Base Load Power Hub (BLPH)

SDV/BDV AND TIGHT SHUT-OFF XV VALVES

PNEUMATIC DIAGRAM and WIRING

Document Number:1724000204-IN-DG-00006

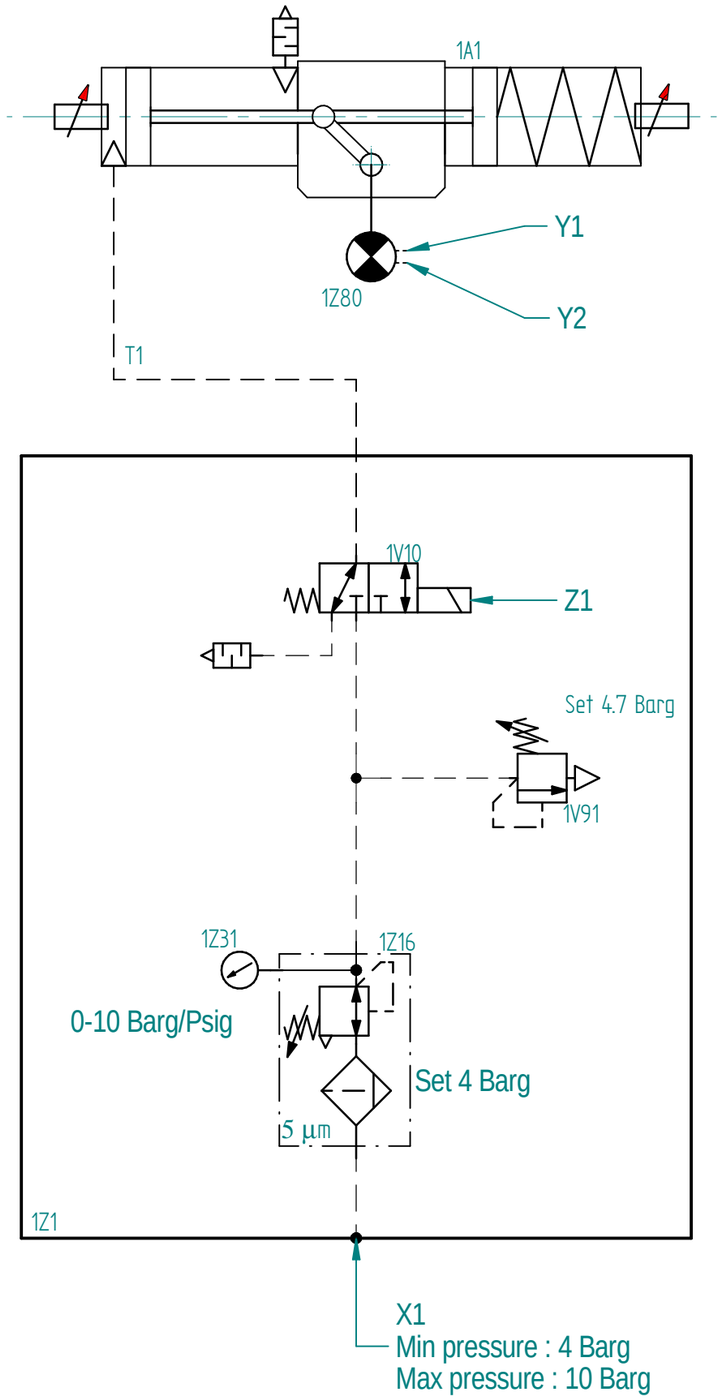
Document Class: 2

03	19/12/2024	Accepted for Construction (AFC)	ROTORK	ROTORK	ROTORK
02	02/08/2024	Accepted for Construction (AFC)	ROTORK	ROTORK	ROTORK
01	10/05/2024	Accepted for Construction (AFC)	ROTORK	ROTORK	ROTORK
00	10/04/2024	Issue for Review (IFR)	ROTORK	ROTORK	ROTORK
Rev.	Date	Description	Prepared	Reviewed	Approved

Fluitek Valves

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

PNEUMATIC



Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0023560	D.Caprai	L.Pecorari	2024-04-04	First issue

rotork®
Lucca - IT
www.rotork.com

© 2024 Rotork Group of Companies. All rights reserved. This document and its contents may not be reproduced, distributed, transmitted, displayed, published, or broadcast, in whole, or in part, without the prior, express written permission of Rotork Group of Companies.

Title: E1F2G1H01A0A1J3L1R0

Created	D.Caprai	2024-04-02	Drawing Number: AF7703PDA01 — Rev: 0-0
Checked	D.Caprai	2024-04-04	
Approved	L.Pecorari	2024-04-04	Size: A3 — Sheet 1 of 2

Template Issue : 24/02/2020-SR

BILL OF MATERIAL					
Pos	Description	Size	Manufacturer	Model	Material
1A1	QUARTER TURN PNEUMATIC ACTUATOR, SPRING RETURN, SPRING TO OPEN		ROTORK	*see Tag Number Table	*see Tag Number Table
1V10	SOLENOID VALVE, DIRECT ACTING, 3/2 UNIVERSAL TYPE, SPRING RETURN	1/4"	BIFOLD	FP06P-S1-04-32-NU-V-77A-24D-57	AISI316L
1V91	PRESSURE RELIEF VALVE, FREE EXHAUST	1/2"	N.G.I.	D10	AISI 316
1Z1	CONTROL PANEL		RFS	-	AISI316L
1Z16	FILTER REGULATOR, SELF RELIEVING, FILTER WITH MANUAL DRAIN	1/4"	BIFOLD	SH06-FR-SR-MD-10-X1	AISI 316L
1Z31	PRESSURE GAUGE, GAUGE TYPE	DN 63	WIKA	233.50	AISI316
1Z80	LIMIT SWITCH BOX, 2 ELECTRIC CONNECTION	-	SOLDO	SQN120E-20X23L7	AISI 316

RFS Item	Tag No.	ACTUATOR MODEL	ACTUATOR MATERIAL
1	25-BDV-022	CP/S-035-080A/AA	CAST IRON
2	25-BDV-005	CP/S-055-200A/BA	CAST IRON
3	25-BDV-007	CP/S-055-200A/BA	CAST IRON
4	25-BDV-010	CP/S-055-200A/BA	CAST IRON
5	25-BDV-013	CP/S-055-200A/BA	CAST IRON
6	25-BDV-016	CP/S-055-200A/BA	CAST IRON
7	25-BDV-019	CP/S-055-200A/BA	CAST IRON

N°	Description	Type	Size	Manufacturer	Material
T1	PNEUMATIC TUBING	POWER LINE	1/2"	SANDVIK or EQUIVALENT	AISI 316L
-	TUBE FITTINGS	DOUBLE FERRULE	ACCORDING TO TUBING SIZE	FITOK	AISI 316
-	SILENCER - BUG SCREEN	SFEX	ACCORDING TO PORT SIZE	-	AISI316
-	THREADED UNIONS		ACCORDING TO COMPONENT SIZE	R.F.S.	AISI316

Connection	Description	Size
X1	PNEUMATIC CONNECTION TO CONTROL PANEL (INLET)	1/2" NPT (Female)
Y1 - Y2	LIMIT SWITCH BOX MICRO ELECTRIC CONNECTION	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

FUNCTION	DESCRIPTION
1) REMOTE OPERATION:	1A) VALVE ACTUATOR CLOSE STROKE: ENERGIZE SOLENOID VALVE 1V10.
	1B) VALVE ACTUATOR OPEN STROKE: DE-ENERGIZE SOLENOID VALVE 1V10.

NOTES
THE SCHEMATIC IS SHOWN WITHOUT PNEUMATIC AND ELECTRIC SUPPLY
THE ACTUATOR IS SHOWN IN OPEN POSITION

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0023560	D.Caprai	L.Pecorari	2024-04-04	First issue

rotork®

Lucca - IT

www.rotork.com

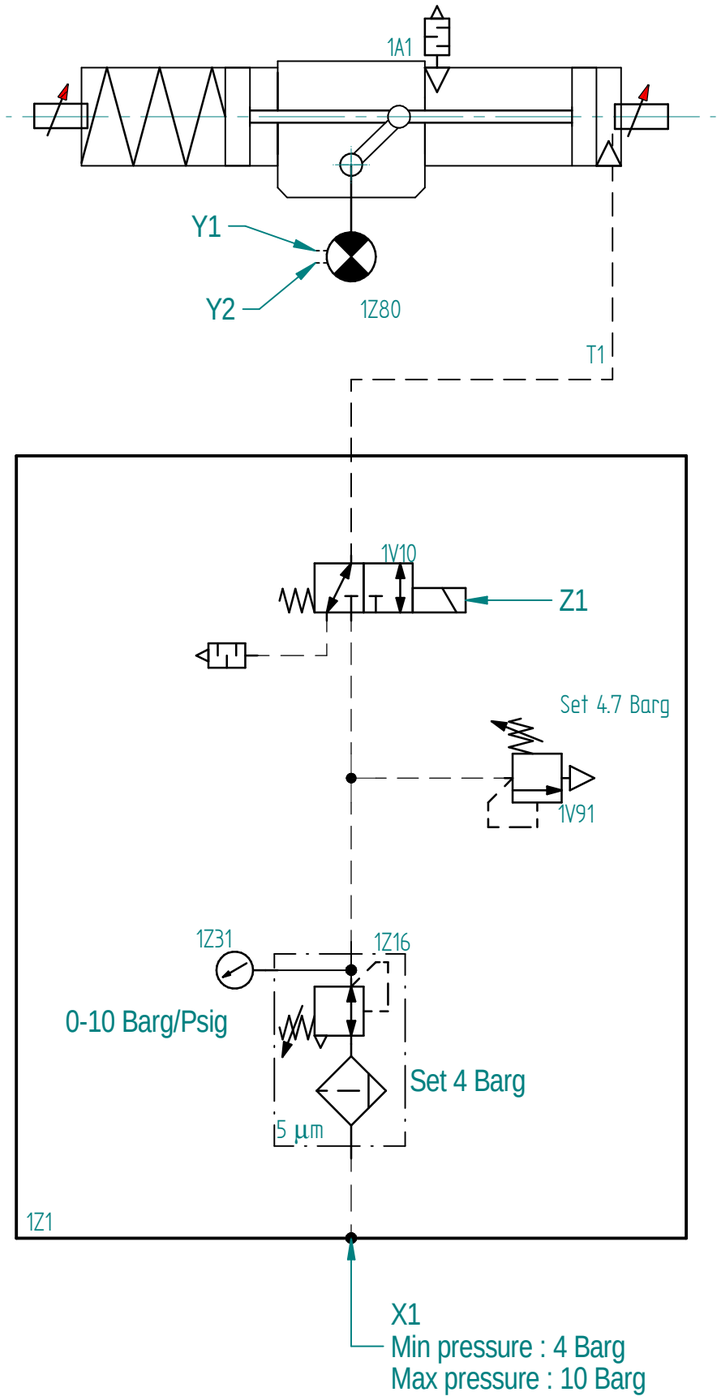
© 2024 Rotork Group of Companies. All rights reserved. This document and its contents may not be reproduced, distributed, transmitted, displayed, published, or broadcast, in whole, or in part, without the prior, express written permission of Rotork Group of Companies.

Title: E1F2G1H01A0A1J3L1R0

Created	D.Caprai	2024-04-02	Drawing Number: AF7703PDA01 — Rev: 0-0
Checked	D.Caprai	2024-04-04	
Approved	L.Pecorari	2024-04-04	Size: A3 — Sheet 2 of 2

Template Issue : 24/02/2020-SR

PNEUMATIC



Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0023560	D.Caprai	L.Pecorari	2024-04-04	First issue

rotork®
Lucca - IT
www.rotork.com

© 2024 Rotork Group of Companies. All rights reserved. This document and its contents may not be reproduced, distributed, transmitted, displayed, published, or broadcast, in whole, or in part, without the prior, express written permission of Rotork Group of Companies.

Title: E1F2G1H02A0A1J3L1R0

Created	D.Caprai	2024-04-03	Drawing Number: AF7703PDC01 — Rev: 0-0
Checked	D.Caprai	2024-04-04	
Approved	L.Pecorari	2024-04-04	Size: A3 — Sheet 1 of 2

Template Issue : 24/02/2020-SR

BILL OF MATERIAL					
Pos	**Description**	**Size**	**Manufacturer**	**Model**	**Material**
1A1	QUARTER TURN PNEUMATIC ACTUATOR, SPRING RETURN, SPRING TO CLOSE		ROTORK	*see Tag Number Table	*see Tag Number Table
1V10	SOLENOID VALVE, DIRECT ACTING, 3/2 UNIVERSAL TYPE, SPRING RETURN	1/4"	BIFOLD	FP06P-S1-04-32-NU-V-77A-24D-57	AISI316L
1V91	PRESSURE RELIEF VALVE, FREE EXHAUST	1/2"	N.G.I.	D10/S	AISI 316
1Z1	CONTROL PANEL		RFS	-	AISI316L
1Z16	FILTER REGULATOR, SELF RELIEVING, FILTER WITH MANUAL DRAIN	1/4"	BIFOLD	SH06-FR-SR-MD-10-X1	AISI 316L
1Z31	PRESSURE GAUGE, GAUGE TYPE	DN 63	WIKA	233.50	AISI316
1Z80	LIMIT SWITCH BOX, 2 ELECTRIC CONNECTION	-	SOLDO	SQN120E-20X23L7	AISI 316

N°	**Description**	**Type**	**Size**	**Manufacturer**	**Material**
T1	PNEUMATIC TUBING	POWER LINE	1/2"	SANDVIK or EQUIVALENT	AISI 316L
-	TUBE FITTINGS	DOUBLE FERRULE	ACCORDING TO TUBING SIZE	FITOK	AISI 316
-	SILENCER - BUG SCREEN	SFEX	ACCORDING TO PORT SIZE	-	AISI316
-	THREADED UNIONS		ACCORDING TO COMPONENT SIZE	R.F.S.	AISI316

Connection	**Description**	**Size**
X1	PNEUMATIC CONNECTION TO CONTROL PANEL (INLET)	1/2" NPT (Female)
Y1 - Y2	LIMIT SWITCH BOX MICRO ELECTRIC CONNECTION	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

FUNCTION	**DESCRIPTION**
1) REMOTE OPERATION:	1A) VALVE ACTUATOR OPEN STROKE: ENERGIZE SOLENOID VALVE 1V10.
	1B) VALVE ACTUATOR CLOSE STROKE: DE-ENERGIZE SOLENOID VALVE 1V10.

NOTES
THE SCHEMATIC IS SHOWN WITHOUT PNEUMATIC AND ELECTRIC SUPPLY
THE ACTUATOR IS SHOWN IN CLOSE POSITION

RFS Item	**Tag No.**	**ACTUATOR MODEL**	**ACTUATOR MATERIAL**
8	25-SDV-001	CP/S-035-080A/AA	CAST IRON
9	25-SDV-023	CP/S-035-100A/BA	CAST IRON
10	64-SDV-001	CP/S-035-080A/AA	CAST IRON
11	25-XV-004	CP/S-035-080A/AA	CAST IRON
12	25-XV-006	CP/S-035-080A/AA	CAST IRON
13	25-XV-008	CP/S-035-080A/AA	CAST IRON
14	25-XV-009	CP/S-035-080A/AA	CAST IRON
15	25-XV-011	CP/S-035-080A/AA	CAST IRON
16	25-XV-012	CP/S-035-080A/AA	CAST IRON
17	25-XV-014	CP/S-035-080A/AA	CAST IRON
18	25-XV-015	CP/S-035-080A/AA	CAST IRON
19	25-XV-017	CP/S-035-080A/AA	CAST IRON
20	25-XV-018	CP/S-035-080A/AA	CAST IRON
21	25-XV-020	CP/S-035-080A/AA	CAST IRON
22	25-XV-021	CP/S-035-080A/AA	CAST IRON
23	25-XV-024	CP/S-035-080A/AA	CAST IRON
24	50-XV-001	CP/S-035-100A/BA	CAST IRON
25	50-XV-002	CP/S-035-080A/AA	CAST IRON
26	50-XV-003	CP/S-035-100A/BA	CAST IRON
27	50-XV-004	CP/S-035-080A/AA	CAST IRON
28	80-XV-001	CP/S-035-080A/AA	CAST IRON

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0023560	D.Caprai	L.Pecorari	2024-04-04	First issue

rotork®
Lucca - IT
www.rotork.com

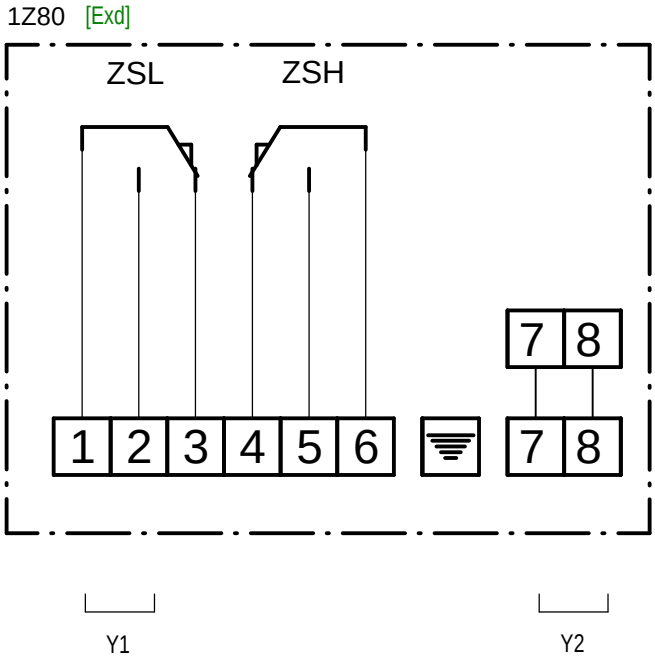
© 2024 Rotork Group of Companies. All rights reserved. This document and its contents may not be reproduced, distributed, transmitted, displayed, published, or broadcast, in whole, or in part, without the prior, express written permission of Rotork Group of Companies.

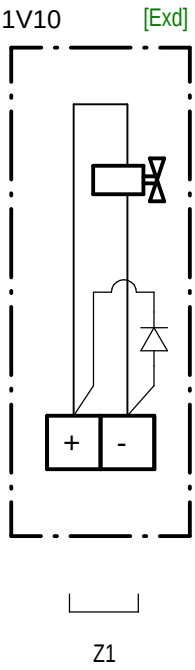
Title: E1F2G1H02A0A1J3L1R0

Created	D.Caprai	2024-04-03	Drawing Number: AF7703PDC01 — Rev: 0-0
Checked	D.Caprai	2024-04-04	
Approved	L.Pecorari	2024-04-04	Size: A3 — Sheet 2 of 2

Template issue : 24/02/2020-SR

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0023560	D.Caprai	L.Pecorari	2024-04-04	First issue





THE LIMIT SWITCHES ARE SHOWN WITH
THE VALVE IN INTERMEDIATE POSITION

closed contact
open contact

limit switch		Limit switch function VALVE POSITION open	interm.	closed
ZSL	1-2 NO			■
	1-3 NC	■	■	
ZSH	6-5 NO	■		
	6-4 NC		■	■

Connection	Description	Size
Y1	LIMIT SWITCH BOX ELECTRIC CONNECTION	M20x1,5 (Female)
Y2	LIMIT SWITCH BOX ELECTRIC CONNECTION (plugged)	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

Item	Description	Manufacturer, Model and Features
1V10	SOLENOID VALVE	BIFOLD, mod. FP06P-S1-04-32-NU-V-77A-24D-57 - ATEX/IECEx - 24Vdc, 5,7 Watt - Exd IIC T4/T6 - IP66
1Z80	LIMIT SWITCHES BOX	SOLDO, mod. SQN120E-20X23L7- ATEX/IECEx - Ex II 2GD Ex d IIC T4/T6 - IP66
ZSL	SPDT HERMETICALLY SEALED MAGNETIC PROXIMITY SWITCH	Rating [5A@250Vac / 5A@28Vdc]
ZSH	SPDT HERMETICALLY SEALED MAGNETIC PROXIMITY SWITCH	Rating [5A@250Vac / 5A@28Vdc]

Template Issue : 2019-05-10

rotork® Fluid Systems
Lucca - Italy
www.rotork.com

© 2024 Rotork Group of Companies. All rights reserved. This document and its contents may not be reproduced, distributed, transmitted, displayed, published, or broadcast, in whole, or in part, without the prior, express written permission of Rotork Group of Companies.

Document type		
WIRING DIAGRAM		
Created	D.Caprai	2024-04-02
Checked	D.Caprai	2024-04-04
Approved	L.Pecorari	2024-04-04

Title **WIRING DIAGRAM**

Drawing Number **AF7703WD01** Rev 0-0

Size A4 Sheet 1 of 1