

# ASCO™ Aluminum Filter Regulator

Series  
**641/642/643**

## Features

- High flow filter regulator with a wide range of options
- Metallic body, bonnet, bowl equipped with powder coating to handle outdoor and harsh environments
- Regulating adjustment with Screw / T-handle
- Optional quick relief available, enhances safety by allowing downstream pressure in the actuator or other instrument to exhaust in the event supply pressure is lost
- Optional tamper resistant available
- Product designed in accordance with EN ISO 80079-36 & 37 (2016)
- Built-in overpressure relieving function, non-relieving option available
- ATEX, Option: II 2G Ex h IIC T5 Gb / II 2D Ex h IIIC T100°C Db
- Optional CRN (Canadian Registration Number) certificate and UKCA (UK Conformity Assessed) certificates available



## Specifications

Series		641	642	643	
Port Sizes		1/4", 3/8", 1/2"	1/4", 1/2"	3/4", 1"	
Thread Type		NPT, G			
N/A	Micron Rating	SCFM (L/min ANR)			
Nominal Flow - Per ISO 6358 P1 = 145 PSI (10 Bar) Setpoint P2 = 91.4 PSI (6.3 Bar) Delta P = 14.5 PSI (1 Bar)	1/4"	5µm	78.0 (2210)	134.2 (3800)	N/A
		25µm	85.5 (2420)	145.5 (4120)	N/A
		40µm	92.5 (2620)	151.8 (4300)	N/A
	3/8"	5µm	81.2 (2300)	N/A	N/A
		25µm	88.3 (2500)	N/A	N/A
		40µm	95.3 (2700)	N/A	N/A
	1/2"	5µm	87.6 (2480)	158.5 (4490)	N/A
		25µm	93.9 (2660)	194.2 (5500)	N/A
		40µm	101.7 (2880)	204.8 (5800)	N/A
	3/4"	5µm	N/A	N/A	314.3 (8900)
		25µm	N/A	N/A	317.8 (9000)
		40µm	N/A	N/A	353.1 (10000)
1"	5µm	N/A	N/A	317.8 (9000)	
	25µm	N/A	N/A	353.1 (10000)	
	40µm	N/A	N/A	370.8 (10500)	
Max. Inlet Pressure P1, PSIG (Bar), Manual Drain		290 (20)	290 (20)	290 (20)	
Max. Inlet Pressure P1, PSIG (Bar), Auto Drain		36.3 to 160 (2.5 to 11)	7.3 to 247 (0.5 to 17)	7.3 to 247 (0.5 to 17)	
Adjustable Pressure Ranges P2, PSIG (Bar)		7.3 to 152.3 (0.5 to 10.5)			
Manual Drain Ambient Temperature Range °F(°C), NBR (Nitrile) Seal		-40 to 194 (-40 to 90)			
Auto Drain Ambient Temperature Range °F(°C), NBR (Nitrile) Seal		32 to 194 (0 to 90)			
Fluid		Air or Inert Gas			
Weight Ibs. (kg)		1.01 (0.46)	1.65 (0.75)	3.79 (1.72)	
<b>Option</b>					
Quick Relief		Yes	Yes	No	
Tamper Proof		Yes			
T-Handle		Yes			
<b>Materials in Contact with Fluid</b>					
Body, Bonnet & Bowl		Aluminum/ Low Copper*	Aluminum	Aluminum	
Seals		NBR (Nitrile)/FKM (Fluro-Elastomer)			
Springs		Stainless Steel			
Filter Element		PE (Polyethylene)/ Bronze/Stainless Steel	PE (Polyethylene)/Bronze		

\*Consult your local ASCO office for details on low copper option.

# ASCO™ Aluminum Filter Regulator

## 641/642/643

### How to Order

8		641		A		P		A		0		1		0		A00		H		M	
<b>Port Type</b>																					
8	NPT																				
G	ISO 228/1-G																				
<b>Product Series</b>																					
641	up to 101.7 SCFM (2880 LPM)																				
642	up to 204.8 SCFM (5800 LPM)																				
643	up to 370.8 SCFM (10500 LPM)																				
<b>Revision</b>																					
A	Initial Release																				
<b>Product Type</b>																					
P	Filter Regulator																				
K	Filter Regulator with Quick Relief <sup>(5)</sup>																				
<b>Filter Elements<sup>(2)</sup></b>																					
A	40 Micron, PE Filter																				
B	05 Micron, PE Filter																				
J	25 Micron, PE Filter																				
G	40 Micron, Bronze Filter																				
H	05 Micron, Bronze Filter																				
K	25 Micron, Bronze Filter																				
P	40 Micron, Stainless Steel Filter <sup>(3)</sup>																				
Q	05 Micron, Stainless Steel Filter <sup>(3)</sup>																				
R	25 Micron, Stainless Steel Filter <sup>(3)</sup>																				
<b>Port Size</b>																					
1	1/4" (641 or 642)																				
2	3/8" (641)																				
3	1/2" (641 or 642)																				
4	3/4" (643)																				
5	1" (643)																				
<b>Drain</b>																					
M	Brass Manual Drain																				
Q	Stainless Steel Manual Drain																				
B	Stainless Steel Auto Drain NC, Male M12 Barb Connection <sup>(1,3,7)</sup>																				
A	Brass Auto Drain NO, Female G1/8" Connection <sup>(1,4)</sup>																				
C	Stainless Steel Auto Drain NC, Female 1/8" NPT Connection <sup>(1,3,7)</sup>																				
D	Brass Auto Drain NC, Male G1/8" Connection <sup>(1,4)</sup>																				
<b>Regulating Pressure Range</b>																					
H	7.3-152.3 PSIG (0.5 to 10.5 bar)																				
<b>Options<sup>(6)</sup></b>																					
A00	No Options																				
106	Low Temp (-52°C/-61°F to 90°C/194°F) <sup>(1&amp;3)</sup>																				
109	FKM Seals (-20°C/-4°F to 80°C/176°F) <sup>(1)</sup>																				
101	Stainless Steel Bracket																				
A01	T-Handle <sup>(1)</sup>																				
A02	Low Copper Body, Bonnet & Bowl <sup>(3&amp;7)</sup>																				
103	Tamper Proof																				
121	Non Relieving																				
123	Right to Left Flow Direction																				
117	ATEX 1-21																				
AAN	CRN																				
AAT	UKCA																				
207	101+109																				
214	101+117																				
351	101+109+117																				
<b>Gauge</b>																					
0	No gauge (1/8" port)																				
1	No gauge (1/4" port)																				
Q	Carbon Steel Gauge 1/8" NPT (-40°C to 70°C)																				
R	Carbon Steel Gauge 1/4" NPT (-40°C to 70°C)																				
S	316 Stainless Steel Gauge 1/8" NPT (-40°C to 70°C)																				
T	316 Stainless Steel Gauge 1/4" NPT (-40°C to 70°C)																				

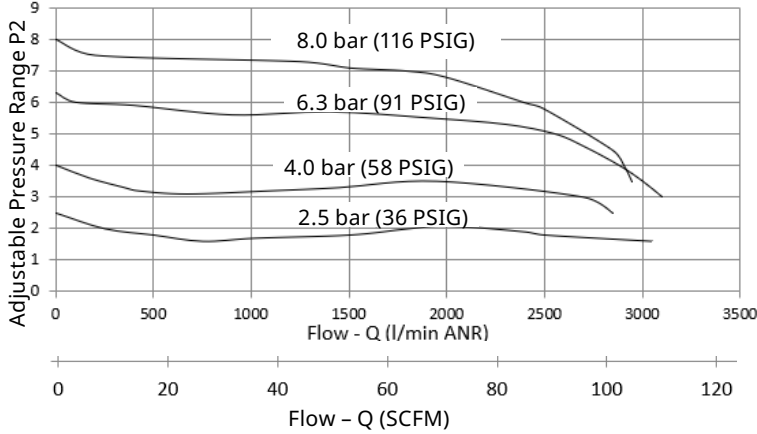
#### Notes:

- Quick relief & low temp combination not available.  
Auto drain & low temp combination not available.  
FKM seals & low temp combination not available.  
FKM seals & quick relief combination not available.  
T-Handle & tamper proof combination not available.
- Filter default PE - 40 Micron (Bronze or Stainless Steel options available), Stainless Steel Filter for 641 only.  
Low temp only available for Stainless Steel Filter.
- Available only for 641.
- Available only for 642 & 643.
- Available only for 641 & 642.
- If multiple options are required, please use ASCO configurator on the website to generate the part number ([www.asco.com](http://www.asco.com)), or consult your local ASCO office for details.
- Consult your local ASCO office for material request.

## Flow Graph

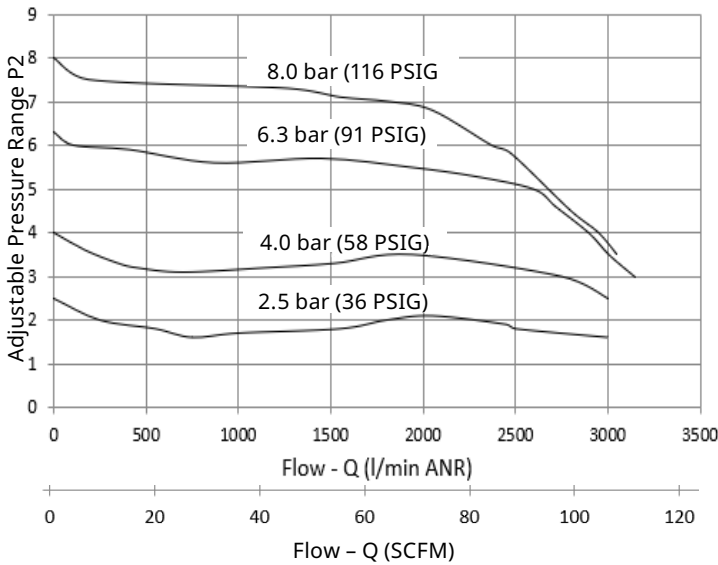
### 641 Filter-Regulator, 5µm Filtration, 1/4" Port

Inlet Pressure P1 = 10 bar (145 PSIG)



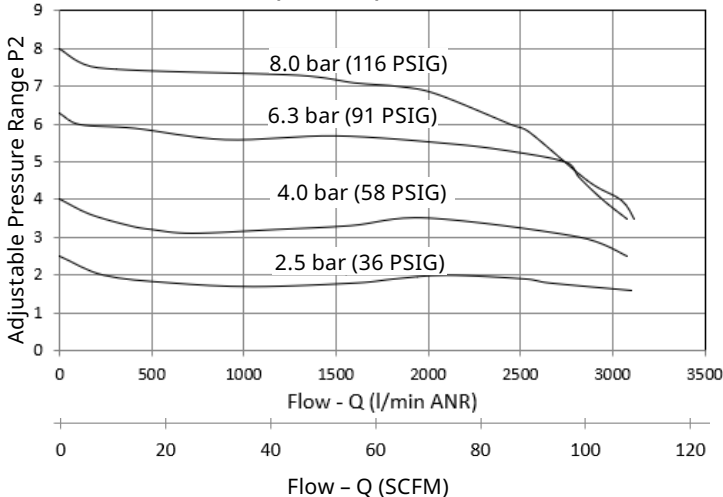
### 641 Filter-Regulator, 5µm Filtration, 3/8" Port

Inlet Pressure P1 = 10 bar (145 PSIG)



### 641 Filter-Regulator, 5µm Filtration, 1/2" Port

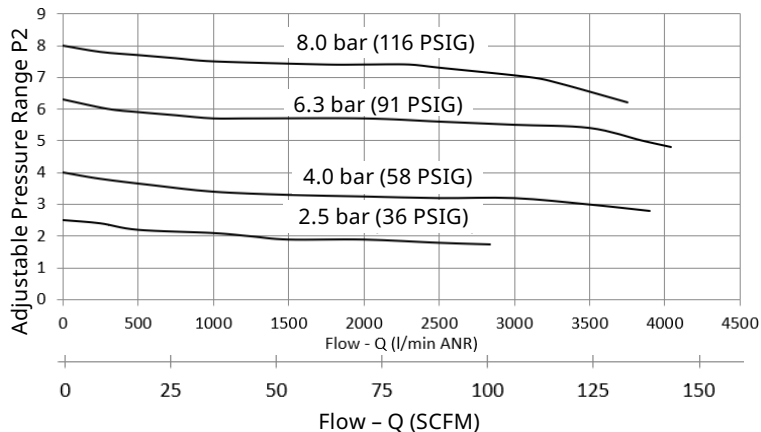
Inlet Pressure P1 = 10 bar (145 PSIG)



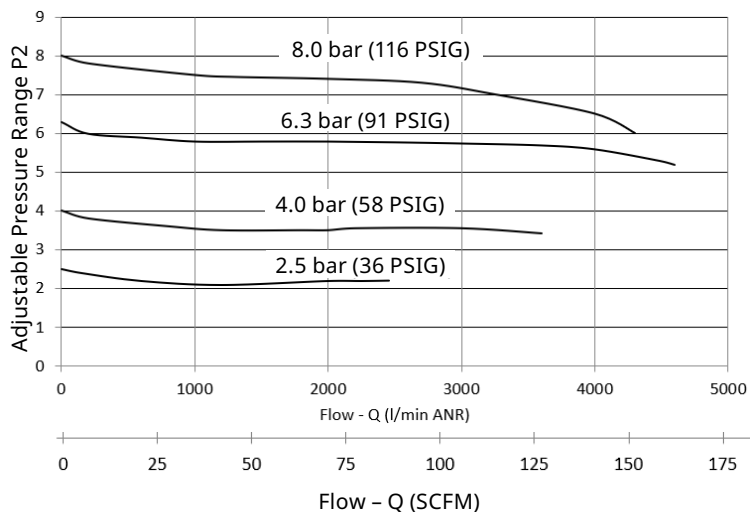
641/642/643

Flow Graph

642 Filter-Regulator, 5µm Filtration, 1/4" Port  
 Inlet Pressure P1 = 10 bar (145 PSIG)

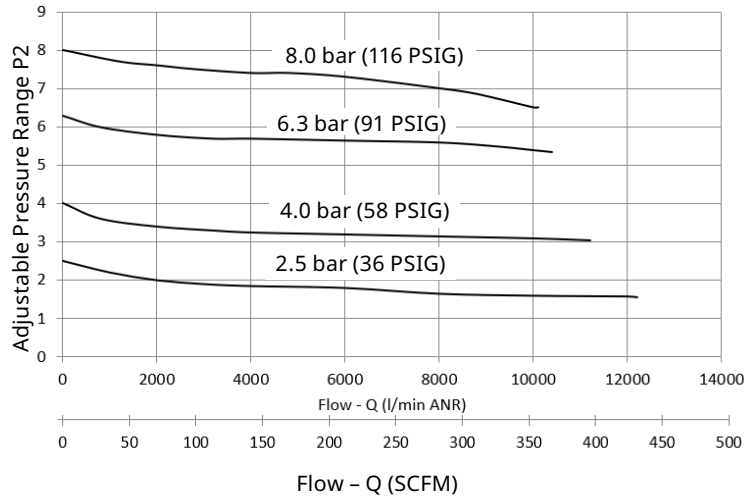


642 Filter-Regulator, 5µm Filtration, 1/2" Port  
 Inlet Pressure P1 = 10 bar (145 PSIG)

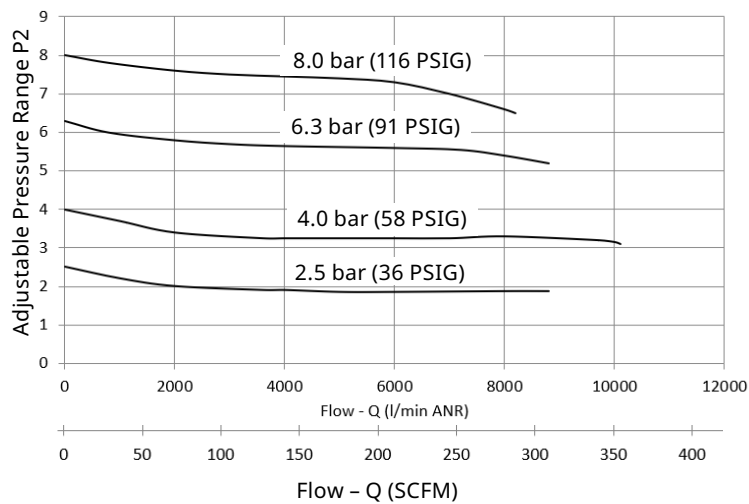


## Flow Graph

**643 Filter-Regulator, 5µm Filtration, 3/4" Port**  
Inlet Pressure P1 = 10 bar (145 PSIG)



**643 Filter-Regulator, 5µm Filtration, 1" Port**  
Inlet Pressure P1 = 10 bar (145 PSIG)

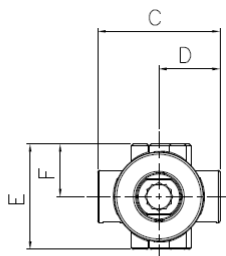


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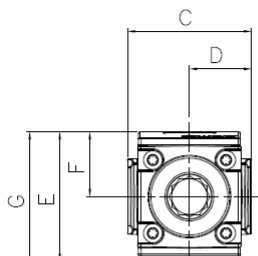
## 641/642/643

### DIMENSIONS mm (Inch)

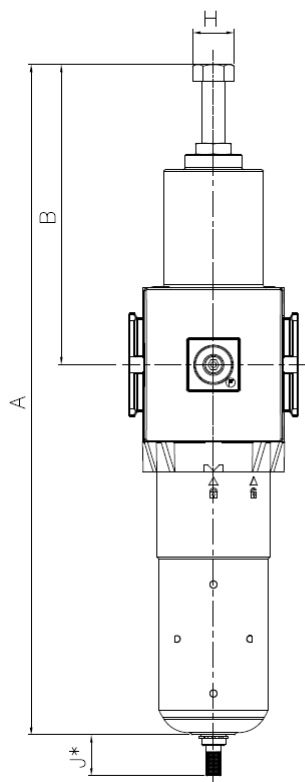
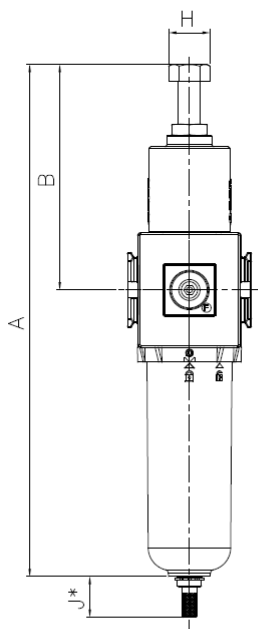
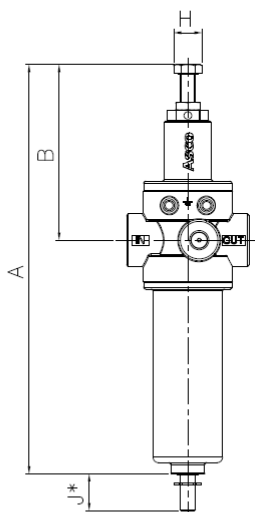
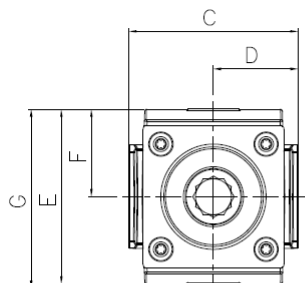
Series 641



Series 642





Series 643



Series	A	B	C	D	E	F	G	H	J*
641	218 (8.6)	94 (3.7)	65 (2.6)	32.5 (1.3)	56 (2.2)	28 (1.1)	N/A	13 (0.5)	20 (0.8)
642	273 (10.7)	120 (4.7)	66 (2.6)	33 (1.3)	69 (2.7)	34.5 (1.4)	71 (2.8)	19 (0.7)	22 (0.9)
643	357 (14.1)	160 (6.3)	90 (3.5)	45 (1.8)	93 (3.7)	46.5 (1.8)	95 (3.7)	19 (0.7)	22 (0.9)

\* Variable dimension based on type of drain that is specified;  
If an automatic drain is specified, add another 8mm to J dimension.

## Accessories

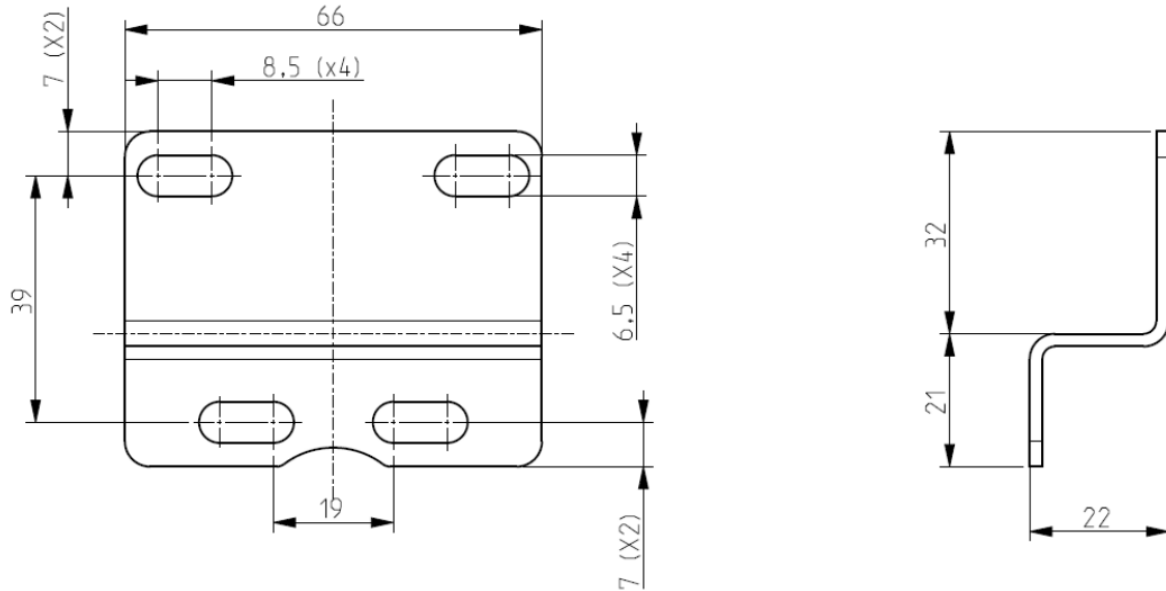
Pressure Gauges		
		
Pressure	0 TO 12Bar / 174 PSI	
Diameter	Ø50mm (2")	
Gauge Port Size	1/8" NPT OR 1/4" NPT	
External Material	316 Stainless steel	Carbon steel with black coating
Spare Kits	See below table for details	

Accessories	641	642	643
Stainless Steel Bracket	558668-001-SP	503860-002-SP	503860-003-SP
Carbon Steel Gauge 1/8" NPT, Dial 50mm 0 to 12Bar / 174 PSI	551691-001-SP		
Carbon Steel Gauge 1/4" NPT, Dial 50mm 0 to 12Bar / 174 PSI	551691-002-SP		
316 Stainless Steel Gauge 1/8" NPT, Dial 50mm 0 to 12Bar / 174 PSI	514701-005-SP		
316 Stainless Steel Gauge 1/4" NPT, Dial 50mm 0 to 12Bar / 174 PSI	514701-007-SP		
316 Stainless Steel Low Temp 1/8" NPT, Dial 50mm 0 to 12Bar / 174 PSI	514701-006-SP		
316 Stainless Steel Low Temp 1/4" NPT, Dial 50mm 0 to 12Bar / 174 PSI	514701-008-SP		
Spare Kits	641	642	643
FR Kit (PE Filter 5 Micron)	553877-001-SP	553878-001-SP	553879-001-SP
FR Kit (PE Filter 25 Micron)	553877-002-SP	553878-002-SP	553879-002-SP
FR Kit (PE Filter 40 Micron)	553877-003-SP	553878-003-SP	553879-003-SP
FR Kit (Bronze Filter 5 Micron)	553877-004-SP	553878-004-SP	553879-004-SP
FR Kit (Bronze Filter 25 Micron)	553877-005-SP	553878-005-SP	553879-005-SP
FR Kit (Bronze Filter 40 Micron)	553877-006-SP	553878-006-SP	553879-006-SP
FR Kit (Stainless Steel Filter 5 Micron)	553877-007-SP	N/A	N/A
FR Kit (Stainless Steel Filter 25 Micron)	553877-008-SP	N/A	N/A
FR Kit (Stainless Steel Filter 40 Micron)	553877-009-SP	N/A	N/A
FR Kit (Low Temp, Stainless Steel Filter 5 Micron)	553877-010-SP	N/A	N/A
FR Kit (Low Temp, Stainless Steel Filter 25 Micron)	553877-011-SP	N/A	N/A
FR Kit (Low Temp, Stainless Steel Filter 40 Micron)	553877-012-SP	N/A	N/A

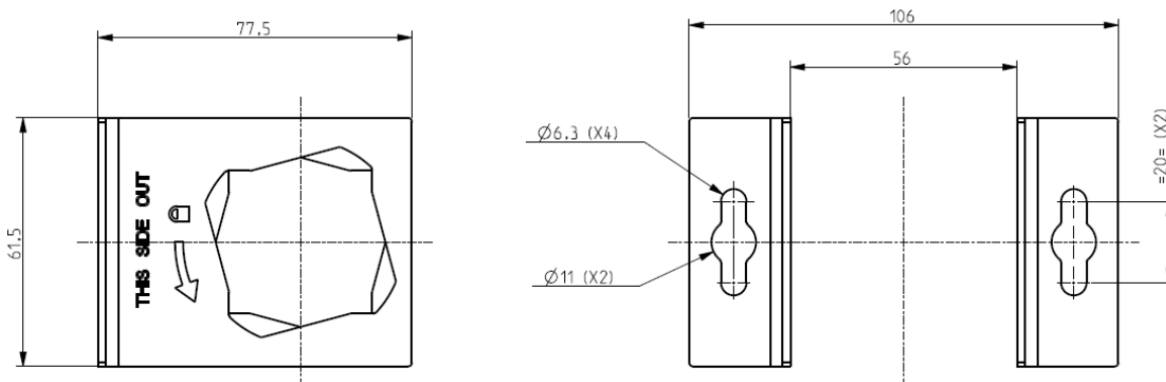
## 641/642/643

### Mounting Bracket

#### Series 641



#### Series 642



#### Series 643

