

# PENN COMMERCIAL REFRIGERATION

## MODULATING WATER VALVES

### PRESSURE ACTUATED WATER VALVES

## V46

### 2-WAY PRESSURE ACTUATED WATER VALVES - COMMERCIAL APPLICATIONS

These pressure actuated modulating valves control the quantity of water to a condenser by directly sensing pressure changes in a refrigerant circuit.

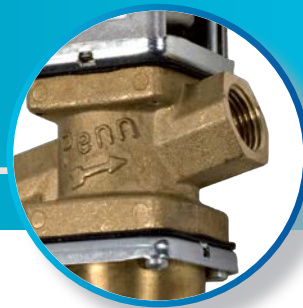
The valves can be used in non-corrosive refrigerant systems. Ammonia power elements and valves designed for salt-water applications are available.

The valves have a quick opening characteristic and open on pressure increase (direct acting). Reverse acting (close on pressure increase) is possible.

## FEATURES

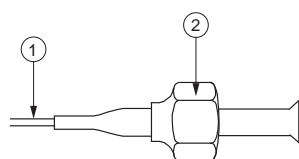
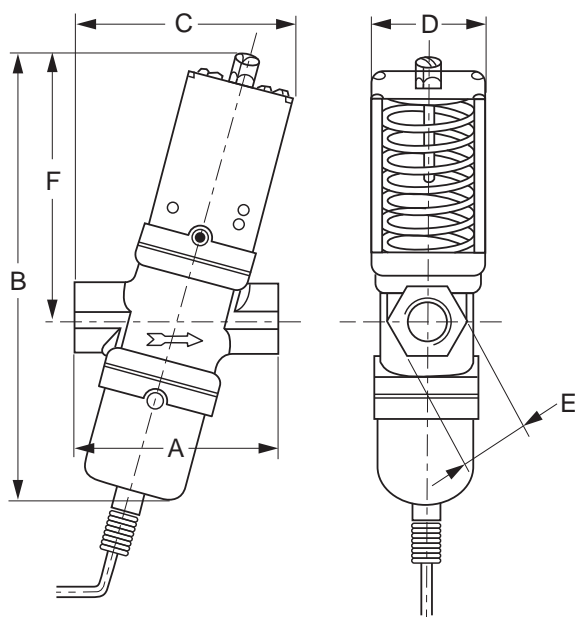
- Pressure balanced valve design
- Pressure actuated
- 3/8, 1/2, 3/4" are angled body type valves with high  $K_v$  value
- 3/8" up to 2" pressure valves "all range" types
- Quick opening valve characteristics
- No close fitting or sliding parts in water passages
- Easy to disassemble. All parts can be replaced
- Special bronze bodies and monel parts
- Power elements with stainless steel bellows available
- Wide range of pressure connection styles
- Nickel plated seats available for 3/8, 1/2, and 3/4" valves
- Direct/reverse action
- Wetted materials approved for use with standard non-corrosive and (mild) flammable A2L / A3 refrigerants





## V46AA / VA46AB / VA46AC DIMENSIONS (in mm)

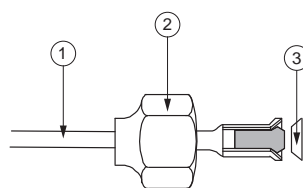
VALVE SIZE	A	B	C	D	E	F
3/8"	70	150	75	41	24	92
1/2"	80	166	86	51	27	98
3/4"	90	181	97	55	36	110



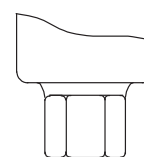
**Style 13**  
(excl. valve depressor)  
1: 75 cm capillary  
2: 7/16-20 UNF flare nut



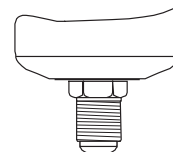
**Style 34**  
1: 75 cm capillary  
2: 1/4" tube for braze connection



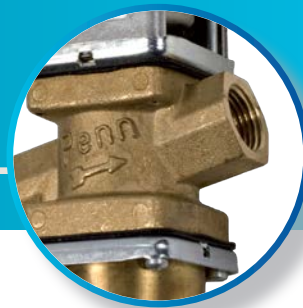
**Style 50**  
(incl. valve depressor mounted into machined flare)  
1: 75 cm capillary  
2: 7/16-20 UNF flare nut  
3: copper sealing



**Style 15**  
1/4-18NPT  
(female)

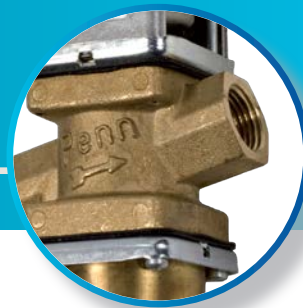


**Style 5**  
7/16-20 UNF



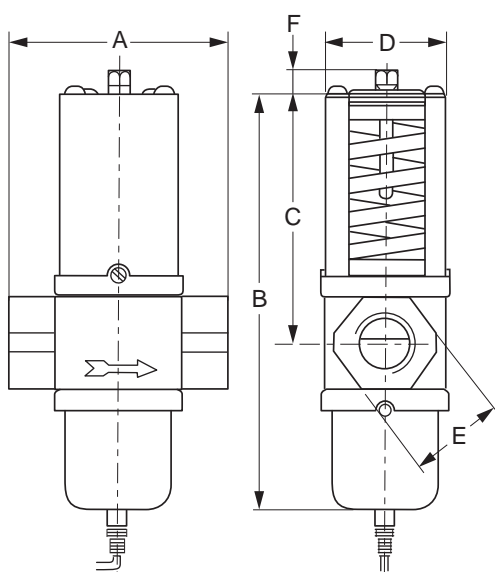
## V46AA / VA46AB / VA46AC ORDERING INFORMATION

CODES	RANGE (bar)	BODY STYLE	SIZE THREAD ACCORDING TO ISO 228	STYLE	CAPILLARY LENGTH (cm)	ADDITIONAL FEATURES (IT IS POSSIBLE TO CHANGE STYLE 13 INTO STYLE 45A BY ORDERING KIT031N600)
V46AA-9600	5...18	Angled	3/8"	13	75	---
V46AA-9608						With special washer to prevent waterhammer at low flow capacity
V46AA-9602					100	Nickel plated seat/longer capillary
V46AA-9950				34	75	Nickel plated seat/solder connection
V46AB-9600			1/2"	13		---
V46AB-9950				34		Solder connection/"062" id.cap
V46AC-9600			3/4"	13		---
V46AA-9300	5...23	Angled	3/8"	5	---	---
V46AA-9301						Nickel plated seat, high range. With washer to prevent waterhammer at low flow capacity
V46AA-9606				13	75	Nickel plated seat, high range
V46AA-9609						Nickel plated seat, high range. With washer to prevent waterhammer at low flow capacity
V46AA-9510						High range
V46AB-9300			1/2"	5	---	---
V46AB-9605				13	75	Nickel plated seat, high range
V46AB-9951				34		Solder connection, high range
V46AB-9510				50		High range
V46AC-9300			3/4"	5		---
V46AC-9605				13		Nickel plated seat, high range
V46AC-9510				50		High range



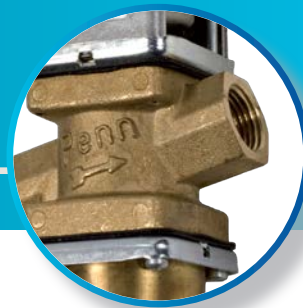
## V46AD / VA46AE DIMENSIONS (in mm)

VALVE SIZE	A	B	C	D	E	F
1"	124	233	138	71	48	13
1-1/4"	126	242	144		57	



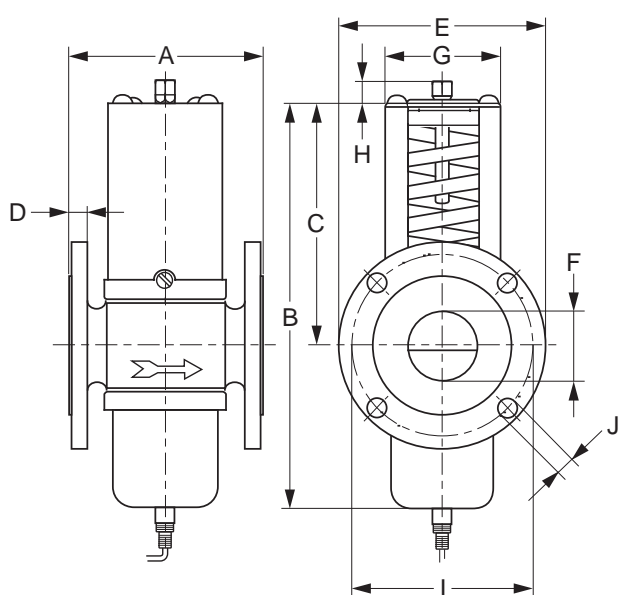
## V46AD / VA46AE ORDERING INFORMATION

CODES	RANGE (bar)	BODY STYLE	SIZE THREAD ACCORDING TO ISO 7-RC	STYLE	CAPILLARY LENGTH (cm)	ADDITIONAL FEATURES (IT IS POSSIBLE TO CHANGE STYLE 13 INTO STYLE 45A BY ORDERING KIT031N600)
V46AD-9300	5...18	Straight	1"	5	---	---
V46AD-9510				50	75	
V46AD-9600				13		
V46AE-9300			1-1/4"	5	---	
V46AE-9510				50	75	
V46AE-9600				13	75	
V46AD-9511	10...23		1"	50	75	High range
V46AE-9512			1-1/4"			



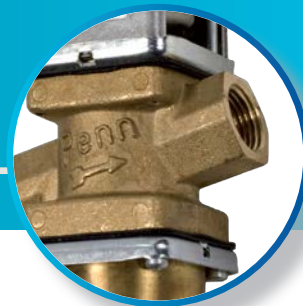
## V46AR / VA46AS / VA46AT DIMENSIONS (in mm)

VALVE SIZE	A	B	C	D	E	F	G	H	I	J
1-1/2"	137	242	144	18	150	47	67	13	110	18
2"	168	299	164	20	165	57	89	16	125	
2-1/2"	172				185	70			145	



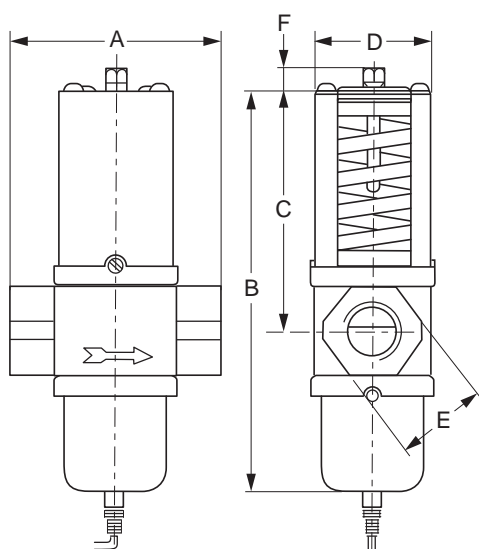
## V46AR / VA46AS / VA46AT ORDERING INFORMATION

CODES	RANGE (bar)	BODY STYLE	SIZE DIN2533 FLANG CONNECTIONS	STYLE	CAPILLARY LENGTH (cm)	ADDITIONAL FEATURES (IT IS POSSIBLE TO CHANGE STYLE 13 INTO STYLE 45A BY ORDERING KIT031N600)			
V46AR-9300	5...18	Straight	1-1/2"	5	---	---			
V46AR-9600				13	75				
V46AS-9300	5...11.5		2"	5	---	---			
V46AS-9301	11...18								
V46AT-9300	5...11.5		2-1/2"						
V46AT-9301	11...18								



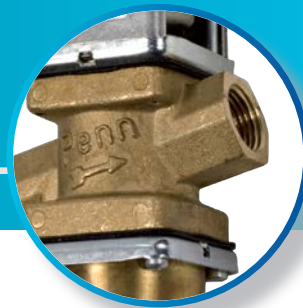
## V46BA / V46BB / V46BC / V46BD / V46BE DIMENSIONS (in mm)

VALVE SIZE	A	B	C	D	E	F
3/8"	67	136	79	41	24	10
1/2"	80	153	86	51	29	
3/4"	86	163	96	55	35	
1"	124	233	138	71	52	13
1-1/4"		242	144		62	



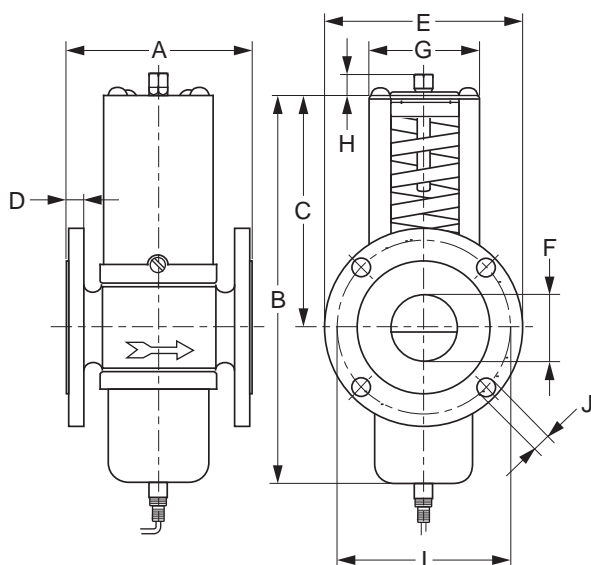
## V46BA / V46BB / V46BC / V46BD / V46BE ORDERING INFORMATION

CODES	RANGE (bar)	BODY STYLE	SIZE THREAD ACCORDING TO ISO 228	STYLE	CAPILLARY LENGTH (cm)	ADDITIONAL FEATURES (IT IS POSSIBLE TO CHANGE STYLE 13 INTO STYLE 45A BY ORDERING KIT031N600)
V46BA-9600	5...18	Straight	3/8"	13	75	---
V46BB-9600			1/2"			
V46BC-9600			3/4"			
V46BD-9600			1"			
V46BE-9510			1-1/4"	50		
V46BE-9600				13		
V46BA-9510	5 ...23		3/8"	50	140	Longer capillary
V46BB-9510			1/2"			
V46BC-9510			3/4"			
V46BC-9511			3/4"			
V46BD-9510	10...23		1"		75	---
V46BE-9511			1-1/4"		150	Longer capillary



## V46BR / V46BS / V46BT DIMENSIONS (in mm)

VALVE SIZE	A	B	C	D	E	F	G	H	I	J
1-1/2"	135	242	144	14	150	47	67	13	110	18
2"	162	299	164	16	165	57	89	16	125	
2-1/2"	172				185	70			145	



## V46BR / V46BS / V46BT ORDERING INFORMATION

CODES	RANGE (bar)	BODY STYLE	SIZE DIN 86021 FLANGE CONNECTIONS	STYLE	CAPILLARY LENGTH (cm)		
V46BR-9510	5...18	Straight	1-1/2"	50	75		
V46BR-9600				13			
V46BS-9300	5...11.5		2"	5	---		
V46BS-9301	11...18						
V46BT-9300	5...11.5		2-1/2"				
V46BT-9301	11...18						