Evaporator and Crankcase Pressure Regulator Series PRE and PRC

Features

- Compact design permits minimal space requirements
- Schrader valve on Inlet for ease of setting
- Direct operated regulator
- Balanced Port design provides accurate pressure control
- Copper tubes for easy soldering



Technical Data

Refrigerants	HFC, HCFC
Oil compatibility	Mineral, Alkyl Benzene and Polyol-Ester (POE) lubricants
Max. operating pressure PS:	25 bar
Max. test pressure PT:	30 bar
Material, housing	CW509L (EN12420)
Temperature range	Storage -30°C to 80°C Medium TS: -30°C to 80°C Ambient -30°C to 80°C

Pressure change per turn:	
Valve size 1	0,6 bar
Valve size 2	0,4 bar
Pressure range:	0,5 to 6,9 bar
Factory setting:	2 bar
Weight:	
PRC/PRE-1..	0,6 kg
PRC/PRE-2..	1,3 kg

Evaporator Pressure Regulator Series PRE

Selection

Type	Part No.	Tube Connection ODF	Nominal Capacity* Q_n (kW) R 134a	R 404A / R 507	R 407C	R 22
PRE - 11A	800 380	16 mm - 5/8"	3,0	4,5	4,5	4,8
PRE - 11B	800 381	22 mm - 7/8"				
PRE - 21C	800 382	28 mm	7,4	11,1	11,1	11,9
PRE - 21D	800 383	1 -1/8"				

*Nominal capacities are based on evaporating Temperature +4°C, condensing temperature +38°C and a pressure drop of 1K.

Correction Table

Selection for operating conditions other than +38°C/+4°C and 1 K liquid subcooling at the inlet of the valve: $\mathbf{Q_n = Q_o \times K_t}$

Q_n: Nominal valve capacity
Q_o: Required cooling capacity

Refrigerant	Condensing Temperature °C	Correction Factor K_t Evaporating Temperature °C 10	0	-10	-20	-30
R 404A / R 507	60	1,35	1,91	2,77	4,18	6,53
	50	1,05	1,46	2,07	3,05	4,62
	40	0,88	1,22	1,71	2,48	3,69
	30	0,77	1,06	1,48	2,12	3,13
R 407C	55	1,02	1,42	2,04		
	50	0,94	1,31	1,87		
	40	0,84	1,17	1,66		
	30	0,77	1,06	1,50		
R 134a	60	1,04	1,51	2,17		
	50	0,92	1,34	1,91		
	40	0,83	1,20	1,71		
	30	0,76	1,1	1,55		
R 22	60	1,02	1,37	1,87	2,67	3,91
	50	0,93	1,25	1,70	2,42	3,53
	40	0,86	1,15	1,57	2,22	3,23
	30	0,80	1,07	1,45	2,05	2,98

Crankcase Pressure Regulator Series PRC

Selection

Type	Part No.	Tube Connection ODF	Nominal Capacity* Q_n kW			
			R 134a	**R 404A / R 507**	**R 407C**	**R 22**
PRC - 11A	800 384	16 mm - 5/8"	3,0	4,5	4,5	4,8
PRC - 11B	800 385	22 mm - 7/8"				
PRC - 21C	800 386	28 mm	7,4	11,1	11,1	11,9
PRC - 21D	800 387	1 -1/8"				
PRC - 21E	800 388	35 mm -1 -3/8"				

*Nominal capacities are based on evaporating temperature +4°C and condensing temperature +38°C and a pressure drop of 1 K.

Capacity Table

Selection for operating conditions other than +38°C / +4°C and 1 K liquid subcooling at the inlet of the valve:
(capacities are based on a pressure drop of 0,07 bar)

Refrigerant	Evaporating Temperature °C	Capacity (kW) Valve setting °C													
		Valve Size 1: PRC-11x							**Valve Size 2: PRC-21x**						
		-20	-15	-10	-5	0	5	10	-20	-15	-10	-5	0	5	10
R 22	-29	2,3	3,4	4,4	4,8	4,9			5,8	8,8	10,0	10,0	10,0		
	-21		2,4	4,1	5,4	5,8				6,5	12,1	12,1	12,1		
	-14			2,7	4,9	6,2					8,1	13,8	13,8		
	-8				3,5	5,3						9,0	15,4		
	-3					3,1							9,9		
R 407 C	-6				3,1	4,8						7,9	13,9		
	-1					2,9							9,2		
R 134 a	-6					2,1	3,9	5,3					5,2	10,3	12,9
	1						2,4	4,7						6,1	12,2
	7							3,3							8,1
R 404A / R 507	-27	1,6	2,9	3,7	3,9				4,8	8,2	8,2	8,2			
	-20		1,9	3,5	4,5					5,7	9,8	9,8			
	-14			2,2	4,5						6,8	11,6			
	-10				3,1							8,1			