

 Contact our sales office regarding a delivery date or a price since this is a special model.

SP093X-010E
P: NW

 **P.G.Information** (Specialized product)

Air Line Equipment –X480 Series Epoxy Resin Coating Specifications

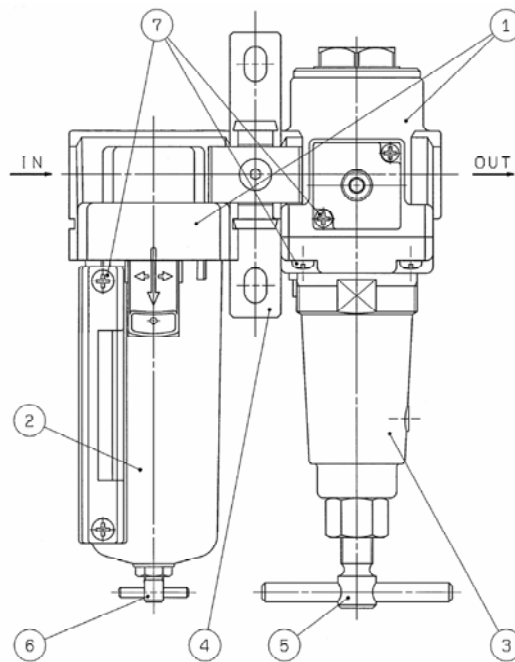
SMC CORPORATION
4-14-1, SOTO-KANDA, CHIYODA-KU,
TOKYO 101-0021, JAPAN
URL: <http://www.smcworld.com>

Feature :

1	External surfaces of die-casted parts are coated with epoxy resin.
	①Body、②Metal Bowl、③Bonnet、④Spacer
2	External metal parts are made of stainless steel.
	⑤Handle、⑥Drain Cock、⑦Screws

The corrosion resistance is improved vs. the standard product.

(Based on salt spray test results, corrosion resistance was twice as effective compared to the standard product .)



Note 1) Although the corrosion resistance is more effective than the standard product, the product is not corrosion proof.

Note 2) * The back of the AF, AFM and AFD bodies are not coated with epoxy resin.

* Parts of the spacer and the piping adapter, which are unexposed when combined with other components, are not coated with epoxy resin.

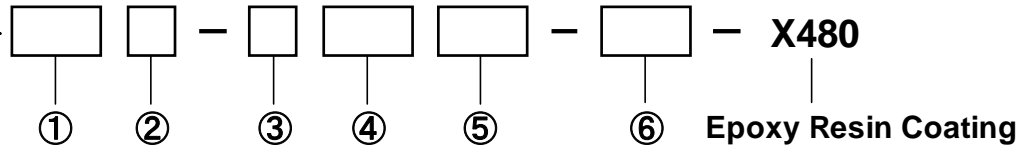
=> Do Not Use in an environment directly exposed to water.

Note 3) Be aware that original features may not be achieved due to peeling of paint or flaws generated by contact of friction between metal parts.

How to Order :

◇ Air Line Equipment

AF AR
AFM AW
AFD AWM



①	Body Size					
	10	20	25	30	40	50

②	Backflow Function	
	Nil	Without Backflow Function
	K	With Backflow Function

③	Thread Type	
	Nil	Metric Thread M5 (Body Size: 10)
		Rc (Body Size: 20 or more)
	N Note1)	NPT
F Note2)	G	

④	Port Size	
	M5	M5
	01	1/8
	02	1/4
	03	3/8
	04	1/2
	06	3/4
10	1	

⑤	Mounting Note3)	
	Nil	Without Mounting Option
	B Note4)	With Bracket
	H	With Set Nut (For Panel Fitting)

⑤	Float Type Auto Drain Note5)	
	Nil	Without Auto Drain
	C	Float Type Auto Drain (N.C.)
	D	Float Type Auto Drain (N.O.)

⑥	Set Pressure	
	Nil	0.05 to 0.85MPa Setting
c	1 Note6)	0.02 to 0.2MPa Setting

⑥	Bowl	
	2	Metal Bowl
	8	Metal Bowl With Level Gauge

⑥	Drain Port Note7)	
	Nil	With Drain Cock Note8)
	J Note9)	Drain Guide 1/8 (Body Size: 20)
		Drain Guide 1/4 (Body Size: 30 or more)

⑥	Exhaust Mechanism	
	Nil	Relieving Type
	N	Non-Relieving Type

⑥	Flow Direction	
	Nil	Flow Direction : Left to Right
	R	Flow Direction : Right to Left

⑥	Pressure Unit	
	Nil	Name plate and caution plate for bowl I in imperial units : MPa
	Z Note10)	Name plate and caution plate for bowl I in imperial units : psi, °F

- ⑤、⑥ : Select one each for a to h .
- ⑤、⑥ symbol : When more than one specification is required, indicate in alphanumeric order .

Example) AR30K-03B-1NR-X480

Note 1) Regarding AF, AFM, AFD, AW and AWM, drain guide is NPT1/8 (applicable to body size 20) and NPT1/4 (applicable to body size 30 or more).

The auto drain port is NPT1/4 (applicable to body size 30 or more).

Note 2) Regarding AF, AFM, AFD, AW and AWM, drain guide is G1/8 (applicable to body size 20) and G1/4 (applicable to body size 30 or more).

The auto drain port is G1/4 (applicable to body size 30 or more).

Note 3) Mounting option B, H are not assembled and supplied loose at the time of shipment.

Note 4) Set nuts are attached to the bracket. [AR20(K) to AR40(K), AW20(K) to AW40(K), AWM]

Mounting screws (2 pieces) are attached. [AF, AFM, AFD, AR50(K), AR60(K), AW60(K)]

Note 5) Since resin parts of the float type auto drains, C and D, are exposed to the outside environment, they may deteriorate by cleaning agents (solvents).

Note 6) The only difference from the standard specifications is the adjusting spring for the regulator. It does not restrict the setting of 0.2 MPa or more.

Note 7) Float type auto drain : The combination of C and D is not possible.

Note 8) Regarding AF, AFM and AFD, the drain cock material for the body sizes of 10 and 20 is brass with electroless plating.

Note 9) Without a valve function.

Note 10) For thread type: M5 and NPT. This product is for overseas use only according to the new Measurement Law .

(The SI unit type is provided for use in Japan.)

◇ Air Line Equipment Configuration

Model		①	②	③		④						⑤				⑥												
		Body Size	K	N	F	M5	01	02	03	04	06	10	a		b		c		d		e		f		g		h	
													B	H	C	D	1	2	8	J	N	R	Z					
AF	Air Filter	10				●													●						●	○		
		20		●	●		●	●					●						●		●				●	○		
		30		●	●				●				●		●	●			●	●	●				●	○		
		40		●	●			●	●	●	●		●		●	●			●	●	●				●	○		
		50		●	●						●	●	●		●	●			●	●	●				●	○		
		60		●	●							●	●		●	●			●	●	●				●	○		
AFM	Mist Separator	20		●	●		●	●					●					●		●				●	○			
		30		●	●				●				●		●	●			●	●	●				●	○		
		40		●	●			●	●	●	●		●		●	●			●	●	●				●	○		
AFD	Micro Mist Separator	20		●	●		●	●					●					●		●				●	○			
		30		●	●			●	●				●		●	●			●	●	●				●	○		
		40		●	●			●	●	●	●		●		●	●			●	●	●				●	○		
AR	Regulator	20	●	●	●		●	●					●	●				●						●	○			
		25	●	●	●			●	●					●	●				●					●	○			
		30	●	●	●			●	●					●	●				●					●	○			
		40	●	●	●			●	●	●	●			●	●				●					●	○			
		50	●	●	●						●	●		●					●					●	○			
		60	●	●	●							●	●		●				●					●	○			
AW	Filter Regulator	20	●	●	●		●	●					●	●				●		●				●	○			
		30	●	●	●			●	●				●	●	●	●			●	●	●			●	○			
		40	●	●	●			●	●	●	●			●	●	●	●			●	●	●			●	○		
		60	●	●	●						●	●		●		●	●			●	●	●			●	○		
AWM	Mist Separator Regulator	20		●	●		●	●					●	●				●		●				●	○			
		30		●	●				●				●	●	●	●			●	●	●			●	○			
		40		●	●			●	●	●			●	●	●	●			●	●	●			●	○			

Note) ○ : For thread type : M5 and NPT only .

※If air line equipment other than those listed above are required, consult with us.

Specifications :

Equivalent to the standard model.

(Fluid, Ambient and fluid temperature, Proof pressure, Maximum operating pressure, Set pressure range)

※Regarding AR, AW and AWM, if an application needs relief pressure, consult with us since the piston type pressure regulating construction is required.

Related Equipment:

◇ Pressure Relief 3 Port Valve With Locking Holes

VHS – – – X519



①

①	Body Size	
	40	50

②

②	Thread Type	
	Nil	Rc
	N	NPT
F	G	

③

③	Port Size	
	02	1/4
	03	3/8
	04	1/2
	06	3/4
	10	1

④

④	Mounting	
	Nil	Without Mounting Option
L	With Bracket	

⑤

⑤	Semi-Standard	
	B	Knob Color: Black
	R	Flow Direction: Right to Left
	Z Note)	psi as unit displayed on label

Epoxy Resin Coating

Note) Only for the NPT thread .

Under the New Measurement Law,
products for overseas use only
(SI unit type for use in Japan) .

◇ Pressure Relief 3 Port Valve With Locking Holes Configuration

Model		①	②		③				④	⑤			
		Body Size	N	F	02	03	04	06	10	L	B	R	Z
VHS	Pressure Relief 3 Port Valve With Locking Holes	40	●	●	●	●	●	●	●	●	●	●	●
		50	●	●				●	●	●	●	●	●

※If VHS other than those listed above are required, consult with us.

◇ Pressure Gauge

G43 Series / Wetted Parts : Stainless Steel Specification (—X3)

A stud and A bourdon tube made of Stainless Steel .



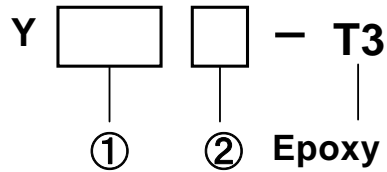
G43-10-01

※ The gauge is sold separately from the AR, AW, and the AWM.

The customer should order the gauge separately for these units.

Options/Attachments:

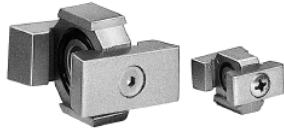
◇ Spacer



①	Body Size				
	20	30	40	50	60

②	Mounting	
	Nil	Spacer
L	Spacer with L-type Bracket	
T	Spacer with T-type Bracket	

Epoxy Resin Coating

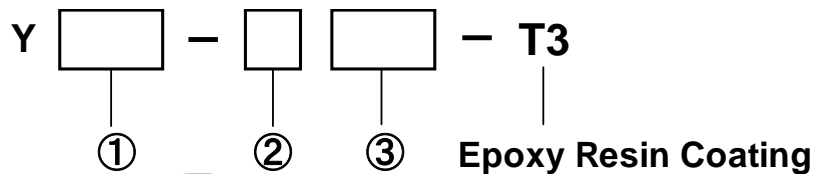


Spacer with L-type Bracket



Spacer with T-type Bracket

◇ Cross Spacer



Epoxy Resin Coating

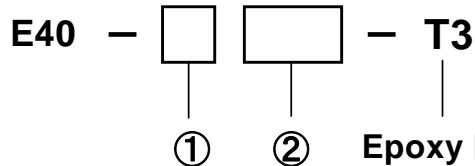


①	Body Size	
	44	54

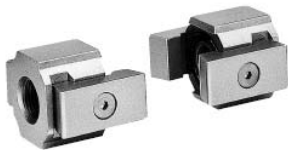
②	Thread Type	
	Nil	Rc
N	NPT	
F	G	

③	Port Size	
	02	1/4
03	3/8	
04	1/2	

◇ Piping Adapter



Epoxy Resin Coating



①	Thread Type	
	Nil	Rc
N	NPT	
F	G	

②	Port Size	
	02	1/4
03	3/8	
04	1/2	
06	3/4	

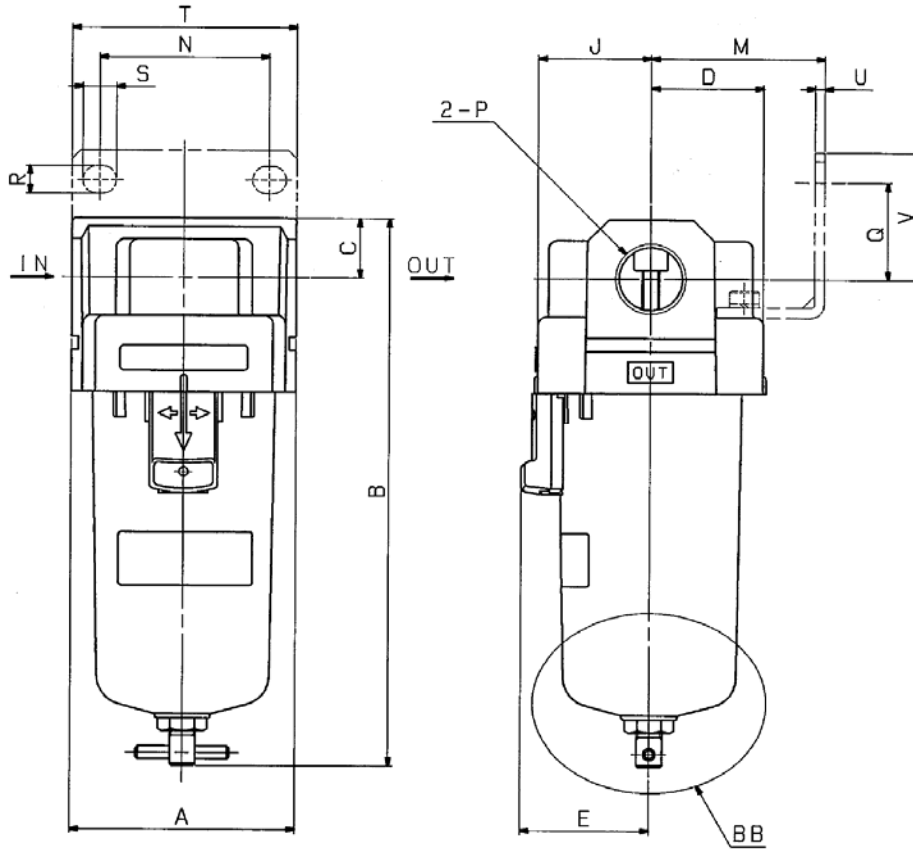
◇ Spacer, Cross Spacer and Piping Adapter Configuration

Model		Body Size	01	02	03	04	06	10	Applicable Model
Y**(L, T)	Spacer	20	●	●					AC20□
		30		●	●				AC25□, AC30□
		40		●	●	●			AC40□, VHS40
		50					●		AC40□-06, VHS40-06
		60					●	●	AC50B, AC55B, AC60B, VHS50
Y**	Cross Spacer	44		●	●				AC40□
		54			●	●			AC40□-06
E**(L, T)	Piping Adapter	40		●	●	●	●		AC40□, AF40, AR40□, AW40□, AFM40, AFD40, AWM40

※If Options other than those listed above are required, consult with us.

Dimensions: mm

◇ Air Filter/AF



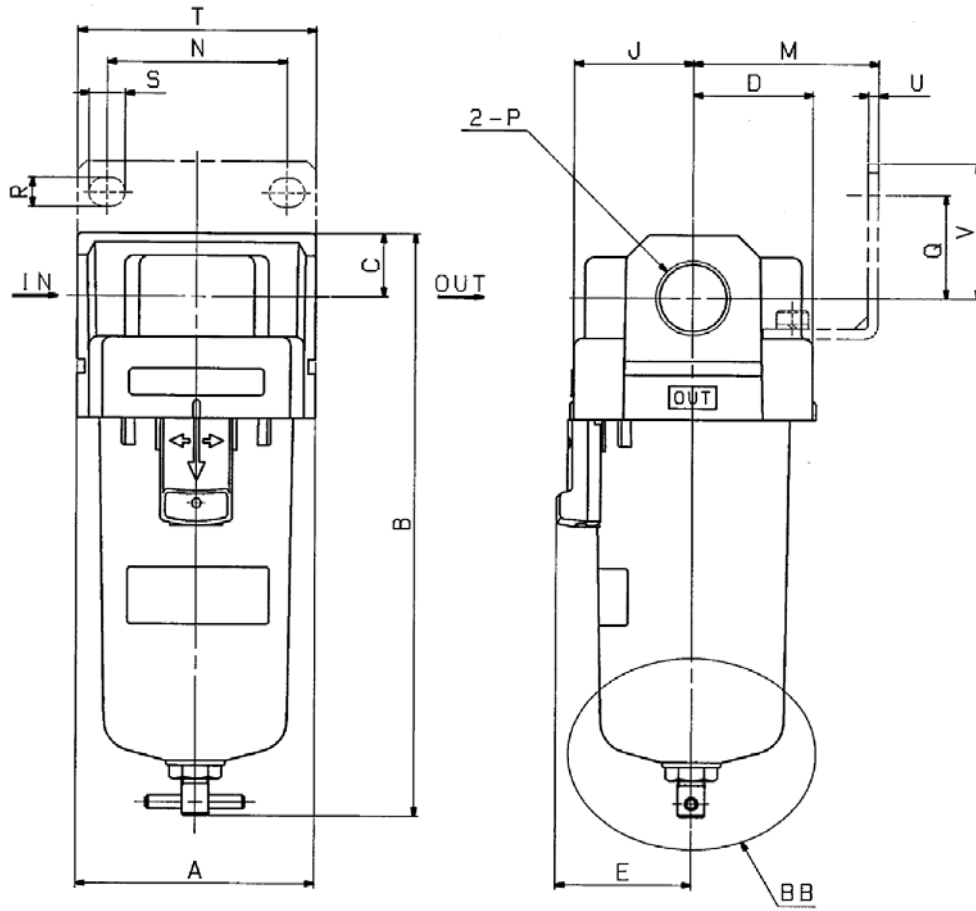
BOWL ASSEMBLY PORTION BB

MODEL NO.	AF30~AF60		AF10, 20	AF30~AF60		AF20	AF30~AF60	
ACCESSORY	WITH AUTO DRAIN(N.O./N.C.)		—	—	—	—	—	—
OPTIONS	2	8	2	2	8	2J	2J	8J
EXTERNAL APPEARANCE DRAWING								

DIMENSIONS

MODEL No.	STANDARD SPECIFICATIONS																OPTIONAL SPECIFICATIONS				SEMI-STANDARD SPECIFICATIONS			
	BRACKET MOUNT																WITH AUTO DRAIN	WITH AUTO DRAIN AND LEVEL GAUGE	METAL BOWL	WITH LEVEL GAUGE	WITH DRAIN GUIDE	WITH LEVEL GAUGE AND DRAIN GUIDE		
	P	A	C	D	E	J	AA	M	N	Q	R	S	T	U	V	B	B	B	B	B	B			
AF10-X480	M5x0.8	25	7	12.5	-	12.5	-	-	-	-	-	-	-	-	-	-	-	66	-	-	-			
AF20-X480	1/8, 1/4	40	10	20	-	20	-	30	27	22	5.4	8.4	40	2.3	28	-	97	-	-	-				
AF30-X480	1/4, 3/8	53	14	26.5	30.5	26.5	34.5	41	40	23	6.5	8	53	2.3	30	158	129	149	136	156				
AF40-X480	1/4, 3/8, 1/2	70	18	35	38	35	41	50	54	26	8.5	10.5	70	2.3	35	194	165	185	172	192				
AF40-06-X480	3/4	75	20	35	38	35	41	50	54	25	8.5	10.5	70	2.3	34	198	169	189	176	196				
AF50-X480	3/4, 1	90	24	45	-	45	41	70	66	35	11	13	90	3.2	47	274	245	265	252	272				
AF60-X480	1	95	24	47.5	-	47.5	41	70	66	35	11	13	90	3.2	47	287	258	278	265	285				

◇Mist Separator/AFM, Micro Mist Separator/AFD



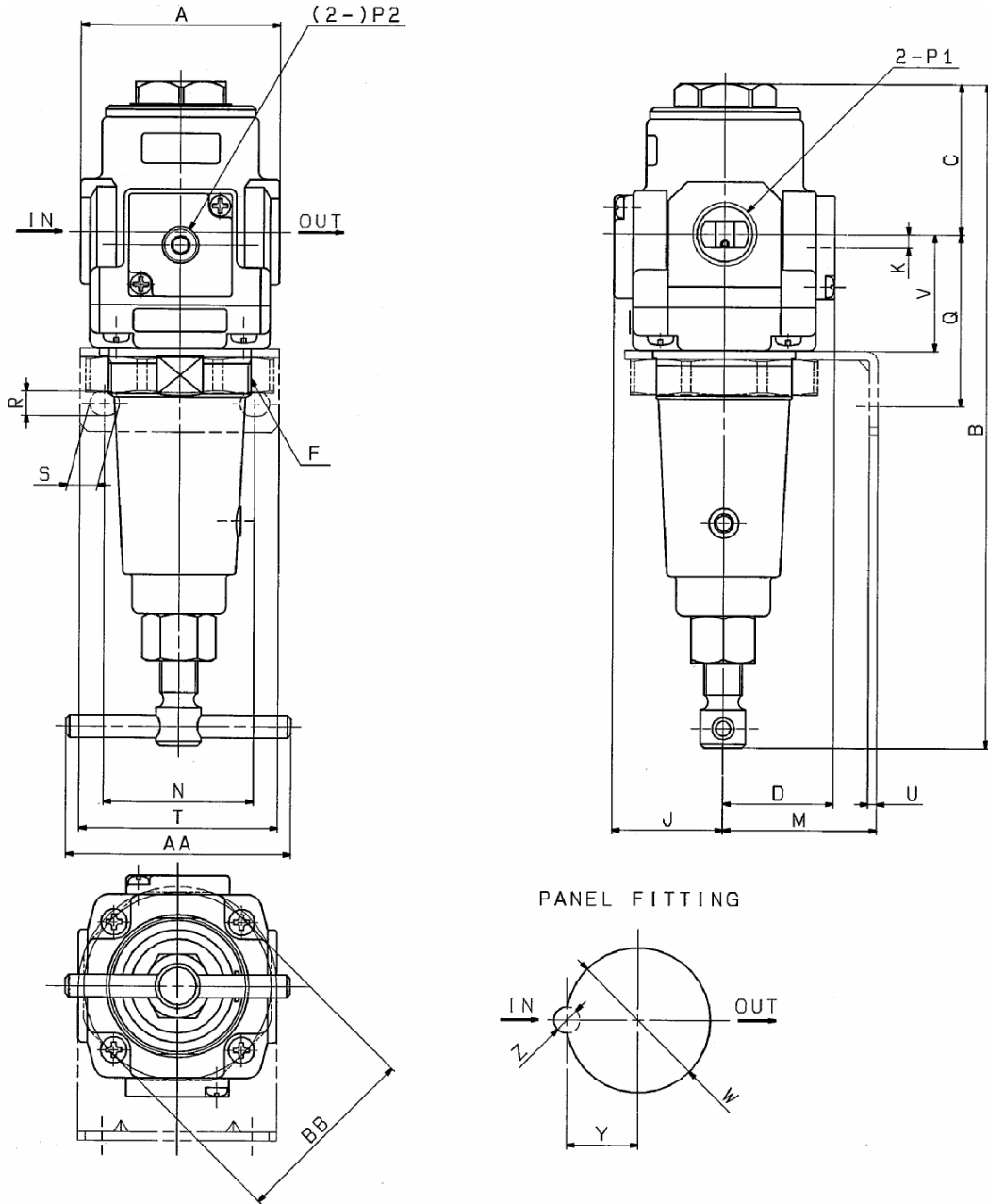
BOWL ASSEMBLY PORTION BB

MODEL No.	AFM, AFD30~AFM, AFD40-06	AFM, AFD20	AFM, AFD30~AFM, AFD40-06	AFM, AFD20	AFM, AFD30~AFM, AFD40-06
ACCESSORY	WITH AUTO DRAIN(N.O./N.C.)	—	—	—	—
OPTIONS	2	8	2	2J	8J
EXTERNAL APPEARANCE DRAWING					

DIMENSIONS

MODEL No.	STANDARD SPECIFICATIONS							OPTIONAL SPECIFICATIONS										SEMI-STANDARD SPECIFICATIONS				
	P	A	C	D	E	J	AA	BRACKET MOUNT										WITH AUTO DRAIN	WITH AUTO DRAIN AND LEVEL GAUGE	METAL BOWL	WITH LEVEL GAUGE	WITH DRAIN GUIDE
								M	N	Q	R	S	T	U	V	B	B	B	B	B	B	
AFM, AFD20-X480	1/8, 1/4	40	10	20	-	20	-	30	27	22	5.4	8.4	40	2.3	28	B	B	97	B	B	B	B
AFM, AFD30-X480	1/4, 3/8	53	14	26.5	30.5	26.5	34.5	41	40	23	6.5	8	53	2.3	30	158	129	149	136	156	156	
AFM, AFD40-X480	1/4, 3/8, 1/2	70	18	35	38	35	41	50	54	26	8.5	10.5	70	2.3	35	194	165	185	172	192	192	
AFM, AFD40-06-X480	3/4	75	20	35	38	35	41	50	54	25	8.5	10.5	70	2.3	34	198	169	189	176	196	196	

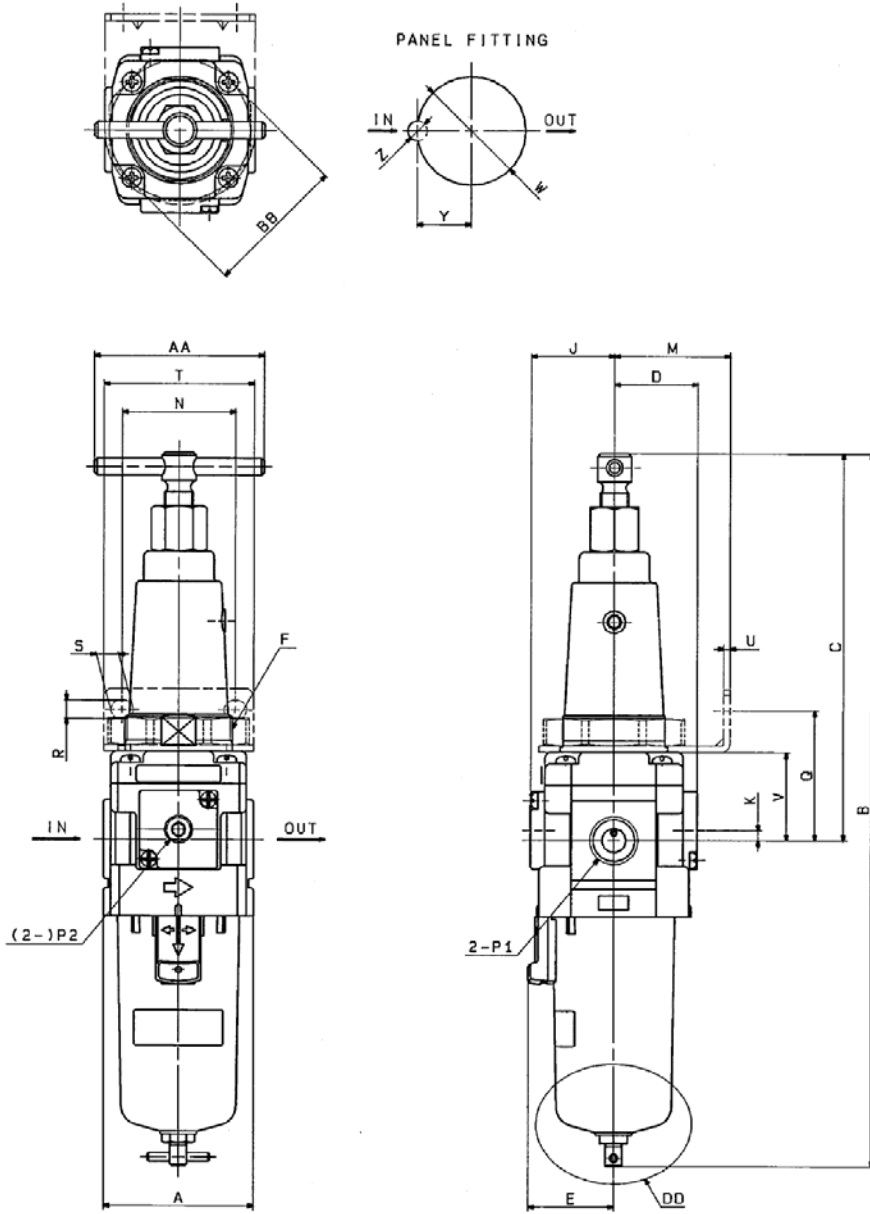
◇Regulator/AR



DIMENSIONS

MODEL No.	STANDARD SPECIFICATIONS										OPTIONAL SPECIFICATIONS											
	P1	P2	A	B	C	D	F	J	K	AA	BRACKET MOUNT					PANEL MOUNT						
											BB	M	N	Q	R	S	T	U	V	W	Y	Z
AR20(K)-X480	1/8, 1/4	1/8	40	134	34	28.5	M28x1	28.5	-2	50	36	30	34	44	5.4	15.4	55	2.3	25	28.5	14	6
AR25(K)-X480	1/4, 3/8	1/8	53	158	35.5	27.5	M32x1.5	27.5	0	60	41	30	34	47	5.4	15.4	55	2.3	29	32.5	16	6
AR30(K)-X480	1/4, 3/8	1/8	53	177	40	29.5	M38x1.5	29.5	3.5	60	50	41	40	46	6.5	8	53	2.3	31	38.5	19	7
AR40(K)-X480	1/4, 3/8, 1/2	1/4	70	204	45	34	M42x1.5	34	3.5	60	55	50	54	57.5	8.5	10.5	70	2.3	39	42.5	21	7
AR40(K)-06-X480	3/4	1/4	75	205	45	34	M42x1.5	34	3	60	55	50	54	59	8.5	10.5	70	2.3	40.5	42.5	21	7
AR50(K)-X480	3/4, 1	1/4	90	256	54	43.5	-	43.5	3.3	125	-	70	66	65.8	11	13	90	3.2	-	-	-	-
AR60(K)-X480	1	1/4	95	264	57	43.5	-	43.5	3.3	125	-	70	66	65.8	11	13	90	3.2	-	-	-	-

◇Filter Regulator/AW



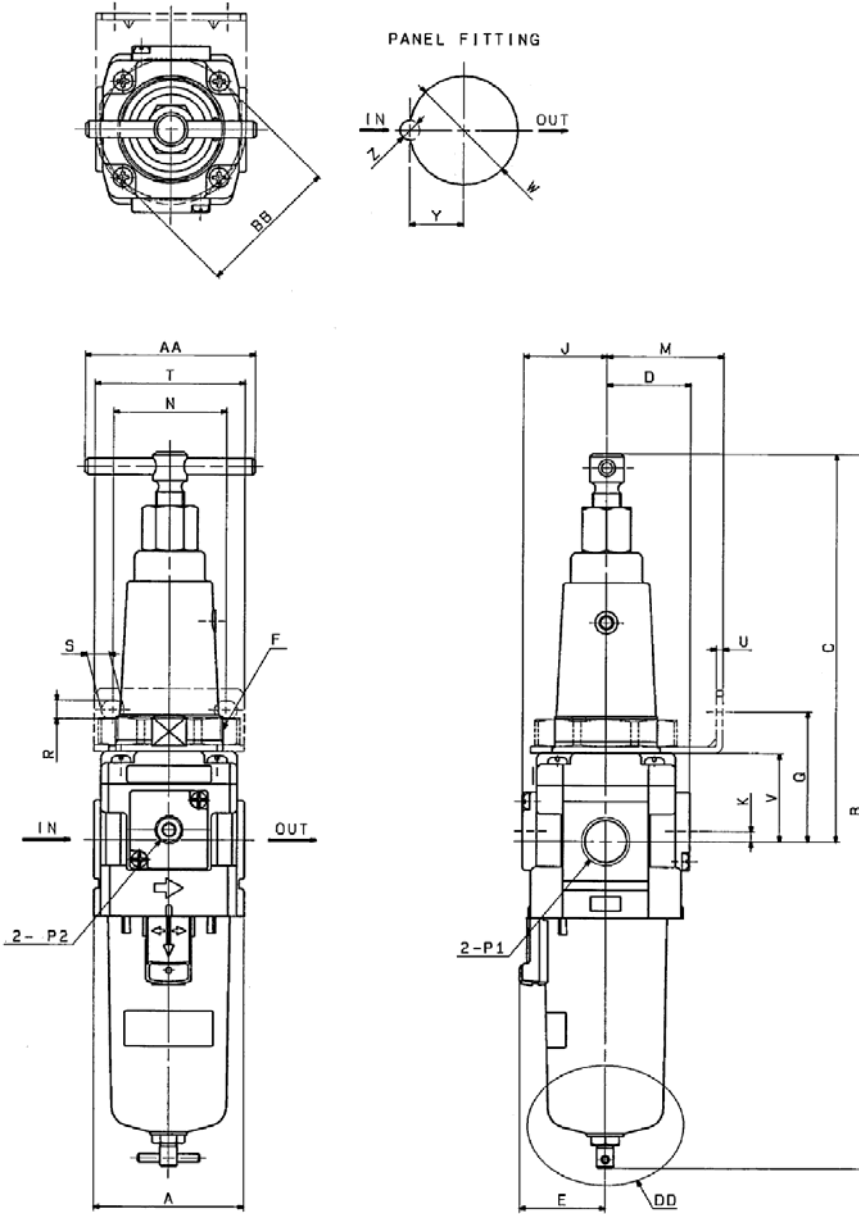
BOWL ASSEMBLY PORTION DD

MODEL No.	AW30(K)~AW60(K)		AW20(K)	AW30(K)~AW60(K)		AW20(K)	AW30(K)~AW60(K)	
ACCESSORY	WITH AUTO DRAIN(N.O./N.C.)		—	—	—	—	—	—
OPTIONS	2	8	2	2	8	2J	2J	8J
EXTERNAL APPEARANCE DRAWING								

DIMENSIONS

MODEL No.	STANDARD SPECIFICATIONS											OPTIONAL SPECIFICATIONS										SEMI-STANDARD SPECIFICATIONS							
	P1	P2	A	C	D	E	F	J	K	AA	BB	CC	M	N	Q	R	S	T	U	V	W	Y	Z	WITH AUTO DRAIN	WITH AUTO DRAIN AND LEVEL GAUGE	METAL BOWL	WITH LEVEL GAUGE	WITH DRAIN SWIVEL	WITH LEVEL GAUGE AND DRAIN SWIVEL
AW20(K)-X480	1/8, 1/4	1/8	40	105	26	—	M28x1	26	5	50	36	—	30	34	44	5.4	15.4	55	2.3	30	29.5	14	6	—	—	192	—	199	—
AW30(K)-X480	1/4, 3/8, 1/2	1/8	53	137	29.5	30	M38x1.5	29.5	3.5	60	50	34.5	41	40	46	6.5	8	53	2.3	31	38.5	19	7	281	252	272	259	279	
AW40(K)-X480	1/4, 3/8, 1/2	1/4	70	159	37.5	38	M42x1.5	37.5	1.5	60	55	41	50	54	57.5	8.5	10.5	70	2.3	39	42.5	21	7	335	306	326	313	333	
AW40(K)-06-X480	3/4	1/4	75	161	37.5	38	M42x1.5	37.5	1.2	60	55	41	50	54	59	8.5	10.5	70	2.3	40.5	42.5	21	7	339	310	330	317	337	
AW60(K)-X480	3/4, 1	1/4	95	207	43.5	38	—	43.5	3.2	125	—	41	70	66	66	11	13	90	3.2	—	—	—	—	470	441.5	461.5	448	468	

◇ Mist Separator Regulator/AWM



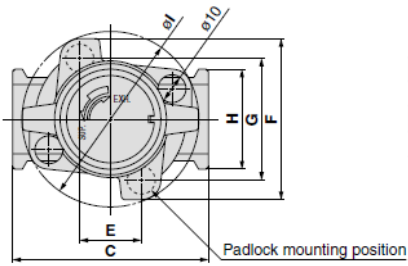
BOWL ASSEMBLY PORTION DD

MODEL No.	AWM30~AWM40		AWM20	AWM30~AWM40			AWM20	AWM30~AWM40	
ACCESSORY	WITH AUTO DRAIN(N.O./N.C.)		2	2	8	2J	2J	8J	
OPTIONS	2	8	2	2	8	2J	2J	8J	
EXTERNAL APPEARANCE DRAWING									
	1/4	1/4			CC	1/8 HEX. 14	1/4 HEX. 17	1/4 HEX. 17	

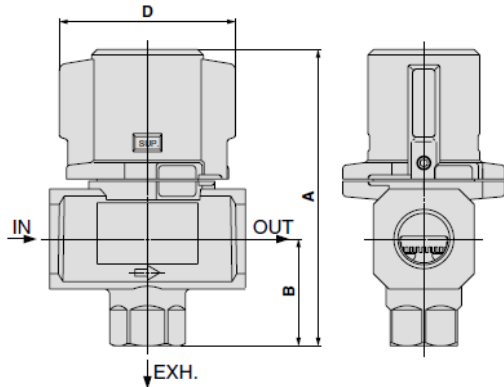
DIMENSIONS

MODEL No.	STANDARD SPECIFICATIONS													OPTIONAL SPECIFICATIONS										SEMI-STANDARD SPECIFICATIONS					
														BRACKET MOUNT					PANEL MOUNT					WITH AUTO DRAIN	WITH AUTO DRAIN	METAL BOWL	WITH LEVEL GAUGE	WITH DRAIN GUIDE	WITH LEVEL GAUGE
	P1	P2	A	C	D	E	F	J	K	AA	BB	CC	M	N	O	R	S	T	U	V	W	Y	Z	B	B	B	B	B	B
AWM20-X480	1/8, 1/4	1/8	40	105	26	-	M2Bx1	26	5	50	36	-	30	34	44	5.4	15.4	55	2.3	30	28.5	14	6			192		199	
AWM30-X480	1/4, 3/8	1/8	53	137	29.5	30	M3Bx1.5	29.5	3.5	60	50	34.5	41	40	46	6.5	8	53	2.3	31	38.5	19	7	281	252	272	259	279	
AWM40-X480	1/4, 3/8, 1/2	1/4	70	159	37.5	38	M42x1.5	37.5	1.5	60	55	41	50	54	57.5	8.5	10.5	70	2.3	39	42.5	21	7	335	306	326	313	333	

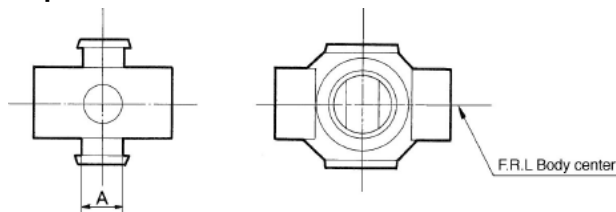
◇ Pressure Relief 3 Port Valve With Locking Holes



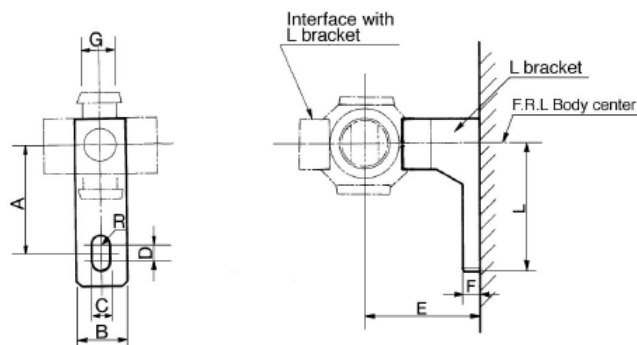
Model	Piping port	A	B	C	D	E	F	G	H	I
VHS40	1/4, 3/8, 1/2	107	39	70	63	22	58	44	36	63
VHS40-06	3/4	110	42	75	67	21	65	50	44	69
VHS50	3/4, 1	134	53	90	78	26	76	61	54	81



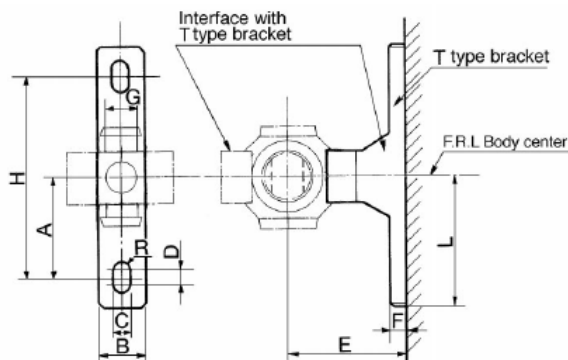
◇ Spacer



Model	A
Y20	10
Y30	11
Y40	14
Y50	14
Y60	15

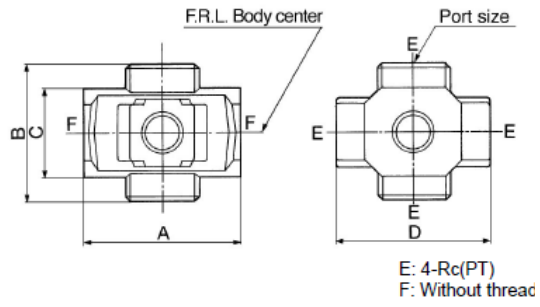


Interface with L bracket	A	B	C	D	E	F	G	R	L
Y20L	24	15	5.5	3	30	6	10	2.75	33
Y30L	35	16	7	4	41	7	11	3.5	45
Y40L	40	22	9	4	50	7	14	4.5	50
Y50L	40	22	9	4	50	7	14	4.5	60
Y60L	50	24	12	4	70	10	15	6	62.5



Interface with T bracket	A	B	C	D	E	F	G	H	R	L
Y20T	24	15	5.5	3	30	5	10	48	2.75	33
Y30T	35	16	7	4	41	7	11	70	3.5	45
Y40T	40	22	9	4	50	7	14	80	4.5	50
Y50T	40	22	9	4	50	7	14	80	4.5	50
Y60T	50	24	12	4	70	10	15	100	6	62.5

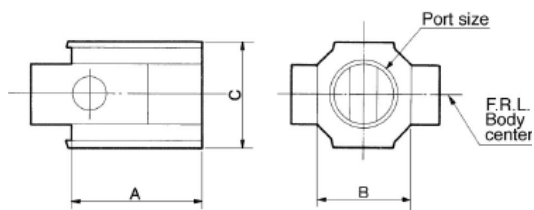
◇ Cross Spacer



Model	Port size	A	B	C	D
Y44-□02	1/4	60	48	36	54
Y44-□03	3/8				
Y54-□03	3/8	72	62	40	62
Y54-□04	1/2				

Note 1) □ in parts number indicates thread. Use nothing for Rc(PT), N for NPT and F for G(PF).

◇ Piping Adapter



Model	Port size	A	B	C
E40-□02	1/4	33	35	42.2
E40-□03	3/8			
E40-□04	1/2	50	35	42.2
E40-□06	3/4			

Note 1) □ in part number indicates thread type. Use nothing for Rc(PT), N for NPT and F for G(PF).

Salt Spray Test Results (For reference) :

1. Test conditions

1) Method: In compliance with JIS Z 2371 (ASTM B117-07a), leave parts in a salt spray test chamber, and compare rust generation.

2) Conditions: Temperature: 35°C Salt water concentration: 5%

3) Time: 1000 hours [Frequency: 0hr, 24hrs, 48hrs, 72hrs, 96hrs, 168hrs, 240hrs, 480hrs, 720hrs, 1000hrs]

4) Samples: Parts for AF and AW30 (See Figure 1.)

* Part descriptions: 4 parts (1) Body (2) Drain cock (3) Small screw for level gauge (4) Bonnet screw

* Types: 2 types A) Standard (B) Special X480 (Coated with epoxy resin [External metal parts are made of SUS])

* Refer to Table 1 for part materials and treatments. * Quantity; 2 peaces for each

2. Test results Table 1 Salt spray resistance test results

No.	Description	Type	Material & Treatment	Results
①	Body	A Standard	Material: ADC Treatment: Platinum coating	Rusted in 480hrs Part of coating swelled.
		B Special X480	Material: ADC Treatment: Platinum & epoxy coating	Not rusted in 1000hrs Part of coating swelled.
②	Drain cock	A Standard	Material: ADC Treatment: Zinc chromate	Rusted in 24hrs
		B Special X480	Material: SUS	Not rusted in 1000hrs
③	Cross recessed round head screw for metal bowl with level gauge	A Standard	Material: Steel Treatment: Nickel plating	Rusted in 24hrs
		B Special X480	Material: SUS	Not rusted in 1000hrs
④	Self-tapping screw for AR and AW bonnet	A Standard	Material: Steel Treatment: Zinc chromate	Rusted in 24hrs
		B Special X480	Material: SUS	Not rusted in 1000hrs

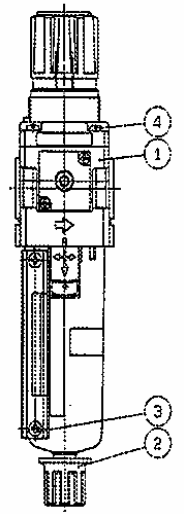
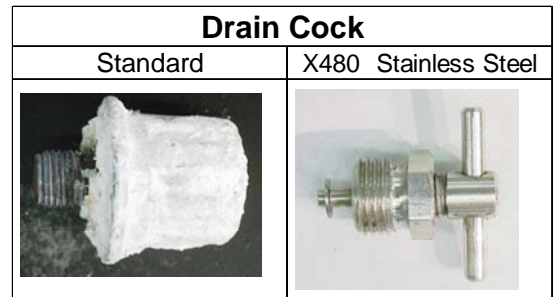
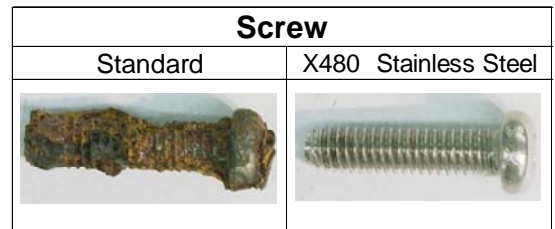
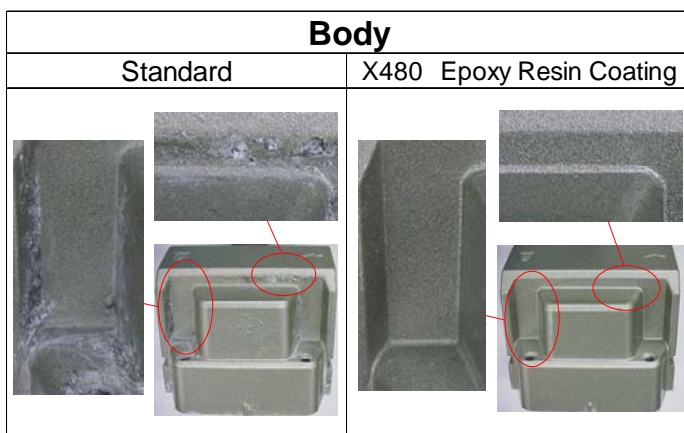


Figure 1.



Caution To ensure the safest possible operation of this product, please be sure to read thoroughly the "Safety Instructions" in our "Best Pneumatics" catalog before use.