

AV – VOLUME BOOSTER

INSTRUCTION MANUAL 2070




*Engineering
GREAT Solutions*

28/10/2025	07	Added “ADDENDUM 1: ADDITIONAL SAFETY PRECAUTIONS” – Rev.00. Removed chapter “CERTIFICATION”. Added note for exhaust connections facing down.	D.Pasini	R.Valoti
05/10/2022	06	Added dust certifications table 7 and IECEx label section 4.1	M.Oberti	N.Zenoni
25/11/2021	05	Revised	M.Oberti	N.Zenoni
Date	Revision	Description	Compiled	Approved

IMI STI S.r.l has taken every care in collecting and verifying the documentation contained in this Instruction Manual. The information herein contained are reserved property of IMI STI S.r.l

INDEX

1	GENERAL INFORMATION	4
1.1	GENERAL WARNING	4
1.2	GENERALITIES.....	4
1.3	MANUFACTURER.....	4
1.4	TERMS AND CONDITIONS.....	4
1.5	MANUFACTURER'S LIABILITY.....	5
1.6	APPLICABLE STANDARDS AND DIRECTIVES.....	5
1.7	SYMBOLOLOGY USED	6
1.8	SIGNS OF WARNING	6
1.9	SIGNS OF OBLIGATION	6
2	DEVICE DESCRIPTION	7
2.1	GENERAL DESCRIPTION	7
2.2	MODEL SELECTION	8
3	TECHNICAL DATA	10
4	USER PROCEDURES	11
4.1	TRANSPORT.....	11
4.2	RECEPTION.....	11
4.3	STORAGE.....	11
4.4	INSTALLATION	12
4.5	CHECKS TO BE PERFORMED BEFORE INSTALLATION	12
4.6	DIMENSIONAL DRAWING	12
4.7	PNEUMATIC CONNECTIONS	12
4.8	EARTHING CONNECTIONS	13
4.9	DISASSEMBLING	13
5	OPERATION AND USE.....	14
5.1	OPERATION DESCRIPTION	14
5.2	AV MODEL : TYPE 3	14
5.3	AV MODEL : TYPE 4	17
5.4	AV MODEL : TYPE 5	20
5.5	AV MODEL : TYPE 6	23
5.6	AV MODEL : TYPE 7	26
5.7	AV MODEL : TYPE 8	29
5.8	AV MODEL : TYPE 9	32
5.9	AV MODEL : TYPE 10	35

5.10	AV MODEL : TYPE 11.....	38
5.11	AV MODEL : TYPE 12.....	41
5.12	AV MODEL : TYPE 13.....	44
5.13	AV MODEL : TYPE 14.....	47
5.14	AV MODEL : TYPE 15.....	50
5.15	AV MODEL : TYPE 16.....	53
5.16	INTENDED USE.....	56
5.17	REASONABLY FORSESEEABLE MISUSE	56
5.18	OPERATING LIMITS.....	56
5.19	RESIDUAL RISKS.....	56
6	INSTRUCTION FOR THE OPERATOR	57
7	MAINTENANCE.....	58
7.1	PERIODIC INSPECTIONS	58
7.2	SPECIAL MAINTENANCE	58
7.3	REPAIRS	58
8	TROUBLESHOOTING.....	59
9	DECOMISSIONING.....	61
	ADDENDUM 1: ADDITIONAL SAFETY PRECAUTIONS	62

1 GENERAL INFORMATION

1.1 GENERAL WARNING



This Instruction Manual is an integral part of the machine, it should be carefully read before carrying out any operation and it should be kept for future references. The operators shall adopt the safety precautions required by the country where the product is installed.

1.2 GENERALITIES

IMI STI products are conceived, manufactured and controlled according to the Quality Control System in compliance with EN ISO 9001 International Standard.

1.3 MANUFACTURER

According to Machinery Directive 2006/42/EC, the Manufacturer of the described product is IMI STI.

IMI STI, Via Dei Caravaggi 15
24040 Levate, Bergamo, Italy
Tel. +39 035 29282
Fax +39 035 2928247
imisti.sales@imi-critical.com
sti.support@imi-critical.com

1.4 TERMS AND CONDITIONS

IMI STI guarantees each single product to be without defects and to be conform to current goods specifications. Unless otherwise stated on the purchased order, the warranty period is one year from the date of installation by the user, or eighteen months from the date of shipment to the first user, whichever occurs first, and considering that:

- the warranty does not cover products which have been subject to improper storage, improper installation, misuse, corrosion, or which have been modified or repaired by unauthorised personnel (it is not advisable that customer or end users modify the device characteristics);
- the warranty does not cover special products or components not covered by warranty in their turn by subcontractors.

1.5 MANUFACTURER'S LIABILITY

IMI STI declines all liability in the event of:

- the use of the product does not comply with local legislation on safety at work;
- disregard or incorrect application of the instructions provided on the product label and/or in the instruction manual;
- incorrect installation and/or use of the product;
- modifications without STI's authorisation and/or work done on the unit by unqualified or unsuitable persons.

1.6 APPLICABLE STANDARDS AND DIRECTIVES

2006/42/EC	Machinery Directive
2014/68/EU	Pressure Equipment Directive (PED)
EN ISO 80079-36	Explosive atmospheres. Non-electrical equipment for explosive atmospheres. Basic method and requirements
EN ISO 80079-37	Explosive atmospheres. Non-electrical equipment for explosive atmospheres. Non-electrical type of protection constructional safety "c", control of ignition sources "b", liquid immersion "k"
EN ISO 12100	Safety of machinery. General principles for design. Risk assessment and risk reduction
EN 60079-0	Explosive atmospheres - Part 0: Equipment - General requirements
EN 1127-1	Explosive atmospheres - Explosion prevention and explosion protection - Part 1
EN ISO 9001	Quality Management Systems. Requirements

Table 1

This product is designed in accordance with the applicable International Standards and Directives, but the following regulations must be observed in any case:

- general and safety regulations;
- plant specific regulations and requirements;
- proper use of personal devices, protective devices (glasses, clothing, gloves, etc), tools and transport equipment.

1.7 SYMBOLOGY USED

1.8 SIGNS OF WARNING

Be careful where the following symbols are shown. They indicate a potentially hazardous situation and they warn that if the steps are not properly performed, they may cause serious injury, death or long term risks to health of exposed persons.

		
General Danger	Crushing hazard	Power supply hazard

Table 2

1.9 SIGNS OF OBLIGATION

Be careful where the following symbols are shown. They indicate an obligation that must be respected.

					
General obligation	Obligation to wear protective clothing.	Obligation to wear protective footwear.	Obligation to wear a helmet.	Obligation to protect your eyes.	Obligation to protect your hearing.

Table 3

2 DEVICE DESCRIPTION

2.1 GENERAL DESCRIPTION

AV Volume Booster is designed to meet conventional and high speed control valve applications. It produces a volume boosting action and contains an integral stabilizing by-pass valve, adjustable by a screw. Opening this valve it is possible to improve the stability of the system composed by positioner - volume booster - actuator.

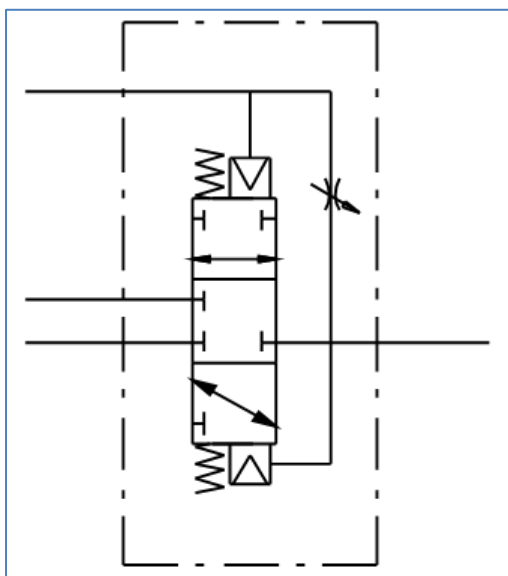


Figure 1

2.2 MODEL SELECTION

AV -
 S -
 M -
 P -
 T -
 C -
 O

S - SIZE	
04	1/4"
12	3/4"

M - MATERIAL	
S0	Stainless Steel SS316
S1	Stainless Steel SS316 (Copper Free Execution)
A0	Aluminum
A1	Aluminum (Copper Free Execution)

P - PAINTING	
00	Not Painted
01	Standard Painting Cycle (CVA.01)
99	Customized Painting

T - TEMPERATURE RANGE	
H	-20°C / +85°C
S	-20°C / +70°C
L	-40°C / +70°C
E	-55°C / +70°C
U	-60°C / +100°C

C - CONNECTIONS	
22CPE	Pilot / Supply1 / Supply2 / Actuator / Exhaust
22A2E	Pilot / Supply1 / Supply2 / Actuator / Exhaust
25EPM	Pilot / Supply1 / Supply2 / Actuator / Exhaust
25A5M	Pilot / Supply1 / Supply2 / Actuator / Exhaust
22CPG	Pilot / Supply1 / Supply2 / Actuator / Exhaust
25EPE	Pilot / Supply1 / Supply2 / Actuator / Exhaust

O - OPTIONS	
TC	Without Added Holes / Collected Exhaust
FC	With Added Holes / Collected Exhaust
TA	Without Added Holes / Free Exhaust
FA	With Added Holes / Free Exhaust

Table 4

Below is the legend regarding the model selection relating to the "C - CONNECTIONS" section

Legend NPT/GAS		Legend HOLES	
1	1/8	A	0mm
2	1/4	B	0mm-5mm
3	3/8	C	12mm-17mm
4	1/2	E	21mm-25mm
5	3/4	G	26mm-31mm
6	1	M	33mm-34mm
7	1 1/4	P	Plug-in
8	1 1/2	T	40mm-45mm
9	2	V	46mm
		W	54mm-56mm
		X	56,1mm-62mm
		Y	69mm-100mm
		Z	160mm-270mm

Table 5



Not all product configurations are available.
For a better product selection, please contact imisti.sales@imi-critical.com or sti.support@imi-critical.com
For existing model see par. 6

3 TECHNICAL DATA

SIZE	1/4" 3/4"
BODY MATERIAL	Stainless steel 316 Aluminium
EXTERNAL PAINTING	Not painted Standard cycle painting (CVA.01) OPTION CUSTOMIZED PAINTING
EXTERNAL SURFACE TREATMENT	Anodized
GASKET MATERIAL	Nbr Viton Fluorosilicone
WORKING PRESSURE p min [Bar]	3
WORKING PRESSURE p max [Bar]	7
DESIGN PRESSURE p des [Bar]	10
WORKING TEMPERATURE T min [°C]	-20
WORKING TEMPERATURE T max [°C]	+85
EXTENDED TEMPERATURE T min [°C]	-60
EXTENDED TEMPERATURE T max [°C]	+100
STORAGE TEMPERATURE T min [°C]	-40
STORAGE TEMPERATURE T max [°C]	+95
PILOT PNEUMATIC CONNECTIONS	1/4"
SUPPLY 1 PNEUMATIC CONNECTIONS	1/4" - 3/4"
SUPPLY 2 PNEUMATIC CONNECTIONS	0mm 12mm - 17mm 21mm - 25mm
ACTUATOR 1 PNEUMATIC CONNECTIONS	Plug in 1/4" 3/4" 21mm - 25mm
EXHAUST PNEUMATIC CONNECTIONS	21mm - 25mm 26mm - 31 33mm - 34mm
GREASE	-
THREAD LOCKER	-
ADHESIVE	-
FLUID	AIR
CV IN MAX	0,8 4
CV OUT MAX	0,8 3
CV BYPASS MAX	-
INTERNATIONAL PROTECTION (IP)	-
LIFETIME	30 years

Table 6

- Tubing with diameter equal to 8mm or 3/8" are recommended as pilot tubing;
- Tubing with diameter greater than the product thread connection size are recommended as supply and exhaust tubing;

4 USER PROCEDURES



Not performing the following procedures will invalidate the product warranty

4.1 TRANSPORT



Always wear protective clothing, gloves, and eyewear to prevent personal injury. The lifting and handling shall be made by qualified staff and in compliance with the laws and valid provisions.

4.2 RECEPTION

Check if the model corresponds with the one reported on the purchase order and if no defects are visible on the product. Product related documents are furnished with documents accompanying the machinery where the product is mounted on. If the product is sold alone, contact IMI STI or download the documentation from IMI STI web site.

4.3 STORAGE

To maintain the product in perfect condition, proper attention must be observed to preserve the product during the storage period. Remember to:

- place the product on a wood surface pallet or on metallic support, avoiding direct contact with the ground;
- protect the product with appropriate covering;
- make sure that plastic plugs are present on the pneumatic connections. If stored outdoor, replace plastic plugs with metal plugs that guarantee perfect tightness;
- keep the product protected from weather conditions.

4.4 INSTALLATION



Always wear protective clothing, gloves, and eyewear to prevent personal injury. Check with your process or safety engineer for any additional measures that must be taken to protect against process media.

4.5 CHECKS TO BE PERFORMED BEFORE INSTALLATION

To allow a correct installation of the product, verify that the product outer surface is free from dust and dirt; if not, clean it and remove anything that might prevent a correct installation. Then, check if the coupling dimensions meet the specified ones and prepare all the necessary tools for the assembly and setting of the unit.

4.6 DIMENSIONAL DRAWING

For dimensional drawing, section and spare parts, see [chapter 5.0](#)

4.7 PNEUMATIC CONNECTIONS



Check that the supply pressure are lower than the product design pressure. Use appropriate pipes and fittings (type, rating, material and dimensions). The connection shall be made by qualified staff.

To guarantee the best performances, follow the

- properly deburr the ends of rigid pipes;
- properly clean the interior of pipes sending through them plenty of the supply fluid used in the system;
- mould and fasten the connection pipes in order to avoid overstress on the connection parts and to avoid loosening of the threaded connections;
- use the recommended quantity of pipe sealant, only on male threads (no-hardening sealant is strongly recommended);
- make the connections according to the machinery (i.e. actuator) pneumatic diagram;
- check that no leakage occurs from pneumatic connections. If necessary, tighten the fittings;
- collect tubing as indicated in the technical data table.
- It is recommended that, when possible, the accessory is mounted with exhaust connections facing down.

4.8 EARTHING CONNECTIONS

The earthing connection is guaranteed through the product fixing screws on the machinery and/or through the pneumatic fittings. If, for any reason, no earthing connection is guaranteed, ensure it by connect the product (or the machinery where the product is mounted) to earth.

4.9 DISASSEMBLING



**Before starting any disassembly operations, it is mandatory to disconnect the pneumatic power and exhaust the product (no fluid under pressure inside the product, fittings, tubing).
The staff must be qualified for the required operation.**

5 OPERATION AND USE



It is severely forbidden to use the product for purpose or application other than those for which it was designed and here above specified.
The product contains fluid under pressure: be careful when using it.

5.1 OPERATION DESCRIPTION

In the following paragraphs you will find information regarding the dimensional drawings, part list and the list with all the models currently available for each type of accessory with the relative spare parts.

5.2 AV MODEL : TYPE 3

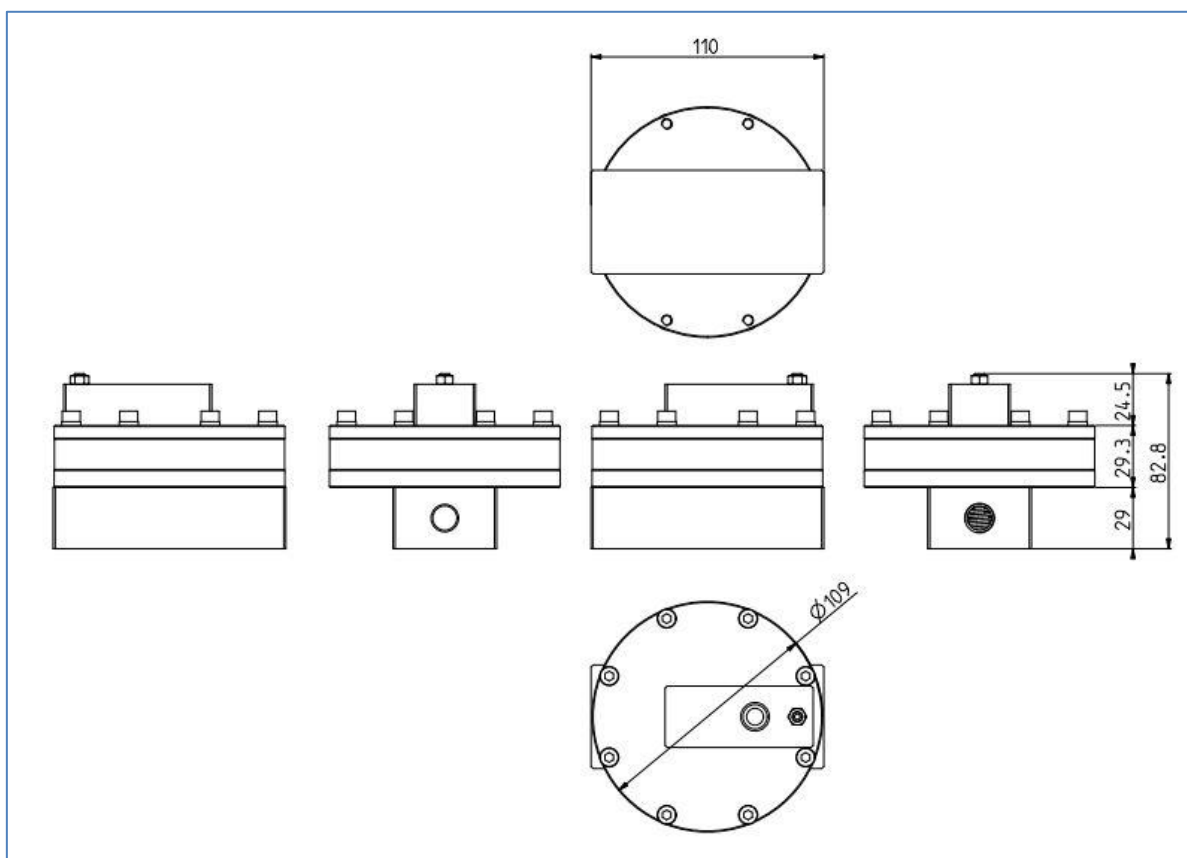


Figure 2 – Dimensional drawing

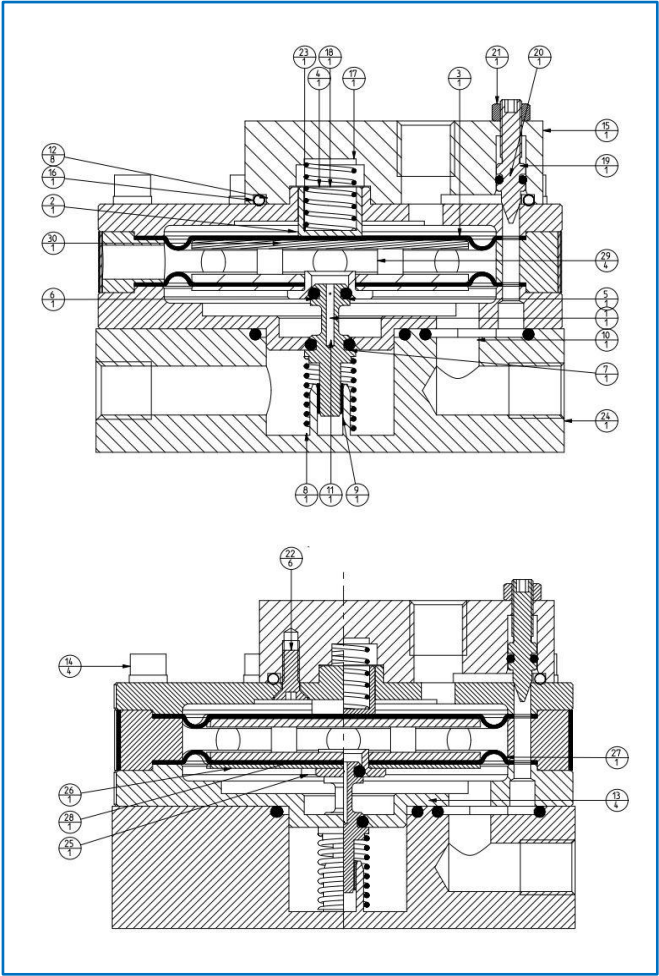


Figure 3 - Section

PART LIST		
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Table 7 – Part list

EXISTING PRODUCTS AND SPARE PARTS			
MODEL	PART NUMBER	SPARE	POSITION
AV-04-A1-01-H-22A2E-TA	62272	62272	ALL
		147700	3-5-6-7-8-10-11-16-17-20-[25-26-27-28-29-30]*+FD77957
AV-04-A1-01-S-22A2E-TA	62272	62272	ALL
		147700	3-5-6-7-8-10-11-16-17-20-[25-26-27-28-29-30]*+FD77957

*The item inside [] are supplied in a single assembled component

Table 8 – Existing product and spare parts

	The previous models are those currently available. For further models refer to the model selection in <u>par. 2.2</u> or contact <u>imisti.sales@imi-critical.com</u> or <u>sti.support@imi-critical.com</u>
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5.3 AV MODEL : TYPE 4

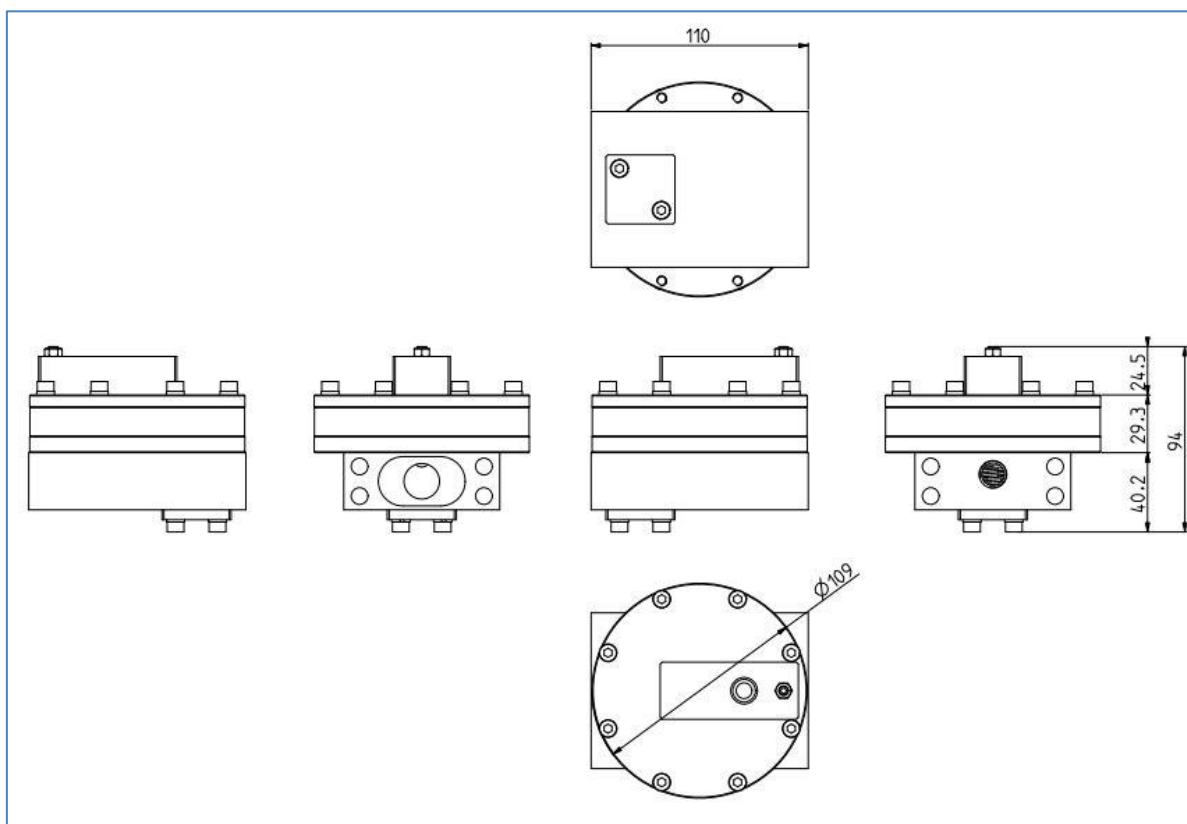


Figure 4 - Dimensional drawing

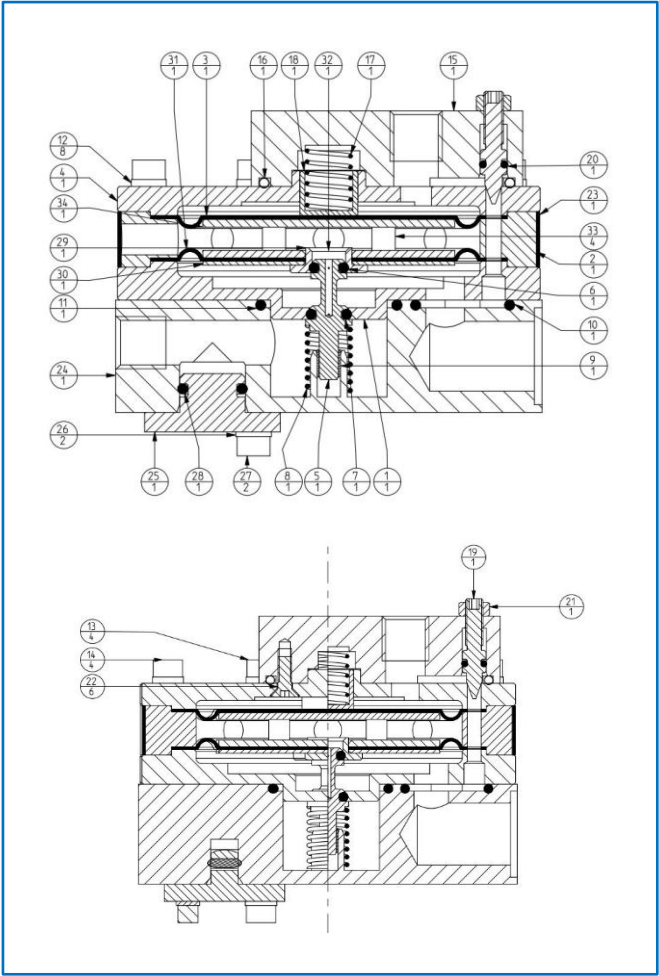


Figure 5 - Section

PART LIST		
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Table 9 – Part list

EXISTING PRODUCTS AND SPARE PARTS

MODEL	PART NUMBER	SPARE	POSITION
AV-04-S1-00-H-22CPE-FA	142499	147099	ALL+OR3125
		180931	3-5-6-7-8-10-11-16-17-20-28-[29-30-31-32-33-34]*+FD77957+OR3125
AV-04-A1-01-H-22CPE-FA	89147	181128	ALL+OR3125
		180931	3-5-6-7-8-10-11-16-17-20-28-[29-30-31-32-33-34]*+FD77957+OR3125
AV-04-S1-00-S-22CPE-FA	142499	147099	ALL+OR3125
		180931	3-5-6-7-8-10-11-16-17-20-28-[29-30-31-32-33-34]*+FD77957+OR3125
AV-04-A1-01-S-22CPE-FA	89147	181128	ALL+OR3125
		180931	3-5-6-7-8-10-11-16-17-20-28-[29-30-31-32-33-34]*+FD77957+OR3125
AV-04-A1-01-L-22CPE-FA	115165	181129	ALL+OR3125
		180931	3-5-6-7-8-10-11-16-17-20-28-[29-30-31-32-33-34]*+FD77957+OR3125

*The item inside [] are supplied in a single assembled component

Table 10 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.4 AV MODEL : TYPE 5

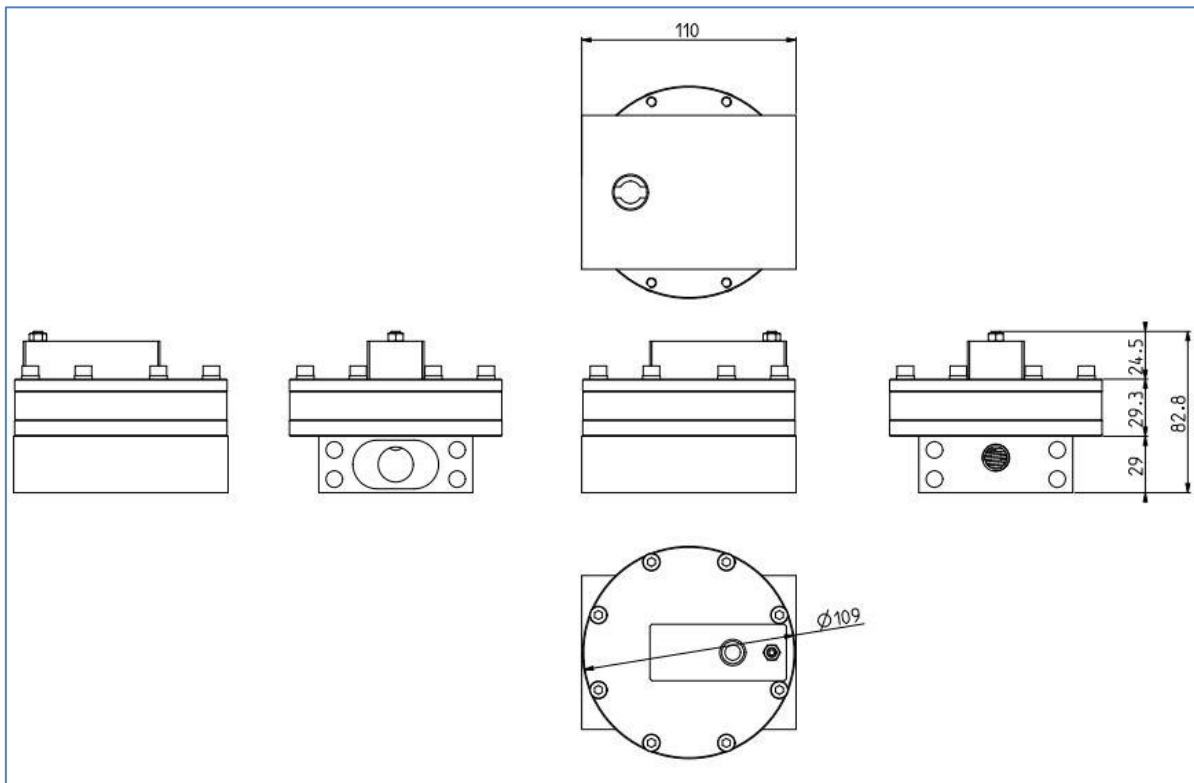


Figure 6 – Dimensional drawing

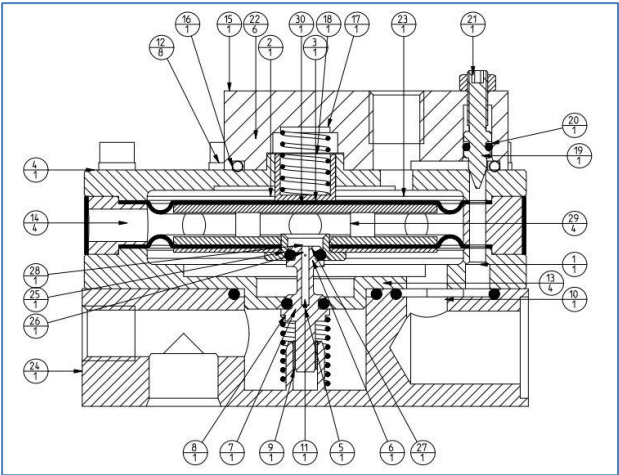


Figure 7 - Section

PART LIST		
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Table 11 – Part list

EXISTING PRODUCTS AND SPARE PARTS			
MODEL	PART NUMBER	SPARE	POSITION
AV-04-A1-01-H-22CPE-TA	60119	146985	ALL+OR3125
		180950	3-5-6-7-8-10-11-16-17-20-[25-26-27-28-29-30]*+FD77957+OR3125
AV-04-A1-99-H-22CPE-TA	82535	181535	ALL+OR3125
		180950	3-5-6-7-8-10-11-16-17-20-[25-26-27-28-29-30]*+FD77957+OR3125
AV-04-A1-01-S-22CPE-TA	60119	146985	ALL+OR3125
		180950	3-5-6-7-8-10-11-16-17-20-[25-26-27-28-29-30]*+FD77957+OR3125
AV-04-A1-99-S-22CPE-TA	82535	181535	ALL+OR3125
		180950	3-5-6-7-8-10-11-16-17-20-[25-26-27-28-29-30]*+FD77957+OR3125
AV-04-S1-00-L-22CPE-TA	92896	181135	ALL+OR3125
		180950	3-5-6-7-8-10-11-16-17-20-[25-26-27-28-29-30]*+FD77957+OR3125
AV-04-A1-01-L-22CPE-TA	75883	181131	ALL+OR3125
		180950	3-5-6-7-8-10-11-16-17-20-[25-26-27-28-29-30]*+FD77957+OR3125

*The item inside [] are supplied in a single assembled component

Table 12 - Existing product and spare parts

	The previous models are those currently available. For further models refer to the model selection in <u>par. 2.2</u> or contact <u>imisti.sales@imi-critical.com</u> or <u>sti.support@imi-critical.com</u>
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5.5 AV MODEL : TYPE 6

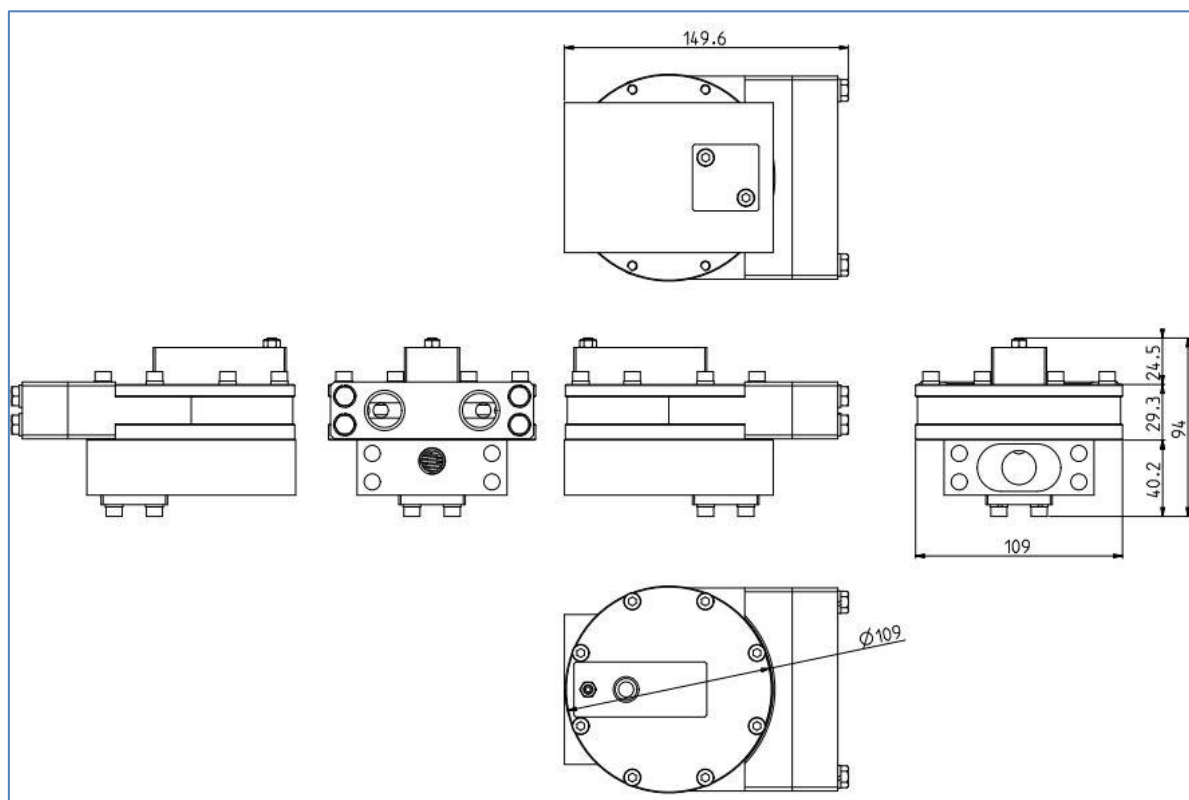


Figure 8 – Dimensional drawing

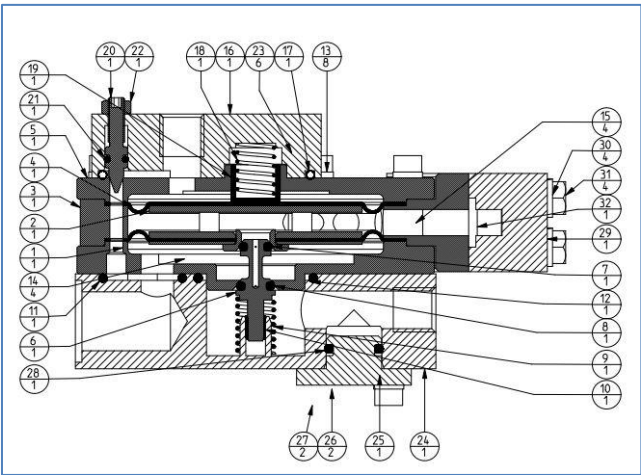


Figure 9 - Section

PART LIST		
Pos	Q.ty	Description
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Table 13 – Part list

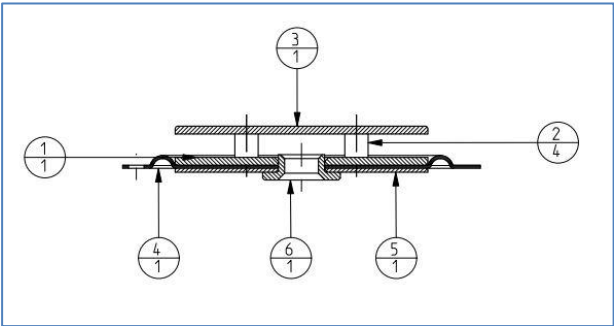


Figure 10 - Section

PART LIST		
Pos	Q.ty	Description
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Table 14 – Part list

EXISTING PRODUCTS AND SPARE PARTS			
MODEL	PART NUMBER	SPARE	POSITION
AV-04-A1-01-H-22CPG-FC	108842	181142	ALL+OR3125
		180932	[2]*-4-6-7-8-9-11-12-17-18-21-28-32 + FD77957 + OR3125
AV-04-A1-01-S-22CPG-FC	108842	181142	ALL+OR3125
		180932	[2]*-4-6-7-8-9-11-12-17-18-21-28-32 + FD77957 + OR3125

*The item inside [] are supplied in a single assembled component

Table 15 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.6 AV MODEL : TYPE 7

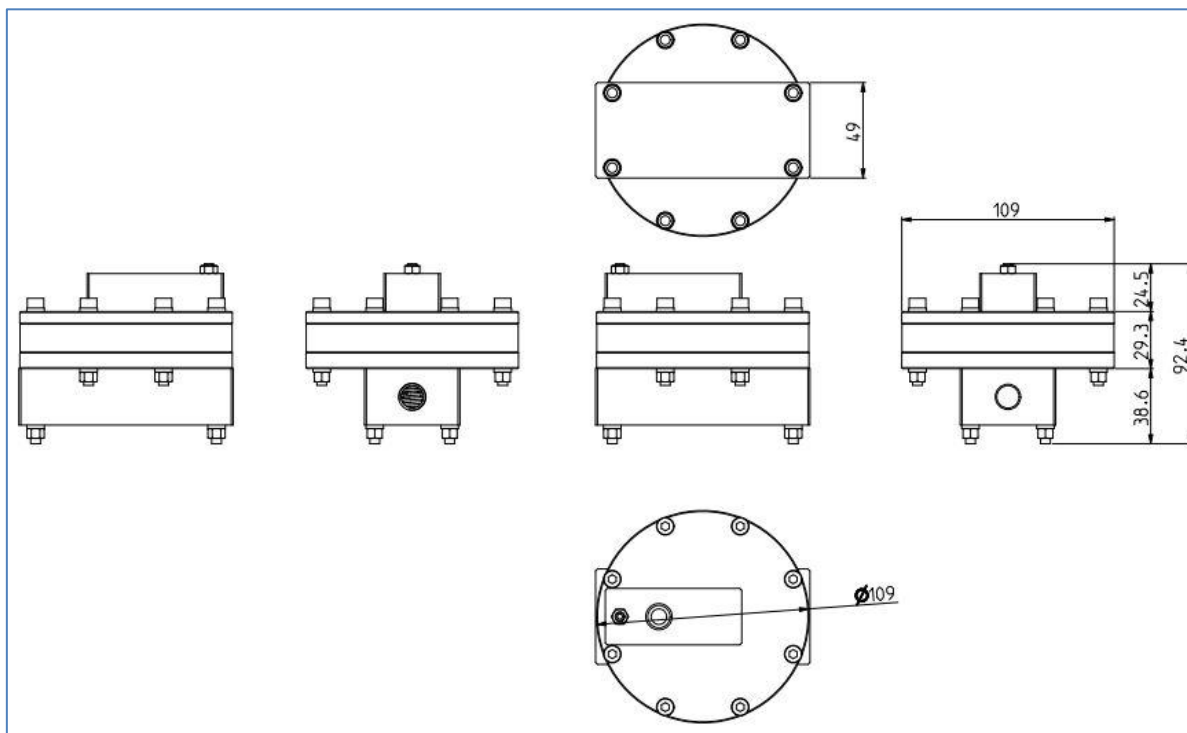


Figure 11 – Dimensional drawing

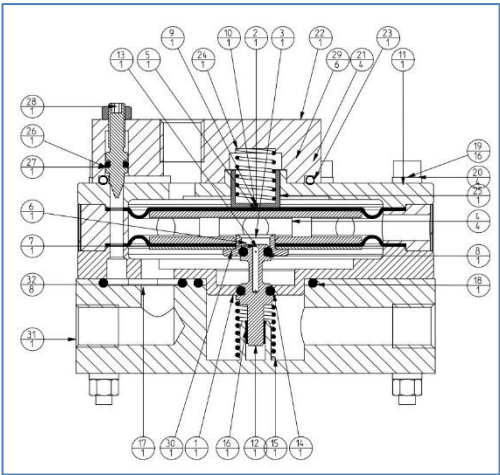


Figure 12 - Section

PART LIST		
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Table 16 – Part list

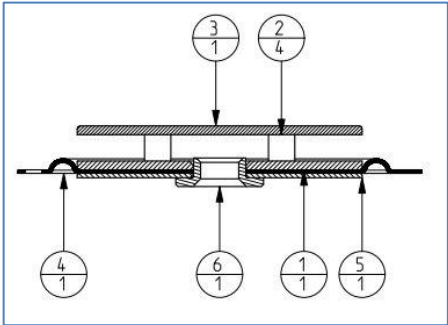


Figure 13 - Section

PART LIST		
Pos	Q.ty	Description
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Table 17 – Part list

EXISTING PRODUCTS AND SPARE PARTS

MODEL	PART NUMBER	SPARE	POSITION
AV-04-S1-00-H-22A2E-TA	144249	142249	ALL
		147700	[3-4-5-6-7-8]*-10-12-13-14-15-17-18-23-24-27+FD77597
AV-04-S1-00-S-22A2E-TA	144249	142249	ALL
		147700	[3-4-5-6-7-8]*-10-12-13-14-15-17-18-23-24-27+FD77597

*The item inside [] are supplied in a single assembled component

Table 18 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.7 AV MODEL : TYPE 8

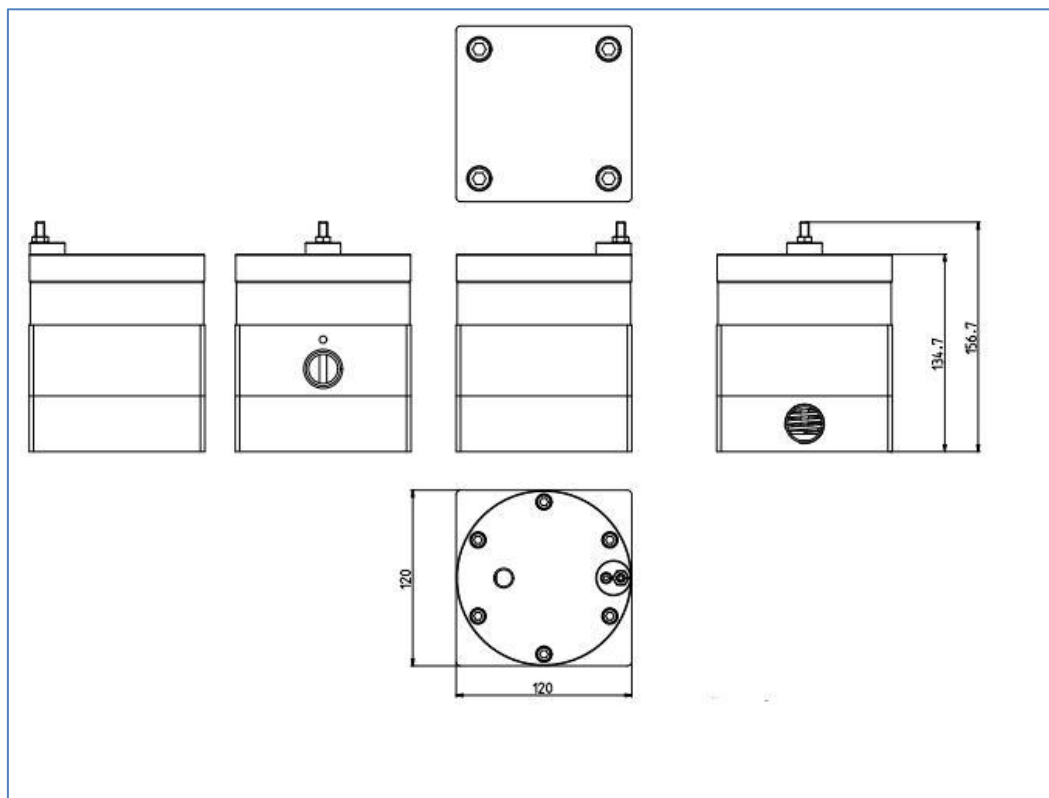


Figure 14 – Dimensional drawing

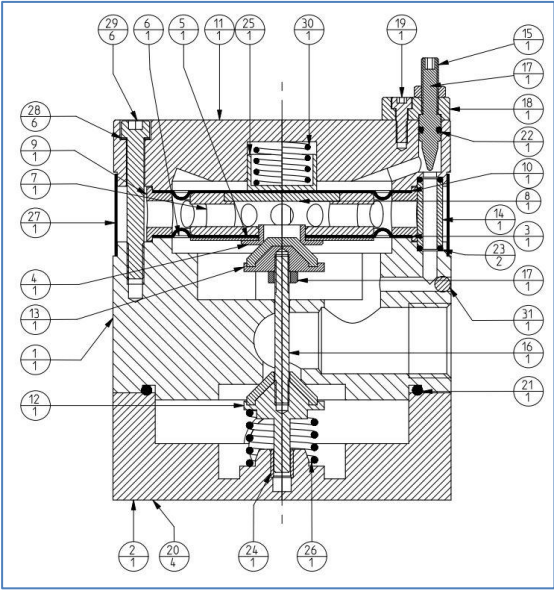


Figure 15 - Section

PART LIST		
Pos	Q.ty	Description
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Table 19 – Part list

EXISTING PRODUCTS AND SPARE PARTS			
MODEL	PART NUMBER	SPARE	POSITION
AV-12-A1-01-H-25A5M-TA	75782	75782	ALL
		147701	[4-5-6-7-8]*-10-14-21-22-23-26-30+FD77957
AV-12-A1-01-S-25A5M-TA	75782	75782	ALL
		147701	[4-5-6-7-8]*-10-14-21-22-23-26-30+FD77957
AV-12-A1-01-L-25A5M-TA	130194	130194	ALL
		147701	[4-5-6-7-8]*-10-14-21-22-23-26-30+FD77957

*The item inside [] are supplied in a single assembled component

Table 20 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.8 AV MODEL : TYPE 9

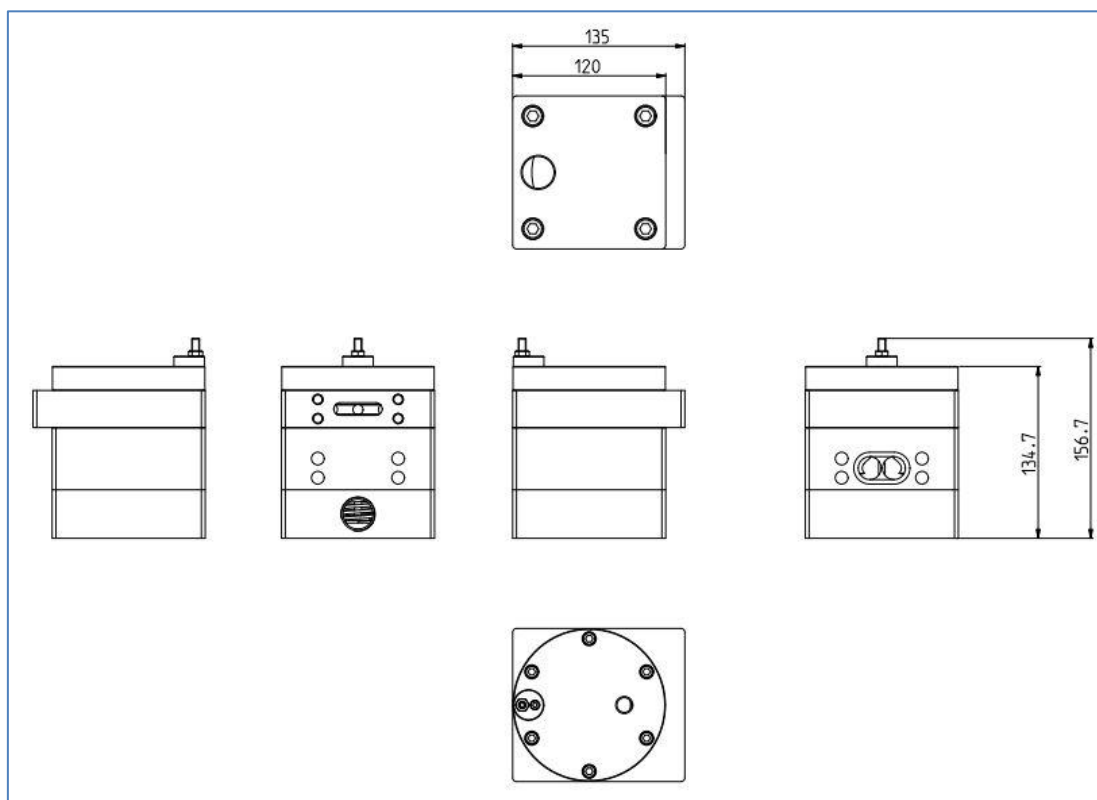


Figure 16 – Dimensional drawing

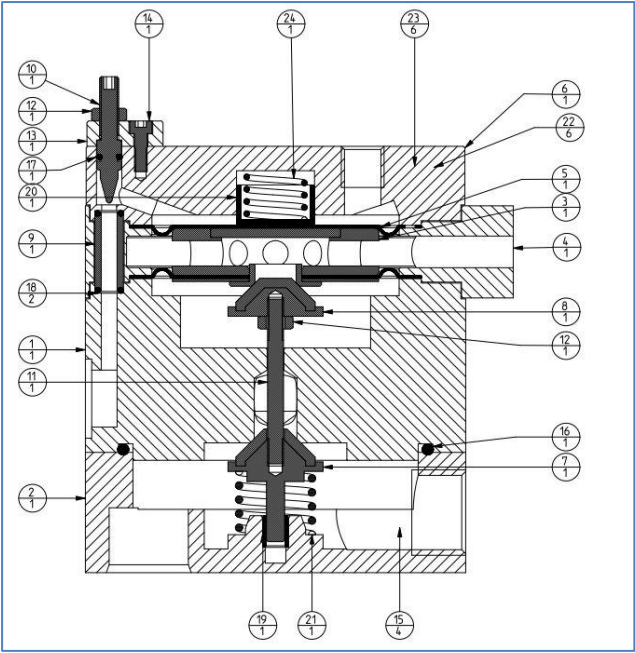


Figure 17 - Section

PART LIST		
Pos	Q.ty	Description
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Table 21 – Part list

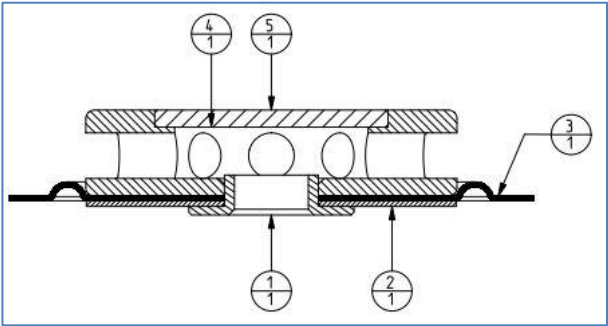


Figure 18 - Section

PART LIST		
Pos	Q.ty	Description
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Table 22 – Part list

EXISTING PRODUCTS AND SPARE PARTS

MODEL	PART NUMBER	SPARE	POSITION
AV-12-A1-01-H-25EPE-TC	106485	181143	ALL+2 OR3125
		180954	[3]*-5-9-16-17-18-21-24+FD77957+2 OR3125
AV-12-A1-01-S-25EPE-TC	106485	181143	ALL+2 OR3125
		180954	[3]*-5-9-16-17-18-21-24+FD77957+2 OR3125

*The item inside [] are supplied in a single assembled component

Table 23 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.9 AV MODEL : TYPE 10

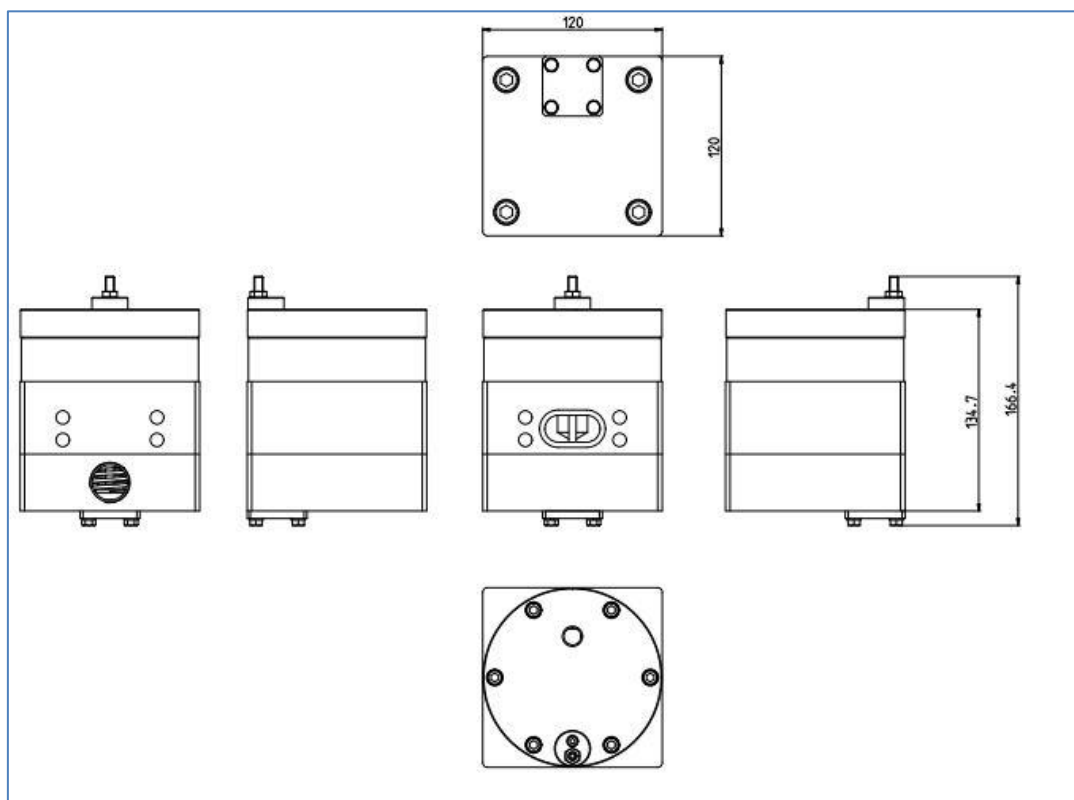


Figure 19 – Dimensional drawing

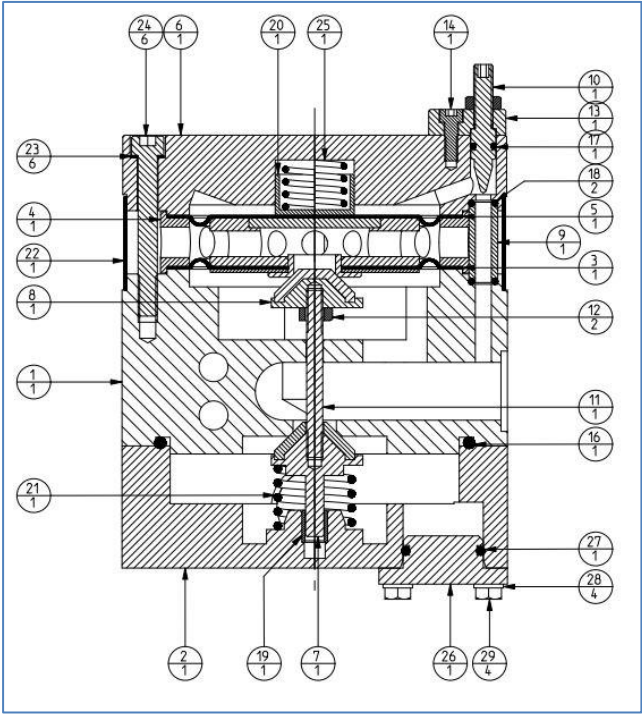


Figure 20 - Section

PART LIST		
Pos	Q.ty	Description
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Table 24 – Part list

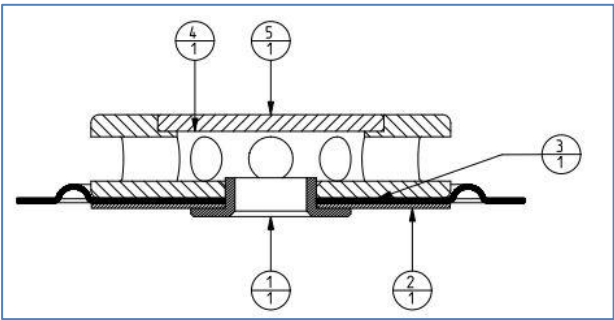


Figure 21 - Section

PART LIST		
Pos	Q.ty	Description
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Table 25 – Part list

EXISTING PRODUCTS AND SPARE PARTS			
MODEL	PART NUMBER	SPARE	POSITION
AV-12-A1-01-H-25EPM-FA	76132	102566	ALL + OR3125
		180949	[4]*-5-9-16-17-18-21-25-27+FD77957+OR3125
AV-12-A1-01-S-25EPM-FA	76132	102566	ALL + OR3125
		180949	[4]*-5-9-16-17-18-21-25-27+FD77957+OR3125
AV-12-A1-01-L-25EPM-FA	118495	181145	ALL + OR3125
		180949	[4]*-5-9-16-17-18-21-25-27+FD77957+OR3125

*The item inside [] are supplied in a single assembled component

Table 26 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.10 AV MODEL : TYPE 11

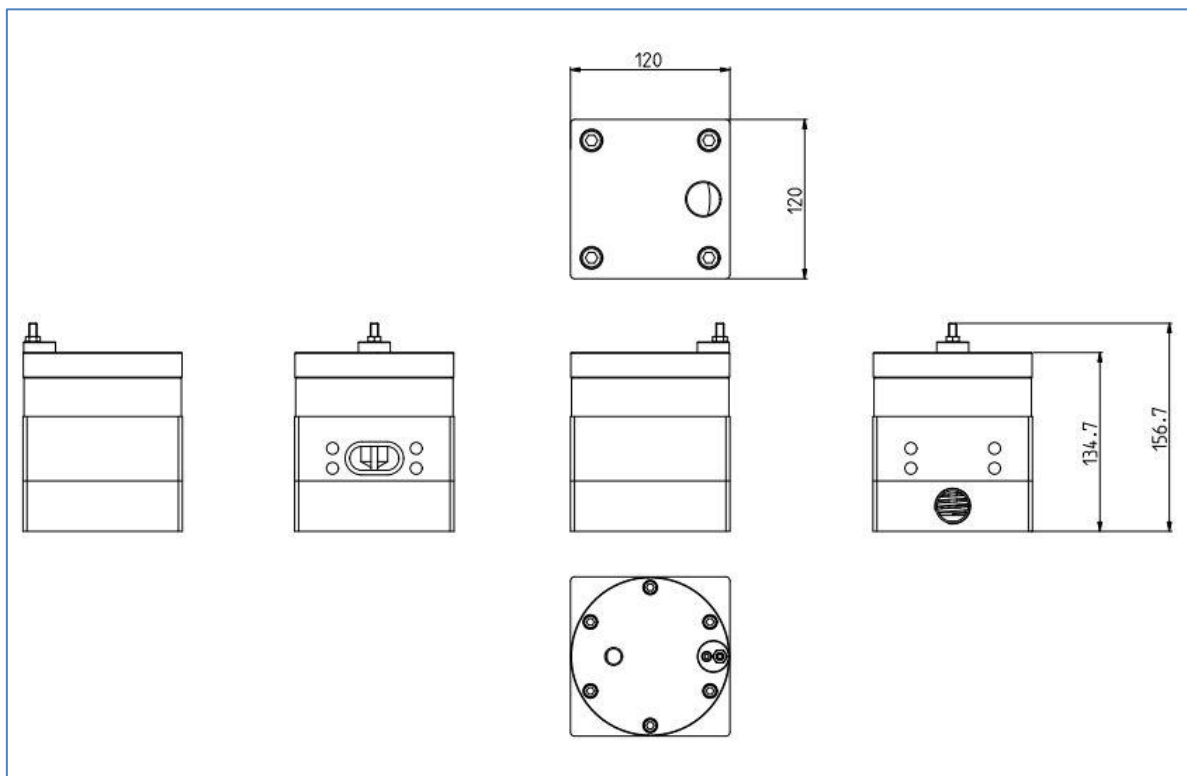


Figure 22 – Dimensional drawing

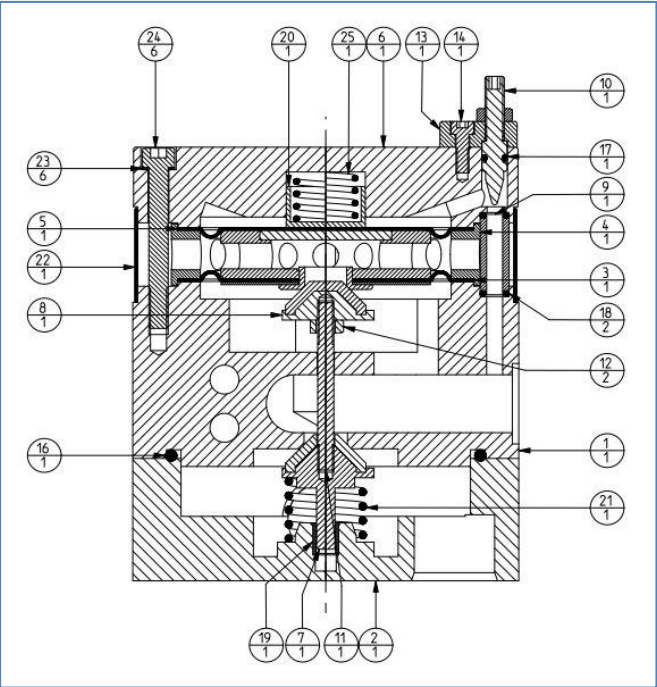


Figure 23 - Section

PART LIST		
Pos	Q.ty	Description
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Table 27 – Part list

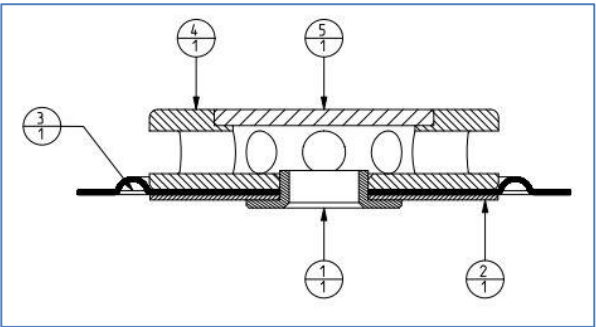


Figure 24 - Section

PART LIST		
Pos	Q.ty	Description
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Table 28 – Part list

EXISTING PRODUCTS AND SPARE PARTS			
MODEL	PART NUMBER	SPARE	POSITION
AV-12-A1-01-H-25EPM-TA	54637	181147	ALL + OR3125
		180963	[3]*-5-9-16-17-18-21-25+FD77957+OR3125
AV-12-A1-99-H-25EPM-TA	143718	181148	ALL + OR3125
		180963	[3]*-5-9-16-17-18-21-25+FD77957+OR3125
AV-12-A1-01-S-25EPM-TA	54637	181147	ALL + OR3125
		180963	[3]*-5-9-16-17-18-21-25+FD77957+OR3125
AV-12-A1-99-S-25EPM-TA	143718	181148	ALL + OR3125
		180963	[3]*-5-9-16-17-18-21-25+FD77957+OR3125
AV-12-A1-01-L-25EPM-TA	73630	181149	ALL + OR3125
		180963	[3]*-5-9-16-17-18-21-25+FD77957+OR3125

*The item inside [] are supplied in a single assembled component

Table 29 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.11 AV MODEL : TYPE 12

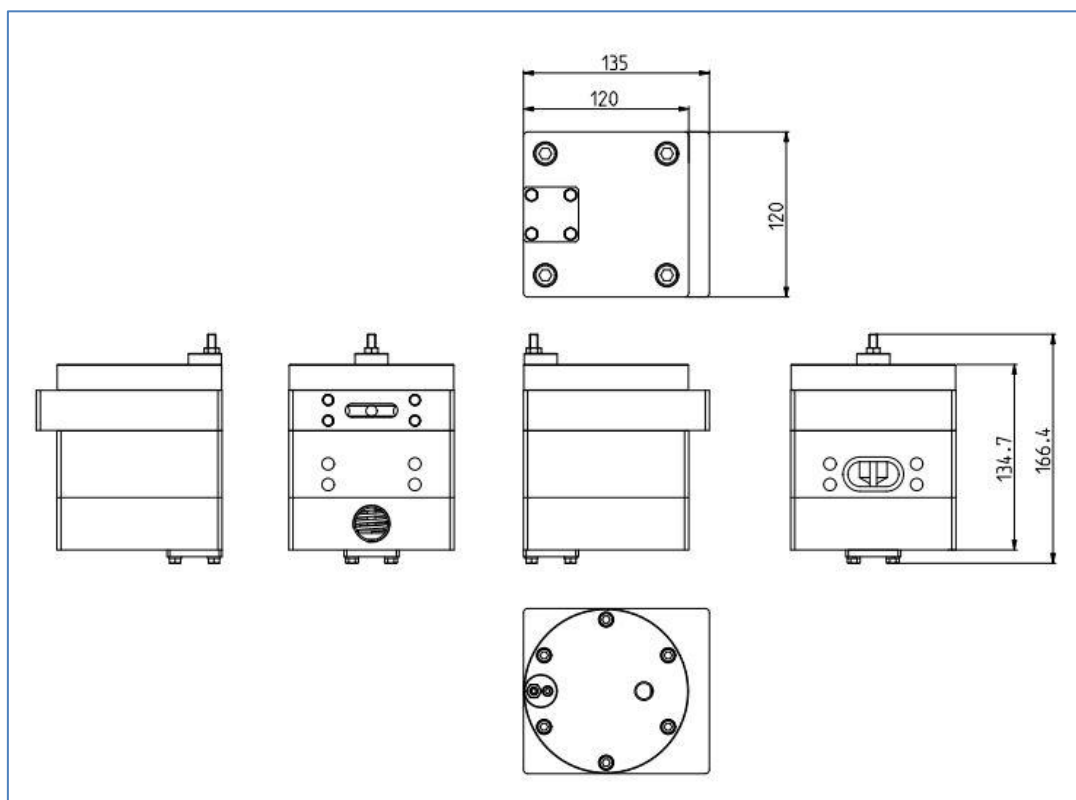


Figure 25 – Dimensional drawing

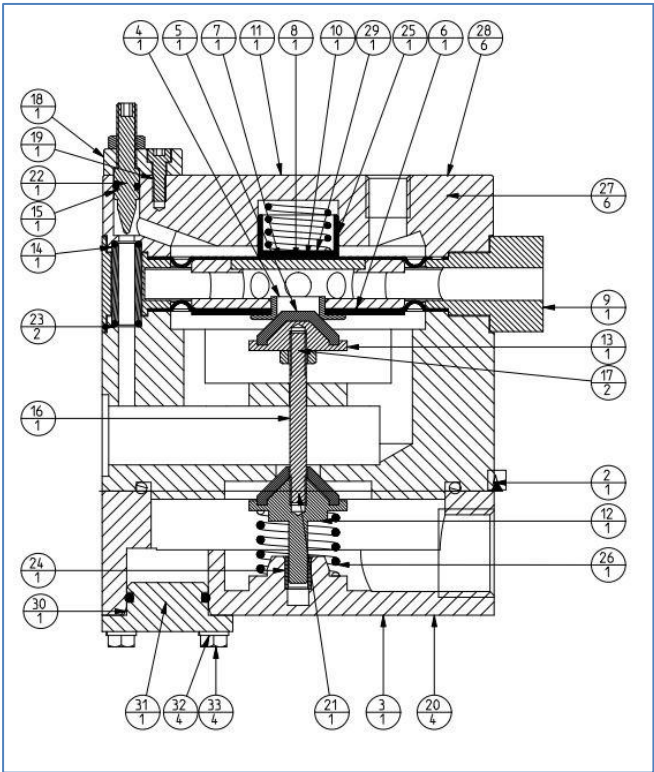


Figure 26 - Section

PART LIST		
Pos	Q.ty	Description
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Table 30 – Part list

EXISTING PRODUCTS AND SPARE PARTS

MODEL	PART NUMBER	SPARE	POSITION
AV-12-A1-01-L-25EPE-FC	107611	181150	ALL + 2 OR3125
		180954	[4-5-6-7-8]*-10-14-21-22-23-26-29+FD77957+2 OR3125

*The item inside [] are supplied in a single assembled component

Table 31 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.12 AV MODEL : TYPE 13

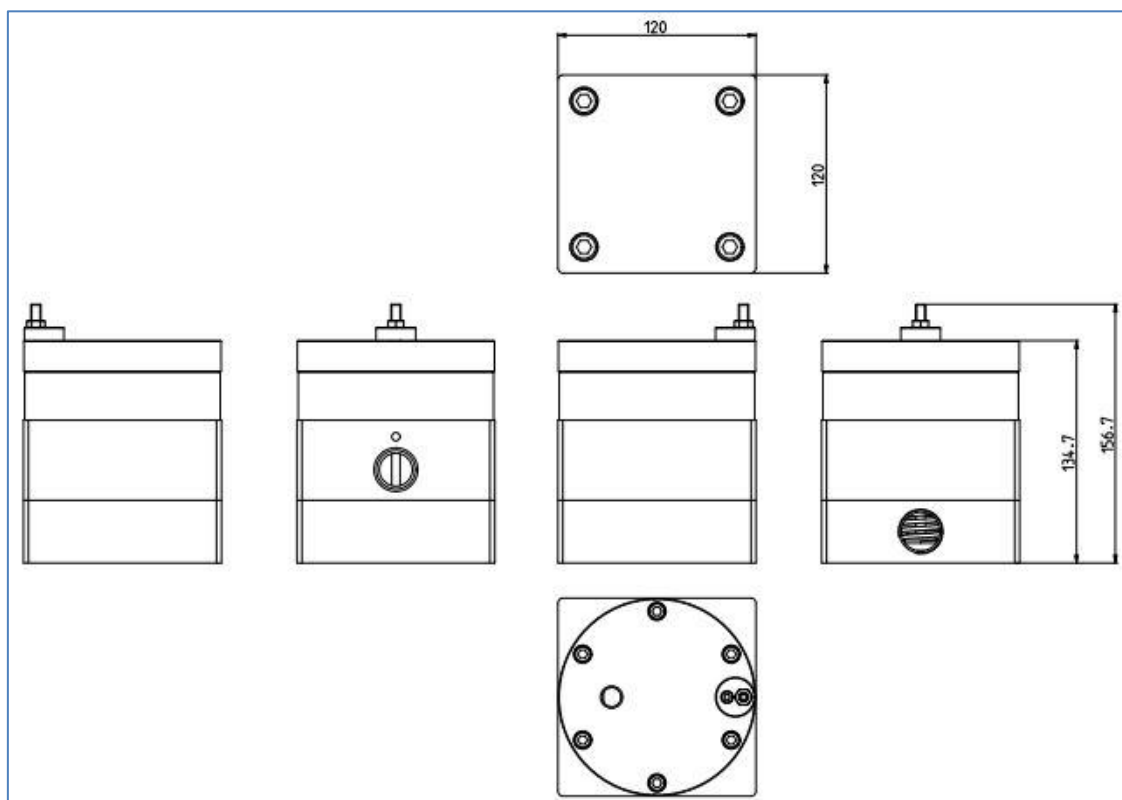


Figure 27 – Dimensional drawing

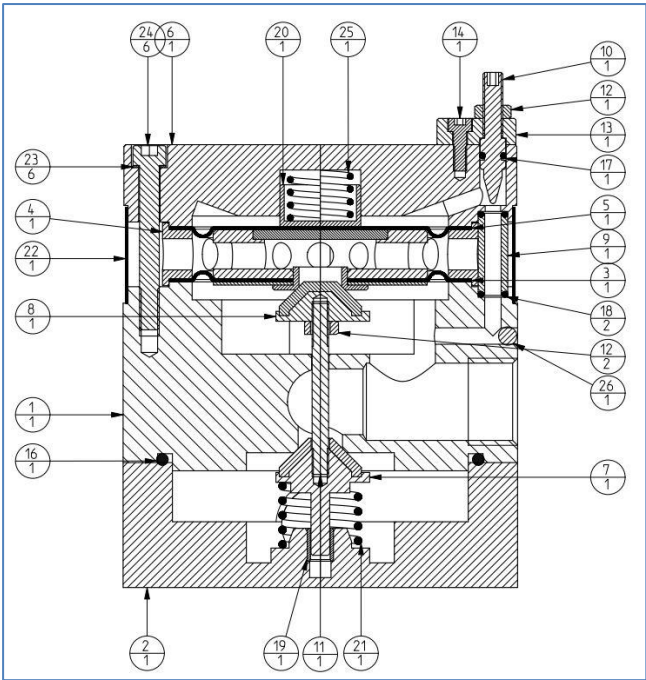


Figure 28 - Section

PART LIST		
Pos	Q.ty	Description
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Table 32 – Part list

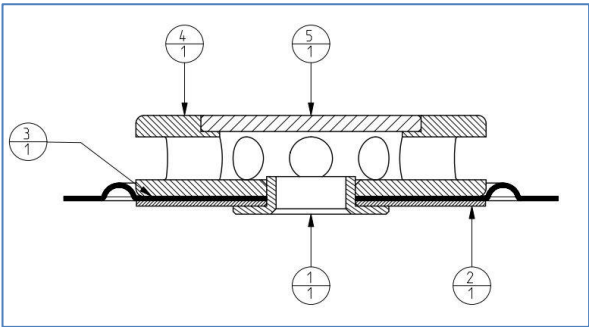


Figure 29 - Section

PART LIST		
Pos	Q.ty	Description
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Table 33 – Part list

EXISTING PRODUCTS AND SPARE PARTS			
MODEL	PART NUMBER	SPARE	POSITION
AV-12-S1-00-H-25A5M-TA	89109	89109	ALL
		147701	[3]*-5-9-16-17-18-21-25+FDD77957
AV-12-S1-00-S-25A5M-TA	89109	89109	ALL
		147701	[3]*-5-9-16-17-18-21-25+FDD77957
AV-12-S1-00-L-25A5M-TA	178950	178950	ALL
		147701	[3]*-5-9-16-17-18-21-25+FDD77957

*The item inside [] are supplied in a single assembled component

Table 34 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.13 AV MODEL : TYPE 14

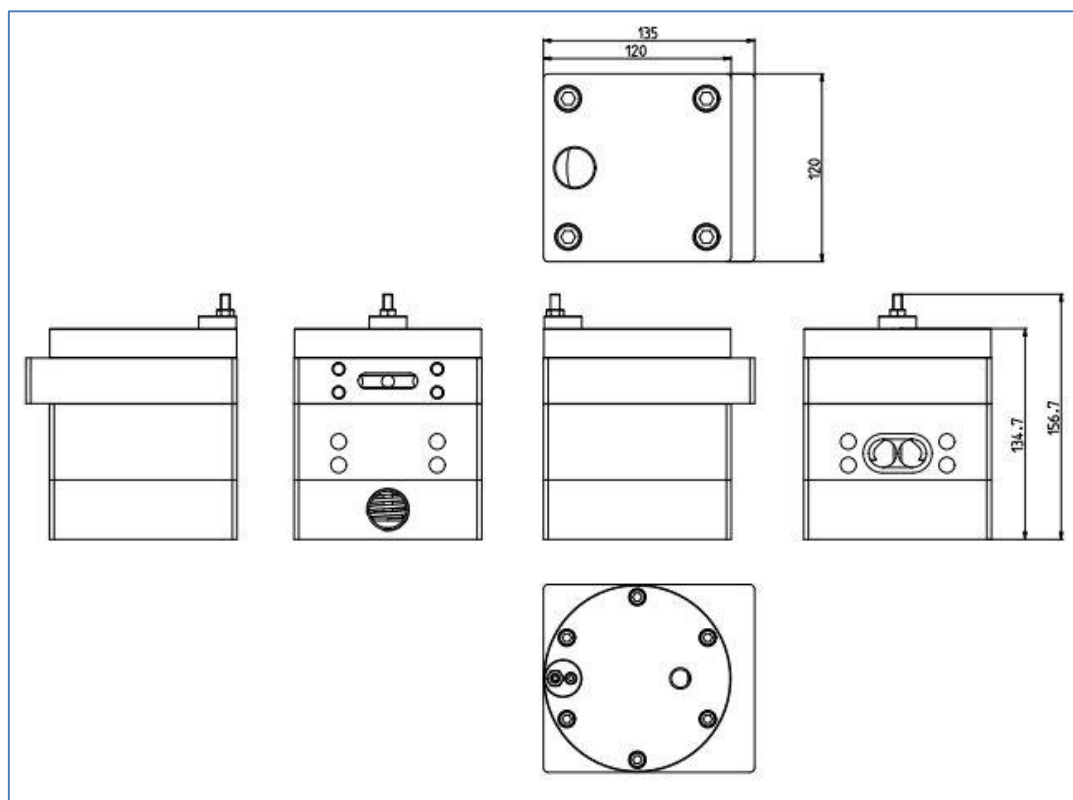


Figure 30 – Dimensional drawing

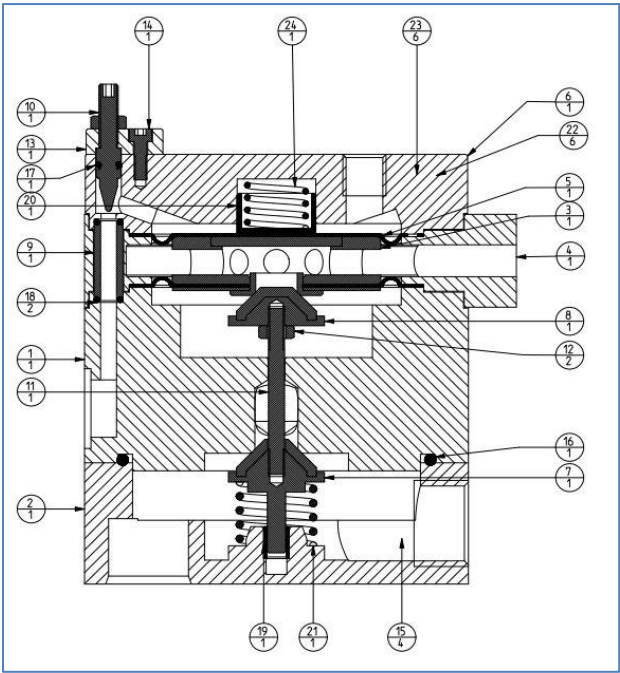


Figure 31 - Section

PART LIST		
Pos	Q.ty	Description
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Table 35 – Part list

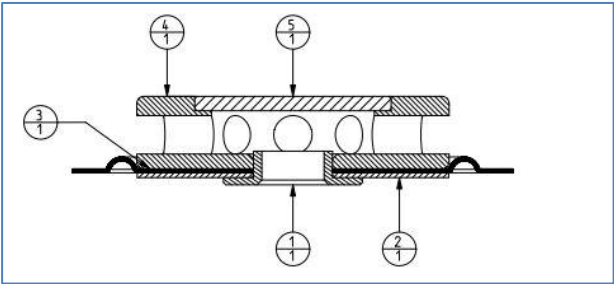


Figure 32 - Section

PART LIST		
Pos	Q.ty	Description
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Table 36 – Part list

EXISTING PRODUCTS AND SPARE PARTS

MODEL	PART NUMBER	SPARE	POSITION
AV-12-S1-00-H-25EPE-TC	106483	181151	ALL + 2 OR3125
		180954	[3]*-5-9-16-17-18-21-24+FD77957+2 OR3125
AV-12-S1-00-S-25EPE-TC	106483	181151	ALL + 2 OR3125
		180954	[3]*-5-9-16-17-18-21-24+FD77957+2 OR3125

*The item inside [] are supplied in a single assembled component

Table 37 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.14 AV MODEL : TYPE 15

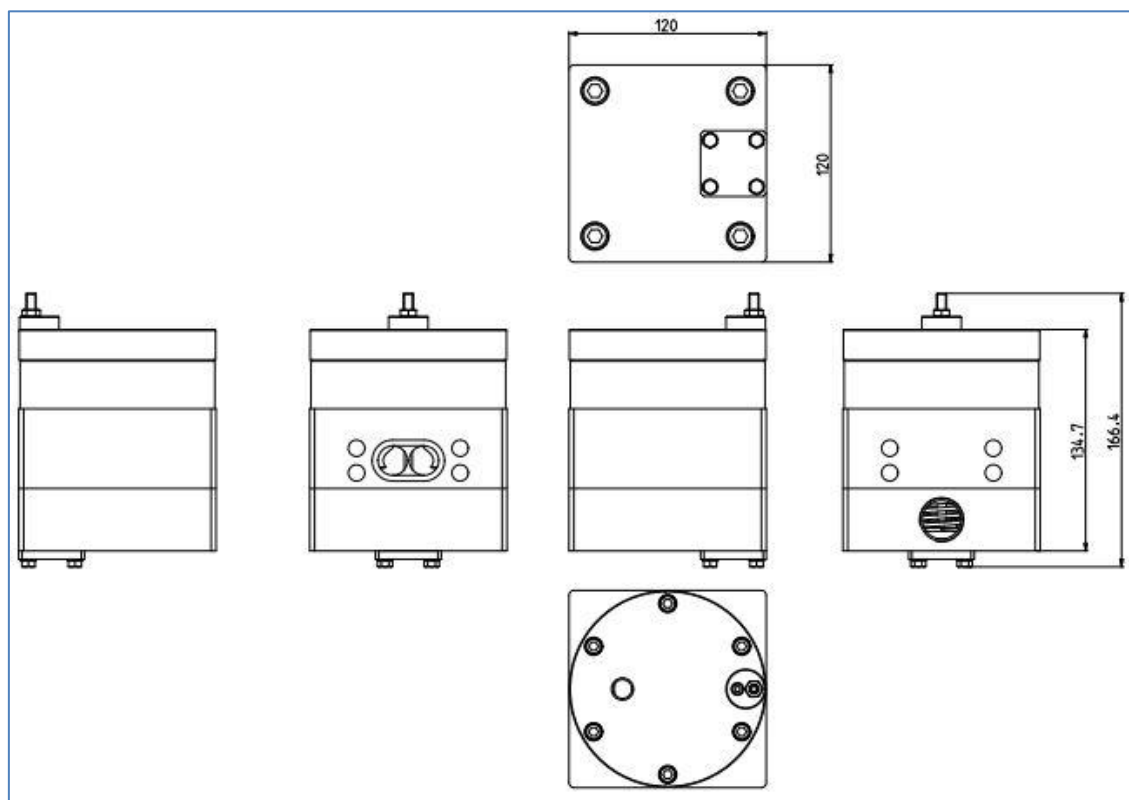


Figure 33 – Dimensional drawing

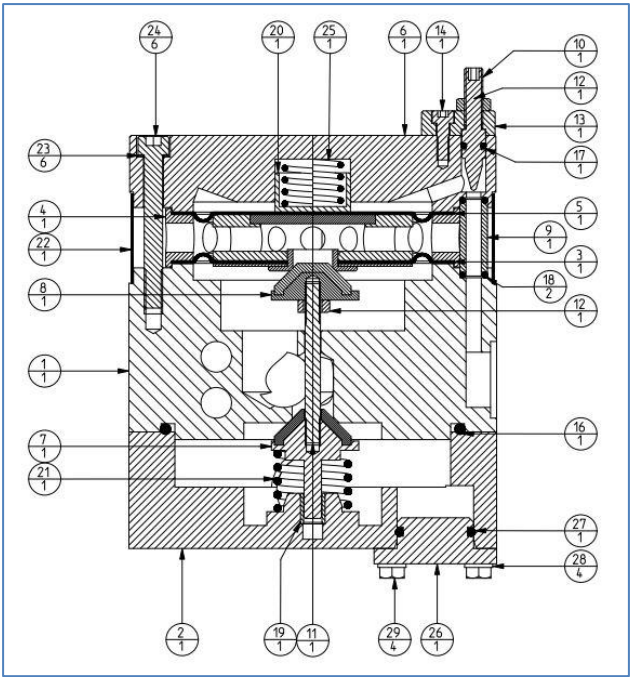


Figure 34 - Section

PART LIST		
Pos	Q.ty	Description
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Table 38 – Part list

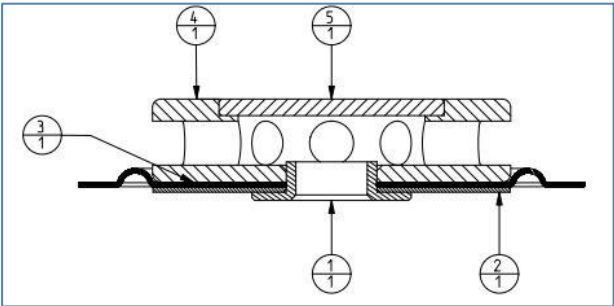


Figure 35 - Section

PART LIST		
Pos	Q.ty	Description
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Table 39 – Part list

EXISTING PRODUCTS AND SPARE PARTS

MODEL	PART NUMBER	SPARE	POSITION
AV-12-S1-00-H-25EPM-FA	114232	114297	ALL + OR3125
		180949	[3]*-5-9-16-17-18-21-24-27+FD77957+OR3125
AV-12-S1-00-S-25EPM-FA	114232	114297	ALL + OR3125
		180949	[3]*-5-9-16-17-18-21-24-27+FD77957+OR3125

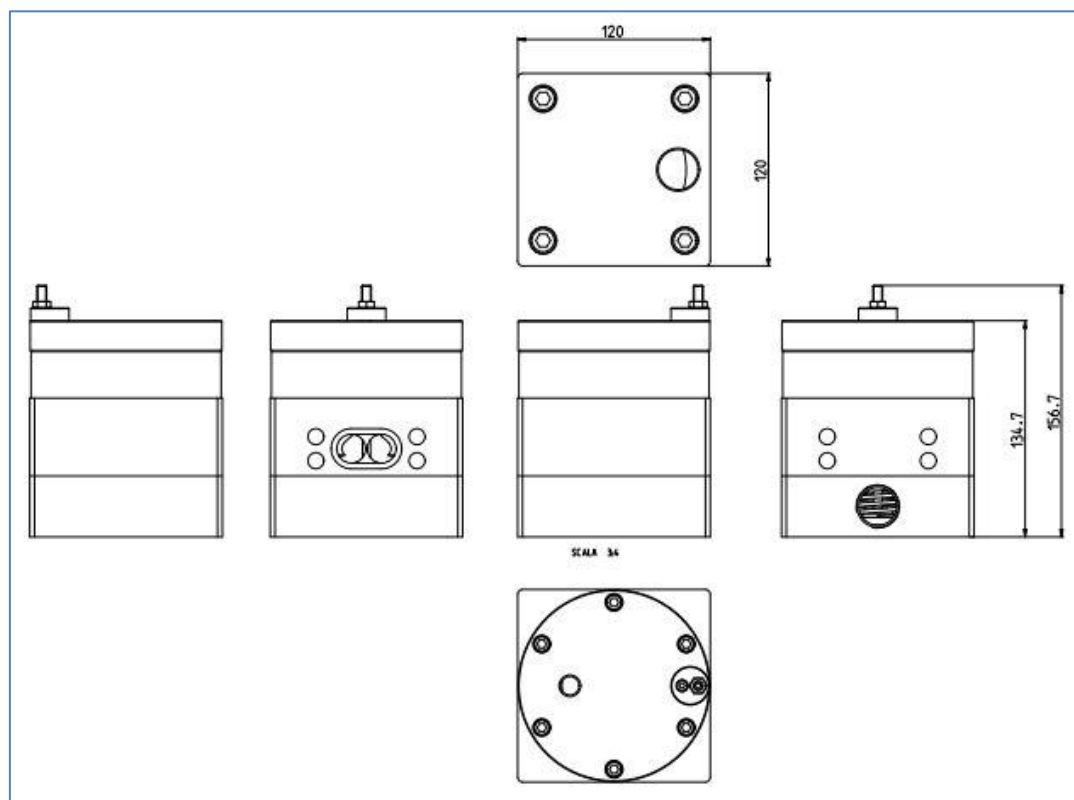
*The item inside [] are supplied in a single assembled component

Table 40 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.15 AV MODEL : TYPE 16



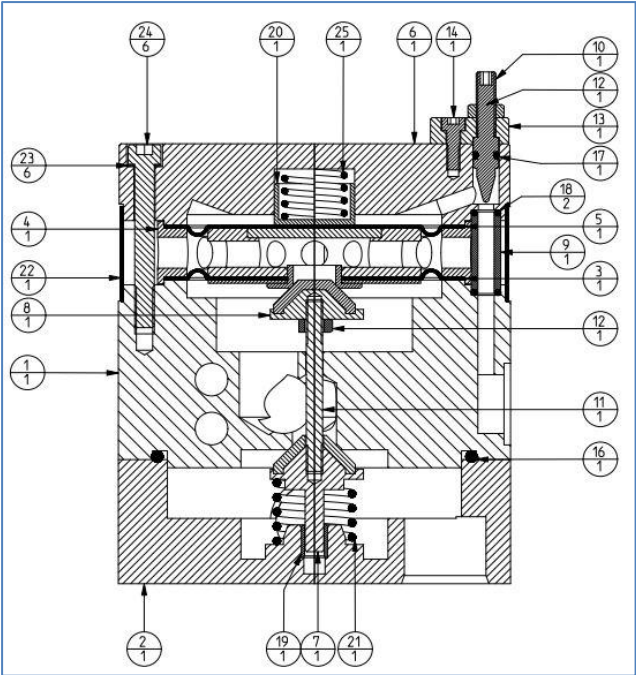


Figure 37 - Section

PART LIST		
Pos	Q.ty	Description
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Table 41 – Part list

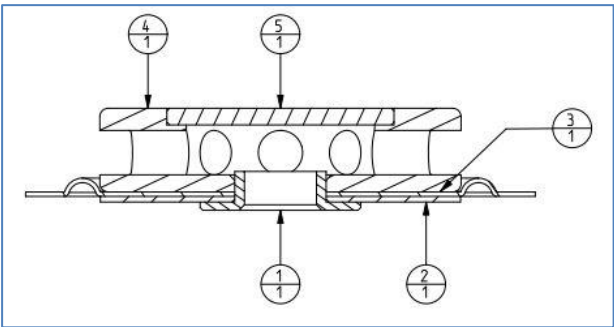


Figure 38 - Section

PART LIST		
Pos	Q.ty	Description
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Table 42 – Part list

EXISTING PRODUCTS AND SPARE PARTS

MODEL	PART NUMBER	SPARE	POSITION
AV-12-S1-00-H-25EPM-TA	90129	181152	ALL + OR3125
		180963	[3]*-5-9-16-17-18-21-25+FD77957+OR3125
AV-12-S1-00-S-25EPM-TA	90129	181152	ALL + OR3125
		180963	[3]*-5-9-16-17-18-21-25+FD77957+OR3125

*The item inside [] are supplied in a single assembled component

Table 43 – Existing product and spare parts



The previous models are those currently available. For further models refer to the model selection in par. 2.2 or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com

5.16 INTENDED USE

IMI STI will not be liable for any possible damage or physical injury resulting from use in other than the designated applications or by lack of care during installation, operation, adjustment or maintenance. Such risks lie entirely with the user.

Considering that IMI STI has no direct control over applications, operation or maintenance conditions, it is the operator's responsibility to comply with all applicable safety rules: it is the sole responsibility of the operator to ensure that the local health and safety regulations are adhered to.

Depending on the specific working conditions, additional precautions may be requested.

Please inform IMI STI if you face unsafe situations not described in this Instruction Manual.

5.17 REASONABLY FORSEEABLE MISUSE

A short list of reasonably foreseeable misuse:

- installation in ambient with not planned conditions (i.e. climatic conditions different from the specified conditions);
- incorrect fluid under pressure inside the product;
- supply pressure out of required range.

5.18 OPERATING LIMITS

The product label and/or this manual indicate the main operating conditions of this product.

5.19 RESIDUAL RISKS

A short list of possible risks:

- risk due to movements of loads during mounting phase;
- crushing during assemblage servicing;
- extreme high or low surface temperature, as consequence of ambient temperature, has to be considered a risk of person injury in case of contact;
- hazardous fluid emission (i.e. when natural gas is used as fluid under pressure).

6 INSTRUCTION FOR THE OPERATOR

During the start-up of the product, proceed as follows:

- check that the pressure and quality of the air supply (filtering degree, dehydration) are as prescribed;
- check that there are not leaks in the pneumatic connections. If necessary, tighten the fittings;
- set the product according the schematic diagram.

If the accessory is mounted in an hazardous location requiring an ATEX certification, read and apply the “ADDENDUM 1: ADDITIONAL SAFETY PRECAUTIONS” of this instruction manual.

7 MAINTENANCE

7.1 PERIODIC INSPECTIONS



Take care that a build-up of dust or dirt on the product can inhibit cooling and contribute to increase surface temperature. The user should plan and provide for a periodic cleaning / maintenance program that will maintain the external surface of the accessory free from excessive layer of dust.
Operation and maintenance shall be carried out by skilled staff.

Product disassembling and reassembling shall be carried out only by IMI STI authorized operators.

7.2 SPECIAL MAINTENANCE

The product does not need special maintenance considering standard applications. If special maintenance is required, send back the device to IMI STI.

Product disassembling and reassembling shall be carried out only by IMI STI authorized operators.



For the available part lists of each accessory refer to chapter 5 and subsequent paragraphs or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com.

7.3 REPAIRS

Repairs shall be carried out by authorized operators. When needed, send back the device to IMI STI for any repairing.

Product disassembling and reassembling shall be carried out only by IMI STI authorized operators.



For the available part lists of each accessory refer to chapter 5 and subsequent paragraphs or contact imisti.sales@imi-critical.com or sti.support@imi-critical.com.

8 TROUBLESHOOTING

Event	Possible cause	Remedy
Do not work properly	Lack of pneumatic supply	Check supply line
	Low supply pressure	Adjust supply pressure
	Uncorrected by-pass stem adjustment	See Instruction for the operator
	Defective internal component (shutters, piston, ecc.)	Call IMI STI S.r.l.
Leakages on pneumatic circuits	Deterioration and/or damage to gasket and/or loosed fittings	Call IMI STI S.r.l.
	Damage to fittings	Call IMI STI S.r.l.

Table 44

9 DECOMISSIONING

Subject	Hazardous	Recyclable	Disposal
Metals	No	Yes	Use licensed recyclers
Plastics	No	Yes	Use specialist recyclers
Rubber (seals and O-rings)	Yes	No	May require special treatment before disposal, use specialist waste disposal companies
Oil and grease	Yes	Yes	May require special treatment before disposal, use specialist waste disposal companies

Table 45



Before starting any disassembly operations, it is mandatory to disconnect the pneumatic power and exhaust the product (no fluid under pressure inside the product, fittings, tubing).

The staff must be qualified for the required operation.



The product decommissioning shall be made by specialized operators
Check local authority regulation before disposal

AV – VOLUME BOOSTER

ADDENDUM 1: ADDITIONAL SAFETY PRECAUTIONS



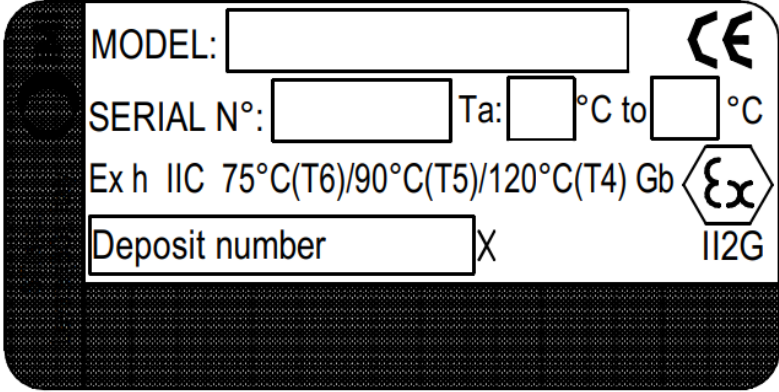
The Volume Booster (AV) accessory is ATEX certified under the following standards:

- DIRECTIVE 2014/34/UE.
- EN ISO 80079-36.
- EN ISO 80079-37.

According to the standards, the Volume Booster is marked as:

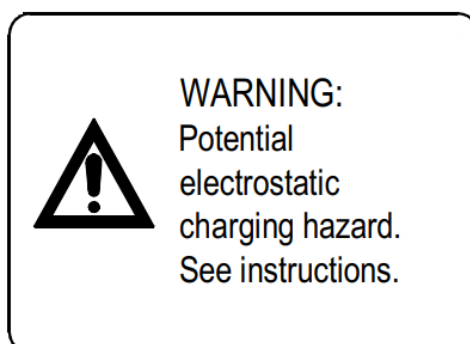
- Ex h IIB T6/T5/T4 Gb or Gc.
- Ex h IIC T6/T5/T4 Gb or Gc.

When certified, the product will be marked with the following label(or a similar one with the same information):

Ex h IIB T4/T5/T6 Gb or Gc	Ex h IIC T4/T5/T6 Gb or Gc
	

Some residual risks are present. Therefore, it is mandatory to follow the following instruction:

- The accessory must be grounded. This can be performed in two ways:
 - Ensuring electrical continuity between the product and the actuator upon which it is mounted on. The actuator must be properly grounded.
 - If available, by using one threaded hole to connect an earthing cable. The earthing cable shall be secured by employing proper means to avoid any unwanted unscrewing or rotation of the connector.
- For aluminum and stainless steel models, only if painting is requested, any charging mechanism stronger than manual rubbing must be avoided. When this must be respected, an additional label is positioned onto the casing:



IMI STI - Headquarters

Via Dei Caravaggi 15
24040 Levate (BG)
Italy

Tel. +39 035 2928.2
Fax +39 035 2928.247

IMI Critical Engineering

Lakeside, Solihull Parkway
Birmingham Business Park
Birmingham B37 7XZ
United Kingdom

Tel. +44 (0)121 717 3700
Fax +44 (0)121 717 3701

www.IMI-STIactuation.com
www.imi-critical.com
imisti.sales@imi-critical.com

IMI STI - Via Dei Caravaggi 15, 24040 Levate, BG, Italy - www.stiactuation.com / www.imi-critical.com