

REV	BY	CKD	REVISION	DATE
D	MLG	JLD	GENERAL REVISION RELEASED ALL HOLDS	12/23/98
A	MLG	JLD	REV TAG FROM FV-0302. SHT 4 REISSUED FOR BIDS	10/26/98
B	MLG	JLD	ISSUED FOR PURCHASE	11/03/98
C	MLG	JLD	REV TOTAL No OF SHTS RELEASED HOLD ON AIR SUP	11/30/98

PROJECT:

Cartonajes Estrella, S.A. de C.V.
4 Effect Evaporator System with
Crystallizer
RCCI Project No. 745

SHEET 3 OF 18

PR NO. 18.0031.10

PO NO. Y

1.Tag: PV - 0301 2.Service: EVAP E-1 STEAM SUPPLY PRESS 3.Location: AS-101-CS1-42"

4	LINE	Line Size	42"	41	LIQUID Flow Units	
5		Schedule (OD / Wall)		42	STEAM Flow Units	kg/hr
6		Line Connections	150# RF FLANGE	43	GAS Flow Units	
7		*Type of Body	BUTTERFLY	44	FLUID	STEAM
8		*Body Size	24"	45	PRESSURE Units	kPaG
9		*Port Size	MFR'S STD	46	DP Units	kPaD
10		*Guiding	MFR'S STD	47	TEMPERATURE Units	degC
11		No. of Ports	ONE	48		
12		End Conn and Rating	LUGGED	49		
13		Body Material	CARBON STEEL	50		
14		*Packing Material	PTFE	51		
15		Lubricator	NOT REQ'D	52		
16		Isolation Valve	NOT REQ'D	53		
17		*Bonnet Type	MFR'S STD	54		
18		*Trim Form	EQUAL PERCENT	55		
19		*Plug/Ball/Disk Material	316 SS	56		
20		*Shaft Material	17-4PH SS	57		
21		Required Seat Tightness	ANSI CLASS V	58		
22		Max. Allowable Sound	85 dBA	59		
23		*Model Number and Size	FISHER CONTROLS 1031(33)	60		
24		*Type of Actuator	SCOTCH YOKE SR PISTON	61		
25		*Close At (Bench Set)	193 kPaG	62		
26		*Open At (Bench Set)	345 kPaG	63		
27		*Flow Action To	NA	64		
28		Fail Position	CLOSED	65		
29		Handwheel and Location	NOT REQ'D	66		
30		Actuator Orientation	RH POS 1	67		
31		Response Time (sec)	FULL OPN TO CLSD: 15	68		
32		*MFR and Model No.	FISHER CONTROLS 3720J	69		
33		*Filter Regulator	YES	70		
34		Gages	YES	71		
35		ByPass	NOT REQ'D	72		
36		*Input Signal	4-20 mADC	73		
37		*Output Signal	0 - 600 kPaG	74		
38		Air Supply Pressure	600 kPaG	75		
39		Enclosure Classification	NEMA 3	76		
40		Positioner Instrument Tag	PY-0301	77		

Notes:

(* Information supplied by manufacturer unless already specified)

- The Vendor shall provide a stainless steel tag engraved with the inst tag number(s) and permanently affixed to the instrument.
- The Vendor shall provide the instrument with all accessories or options installed, tubed with SS tubing & fittings, and/or wired.
- The degree of corrosion or moisture resistance specified by line 39 shall apply to all component enclosures.
- The F-F dimen's of lugged and wafer style butterfly valves shall comply with API 609.
- Sizing coefficients represent Fisher Controls Cs values.

MANUFACTURER: FISHER CONTROLS

MODEL NO. 24" - A31A / 1031(33) / 3720J

**Control Valve
Specification
7450- 671**

REV	BY	CKD	REVISION	DATE
Orig	MLG	GRJ	ISSUED FOR BIDS	12/08/98
A	MLG	JLD	ISSUED FOR PURCHASE	02/10/99

PROJECT:

Cartonajes Estrella, S.A. de C.V.
4 Effect Evaporator System with
Crystallizer
RCCI Project No. 745

SHEET 20 OF 20

PR NO. 18.0031.13

PO NO. Y

1.Tag: PV - 0320 2.Service: TURBINE EXH STM TO AIR CLD CONDENSER 3.Location: AS-later-CS1.36"

4	LINE	Line Size	36"	41	LIQUID Flow Units	
5		Schedule (OD / Wall)	40	42	STEAM Flow Units	kg/hr
6		Line Connections	150# RF FLANGE	43	GAS Flow Units	
7		*Type of Body	BUTTERFLY	44	FLUID	STEAM
8		*Body Size	18"	45	PRESSURE Units	kPaG
9		*Port Size	MFR'S STD	46	DP Units	kPaD
10		*Guiding	MFR'S STD	47	TEMPERATURE Units	degC
11		No. of Ports	ONE	48		
12		End Conn and Rating	LUGGED	49		
13		Body Material	CARBON STEEL	50		
14		*Packing Material	PTFE	51		
15		Lubricator	NOT REQ'D	52		
16		Isolation Valve	NOT REQ'D	53		
17		*Bonnet Type	MFR'S STD	54		
18		*Trim Form	EQUAL PERCENT	55		
19		*Plug/Ball/Disk Material	316 SS	56		
20		*Shaft Material	17-4PH SS	57		
21		Required Seat Tightness	ANSI CLASS V	58		
22		Max. Allowable Sound	85 dBA	59		
23		*Model Number and Size	FISHER CONTROLS 1031(26)	60		
24		*Type of Actuator	SCOTCH YOKE SR PISTON	61		
25		*Close At (Bench Set)	352 kPaG	62		
26		*Open At (Bench Set)	186 kPaG	63		
27		*Flow Action To	NA	64		
28		Fail Position	OPEN	65		
29		Handwheel and Location	NOT REQ'D	66		
30		Actuator Orientation	PARALLEL TO VALVE	67		
31				68		
32		*MFR and Model No.	FISHER CONTROLS 3720	69		
33		*Filter Regulator	YES	70		
34		Gages	YES	71		
35		ByPass	NOT REQ'D	72		
36		*Input Signal	4-20 mADC	73		
37		*Output Signal	0 - 600 kPaG	74		
38		Air Supply Pressure	600 kPaG	75		
39		Enclosure Classification	NEMA 3	76		
40		Positioner Instrument Tag	PV-0320	77		

Notes:

(* Information supplied by manufacturer unless already specified)

- The Vendor shall provide a stainless steel tag engraved with the inst tag number(s) and permanently affixed to the instrument.
- The Vendor shall provide the instrument with all accessories or options installed, tubed with SS tubing & fittings, and/or wired.
- The degree of corrosion or moisture resistance specified by line 39 shall apply to all component enclosures.
- The F-F dimen's of lugged and wafer style butterfly valves shall comply with API 609.
- Sizing coefficients represent Fisher Controls Cs values.

MANUFACTURER: FISHER CONTROLS

MODEL NO. 18" - A31A / 1031(26) / 3720

**Control Valve
Specification
7450- 671**

REV	BY	CKD	REVISION	DATE
Orig	MLG	JLD	ISSUED FOR BIDS	10/26/98
A	MLG	JLD	ISSUED FOR PURCHASE	11/03/98
B	MLG	JLD	REV TOTAL No OF SHTS RELEASED HOLD ON AIR SUP	11/30/98
C	MLG	JLD	GENERAL REVISION RELEASED ALL HOLDS.	12/23/98

PROJECT:

Cartonajes Estrella, S.A. de C.V.
4 Effect Evaporator System with
Crystallizer
RCCI Project No. 745

SHEET 16 OF 18
PR NO. 18.0031.10
PO NO. Y
1.Tag: HV - 0302
2.Service: EVAP E-1 START UP STEAM
3.Location: AS-1101-CS1-10"

4	LINE	Line Size	10"	41	LIQUID Flow Units	
5		Schedule (OD / Wall)	40	42	STEAM Flow Units	kg/hr
6		Line Connections	150# RF FLANGE	43	GAS Flow Units	
7		*Type of Body	BUTTERFLY	44	FLUID	STEAM
8		*Body Size	6"	45	PRESSURE Units	kPaG
9		*Port Size	MFR'S STD	46	DP Units	kPaD
10		*Guiding	MFR'S STD	47	TEMPERATURE Units	degC
11		No. of Ports	ONE	48		
12		End Conn and Rating	LUGGED	49		
13		Body Material	CARBON STEEL	50		
14		*Packing Material	PTFE	51		
15		Lubricator	NOT REQ'D	52		
16		Isolation Valve	NOT REQ'D	53		
17		*Bonnet Type	MFR'S STD	54		
18		*Trim Form	LINEAR	55		
19		*Plug/Ball/Disk Material	316 SS	56		
20		*Shaft Material	17-4PH SS	57		
21		Required Seat Tightness	ANSI CLASS IV	58		
22		Max. Allowable Sound	85 dBA	59		
23		*Model Number and Size	FISHER CONTROLS 1051(60)	60		
24		*Type of Actuator	SR DIAPHRAGM	61		
25		*Close At (Bench Set)	37 kPaG	62		
26		*Open At (Bench Set)	187 kPaG	63		
27		*Flow Action To	NA	64		
28		Fail Position	CLOSED	65		
29		Handwheel and Location	NOT REQ'D	66		
30		Actuator Orientation	RH POS 1	67		
31				68		
32		*MFR and Model No.	FISHER CONTROLS 3620J	69		
33		*Filter Regulator	YES	70		
34		Gages	YES	71		
35		ByPass	NOT REQ'D	72		
36		*Input Signal	4-20 mADC	73		
37		*Output Signal	0 - 600 kPaG	74		
38		Air Supply Pressure	600 kPaG	75		
39		Enclosure Classification	NEMA 3	76		
40		Positioner Instrument Tag	HY-0302	77		

SERVICE CONDITIONS

VARIABLE	MINIMUM	NORMAL	MAXIMUM
Flow (See 44)	907	11340	19883
Inlet Pressure	232.1	232.1	232.1
Delta Pressure	222.1	193	183
Temperature	142.5	142.5	142.5
Specific Gravity	0.0017	0.0017	0.0017
Viscosity(CP)	0.014	0.014	0.014
*CV	44.9	561	1008
*Valve Open %	11	54	100

*Valve CV	1008
MOL.WT	18
% Superheat	0
% Flash	NA
% Solids	NA
Vapor Pressure (kPaA)	NA
Critical Pressure (kPaA)	22118
Maximum Shutoff Press	232.1
*Pred. Sound Level dBA	96/105/107

OPTIONS/ACCESSORIES

Atmospheric Pressure	77.9 kPaA
Ambient Temperature	0 - 29 degC
Area Classification	NON-HAZARDOUS
Face to Face Dimensions	2.25 in
Total Mass With Actuator	94 kg

Notes:

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- The Vendor shall provide the instrument with all accessories or options installed, tubed with SS tubing & fittings, and/or wired.
- The degree of corrosion or moisture resistance specified by line 39 shall apply to all component enclosures.
- The F-F dimen's of lugged and wafer style butterfly valves shall comply with API 609.
- Sizing coefficients represent Fisher Controls Cs values.

MANUFACTURER: FISHER CONTROLS
MODEL NO. 6"-8560 / 1051(60) / 3620J