

Spool valve

VAQ255/VAQ355/VAQ455/ VAQ215/VAQ315/VAQ275

Installation, maintenance and
operating instructions

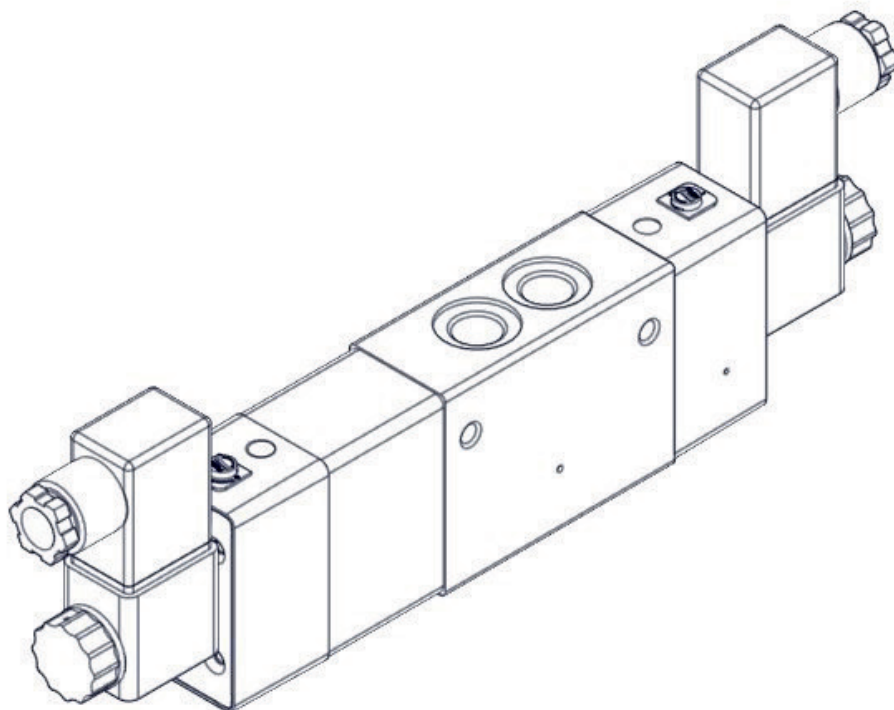


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READ THESE INSTRUCTIONS FIRST!

These instructions provide information about safe handling and operation of the valve.

If you require additional assistance, please contact the manufacturer or manufacturer's representative.

SAVE THESE INSTRUCTIONS!

Addresses and phone numbers are printed on the back cover.

1. INTRODUCTION

Thank you for choosing Valmet product. Each product is fully inspected after the production to offer you the highest quality. In order to fully utilize the product, we strongly recommend users to read this manual carefully and understood.

- This manual provides information on installation; operation and maintenance procedures and related instructions for the Neles brand VAQ255 SPOOL VALVE.
- The aim of this literature is to support the use of products in correct manner, and all the technical information provided in the catalogue.
- The manual should be given to the end user.
- The manual can be changed or revised without any prior notice. Any changes in product's specification, structure, and/or any components may not result immediate revised version of the manual.
- The manual should not be duplicated or reproduced for any purpose without any consent of Valmet Flow Control INDIA PVT. LTD., INDIA.

MANUFACTURER WARRANTY

For the safety, it is vital to follow instructions in the manual. It is not Valmet liability for any damages which caused by users' negligence.

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- It is not Valmet liability for any damages or accidents which resulted by any alteration or modification of the product and parts. If alteration or modification is necessary, please contact the Valmet directly.
- Valmet warrants the product from the date of original retail purchase of the product for one (1) year, except as otherwise stated.
- Valmet warranty will not cover the products that the product have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; damages that occurs in shipment, failure due to power surge, and cosmetic damage. Improper or incorrectly performed maintenance or report voids this Limited Warranty.
- For detailed warranty information, please contact:
Valmet Flow Control INDIA PVT. LTD., INDIA, Manapada road,
Dombivli (E), Maharashtra, India, Pin - 421204

1.1 DEFINITIONS

WARNING:

IF NOT OBSERVED, USER INCURS A HIGH RISK OF SEVERE DAMAGE TO PRODUCT AND/OR FATAL INJURY TO PERSONNEL.



CAUTION:

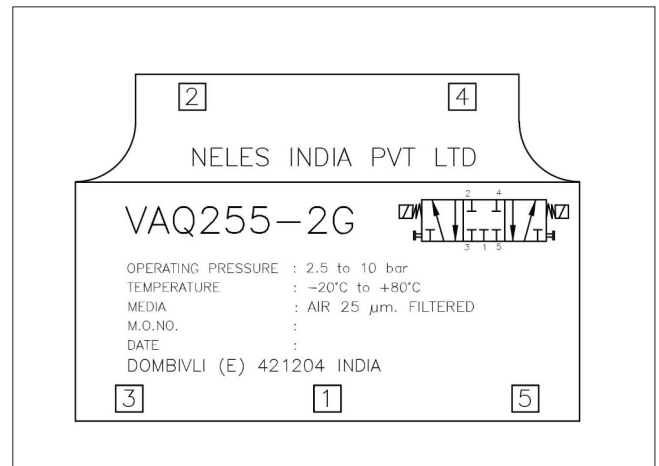
IF NOT OBSERVED, USER MAY INCUR DAMAGE TO PRODUCT AND/OR INJURY TO PERSONNEL.



NOTE:

ADVISORY AND INFORMATION COMMENTS PROVIDED TO ASSIST MAINTENANCE PERSONNEL TO CARRY OUT MAINTENANCE PROCEDURES.

2. LABEL DESCRIPTION



Label of the VAQ255-2G defines the precise feature. This description is written below the company logo and is as follow.

Model No.:	VAQ – SPOOL VALVE 5/3 valve.
2	1/4"
55	3 Position, solenoid operated centre off.
Operating air pressure	2.5 to 10 bar.
Temperature	-20°C to +80°C
M.O. NO.	Manufacturing order number.
DATE	Date of manufacturing.
Dombivli – 421204 INDIA Brief address.	

3. INSTALLATION PROCEDURE

CAUTION:

- BLOW OUT AIR LINES AND FITTINGS BEFORE INSTALLATION.
- USE DRY AND OIL FREE AIR.
- DO NOT DISMANTLE THE VAQ255 WHILE OPERATION IS IN LINE.
- DO NOT ALLOW DIRTY AIR OR FLUIDS TO GET INTO THE VAQ255. USE FILTER UNIT (FILTER SIZE 40MM, 3°C) FOR DUST AND MOISTURE REMOVAL.



NOTE:

- ENSURE THE INSTALLATION MEETS THE LEGAL AND REGULATORY REQUIREMENTS OF THE COUNTRY AND STATE OF USE.
- THE VAQ255 ASSEMBLY SHOULD BE LEFT IN THE ORIGINAL PACKING UNTIL IT IS REQUIRED FOR THE USE.

1. Hemp filaments, jute or even Teflon ribbons are normally not required, As the part connections are accurately threaded. By chance, if any of these or any other tightening medium get into the operational area inside the VAQ255, possible damage of the VAQ255 could not be ruled out.
2. Clean all pipes and tube fittings thoroughly with suitable means. As even when brand new pipes are fitted, unclean interior are quite covered with dirt and dust.
3. Avoid impact on the VAQ255. These may happen during transportation/ erection/ mishandling.

4. TECHNICAL SPECIFICATION

Model	VAQ255	VAQ215	VAQ275
Operation type	Internal Pilot operated	Internal Pilot operated	Internal Pilot operated
Type	5/3 Double solenoid	5/3 Double solenoid	5/3 Double solenoid
Port	1/4" BSP / 1/4" NPT	1/4" BSP / 1/4" NPT	1/4" BSP / 1/4" NPT
Operating Pressure	2.5 to 10 kg/cm2	2.5 to 10 kg/cm2	2.5 to 10 kg/cm2
Centre position	Off	Exhaust	Pressurised

5. MAINTENANCE

NOTE:

- THE VAQ255 MUST BE REMOVED FROM INSTALLATION PRIOR TO MAINTENANCE.
- ALL THE CONNECTIONS/PORTS HAVE TO BE DISCONNECTED PRIOR TO DISASSEMBLY.
- ALL THE MOUNTINGS, ACCESSORIES AND SPARE PARTS USED OR REPLACED MUST BE ORIGINAL FROM VALMET.

Valmet recommends "NELES M 55" grease for greasing.

- Apply the grease with soft brush or similar.
 - In case of any difficulty consult Valmet distributor.
1. Install, operate and maintain as per the instructions and recommendations of this manual.
 2. Any deviation from the above will cease the responsibilities of Valmet.

6. DISASSEMBLY

WARNING:

ALL ELECTRIC AND PNEUMATIC CONNECTIONS SHOULD BE REMOVED BEFORE STARTING DISASSEMBLY.



CAUTION:

DO NOT PLACE DISMANTLED PART ON ANY DIARY/ WORK BENCH BUT KEEP IT ON CLEAN PAPER/CLOTH IN SAME SEQUENCE AS YOU HAVE DISMANTLED IT.

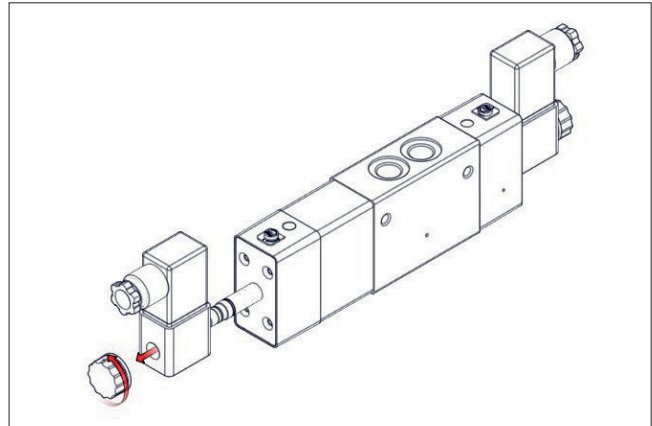


NOTE:

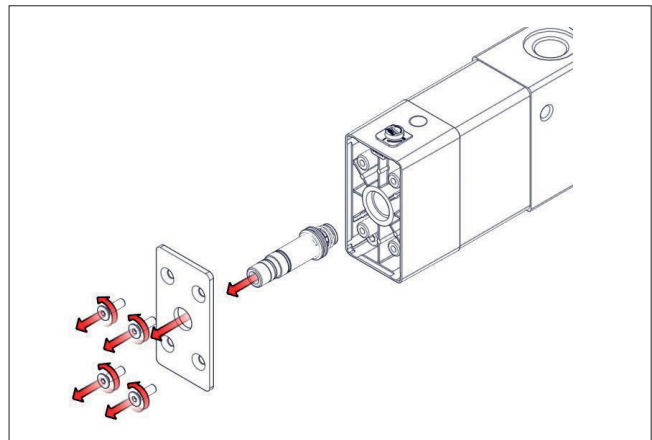
- IT IS ADVISABLE TO REPLACE ALL THE RUBBER PARTS USING GENUINE NELES SPARE KIT.
- NUMBERS IN PARENTHESES, () INDICATE THE BUBBLE NUMBER (REFERENCE NUMBER) USED ON THE NELES ASSEMBLY DETAILS AND PART LIST.

6.1 DISASSEMBLY OF SPOOL VALVE.

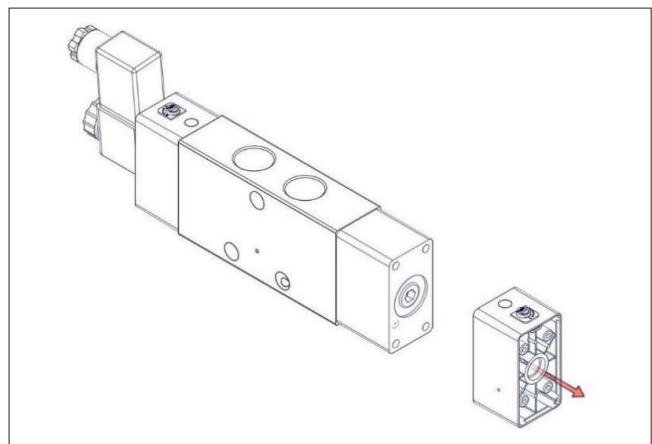
1. Remove coil nut (26), after that remove solenoid coil (24).



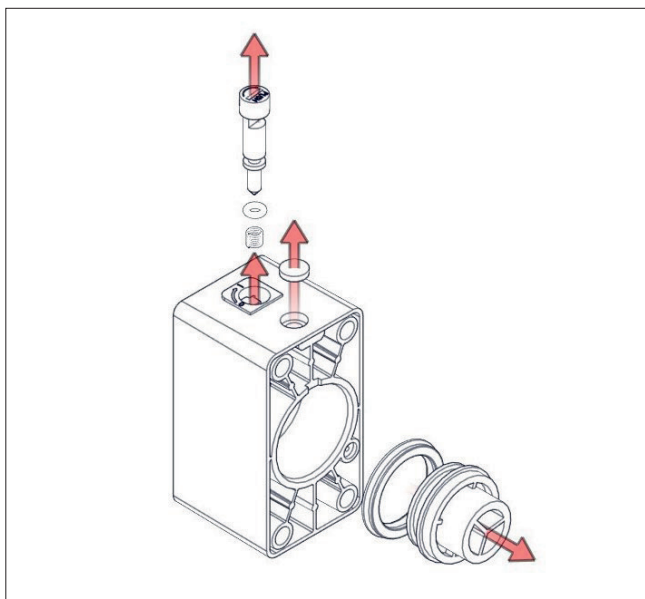
2. Remove the 4 screws (21) by loosening them from EL cover (2), Cover plate (5) and simultaneously remove guide plunger (13).



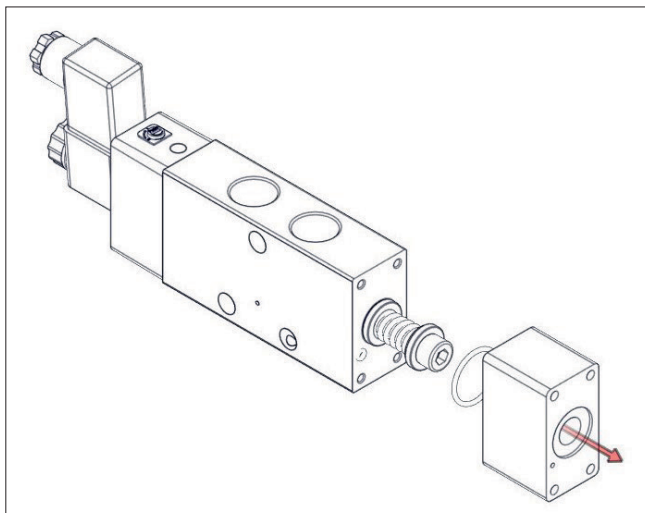
3. Remove 4 bolts (23) from EL cover (2) and separate the EL cover assembly.



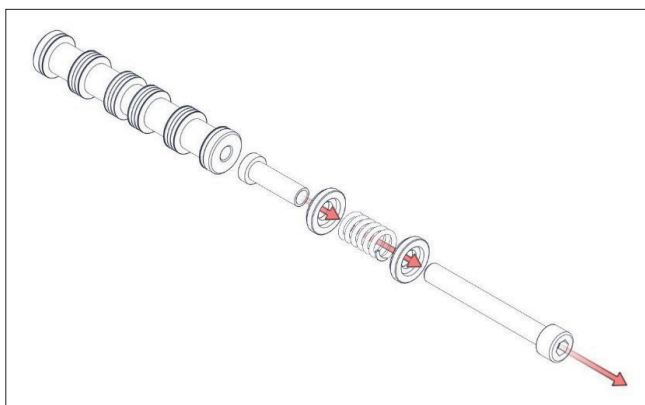
4. Take out EL cover assembly, remove MA (7), MA plate (24) O-ring (8) and MA spring (9) then remove O-ring (10) and helping piston (11) too.



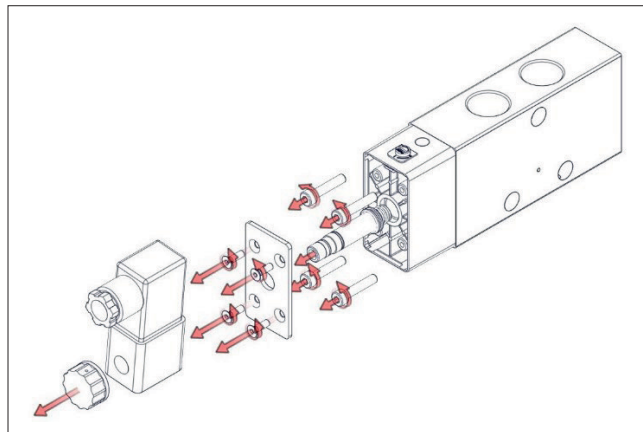
5. Separate out middle cover (5), O-ring (14) & (8). And separate out spool assembly.



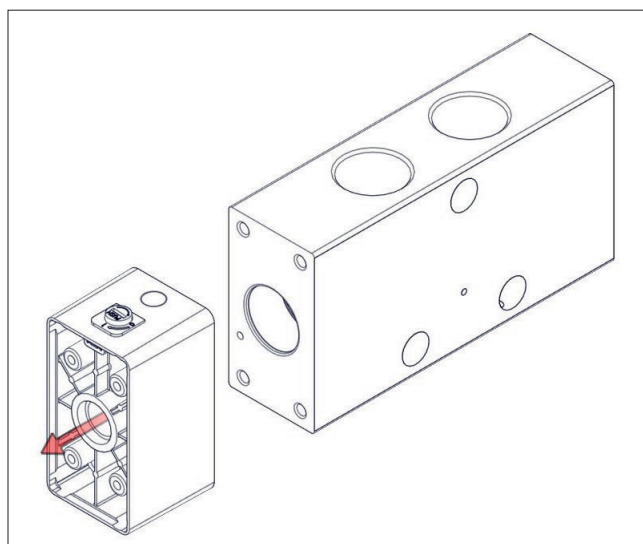
6. Remove bolt (15) from spool (3), simultaneously remove spring piston (16), (17) and spring tensioner (19).



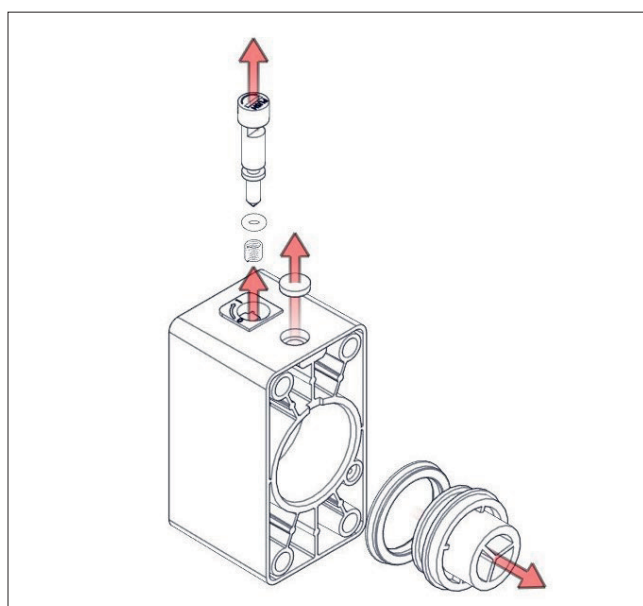
7. Remove coil nut (25), after that remove solenoid coil (26). Remove the 4 screws (21) by loosening them from EL cover (2), Cover plate (5) and simultaneously remove guide plunger (13).



8. Remove bolts (22) from EL cover (2) and body (1). And separate out EL cover assembly.



9. Take out EL cover assembly, remove MA (7), MA plate (24) O-ring (8) and MA spring (9) then remove O-ring (10) and helping piston (11) too



6

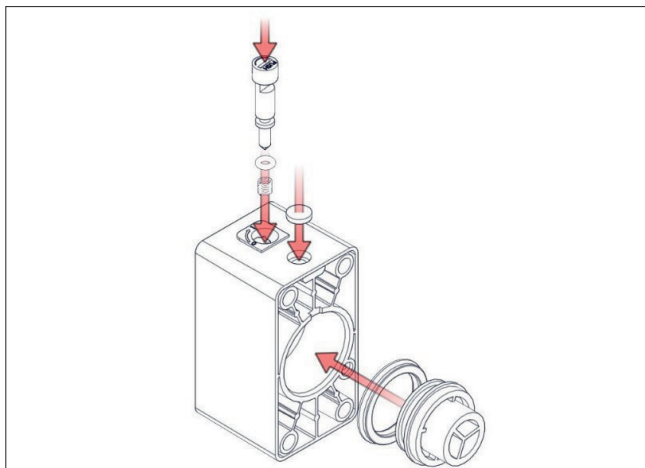


7. ASSEMBLY

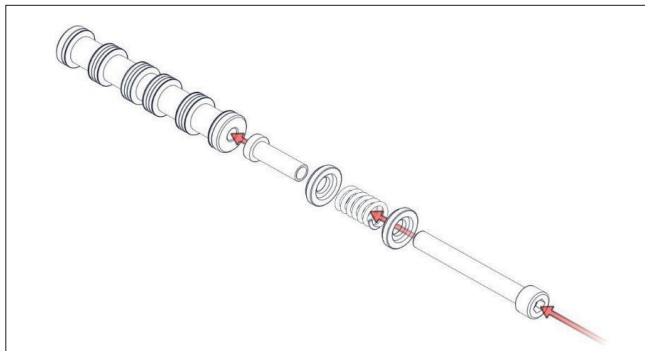
NOTE:

- FOLLOW THE SEQUENCE AS GIVEN BELOW TO ENSURE PROPER ASSEMBLY.

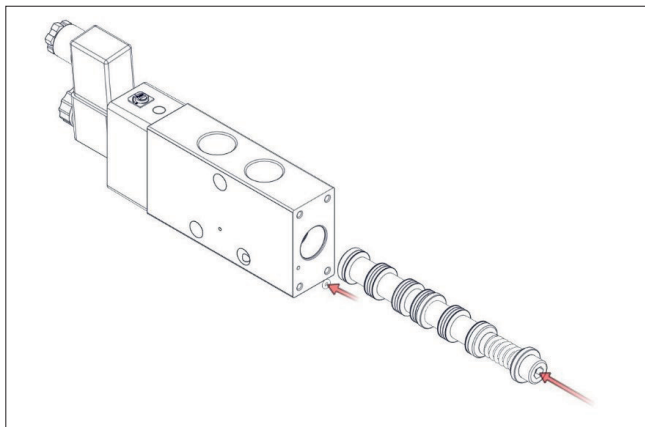
1. Clean all parts with soap water and dry.
2. Apply a layer of Valmet recommended grease to the inner face of the body (1). (grease: NELES M 55).
3. Separately make the assembly of EL covers, fit the MA (7) on EL cover (2) with O-ring (8) and spring (9) and fix it with MA plate (24). Finally fit filter (20) in given groove of EL cover (2).



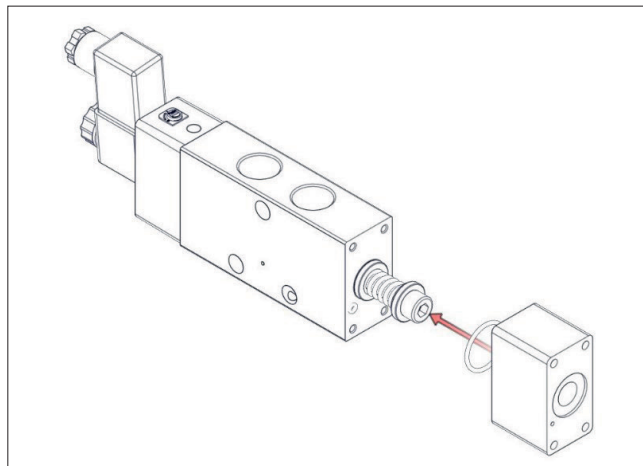
4. Now fit spool (3) with sealing (4).
5. Now make spool assembly as follows: Place spring tensioner on top of spool, insert spring piston left, spring and spring piston right and tight it with the help of M6 bolt (15).



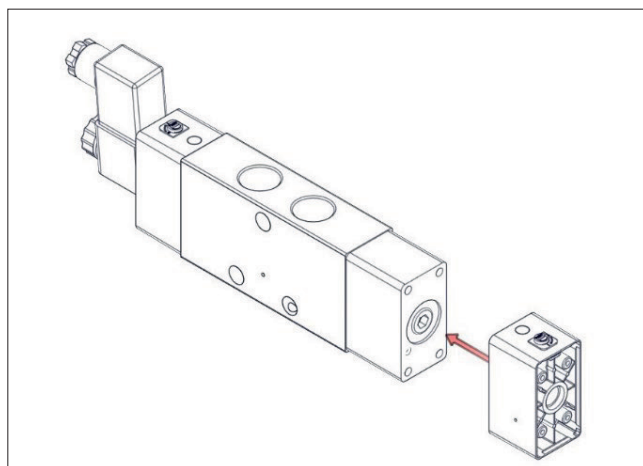
6. Insert spool assembly in body (1).



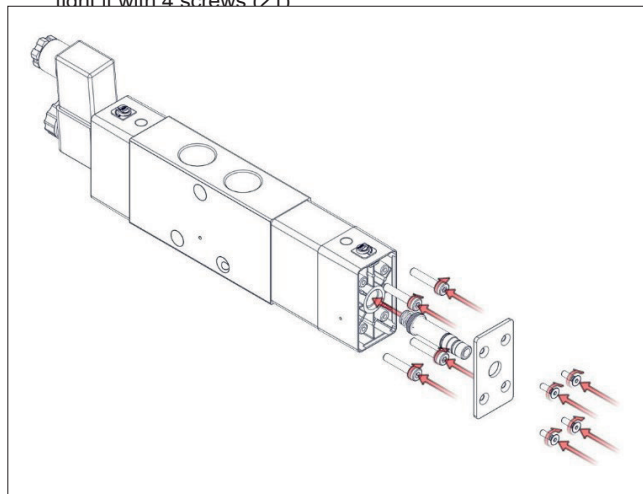
7. Place the O-ring (14) and (10) in middle cove (5).



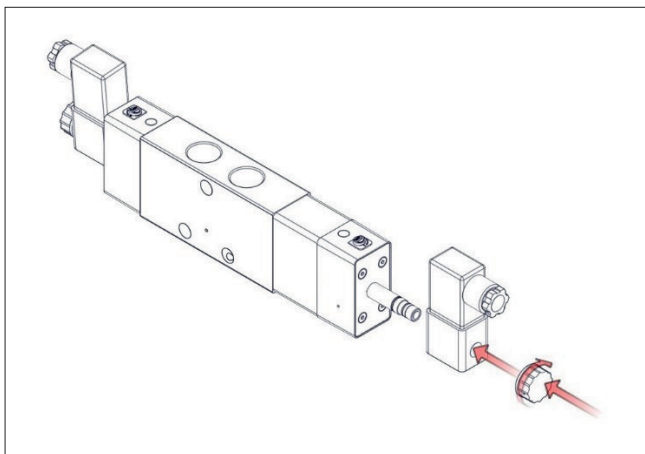
8. Fit EL cover assembly with help of bolt (23).



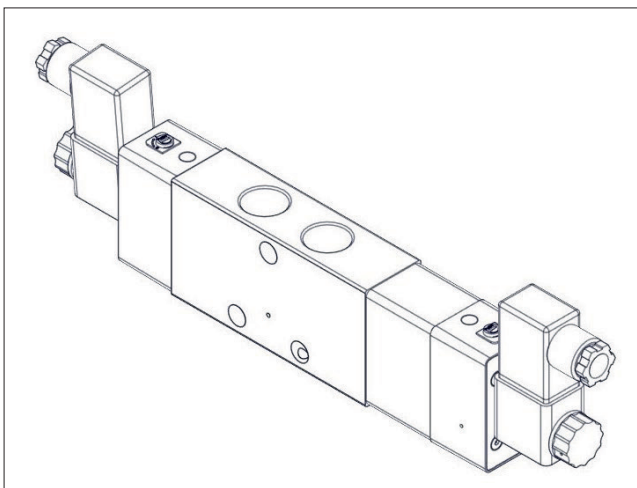
9. Fit guide plunger (13) into EL cover (2) with cover plate (6) and tight it with 4 screws (21).



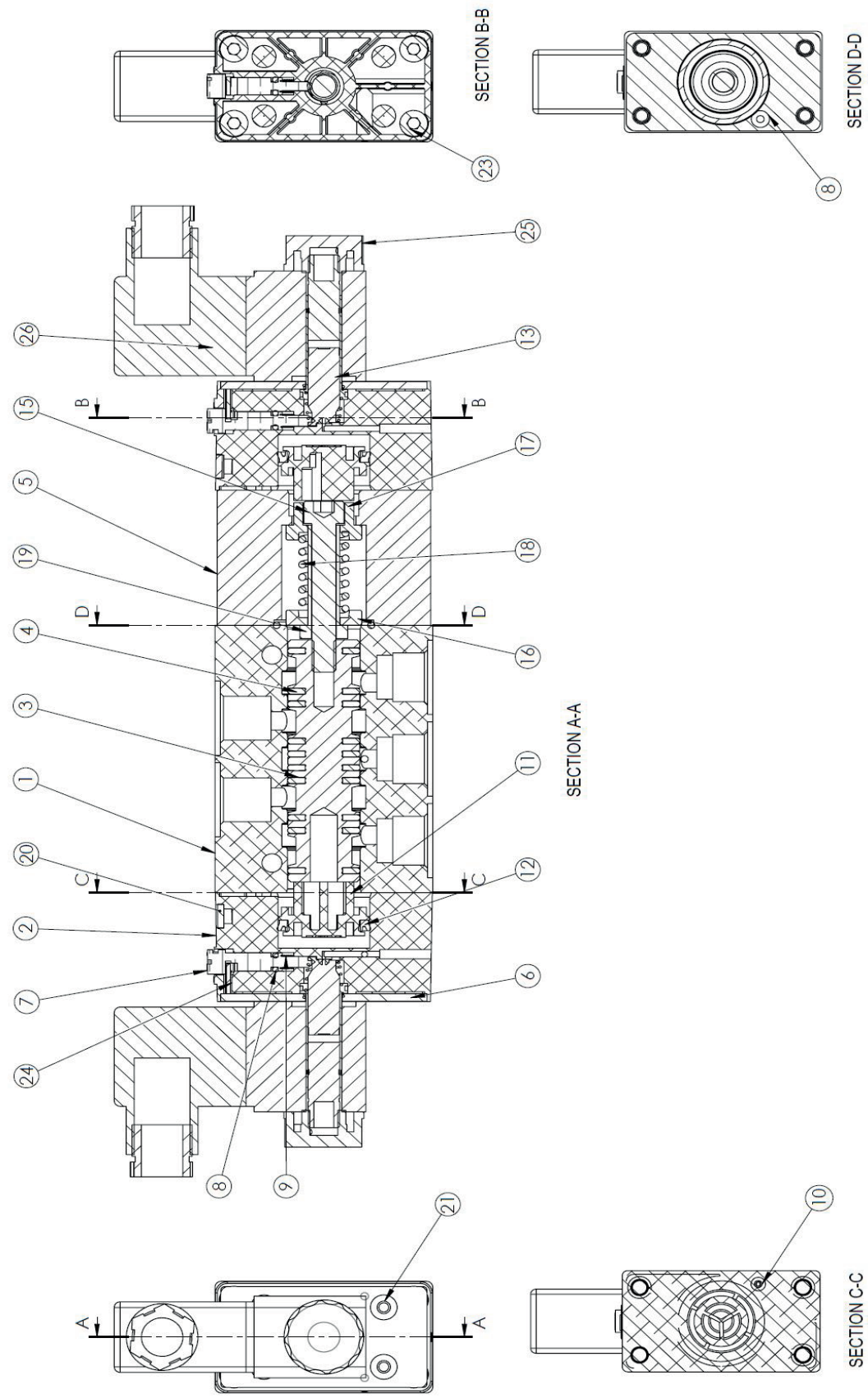
10. Fit coil nut (25) with solenoid coil (26) into cover plate (6).



11. Repeat the step 8, 9 and 10 to fit EL Cover assembly and Solenoid coil assembly.



8. CROSS-SECTION



8.1 PART LIST

Sr. No.	Name	Quantity
1	BODY	1
2	EL COVER	2
3	SPOOL	1
4	SEAL FOR SPOOL	10
5	MIDDLE COVER	1
6	COVER PLATE	2
7	MA	1
8	ORING 2.4 X 1.4	3
9	SPRING FOR MA	1
10	ORING 1.4 X 1.4	2
11	HELPING PISTON	2
12	PISTON LIP SEAL	2
13	GUIDE PLUNGER	1
14	ORING 21.95 X 1.78	1
15	DIN 912 M6 X 45	1
16	SPRING PISTON LEFT	1
17	SPRING PISTON RIGHT	1
18	SPRING	1
19	SPRING TENSIONER	1
20	FILTER	1
21	DIN 7991 M3 X 10	8
22	DIN 912 M4 X 20	4
23	DIN 912 M4 X 60	4
24	LOCKING PLATE FOR MA	1
25	COIL NUT	1
26	SOLENOID COIL	1

9. PACKAGING & STORE

1. When not in use, VAQ255 ASSEMBLY should be kept in a sealed plastic bag in a cardboard box to prevent moisture or dust from contacting product.
2. VAQ255 should be stored in a dry place free from water and dust.
3. Store at temperature between 40°F and 120°F (4°C and 49°C).
4. Locate in an area to avoid damage by impact.

10. ASSISTANCE

For technical questions or assistance, contact any authorized distributor of Valmet or:

For technical questions or assistance, contact any authorized distributor of Valmet Flow Control India Private limited. or

Valmet Flow Control Oy

Vanha Porvoontie 229, 01380 Vantaa, Finland.

Tel. +358 10 417 5000.

www.valmet.com/flowcontrol

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