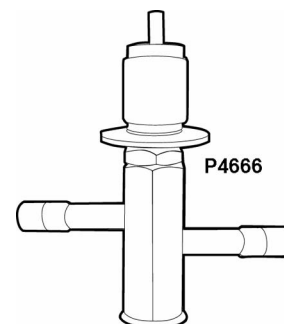


**HOT GAS BYPASS REGULATOR**

**EGR(E) DIRECT ACTING HOT GAS BYPASS REGULATOR**

EGRE Series Direct Acting Hot Gas Bypass Regulators are designed for use on light commercial systems. They provide precision system capacity balance at an economical price. The EGRE is an adjustable valve. The adjustable EGR Regulators are supplied with a factory set point of 50 psig (point where the regulator starts to open), which can be changed by adjustment. Capacity of these regulators is based on 6° gradient. Rated capacity will be attained when the suction pressure falls 6° below the corresponding set point saturation temperature. This lower temperature, at which the regulator is rated, is termed "178-180). When the suction pressure decreases below the set point, the regulator opens and allows discharge gas to be bypassed. The discharge gas may be bypassed into the evaporator or the suction line. When bypassed to the suction line, a liquid injection Thermo Valve must be installed to properly desuperheat the suction gas returning to the compressor.



CATALOG NUMBER	LINE CONNECTIONS CODE	SIZE & STYLE	STANDARD EQUALIZER‡	ADJUSTMENT RANGE	SHIPPING WEIGHT
EGRE-4†	S3	3/8 ODF	1/4 SAE or 1/4 ODF EXTERNAL	0-80 psig	2-1/2 lbs.
EGRE-6†	S4	1/2 ODF			
EGRE-8†	S5	5/8 ODF			

†Add connection code to complete catalog number.

Example: EGRE-4S4.

‡Internal equalized style available. To order, omit "E" from catalog number.

Example: EGR-4S3.

**FEATURES**

- Compact hermetic construction.
- Contoured power assembly for long life.
- ODF line connections.
- Balanced port design.

**OPTIONS**

- External or internal equalizer.
- Sizes available: 4 thru 8.

**SPECIFICATIONS**

- Safe working pressure: 440 psig
- Adjustment range: 0-80 psig (factory setting - 50 psig)
- UL file number SA5312
- CSA file number LR44005

**ORDERING INFORMATION**

PCN*	PART NO.	PCN*	PART NO.
063167	EGR4S3AIE	063177	EGRE4S5BSAEEEE
063168	EGR4S4AIE	063178	EGRE4S5CODFEE
063169	EGR4S5AIE	063179	EGRE6S3BSAEEEE
063170	EGR6S3AIE	063180	EGRE6S3CODFEE
063171	EGR6S4AIE	063181^	EGRE6S4BSAEEEE
063172	EGR6S5AIE	062868	EGRE6S4CODFEE
063173	EGR8S4AIE	062869^	EGRE6S5BSAEEEE
063174	EGR8S5AIE	062870	EGRE6S5CODFEE
063175	EGRE4S3BSAEEEE	062871	EGRE8S4BSAEEEE
063176	EGRE4S3CODFEE	063182	EGRE8S4CODFEE
062866^	EGRE4S4BSAEEEE	063183^	EGRE8S5BSAEEEE
062867	EGRE4S4CODFEE	062872	EGRE8S5CODFEE

^Standard Product Offering.

\*Product Code Number.

**NOMENCLATURE** EXAMPLE: EGR E 6 S 4 B SAEFF

EGR	E	6	S	4	B	SAEFF
Valve Series	External Equalizer (omit for internal equalizer)	Size	Connection S = ODF Connections	Connection (in 1/8")	External Equalizer Connection A = NONE, B = 1/4" SAE C = 1/4" ODF	External Equalizer Type

**NOMINAL CAPACITY TABLE IN TONS (kW)**

VALVE	R-12	R-134a	R-22	R-407C	R-507/R-404A	R-502
EGR(E)-4	1.6 (5.6)	1.8 (6.2)	2.9 (10.1)	2.9 (10.1)	2.8 (9.7)	2.6 (9.0)
EGR(E)-6	2.0 (6.9)	2.4 (8.3)	3.8 (13.2)	3.8 (13.2)	3.5 (12.1)	2.9 (10.1)
EGR(E)-8	3.6 (12.5)	4.2 (14.6)	6.7 (23.2)	6.7 (23.2)	6.3 (21.9)	5.9 (20.5)

All capacities shown are based on 40°F Evaporator Temperature, 100°F Condensing Temperature, Valve Full Open, Compressor Discharge Temperature is 50°F higher than Isentropic Compression & 25°F Superheat at the compressor inlet.

See EGRE Extended Capacity Tables before completing selection.

For conditions other than nominal conditions, multiply the nominal capacities shown in the above tables by the appropriate multiplier found in the extended capacity tables section.

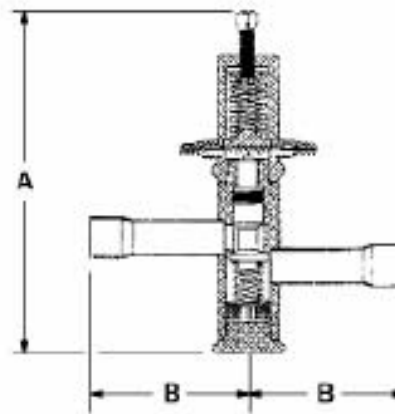
HOT GAS BYPASS REGULATOR

EGR(E) DIRECT ACTING HOT GAS BYPASS REGULATOR

EGR(E) DIMENSIONAL DATA

VALVE	CONNECTIONS	A	B
	S3 3/8 ODF		1.75
EGRE4,EGRE6	S4 1/2 ODF	5.63	1.75
	S5 5/8 ODF		2.13
	S3 3/8 ODF		1.75
EGRE8	S4 1/2 ODF	6.25	1.75
	S5 5/8 ODF		2.13

DIMENSIONS SHOWN ARE IN INCHES.



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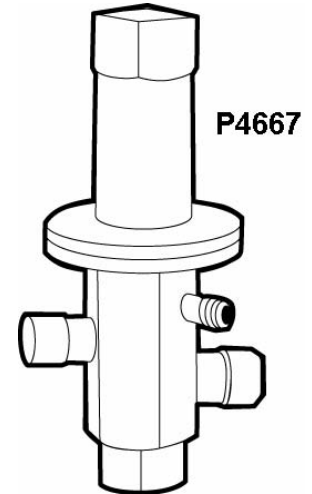
**HOT GAS BYPASS REGULATOR**

**DGR(E) DIRECT ACTING HOT GAS BYPASS REGULATOR**

DGRE Series Direct Acting Hot Gas Bypass Regulators are designed for use on residential and light commercial systems. They provide precision system capacity balance at an economical price. The DGRE is an adjustable valve. The adjustable DGR Regulators are supplied with a factory set point of 50 psig (point at which the regulator starts to open), which can be changed by adjustment. Capacity of these regulators is based on 6° gradient. Rated capacity will be attained when the suction pressure falls 6° below the corresponding set point saturation temperature. This lower temperature, at which the regulator is rated, is termed “evaporator temperature” in the selection tables. When the suction pressure decreases below the set point, the regulator opens and allows discharge gas to be bypassed. The discharge gas may be bypassed into the evaporator or the suction line. When bypassed to the suction line, a liquid injection thermo valve must be installed to properly desuperheat the suction gas returning to the compressor.

**FEATURES**

- Compact hermetic construction
- Contoured power assembly for long life



**OPTIONS**

- External or internal equalizer

**SPECIFICATIONS**

- Maximum working pressure: 440 psig
- Adjustment range: 0-80 psig (factory setting 50 psig)
- UL file number SA5312, CSA file number 44005

**ORDERING INFORMATION FOR DGRE VALVES**

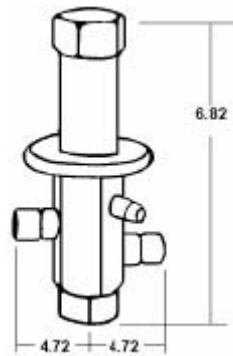
PCN*	PART NO.
049640^	DGRE 12 S 7 B SAE EE
029806^	DGRE 12 S 7 C ODF EE
049861^	DGRE 12 S 9 B SAE EE

^ Standard Product Offering. \*Product Code Number.

**NOMENCLATURE** EXAMPLE: DGR E 12 S 7 B SAE E E E

DGR	E	12	S	7	B	SAE E E E
Valve Series	External Equalizer (omit for internal equalizer)	Size	Connection S = ODF Connections	Connection (in 1/8")	EE Connection A = NONE, B = 1/4" SAE C = 1/4" ODF	External Equalizer Type

**DGRE DIMENSIONAL DATA**



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DIMENSIONS SHOWN ARE IN INCHES.

**NOMINAL CAPACITY TABLE IN TONS (KW)**

VALVE	R-12	R-134a	R-22	R-407C	R-507/R-404A	R-502
DGR(E)-12	8.3 (29.4)	9.7 (34.2)	15.4 (54.6)	15.4 (54.6)	14.5 (51.3)	13.6 (48.0)

All capacities shown are based on 40°F Evaporator Temperature, 100°F Condensing Temperature, Valve Full Open, Compressor Discharge Temperature is 50°F higher than Isentropic Compression and 25°F Superheat at the compressor inlet.

For conditions other than nominal conditions, multiply the nominal capacities shown in the above tables by the appropriate multiplier found in the extended capacity tables section.

**HOT GAS BYPASS REGULATOR**

**CPH(E) DIRECT OPERATED HOT GAS BYPASS REGULATOR**

CPHE Series Direct Operated Regulators are furnished with an adjustment range of 0 -80 psig. Other features include: Take-A-Part construction for service ease without removing the body flange from the line; stainless steel diaphragm; contoured power element; and the "U" gland packing material which eliminates stem friction and packing leaks. Vacuum service is possible by counterclockwise adjustment of the side-mounted adjusting screw. Chart below shows breakdown of parts by number and connection sizes.

A 1/4" SAE male flare external equalizer is standard. Types CPHE3 thru CPHE6 use a balanced double-ported cage assembly.

**FEATURES**

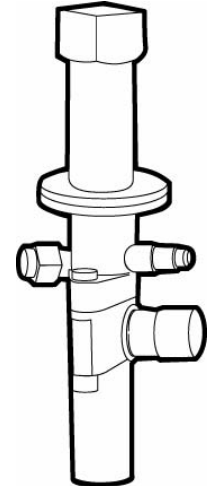
- SAE external equalizer standard

**OPTIONS**

- Sizes available: 1 thru 6
- ODF and ODF x ODM connections are available
- External air connection available for pneumatic compensation (add EAC prefix - example: EAC CPHE)

**SPECIFICATIONS**

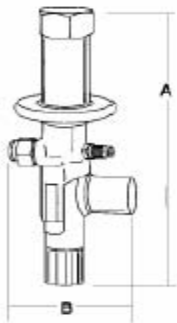
- Adjustment Range: 0-80 psig (factory setting 20 psig)



P4669

**NOMENCLATURE EXAMPLE: CPH E 3 SAE E E 3/8 X 5/8 ODF ANG**

CPH	E	3	SAE E E	3/8	X	5/8	ODF	ANG
Valve Series	External Equalizer (omit on CPHE1 & 2 for internal equalizer)	Size	1/4 " SAE male External Equalizer	Inlet Connection Size		Outlet Connection Size	Connection Type	Connection Style



P4669A

**CPHE**

**DIMENSIONAL DATA**

VALVE	A	B
CPHE 1	6.81	2.75
CPHE 2	2.94	
CPHE 3	8.25	
CPHE 4	8.25	
CPHE 5	8.75	
CPHE 6	8.75	

The above dimensions are maximum height & width variations, dependent on flange selection.

DIMENSIONS SHOWN ARE IN INCHES

**NOMINAL CAPACITY TABLE IN TONS (kW)**

VALVE	R-12	R-134a	R-22	R-407C	R-507/R-404A	R-502
CPHE 1	0.4 (1.4)	0.5 (1.7)	0.7 (2.5)	0.7 (2.5)	0.7 (2.4)	0.6 (2.2)
CPHE 2	0.7 (2.3)	0.8 (2.8)	1.2 (4.2)	1.2 (4.2)	1.2 (4.2)	1.0 (3.5)
CPHE 3	1.2 (4.2)	1.6 (5.6)	2.3 (8.0)	2.3 (8.0)	2.2 (7.6)	2.0 (6.9)
CPHE 4	3.0 (10.4)	3.8 (13.2)	5.5 (19.4)	5.5 (19.4)	5.3 (18.4)	4.8 (16.7)
CPHE 5	3.6 (12.5)	4.5 (15.6)	6.7 (23.2)	6.7 (23.2)	6.4 (22.2)	5.8 (20.1)
CPHE 6	4.6 (16.0)	5.8 (20.1)	8.5 (29.5)	8.5 (29.5)	8.2 (28.5)	7.4 (25.7)

All capacities shown are based on 40°F Evaporator Temperature, 100°F Condensing Temperature, Valve Full Open, Compressor Discharge Temperature is 50°F higher than Isentropic Compression and 25°F Superheat at the compressor inlet.

For conditions other than nominal conditions, multiply the nominal capacities shown in the above tables by the appropriate multiplier found in the extended capacity tables section.

**ORDERING INFORMATION FOR CPHE VALVES**

PCN*	PART NO.	PCN*	PART NO.
038828	CPHE 1 SAE EE 1/2 x 5/8 ODF ANG	087357^	CPHE 3 SAE EE 7/8 ODF/1-1/8 ODM S/T
044015	CPHE 1 SAE EE 1/2 x 5/8 ODF S/T	081348^	CPHE 4 SAE EE 7/8 ODF/1-1/8 ODM ANG
087912	CPHE 1 SAE EE 3/8 x 1/2 ODF ANG	044783^	CPHE 4 SAE EE 7/8 ODF/1-1/8 ODM S/T
088025	CPHE 1 SAE EE 3/8 x 5/8 ODF ANG	038302	CPHE 5 ODF EE 7/8 ODF/1-1/8 ODM ANG
087274^	CPHE 1 SAE EE 3/8 x 5/8 ODF S/T	045225^	CPHE 5 SAE EE 7/8 ODF/1-1/8 ODM ANG
087774^	CPHE 2 SAE EE 1/2 x 5/8 ODF ANG	037802	CPHE 5 SAE EE 7/8 ODF/1-1/8 ODM S/T
087887^	CPHE 2 SAE EE 1/2 x 5/8 ODF S/T	064577	CPHE 6 ODF EE 1-1/8 x 1-1/8 ODM ANG
045398	CPHE 2 SAE EE 3/8 x 1/2 ODF ANG	038661	CPHE 6 ODF EE 1-1/8 x 1-1/8 ODM S/T
043853	CPHE 2 SAE EE 3/8 x 5/8 ODF ANG	028619^	CPHE 6 SAE EE 1-1/8X1-1/8 ODM ANG
026286	CPHE 2 SAE EE 5/8 x 7/8 ODF ANG	038219^	CPHE 6 SAE EE 1-1/8X1-1/8 ODM S/T
036903^	CPHE 3 SAE EE 7/8 x 1-1/8 ODF ANG		

^ Standard Product Offering.

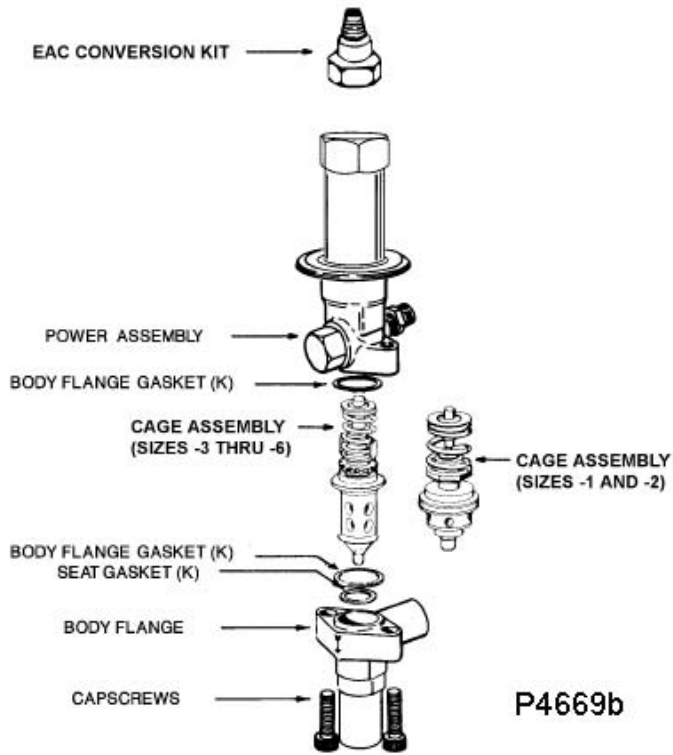
\* Product Code Number.

# EMERSON CLIMATE TECHNOLOGIES

## HOT GAS BYPASS REGULATOR

### CPHE REPLACEMENT PARTS AND EXPLODED VIEW

#### CPHE REPLACEMENT PARTS



EAC CONVERSION KIT		
PCN*	PART NO	KIT
042475	X10227-2	EAC CONVERSION

Consists of gasket, 1/4" SAE fitting and seal cap.

CAGE		
PCN*	PART NO	SIZE
037043	X-22440-B5B	1
037049	X-22440-B8B	2
089058	X-11873-B5B	3
029429	X-9117-B9B	4
070738	X-9166-B10B	5
021067	X-9144-B13B	6

FLANGE		
PCN*	PART NO	CONNECTION
065748	C-501-5	3/8 X 5/8 ODF ANG
029411	10331	7/8 ODF X 1-1/8 ODM ANG
027919	9153	7/8 ODF X 1-1/8 ODM ANG
027771	9761-3	3/8 X 5/8 ODF S/T
032988	10332	7/8 ODF X 1-1/8 ODM S/T
027918	9152	7/8 ODF X 1-1/8 ODM S/T

POWER ASSEMBLY		
PCN*	PART NO	VALVE
026296**	X7118-4	CPHE 1, 2, 3
029055	X7428-2	CPHE 4, 5, 6

\*\*Standard Product Offering.

\*Product Code Number.

Consists of power assembly and body flange gasket.