

OPERATING INSTRUCTIONS

QUICK CLOSING VALVES CABINET APPLICATION

&

MAINTENANCE

JUNE, 2021

WARNING

This manual is exclusive property DIKKAN, under copyright and any not authorized reproduction, in part or in total, shall be prosecuted.

Read and follow instructions carefully. Proper training and periodic review regarding the use of this equipment is essential to prevent possible serious injury and/or property damage. Shown products are according the current production. Dikkan reserves to modify product characteristics according technical evolution or customer special request. Verify if manual comply with used product.



CONTENTS

1.	SAFETY TERMS	1
2.	TECHNICAL FEATURES	1
3.	DESCRIPTION	1
4.	PNEUMATIC CONTROL CABINET PART LIST	2
	4.1 Symbolic Component Diagram	3
	4.2 Components in Symbolic Diagram	3
	4.3 Options	4
5.	PROTECTION DURING STORAGE AND TRANSPORT	5
6.	INSTALLATION	5
	6.1 Setting of Pressure Switch	5
	6.2 Setting of Pressure Regulator	6
	6.3 Installation Position	7
7.	MAINTENANCE	7
8.	OPERATION	7
9.	RECYCLING	8
10.	PRESSURE EQUIPMENT DIRECTIVE (2014/68/EU) AND CE MARKING	8
11.	SAFETY REMARKS	8
12.	WARRANTY	8
12	NOTES	O



1. SAFETY TERMS

The signal terms DANGER, CAUTION and NOTICE are used in this operating manual in the event of notices related special dangers, or for unusual information, requiring a special marking.



Danger refers that there is a danger of life and considerable damage in the event of non-compliance.



Caution refers that there is a danger of injuries and damage in the event of non-compliance.



Notice refers that attention is drawn to technical correlations/connections.

2. TECHNICAL FEATURES

Standard: Special design

Material: Steel

Type: Control Cabinet

Application: Actuating quick closings valves

Operation: Pneumatic Operated

Pressure & Temperature Ranges

Temperature max. 80 °C

Maximum input pressure of vessel 30 bar

Operating pressure max 10 bar



Cabinet must not be used at higher "pressure & temperature" than defined "pressure & temperature".

3. DESCRIPTION

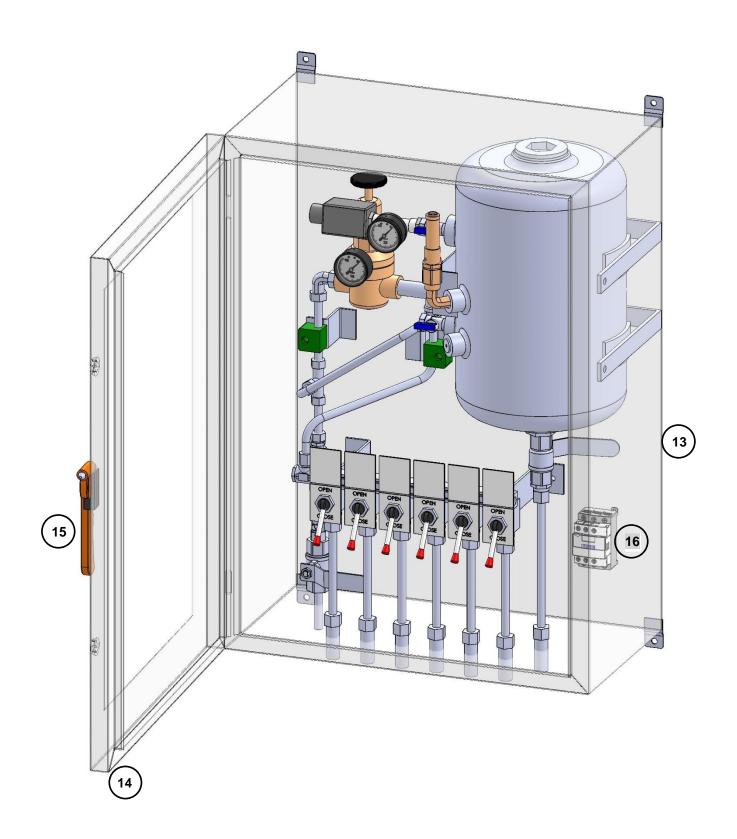
The pneumatic control cabinet is designed for controlling quick closing valves.

The control cabinet contains the necessary equipment for store, adjustment and directing the air signal to release cylinder on the valve.

The air signal from the control cabinet will retract the piston inside the release cylinder on the valve, allowing the disc of the valve to move down and close the valve.

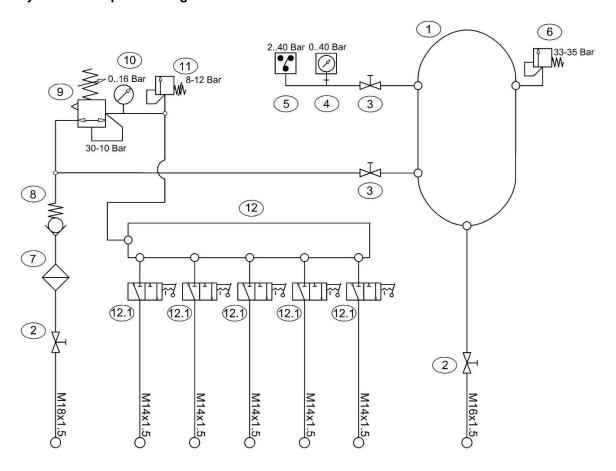


4. PNEUMATIC CONTROL CABINET PART LIST





4.1 Symbolic Component Diagram



4.2 Components in Symbolic Diagram

	PIPING+FITTINGS	-	STAINLESS STEEL	
16	CABLE CONNECTOR	CONNECTOR	PLASTIC	1
15	EMERGENCY HAMMER+HOLDER	-	STEEL+PLASTIC	1
14	FRAME COVER	-	STEEL (RAL 7016 ANTHRACITE GRAY)+GLASS	1
13	FRAME	-	STEEL (RAL 7016 ANTHRACITE GRAY)	1
12.1	DIRECTIONAL CONTROL VALVE	EK4/MVF	ALUMINIUM+RUBBER	
12	MANIFOLD	1 x G3/8", G1/4"	ALUMINIUM	1
11	PRESSURE RELIEF VALVE	G1/2", 8-12 Bar	BRASS	1
10	PRESSURE GAUGE	G1/2", 0-16 Bar, Ø63 (Rear Entry)	METAL+GLYCERIN	1
9	REGULATOR	G1/2", 40-25 Bar, (274.665), Set Pressure: 10 Bar	BRASS	1
8	CHECK VALVE	CVSSG38V, Min. PN40	STAINLESS STEEL	1
7	FILTER	G1/2", Min. PN40	STAINLESS STEEL	1
6	PRESSURE RELIEF VALVE	G3/8", Set Pressure: 33-35 Bar	BRASS	1
5	PRESSURE SWITCH	K53P, (2>40 Bar)	ALUMINIUM	1
4	PRESSURE GAUGE	G3/8", 0-40 Bar, Ø63 (Rear Entry)	METAL+GLYCERIN	1
3	MINI BALL VALVE	G3/8", Min. PN40	STAINLESS STEEL	2
2	BALL VALVE	G1/2", Min. PN40	STAINLESS STEEL	2
1	AIR TANK	30 Bar	P355GH STEEL	1
NO	MATERIAL NAME	MATERIAL CODE	MATERIAL	QTY.

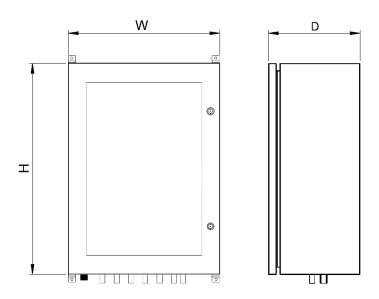
The symbolic diagram shows the 30 bar-10 liter / 6 control handles

All the information are only indicative data. DIKKAN has the rights to make changes without prior notice.



4.3 Options

Dikkan Ordering Code	Control Handles	Air Vessels	Н	W	D
DPAKD1XXXXXXXXXXX005L0000	1	1x5 litre	700	500	300
DPAKD2XXXXXXXXXXX005L0000	2	1x5 litre	700	500	300
DPAKD3XXXXXXXXXXX005L0000	3	1x5 litre	700	500	300
DPAKD4XXXXXXXXXXX005L0000	4	1x5 litre	700	500	300
DPAKD5XXXXXXXXXXX005L0000	5	1x5 litre	700	500	300
DPAKD6XXXXXXXXXXX005L0000	6	1x5 litre	700	500	300
DPAKD7XXXXXXXXXXX005L0000	7	1x5 litre	800	600	300
DPAKD8XXXXXXXXXXX005L0000	8	1x5 litre	800	600	300
DPAKD9XXXXXXXXXXX005L0000	9	1x5 litre	800	600	300
DPAKD10XXXXXXXXXX005L0000	10	1x5 litre	800	600	300
DPAKD1XXXXXXXXXXX010L0000	1	1x10 litre	700	500	300
DPAKD2XXXXXXXXXX010L0000	2	1x10 litre	700	500	300
DPAKD3XXXXXXXXXX010L0000	3	1x10 litre	700	500	300
DPAKD4XXXXXXXXXXX010L0000	4	1x10 litre	700	500	300
DPAKD5XXXXXXXXXXX010L0000	5	1x10 litre	700	500	300
DPAKD6XXXXXXXXXXX010L0000	6	1x10 litre	700	500	300
DPAKD7XXXXXXXXXXX010L0000	7	1x10 litre	800	600	300
DPAKD8XXXXXXXXXX010L0000	8	1x10 litre	800	600	300
DPAKD9XXXXXXXXXX010L0000	9	1x10 litre	800	600	300
DPAKD10XXXXXXXXXX010L0000	10	1x10 litre	800	600	300



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5. PROTECTION DURING STORAGE AND TRANSPORT

- The cabinets shall be stored in a closed area where they will not be exposed to direct to sunlight.
- The cabinets shall be kept on pallets, avoiding any direct contact with the ground.
- The cabinets shall be protected from any external effects and damages in the storage area.
- The cabinets shall be protected from dust and dirt.
- The cabinets shall be kept with package until the installation (to prevent sweating in valve package, it is needed to prevent any sudden changes in temperature during the storage).
- Keep the cabinets away from heat and flame sources in the storage area.
- Protect the cabinets from excessive vibration during transportation.
- Optimum storage temperature should be between 5°C and 40°C.
- When lifting, use suitable soft handling equipment to avoid damage on painted surfaces.
- Condition of stored products shall be periodically verified.

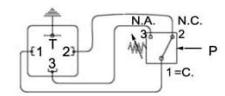
6. INSTALLATION

- Connect all electric lines to the cabinet
- Connect all pneumatic pipes to the cabinet.
- Check all pneumatic connection for tightness.
- Check low pressure alarm, if necessary adjust the alarm pressure value acc. to 6.1
- Check the quick closing function (without supply air from ship side):
 - Fill the air tank
 - Close the inlet ball valve and pull down all handles (part 12.1).
 - Check that all quick closing valves are closed.

6.1 Setting of Pressure Switch

Adjustable pressure switches activate a microswitch once preset value is reached. The pressure is set by rotating a graduated knob.



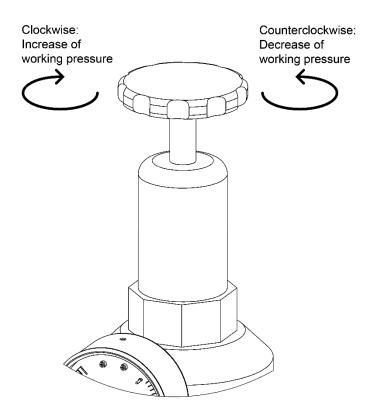




6.2 Setting of Pressure Regulator

Pressure regulators regulate the system pressure in a compressed air system to the working pressure and keep this pressure, regardless of pressure fluctuations and air consumption, largely constant. Always approach the desired pressure from a lower pressure.

Turn adjustment handle clockwise to increase and counterclockwise to decrease the outlet working pressure setting.



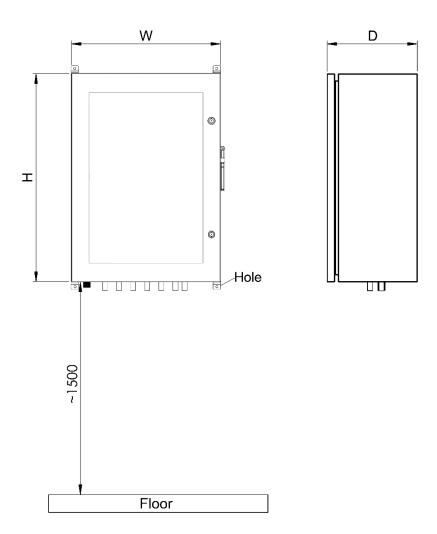


6.3 Installation / Location Position

The cabinet should be placed in an area that has good protection in case of fire and is easily accessible for urgent closing of the valves.

The cabinet is fixed to the wall by screws in the holes on the cabinet.

Ideal mounting position is 1.5 m over the floor.



7. MAINTENANCE

The system requires no special maintenance but check all connection of tightness and the function of the cabinet periodically.

When testing the system, be sure that the closing of valves will not have any problem for the function of the ship.

8. OPERATION

Normally the quick closing valves are in open position and the handles of the cabinet are in closed position. In case of fire pull up the handles of the cabinet for the quick closing valves in the endangered area.



9. RECYCLING

The product can be recycled. If suitable procedure has been respected, no environment pollution risk occurs. When the recycling of the product is made, the country's laws, rules and regulations must be observed.

10. PRESSURE EQUIPMENT DIRECTIVE (2014/68/EU) AND CE MARKING

Dikkan pneumatic control cabinet comply with the requirements of the European Pressure Equipment Directive 2014/68/EU. Valves are categorized in accordance with the maximum working pressure, size and ascending level of hazard, which is dependent on the fluid being transported. Fluids are classified as Group 1, dangerous fluids or Group 2, all other fluids including steam. Categories are SEP (sound engineering practice) and for ascending levels of hazard, I, II, III or IV. All valves designated as SEP do not bear the CE mark nor require a Declaration of Conformity. Dikkan valves with a CE marking have a declaration of conformity which includes information about the applied conformity assessment procedure. It has been confirmed that the quality assurance in design control, manufacture and the manufacturer's final acceptance of Dikkan pneumatic control cabinet by a notified body.

11. SAFETY REMARKS

- The operating instruction has to be observed in an obligatory way. In the event of mismatch, all warrants and liabilities are reserved.
- Sharp edges and burrs can cause injuries.
- The products must be mounted, started up or serviced by only fully trained and qualified personnel.
- Maintenance staff must be reminded about the dangers pertaining to disassembling and mounting of products as well as electric and machinery installations.
- Safety goggles and other appropriate protective gear should be used. Failure to do so could result in serious injury.
- Preserve valve specific maintenance manual in conjunction with this manual and allow them to be reachable by maintenance staff. Be sure that, maintenance staff reads any parts of those manuals before any use or maintenance operation.

12. WARRANTY

Warranty Period: 18 Months

The warranty does not cover maintenance work, installation of external parts. When unoriginal parts are used for replacement, warranties and liabilities become invalid.



13. NOTES



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