
B44	BUSHING	SUS440C	1	HEAT TREATED
B45	GLAND FLANGE	SUS304	1	
B50	STUD BOLT&NUT	*1	8SETS	
B51	STUD BOLT&NUT	SUS304/SUS304	2SETS	
B54	DISC SET SCREW	SUS304	1	
B61	GASKET	*2	1	
B63	PACKING	*3	1SET	
B80	WATER SEAL NOZZLE	F11	1	
A01	YOKE	SCPH2	1	
A02	CYLINDER BASE	FC0400	1	
A04	CYLINDER COVER	FC0400	1	
A06	PISTON	FC250	1	MOIL PAINT
A07	CYLINDER	STPG370 STKM13A	1	INSIDE HARD Cr PL. TYPE240 TYPE290,335
A10	PISTON STEM	SUS403	1	
A11	SPRING DISC	SS400	1	
A17	COLLAR	SS400	1	
A18	LOCK NUT	SS400	1	
A22	SPRING	SUP10	1	
A23	SPRING	SUP10	1	
A26	TRAVEL INDICATOR	C2600P	1	
A30	BOLT&NUT	SS400	8SETS 12SETS	TYPE240 TYPE290,335
A31	STUD BOLT&NUT	SNB7/S45C	4SETS	
A34	LOCK NUT	SUS304	1	
A36	BOLT	S45C EQ.	4	
A50	O-RING	NBR	3	
A51	O-RING	NBR	1	
A50	INDICATOR SCALE	SUS304	1	
A55	SET SCREW	SUS304	2	
A70	WASHER	SUS304	1	

NOMINAL SIZE	L		G	STANDARD BONNET		LONG BONNET		TRAVEL
	A	B		H2	BODY MASS (kg)	H2	BODY MASS (kg)	
65	2 1/2	311	70	225	52	323	58	25
80	3	337	77	245	71	340	78	35
100	4	394	96	275	105	370	112	45
125	5	457	122	300	132	390	137	45
150	6	508	145	330	235	420	249	55

ACTUATOR TYPE	J	WITHOUT TOP HANDLE						WITH TOP HANDLE						E
		DB		DBL		DL		DB		DBL		DL		
		H1	MASS (kg)	H1	MASS (kg)	H1	MASS (kg)	H1	MASS (kg)	H1	MASS (kg)	H1	MASS (kg)	
240	320	539	85	579	88	709	99	715	93	755	86	911	109	350
280	380	544	100	584	103	714	114	715	109	755	112	911	125	
335	415	550	140	590	143	720	154	715	150	755	153	916	166	

REV.	REVISIONS	BY/DATE	CHKD/DATE	APPD/DATE
Y.SADAMOTO	K.MINAMI	H.SAWADA		
8/9 '91	8/9 '91	8/9 '91		

TYPE NS650EPO
SIZE 65~150

SCALE

MASS

(600- WC6 -B1) 49, 101, 101

ORG. No. 10C2015

NAKAKITA SEISAKUSHO CO., LTD.

ACEP102FBDE 0

95-11-23 ACT. 03-12/27 DL '08 7/5

2

CYLINDER VALVE DATA SHEET

Tag No. *ES-PN003
Mfr. Serial No. 10C2016A/B

				CYLINDER VALVE DATA SHEET				Tag No. *ES-PN003									
								Mfr. Serial No. 10C2016A/B									
1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
				Location	indoor			57				MFR.	NAKAKITA SEISAKUSHO CO., LTD.	Model	DG140		
				Service	See Remarks			58				Pneumatic	<input checked="" type="checkbox"/> piston				
				Haz. area class.				59				Style					
				Ambient temp. min.		°C	max.	°C	60				Act. area	154cm ²			
				Allowable sound pressure level				dB(A)	61				Reqd. travel/angle	12	mm		
				Pipe Identification No.					62				Supply press. min.	6	max.	7 bar(g)	
				DN / /	Sch /				63				Spring range	1.42-2.27	bar(g)	△	
				Pipe material					64				Air consumption	3.48	ℓ(Nor.)/STROKE		
				Pipe insulation					65				Air connection	<input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4			
				Pipe connection	SOCKET WELD END				66				Other actuator				
				Process fluid	DRAIN				68				<input checked="" type="checkbox"/> Handle				
				Upstream condition	<input checked="" type="checkbox"/> liquid <input type="checkbox"/> vapour <input type="checkbox"/> gas				69								
				Des. press.	21.3 bar(g)	Des. temp.	488 °C	Backpress.	NO	70							
					Min.	Norm.	Max.	Unit	71								
				Flow rate					72								
				Inlet press.	P1			21.3 bar(g)	73								
				Outlet press.	P2			bar(g)	74								
				Temperature	T1			488 °C	75								
									76								
									77								
									78								
									79								
									80								
									81				MFR.	YAMATAKE	Model	VCL-5102	
									82				Switch type	<input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.			
									83				Switching pos.	<input checked="" type="checkbox"/> closed <input type="checkbox"/> % travel <input checked="" type="checkbox"/> open			
				Shutoff press.	P1		P2		84				Switch acting	<input checked="" type="checkbox"/> make <input type="checkbox"/> break			
				Air supply	min.	6	max.	7	85				Reduction of haz.	<input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.			
				Power failure pos.	<input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> hold				86				Cable gland	G3/4×NPT3/4	Qty	2	
									87				MFR.	NAKAKITA	Model	NS6640E3	
				Calc. max. flow coef. Cv		Calc. nor. flow coef.			88				Valve style	<input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way			
				Calc. min. flow coef. Cv					89				De-energ. : control valve	<input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> lock			
				Selected flow coef. Cv	10				90				Air connection	Rc 3/8	Port size	Rc 3/8	
				Predicted sound pressure level				dB(A)	91				Electrical date	AC220V50Hz			
				MFR.	NAKAKITA SEISAKUSHO CO., LTD.	Model	NS650E0L		92				Reduction of haz.	<input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.			
				Body type	<input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way				93				Cable gland	G1/2×NPT3/4	Qty	1	
				Flow direction	<input type="checkbox"/> FTO <input checked="" type="checkbox"/> FIC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN			△	94				Articles FILTER REGULATOR	Model AW30-036-2-X2253A	Qty	1	
				Pressure rating	300#				95				Articles	Model	Qty		
				Nominal size	DN25				96				Articles	Model	Qty		
				End conn.	<input type="checkbox"/> flgd. <input checked="" type="checkbox"/> s.welded <input type="checkbox"/> b.welded <input type="checkbox"/> thd.				97				Articles	Model	Qty		
				SW					98				Articles	Model	Qty		
				End extensions					99				Articles	Model	Qty		
				Bonnet style	<input type="checkbox"/> standard <input type="checkbox"/> fin <input checked="" type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows				100				Articles	Model	Qty		
				Mounting method	Pls inform				101				Articles	Model	Qty		
				Body/bonnet matl.	A217 WC6				102				Articles	Model	Qty		
				Trim	<input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise				103				Articles	Model	Qty		
				Characteristic	<input checked="" type="checkbox"/> quick opening				104				Articles	Model	Qty		
				Plug/stem matl.	/				105				Tubing/connection	37' SFJφ10+BOOTS	Matl.	C3604	
				Guide/seat matl.	/				106				Test certificate(s)	<input checked="" type="checkbox"/> chem. and mech. test			
									107				Test Press. (Assembly)	<input checked="" type="checkbox"/> water <input type="checkbox"/> air	31.95 bar(g)		
				Seat style	<input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch				108				<input checked="" type="checkbox"/> shell	78 bar(g)	Mass.	31 kg	
				Trim coating	S. STEEL/STELLITE				109				Shut Off Press.	23.43 bar(g)			
									110				Paint Color	SILVER/(Body) SILVER/(Act.)			
				Leakage specification	JEAC3706 0ml/1min(WATER)				111				Valve Speed(sec.)	0→C ≤ 10 C→0 ≤ 10			
				Packing matl.	P#6711				112				<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.				
				gasket matl.	V#8590ML								Rule				

Remarks:

Service : HP FEEDWATER HEATER NO. 5 EXTRACTION STEAM CHECK VALVE INLET DRAIN VALVE
F.R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)

TAG No's	
XIT3	3
XIT4	4

Project	ACEL366DBDE		
Dwg. Ref. No.	ACEL366DBDE		
Plant			
Mat. Req. No.			
Item No.			Qty 1

2

CYLINDER VALVE DATA SHEET

Tag No. *ES-PN004
Mfr. Serial No. 10C2017A/B

				CYLINDER VALVE DATA SHEET				Tag No. *ES-PN004											
								Mfr. Serial No. 10C2017A/B											
1	2	3	4	5				1	2	3	4	5							
				Location	indoor			57					MFR.	NAKAKITA SEISAKUSHO CO., LTD.		Model	DG140		
				Service	See Remarks			58					Pneumatic	<input checked="" type="checkbox"/> piston					
				Haz. area class.				59					Style						
				Ambient temp. min.	°C	max.	°C	60					Act. area	154cm ²					
				Allowable sound pressure level				61					Read. travel/angle	12	mm				
				Pipe identification No.				62					Supply press. min.	6	max.	7 bar(g)			
				DN / /	Sch / /			63					Spring range	1.42-2.27 bar(g)		<input checked="" type="checkbox"/>			
				Pipe material				64					Air consumption	3.48	l(Nor.)/STROKE				
				Pipe insulation				65					Air connection	<input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4					
								66					Other actuator						
				Pipe connection	SOCKET WELD END			67											
				Process fluid	DRAIN			68					<input checked="" type="checkbox"/> Handle						
				Upstream condition	<input checked="" type="checkbox"/> liquid <input type="checkbox"/> vapour <input type="checkbox"/> gas			69											
				Des. press.	21.3 bar(g)	Des. temp.	488 °C	Beckpress.	NO	70									
					Min.	Norm.	Max.	Unit	71										
				Flow rate				72											
				Inlet press.	P1			21.3 bar(g)	73										
				Outlet press.	P2			bar(g)	74										
				Temperature	T1			488 °C	75										
								76											
								77											
								78											
								79											
								80											
								81					MFR.	YAMATAKE		Model	VCL-5102		
								82					Switch type	<input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.					
								83					Switching pos.	<input checked="" type="checkbox"/> closed <input type="checkbox"/> % travel <input checked="" type="checkbox"/> open					
				Shutoff press.	P1	P2			84				Switch acting	<input checked="" type="checkbox"/> make <input type="checkbox"/> break					
				Air supply	min.	6	max.	7	85				Reduction of haz.	<input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.					
				Power failure pos.	<input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> hold			86					Cable gland	G3/4×NPT3/4		Qty	2		
								87					MFR.	NAKAKITA		Model	NS6540E3		
				Calc. max. flow coef. Cv	Calc. nor. flow coef.			88					Valve style	<input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way					
				Calc. min. flow coef. Cv				89					De-energ. control valve	<input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> lock					
				Selected flow coef. Cv	10			90					Air connection	Rc 3/8		Port size	Rc 3/8		
				Predicted sound pressure level				91					Electrical data	AC220V50Hz					
				MFR.	NAKAKITA SEISAKUSHO CO., LTD.		Model	NS650EL0L	92				Reduction of haz.	<input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.					
				Body type	<input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way			93					Cable gland	G1/2×NPT3/4		Qty	1		
				Flow direction	<input type="checkbox"/> FTO <input checked="" type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN			94					Articles	FILTER REGULATOR		Model	AW30-036-2-X2253A	Qty	1
				Pressure rating	300#			95					Articles	Model			Qty		
				Nominal size	DN25			96					Articles	Model			Qty		
				End conn.	<input type="checkbox"/> flgd. <input checked="" type="checkbox"/> s.welded <input type="checkbox"/> b.welded <input type="checkbox"/> thd.			97					Articles	Model			Qty		
				SW				98					Articles	Model			Qty		
				End extensions				99					Articles	Model			Qty		
				Bonnet style	<input type="checkbox"/> standard <input type="checkbox"/> fin <input checked="" type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows			100					Articles	Model			Qty		
				Mounting method	Pls inform			101					Articles	Model			Qty		
				Body/bonnet matl.	A217 WC6			102					Articles	Model			Qty		
				Trim	<input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise			103					Articles	Model			Qty		
				Characteristic	<input checked="" type="checkbox"/> quick opening			104					Articles	Model			Qty		
				Plug/stem matl.	/			105					Tubing/connection	37° SFJφ10×B00TS		Matl.	C3604		
				Guide/seat matl.	/			106					Test certificate(s)	<input checked="" type="checkbox"/> chem. and mech. test					
								107					Test Press. (Assembly)	<input checked="" type="checkbox"/> water <input type="checkbox"/> air 31.95 bar(g)					
				Seat style	<input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch			108					<input checked="" type="checkbox"/> shell	78 bar(g)		Mass.	31 kg		
				Trim coating	S. STEEL/STELLITE			109					Shut Off Press.	23.43 bar(g)					
								110					Paint Color	SILVER/(Body) SILVER/(Act.)					
				Leakage specification	JEAC3706 0ml/1min(WATER)			111					Valve Speed(sec.)	0→C ≤ 10 C→0 ≤ 10					
				Packing matl.	P#6711			112					<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.						
				Gasket matl.	V#8590ML								Rule						

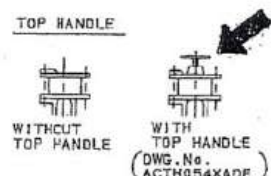
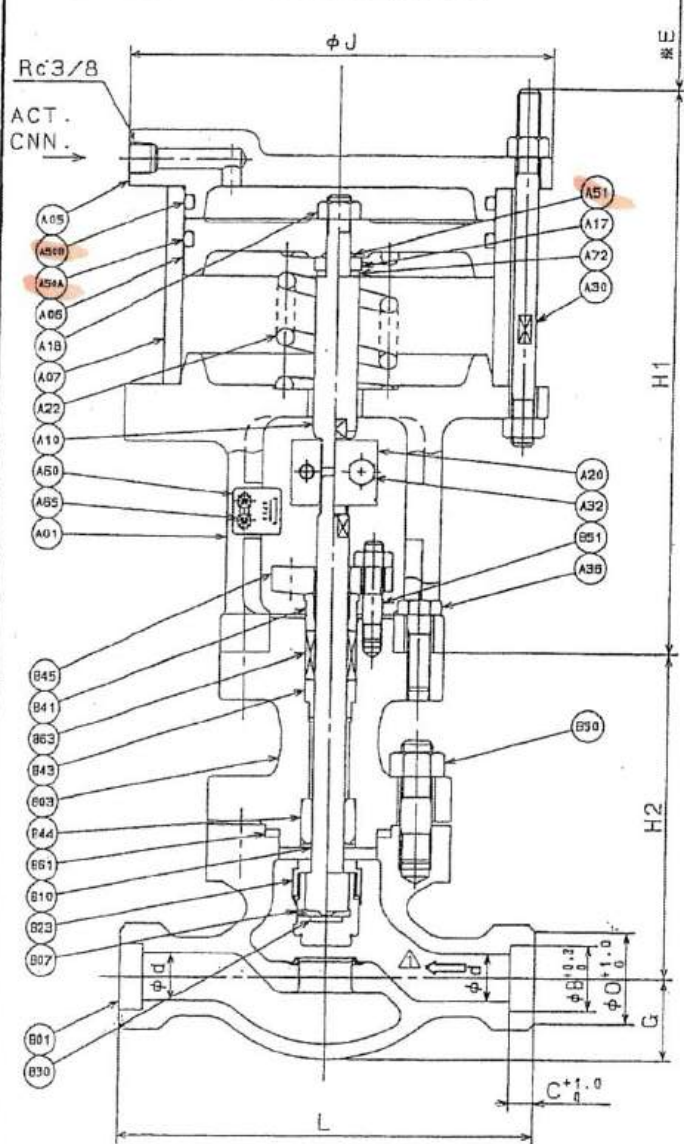
Remarks:

Service : HP FEEDWATER HEATER NO. 5 EXTRACTION STEAM CHECK VALVE OUTLET DRAIN VALVE
F.R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)

	TAG No's *
XIT3	3
XIT4	4

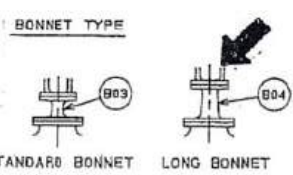
Rev.	Date	Name	Rev.	Date	Name	Project	Dwg. Ref. No.
	10/1/27	K. Ueda					ACEL366DBDE
						Plant	Mat. Req. No.
						P. O. No.	Item No.
							Qty 1

※ OVERHAULE SPACE FOR DISASSEMBLY LIKE USING CHAIR BLOCK IS NOT INCLUDED IN THIS DIMENSION.
 ※ 分解寸法には分拆・組立作業(チェンブロック取付等)に必要な寸法は含まれていません。



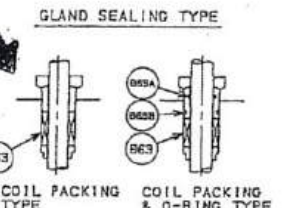
※1 STUD BOLT&NUT

TRIM PARTS No.	TRIM No.	TRIM No.
B50	SNB16/A194 Gr.4	
B51	SUS304D/SUS304	



※2 GASKET (ASBESTOS FREE)

B61	V#6590M	
	V#8590ML	
	V#7590M	

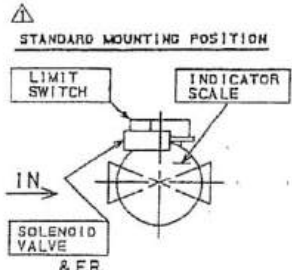
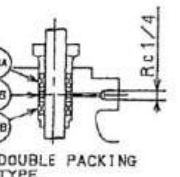


※3 PACKING (ASBESTOS FREE)

B63	P#4519	
B63A	P#6711	
B63B	P#6710+P#6616A	

※4 O-RING MATERIAL

B65A	NBR	
B65B	EPDM	
B65B	FKM	



ACTUATOR TYPE	J	WITHOUT TOP HANDLE		WITH TOP HANDLE		E
		H1	ACTUATOR MASS (kg)	H1	ACTUATOR MASS (kg)	
DG140	190	300	15	371	16	300
DG160	220		21		22	

NOMINAL SIZE	d	C	B	O	L	G	STANDARD BONNET		LONG BONNET		TRAVEL
							H2	BODY MASS (kg)	H2	BODY MASS (kg)	
A 15	1/2	15		22.2	33	191					
A 20	3/4	20	13	27.7	39.5	191	43	171	14.5	222	15
A 25	1	25		34.5	48	216					

PARTS No.	PARTS NAME	MATERIAL	Q'TY	REMARKS
B01	BODY	WC6	1	STELLITING
B03	BONNET	WC6	1	
B04	LONG BONNET	WC6	1	
B07	DISC	SUS316	1	STELLITING
B10	VALVE STEM	SUS316	1	HARD Cr PLATING
B23	DISC STEM NUT	SUS316	1	
B30	THRUST PLATE	STELLITE	1	
B41	GLAND	SUS316	1	
B43	PACKING SEAT	SUS316	1	
B44	BUSHING	SUS316	1	INSIDE STELLITING
B45	GLAND FLANGE	SUS304	1	
B45	LANTERN RING	SUS316	1	
B50	STUD BOLT&NUT	※1	4SETS	
B51	STUD BOLT&NUT	※1	2SETS	
B61	GASKET	※2	1	
B63	PACKING	※3	1SET	
B63A	PACKING	※3	1SET	
B63B	PACKING	※3	1SET	
B65A	O-RING	※4	1	
B65B	O-RING	※4	1	
A01	YOKE	FC250	1	
A05	CYLINDER COVER	FC250	1	
A06	PISTON	FC250	1	MOIL PAINT
A07	CYLINDER	STKM13C	1	INSIDE HARD Cr PL.
A10	PISTON STEM	SUS403	1	
A17	COLLAR	SS400	1	
A18	LOCK NUT	S45C	1	
A20	CONNECTION PIECE	SS400	1SET	
A22	SPRING	SWOSC-B	1	
A30	BOLT&NUT	SS400	4SETS : DG140 6SETS : DG160	
A32	BOLT	SUS304	2	
A36	BOLT	SS400	4	
A50A	O-RING	NBR	1	
A50B	O-RING	NBR	1	
A51	O-RING	NBR	1	
A60	INDICATOR SCALE	SUS304	1	
A65	SET SCREW	SUS304	2	
A72	SPRING WASHER	SWRH	1	

TAG No. : *ES-PN003
 *ES-PN004

2

Rev.	REVISIONS	BY/DATE	CHKD/DATE	APPD/DATE

BY/DATE	CHKD/DATE	APPD/DATE	TYPE NS650EL SIZE 15-25A	SCALE
X.MONDO OCT.11'05	T.KODAMA OCT.11'05	Y.NAKAMURA OCT.12'05	CYLINDER VALVE	MASS
NAKAKITA SEISAKUSHO CO.,LTD.			300-WC6-E31 DG	Rev.
			DWG.No. 10C2016V	0
			ACEL366DBDE	

3

CYLINDER VALVE DATA SHEET

Tag No. *ES-PN007
Mfr. Serial No. 10G2018A/B

1	2	3	4	5	1	2	3	4	5
1				Location indoor	57				MFR. NAKAKITA SEISAKUSHO CO., LTD. Model DG140
2				Service See Remarks	58				Pneumatic <input checked="" type="checkbox"/> piston
3				Haz. area class.	59				Style
4				Ambient temp. min. °C max. °C	60				Act. area 154cm ²
5				Allowable sound pressure level dB(A)	61				Read. travel/angle 12 mm
6				Pipe identification No.	62				Supply press. min. 6 max. 7 bar(g)
7				DN / / Sch /	63				Spring range 0.84-1.32 bar(g)
8				Pipe material	64				Air consumption 3.48 l(Nor.)/STROKE
9				Pipe insulation	65				Air connection <input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4
10					66				Other actuator
11				Pipe connection SOCKET WELD END	67				<input checked="" type="checkbox"/> Handle
12				Process fluid DRAIN	68				
13				Upstream condition <input checked="" type="checkbox"/> liquid <input type="checkbox"/> vapour <input type="checkbox"/> gas	69				
14				Des. press. 7.7 bar(g) Des. temp. 342 °C Backpress. NO	70				
15				Min. Norm. Max. Unit	71				
16				Flow rate	72				
17				Inlet press. P1 7.7 bar(g)	73				
18				Outlet press. P2 bar(g)	74				
19				Temperature T1 342 °C	75				
20					76				
21					77				
22					78				
23					79				
24					80				
25					81				MFR. YAMATAKE Model VCL-5102
26					82				Switch type <input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.
27				Shutoff press. P1 P2	83				Switching pos. <input checked="" type="checkbox"/> closed <input type="checkbox"/> % travel <input checked="" type="checkbox"/> open
28				Air supply min. 6 max. 7	84				Switch acting <input checked="" type="checkbox"/> make <input type="checkbox"/> break
29				Power failure pos. <input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> hold	85				Reduction of haz. <input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.
30					86				Cable gland G3/4×NPT3/4 Qty 2
31				Calc. max. flow coef. Cv Calc. nor. flow coef.	87				MFR. NAKAKITA Model NS6640E3
32				Calc. min. flow coef. Cv	88				Valve style <input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way
33				Selected flow coef. Cv 10	89				De-energ. control valve <input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> lock
34				Predicted sound pressure level dB(A)	90				Air connection Rc 3/8 Port size Rc 3/8
35				MFR. NAKAKITA SEISAKUSHO CO., LTD. Model NS650E L O L	91				Electrical data AC220V50Hz
36				Body type <input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way	92				Reduction of haz. <input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.
37				Flow direction <input type="checkbox"/> FTO <input checked="" type="checkbox"/> FIC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN	93				Cable gland G1/2×NPT3/4 Qty 1
38				Pressure rating 150#	94				Articles FILTER REGULATOR Model AN30-036-2-X2253A Qty 1
39				Nominal size DN25	95				Articles Model Qty
40				End conn. <input type="checkbox"/> flgd. <input checked="" type="checkbox"/> s. welded <input type="checkbox"/> b. welded <input type="checkbox"/> thd.	96				Articles Model Qty
41				SW	97				Articles Model Qty
42				End extensions	98				Articles Model Qty
43				Bonnet style <input type="checkbox"/> standard <input type="checkbox"/> fin <input checked="" type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows	99				Articles Model Qty
44				Mounting method Pls inform	100				Articles Model Qty
45				Body/bonnet matl. A216 WCB	101				Articles Model Qty
46				Trim <input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise	102				Articles Model Qty
47				Characteristic <input checked="" type="checkbox"/> quick opening	103				Articles Model Qty
48				Plug/stem matl. /	104				Articles Model Qty
49				Guide/seat matl. /	105				Articles Model Qty
50					106				Articles Model Qty
51				Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch	107				Articles Model Qty
52				Trim coating S. STEEL/STELLITE	108				Articles Model Qty
53					109				Articles Model Qty
54				Leakage specification JEAC3706 0ml/min(WATER)	110				Articles Model Qty
55				Packing matl. P#6711	111				Articles Model Qty
56				gasket matl. V#6590M	112				Articles Model Qty

Remarks:
 ⚠ Service DEAERATOR AND FEEDWATER TANK EXTRACTION STEAM CHECK VALVE INLET DRAIN VALVE
 F. R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)

	TAG No's *
XIT3	3
XIT4	4

2	10/27	K. Wada			Project		Dwg. Ref. No.	ACEL366DBDE
1	09/9/10	K. Wada			Plant		Mat. Req. No.	
Rev.	Date	Name	Rev.	Date	Name	P. O. No.	Item No.	Qty 1

3

CYLINDER VALVE DATA SHEET										Tag No. +ES-PN008					
										Mfr. Serial No. 10C2019A/B					
1	2	3	4	5					1	2	3	4	5		
1				Location indoor					57				MFR.	NAKAKITA SEISAKUSHO CO., LTD.	Model DG140
2				Service See Remarks					58				Pneumatic	<input checked="" type="checkbox"/> piston	
3				Haz. area class.					59				Style		
4				Ambient temp. min. °C max. °C					60				Act. area	154cm ²	
5				Allowable sound pressure level dB(A)					61				Reqd. travel/angle	12 mm	
6				Pipe identification No.					62				Supply press. min. 6 max. 7 bar(g)		
7				DN / / Sch /					63				Spring range	0.84-1.32 bar(g)	
8				Pipe material					64				Air consumption	3.48 l(Nor.)/STROKE	
9				Pipe insulation					65				Air connection	<input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4	
10									66				Other actuator		
11				Pipe connection SOCKET WELD END					67						
12				Process fluid DRAIN					68						
13				Upstream condition <input checked="" type="checkbox"/> liquid <input type="checkbox"/> vapour <input type="checkbox"/> gas					69						
14				Des. press. 7.7 bar(g) Des. temp. 342 °C Backpress. NO					70						
15				Min. Norm. Max. Unit					71						
16				Flow rate					72						
17				Inlet press. P1 7.7 bar(g)					73						
18				Outlet press. P2 bar(g)					74						
19				Temperature T1 342 °C					75						
20									76						
21									77						
22									78						
23									79						
24									80						
25									81						
26									82						
27				Shutoff press. P1 P2					83						
28				Air supply min. 6 max. 7					84						
29				Power failure pos. <input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> hold					85						
30									86						
31				Calc. max. flow coef. Cv Calc. nor. flow coef.					87						
32				Calc. min. flow coef. Cv					88						
33				Selected flow coef. Cv 10					89						
34				Predicted sound pressure level dB(A)					90						
35				MFR. NAKAKITA SEISAKUSHO CO., LTD. Model NS650E0L					91						
36				Body type <input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way					92						
37				Flow direction <input type="checkbox"/> FTO <input checked="" type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN <input type="checkbox"/> A					93						
38				Pressure rating 150#					94						
39				Nominal size DN25					95						
40				End conn. <input type="checkbox"/> flgd. <input checked="" type="checkbox"/> s.welded <input type="checkbox"/> b.welded <input type="checkbox"/> thd.					96						
41				SW					97						
42				End extensions					98						
43				Bonnet style <input type="checkbox"/> standard <input type="checkbox"/> fin <input checked="" type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows					99						
44				Mounting method Pls inform					100						
45				Body/bonnet matl. A216 WCB					101						
46				Trim <input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise					102						
47				Characteristic <input checked="" type="checkbox"/> quick opening					103						
48				Plug/stem matl. /					104						
49				Guide/seat matl. /					105						
50									106						
51				Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch					107						
52				Trim coating S. STEEL/STELLITE					108						
53									109						
54				Leakage specification JEAC3706 0ml/1min(WATER)					110						
55				Packing matl. P#6711					111						
56				gasket matl. V#6590M					112						

Remarks:
 ⚠ Service : (DEAERATOR) AND FEEDWATER TANK EXTRACTION STEAM CHECK VALVE OUTLET DRAIN VALVE
 F. R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)

TAG No's	
XIT3	3
XIT4	4

Rev.	Date	Name	Rev.	Date	Name	P. O. No.	Dwg. Ref. No.	ACEL366BDE
	10/29	R. Wade					Mat. Req. No.	
	09/10	K. Wade					Item No.	Qty 1

3

CYLINDER VALVE DATA SHEET

Tag No. *GST-PN001A
Mfr. Serial No. 10C2031A/B

1	2	3	4	5	1	2	3	4	5
1			Location	indoor	57			MFR.	NAKAKITA SEISAKUSHO CO.,LTD. Model DG140
2			Service	See Remarks	58			Pneumatic	<input checked="" type="checkbox"/> piston
3			Haz. area class.		59			Style	
4			Ambient temp. min.	°C max. °C	60			Act. area	154cm ²
5			Allowable sound pressure level		61			Reqd. travel/angle	12 mm
6			Pipe identification No.		62			Supply press. min.	6 max. 7 bar(g)
7			DN / /	Sch /	63			Spring range	0.84-1.32 bar(g)
8			Pipe material		64			Air consumption	3.48 ℓ(Nor.)/STROKE
9			Pipe insulation		65			Air connection	<input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4
10					66			Other actuator	
11			Pipe connection	SOCKET WELD END	67				
12			Process fluid	DRAIN	68			<input checked="" type="checkbox"/> Handle	
13			Upstream condition	<input checked="" type="checkbox"/> liquid <input type="checkbox"/> vapour <input type="checkbox"/> gas	69				
14			Des. press.	1.73 bar(g) Des. temp. 390 °C Backpress. NO	70				
15				Min. Norm. Max. Unit	71				
16			Flow rate		72				
17			Inlet press. P1		73				
18			Outlet press. P2		74				
19			Temperature T1		75				
20					76				
21					77				
22					78				
23					79				
24					80				
25					81				
26					82				
27			Shutoff press. P1	1.73 P2	83			MFR.	YAMATAKE Model VCL-5102
28			Air supply min.	6 max. 7	84			Switch type	<input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.
29			Power failure pos.	<input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> hold	85			Switching pos.	<input checked="" type="checkbox"/> closed <input type="checkbox"/> % travel <input checked="" type="checkbox"/> open
30					86			Switch acting	<input checked="" type="checkbox"/> make <input type="checkbox"/> break
31					87			Reduction of haz.	<input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.
32			Calc. max. flow coef. Cv	Calc. nor. flow coef.	88			Cable gland	G3/4×NPT3/4 Qty 2
33			Calc. min. flow coef. Cv		89			MFR.	NAKAKITA Model NS6640E3
34			Selected flow coef. Cv	10	90			Valve style	<input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way
35			Predicted sound pressure level		91			De-energ. : control valve	<input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> lock
36			MFR.	NAKAKITA SEISAKUSHO CO.,LTD. Model NS650E L0L	92			Air connection	Rc 3/8 Port size Rc 3/8
37			Body type	<input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way	93			Electrical date	AC220V50Hz
38			Flow direction	<input type="checkbox"/> FTO <input checked="" type="checkbox"/> FIC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN	94			Reduction of haz.	<input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.
39			Pressure rating	150#	95			Cable gland	G1/2×NPT3/4 Qty 1
40			Nominal size	DN25	96			Articles FILTER REGULATOR	Model AW30-036-2-X2253A Qty 1
41			End conn. <input type="checkbox"/> flgd. <input checked="" type="checkbox"/> s.welded <input type="checkbox"/> b.welded <input type="checkbox"/> thd.		97			Articles	Model Qty
42			SW		98			Articles	Model Qty
43			End extensions		99			Articles	Model Qty
44			Bonnet style <input type="checkbox"/> standard <input type="checkbox"/> fin <input checked="" type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> belows		100			Articles	Model Qty
45			Mounting method	Pls inform	101			Articles	Model Qty
46			Body/bonnet matl.	A216 WCB	102			Articles	Model Qty
47			Trin <input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise		103			Articles	Model Qty
48			Characteristic <input checked="" type="checkbox"/> quick opening		104			Articles	Model Qty
49			Plug/stem matl.	/	105			Tubing/connection	37° SFJφ10+BOOTS Matl. C3604
50			Guide/seat matl.	/	106			Test certificate(s)	<input checked="" type="checkbox"/> chem. and mech. test
51			Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch		107			Test Press. (Assembly)	<input checked="" type="checkbox"/> water <input type="checkbox"/> air 2.60 bar(g)
52			Trin coating	S. STEEL/STELLITE	108			<input checked="" type="checkbox"/> shell	30 bar(g) Mass. 31 kg
53					109			Shut Off Press.	1.91 bar(g)
54			Leakage specification	JEAC3706 0ml/min(WATER)	110			Paint Color	SILVER/(Body) SILVER/(Act.)
55			Packing matl.	P#6711	111			Valve Speed(sec.)	0→C ≤ 10 C→0 ≤ 10
56			gasket matl.	V#6590M	112			<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.	

Remarks:

Service : BFPT A STEAM SEAL HEADER DRAIN VALVE
F.R. SET PRESS. : 7bar(INLET PRESS. :6~12bar)

Rev.	Date	Name	Rev.	Date	Name

Rev.	Date	Name	Rev.	Date	Name	Project	Dwg. Ref. No.	Mat. Req. No.	Item No.	Qty
	10/27	H. Wada				ACEL366BDE				1

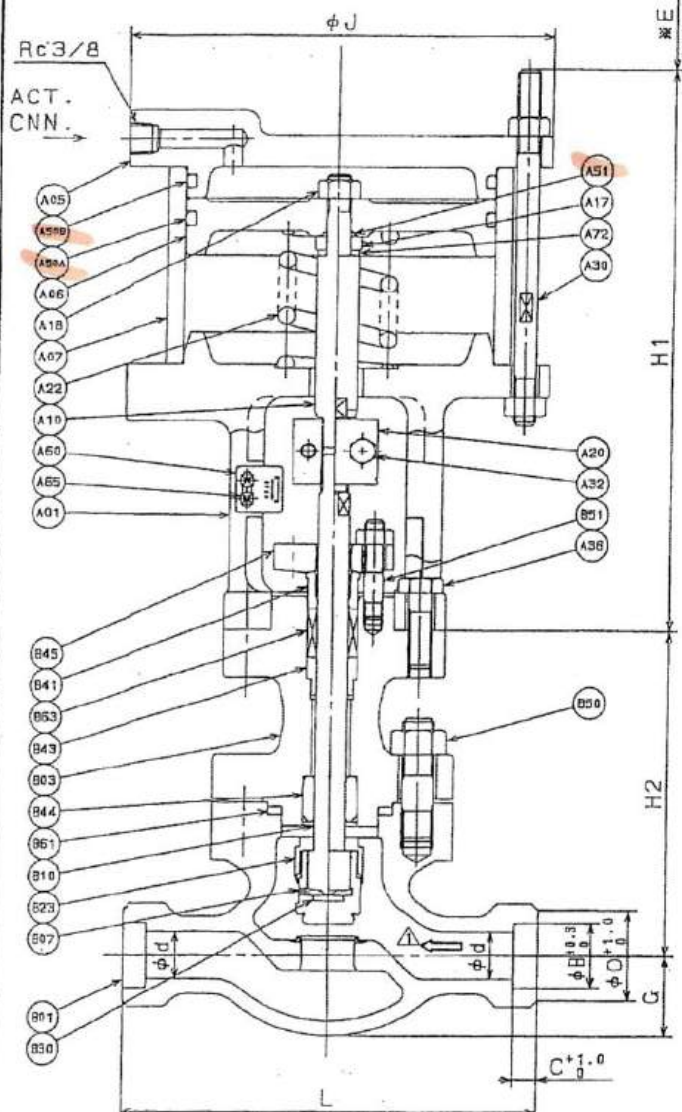
CYLINDER VALVE DATA SHEET					Tag No. +GST-PNDD1B				
					Mfr. Serial No. 10C2032A/B				
1	2	3	4	5	1	2	3	4	5
				Location indoor	57			MFR. NAKAKITA SEISAKUSHO CO., LTD.	Model DG140
				Service See Remarks	58			Pneumatic <input checked="" type="checkbox"/> piston	
				Haz. area class.	59			Style	
				Ambient temp. min. °C max. °C	60			Act. area 154cm ²	
				Allowable sound pressure level dB(A)	61			Reqd. travel/angle 12 mm	
				Pipe identification No.	62			Supply press. min. 6 max. 7 bar (g)	
				DN / / Sch /	63			Spring range 0.84-1.32 bar (g)	
				Pipe material	64			Air consumption 3.48 l(Nor.)/STROKE	
				Pipe insulation	65			Air connection <input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4	
				Pipe connection SOCKET WELD END	66			Other actuator	
				Process fluid DRAIN	67				
				Upstream condition <input checked="" type="checkbox"/> liquid <input type="checkbox"/> vapour <input type="checkbox"/> gas	68			<input checked="" type="checkbox"/> Handle	
				Des. press. 1.73 bar (g) Des. temp. 390 °C Backpress. NO	69				
				Min. Norm. Max. Unit	70				
				Flow rate	71				
				Inlet press. P1	72				
				Outlet press. P2	73				
				Temperature T1	74				
					75				
					76				
					77				
					78				
					79				
					80				
					81			MFR. YAMATAKE	Model VCL-5102
					82			Switch type <input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.	
					83			Switching pos. <input checked="" type="checkbox"/> closed <input type="checkbox"/> % travel <input checked="" type="checkbox"/> open	
					84			Switch acting <input checked="" type="checkbox"/> make <input type="checkbox"/> break	
				Shutoff press. P1 1.73 P2	85			Reduction of haz. <input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.	
				Air supply min. 6 max. 7	86			Cable gland G3/4 x NPT3/4 Qty 2	
				Power failure pos. <input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> hold	87			MFR. NAKAKITA	Model NS6640E3
				Calc. max. flow coef. Cv	88			Valve style <input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way	
				Calc. min. flow coef. Cv	89			De-energ. : control valve <input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> lock	
				Selected flow coef. Cv 10	90			Air connection Rc 3/8	Port size Rc 3/8
				Predicted sound pressure level dB(A)	91			Electrical date AC220V50Hz	
				MFR. NAKAKITA SEISAKUSHO CO., LTD. Model NS650E L0L	92			Reduction of haz. <input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.	
				Body type <input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way	93			Cable gland G1/2 x NPT3/4 Qty 1	
				Flow direction <input type="checkbox"/> FTO <input checked="" type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN	94			Articles FILTER REGULATOR Model AW30-036-2-X2253A Qty 1	
				Pressure rating 150#	95			Articles Model Qty	
				Nominal size DN25	96			Articles Model Qty	
				End conn. <input type="checkbox"/> figd. <input checked="" type="checkbox"/> s. welded <input type="checkbox"/> b. welded <input type="checkbox"/> thd.	97			Articles Model Qty	
				SW	98			Articles Model Qty	
				End extensions	99			Articles Model Qty	
				Bonnet style <input type="checkbox"/> standard <input type="checkbox"/> fin <input checked="" type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows	100			Articles Model Qty	
				Mounting method - Pls inform	101			Articles Model Qty	
				Body/bonnet matl. A216 WCB	102			Articles Model Qty	
				Trim <input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise	103			Articles Model Qty	
				Characteristic <input checked="" type="checkbox"/> quick opening	104			Articles Model Qty	
				Plug/stem matl. /	105			Tubing/connection 37" SFJφ10*BOOTS Matl. C3604	
				Guide/seal matl. /	106			Test certificate(s) <input checked="" type="checkbox"/> chem. and mech. test	
					107			Test Press. (Assembly) <input checked="" type="checkbox"/> water <input type="checkbox"/> air 2.60 bar (g)	
				Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch	108			<input checked="" type="checkbox"/> shell 30 bar (g) Mass. 31 kg	
				Trim coating S. STEEL/STELLITE	109			Shut Off Press. 1.91 bar (g)	
					110			Paint Color SILVER/(Body) SILVER/(Act.)	
				Leakage specification JEAC3706 0ml/1min(WATER)	111			Valve Speed(sec.) 0→C ≤ 10 C→0 ≤ 10	
				Packing matl. P#6711	112			<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.	
				gasket matl. V#6590M				Rule	

Remarks: Service : BFPT B STEAM SEAL HEADER DRAIN VALVE
F.R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)

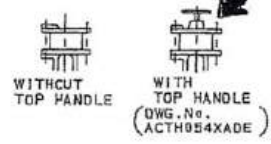
TAG No's *	
XIT3	3
XIT4	4

Project	Dwg. Ref. No.	ACEL366DBDE
Plant	Mat. Req. No.	
Rev.	Date	Name
Rev.	Date	Name
Rev.	Date	Name
P. O. No.	Item No.	Qty 1

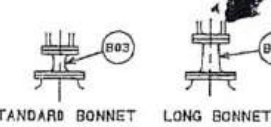
OVERHAUL SPACE FOR DISASSEMBLY LIKE USING CHAIN BLOCK IS NOT INCLUDED IN THIS DIMENSION.
 分解寸法には分解・組立作業（チェーンブロック取付等）に必要な寸法は含まれていません。



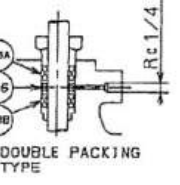
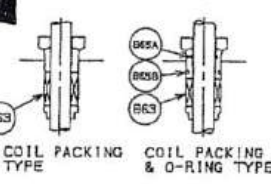
TOP HANDLE



BONNET TYPE



GLAND SEALING TYPE



#1 STUD BOLT&NUT

TRIM PART No.	
B50	SNB7/S45C
B51	SUS304D/SUS304

#2 GASKET (ASBESTOS FREE)

B61	V#6590M
	V#6590ML
	V#7590M

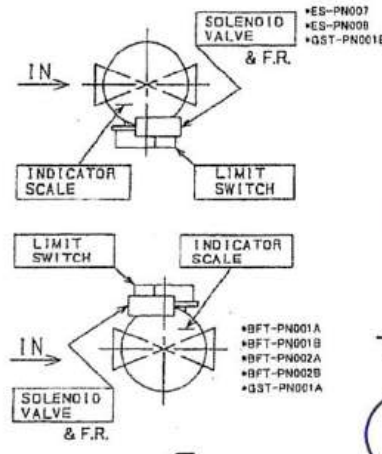
#3 PACKING (ASBESTOS FREE)

B63	P#4519
B63A	P#6711
B63B	P#6710+P#6616A

#4 O-RING MATERIAL

B65A	NBR
B65B	EPDM
B65B	FKM

STANDARD MOUNTING POSITION



*ES-PN007
 *ES-PN008
 *GST-PN001B
 *BFT-PN001A
 *BFT-PN001B
 *BFT-PN002A
 *BFT-PN002B
 *GST-PN001A
 *GST-PN001B

TAG No. : *ES-PN007 *BFT-PN002A
 *ES-PN008 *BFT-PN002B
 *BFT-PN001A *GST-PN001A
 *BFT-PN001B *GST-PN001B

ACTUATOR TYPE	J	WITHOUT TOP HANDLE		WITH TOP HANDLE		E
		H1	ACTUATOR MASS (kg)	H1	ACTUATOR MASS (kg)	
DG140	190	300	15	371	16	300
DG160	220		21		22	

NOMINAL SIZE		d	C	B	D	L	G	STANDARD BONNET		LONG BONNET		TRAVEL
A	B							H2	BODY MASS (kg)	H2	BODY MASS (kg)	
15	1/2	15		22.2	33	191	43	171	14.5	222	15	12
20	3/4	20	13	27.7	39.5	191						
25	1	25		34.5	48	216						

PARTS No.	PARTS NAME	MATERIAL	Q'TY	REMARKS
B01	BODY	WCB	1	STELLITING
B03	BONNET	WCB	1	
B04	LONG BONNET	WCB	1	
B07	DISC	SUS316	1	STELLITING
B10	VALVE STEM	SUS316	1	HARD Cr PLATING
B23	DISC STEM NUT	SUS316	1	
B30	THRUST PLATE	SUS420J2	1	HEAT TREATED
B41	GLAND	SUS316	1	
B43	PACKING SEAT	SUS316	1	
B44	BUSHING	SUS440C	1	HEAT TREATED
B45	GLAND FLANGE	SUS304	1	
B46	LANTERN RING	SUS316	1	
B50	STUD BOLT&NUT	#1	4SETS	
B51	STUD BOLT&NUT	#1	2SETS	
B61	GASKET	#2	1	
B63	PACKING	#3	1SET	
B63A	PACKING	#3	1SET	
B63B	PACKING	#3	1SET	
B65A	O-RING	#4	1	
B65B	O-RING	#4	1	
A01	YOKE	FC250	1	
A05	CYLINDER COVER	FC250	1	
A06	PISTON	FC250	1	MOIL PAINT
A07	CYLINDER	STKM13C	1	INSIDE HARD Cr PL.
A10	PISTON STEM	SUS403	1	
A17	COLLAR	SS400	1	
A18	LOCK NUT	S45C	1	
A20	CONNECTION PIECE	SS400	1SET	
A22	SPRING	SWOSC-B	1	
A30	BOLT&NUT	SS400	4SETS	DG140
A32	BOLT	SUS304	2	DG160
A36	BOLT	SS400	4	
A50A	O-RING	NBR	1	
A50B	O-RING	NBR	1	
A51	O-RING	NBR	1	
A60	INDICATOR SCALE	SUS304	1	
A65	SET SCREW	SUS304	2	
A72	SPRING WASHER	SWRH	1	

Rev.	REVISIONS			BY/DATE	CHKD/DATE	APPD/DATE
	BY/DATE	CHKD/DATE	APPD/DATE	TYPE NS650EL SIZE 15~25A		
	K.MONDO OCT.11'05	T.KODAMA OCT.11'05	Y.NAKAMURA OCT.12'05	CYLINDER VALVE		
	NAKAKITA SEISAKUSHO CO.,LTD.			DWG. No. 10C2018V ACEL366DBDE		

SPC-GIH-XIT3-0004

39

'08 7/26
STD.

R-1

4

CYLINDER VALVE DATA SHEET

Tag No. *FW-PN001
Mfr. Serial No. 10C2022A/B

1	2	3	4	5	1	2	3	4	5
1	Location	indoor			57	MFR.	NAKAKITA SEISAKUSHO CO., LTD.		Model RA280
2	Service	See Remarks			58	Pneumatic	<input checked="" type="checkbox"/> piston		
3	Haz. area class.				59	Style			
4	Ambient temp. min.	°C		max.	°C	60	Act. area	616cm ²	
5	Allowable sound pressure level				61	Reqd. travel/angle	25		mm
6	Pipe identification No.				62	Supply press. min.	6		max. 7 bar(g)
7	DN / /	Sch /		63	Spring range	2.55-3.17 bar(g)			
8	Pipe material				64	Air consumption	29.41 ℓ(Nor.)/STROKE		
9	Pipe insulation				65	Air connection	<input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4		
10					66	Other actuator			
11	Pipe connection	SOCKET WELD END			67				
12	Process fluid	FEED WATER			68	<input checked="" type="checkbox"/> Handle			
13	Upstream condition	<input checked="" type="checkbox"/> liquid <input type="checkbox"/> vapour <input type="checkbox"/> gas			69				
14	Des. press.	25 bar(g)		Des. temp.	174 °C	Backpress.	NO		
15		Min.	Norm.	Max.	Unit	71			
16	Flow rate				72				
17	Inlet press. P1			25	bar(g)	73			
18	Outlet press. P2				bar(g)	74			
19	Temperature T1			174	°C	75			
20					76				
21					77				
22					78				
23					79				
24					80				
25					81	MFR.	YAMATAKE		Model VCL-5102
26					82	Switch type	<input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.		
27					83	Switching pos.	<input checked="" type="checkbox"/> closed <input type="checkbox"/> % travel <input checked="" type="checkbox"/> open		
28	Shutoff press. P1			P2	84	Switch acting	<input checked="" type="checkbox"/> make <input type="checkbox"/> break		
29	Air supply min.	6		max.	7	Reduction of haz.	<input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.		
30	Power failure pos.	<input type="checkbox"/> open <input checked="" type="checkbox"/> closed <input type="checkbox"/> hold			85	Cable gland	G3/4×NPT3/4 Qty 2		
31					86	MFR.	NAKAKITA		Model NS6640E3
32	Calc. max. flow coef. Cv	Calc. nor. flow. coef.			87	Valve style	<input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way		
33	Calc. min. flow coef. Cv				88	De-energ. : control valve	<input type="checkbox"/> open <input checked="" type="checkbox"/> closed <input type="checkbox"/> lock		
34	Selected flow coef. Cv	43			89				
35	Predicted sound pressure level				90	Air connection	Rc 3/8		Port size Rc 3/8
36	MFR.	NAKAKITA SEISAKUSHO CO., LTD.		Model	NS650EL00	91	Electrical data	AC220V50Hz	
37	Body type	<input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way			92	Reduction of haz.	<input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.		
38	Flow direction	<input checked="" type="checkbox"/> FTD <input type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN			93	Cable gland	G1/2×NPT3/4 Qty 1		
39	Pressure rating	300#			94	Articles FILTER REGULATOR	Model AW30-036-2-X2253A		Qty 1
40	Nominal size	DN50			95	Articles	Model Qty		
41	End conn. <input type="checkbox"/> flgd. <input checked="" type="checkbox"/> s.welded <input type="checkbox"/> b.welded <input type="checkbox"/> thd.				96	Articles	Model Qty		
42	SW				97	Articles	Model Qty		
43	End extensions				98	Articles	Model Qty		
44	Bonnet style <input checked="" type="checkbox"/> standard <input type="checkbox"/> fin <input type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows				99	Articles	Model Qty		
45	Mounting method	Pls inform			100	Articles	Model Qty		
46	Body/bonnet matl.	A216 WCB			101	Articles	Model Qty		
47	Trim <input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> oage <input type="checkbox"/> pilot <input type="checkbox"/> low noise				102	Articles	Model Qty		
48	Characteristic <input checked="" type="checkbox"/> quick opening				103	Articles	Model Qty		
49	Plug/stem matl.	/			104	Tubing/connection	37° SFJφ10+BOOTS		Matl. C3604
50	Guide/seat matl.	/			105	Test certificate(s)	<input checked="" type="checkbox"/> chem. and mech. test		
51	Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch				106	Test Press. (Assembly)	<input checked="" type="checkbox"/> water <input type="checkbox"/> air		37.50 bar(g)
52	Trim coating	S. STEEL/STELLITE			108	<input checked="" type="checkbox"/> shell	77 bar(g)		Mass. 154.5 kg
53					109	Shut Off Press.	27.50 bar(g)		
54	Leakage specification	JEAC3706 0ml/1min(WATER)			110	Paint Color	SILVER/ (Body) SILVER/ (Act.)		
55	Packing matl.	P#4519			111	Valve Speed(sec.)	0→C ≤ 10 C→0 ≤ 10		
56	Gasket matl.	V#6590H			112	<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.			

Remarks:

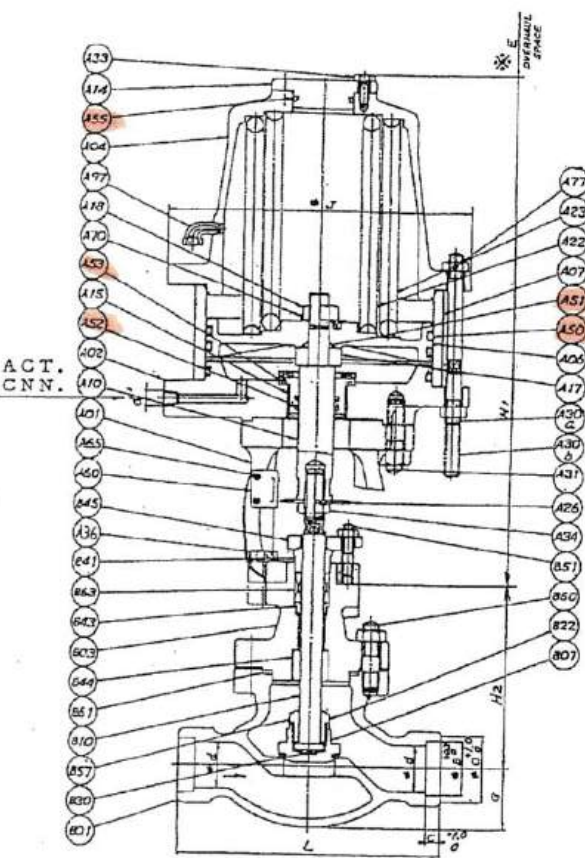
Service : HP FEEDWATER HEATER NO. 5 DRAIN PIPE WARMING VALVE
F. R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)

TAG No's *	
XIT3	3
XIT4	4

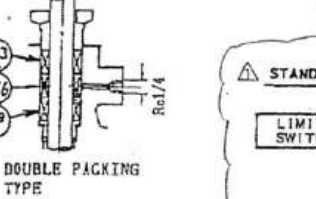
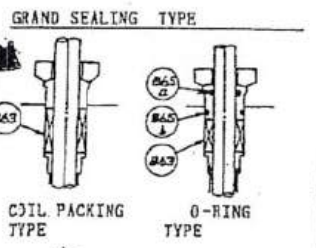
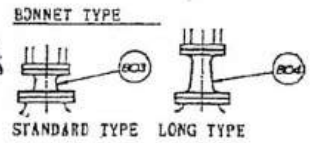
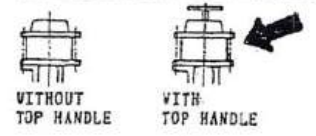
Project	Dwg. Ref. No.	ACEL505DBRE
Plant	Mat. Req. No.	
Rev.	Date	Name
Rev.	Date	Name
P. O. No.	Item No.	Qty 1

※ Overhaul space for disassembly
the valve chain block is not
included in this dimension.

※ 分解寸法には分解・組立作業（チェ
ンブロック取付等）に必要寸法は
含まれていません。



DRAWING No. ACTH035XARE



#1 STUD BOLT & NUT

No.	
B50	SNB7/S45C
B51	SUS304D/SUS304

#2 GASKET (ASBESTOS FREE)

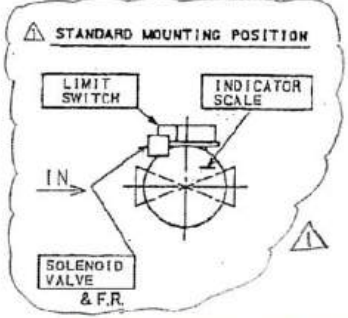
B61	V#6590M	V#7590M
	V#8590ML	

#3 PACKING (ASBESTOS FREE)

B63	P#4519	P#6711
B63a	P#6710	P#6722
B63b	+P#6616A	

#4 O-RING MATERIAL

B65a	NBR	FPN
D65b		EPDM



TAG No. : *FW-PN001

PARTS No.	PARTS NAME	MATERIAL	Q'TY	REMARKS
B01	BODY	WCB	1	STELLITING
B03	BONNET	WCB	1	
B04	LONG BONNET	WCB	1	
B07	DISC	SUS304	1	STELLITING
B10	VALVE STEM	SUS403	1	HARD Cr PLATING
B22	DISC STEM NUT	SUS403	1	
B30	DISC PLATE	SUS420J2	1	HEAT TREATED
B41	GLAND	SUS316	1	
B43	PACKING SGAT	SUS316	1	
B44	BUSHING	SUS440C	1	HEAT TREATED
B45	GLAND FLANGE	SUS304	1	
B46	LANTERN RING	SUS316	1	
B50	STUD BOLT & NUT	#1	4SETS	BORE 32A, 40A
B51	STUD BOLT & NUT	#1	2SETS	BORE 50A
B57	LOCK WASHER	SUS316	1	
B61	GASKET	#2	1	
B63	PACKING	#3	1SET	
B63a	PACKING	#3	1SET	
B63b	PACKING	#3	1SET	
B65a	O-RING	#4	1	
B65b	O-RING	#4	1	
A01	YOKE	SCPN2	1	
A02	CYLINDER BASE	FCD400	1	
A04	CYLINDER COVER	FCD400	1	
A06	PISTON	FC250	1	MOTL PAINT
A07	CYLINDER	STP#370	1	INSIDE HCr PLAT.
A10	PISTON STEM	SUS403	1	RA200, 240
A14	COVER	C3604BE	1	RA280
A15	BUSHING	C3604BE	1	
A17	COLLAR	SS400	1	
A18	LOCK NUT	SS400	1	
A22	SPRING	SUP10	1	
A23	SPRING	SUP10	1	
A26	TRAVEL INDICATOR	C2600P	1	
A30a	BOLT & NUT	SS400	6SETS	RA200, 240
			8SETS	RA280
A30b	STUD BOLT & NUT	SUS316	2SETS	RA200, 240
			4SETS	RA280
A36	BOLT	S45CEQ.	4	
A31	STUD BOLT & NUT	SS400	4SETS	
A33	BOLT	SS400	4	
A34	LOCK NUT	SUS304	1	
A50	O-RING	NBR	3	
A51	O-RING	NBR	1	
A52	O-RING	NBR	2	
A53	O-RING	NBR	1	
A55	O-RING	NBR	1	
A60	INDICATOR SCALE	SUS304	1	
A65	SET SCREW	SUS304	2	
A70	WASHER	SUS304	1	
A77	SPRIT PIN	SUS304	1	2SETS: RA200, 240
A97	ELBOW	FCHB270	1	4SETS: RA280

ADHINAL BORE	A	B	d	C	B	D	L	G	H2		BODY MASS (kg)		TRAVEL
									STANDARD TYPE	LONG TYPE	STANDARD TYPE	LONG TYPE	
31	1-1/4	32	13	43.2	58	216	53	185	270	20	23	15	
46	1-1/2	40	13	49.1	64	229	53	190	275	19.5	23		
56	2	50	16	61.1	77.5	267	64	195	280	24.5	27		25

ACTUATOR TYPE	J	d'	H1				E		ACTUATOR MASS (kg)	
			WITH OUT TOP HANDL	WITH TOP HANDL	WITH OUT TOP HANDL	WITH TOP HANDL	WITH OUT TOP HANDLE	WITH TOP HANDLE		
RA200	280	Rc3/8	545	638	350	450	69	83		
RA240	320		565	658	350	450	93	107		
RA280	350		590	683	400	500	116	130		

REVISIONS				BY/DATE	CHKD/DATE	CHKD/DATE	APPO/DATE
BY/DATE	CHKD/DATE	CHKD/DATE	APPO/DATE				
Z. Hondo 10/15/92							
NAKAKITA SEISAKUSHO CO. LTD.				3rd ANGLE PROJ.	SCALE	TYPE. NS 6 5 0 ELOO*ELOL	
						CYLINDER VALVE (300 - WCB) RA	
						ACEL505DBRE10	

41

9/2
12/15
ACT

A

B

C

D

E

F

SPC-GIH-XIT3-0004

R-1

				CYLINDER VALVE DATA SHEET				Tag No. *ATT-PN001										
								Mfr. Serial No. 10C2023A/B										
1	2	3	4	5				1	2	3	4	5						
				Location	indoor			57					MFR.	NAKAKITA SEISAKUSHO CO., LTD.		Model	RG160	
				Service	See Remarks			58					Pneumatic	<input checked="" type="checkbox"/> piston				
				Haz. area class.				59					Style					
				Ambient temp. min.	°C		max. °C	60					Act. area	201cm ²				
				Allowable sound pressure level				dB(A)	61				Reqd. travel/angle	12		mm		
				Pipe identification No.					62				Supply press. min.	6		max. 7 bar(g)		
				DN / /	Sch /			63				Spring range	2.06-2.94 bar(g)					
				Pipe material					64				Air consumption	6.08		ℓ(Nor.)/STROKE		
				Pipe insulation					65				Air connection	<input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4				
									66				Other actuator					
				Pipe connection	SOCKET WELD END				67									
				Process fluid	CONDENSATE WATER				68				<input checked="" type="checkbox"/> Handle					
				Upstream condition	<input checked="" type="checkbox"/> liquid <input type="checkbox"/> vapour <input type="checkbox"/> gas				69									
				Des. press.	30 bar(g)		Des. temp.	60 °C		Backpress.	NO							
					Min.	Norm.	Max.	Unit										
				Flow rate					72									
				Inlet press. P1					73									
				Outlet press. P2					74									
				Temperature T1					75									
									76									
									77									
									78									
									79									
									80				MFR.	YAMATAKE		Model	VCL-5102	
									81				Switch type	<input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.				
									82				Switching pos.	<input checked="" type="checkbox"/> closed <input type="checkbox"/> % travel <input checked="" type="checkbox"/> open				
				Shutoff press. P1	30		P2		83				Switch acting	<input checked="" type="checkbox"/> make <input type="checkbox"/> break				
				Air supply min.	6		max. 7		84				Reduction of haz.	<input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.				
				Power failure pos.	<input type="checkbox"/> open <input checked="" type="checkbox"/> closed <input type="checkbox"/> hold				85				Cable gland	G3/4×NPT3/4		Qty	2	
									86				MFR.	NAKAKITA		Model	NS6640E3	
				Calc. max. flow coef. Cv				Calc. nor. flow. coef.		87			Valve style	<input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way				
				Calc. min. flow coef. Cv					88				De-energ. : control valve	<input type="checkbox"/> open <input checked="" type="checkbox"/> closed <input type="checkbox"/> lock				
				Selected flow coef. Cv	10				89									
				Predicted sound pressure level				dB(A)	90				Air connection	Rc 3/8		Port size	Rc 3/8	
				MFR.	NAKAKITA SEISAKUSHO CO., LTD.		Model	NS650EL00					Electrical data	AC220V50Hz				
				Body type	<input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way				92				Reduction of haz.	<input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.				
				Flow direction	<input checked="" type="checkbox"/> FTO <input type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN				93				Cable gland	G1/2×NPT3/4		Qty	1	
				Pressure rating	300#				94				Articles	FILTER REGULATOR Model AN30-036-2-X2253A		Qty	1	
				Nominal size	DN25				95				Articles	Model			Qty	
				End conn. <input type="checkbox"/> flgd. <input checked="" type="checkbox"/> s. welded <input type="checkbox"/> b. welded <input type="checkbox"/> thd.					96				Articles	Model			Qty	
				SW					97				Articles	Model			Qty	
				End extensions					98				Articles	Model			Qty	
				Bonnet style <input checked="" type="checkbox"/> standard <input type="checkbox"/> fin <input type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows					99				Articles	Model			Qty	
				Mounting method	Pis inform				100				Articles	Model			Qty	
				Body/bonnet matl.	A216 WCB				101				Articles	Model			Qty	
				Trim <input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise					102				Articles	Model			Qty	
				Characteristic <input checked="" type="checkbox"/> quick opening					103				Articles	Model			Qty	
				Plug/stem matl.	/				104				Tubing/connection	37° SFJφ 10+BOOTS		Matl.	C3604	
				Guide/seat matl.	/				105				Test certificate(s)	<input checked="" type="checkbox"/> chem. and mech. test				
									106				Test Press. (Assembly)	<input checked="" type="checkbox"/> water <input type="checkbox"/> air		45.00 bar(g)		
				Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch					107				<input checked="" type="checkbox"/> shell	77 bar(g)		Mass.	37.5 kg	
				Trim coating	S. STEEL/STELLITE				108				Shut Off Press.	33.00 bar(g)				
									109				Paint Color	SILVER/(Body) SILVER/(Act.)				
				Leakage specification	JEAC3706 0ml/1min(WATER)				110				Valve Speed(sec.)	0→C ≤ 10		C→0 ≤ 10		
				Packing matl.	P#4519				111				<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.					
				gasket matl.	V#6590M				112				Rule					

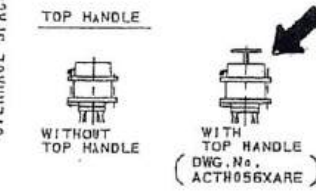
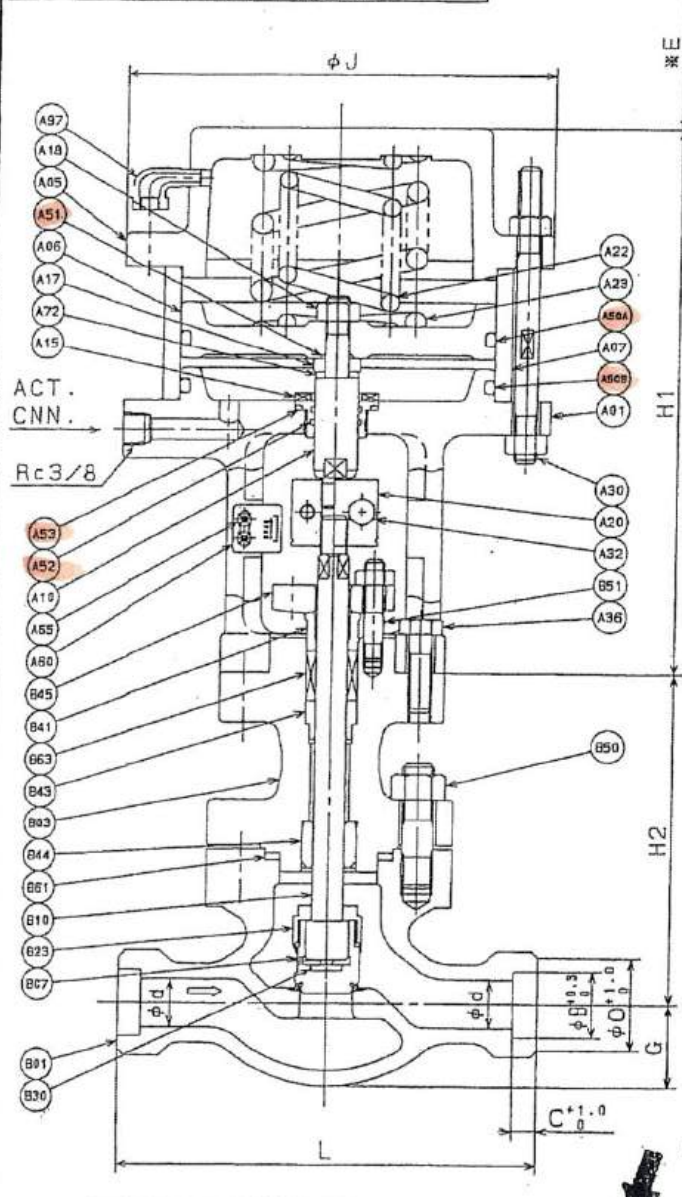
Remarks:

Service : AUXILIARY STEAM HEADER ATTEMPERATOR TEMPERATURE CONTROL VALVE INLET ISOLATION VALVE
 F.R. SET PRESS. : 7bar(INLET PRESS. : 6~12bar)

TAG No's *	
XIT3	3
XIT4	4

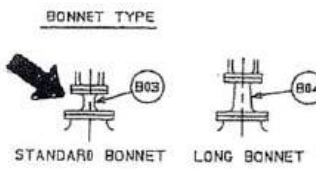
Rev.	Date	Name	Rev.	Date	Name	P. O. No.	Dwg. Ref. No.	Mat. Req. No.	Item No.	Qty
							ACEL370DBRE			1

※ Overhaul space for disassembly like using chain block is not included in this dimension.
 ※ 分解寸法には分解・組立作業（チェーンブロック取付等）に必要な寸法は含まれていません。



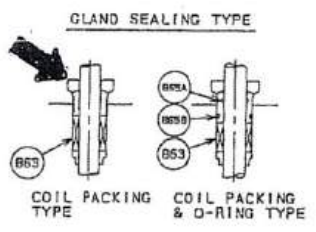
※1 STUD BOLT&NUT

B50	SN87/S45C
B51	SUS304D/SUS304



※2 GASKET (ASBESTOS FREE)

B61	V#6590M
	V#6590ML
	V#7590M

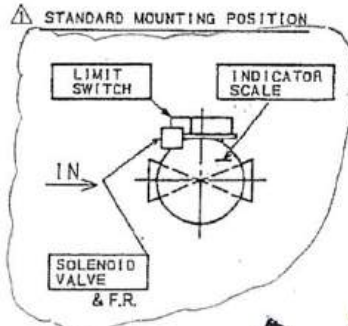
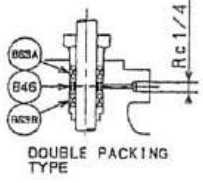


※3 PACKING (ASBESTOS FREE)

B63	P#4519
	P#6710+P#6616A
	P#6711

※4 O-RING MATERIAL

B65A	EPDM
B65B	FPM



PARTS No.	PARTS NAME	MATERIAL	Q'TY	REMARKS
B01	BODY	WCB	1	STELLITING
B03	BONNET	WCB	1	
B04	LONG BONNET	WCB	1	
B07	DISC	SUS316	1	STELLITING
B10	VALVE STEM	SUS316	1	HARD Cr PLATING
B23	DISC STEM NUT	SUS316	1	
B30	THRUST PLATE	SUS420J2	1	HEAT TREATED
B41	GLAND	SUS316	1	
B43	PACKING SEAT	SUS316	1	
B44	BUSHING	SUS440C	1	HEAT TREATED
B45	GLAND FLANGE	SUS304	1	
B46	LANTERN RING	SUS316	1	
B50	STUD BOLT&NUT	※1	4SETS	
B51	STUD BOLT&NUT	※1	2SETS	
B61	GASKET	※2	1	
B63	PACKING	※3	1SET	
B63A	PACKING	※3	1SET	
B63B	PACKING	※3	1SET	
B65A	O-RING	※4	1	
B65B	O-RING	※4	1	
A01	YOKE	FC250	1	
A05	CYLINDER COVER	FC250	1	
A06	PISTON	FC250	1	MOIL PAINT
A07	CYLINDER	STKM13C	1	INSIDE HARD Cr PL.
A10	PISTON STEM	SUS403	1	HARD Cr PLATING
A15	BUSHING	SUS304	1	
A17	COLLAR	SS400	1	
A18	LOCK NUT	S45C	1	
A20	CONNECTION PIECE	SS400	1SET	
A22	SPRING	SWOSC-B	1	
A23	SPRING	SWOSC-B	1	
A30	BOLT&NUT	SS400	4SETS	RG140
A32	BOLT	SUS304	2	
A36	BOLT	SS400	4	
A50A	O-RING	NBR	1	
A50B	O-RING	NBR	1	
A51	O-RING	NBR	1	
A52	O-RING	NBR	2	
A53	O-RING	NBR	1	
A60	INDICATOR SCALE	SUS304	1	
A65	SET SCREW	SUS304	2	
A72	SPRING WASHER	SWRH	1	
A97	ELBOW	FCMB270	1	

ACTUATOR TYPE	J	WITHOUT TOP HANDLE		WITH TOP HANDLE	
		H1	E	H1	E
RG140	190	285	300	16.5	370
RG160	220	285	300	21.5	370

5 TAG No. : *ATT-PN001

NOMINAL SIZE		d	C	B	O	L	G	STANDARD BONNET		LONG BONNET		TRAVEL
A	B							H2	BODY MASS (kg)	H2	30DY MASS (kg)	
15	1/2	15	13	22.2	33	191	43	171	14.5	222	15	12
20	3/4	20	13	27.7	39.5	191	43	171	14.5	222	15	12
25	1	25	13	34.5	48	216	43	171	14.5	222	15	12

Rev.	BY/DATE	CHKD/DATE	APPD/DATE	REVISIONS	BY/DATE	CHKD/DATE	APPD/DATE
	K.MONDO Aug. 3.'05	T.KODAMA Aug. 3.'05	N.KUROKI Aug. 3.'05				
				TYPE NS650EL	SIZE 25A		SCALE
				CYLINDER VALVE		MASS	
				(300-WCB) RG			
				NAKAKITA SEISAKUSHO CO.,LTD.	DWG.No. 10C2023		Rev. 0
				ACEL370DBRE			

6

CYLINDER VALVE DATA SHEET

Tag No. *GSS-PN001
Mfr. Serial No. 10C2024A/B

1	2	3	4	5	1	2	3	4	5
1				Location Indoor	57				MFR. NAKAKITA SEISAKUSHO CO.,LTD. Model DA240
2				Service See Remarks	58				Pneumatic <input checked="" type="checkbox"/> piston
3				Haz. area class.	59				Style
4				Ambient temp. min. °C max. °C	60				Act. area 452cm2
5				Allowable sound pressure level dB(A)	61				Reqd. travel/angle 15 mm
6				Pipe identification No.	62				Supply press. min. 6 max. 7 bar(g)
7				DN / / Sch /	63				Spring range 0.92-1.41 bar(g) ¹
8				Pipe material	64				Air consumption 18.30 l(Nor.)/STROKE
9				Pipe insulation	65				Air connection <input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4
10					66				Other actuator
11				Pipe connection SOCKET WELD END	67				
12				Process fluid DRAIN	68				<input checked="" type="checkbox"/> Handle
13				Upstream condition <input checked="" type="checkbox"/> liquid <input type="checkbox"/> vapour <input type="checkbox"/> gas	69				
14				Des. press. 63.8 bar(g) Des. temp. 485 °C Backpress. NO	70				
15				Min. Norm. Max. Unit	71				
16				Flow rate	72				
17				Inlet press. P1 63.8 bar(g)	73				
18				Outlet press. P2 bar(g)	74				
19				Temperature T1 485 °C	75				
20					76				
21					77				
22					78				
23					79				
24					80				
25					81				MFR. YAMATAKE Model VCL-5102
26					82				Switch type <input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.
27				Shutoff press. P1 63.8 P2	83				Switching pos. <input checked="" type="checkbox"/> closed <input type="checkbox"/> % travel <input checked="" type="checkbox"/> open
28				Air supply min. 6 max. 7	84				Switch acting <input checked="" type="checkbox"/> make <input type="checkbox"/> break
29				Power failure pos. <input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> hold	85				Reduction of haz. <input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.
30					86				Cable gland G3/4×NPT3/4 Qty 2
31				Calc. max. flow coef. Cv Calc. nor. flow. coef.	87				MFR. NAKAKITA Model NS6640E3
32				Calc. min. flow coef. Cv	88				Valve style <input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way
33				Selected flow coef. Cv 10	89				De-energ. : control valve <input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> lock
34				Predicted sound pressure level dB(A)	90				Air connection Rc 3/8 Port size Rc 3/8
35				MFR. NAKAKITA SEISAKUSHO CO.,LTD. Model NS650E L O L	91				Electrical date AC220V50Hz
36				Body type <input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way	92				Reduction of haz. <input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.
37				Flow direction <input type="checkbox"/> FTO <input checked="" type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN ¹	93				Cable gland G1/2×NPT3/4 Qty 1
38				Pressure rating 900#	94				Articles FILTER REGULATOR Model AW30-03G-2-X2253A Qty 1
39				Nominal size DN25	95				Articles Model Qty
40				End conn. <input type="checkbox"/> figd. <input checked="" type="checkbox"/> s.welded <input type="checkbox"/> b.welded <input type="checkbox"/> thd.	96				Articles Model Qty
41				SW	97				Articles Model Qty
42				End extensions	98				Articles Model Qty
43				Bonnet style <input type="checkbox"/> standard <input type="checkbox"/> fin <input checked="" type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows	99				Articles Model Qty
44				Mounting method Pls inform	100				Articles Model Qty
45				Body/bonnet matl. A217 WC6	101				Articles Model Qty
46				Trim <input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise	102				Articles Model Qty
47				Characteristic <input checked="" type="checkbox"/> quick opening	103				Articles Model Qty
48				Plug/stem matl. /	104				Tubing/connection 37° SFJ φ10+BOOTS Matl. C3604
49				Guide/seat matl. /	105				Test certificate(s) <input checked="" type="checkbox"/> chem. and mech. test
50					106				Test Press. (Assembly) <input checked="" type="checkbox"/> water <input type="checkbox"/> air 95.70 bar(g)
51				Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch	107				<input checked="" type="checkbox"/> shell 233 bar(g) Mass. 165 kg
52				Trim coating S. STEEL/STELLITE	108				Shut Off Press. 70.18 bar(g)
53					109				Paint Color SILVER/(Body) SILVER/(Act.)
54				Leakage specification JEAC3706 0ml/lmin(WATER)	110				Valve Speed(sec.) 0→C ≤ 10 C→0 ≤ 10
55				Packing matl. P#6711	111				<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.
56				gasket matl. V#8590ML	112				Rule

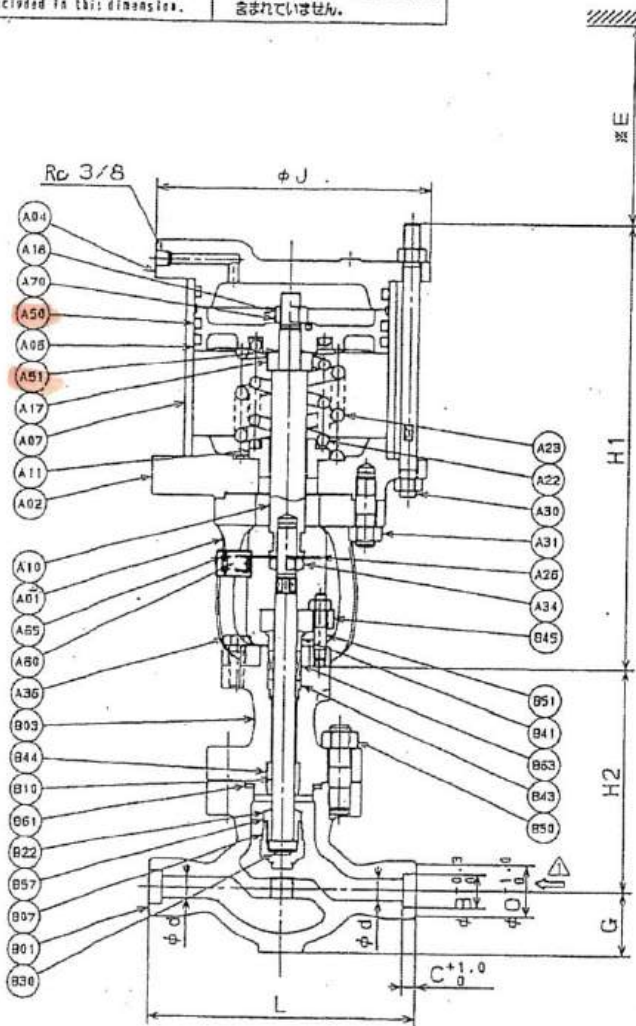
Remarks:

Service : HP TURBINE CASING DRAIN VALVE
F.R. SET PRESS. : 7bar(INLET PRESS. :6~12bar)

TAG No's	
XIT3	3
XIT4	4

Project	ACEL584GBDE		
Dwg. Ref. No.	ACEL584GBDE		
Plant			
Mat. Req. No.			
Rev.	Date	Name	Qty
	10/27	M. Ueda	1

Overhaul space for disassembly like using chain block is not included in this dimension.
 分解寸法には分解・組立作業(チェーンブロック取付等)に必要な寸法は含まれていません。



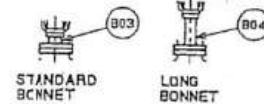
TOP HANDLE



#1 STUD BOLT&NUT MATERIAL

No.	MATERIAL
B50	SNB16/A194 Gr.4

BONNET TYPE



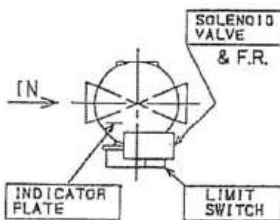
#2 GASKET MATERIAL

No.	MATERIAL
B61	V#859 0M-L V#759 0M V#659 0M

#3 PACKING MATERIAL

No.	MATERIAL
B63	P#4519 P#6722 P#6711 P#6710+P#6616A

STANDARD MOUNTING POSITION



PARTS No.	PARTS NAME	MATERIAL	Q'TY	REMARKS
B01	BODY	WC6	1	STELLITE FACED
B03	BONNET	WC6	1	
B04	LONG BONNET	WC6	1	
B07	DISC	SUS316	1	STELLITE FACED
B10	VALVE STEM	SUS316	1	HARD Cr PLATING
B22	DISC STEM NUT	SUS316	1	
B30	THRUST PLATE	STELLITE	1	
B41	GLAND	SUS316	1	
B43	PACKING SEAT	SUS316	1	
B44	BUSHING	SUS316	1	INSIDE STELLITING
B45	GLAND FLANGE	SUS304	1	
B50	STUD BOLT&NUT	#1	5SETS	
B51	STUD BOLT&NUT	S93140/SUS316	2SETS	
B57	LOCK WASHER	SUS316	1	
B61	GASKET	#2	1	
B63	PACKING	#3	1SET	
A01	YOKE	SCPH2	1	
A02	CYLINDER BASE	FCD400	1	
A04	CYLINDER COVER	FCD400	1	
A06	PISTON	FC250	1	MOIL PAINT
A07	CYLINDER	STPG370	1	HARD Cr PLATING
A10	PISTON STEM	SUS403	1	
A11	SPRING DISC	SS400	1	
A17	COLLAR	SS400	1	
A18	LOCK NUT	SS400	1	
A22	SPRING	SWOSC-B	1	
A23	SPRING	SUPT0	1	
A26	TRAVEL INDICATOR	C2600P	1	
A30	BOLT&NUT	SS400	8SETS	
A31	STUD BOLT&NUT	SS400	4SETS	
A34	LOCK NUT	SUS304	1	
A36	BOLT	S45C EQ.	4	
A50	O-RING	NBR	3	
A51	O-RING	NBR	1	
A60	INDICATOR SCALE	SUS304	1	
A65	SET SCREW	SUS304	2	
A70	WASHER	SUS304	1	

TAG No. : *GSS-PN001

NOMINAL SIZE	d	C	B	D	L	G	STANDARD BONNET		LONG BONNET		TRAVEL
							H2	BODY MASS (kg)	H2	BODY MASS (kg)	
A 13	1/2	13	22.2	35			230	59	285	75	15
B 20	3/4	17	27.7	44	274	65	61	78			
C 25	1	22	34.5	53.5			63	80			

ACTUATOR TYPE	J	WITHOUT TOP HANDLE		WITH TOP HANDLE		E
		H1	MASS (kg)	H1	MASS (kg)	
DA200	280	463	61	615	67	350
DA240	320		77		85	

REVISIONS			BY/DATE	CHKD/DATE	APPD/DATE
BY/DATE	CHKD/DATE	APPD/DATE	TYPE NS550E100 SIZE 15~25A		
I.KAWANISHI 6/29'93	T.MINAMI 6/29'93	H.SAWADA 6/30'93	CYLINDER VALVE		
NAKAKITA SEISAKUSHO CO.,LTD.			SCALE —		
DWG. No. 10C2024			ACEL584GBDE .0		

SPC-GIH-XIT3-0004

7

CYLINDER VALVE DATA SHEET

Tag No. *GSS-PN002

Mfr. Serial No. 10C2025A/B

1	2	3	4	5	1	2	3	4	5
1	Location		indoor		57	MFR.	NAKAKITA SEISAKUSHO CO., LTD.	Model DL335	
2	Service	See Remarks			58	Pneumatic	<input checked="" type="checkbox"/> piston		
3	Haz. area class.				59	Style			
4	Ambient temp. min.			°C max.	°C	60	Act. area	881cm ²	
5	Allowable sound pressure level				dB (A)	61	Reed. travel/angle	75 mm	
6	Pipe identification No.				62	Supply press. min.	6 max.	7 bar (g)	
7	DN / /		Sch /		63	Spring range		bar (g)	
8	Pipe material				64	Air consumption	79.71	ℓ(Nor.) /STROKE	
9	Pipe insulation				65	Air connection	<input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4		
10					66	Other actuator			
11	Pipe connection	BUTT WELD END			67	<input checked="" type="checkbox"/> Handle			
12	Process fluid	STEAM			68				
13	Upstream condition	<input type="checkbox"/> liquid <input checked="" type="checkbox"/> vapour <input type="checkbox"/> gas			69				
14	Des. press.	7.7 bar (g)	Des. temp.	480 °C	Backpress. NO	70			
15		Min.	Norm.	Max.	Unit	71			
16	Flow rate					72			
17	Inlet press. P1				7.7 bar (g)	73			
18	Outlet press. P2				bar (g)	74			
19	Temperature T1				480 °C	75			
20						76			
21						77			
22						78			
23						79			
24						80			
25						81	MFR.	YAMATAKE	Model VCL-5102
26						82	Switch type	<input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.	
27	Shutoff press. P1	7.7	P2			83	Switching pos.	<input checked="" type="checkbox"/> closed <input type="checkbox"/> % travel <input checked="" type="checkbox"/> open	
28	Air supply min.	6	max.	7		84	Switch acting	<input checked="" type="checkbox"/> make <input type="checkbox"/> break	
29	Power failure pos.	<input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> hold				85	Reduction of haz.	<input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.	
30						86	Cable gland	G3/4×NPT3/4 Qty 2	
31	Calc. max. flow coef. Cv		Calc. nor. flow coef.			87	MFR.	NAKAKITA	Model NS6640E3
32	Calc. min. flow coef. Cv					88	Valve style	<input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way	
33	Selected flow coef. Cv	800				89	De-energ.: control valve	<input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> lock	
34	Predicted sound pressure level				dB (A)	90	Air connection	Rc 3/8	Port size Rc 3/8
35	MFR.	NAKAKITA SEISAKUSHO CO., LTD.	Model	NS650EPOL		91	Electrical date	AC220V50Hz	
36	Body type	<input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way				92	Reduction of haz.	<input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.	
37	Flow direction	<input type="checkbox"/> FTO <input checked="" type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN				93	Cable gland	G1/2×NPT3/4 Qty 1	
38	Pressure rating	300#				94	Articles	FILTER REGULATOR Model AW40-036-2-X2253A Qty 1	
39	Nominal size	DN250				95	Articles	Model Qty	
40	End conn. <input type="checkbox"/> flgd. <input type="checkbox"/> s. welded <input checked="" type="checkbox"/> b. welded <input type="checkbox"/> thd.					96	Articles	Model Qty	
41	BW					97	Articles	Model Qty	
42	End extensions					98	Articles	Model Qty	
43	Bonnet style <input type="checkbox"/> standard <input type="checkbox"/> fin <input checked="" type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows					99	Articles	Model Qty	
44	Mounting method	Pis inform				100	Articles	Model Qty	
45	Body/bonnet matl.	A217 WC6				101	Articles	Model Qty	
46	Trim <input type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input checked="" type="checkbox"/> pilot <input type="checkbox"/> low noise					102	Articles	Model Qty	
47	Characteristic <input checked="" type="checkbox"/> quick opening					103	Articles	Model Qty	
48	Plug/stem matl.	/				104	Tubing/connection	37° SFJφ10+BOOTS Matl. C3604	
49	Guide/seat matl.	/				105	Test certificate(s)	<input checked="" type="checkbox"/> chem. and mech. test	
50						106	Test Press. (Assembly)	<input checked="" type="checkbox"/> water <input type="checkbox"/> air 11.55 bar (g)	
51	Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch					107	<input checked="" type="checkbox"/> shell	78 bar (g) Mass. 666 kg	
52	Trim coating	S. STEEL/STELLITE				108	Shut Off Press.	8.47 bar (g)	
53						109	Paint Color	SILVER/(Body) SILVER/(Act.)	
54	Leakage specification	JEAC3706 0ml/1min(WATER)				110	Valve Speed(sec.)	0→C ≤ 10 C→0 ≤ 10	
55	Packing matl.	PH6711				111	<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.		
56	gasket matl.	V#8590ML				112	Rule		

Remarks:

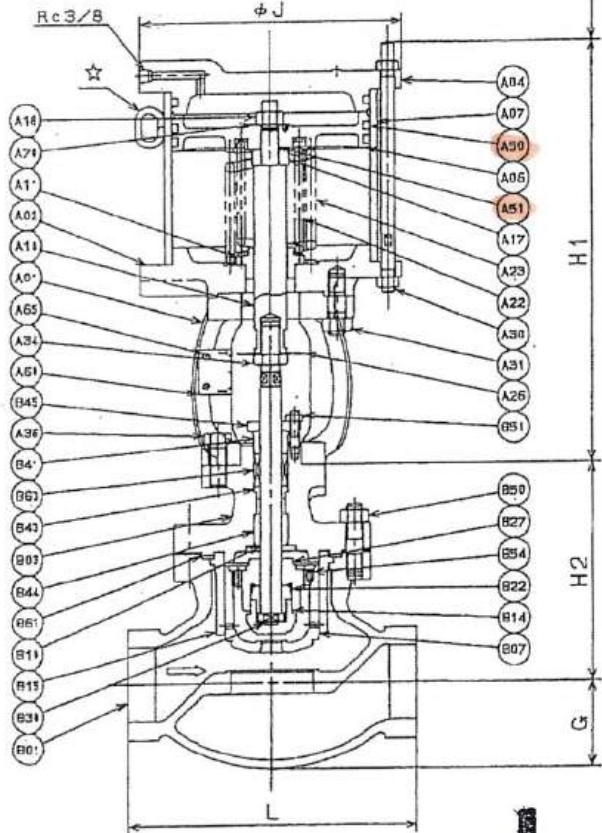
Service : STEAM PACKING LEAK OFF VALVE
 F. R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)

TAG No's *	
XIT3	3
XIT4	4

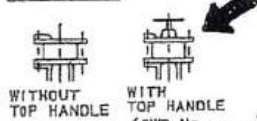
Project	Dwg. Ref. No.	ACEP101DRDE
Plant	Mat. Req. No.	
Rev.	Date	Name
Rev.	Date	Name
P. O. No.	Item No.	Qty 1

※ OVERHAULE SPACE FOR DISASSEMBLY LIKE USING CHAIN BLOCK IS NOT INCLUDED. IN THIS DIMENSION.
 ※ 分解寸法には分解・組立作業(チェーンブロック取付等)に必要な寸法は含まれていません。

☆ WITH HOOK (2SETS)



TOP HANDLE



*1 STUD BOLT&NUT MATERIAL

No.	
B50	SNB16/A194 Gr.4

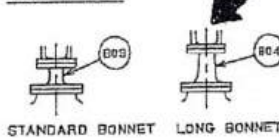
*2 GASKET MATERIAL

B61	V#8590M-L
	V#7590M
	V#6590M

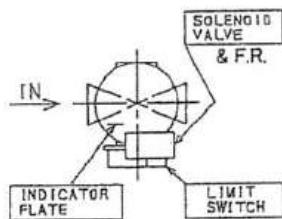
*3 PACKING MATERIAL

B63	P#4519
	P#6710+P#6616A
	P#6711

BONNET TYPE



STANDARD MOUNTING POSITION



BW SYMBOL:4C/10A

PARTS No.	PARTS NAME	MATERIAL	Q'TY	REMARKS
B01	BODY	WC6	1	STELLITE FACED
B03	BONNET	WC6	1	
B04	LONG BONNET	WC6	1	
B07	DISC	SUS316	1	STELLITE FACED
B10	VALVE STEM	SUS316	1	HARD Cr PLATING
B14	PILOT DISC	SUS316	1	STELLITE FACED
B15	CYLINDER	SCS14A	1	HARD Cr PLATING
B22	DISC STEM NUT	SUS316	1	TUFFTRIDE
B27	DISC STEM NUT	SUS316	1	TUFFTRIDE
B30	THRUST PLATE	STELLITE	1	
B41	GLAND	SUS316	1	
B43	PACKING SEAT	SUS316	1	
B44	BUSHING	SUS316	1	INSIDE STELLITING
B45	GLAND FLANGE	SUS304	1	
B50	STUD BOLT&NUT	*1	8SETS	:SIZE 80A-125A
B51	STUD BOLT&NUT	SUS304/SUS304	12SETS	:SIZE 150A
B54	DISC SET SCREW	SUS316	1	
B61	GASKET	*2	1	
B63	PACKING	*3	1SET	
A01	YOKE	SCPH2	1	
A02	CYLINDER BASE	FC0400	1	
A04	CYLINDER COVER	FC0400	1	
A06	PISTON	SS400	1	MOIL PAINT
A07	CYLINDER	STPG370	1	INSIDE HARD Cr PL. :TYPE240
A10	PISTON STEM	STKM13A	1	:TYPE280, 335
A11	SPRING DISC	SUS403	1	
A17	COLLAR	SS400	1	
A18	LOCK NUT	SS400	1	
A22	SPRING	SS400	1	
A23	SPRING	SUP10	1	
A26	TRAVEL INDICATOR	SUP10	1	
A30	BOLT&NUT	C2600P	1	8SETS :TYPE240
A31	STUD BOLT&NUT	SS400	12SETS	:TYPE280, 335
A34	LOCK NUT	SS400	4SETS	
A36	BOLT	SUS304	1	
A50	O-RING	S45C EQ.	4	
A51	O-RING	NBR	3	
A51	O-RING	NBR	1	
A60	INDICATOR PLATE	NBR	1	
A65	SET SCREW	SUS304	1	
A70	WASHER	SUS304	2	
A70	WASHER	SUS304	1	

44

95-1/23 ACT 03-12/27 DL

NOMINAL SIZE		L	G	H2		BODY MASS(kg)		TRAVEL
A	B			STANDARD BONNET	LONG BONNET	STANDARD BONNET	LONG BONNET	
80	3	318	90	250	345	48	49	35
100	4	356	108.5	275	370	76	80	45
125	5	400	132	300	390	102	105	45
150	6	444	153	320	410	133	137	55
200	8	559	191	340	454	230	235	65
250	10	752	178	-	539	-	500	75

ACTUATOR TYPE	J	WITHOUT TOP HANDLE				WITH TOP HANDLE				E
		DB		DL		DB		DL		
		H1	MASS (kg)	H1	MASS (kg)	H1	MASS (kg)	H1	MASS (kg)	
240	320	539	85	708	99	715	93	911	109	350
250	360	544	100	714	114	715	109	911	125	
335	415	550	140	720	154	715	150	916	166	

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TAG No. : *GSS-PN002

Rev.	REVISIONS	BY/DATE	CHKD/DATE	APPD/DATE
BY/DATE	CHKD/DATE	APPD/DATE	TYPE NS650EPO SIZE 80~150	
Y.SADAMOTO 8/9 '91	K.MINAMI 8/9 '91	H.SAWADA 8/9 '91	CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
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			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
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			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
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			CYLINDER VALVE	
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			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
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			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
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			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
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			TYPE NS650EPO SIZE 80~150	
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			TYPE NS650EPO SIZE 80~150	
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			TYPE NS650EPO SIZE 80~150	
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			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER VALVE	
			SCALE	
			MASS	
			TYPE NS650EPO SIZE 80~150	
			CYLINDER	

8

CYLINDER VALVE DATA SHEET

Tag No. *GSS-PN003
Mfr. Serial No. 10C2026A/B

				5								5			
1	2	3	4	Location indoor				57	MFR. NAKAKITA SEISAKUSHO CO., LTD. Model DA200						
2	Service See Remarks							58	Pneumatic <input checked="" type="checkbox"/> piston						
3	Haz. area class.							59	Style						
4	Ambient temp. min. °C max. °C							60	Act. area 314cm ²						
5	Allowable sound pressure level			dB(A)				61	Reqd. travel/angle 25 mm						
6	Pipe identification No.							62	Supply press. min. 6 max. 7 bar(g)						
7	DN / /			Sch /				63	Spring range 1.23-2.27 bar(g) 1.23-2.27 ▲						
8	Pipe material							64	Air consumption 14.70 l(Nor.)/STROKE						
9	Pipe insulation							65	Air connection <input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4						
10								66	Other actuator						
11	Pipe connection SOCKET WELD END							67	<input checked="" type="checkbox"/> Handle						
12	Process fluid DRAIN							68							
13	Upstream condition <input checked="" type="checkbox"/> liquid <input type="checkbox"/> vapour <input type="checkbox"/> gas							69							
14	Des. press. 7.7 bar(g) Des. temp. 480 °C Backpress. NO							70							
15				Min. Norm. Max. Unit				71							
16	Flow rate							72							
17	Inlet press. P1			7.7 bar(g)				73							
18	Outlet press. P2			bar(g)				74							
19	Temperature T1			480 °C				75							
20								76							
21								77							
22								78							
23								79							
24								80							
25								81	MFR. YAMATAKE Model VCL-5102						
26								82	Switch type <input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.						
27	Shutoff press. P1 7.7 P2							83	Switching pos. <input checked="" type="checkbox"/> closed <input type="checkbox"/> % travel <input checked="" type="checkbox"/> open						
28	Air supply min. 6 max. 7							84	Switch acting <input checked="" type="checkbox"/> make <input type="checkbox"/> break						
29	Power failure pos. <input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> hold							85	Reduction of haz. <input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.						
30								86	Cable gland G3/4×NPT3/4 Qty 2						
31	Calc. max. flow coef. Cv			Calc. nor. flow. coef.				87	MFR. NAKAKITA Model NS6640E3						
32	Calc. min. flow coef. Cv							88	Valve style <input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way						
33	Selected flow coef. Cv 43							89	De-energ. : control valve <input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> lock						
34	Predicted sound pressure level			dB(A)				90	Air connection Rc 3/8 Port size Rc 3/8						
35	MFR. NAKAKITA SEISAKUSHO CO., LTD. Model NS650E0L							91	Electrical date AC220V50Hz						
36	Body type <input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way							92	Reduction of haz. <input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.						
37	Flow direction <input type="checkbox"/> FTD <input checked="" type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN ▲							93	Cable gland G1/2×NPT3/4 Qty 1						
38	Pressure rating 300#							94	Articles FILTER REGULATOR Model AW30-036-2-X2253A Qty 1						
39	Nominal size DN50							95	Articles Model Qty						
40	End conn. <input type="checkbox"/> flgd. <input checked="" type="checkbox"/> s.welded <input type="checkbox"/> b.welded <input type="checkbox"/> thd.							96	Articles Model Qty						
41	SW							97	Articles Model Qty						
42	End extensions							98	Articles Model Qty						
43	Bonnet style <input type="checkbox"/> standard <input type="checkbox"/> fin <input checked="" type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows							99	Articles Model Qty						
44	Mounting method Pls inform							100	Articles Model Qty						
45	Body/bonnet matl. A217 WC6							101	Articles Model Qty						
46	Trim <input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise							102	Articles Model Qty						
47	Characteristic <input checked="" type="checkbox"/> quick opening							103	Articles Model Qty						
48	Plug/stem matl. /							104	Articles Model Qty						
49	Guide/seat matl. /							105	Tubing/connection 37' SFJφ10+BOOTS Matl. C3604						
50								106	Test certificate(s) <input checked="" type="checkbox"/> chem. and mech. test						
51	Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch							107	Test Press. (Assembly) <input checked="" type="checkbox"/> water <input type="checkbox"/> air 11.55 bar(g)						
52	Trim coating S. STEEL/STELLITE							108	<input checked="" type="checkbox"/> shell 78 bar(g) Mass. 94 kg						
53								109	Shut Off Press. 8.47 bar(g)						
54	Leakage specification JEAC3706 0ml/1min(WATER)							110	Paint Color SILVER/(Body) SILVER/(Act.)						
55	Packing matl. P#6711							111	Valve Speed(sec.) 0→C ≤ 10 C→0 ≤ 10						
56	gasket matl. V#8590ML							112	<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.						

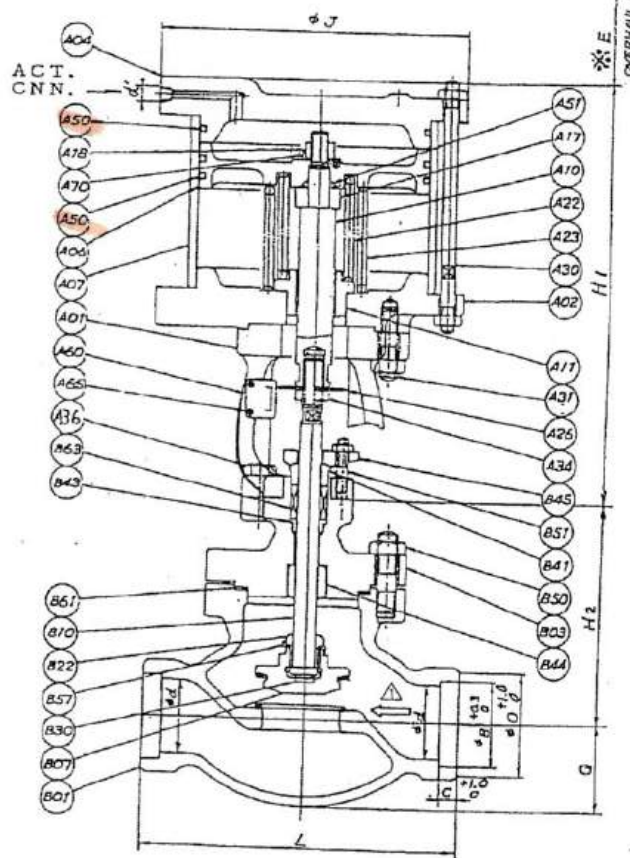
Remarks:

Service : STEAM PACKING LEAK OFF DRAIN VALVE
F.R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)

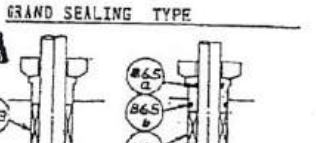
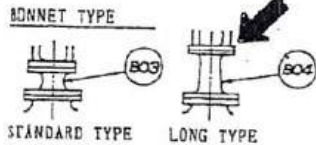
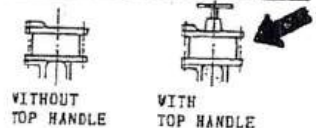
TAG No's *	
XIT3	3
XIT4	4

Rev.	Date	Name	Rev.	Date	Name	Project	Dwg. Ref. No.	ACEL516DBDE
						P.O. No.	Mat. Req. No.	
							Item No.	Qty 1

* Overhead space for disassembly
 1. The valve chest block is not
 included in this drawing.
 ※ 分解寸法には分解・組立作業(チェ
 ンブロック取付等)に必要な寸法は
 含まれていません。



DRAWING No. ACTH034XADE



#1 STUD BOLT & NUT

No.	Material
B50	SNB16/A194 Gr.4
B51	SUS304D/SUS304

#2 GASKET (ASBESTOS FREE)

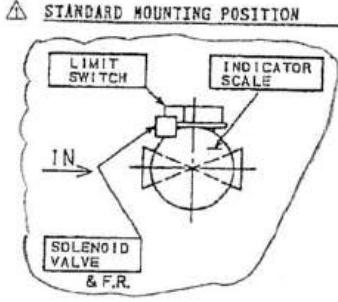
No.	Material
B61	V#8590M V#7590M V#8590ML

#3 PAKING (ASBESTOS FREE)

No.	Material
B63	P#4519 P#6711 P#6710 +P#5615A P#6722

#4 O-RING MATERIAL

No.	Material
B65a	NBR
B65b	FPM
	EPDM



PARTS No.	PARTS NAME	MATERIAL	Q'TY	REMARKS
B01	BODY	WC6	1	STELLITING
B03	BONNET	WC6	1	
B04	LONG BONNET	WC6	1	
B07	DISC	SUS316	1	STELLITING
B10	VALVE STEM	SUS316	1	HARD CR PLATING
B22	DISC STEM NUT	SUS316	1	
B30	DISC PLATE	STELLITE	1	
B41	GLAND	SUS316	1	
B43	PACKING SEAT	SUS316	1	
B44	BUSHING	SUS316	1	INSIDE STELLITING
B45	GLAND FLANGE	SUS304	1	
B46	LANTERN RING	SUS316	1	
B50	STUD BOLT & NUT	#1	4SETS:BORE 32A,40A 8SETS:BORE 50A	
B51	STUD BOLT & NUT	#1	2SETS	
B57	LOCK WASHER	SUS316	1	
B61	GASKET	#2	1	
B63	PACKING	#3	1SET	
B63a	PACKING	#3	1SET	
B63b	PACKING	#3	1SET	
B65a	O-RING	#4	1	
B65b	O-RING	#4	1	

A01	YOKE	SCPH2	1	
A02	CYLINDER BASE	FCD400	1	
A04	CYLINDER COVER	FCD400	1	
A06	PISTON	FC250	1	NOIL PAINT
A07	CYLINDER	STP6370	1	INSIDE NCR PLAT.
A10	PISTON STEM	SS403	1	
A11	SPRING DISC	SS400	1	
A17	COLLAR	SS400	1	
A18	LOCK NUT	SS400	1	
A22	SPRING	SWOSC-B	1	
A23	SPRING	SUPT0	1	
A26	TRAVEL INDICATOR	CZ600P	1	
A30	BOLT & NUT	SS400	8SETS	
A36	BOLT	S45C Eq.	4	
A31	STUD BOLT & NUT	SS400	4SETS	
A34	LOCK NUT	SUS304	1	
A50	O-RING	NBR	3	
A51	O-RING	NBR	1	
A50	INDICATOR SCALE	SUS304	1	
A65	SET SCREW	SUS304	2	
A70	WASHER	SUS304	1	

45

NOMINAL BORE	d	C	B	D	L	G	H2		BODY MASS(Kg)		TRAVEL
							STANDARD TYPE	LONG TYPE	STANDARD TYPE	LONG TYPE	
32	1-1/4	32	13	43.2	58	216	53	185	270	20	23
40	1-1/2	40	13	49.1	64	229	53	190	275	19.5	23
50	2	50	16	61.1	77.5	267	54	195	280	24.5	27

ACTUATOR TYPE	J.	d'	E	H1		ACTUATOR MASS(Kg)	
				WITH OUT TOP HANDL	WITH TOP HANDL	WITH OUT TOP HANDLE	WITH TOP HANDLE
DA200	280					61	67
DA240	320	Ra3/B	350	445	615	77	85

TAG No. : *GSS-PN003

Rev.	BY/DATE	CHKD/DATE	CHKD/DATE	APPD/DATE	BY/DATE	CHKD/DATE	CHKD/DATE	APPD/DATE

TYPE NS 650 E L

CYLINDER VALVE
 (300-WC6) DA

NAKAKITA SEISAKUSHO CO. LTD.

SCALE: -

DWG. No. 10C2026

ACEL516DBDE

SPC-GIH-XIT3-0004

9

CYLINDER VALVE DATA SHEET

Tag No. *IA-PN001A
Mfr. Serial No. 10C2036A/B

1	2	3	4	5	1	2	3	4	5
1				Location indoor	57				MFR. NAKAKITA SEISAKUSHO CO., LTD. Model DG160
2				Service See Remarks	58				Pneumatic <input checked="" type="checkbox"/> piston
3				Haz. area class.	59				Style
4				Ambient temp. min. °C max. °C	60				Act. area 201cm ²
5				Allowable sound pressure level dB(A)	61				Reqd. travel/angle 12 mm
6				Pipe identification No.	62				Supply press. min. 6 max. 7 bar(g)
7				DN / / Sch /	63				Spring range 1.04-1.93 bar(g)
8				Pipe material	64				Air consumption 4.51 (Nor.)/STROKE
9				Pipe insulation	65				Air connection <input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4
10					66				Other actuator
11				Pipe connection FLANGE	67				
12				Process fluid INSTRUMENT AIR	68				<input checked="" type="checkbox"/> Handle
13				Upstream condition <input type="checkbox"/> liquid <input type="checkbox"/> vapour <input checked="" type="checkbox"/> gas	69				
14				Des. press. 12 bar(g) Des. temp. 60 °C Backpress. NO	70				
15				Min. Norm. Max. Unit	71				
16				Flow rate	72				
17				Inlet press. P1 12 bar(g)	73				
18				Outlet press. P2 bar(g)	74				
19				Temperature T1 60 °C	75				
20					76				
21					77				
22					78				
23					79				
24					80				
25					81				MFR. YAMATAKE Model VCL-5102
26					82				Switch type <input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.
27				Shutoff press. P1 12 P2	83				Switching pos. <input checked="" type="checkbox"/> B & C SIDE
28				Air supply min. 6 max. 7	84				Switch acting <input checked="" type="checkbox"/> make <input type="checkbox"/> break
29				Power failure pos. <input checked="" type="checkbox"/> open(A-B side)	85				Reduction of haz. <input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.
30					86				Cable gland G3/4×NPT3/4 Qty 2
31				Calc. max. flow coef. Cv Calc. nor. flow coef.	87				MFR. NAKAKITA Model 212-631-3RVu
32				Calc. min. flow coef. Cv	88				Valve style <input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way
33				Selected flow coef. Cv 10	89				De-energ. : control valve <input checked="" type="checkbox"/> open(A-B side)
34				Predicted sound pressure level dB(A)	90				Air connection Rc 3/8 Port size Rc 3/8
35				MFR. NAKAKITA SEISAKUSHO CO., LTD. Model NS650ET00	91				Electrical date DC24V
36				Body type <input type="checkbox"/> inline <input type="checkbox"/> angle <input checked="" type="checkbox"/> 3 way	92				Reduction of haz. <input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.
37				Flow direction <input checked="" type="checkbox"/> FTO <input type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input checked="" type="checkbox"/> RETURN	93				Cable gland 4×NPT3/4 Qty 2
38				Pressure rating 150#	94				Articles FILTER REGULATOR Model AW30-036-2-X2253A Qty 4
39				Nominal size DN25	95				Articles Model Qty
40				End conn. <input checked="" type="checkbox"/> flgd. <input type="checkbox"/> s. welded <input type="checkbox"/> b. welded <input type="checkbox"/> thd.	96				Articles Model Qty
41				ANSI 150#RF	97				Articles Model Qty
42				End extensions	98				Articles Model Qty
43				Bonnet style <input checked="" type="checkbox"/> standard <input type="checkbox"/> fin <input type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows	99				Articles Model Qty
44				Mounting method Pls inform	100				Articles Model Qty
45				Body/bonnet matl. A216 WCB	101				Articles Model Qty
46				Trim <input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise	102				Articles Model Qty
47				Characteristic <input checked="" type="checkbox"/> quick opening	103				Articles Model Qty
48				Plug/stem matl. /	104				Articles Model Qty
49				Guide/seat matl. /	105				Tubing/connection 37" SFJφ10+BOOTS Matl. C3604
50					106				Test certificate(s) <input checked="" type="checkbox"/> chem. and mech. test
51				Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch	107				Test Press. (Assembly) <input checked="" type="checkbox"/> water <input type="checkbox"/> air 18.00 bar(g)
52				Trim coating S. STEEL/STELLITE	108				<input checked="" type="checkbox"/> shell 30 bar(g) Mass. 45 kg
53					109				Shut Off Press. 13.20 bar(g)
54				Leakage specification JEAC3706 Oml/lmin(WATER)	110				Paint Color SILVER/(Body) SILVER/(Act.)
55				Packing matl. P#4519	111				Valve Speed(sec.) 0→C ≤ 10 C→0 ≤ 10
56				Gasket matl. V#G590M	112				<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.

Remarks: Service : RELAY DUMP VALVE A
F.R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)

TAG No's *	
XIT3	3
XIT4	4

Rev.	Date	Name	Rev.	Date	Name	P. O. No.	Dwg. Ref. No.	Mat. Req. No.	Item No.	Qty
2	'09 7/1	H. K	4	'10 1/21	K. Wada	Project				
1	'09 6/1	H. K	3	'09 9/10	K. Wada	Plant		ACETO09DBDE		

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CYLINDER VALVE DATA SHEET

Tag No. *1A-PN001B
Mfr. Serial No. 10C2037A/B

				5								5			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PROCESS DATA RELEVANT FOR CONTROL VALVE SELECTION				Location indoor				57				MFR. NAKAKITA SEISAKUSHO CO., LTD. Model DG160			
				Service See Remarks				58				Pneumatic <input checked="" type="checkbox"/> piston			
				Haz. area class.				59				Style			
				Ambient temp. min. °C max. °C				60				Act. area 201cm ²			
				Allowable sound pressure level dB (A)				61				Reqd. travel/angle 12 mm			
				Pipe identification No.				62				Supply press. min. 6 max. 7 bar (g)			
				DN / / Sch /				63				Spring range 1.04-1.93 bar (g)			
				Pipe material				64				Air consumption 4.51 l (Nor.) / STROKE			
				Pipe insulation				65				Air connection <input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4			
				Pipe connection FLANGE				66				Other actuator			
				Process fluid INSTRUMENT AIR				67				Handle			
				Upstream condition <input type="checkbox"/> liquid <input type="checkbox"/> vapour <input checked="" type="checkbox"/> gas				68							
				Des. press. 12 bar (g) Des. temp. 60 °C Backpress. NO				69							
								70							
								71							
				Flow rate				72							
				Inlet press. P1				73							
				Outlet press. P2				74							
				Temperature T1				75							
								76							
								77							
								78							
								79							
								80							
								81				MFR. YAMATAKE Model VCL-5102			
								82				Switch type <input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.			
				Shutoff press. P1 12 P2				83				Switching pos. <input checked="" type="checkbox"/> B & C SIDE			
				Air supply min. 6 max. 7				84				Switch acting <input checked="" type="checkbox"/> make <input type="checkbox"/> break			
				Power failure pos. <input checked="" type="checkbox"/> open(A-B side)				85				Reduction of haz. <input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.			
								86				Cable gland G3/4 x NPT3/4 Qty 2			
Calc. max. flow coef. Cv				87				MFR. NAKAKITA Model 212-631-3RV0							
Calc. min. flow coef. Cv				88				Valve style <input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way							
Selected flow coef. Cv 10				89				De-energ. control valve <input checked="" type="checkbox"/> open(A-B side)							
Predicted sound pressure level dB (A)				90				Air connection Rc 3/8 Port size Rc 3/8							
MFR. NAKAKITA SEISAKUSHO CO., LTD. Model NS650ET00				91				Electrical date DC24V							
Body type <input type="checkbox"/> inline <input type="checkbox"/> angle <input checked="" type="checkbox"/> 3 way				92				Reduction of haz. <input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.							
Flow direction <input checked="" type="checkbox"/> FTO <input type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input checked="" type="checkbox"/> RETURN				93				Cable gland 4 NPT3/4 Qty 2							
Pressure rating 150#				94				Articles FILTER REGULATOR Model AW30-036-2-X2253A Qty 4							
Nominal size DN25				95				Articles Model Qty							
End conn. <input checked="" type="checkbox"/> figd. <input type="checkbox"/> s.welded <input type="checkbox"/> b.welded <input type="checkbox"/> thd.				96				Articles Model Qty							
ANSI 150#RF				97				Articles Model Qty							
End extensions				98				Articles Model Qty							
Bonnet style <input checked="" type="checkbox"/> standard <input type="checkbox"/> fin <input type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows				99				Articles Model Qty							
Mounting method Pls inform				100				Articles Model Qty							
Body/bonnet matl. A216 WCB				101				Articles Model Qty							
Trim <input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise				102				Articles Model Qty							
Characteristic <input checked="" type="checkbox"/> quick opening				103				Articles Model Qty							
Plug/stem matl. /				104				Tubing/connection 37" SFJ φ 10+BOOTS Matl. C3604							
Guide/seat matl. /				105				Test certificate(s) <input checked="" type="checkbox"/> chem. and mech. test							
				106				Test Press. (Assembly) <input checked="" type="checkbox"/> water <input type="checkbox"/> air 18.00 bar (g)							
Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch				107				<input checked="" type="checkbox"/> shell 30 bar (g) Mass. 45 kg							
Trim coating S. STEEL/STELLITE				108				Shut Off Press. 13.20 bar (g)							
				109				Paint Color SILVER/(Body) SILVER/(Act.)							
Leakage specification JEAC3706 0ml/1min(WATER)				110				Valve Speed(sec.) 0→C ≤ 10 C→0 ≤ 10							
Packing matl. P#4519				111				<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.							
gasket matl. V#6590W				112				Rule							

Remarks:

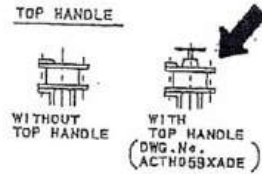
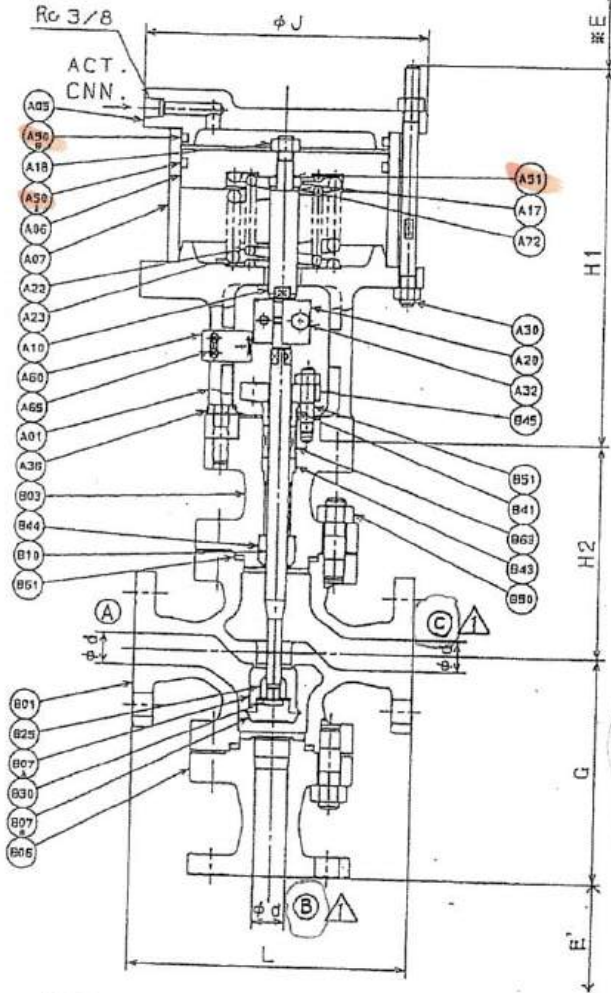
Service : RELAY DUMP VALVE B
F.R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)

	TAG No.'s
XIT3	3
XIT4	4

Rev.	Date	Name	Rev.	Date	Name	P. O. No.	Dwg. Ref. No.	Mat. Req. No.	Item No.	Qty
△	'09 7/1	H. K	△	'10 1/29	K. Wada	Project	ACET009DBDE			
△	'09 6/1	H. K	△	'09 9/10	K. Wada	Plant				

※ Overhaul space for disassembly
like yoke chain block is not
included in this dimension.

※ 分解寸法には分解・組立作業(チェ
ンブロック取付等)に必要な寸法は
含まれていません。



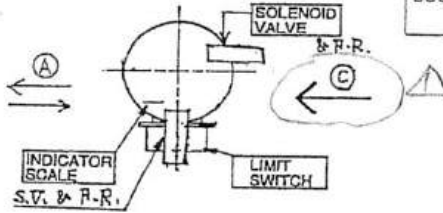
#1 GASKET MATERIAL

B61	V#8590M-L
	V#7590M
	V#6590M

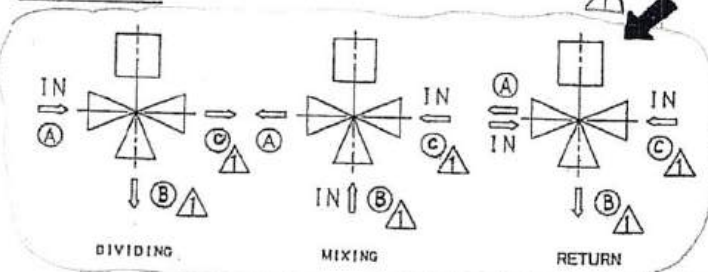
#2 PACKING MATERIAL

B63	P#4519
	P#6722
	P#6711
	P#6710+P#6616A

▲ STANDARD MOUNTING POSITION



FLOW DIRECTION



PARTS No.	PARTS NAME	MATERIAL	Q'TY	REMARKS
B01	BODY	WCB	1	
B03	BONNET	WCB	1	
B06	PIECE	WCB	1	
B07A	DISC	SUS316	1	STELLITE FACED
B07B	DISC	SUS316	1	STELLITE FACED
B10	VALVE STEM	SUS316	1	HARD Cr PLATING
B25	RING	SUS316	1	
B30	THRUST PLATE	SUS420J2	1	HEAT TREATED
B41	GLAND	SUS316	1	
B43	PACKING SEAT	SUS316	1	
B44	BUSHING	SUS440C	1	HEAT TREATED
B45	GLAND FLANGE	SUS304	1	
B50	STUD BOLT&NUT	SNB7/S45C	8SETS	
B51	STUD BOLT&NUT	SUS304/SW304	2SETS	
B61	GASKET	*1	2	
B63	PACKING	*2	1SET	
A01	YOKE	FC250	1	
A05	CYLINDER COVER	FC250	1	
A06	PISTON	SS402	1	MOIL PAINT
A07	CYLINDER	STKM13C	1	INSIDE HARD Cr PL.
A10	PISTON STEM	SUS403	1	
A17	COLLAR	SS400	1	
A18	LOCK NUT	S45C	1	
A20	CONNECTION PIECE	SS400	1SET	
A22	SPRING	SWOSC-V	1	
A23	SPRING	SWOSC-B	1	
A30	BOLT&NUT	SS400	4SETS	:DG140
A32	BOLT	SUS304	2	:DG160
A36	BOLT	SS400	4	
A50A	O-RING	NBR	1	
A50B	O-RING	NBR	1	
A51	O-RING	NBR	1	
A50	INDICATOR SCALE	SUS304	1	
A65	SET SCREW	SUS304	2	
A72	SPRING WASHER	SWRH	1	

TAG No. : *IA-PN001A
*IA-PN001B

9

NOMINAL SIZE		d	L	G	H2	BODY MASS (kg)	TRAVEL	E'
A	B							
15	1/2	15	191	180	171	20	12	300
20	3/4	20				22		
25	1	25	216			23		

ACTUATOR TYPE	J	WITHOUT TOP HANDLE		WITH TOP HANDLE		E
		H1	MASS (kg)	H1	MASS (kg)	
DG160	220	300	21	371	22	300

APPLIED FLANGE

JIS 10KFF
JIS 16KFF
JIS 20KFF
ANSI 150#RF
ANSI 300#RF

Rev.	REVISIONS			BY/DATE	CHKD/DATE	APPD/DATE
	BY/DATE	CHKD/DATE	APPD/DATE			
	I.KAWANISHI 6/29'93	T.MINAMI 6/29'93	H.SAWADA 6/30'93			
				TYPE NSG50ET00 SIZE 15-25A	SCALE	
				CYLINDER VALVE		
				(300-WCB-D1) DG		
NAKAKITA SEISAKUSHO CO.,LTD.				DWG. No. 10C2036V	REV. 0	
				ACET009DBDE		

10

CYLINDER VALVE DATA SHEET

Tag No. *HV-PN001
Mfr. Serial No. 10C2038A/B

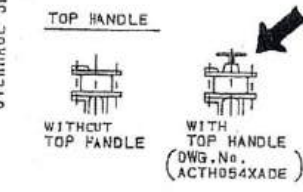
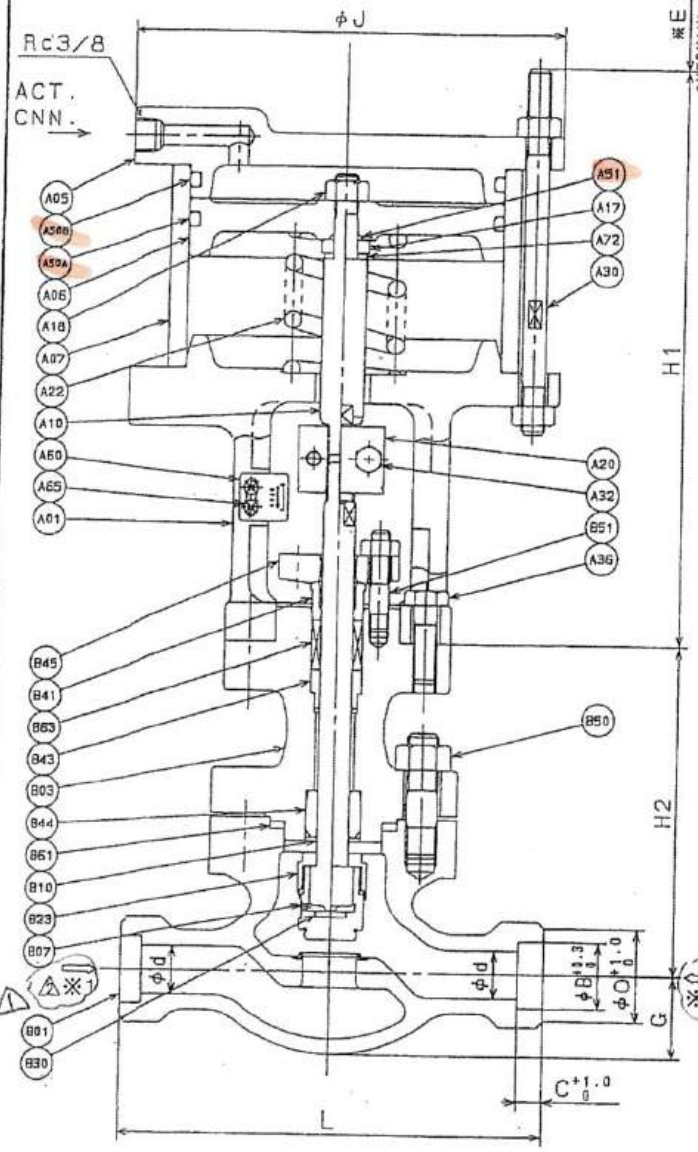
1	2	3	4	5	1	2	3	4	5
1				Location indoor	57				MFR. NAKAKITA SEISAKUSHO CO., LTD. Model DG140
2				Service See Remarks	58				Pneumatic <input checked="" type="checkbox"/> piston
3				Haz. area class.	59				Style
4				Ambient temp. min. °C max. °C	60				Act. area 154cm ²
5				Allowable sound pressure level dB(A)	61				Reqd. travel/angle 12 mm
6				Pipe identification No.	62				Supply press. min. 6 max. 7 bar (g)
7				DN / / Sch /	63				Spring range 1.12-1.68 bar (g) <input checked="" type="checkbox"/>
8				Pipe material	64				Air consumption 3.48 $\frac{1}{2}$ (Nor.) /STROKE
9				Pipe insulation	65				Air connection <input type="checkbox"/> Rc1/4 <input checked="" type="checkbox"/> Rc3/8 <input type="checkbox"/> Rc1/2 <input type="checkbox"/> Rc3/4
10					66				Other actuator
11				Pipe connection SOCKET WELD END	67				
12				Process fluid INSTRUMENT AIR	68				<input checked="" type="checkbox"/> Handle
13				Upstream condition <input type="checkbox"/> liquid <input type="checkbox"/> vapour <input checked="" type="checkbox"/> gas	69				
14				Des. press. 21.3 bar (g) Des. temp. 218 °C Backpress. NO	70				
15				Min. Norm. Max. Unit	71				
16				Flow rate	72				
17				Inlet press. P1 21.3 bar (g)	73				
18				Outlet press. P2 bar (g)	74				
19				Temperature T1 218 °C	75				
20					76				
21					77				
22					78				
23					79				
24					80				
25					81				MFR. YAMATAKE Model VCL-5102
26					82				Switch type <input checked="" type="checkbox"/> mech. <input type="checkbox"/> proximity <input type="checkbox"/> pneum.
27				Shutoff press. P1 21.3 P2	83				Switching pos. <input checked="" type="checkbox"/> closed <input type="checkbox"/> % travel <input checked="" type="checkbox"/> open
28				Air supply min. 6 max. 7	84				Switch acting <input checked="" type="checkbox"/> make <input type="checkbox"/> break
29				Power failure pos. <input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> hold	85				Reduction of haz. <input type="checkbox"/> intrin. Safe <input type="checkbox"/> explos.-proof <input checked="" type="checkbox"/> non.
30					86				Cable gland G3/4 x NPT3/4 Qty 2
31				Calc. max. flow coef. Cv Calc. nor. flow. coef.	87				MFR. NAKAKITA Model NS6540E3
32				Calc. min. flow coef. Cv	88				Valve style <input type="checkbox"/> two way <input checked="" type="checkbox"/> three way <input type="checkbox"/> four way
33				Selected flow coef. Cv 10	89				De-energ.: control valve <input checked="" type="checkbox"/> open <input type="checkbox"/> closed <input type="checkbox"/> lock
34				Predicted sound pressure level dB(A)	90				Air connection Rc 3/8 Port size Rc 3/8
35				MFR. NAKAKITA SEISAKUSHO CO., LTD. Model NS650EL00	91				Electrical data AC220V50Hz
36				Body type <input checked="" type="checkbox"/> inline <input type="checkbox"/> angle <input type="checkbox"/> 3 way	92				Reduction of haz. <input type="checkbox"/> intrin. Safe <input checked="" type="checkbox"/> explos.-proof <input type="checkbox"/> non.
37				Flow direction <input type="checkbox"/> FTO <input checked="" type="checkbox"/> FTC <input type="checkbox"/> MIXING <input type="checkbox"/> DIVIDING <input type="checkbox"/> RETURN <input checked="" type="checkbox"/>	93				Cable gland G1/2 x NPT3/4 Qty 1
38				Pressure rating 300#	94				Articles FILTER REGULATOR Model AW30-030-2-X2253A Qty 1
39				Nominal size DN25	95				Articles Model Qty
40				End conn. <input type="checkbox"/> flgd. <input checked="" type="checkbox"/> s. welded <input type="checkbox"/> b. welded <input type="checkbox"/> thd.	96				Articles Model Qty
41				SW	97				Articles Model Qty
42				End extensions	98				Articles Model Qty
43				Bonnet style <input checked="" type="checkbox"/> standard <input type="checkbox"/> fin <input type="checkbox"/> long <input type="checkbox"/> extension <input type="checkbox"/> bellows	99				Articles Model Qty
44				Mounting method Pls inform	100				Articles Model Qty
45				Body/bonnet matl. A351 CF8 <input checked="" type="checkbox"/>	101				Articles Model Qty
46				Trim <input checked="" type="checkbox"/> p-port <input type="checkbox"/> labyrinth <input type="checkbox"/> cage <input type="checkbox"/> pilot <input type="checkbox"/> low noise	102				Articles Model Qty
47				Characteristic <input checked="" type="checkbox"/> quick opening	103				Articles Model Qty
48				Plug/stem matl. /	104				Tubing/connection 37° SFJ ϕ 10+BOOTS Matl. C3604
49				Guide/seat matl. /	105				Test certificate(s) <input checked="" type="checkbox"/> chem. and mech. test
50					106				Test Press. (Assembly) <input checked="" type="checkbox"/> water <input type="checkbox"/> air 31.95 bar (g)
51				Seat style <input checked="" type="checkbox"/> metal touch <input type="checkbox"/> soft touch	107				<input checked="" type="checkbox"/> shell 77 bar (g) Mass. 30.5 kg
52				Trim coating S. STEEL/STELLITE	108				Shut Off Press. 23.43 bar (g)
53					109				Paint Color SILVER/(Body) SILVER/(Act.)
54				Leakage specification JEAC3706 Oml/1min (WATER)	110				Valve Speed (sec.) 0→C ≤ 10 C→0 ≤ 10
55				Packing matl. P#4519	111				<input type="checkbox"/> High-temp spec. <input type="checkbox"/> Low-temp spec. <input type="checkbox"/> salt damage-proof spec.
56				gasket matl. V#6590M	112				Rule

Remarks:
Service : HP FEEDWATER HEATER NO.5 DRAIN COOLING ZONE VENTILATION VALVE
F.R. SET PRESS. : 7bar (INLET PRESS. : 6~12bar)

TAG No's *	
XIT3	3
XIT4	4

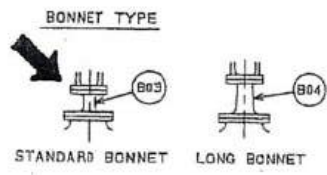
Project	Dwg. Ref. No.	ACEL36608DE
Plant	Mat. Req. No.	
P. O. No.	Item No.	Qty 1

※ OVERHAUL SPACE FOR DISASSEMBLY LIKE USING CHAIR BLOCK IS NOT INCLUDED IN THIS DIMENSION. ※ 分解寸法に分解・組立作業(チェアブロック取付等)に必要な寸法は含まれていません。



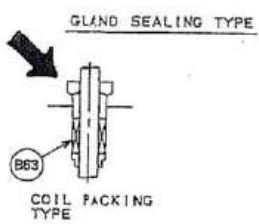
※1 STUD BOLT&NUT

TRIM PARTS No.	
B50	SUS304D/SUS304
B51	SUS304D/SUS304



※2 GASKET (ASBESTOS FREE)

B61	V#6590M
	V#8590ML
	V#7590M



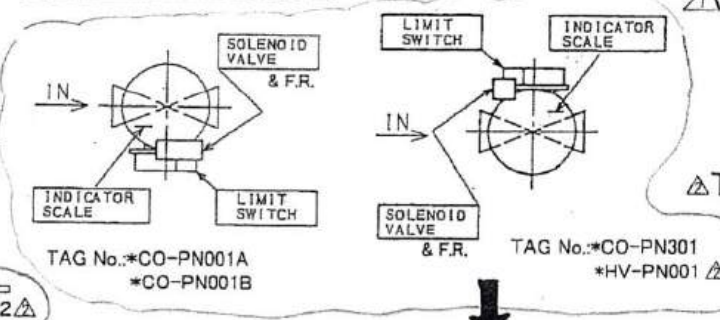
※3 PACKING (ASBESTOS FREE)

B63	P#4519
B63A	P#6711
B63B	P#6710+P#6616A

※4 O-RING MATERIAL

B65A	NBR
B65B	EPDM
B65B	FPM

△ STANDARD MOUNTING POSITION



PARTS No.	PARTS NAME	MATERIAL	Q'TY	REMARKS
B01	BODY	CFB	1	STELLITING
B03	BONNET	CFB	1	
B04	LONG BONNET	CFB	1	
B07	DISC	SUS316	1	STELLITING
B10	VALVE STEM	SUS316	1	HARD Cr PLATING
B23	DISC STEM NUT	SUS316	1	
△ B30	THRUST PLATE	△ STELLITE	1	
B41	GLAND	SUS316	1	
B43	PACKING SEAT	SUS316	1	
△ B44	BUSHING	△ SUS316	1	
B45	GLAND FLANGE	SUS304	1	
B46	LANTERN RING	SUS316	1	
B50	STUD BOLT&NUT	※1	4SETS	
B51	STUD BOLT&NUT	※1	2SETS	
B61	GASKET	※2	1	
B63	PACKING	※3	1SET	
B63A	PACKING	※3	1SET	
B63B	PACKING	※3	1SET	
B65A	O-RING	※4	1	
B65B	O-RING	※4	1	
A01	YOKE	FC250	1	
A05	CYLINDER COVER	FC250	1	
A06	PISTON	FC250	1	MOIL PAINT
A07	CYLINDER	STKM13C	1	INSIDE HARD Cr PL.
A10	PISTON STEM	SUS403	1	
A17	COLLAR	SS400	1	
A18	LOCK NUT	S45C	1	
A20	CONNECTION PIECE	SS400	1SET	
A22	SPRING	SWOSC-B	1	
A30	BOLT&NUT	SS400	4SETS	△ DG140
A32	BOLT	SUS304	2	△ DG160
A36	BOLT	SS400	4	
A50A	O-RING	NBR	1	
A50B	O-RING	NBR	1	
A51	O-RING	NBR	1	
A60	INDICATOR SCALE	SUS304	1	
A65	SET SCREW	SUS304	2	
A72	SPRING WASHER	SWRH	1	

△ TAG No. : *CO-PN001A ※1
 *CO-PN001B ※1
 *CO-PN301 ※1
 *HV-PN001 ※2

⑩

ACTUATOR TYPE	J	WITHOUT TOP HANDLE		WITH TOP HANDLE		E
		H1	ACTUATOR MASS (kg)	H1	ACTUATOR MASS (kg)	
DG140	190	300	15	371	16	300
DG160	220		21		22	

NOMINAL SIZE	d	C	B		L	G	STANDARD BONNET		LONG BONNET		TRAVEL
			C	C			H2	BODY MASS (kg)	H2	BODY MASS (kg)	
A 15 1/2	15		22.2	33	191						
B 20 3/4	20	13	27.7	39.5	191	43	171	14.5	222	15	12
C 25 1	25		34.5	48	216						


REVISONS

BY/DATE	CHKD/DATE	APPD/DATE	BY/DATE	CHKD/DATE	APPD/DATE
X.MONDO OCT.11'05	T.KODAMA OCT.11'05	Y.NAKAMURA OCT.12'05			

TYPE NS650EL
 SIZE 15~25A
 CYLINDER VALVE
 (300 - CFB - 011)DG
 OMC.No. 10C2033V
 NAKAKITA SEISAKUSHO CO.,LTD.
 ACEL366DBDE

SCALE
 MASS

Rev. 0

	PT. KOMIPO PEMBANGKITAN JAWA BALI	Doc. Ref	: KPJB-0951-02
	PLTU TANJUNG JATI B #UNIT 3&4	Form No.	: KPJB-0951-02-ZZ-FM-03
	REQUEST FOR QUOTATION	Design Div.	: Finance and Administration
		Revision No.	: 00

Date	RFQ No:	PRF No:
May 8, 2026	K19733	K19733
SUBJECT : U4POB The Reconditioned of Main Turbine Pneumatic Actuator		

KPJB on behalf of PT. PLN hereby request your quotation for material/services below :

No	Item Code	Description	No		Item Code
			Qty	Unit	

As per the attachment

- The quotation shall be submitted in one sealed envelope containing both the priced and unpriced proposals, addressed to Procurement Team, F&A Division PT. KPJB. The original documents should be received by KPJB not later than 11.00 WIB date 02 JUN 2026 by registered mail or direct submission after PLTU Tanjung Jati B security check and registration.
- Aanwijzing will be held in KPJB on 20 MAY 2026.
- Validity of Quotation price should be minimum 3 months.
- Prices and detailed information should be specified about the materials and services in the quotation by strictly following the quotation form attached hereto.
- Payment will be made by Telegraphic Transfer (T/T) within forty five (45) days after invoice received, attached with delivery or work completion report (Invoice, Good receive form, MOV, BAPP, etc.) issued by PT. KPJB.
- Warranty period is 12 months (365 calendar days).
- **Delivery time: not later than 23 July 2026.**
- **Delivery should be completed to PT. KPJB's warehouse, PLTU Tanjung Jati B Unit #3&4.**
- **Certificate should be submitted at the delivery time: Inspection Report for each Pneumatic Actuator Cylinder and Document Report for Materials & Specification of Seal Kit and Site Acceptance Test Result Report (Include Functional Test Result) are required at the delivery time.**
- Warranty letter that state "The material is genuine, no defect, new and can be used properly" should be submitted at the time of delivery.
- All documents and communications shall be in English.
- All terms and conditions of this contract must be subject to and governed by PT. KPJB's Terms and Conditions for Contract attached hereto.
- In case of hazardous material, Material Safety Data Sheets (MSDS) and other related document for hazardous material shall be submitted at the time of delivery.
- For hand powered tools / powered tools: must be attached with tools certificate from manufacturer.
- For chemicals: All material delivery must be completed with symbol & label as required on regulation in every containers/other packaging.
- For service: All personnel must have appropriate certification as required on local HSE Regulation.

Sincerely Yours,


Hendang Suroso
 F&A. Manager

Date

Attachment :


1. Material list
2. Quotation format
3. Unprice document required
4. KPJB Contractor Safety Rules
5. PT. KPJB's General Terms and Conditions for Contract
6. Pakta Integritas Form
7. Term of Reference

	PT. KOMIPO PEMBANGKITAN JAWA BALI	Doc. Ref	: KPJB-0951-02
	PLTU TANJUNG JATI B #UNIT 3&4	Form No.	: KPJB-0951-02-ZZ-FM-03
	REQUEST FOR QUOTATION	Design Div.	: Finance and Administration
		Revision No.	: 00

Attachment 1: RFQ No. K19733

MATERIAL LIST

Item No	Item Code	Description	Quantity	
			Order	Unit
1	224559-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DB280, TRAVEL LENGTH 35MM, REF DWG NO: 10C2015/ ACEP102FBDE, MFC NAKAKITA	1,00	PC
2	224560-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2016V/ ACEL366DBDE, MFC NAKAKITA	2,00	PC
3	224561-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2018V/ ACEL366DBDE, MFC NAKAKITA	4,00	PC
4	224562-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL RA280, TRAVEL LENGTH 25MM, REF DWG NO: 10C2022/ ACEL505DBRE, MFC NAKAKITA	1,00	PC
5	224563-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL RG160, TRAVEL LENGTH 12MM, REF DWG NO: 10C2023/ ACEL370DBRE, MFC NAKAKITA	1,00	PC
6	224564-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DA240, TRAVEL LENGTH 15MM, REF DWG NO: 10C2024/ ACEL584GBDE, MFC NAKAKITA	1,00	PC
7	224565-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DL335, TRAVEL LENGTH 75MM, REF DWG NO: 10C2025/ ACEP101DBDE, MFC NAKAKITA	1,00	PC
8	224566-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DA200, TRAVEL LENGTH 25MM, REF DWG NO: 10C2026/ ACEL516DBDE, MFC NAKAKITA	1,00	PC
9	224567-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG160, TRAVEL LENGTH 12MM, REF DWG NO: 10C2036/ ACETO09DBDE, MFC NAKAKITA	2,00	PC
10	224568-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2033V/ ACEL366DBDE, MFC NAKAKITA	1,00	PC

	PT. KOMIPO PEMBANGKITAN JAWA BALI	Doc. Ref	: KPJB-0951-02
	PLTU TANJUNG JATI B #UNIT 3&4	Form No.	: KPJB-0951-02-ZZ-FM-03
	REQUEST FOR QUOTATION	Design Div.	: Finance and Administration
		Revision No.	: 00

Attachment 2: RFQ No. K19733

Quotation format

A. Price Quotation

<COMPANY LOGO>

Quotation


No:

Item No	Item Code	Description	Quantity		Price (IDR)	
			Order	Unit	Unit Price	Total
1	224559-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DB280, TRAVEL LENGTH 35MM, REF DWG NO: 10C2015/ ACEP102FBDE, MFC NAKAKITA	1,00	PC		
2	224560-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2016V/ ACEL366DBDE, MFC NAKAKITA	2,00	PC		
3	224561-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2018V/ ACEL366DBDE, MFC NAKAKITA	4,00	PC		
4	224562-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL RA280, TRAVEL LENGTH 25MM, REF DWG NO: 10C2022/ ACEL505DBRE, MFC NAKAKITA	1,00	PC		
5	224563-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL RG160, TRAVEL LENGTH 12MM, REF DWG NO: 10C2023/ ACEL370DBRE, MFC NAKAKITA	1,00	PC		
6	224564-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DA240, TRAVEL LENGTH 15MM, REF DWG NO: 10C2024/ ACEL584GBDE, MFC NAKAKITA	1,00	PC		
7	224565-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DL335, TRAVEL LENGTH 75MM, REF DWG NO: 10C2025/ ACEP101DBDE, MFC NAKAKITA	1,00	PC		
8	224566-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DA200, TRAVEL LENGTH 25MM, REF DWG NO: 10C2026/ ACEL516DBDE, MFC NAKAKITA	1,00	PC		
9	224567-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG160, TRAVEL LENGTH 12MM, REF DWG NO: 10C2036/ ACETO09DBDE, MFC NAKAKITA	2,00	PC		
10	224568-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2033V/ ACEL366DBDE, MFC NAKAKITA	1,00	PC		
		TOTAL				
		VAT 11%				
		GRAND TOTAL				

..... rupiah (Please mention the price in words)

Term and Conditions:

1. The above price are included delivery cost to warehouse of PT. KPJB
2. Please mention Certificate is required at the delivery time
3. Payment will be made by Telegraphic Transfer (T/T) within forty five (45) days after invoice received, attached with delivery or work completion report issued by PT.KPJB.
4. Please mention Bank Account that will be use for payment (including Bank Name, Bank Address)

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5. Please mention Name of Director

Place, [Month] [Date] [Year]
SIGN & COMPANY STAMP
DUTY STAMP / MATERAI (10000)
Name
(Title)

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B. Unpriced Quotation

<COMPANY LOGO>

Quotation

No:


Item No	Item Code	Description	Quantity		Delivery Time
			Order	Unit	
1	224559-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DB280, TRAVEL LENGTH 35MM, REF DWG NO: 10C2015/ ACEP102FBDE, MFC NAKAKITA	1,00	PC	
2	224560-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2016V/ ACEL366DBDE, MFC NAKAKITA	2,00	PC	
3	224561-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2018V/ ACEL366DBDE, MFC NAKAKITA	4,00	PC	
4	224562-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL RA280, TRAVEL LENGTH 25MM, REF DWG NO: 10C2022/ ACEL505DBRE, MFC NAKAKITA	1,00	PC	
5	224563-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL RG160, TRAVEL LENGTH 12MM, REF DWG NO: 10C2023/ ACEL370DBRE, MFC NAKAKITA	1,00	PC	
6	224564-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DA240, TRAVEL LENGTH 15MM, REF DWG NO: 10C2024/ ACEL584GBDE, MFC NAKAKITA	1,00	PC	
7	224565-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DL335, TRAVEL LENGTH 75MM, REF DWG NO: 10C2025/ ACEP101DBDE, MFC NAKAKITA	1,00	PC	
8	224566-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DA200, TRAVEL LENGTH 25MM, REF DWG NO: 10C2026/ ACEL516DBDE, MFC NAKAKITA	1,00	PC	
9	224567-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG160, TRAVEL LENGTH 12MM, REF DWG NO: 10C2036/ ACETO09DBDE, MFC NAKAKITA	2,00	PC	
10	224568-R/	ACTUATOR,PNEUMATIC, SINGLE ACTING CYLINDER, MODEL DG140, TRAVEL LENGTH 12MM, REF DWG NO: 10C2033V/ ACEL366DBDE, MFC NAKAKITA	1,00	PC	

Term and Conditions:

1. The above price are included delivery cost to warehouse of PT. KPJB
2. Please mention Certificate is required at the delivery time
3. Payment will be made by Telegraphic Transfer (T/T) within forty five (45) days after invoice received, attached with delivery or work completion report issued by PT.KPJB.
4. Please mention Bank Account that will be use for payment (including Bank Name, Bank Address)
5. Please mention Name of Director

Place, [Month] [Date] [Year]
SIGN & COMPANY STAMP

Name
(Title)

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Attachment 3: RFQ No. K19733

(KOP PERUSAHAAN/BADAN/LEMBAGA)

PAKTA INTEGRITAS

Saya yang bertanda tangan di bawah ini, dalam rangka Pengadaan (*diisi Nama Pengadaan*) dengan nomor (*diisi nomor RFQ/PR*), pada satuan kerja PT KPJB yang dalam hal ini mewakili PT PLN (Persero) Unit Induk Pembangkitan Tanjung Jati B Jebara dengan ini menyatakan bahwa saya:

1. Akan mentaati peraturan tentang Pedoman Pengadaan Barang/Jasa di Lingkungan PT KPJB dan PT PLN (Persero), dan peraturan perundang-undangan yang terkait dengan pengadaan;
2. Tidak akan melakukan persengkokolan/pengaturan/kerjasama diantara para Peserta Pengadaan/Jasa lain dan/atau Pengguna Barang/Jasa dan/atau Pelaksana Pengadaan yang dapat mengakibatkan terjadinya persaingan usaha tidak sehat;
3. Mendukung prinsip **4 NO's** yang dijunjung tinggi oleh PT KPJB dan PT PLN (Persero) yaitu:
 - a. **No Bribery** (tidak boleh ada suap menyuap dan pemerasan)
 - b. **No Kickback** (tidak boleh ada komisi, tanda terimakasih baik dalam bentuk uang dan dalam bentuk lainnya);
 - c. **No Gift** (tidak boleh ada hadiah atau gratifikasi yang bertentangan dengan peraturan
 - d. **No Luxirious Hospitality** (tidak boleh ada penyambutan dan jamuan yang berlebihan).
4. Tidak akan melakukan komunikasi yang mengarah dan/atau melakukan praktek Korupsi, Kolusi dan Nepotisme (KKN)
5. Akan melakukan proses pengadaan secara bersih dan transparan agar menghasilkan pekerjaan sesuai ketentuan peraturan perundang-undangan yang berlaku.

Jika saya melanggar hal-hal yang telah saya nyatakan dalam Pakta Integritas ini, saya bersedia dikenakan sanksi sesuai dengan ketentuan peraturan perundang-undangan yang berlaku.

_____ [Tempat], _____ [Tanggal]

[Tanda Tangan & Cap Perusahaan & Materai 10.000]

_____ [Nama Jelas]

_____ [Jabatan]

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Attachment 4: RFQ No. K19733

(KOP PERUSAHAAN/BADAN/LEMBAGA)

SURAT PERNYATAAN KEASLIAN DOKUMEN

Yang bertanda tangan di bawah ini :

Nama :

Jabatan :

Alamat :

Sehubungan dengan pekerjaan :

Judul Pekerjaan :

RFQ No. :


Menyatakan dengan sesungguhnya bahwa segala dokumen yang kami sampaikan adalah benar dan apabila dikemudian hari ditemukan bahwa dokumen – dokumen yang telah kami sampaikan tidak benar dan ada pemalsuan, maka kami bersedia dikenakan sanksi sesuai peraturan perundang – undangan yang berlaku.

_____ [Tempat], _____ [Tanggal]

[Tanda Tangan & Cap Perusahaan & Materai 10.000]

_____ [Nama Jelas]

_____ [Jabatan]

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Attachment 5: RFQ No. K19733

Unprice Document Required

No.	Syarat Administrasi (Administration Requirement)
A.	
1	Asli Surat Penawaran (Original Unprice quotation) yang: 1. Description sesuai permintaan 2. Bertanggal (dated) 3. Bertanda tangan dan Cap Perusahaan (Company stamped) 4. Menyebutkan waktu pengiriman sampai gudang sesuai permintaan (Time Delivery)
2	Pengalaman Pekerjaan dengan total harga kontrak senilai minimal IDR 50.000.000 – menyerahkan copy kontrak atau PO (Work Experience for contract amount minimum IDR 50.000.000 – submitting the copy of the contract or PO)
3	Copy pembayaran pajak SSP (PPN) 3 bulan terakhir periode: January, February, March 2026 (Copy of 3 month payment tax period of: January, February, March 2026)
4	Original Pakta Integritas
5	Surat Pernyataan Keaslian Dokumen
6	Vendor participants must have registered CSMS Certificate (minimum: Low Risk Level) issued by PT. PLN (Persero) - submitting the copy of the document
B.	
1	Copy Surat Ijin Usaha Perusahaan – SIUP / BKPM (PMA) (copy of Business License)
2	Copy Surat Ijin Tempat Usaha – SITU / DOMISILI / HO (Copy of Domicile Certificate)
3	Copy Nomor Pokok Wajib Pajak - NPWP (Copy Tax ID number of company)
4	Copy Surat Pengukuhan Perusahaan Kena Pajak - SPPKP (Copy of Taxable Company Certificate)
5	Copy Tanda Daftar Perusahaan – TDP / NIB (Copy of Certificate Company Registration)
6	Copy Akte pendirian perusahaan/perubahan *jika ada (Deed of Incorporation)

Note: Administration Requirement point B 1-6 is not required to be submitted if your company already registered in our SAP and the Company data submitted still valid until closing time. If any document not submitted by the suppliers or the submitted document do not meet the requirement, we will regard that the supplier fails and we will not open the price quotation document (price evaluation)

Catatan: Syarat Administrasi no. B 1-6 tidak perlu di kirimkan jika perusahaan anda sudah terdaftar di SAP kami dan data yang dahulu di kirimkan masih berlaku sampai dengan waktu penutupan bidding. Jika ada dokumen yang tidak diserahkan atau dokumen yang diserahkan tidak sesuai dengan persyaratan, kami akan menganggap bahwa supplier gagal dan kami tidak akan membuka dokumen penawaran harga (evaluasi harga).



**PT. KOMPIO PEMBANGKITAN JAWA BALI
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TERMS AND CONDITION

Lampiran

PO NO : K19733

Description :

SYARAT - SYARAT DAN KONDISI

KETENTUAN UMUM

Singkatan dan istilah umum :

"**Purchase Order/PO**" adalah Surat Pesanan Pembelian (*Purchase Order* atau *PO*).

"**ASET OPERATOR**" adalah PT Komipo Pembangkitan Jawa Bali (PT. KPJB)

"**PLN TJB**" adalah PT PLN (Persero) Unit Induk Pembangkitan Tanjung Jati B.

"**PPN**" adalah Pajak Pertambahan Nilai.

1. SURAT MENYURAT

Setiap surat menyurat harus menggunakan Kop Surat Perusahaan yang mencantumkan Nomor *Purchase Order/PO* , Nomor Surat Penawaran, Tanggal dan ditandatangani di atas meterai oleh Penyedia Barang/Jasa (oleh Direktur atau yang dikuasakan berdasarkan Anggaran Dasar Perusahaan), dan dialamatkan kepada: **ASET OPERATOR**, Procurement, Jepara.

Korespondensi antara **ASET OPERATOR** dan Penyedia Barang/Jasa dapat dilaksanakan melalui surat, faksimili, atau *e-mail* dan ditujukan kepada alamat masing-masing Pihak sebagaimana yang tercantum dalam *Purchase Order/PO*.

Salah satu Pihak dapat mengganti alamat, nomor telepon, faksimili dan/atau *E-mail* dengan memberikan pemberitahuan terlebih dahulu kepada Pihak lainnya.

2. PROSES PENGADAAN

Proses Pengadaan diadakan dengan sistem yang diputuskan oleh **ASET OPERATOR Procurement** dan **PLN TJB**, dimana prosedur yang berlaku yaitu sebagai berikut:

2.1 Penyedia Barang / Jasa yang diundang untuk Pengadaan adalah yang telah terdaftar di daftar Penyedia Barang/Jasa **ASET OPERATOR** dan telah disetujui oleh **PLN TJB** dengan diterbitkan "SAP CODE" oleh **PLN TJB**.

2.2 Menyerahkan Jaminan Penawaran untuk Surat Penawaran di atas Rp.500,000,000,- (Lima Ratus Juta Rupiah) dan/atau dipersyaratkan pada Undangan Pengadaan Barang / Jasa dengan nilai jaminan minimal 1% (satu persen) dan maksimal 3% (tiga persen) dari Harga Penawaran dari Penyedia Barang/Jasa termasuk PPN sesuai peraturan yang berlaku, kepada **ASET OPERATOR** dengan masa berlaku adalah 90 (Sembilan Puluh) hari kalender terhitung dari tanggal yang tertera di Surat Penawaran Harga. Jaminan Penawaran Harus diterbitkan oleh Bank sesuai dengan Daftar Penyedia Jaminan Terseleksi (DPJT) PLN yang telah disetujui oleh **ASET OPERATOR** dan/atau **PLN TJB**.

2.3 Penyedia Barang/Jasa wajib memenuhi persyaratan yang diminta oleh **ASET OPERATOR Procurement** dan tercantum dalam Surat Penawaran Harga, yaitu sebagai berikut:

2.3.1 Jadwal Pengiriman/pekerjaan yang diajukan dalam Surat Penawaran Harga adalah dalam hitungan "**HARI KALENDER atau TANGGAL yang disepakati**".

2.3.2 Sertifikat dan/atau dokumen lainnya yang dipersyaratkan dalam permintaan barang/jasa yang akan diserahkan, maka harus tercantum dalam Surat Penawaran Harga dan itu adalah "**SERTIFIKAT/DOKUMEN ASLI**", kecuali ada ketentuan dan persetujuan lain yang disepakati Para Pihak (Penyedia Barang/Jasa dan **ASET OPERATOR Procurement**).

2.3.3 Harga Yang ditawarkan adalah dalam "**RUPIAH**" sesuai dengan peraturan yang berlaku, kecuali ada ketentuan dan persetujuan lain yang disepakati Para Pihak (Penyedia Barang/Jasa dan **ASET OPERATOR Procurement**).

2.3.4 Surat Penawaran Harga yang diserahkan ke **ASET OPERATOR Procurement** harus menggunakan kop surat resmi perusahaan, bertanggal, bermeterai dan ditandatangani oleh Penyedia Barang/Jasa (oleh Direktur atau yang dikuasakan berdasarkan Anggaran Dasar Perusahaan).

2.3.5 Masa berlaku Surat Penawaran Harga adalah 90 (Sembilan Puluh) Hari Kalender sejak tanggal Surat Penawaran Harga dibuat.

2.3.6 Syarat dan Kondisi penyerahan barang/jasa adalah "**DDP Tanjung Jati B**" (*incoterms 2000*), kecuali ada ketentuan dan persetujuan lain yang disepakati Para Pihak (Penyedia Barang/Jasa dan **ASET OPERATOR Procurement**).

2.3.7 Syarat dan Kondisi Pembayaran adalah 45 (empat puluh lima) Hari Kalender sejak barang/atau bukti penyelesaian pekerjaan dan dokumen lainnya yang dipersyaratkan dalam *Purchase Order/PO* lengkap diterima oleh **ASET OPERATOR** dan **PLN TJB**.

2.3.8 Penyedia Barang/Jasa dipersyaratkan mencantumkan kesanggupan untuk menerbitkan "**Surat Pernyataan Jaminan/Warranty Letter**", yang menyatakan bahwa barang yang dikirimkan adalah Asli, Baru dan Tidak ada cacat. *Purchase Order/PO* lengkap diterima oleh **ASET OPERATOR** dan dapat digunakan, dan ditandatangani di atas meterai oleh Penyedia Barang/Jasa (oleh Direktur atau yang dikuasakan berdasarkan Anggaran Dasar Perusahaan). Jika dipersyaratkan dalam *PO*

2.4 Surat Penawaran Harga dan Dokumen pengadaan lainnya yang telah diterima oleh **ASET OPERATOR Procurement** adalah mutlak milik **ASET OPERATOR Procurement** dan keputusan yang dibuat oleh **ASET OPERATOR Procurement Komite** adalah mutlak dan tidak dapat diganggu gugat.

2.5 Adapun Syarat dan Ketentuan lainnya yang ditetapkan terpisah adalah satu kesatuan dari Syarat –Syarat dan Kondisi pada lampiran 2.

3. PERSETUJUAN PURCHASE ORDER/PO

Sebagai konfirmasi persetujuan Pesanan atau syarat-syarat *Purchase Order/PO*, Nomor Referensi Rekanan wajib menandatangani Surat *Purchase Order/PO* di atas meterai yang cukup pada kolom yang tersedia dan mengembalikan kepada Procurement **ASET OPERATOR**.

3.1 PROSES PURCHASE ORDER/PO

Proses *Purchase Order/PO* diberlakukan dalam tahap sebagai berikut.

3.1.1 *Purchase Order/PO* atas nama **PLN TJB** lebih besar dari Rp.500,000,000,- (Lima Ratus Juta Rupiah), maka Penyedia Barang/Jasa diwajibkan menyerahkan Jaminan Pelaksanaan ditujukan ke **PLN TJB**, bernilai minimal 5% (lima persen) dari total harga barang/ jasa yang tercantum dalam *Purchase Order/PO* termasuk PPN sesuai dengan peraturan yang berlaku.

3.1.2 *Purchase Order/PO* Asli yang telah lengkap ditandatangani oleh **ASET OPERATOR** atas sepengetahuan dan persetujuan **PLN TJB** terlebih dahulu, dan wajib ditandatangani di atas meterai oleh Penyedia Barang/Jasa (oleh Direktur atau yang dikuasakan berdasarkan Anggaran Dasar Perusahaan) dan dikembalikan kepada Procurement **ASET OPERATOR**.

3.1.3 *Aktivasi Surat Purchase Order/PO* adalah 7 (tujuh) Hari Kalender sejak *Purchase Order/PO* dikirimkan melalui surat tertulis dan/atau surat elektronik (*surel/email*) oleh Procurement **ASET OPERATOR**.



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- 3.1.4 *Jangka Waktu berlakunya Purchase Order/PO ditetapkan dalam Purchase Order/PO, pada kolom "Start Date" dan "End Date".*
- 3.1.5 *Pada ketentuan Pasal 3.1.1 dimana ASET OPERATOR akan mengirimkan surat "Appointment of awarded Supplier" melalui surat tertulis dan/atau Surat Elektronik (surel/email) kepada Penyedia Barang/Jasa, dan selambat-lambatnya dalam waktu 14 (empat belas) Hari Kalender setelah tanggal dikirimkan surat "Appointment of awarded Supplier", maka Jaminan Pelaksanaan harus diterima oleh Procurement ASET OPERATOR, apabila telah melewati jangka waktu yang telah ditetapkan dan pihak Penyedia Barang/Jasa belum memberikan Jaminan Pelaksanaan, maka ASET OPERATOR mempunyai hak membatalkan perikatan hukum (Purchase Order/PO) dengan Penyedia Barang/Jasa. Penyedia Barang/Jasa dianggap mengundurkan diri dan Jaminan Penawaran dicairkan tanpa syarat. Penyedia Barang/Jasa dianggap telah melakukan Wanprestasi dan akan dikenakan sanksi sesuai dengan peraturan yang berlaku di ASET OPERATOR dan PLN TJB.*
- 3.2 **ASET OPERATOR dan Penyedia Barang/Jasa sepakat dalam hal ASET OPERATOR membatalkan Purchase Order/PO maka ASET OPERATOR dan PLN TJB tanpa terkecuali dibebaskan dari segala bentuk gugatan dan laporan hukum, sanksi, ganti rugi, penggantian biaya-biaya maupun ongkos-ongkos apapun sehingga Penyedia Barang/Jasa tidak memiliki hak dan wewenang untuk menuntut pertanggungjawaban apapun lagi dari ASET OPERATOR dan PLN TJB.**
- 3.3 *Purchase Order/PO dan Ketentuan lainnya yang ditetapkan terpisah adalah satu kesatuan dari Syarat –Syarat dan Kondisi lampiran 2.*

4. JANGKA WAKTU PELAKSANAAN

Jangka Waktu Pelaksanaan adalah Jangka Waktu yang tertera dalam *Purchase Order/PO* sesuai pada ketentuan Pasal 3.1.4, kecuali adanya pengakhiran atau perpanjangan berdasarkan kesepakatan Para Pihak.

5. PERPANJANGAN WAKTU PELAKSANAAN

Setiap perpanjangan waktu pelaksanaan akan diterbitkan Amendemen *Purchase Order/PO* dengan Jangka Waktu yang disepakati Para Pihak.

6. PERUBAHAN PURCHASE ORDER/PO (AMENDMENT PO)

Setiap perubahan atas *Purchase Order/PO* mengenai Masa berlaku *Purchase Order/PO*, sebagaimana ketentuan pada Pasal 3.1.4 dan syarat-syarat dan kondisi lain hanya akan mengikat apabila disetujui secara tertulis dari ASET OPERATOR atas nama PLN TJB dengan diterbitkannya *Amendment PO* yang diterbitkan 2 (dua) rangkap yang masing - masing rangkap ditandatangani diatas meterai oleh ASET OPERATOR dan Penyedia Barang/Jasa.

7. BARANG-BARANG

7.1 Semua barang yang pasok/disuplai harus sesuai dengan perincian yang tercantum dalam *Purchase Order/PO*.

7.2 Penyimpangan dari ketentuan-ketentuan di atas tidak diperkenankan tanpa persetujuan tertulis/tanpa *Amendment PO* dari ASET OPERATOR.

8. KEMASAN

Kemasan harus dibuat kuat (dalam wujud kayu atau karton) dan layak laut atau udara sesuai dengan standar yang berlaku bagi kemasan. Semua harga bahan kemasan telah termasuk dalam harga yang telah disetujui. Pada setiap kemasan harus dicantumkan nama barang.

9. PEMERIKSAAN

9.1 Pemeriksaan sebelum pengapalan: apabila pemeriksaan sebelum pengapalan diperlukan, maka ASET OPERATOR dan/atau PLN TJB akan melakukan pemeriksaan barang di tempat Penyedia Barang/Jasa atau tempat lain yang disetujui Para Pihak.

9.2 Barang akan diperiksa pada waktu penyerahan dilaksanakan setelah lengkap dengan dokumen yang dipersyaratkan pada *Purchase Order/PO*. Barang yang tidak memenuhi syarat-syarat yang ditentukan dalam *Purchase Order/PO* akan dikembalikan kepada Penyedia Barang/Jasa, dan semua biaya dan kerugian akan ditimbulkan menjadi risiko dan tanggung jawab Penyedia Barang/Jasa.

10. SERTIFIKASI

Sertifikat untuk barang (-barang) tertentu yang ditetapkan oleh ASET OPERATOR dan PLN TJB adalah sebagai berikut:

- Sertifikat Asal Usul Barang (*Certificate of Origin/COO*);
 - Sertifikat dari Pabrik (*Certificate of Manufacture/COM*);
 - Surat Keaslian Barang;
 - Sertifikat Hasil Uji Pabrik (*Factory Acceptance Test Certificate*);
 - Salinan Dokumen Impor Barang (*Copy Bill of Lading*);
 - Sertifikat Analisa (*Certificate of Analysis/COA*);
- ataupun dokumen-dokumen pendukung lainnya (sebagaimana dipersyaratkan khusus di *Purchase Order/PO*).

11. PENYERAHAN

11.1 Penyedia Barang/Jasa harus menyerahkan barang (-barang) dalam jangka waktu dan tempat sesuai dengan syarat-syarat yang telah ditentukan dalam *Purchase Order/PO*.

11.2 Dalam jangka waktu paling lambat 7 (tujuh) Hari Kalender sebelum pengiriman barang (-barang), Penyedia Barang/Jasa harus memberitahukan ASET OPERATOR mengenai jadwal pengiriman.

11.3 Waktu Penyerahan barang(-barang) dihitung efektif sejak 7 (tujuh) Hari Kalender sejak *Purchase Order/PO* dikirimkan melalui surat tertulis dan/atau Surat Elektronik (surel/ email) oleh Procurement ASET OPERATOR ditambah jangka waktu pengiriman yang tercantum pada *Purchase Order/PO* sebagaimana ketentuan pada Pasal 3.1.5 dan lengkap disertai dengan penyerahan dokumen pendukung yang dipersyaratkan dalam *Purchase Order/PO*.

12. DENDA SANKSI

12.1 Sanksi atas pencairan Jaminan Penawaran tanpa syarat apabila Penyedia Barang/Jasa membatalkan *Purchase Order/PO* secara sepihak, tanpa persetujuan ASET OPERATOR dan PLN TJB, sebagaimana ketentuan pada Pasal 2.2 dan Pasal 3.1.6. Penyedia Barang/Jasa dianggap telah melakukan Wanprestasi dan mendapatkan sanksi *blacklist* di lingkungan ASET OPERATOR dan PLN TJB minimal 2 (dua) tahun.

12.2 Denda atas keterlambatan menyelesaikan pekerjaan atau memasok Barang adalah setiap hari keterlambatan dikenakan 1/1000 (satu per seribu) dengan maksimal denda keterlambatan adalah 5% (lima persen) dari total nilai *Purchase Order/PO* belum termasuk PPN sesuai dengan peraturan yang berlaku dan/atau sama dengan maksimal keterlambatan pengiriman maksimal adalah 50 (lima puluh) Hari Kalender, kecuali ada kesepakatan lain antara Para Pihak. Serta melakukan pemotongan pembayaran kepada Penyedia Barang/Jasa dengan menggunakan nilai denda yang sudah ditetapkan ASET OPERATOR tersebut sebagai dasar pemotongan.

12.3 Batas maksimal Penyedia Barang/Jasa dalam keterlambatan adalah 3 (tiga) *Purchase Order/PO* dan Penyedia Barang/Jasa akan di tangguhkan ("suspend") atau tidak dapat turut serta dalam proses pengadaan berikutnya. Pemberian Penangguhan ("suspend") kepada Penyedia Barang/Jasa adalah hak mutlak ASET OPERATOR atas persetujuan PLN TJB, dan tanpa pemberitahuan resmi kepada Penyedia Barang/Jasa.

12.4 Penyedia Barang/Jasa tidak dapat membatalkan *Purchase Order/PO* sepihak kepada ASET OPERATOR dan/atau PLN TJB. Bila Penyedia Barang/Jasa tidak sanggup menyerahkan atau menyelesaikan pekerjaannya dalam waktu yang telah ditentukan, ASET OPERATOR dan/atau PLN TJB sebagaimana ketentuan pada Pasal 11.3, maka ASET OPERATOR memiliki hak dan wewenang penuh untuk:



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- 12.4.1 Mengenakan denda maksimal sebesar 5% (lima persen) dari Total Nilai pada *Purchase Order/PO* atau mencairkan Jaminan Pelaksanaan tanpa syarat;
- 12.4.2 Dan/ Atau memesan barang/ jasa tersebut kepada sumber lain dan bila ada kelebihan harga yang dibayarkan **ASET OPERATOR** maka Penyedia Barang/Jasa wajib menanggung kelebihan harga tersebut;
- 12.4.3 Penyedia Barang/Jasa dianggap telah melakukan Wanprestasi dan mendapatkan sanksi *black list* di lingkungan **ASET OPERATOR** dan **PLN TJB** minimal 2 (dua) tahun disertai dengan membatalkan atau mengakhiri *PO* beserta pengakhiran ikatan Kerjasama dengan Penyedia Barang/Jasa.
- 12.5 Denda atau Sanksi dapat diabaikan dan/atau dihilangkan apabila keterlambatan atas suatu Pengadaan Barang atau Jasa yang dianggap oleh **ASET OPERATOR** dan/ atau **PLN TJB** adalah dikategorikan sebagai suatu "*Force Majeure*" sebagaimana ketentuan pada Pasal 16.

13. TAHAPAN SURAT PEMBERITAHUAN, PERINGATAN, DAN PEMUTUSAN PURCHASE ORDER/PO KARENA WANPRESTASI

- 13.1 Peristiwa-peristiwa yang digolongkan sebagai Wanprestasi adalah:
- Peristiwa Wanprestasi yang mengakibatkan *Purchase Order/PO* berakhir tanpa melalui surat peringatan dari **ASET OPERATOR** terhadap Penyedia Barang/Jasa adalah sebagai berikut:
 - Penyedia Barang/Jasa terbukti melakukan tindak pidana antara lain adanya pemalsuan surat/dokumen, praktek korupsi, penyuapan, pemberian gratifikasi, persekongkolan, kecurangan dan pemalsuan yang berkaitan dengan proses pengadaan, *Purchase Order/PO* dan/atau pelaksanaan Pekerjaan.
 - Penyedia Barang/Jasa terbukti melakukan pelanggaran atas peraturan internal **ASET OPERATOR** dan/atau **PLN TJB** terkait *fraud*.
 - Berdasarkan putusan Pengadilan yang telah mempunyai kekuatan hukum tetap, Penyedia Barang/Jasa dinyatakan dalam keadaan pailit, pembubaran, likuidasi atau diberikan penundaan pembayaran hutang yang menyebabkan Penyedia Barang/Jasa tidak dapat melakukan kewajibannya berdasarkan *Purchase Order/PO*.
 - Penyedia Barang/Jasa terbukti dikenakan Sanksi Daftar Hitam (*blacklist*) sebelum penandatanganan *Purchase Order/PO*.
 - Apabila Jaminan Penawaran dan/atau Jaminan Pelaksanaan yang diserahkan oleh Penyedia Barang/Jasa kepada **ASET OPERATOR** dan/atau **PLN TJB** selama jangka waktu *Purchase Order/PO* terbukti palsu/tidak benar.
 - Setiap pernyataan yang dibuat oleh Penyedia Barang/Jasa di dalam *Purchase Order/PO* yang berkaitan dengan proses pengadaan *Purchase Order/PO* dan/atau pelaksanaan Pekerjaan terbukti tidak sah dan/atau tidak dilaksanakan oleh Penyedia Barang/Jasa.
 - Peristiwa Wanprestasi yang mengakibatkan *Purchase Order/PO* berakhir melalui surat peringatan dari **ASET OPERATOR** terhadap Penyedia Barang/Jasa adalah sebagai berikut:
 - Penyedia Barang/Jasa mengalihkan Pekerjaan baik sebagian atau seluruhnya atau hak atau kewajiban yang diatur dalam *Purchase Order/PO* tanpa persetujuan tertulis dari **ASET OPERATOR**;
 - Apabila denda yang diatur dalam *Purchase Order/PO* tidak dibayar oleh Penyedia Barang/Jasa kepada **ASET OPERATOR**.
 - Apabila Penyedia Barang/Jasa tidak melakukan perpanjangan Jaminan Pelaksanaan sebagaimana diatur dalam *Purchase Order/PO*.
 - Penyedia Barang/Jasa tidak memenuhi baik sebagian atau seluruh kewajiban sesuai ketentuan yang diatur dalam *Purchase Order/PO*.
- 13.2 Dalam hal terjadi Peristiwa Wanprestasi oleh Penyedia Barang/Jasa sebagaimana dimaksud Pasal 13 ayat 13.1 butir b Syarat Umum *Purchase Order/PO*, **ASET OPERATOR** berhak mengakhiri *Purchase Order/PO* dengan memberikan surat peringatan, dengan ketentuan sebagai berikut:
- Surat Pemberitahuan (*Notification Letter*): dikirimkan secara tertulis dan/atau melalui *Email* ke Penyedia Barang/Jasa maksimal 14 (empat belas) Hari Kalender sebelum jangka waktu pengiriman jatuh tempo yang tertera pada *Purchase Order/PO*.
 - Surat Peringatan Resmi (*Official Warning Letter*): dikirimkan secara tertulis dan/atau melalui *Email* ke Penyedia Barang/Jasa yang mengalami keterlambatan pengiriman dengan ketentuan sebagai berikut:
 - Surat Peringatan Pertama (*Warning Letter 1*): 1- 10 hari setelah masa berlakunya *Purchase Order/PO* berakhir (*end date*), dan Penyedia Barang/Jasawajib merespon dalam waktu 10 hari setelah Surat Peringatan Pertama (*Warning Letter 1*) diterima.
 - Surat Peringatan Kedua (*Warning Letter 2*): 21- 30 hari setelah masa berlakunya *Purchase Order/PO* berakhir (*end date*), dan Penyedia Barang/Jasawajib merespon dalam waktu 10 hari setelah Surat Peringatan Kedua (*Warning Letter 2*) diterima.
 - Warning Letter 3* ((Surat Pengakhiran/Pemutusan (*Termination Letter*)): 51 hari setelah masa berlakunya *Purchase Order/PO* berakhir (*end date*).
 - Surat Pengakhiran/Pemutusan (*Termination Letter*): dikirimkan secara tertulis dan/atau melalui *Email* ke Penyedia Barang/Jasa setelah 2 (dua) surat pada Pasal 13.2.a dan 13.2.b di atas dikirimkan dan tidak tercapainya kesepakatan antara Para Pihak dalam penyelesaian permasalahan yang dimaksud dalam jangka waktu masa berlakunya *Purchase Order/PO*, maka secara sepihak yaitu **ASET OPERATOR** atas persetujuan **PLN TJB**, akan membatalkan *Purchase Order/PO* dengan mengirimkan Surat Pemutusan (*Termination Letter*) kepada Penyedia Barang/Jasa.
 - Apabila Penyedia Barang/Jasa tidak menyelesaikan pekerjaan serta tidak tercapainya kesepakatan antara Para Pihak dalam penyelesaian pekerjaan yang dimaksud dalam jangka waktu masa berlakunya *Purchase Order/PO* dalam waktu sebagaimana disebutkan pada Pasal 13 ayat 13.2 butir c, maka **ASET OPERATOR** berhak mencairkan Jaminan Pelaksanaan Penyedia Barang/Jasa pada periode berjalan, dan mengakhiri *Purchase Order/PO* secara sepihak.
- 13.3 Dalam hal Penyedia Barang/Jasa telah melakukan pemulihan atau perbaikan sebagaimana dimaksud pada bab ini, dan pemulihan atau perbaikan tersebut disetujui oleh **ASET OPERATOR** maka peringatan tertulis yang telah diterbitkan tersebut tidak akan diperhitungkan sebagai pemberian peringatan yang berkelanjutan atau tidak berlaku kumulatif pada pemberian peringatan berikutnya.
- 13.4 Atas setiap pengakhiran dari *Purchase Order/PO*, seluruh kewajiban-kewajiban masing-masing Pihak berdasarkan *Purchase Order/PO* wajib berhenti, kecuali:
- Sehubungan dengan kewajiban-kewajiban pembayaran yang ditimbulkan dari tindakan-tindakan yang diambil sebelum pengakhiran tersebut (termasuk namun tidak terbatas pada hak normatif Pekerja Penyedia Barang/Jasa);
 - Sebagaimana ditentukan lain dalam *Purchase Order/PO*;
 - Bahwa ketentuan terkait Jaminan Pelaksanaan akan tetap berlaku walaupun *Purchase Order/PO* telah diakhiri; dan/atau
 - Pengakhiran tersebut tidak akan mengurangi setiap hak atas ganti rugi atau setiap perbaikan lainnya yang mungkin dimiliki oleh masing-masing pihak berdasarkan *Purchase Order/PO*.
- 13.5 Dalam hal terjadi Peristiwa Wanprestasi Penyedia Barang/Jasa, maka Penyedia Barang/Jasa akan dikenakan hukuman/denda sesuai ketentuan pada *Purchase Order/PO*.
- 13.6 **ASET OPERATOR** akan memberlakukan hukuman daftar hitam (*blacklist*) bagi setiap pengakhiran *Purchase Order/PO* yang disebabkan karena wanprestasi Penyedia Barang/Jasa sebagaimana diatur lebih lanjut dalam ketentuan yang berlaku pada **ASET OPERATOR**.
- 13.7 Terhadap pengakhiran *Purchase Order/PO*, Para Pihak sepakat untuk tidak memberlakukan ketentuan Pasal 1266 Kitab Undang-Undang Hukum Perdata.
- 13.8 Akibat-akibat Pemutusan *Purchase Order/PO*:
- ASET OPERATOR** dan/atau **PLN TJB** dibebaskan dari segala tuntutan hutang-hutang Penyedia Barang/Jasa kepada pihak ketiga yang harus ditanggung oleh Penyedia Barang/Jasa;
 - ASET OPERATOR** dan Penyedia Barang/Jasa segera mengadakan pemeriksaan bersama yang dituangkan dalam Berita Acara Pemeriksaan Pekerjaan dan/atau *Good Receipt (GR)* dan/atau *Join Inspection (JI)* yang meliputi beberapa prestasi yang telah selesai dikerjakan oleh Penyedia Barang/Jasa. Apabila Penyedia Barang/Jasa tidak bersedia mengadakan pemeriksaan bersama, maka **ASET OPERATOR** akan mengadakan



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- pemeriksaan terakhir dan hasilnya dianggap sebagai hasil pemeriksaan bersama;
- Penyedia Barang/Jasa hanya berhak mendapatkan pembayaran sesuai kemajuan pekerjaan yang telah dilaksanakan dan disetujui **ASET OPERATOR**. Peralatan dan bahan-bahan yang belum dipergunakan tidak termasuk dalam penilaian kemajuan pekerjaan;
 - ASET OPERATOR** akan mengambil alih pekerjaan untuk diselesaikan dengan *Purchase Order/PO* lain atau dengan cara lain;

14. HARGA

- Harga yang tercantum dalam *Purchase Order/PO* ini adalah tetap, tidak berubah dan mengikat.
- Bagi Pengusaha Kena Pajak ("PKP") harga yang tercantum dalam *Purchase Order/PO* tidak termasuk PPN sesuai dengan peraturan yang berlaku. PPN harus dinyatakan terpisah dari harga barang(-barang) yang dipesan.

15. JAMINAN PENAWARAN DAN JAMINAN PELAKSANAAN

Jaminan dipersyaratkan untuk Pengadaan sebagai berikut :

- Jaminan Penawaran adalah bernilai minimal 1% (satu persen) maksimal 3% (Tiga persen) dari Total Nilai Perkiraan Sendiri (HPS) atau Surat Penawaran Harga dari Penyedia Barang/Jasa termasuk PPN sesuai dengan peraturan yang berlaku, untuk nilai Penawaran lebih besar dari Rp.500,000,000,- (lima ratus juta rupiah), sebagaimana ketentuan pada Pasal 2.2 .
- Jaminan Pelaksanaan adalah bernilai minimal 5% (lima persen) dari Total Nilai pada *Purchase Order/PO* termasuk PPN sesuai dengan peraturan yang berlaku untuk nilai Pembelian lebih besar dari Rp.500,000,000,- (lima ratus juta rupiah), sebagaimana ketentuan pada Pasal 3.1.1 di atas. Dengan ketentuan masa berlaku Jaminan Pelaksanaan adalah sebagaimana ketentuan pada Pasal 3.1.4 ditambah sekurang-kurangnya 50 (Lima Puluh Hari) Hari Kalender.
- Jaminan yang disertakan harus mengikuti persyaratan yang diminta oleh **ASET OPERATOR** dan/atau **PLN TJB** dengan ketentuan sebagai berikut :
 - Mengikuti format yang sudah dibakukan oleh **ASET OPERATOR** dan/ atau **PLN TJB**.
 - Menggunakan mata uang dalam "Rupiah", kecuali ada ketentuan dan persetujuan lain yang disepakati Para Pihak (Penyedia Barang/ Jasa dan **ASET OPERATOR** Procurement).
 - Harus diterbitkan oleh Bank sesuai dengan Daftar Penyedia Jaminan Terseleksi (DPJT) PLN yang telah disetujui oleh **ASET OPERATOR** dan/atau **PLN TJB**.
- Jaminan Pelaksanaan diserahkan kepada **ASET OPERATOR** maksimal 14 (empat belas) Hari Kalender setelah "Surat Penunjukan Pemenang / *Appointment of Awarded Supplier*" dikirimkan melalui surat tertulis dan/atau Surat Elektronik (*Surel/ Email*) oleh **ASET OPERATOR** kepada Penyedia Barang/Jasa, sebagaimana ketentuan pada Pasal 3.1.5.
- Asli dari Jaminan akan dikembalikan ke Penyedia Barang/Jasa apabila semua kewajiban dari Penyedia Barang/Jasa telah dinyatakan selesai oleh **ASET OPERATOR** atas persetujuan **PLN TJB**.
- Jaminan dapat dimungkinkan untuk diperpanjang masa berlakunya atas permintaan dari **ASET OPERATOR** dan/atau **PLN TJB** kepada Penyedia Barang/Jasa.

16. FORCE MAJEURE

- Peristiwa, kejadian atau keadaan berikut ini adalah *Force Majeure*: Kehendak Tuhan (*Act of God*) meliputi namun tidak terbatas pada gempa bumi, dari banjir, epidemi, kebakaran, perang, huru-hara, pemogokan dan/atau pemberlakuan peraturan pemerintah yang mengatur atau berhubungan dengan pelaksanaan/ pengiriman di dalam *Purchase Order/PO*.
- Dalam hal terjadi suatu peristiwa, kejadian atau keadaan *Force Majeure*, Penyedia Barang/Jasa wajib memberitahukan secara tertulis dan/atau *email* dengan melampirkan bukti-bukti dari instansi yang berwenang kepada **ASET OPERATOR** selambat-lambatnya 3 (tiga) hari sejak terjadinya suatu peristiwa, kejadian atau keadaan *Force Majeure*.
- Dalam hal pemberitahuan sebagaimana ketentuan Pasal 16.2 di atas terlampaui atau tidak dilaksanakan maka Para Pihak sepakat bahwa kejadian tersebut bukan merupakan keadaan *Force Majeure*.
- Baik Penyedia Barang/Jasa maupun **ASET OPERATOR** dan **PLN TJB** dibebaskan dari setiap dan semua tanggung jawab yang timbul sebagai akibat terjadinya suatu peristiwa, kejadian atau keadaan *Force Majeure*.

17. TUNTUTAN DARI PIHAK KETIGA

Penyedia Barang/Jasa harus membebaskan dan melindungi **ASET OPERATOR** dan **PLN TJB** dari segala tuntutan dari pihak ketiga yang timbul atau akan timbul sehubungan dengan *Purchase Order/PO*.

18. GARANSI (Apabila Dipersyaratkan di dalam *Purchase Order/PO*)

Penyedia Barang/Jasa menjamin ke **ASET OPERATOR** dan/ atau **PLN TJB**, bahwa barang-barang yang dikirim sesuai dengan spesifikasi yang disepakati sebagaimana ketentuan pada Pasal 2.3.8. Barang tidak cacat atau rusak material atau teknis, baru (bukan barang bekas pakai) dan digaransi oleh Pabrik dan/atau Penyedia Barang/Jasa. Garansi harus berlaku selama jangka waktu 18 (delapan belas) bulan sejak tanggal pengiriman barang atau 12 (dua belas) bulan sejak tanggal pemasangan atau operasi awal atas barang ("**Masa Garansi**"). Apapun yang terjadi terlebih dahulu dalam Masa Garansi, ditemukan kerusakan atau kecacatan barang, **ASET OPERATOR** berkewajiban untuk memberitahukan secara tertulis dan/atau melalui *email* atas hal tersebut kepada Penyedia Barang/Jasa. Dan dalam waktu 3 x 24 jam setelah diterimanya pemberitahuan tersebut, Penyedia Barang/Jasa wajib memperbaiki barang yang cacat atau rusak tersebut, dan apabila barang tidak bisa diperbaiki dalam jangka waktu paling lambat 30 (tiga puluh) Hari Kalender, maka Penyedia Barang/Jasa harus mengganti barang yang rusak tersebut dengan barang baru dengan kualitas dan spesifikasi yang sama tanpa ada penambahan biaya apapun dari **ASET OPERATOR**.

19. TAGIHAN

Untuk melakukan penagihan, Penyedia Barang/Jasa harus memenuhi syarat-syarat penagihan dengan melengkapi dokumen-dokumen antara lain sebagai berikut:

- Surat Permohonan Pembayaran: 1 (satu) rangkap Asli
- Kwitansi : 3 (tiga) rangkap, 1 (satu) rangkap bermeterai cukup dan 2 (dua) rangkap lainnya tanpa meterai .
- Invoice : 3 (tiga) rangkap, 1 (satu) rangkap bermeterai cukup dan 2 (dua) rangkap lainnya tanpa meterai.
- Faktur Pajak : 2 (dua) rangkap.
- Berita Acara Penyelesaian Pekerjaan (BAPK) dan/atau *Goods Receipt* dan/atau *Joint Inspection* : 1 (satu) rangkap Asli.
- Berita Acara Serah Terima (BAST) barang/jasa/pekerjaan dan/atau *Minutes Of Verification* (MOV): 1 (satu) rangkap Asli.
- NPWP dan SPPKP : 1 (satu) rangkap *Copy*.
- Sertifikat Asal Barang dan/atau Sertifikat Manufaktur: 1 (satu) asli dan/atau 1 (satu) *Copy* (Apabila dipersyaratkan pada *Purchase Order/PO*).
- Surat Jaminan/Garansi yang menyatakan masa garansi barang adalah 18 (delapan belas) bulan sejak pengiriman atau 12 (dua belas) bulan sejak instalasi : 1 (satu) asli dan 2 (dua) *Copy* (Apabila dipersyaratkan pada *Purchase Order/PO*).
- Jaminan Pelaksanaan dan Surat Konfirmasi keabsahan Jaminan Pelaksanaan : 1 (satu) rangkap *Copy* (Apabila dipersyaratkan pada *Purchase Order/PO*).
- SIUP/NIB dan SIUJK : 1 (satu) rangkap *Copy* (Apabila ada atau apabila dipersyaratkan pada *Purchase Order/PO*)



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19.12 Syarat-syarat lain yang belum tercantum sebagaimana poin-poin diatas namun dipersyaratkan khusus pada *Purchase Order /PO* wajib dipenuhi oleh Penyedia Barang/Jasa.

(Persyaratan penagihan terlampir di lampiran "Tata Cara Penagihan")

20. PEMBAYARAN

Kecuali ditentukan lain dalam *Purchase Order/PO* :

- 20.1 Pembayaran akan dilakukan pada 45 (empat puluh lima) Hari Kalender setelah barang/ Jasa dinyatakan diterima dengan Bukti Asli *Goods Receipt/ Completion Work*, dan dokumen-dokumen penagihan telah diterima dengan baik, lengkap dan benar.
- 20.2 Pembayaran akan dilakukan melalui bank transfer.

21. LAIN - LAIN

- 21.1 Syarat-syarat umum ini berlaku sah dan mengikat, kecuali ada ketentuan lain yang tertera pada *Purchase Order/PO*.
- 21.2 Bilamana **ASET OPERATOR** serta Penyedia Barang/Jasa menandatangani kesepakatan tambahan sebagai satu kesatuan dari *Purchase Order/PO* dan ternyata menimbulkan pertentangan dengan klausul-klausul di dalam *Purchase Order/PO* maka **ASET OPERATOR** dan Penyedia Barang/Jasa sepakat akan selalu menafsirkan dengan cara memilih, mematuhi dan menerapkan klausul yang lebih menguntungkan **ASET OPERATOR** semata.
- 21.3 **ASET OPERATOR** dan/atau **PLN TJB**, setiap saat memiliki hak eksklusif untuk melakukan evaluasi berkaitan dengan kinerja, kepatuhan atau hasil pelaksanaan kewajiban oleh Penyedia Barang/Jasa, dimana hasil evaluasi tersebut akan disampaikan kepada Penyedia Barang/Jasa dalam bentuk pernyataan tertulis.
- 21.4 Evaluasi tersebut dilakukan dalam rangka menjamin keberlangsungan PLTU Tanjung Jati B Jepara sehingga hasil evaluasi sebagaimana dimaksud menjadi dasar bagi **ASET OPERATOR** dan/atau **PLN TJB** untuk mengkaji ulang status serta jangka waktu *Purchase Order/PO* dan/atau penentuan status Penyedia Barang/Jasa dalam Daftar Hitam Penyedia Barang/Jasa **ASET OPERATOR** dan/atau **PLN TJB**.
- 21.5 *Purchase Order/PO* dibuat, diatur dan ditafsirkan sesuai dengan hukum Negara Republik Indonesia.
- 21.6 Jika terjadi perselisihan yang tidak mendapatkan solusi maka **ASET OPERATOR** dan Penyedia Barang/Jasa sepakat untuk dapat melakukan pengakhiran *Purchase Order/PO* dan tidak memberlakukan ketentuan Pasal 1266 Kitab Undang-undang Hukum Perdata.
- 21.7 Syarat-syarat dan kondisi ini dibuat dalam Bahasa Indonesia dan Bahasa Inggris. Dalam hal adanya inkonsistensi atau penafsiran yang berbeda antara versi Bahasa Indonesia dan versi Bahasa Inggris, versi Bahasa Indonesia dari Syarat-syarat dan kondisi ini akan berlaku dan versi Bahasa Inggris harus dianggap secara otomatis diubah (perubahan mana berlaku sejak tanggal ditandatanganinya versi bilingual ini) untuk menjadikan bagian yang relevan dari versi Bahasa Inggris sesuai dengan bagian yang relevan dari versi Bahasa Indonesia.
- 21.8 **ASET OPERATOR** berhak melakukan Audit di Waktu tertentu kepada rekanan Penyedia Barang/Jasa, Proses pengaudit dilakukan oleh **ASET OPERATOR** didampingi tim Auditor yang ditunjuk **ASET OPERATOR**.

KETENTUAN MENYANGKUT LINGKUNGAN, KESEHATAN, DAN KESELAMATAN KERJA

1. STANDART KESELAMATAN UNTUK BAHAN BAHAN YANG BERACUN

- 1.1 Penyedia Barang/Jasa harus memberikan daftar data keselamatan material - material (MSDS) untuk seluruh *chemical*, pelumas, lem, cairan, pembersih dan bahan bahan lainnya yang berpotensi beracun yang rekanan akan gunakan dalam pelaksanaan pekerjaan.
- 1.2 Penyedia Barang/Jasa harus mengikuti syarat - syarat untuk penyimpanan, penanganan dan pembuangan meterial termasuk syarat - syarat untuk Peralatan Perlindungan Personal dan peralatan Pernafasan (RPE) yang ditentukan oleh **ASET OPERATOR**.
- 1.3 Setiap Material yang mengandung zat - zat yang berpotensi beracun yang ada di *Site* yang tidak sesuai dengan persyaratan MSDS dan belum disetujui oleh **ASET OPERATOR**, harus segera dihilangkan atau dipindahkan dari *site* oleh Penyedia Barang/Jasa sampai persetujuan tersebut diperoleh.

2. PURCHASE REQUISITION JASA/SERVICE

- 2.1 Dokumen Analisa Kerja Aman (*Job Safety Analysis / JSA*) atau dokumen identifikasi bahaya lainnya yang terkait dengan Jasa.
- 2.2 Prosedur kerja aman / instruksi kerja dan/atau dokumen EHS lainnya yang terkait dengan Jasa.
- 2.3 Surat keterangan sehat dari dokter untuk personel yang terkait dengan jasa.
- 2.4 Foto *copy* Sertifikat kompetensi untuk personel yang terkait dengan jasa.
- 2.5 Foto *copy* Sertifikat Kelayakan atas Peralatan Angkat dan Angkut yang masih "VALID" yang terkait dengan Jasa.
- 2.6 Foto *copy* Surat Keterangan Catatan Kepolisian (SKCK) dan kartu identitas (Kartu Tanda Penduduk/KTP atau Paspor) masih berlaku untuk lampiran Formulir *Request ID Card*.
- 2.7 Foto *copy* Surat Ijin Mengemudi (SIM) yang masih berlaku untuk pengemudi mobil perusahaan untuk lampiran formulir "*Vehicle Gate Pass Request*".
- 2.8 Foto *copy* surat KIR yang masih berlaku untuk kendaraan operasional kategori tertentu untuk lampiran formulir "*Vehicle Gate Pass Request*".
- 2.9 Surat pernyataan dari Manajemen perusahaan bahwa akan mematuhi peraturan perundangan terkait dengan Lingkungan dan
- 2.10 Keselamatan, Kesehatan Kerja (LK3), salah satunya seperti berikut :
 - 2.10.1 Menyediakan Alat Pelindung Diri (APD) untuk seluruh karyawan yang standard dan sesuai
 - 2.10.2 Bertanggung jawab atas limbah/sampah yang dihasilkan oleh pekerjaan jasa tersebut serta selalu menjaga kerapian dan kebersihan area kerja.
 - 2.10.3 Membuat "Surat Pernyataan" bahwa perusahaan tidak mencemari lingkungan
 - 2.10.4 Melampirkan Sertifikat ISO 14001 dan Sertifikat PROPER yang dimiliki (apabila dipersyaratkan dalam RFQ & *Purchase Order/PO*)

3. PURCHASE REQUISITION BARANG

Menyediakan dokumen yang terkait dengan persyaratan Lingkungan, Keselamatan dan Kesehatan Kerja (LK3), seperti:

- 3.1 Lembar Data Keselamatan Bahan / LDKB (*Material Safety Data Sheet/MSDS*) untuk Bahan Beracun dan Berbahaya (B3), seperti: bahan kimia/resin/oli/grease/dll.
- 3.2 Petunjuk Pengoperasian secara aman (*Safety Operating Manual*) untuk peralatan/mesin/alat kerja/ dll.
- 3.3 Persyaratan penyimpanan serta penanganan secara manual.
- 3.4 Atau dokumen lainnya yang terkait dengan persyaratan dan perundangan Lingkungan, Keselamatan & Kesehatan Kerja (LK3).

4. KETENTUAN MENYANGKUT KETENAGA KERJAAN

Berikut persyaratan dari HRD yaitu sebagai berikut :

- 4.1 *Copy* sertifikat kepesertaan perusahaan di BPJS Ketenagakerjaan.
- 4.2 *Copy* kartu kepesertaan BPJS Ketenagakerjaan dari setiap karyawan yang dipekerjakan.
- 4.3 Ijin Operasional dari Disnaker Propinsi Jawa Tengah Cq. Disnaker Jepara Untuk pekerjaan yang di alih-daya kan (*Outsource*).
- 4.4 Surat Pemberitahuan ke Disnaker Jepara untuk pekerjaan jasa pemborongan.
- 4.5 *Copy* Perjanjian kerja antara perusahaan dengan masing-masing karyawan.