

Electrical Control Valves Series EX4-8

Technical Bulletin

Electrical Control Valves Series EX are stepper motor driven valves for precise control of refrigerant mass flow in air conditioning, refrigeration, heat pumps, close control and industrial process cooling applications.

The Control Valves can be used as thermo-expansion duty, liquid injection duty, hot gas bypass, evaporator pressure regulator, crankcase pressure regulator, head pressure regulator or liquid level control.

Features

- Multifunction as expansion valves, hot gas bypass, suction gas throttling, head pressure, liquid level actuator etc.
- Fully hermetic design
- Applicable to all common refrigerants (HCFC, HFC), HFO/ HFO blends and for subcritical CO₂ applications (for R290, please see separate R290 product guide)
- Stepper motor driven
- Short opening and closing time
- Very fast full stroke time
- High resolution and excellent repeatability
- Bi-flow versions with positive shut-off in both flow directions
- Positive shut-off function to eliminate the use of an additional solenoid valve
- Linear flow capacity
- Extremely wide capacity range (10...100%)
- Continuous modulation of mass flow, no stress (liquid hammering) in the refrigeration circuit
- Direct coupling of motor and valve for high reliability (no gear mechanism)
- Ceramic slide and port for accurate flow and minimal wear
- Rating pressure (PS): 60 bar EX4/5/6/7 and 56 bar EX8
- Corrosion resistant stainless-steel body and connections



Selection table

| Type | Part No. | Flow pattern | Nominal Capacity range (kW) | Inlet connection | Outlet connection | Electric connector |
|---------|----------|------------------------|-----------------------------|--------------------|--------------------|--------------------|
| EX4-I21 | 800615 | Uni-flow | 10...100% | 3/8" ODF | 5/8" ODF | M12 plug |
| EX4-M21 | 800616 | | | 10 mm ODF | 16 mm ODF | |
| EX5-U21 | 800618 | | | 5/8" (16 mm) ODF | 7/8" (22 mm) ODF | |
| EX6-I21 | 800620 | | | 7/8" ODF | 1-1/8" ODF | |
| EX6-M21 | 800621 | | | 22 mm ODF | 28 mm ODF | |
| EX7-I21 | 800624 | | | 1-1/8" ODF | 1-3/8" ODF | |
| EX7-M21 | 800625 | | | 28 mm ODF | 35 mm ODF | |
| EX8-M21 | 800629 | | | 42 mm ODF | 42 mm ODF | |
| EX8-U21 | 800630 | | | 1-3/8" (35 mm) ODF | 1-3/8" (35 mm) ODF | |
| EX8-I21 | 800631 | | | 1-5/8" ODF | 1-5/8" ODF | |
| EX4-U31 | 800617 | Bi-flow (Heat pump) | | 5/8" (16 mm) ODF | 5/8" (16 mm) ODF | |
| EX5-U31 | 800619 | | | 7/8" (22 mm) ODF | 7/8" (22 mm) ODF | |
| EX6-I31 | 800622 | | | 1-1/8" ODF | 1-1/8" ODF | |
| EX6-M31 | 800623 | | | 28 mm ODF | 28 mm ODF | |
| EX7-U31 | 800626 | | | 1-3/8" (35 mm) ODF | 1-3/8" (35 mm) ODF | |

Note: EX4-8 are delivered without cable/connector assembly -to be ordered separately.

Cable and connector assembly

| Type | Part No. | Temperature Range | Length | Connector type to valve | Connector type to driver board or controller | Illustration |
|---------|----------|-------------------|--------|-------------------------|--|--------------|
| EXV-M15 | 804663 | -50...+80°C | 1.5 m | M12 plug | Loose wires | |
| EXV-M30 | 804664 | | 3.0 m | | | |
| EXV-M60 | 804665 | | 6.0 m | | | |

Note: Plug does not comply with EN60335-1.

Electrical Control Valves Series EX4-8

Nominal capacities...

...as expansion valves and liquid injection valves, (kW) (10%...100%) -(EXV)

| Type | R744 | R448A | R449A | R513A | R450A | R134a | R1234ze | R452A | R23 | R32 | R452B/ R454B | R410A | R407C | R404A/ R507 | R124 |
|------|------|-------|-------|-------|-------|-------|---------|-------|------|-------|-----------------|-------|-------|----------------|------|
| EX4 | 27.0 | 6.5 | 16.1 | 11.5 | 11.3 | 12.8 | 10 | 12.5 | 17.8 | 28.6 | 22 | 19.3 | 17.4 | 11.5 | 9.2 |
| EX5 | 82.0 | 50 | 49 | 35 | 34 | 39 | 30 | 38 | 54 | 87 | 67 | 58 | 53 | 35 | 28 |
| EX6 | 197 | 120 | 117 | 84 | 82 | 93 | 73 | 91 | 130 | 208 | 161 | 140 | 126 | 84 | 67 |
| EX7 | 541 | 329 | 321 | 230 | 225 | 255 | 199 | 250 | 357 | 573* | 441* | 385 | 347 | 230 | 186 |
| EX8 | 1442 | 877 | 857 | 614 | 600 | 680 | 532 | 666 | - | 1528* | 1175* | 1027 | 925 | 613 | 495 |

Note 1: EX Bi-flow versions are not released for use with R124 and R23 refrigerants.

Note 2: EX Bi-flow versions have identical capacity in both flow directions.

Note 3: *) Upgrade certification according to PED, from hazard category I to hazard category II is pending. Please contact local sales offices prior to selection.

...as suction pressure regulator (evaporator or crankcase), (kW) – (SPR)

| Type | Kv (m³/h) | R744 | R448A | R449A | R513A | R450A | R134a | R1234ze | R452A | R410A | R407C | R404A/ R507 |
|------|-----------|-------|-------|-------|-------|-------|-------|---------|-------|-------|-------|----------------|
| EX5 | 0.68 | 4.1 | 1.7 | 1.6 | 1.3 | 1.2 | 1.3 | 1.1 | 1.5 | 2.2 | 1.7 | 1.5 |
| EX6 | 1.57 | 9.5 | 3.9 | 3.8 | 3.0 | 2.8 | 3.1 | 2.5 | 3.4 | 5 | 3.9 | 3.5 |
| EX7 | 5.58 | 33.8 | 13.8 | 13.6 | 10.6 | 9.9 | 11 | 9.0 | 12 | 17.9 | 14 | 13 |
| EX8 | 16.95 | 102.6 | 42.0 | 41.4 | 32.2 | 30.1 | 34 | 27.4 | 37 | 54.5 | 42 | 38 |

Note: EX Bi-flow versions are not released for use below -40°C

...as hot gas bypass regulator, (kW) – (HGB)

| Type | Kv (m³/h) | R448A | R449A | R513A | R450A | R134a | R1234ze | R452A | R410A | R407C | R404A/ R507 |
|------|-----------|-------|-------|-------|-------|-------|---------|-------|-------|-------|----------------|
| EX4 | 0.21 | 4.5 | 4.4 | 2.7 | 2.4 | 2.7 | 2.0 | 3.9 | 5.9 | 4.4 | 3.8 |
| EX5 | 0.68 | 14.6 | 14.4 | 8.6 | 7.7 | 8.8 | 6.5 | 12.8 | 19.1 | 14.3 | 12.2 |
| EX6 | 1.57 | 33.7 | 33.1 | 19.9 | 17.7 | 20.4 | 15.1 | 30 | 44.0 | 33.0 | 28.3 |
| EX7 | 5.58 | 119.8 | 117.8 | 70.7 | 63.0 | 72.5 | 53.6 | 105 | 156.4 | 117.4 | 100.5 |
| EX8 | 16.95 | 364 | 358 | 215 | 191 | 220 | 163 | 320 | 475 | 357 | 305 |

Note: EX Bi-flow versions are not released for hot gas flow applications.

...for hot gas flow such as heat reclaim application, (kW) – (HRC1/2)

| Type | Kv (m³/h) | R448A | R449A | R513A | R450A | R134a | R1234ze | R452A | R410A | R407C | R404A/ R507 |
|------|-----------|-------|-------|-------|-------|-------|---------|-------|-------|-------|----------------|
| EX5 | | 5.1 | 5.0 | 3.8 | 3.7 | 4.0 | 3.3 | 4.4 | 5.9 | 5.1 | 4.3 |
| EX6 | 1.57 | 11.7 | 11.6 | 8.8 | 8.5 | 9.3 | 7.6 | 10.1 | 13.7 | 11.8 | 9.9 |
| EX7 | 5.58 | 42 | 41 | 31 | 30 | 33 | 27 | 36 | 49 | 42 | 35 |
| EX8 | 16.95 | 127 | 125 | 95 | 91 | 100 | 82 | 110 | 148 | 128 | 107 |

Note: EX Bi-flow versions are not released for hot gas flow applications.

...as condensing pressure regulator and liquid duty, (kW) –(CPR)

| Type | Kv (m³/h) | R448A | R449A | R513A | R450A | R134a | R1234ze | R452A | R407C | R404A |
|------|-----------|-------|-------|-------|-------|-------|---------|-------|-------|-------|
| EX4 | | 5.4 | 5.2 | 5.1 | 5.3 | 5.6 | 5.1 | 4.1 | 5.7 | 4 |
| EX5 | 0.68 | 17.4 | 17.0 | 16.5 | 17.2 | 18 | 16.6 | 13 | 18 | 13 |
| EX6 | 1.57 | 40.4 | 39.6 | 38.3 | 40.1 | 42 | 38.7 | 31 | 43 | 30 |
| EX7 | 5.58 | 143 | 140 | 136 | 142 | 151 | 137 | 196 | 153 | 106 |
| EX8 | 16.95 | 430 | 422 | 408 | 428 | 458 | 413 | 331 | 463 | 324 |

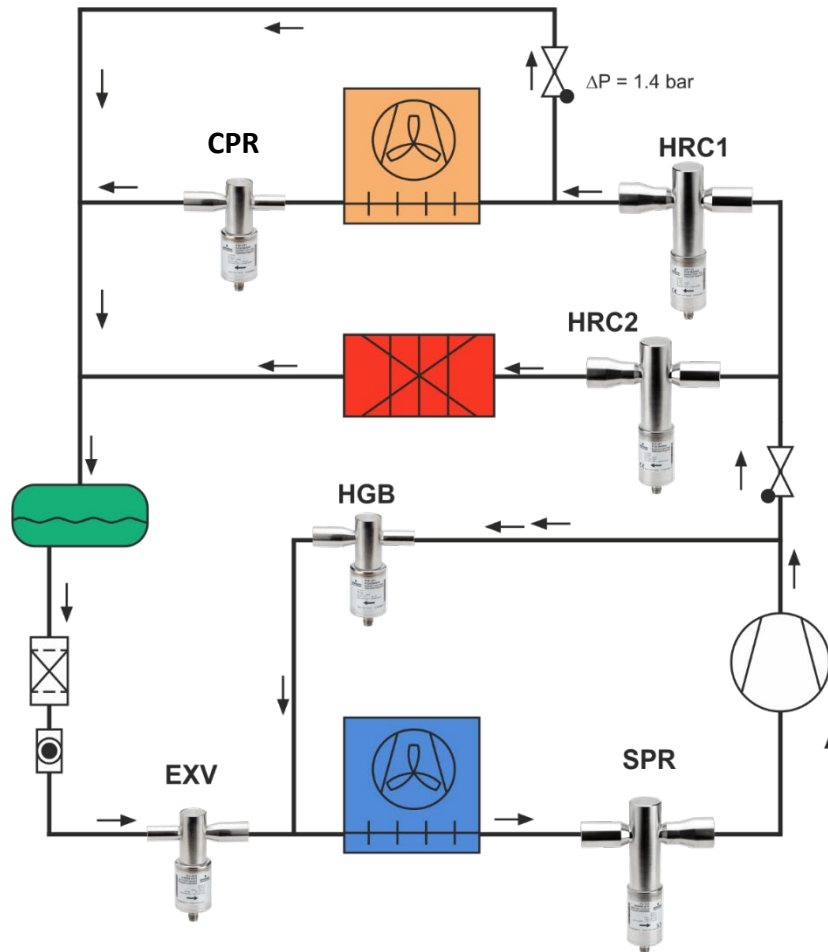
Electrical Control Valves Series EX4-8

The nominal capacity is based on the following conditions:

| Refrigerant | Evaporating temperature | Condensing temperature | Pressure drop (For suction duty) | Pressure drop (For liquid duty) | Pressure drop (For hot gas flow duty) | Isentropic efficiency (For hot gas flow duty) |
|-------------------------------------|-------------------------|------------------------------------|----------------------------------|---------------------------------|---------------------------------------|---|
| R134a, R404A, R410A, R513A, R1234ze | +4°C dew point | +38°C bubble & dew point | 0.15 bar | 0.35 bar | 0.5 bar | 80% |
| R407C | +4°C dew point | +38°C bubble/ +43°C dew point | | | | |
| R124 | +20°C | +80°C | | | | |
| R23 | -60°C | -25°C | | | | |
| R744 | -10°C | +10°C | | | | |
| R450A | +4°C | +38°C bubble/ +38.6°C dew point | | | | |
| R452A | | +38°C bubble/ +41.6°C dew point | | | | |
| R448A, R449A | | +38°C bubble/ +42.6°C dew point | | | | |

Note: For selection of other operating condition, please use quick selection tables in the next pages or Navigator selection program 2019.

Application of EX4-8



- EXV:** Electronic Expansion Valve
- SPR:** Suction Pressure Regulator
- HGB:** Hot Gas Bypass Regulator
- HRC1/2:** Heat Reclaim Regulator
- CPR:** Condensing Pressure Regulator

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R744 | | | | | | | | | | | | | Valve type |
|-----------------------------|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------------|
| | Capacity (kW) | | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | | |
| | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | -35 | -40 | -45 | -50 | |
| 20 | 15.6 | 19.6 | 22.8 | 25.4 | 27.6 | 29.4 | 30.9 | 32.1 | 33.1 | 33.9 | 34.5 | 34.9 | 35.2 | EX4 |
| | 47 | 59 | 69 | 77 | 84 | 89 | 94 | 97 | 100 | 103 | 105 | 106 | 107 | EX5 |
| | 113 | 142 | 166 | 185 | 201 | 214 | 225 | 234 | 241 | 247 | 251 | 254 | 256 | EX6 |
| | 312 | 391 | 455 | 508 | 552 | 588 | 618 | 643 | 663 | 678 | 690 | 698 | 703 | EX7 |
| | 831 | 1044 | 1214 | 1355 | 1471 | 1568 | 1649 | 1715 | 1768 | 1809 | 1840 | 1862 | 1876 | EX8 |
| 15 | | 17 | 21 | 25 | 27 | 30 | 31 | 33 | 34 | 35 | 36 | 36 | 37 | EX4 |
| | | 52 | 65 | 75 | 83 | 90 | 95 | 100 | 104 | 106 | 109 | 110 | 112 | EX5 |
| | | 124 | 155 | 179 | 199 | 215 | 229 | 239 | 248 | 255 | 261 | 265 | 268 | EX6 |
| | | 342 | 426 | 493 | 547 | 592 | 628 | 659 | 683 | 703 | 718 | 729 | 736 | EX7 |
| | | 911 | 1136 | 1314 | 1458 | 1577 | 1676 | 1756 | 1822 | 1874 | 1914 | 1943 | 1964 | EX8 |
| 10 | | | 18.1 | 22.5 | 25.9 | 28.7 | 30.9 | 32.8 | 34.2 | 35.4 | 36.4 | 37.1 | 37.6 | EX4 |
| | | | 55 | 68 | 79 | 87 | 94 | 99 | 104 | 107 | 110 | 112 | 114 | EX5 |
| | | | 132 | 164 | 189 | 209 | 225 | 238 | 249 | 258 | 265 | 270 | 273 | EX6 |
| | | | 362 | 450 | 518 | 573 | 618 | 655 | 685 | 709 | 727 | 742 | 752 | EX7 |
| | | | 966 | 1201 | 1383 | 1529 | 1649 | 1747 | 1826 | 1890 | 1940 | 1978 | 2006 | EX8 |
| 5 | | | | 19 | 23 | 27 | 30 | 32 | 34 | 35 | 36 | 37 | 38 | EX4 |
| | | | | 57 | 71 | 81 | 89 | 96 | 102 | 106 | 110 | 112 | 114 | EX5 |
| | | | | 137 | 170 | 195 | 215 | 231 | 244 | 255 | 263 | 270 | 274 | EX6 |
| | | | | 376 | 466 | 535 | 591 | 635 | 671 | 700 | 723 | 741 | 755 | EX7 |
| | | | | 1003 | 1243 | 1428 | 1575 | 1694 | 1790 | 1868 | 1929 | 1977 | 2012 | EX8 |
| 0 | | | | | 19.2 | 23.8 | 27.2 | 30.0 | 32.2 | 34.0 | 35.4 | 36.5 | 37.3 | EX4 |
| | | | | | 58 | 72 | 83 | 91 | 98 | 103 | 107 | 110 | 113 | EX5 |
| | | | | | 139 | 173 | 198 | 218 | 234 | 247 | 257 | 265 | 271 | EX6 |
| | | | | | 384 | 475 | 545 | 600 | 644 | 679 | 707 | 729 | 746 | EX7 |
| | | | | | 1023 | 1268 | 1453 | 1600 | 1717 | 1811 | 1886 | 1945 | 1990 | EX8 |
| -5 | | | | | | 19 | 24 | 27 | 30 | 32 | 34 | 35 | 36 | EX4 |
| | | | | | | 58 | 73 | 83 | 91 | 98 | 103 | 107 | 110 | EX5 |
| | | | | | | 140 | 174 | 199 | 219 | 235 | 247 | 257 | 265 | EX6 |
| | | | | | | 386 | 479 | 548 | 603 | 646 | 680 | 707 | 728 | EX7 |
| | | | | | | 1029 | 1277 | 1462 | 1607 | 1722 | 1813 | 1885 | 1940 | EX8 |
| -10 | | | | | | | 19.2 | 23.8 | 27.3 | 30.0 | 32.1 | 33.7 | 35.0 | EX4 |
| | | | | | | | 58 | 72 | 83 | 91 | 97 | 102 | 106 | EX5 |
| | | | | | | | 140 | 173 | 199 | 218 | 233 | 245 | 254 | EX6 |
| | | | | | | | 384 | 477 | 546 | 599 | 641 | 674 | 700 | EX7 |
| | | | | | | | 1024 | 1272 | 1456 | 1598 | 1710 | 1798 | 1866 | EX8 |
| -15 | | | | | | | | 18.9 | 23.5 | 26.9 | 29.5 | 31.6 | 33.1 | EX4 |
| | | | | | | | | 57.2 | 71.3 | 81.6 | 89.5 | 95.6 | 100 | EX5 |
| | | | | | | | | 137 | 171 | 196 | 215 | 230 | 241 | EX6 |
| | | | | | | | | 377 | 471 | 539 | 591 | 631 | 663 | EX7 |
| | | | | | | | | 1007 | 1255 | 1436 | 1575 | 1683 | 1767 | EX8 |
| -20 | | | | | | | | | 18.4 | 23.0 | 26.3 | 28.9 | 30.8 | EX4 |
| | | | | | | | | | 56 | 70 | 80 | 87 | 93 | EX5 |
| | | | | | | | | | 133 | 167 | 191 | 210 | 224 | EX6 |
| | | | | | | | | | 367 | 460 | 527 | 577 | 616 | EX7 |
| | | | | | | | | | 979 | 1226 | 1404 | 1539 | 1643 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R448A | | | | | | | | | | | | | | | | Valve type |
|--------------------------------|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------------|
| | Capacity (kW) | | | | | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | | | | | |
| | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | -35 | -40 | -45 | -50 | -55 | -60 | -70 | |
| 60 bubble/ 63.4 dew point | 15.2 | 15.2 | 15.2 | 15.1 | 15.0 | 14.8 | 14.5 | 14.2 | 13.9 | 13.5 | 13.1 | 12.7 | 12.3 | 11.8 | 11.4 | 10.4 | EX4 |
| | 46 | 46 | 46 | 46 | 45 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 37 | 36 | 35 | 32 | EX5 |
| | 110 | 111 | 111 | 110 | 109 | 107 | 106 | 103 | 101 | 98 | 96 | 93 | 89 | 86 | 83 | 76 | EX6 |
| | 304 | 305 | 305 | 303 | 300 | 296 | 291 | 285 | 278 | 271 | 263 | 255 | 246 | 237 | 228 | 209 | EX7 |
| | 810 | 813 | 812 | 807 | 799 | 788 | 775 | 759 | 741 | 722 | 701 | 679 | 656 | 632 | 607 | 557 | EX8 |
| 50 bubble/ 54 dew point | 15.7 | 15.9 | 16.1 | 16.1 | 16.1 | 16.0 | 15.9 | 15.6 | 15.4 | 15.1 | 14.8 | 14.4 | 14.1 | 13.7 | 13.2 | 12.4 | EX4 |
| | 47 | 48 | 49 | 49 | 49 | 49 | 48 | 47 | 47 | 46 | 45 | 44 | 43 | 41 | 40 | 38 | EX5 |
| | 114 | 116 | 117 | 117 | 117 | 116 | 115 | 114 | 112 | 110 | 108 | 105 | 102 | 99 | 96 | 90 | EX6 |
| | 313 | 318 | 321 | 322 | 322 | 320 | 317 | 313 | 308 | 302 | 296 | 289 | 281 | 273 | 265 | 248 | EX7 |
| | 835 | 849 | 857 | 860 | 859 | 854 | 846 | 835 | 821 | 806 | 788 | 770 | 750 | 728 | 707 | 661 | EX8 |
| 40 bubble/ 44.5 dew point | 15.0 | 15.5 | 15.9 | 16.1 | 16.2 | 16.3 | 16.3 | 16.2 | 16.0 | 15.8 | 15.6 | 15.3 | 15.0 | 14.6 | 14.3 | 13.5 | EX4 |
| | 45 | 47 | 48 | 49 | 49 | 49 | 49 | 49 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 41 | EX5 |
| | 109 | 113 | 115 | 117 | 118 | 118 | 118 | 118 | 116 | 115 | 113 | 111 | 109 | 106 | 104 | 98 | EX6 |
| | 299 | 310 | 317 | 322 | 325 | 326 | 325 | 323 | 320 | 316 | 311 | 306 | 299 | 293 | 285 | 270 | EX7 |
| | 798 | 826 | 846 | 859 | 866 | 869 | 867 | 862 | 854 | 843 | 830 | 815 | 798 | 780 | 761 | 721 | EX8 |
| 30 bubble/ 34.9 dew point | 13.1 | 14.0 | 14.7 | 15.2 | 15.5 | 15.8 | 15.9 | 15.9 | 15.9 | 15.8 | 15.6 | 15.4 | 15.2 | 14.9 | 14.6 | 14.0 | EX4 |
| | 40 | 42 | 45 | 46 | 47 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 45 | 44 | 42 | EX5 |
| | 95 | 102 | 107 | 111 | 113 | 115 | 116 | 116 | 115 | 115 | 114 | 112 | 110 | 108 | 106 | 102 | EX6 |
| | 262 | 280 | 294 | 304 | 311 | 315 | 318 | 318 | 318 | 316 | 312 | 308 | 304 | 298 | 292 | 280 | EX7 |
| | 699 | 748 | 784 | 810 | 829 | 841 | 847 | 849 | 847 | 841 | 833 | 822 | 810 | 795 | 780 | 746 | EX8 |
| 20 bubble/ 25.3 dew point | 9.6 | 11.3 | 12.5 | 13.3 | 14.0 | 14.5 | 14.8 | 15.0 | 15.1 | 15.1 | 15.1 | 14.9 | 14.8 | 14.6 | 14.4 | 13.9 | EX4 |
| | 29 | 34 | 38 | 40 | 42 | 44 | 45 | 45 | 46 | 46 | 46 | 45 | 45 | 44 | 44 | 42 | EX5 |
| | 70 | 82 | 91 | 97 | 102 | 105 | 107 | 109 | 110 | 110 | 109 | 109 | 108 | 106 | 105 | 101 | EX6 |
| | 192 | 225 | 249 | 267 | 280 | 289 | 296 | 300 | 302 | 302 | 301 | 299 | 296 | 292 | 287 | 277 | EX7 |
| | 513 | 601 | 665 | 712 | 746 | 771 | 788 | 799 | 804 | 805 | 803 | 797 | 789 | 779 | 767 | 739 | EX8 |
| 10 bubble/ 15.5 dew point | | | 8.6 | 10.3 | 11.4 | 12.3 | 12.9 | 13.3 | 13.6 | 13.8 | 13.9 | 13.9 | 13.8 | 13.7 | 13.6 | 13.2 | EX4 |
| | | | 26 | 31 | 35 | 37 | 39 | 40 | 41 | 42 | 42 | 42 | 42 | 42 | 41 | 40 | EX5 |
| | | | 63 | 75 | 83 | 89 | 94 | 97 | 99 | 100 | 101 | 101 | 101 | 100 | 99 | 96 | EX6 |
| | | | 172 | 205 | 229 | 246 | 258 | 267 | 272 | 276 | 278 | 278 | 277 | 275 | 272 | 264 | EX7 |
| | | | 460 | 548 | 610 | 655 | 688 | 711 | 726 | 736 | 740 | 741 | 738 | 732 | 724 | 704 | EX8 |
| 0 bubble/ 5.7 dew point | | | | | 7.2 | 8.9 | 10.0 | 10.8 | 11.4 | 11.8 | 12.1 | 12.3 | 12.3 | 12.3 | 12.3 | 12.0 | EX4 |
| | | | | | 22 | 27 | 30 | 33 | 35 | 36 | 37 | 37 | 37 | 37 | 37 | 36 | EX5 |
| | | | | | 52 | 65 | 73 | 79 | 83 | 86 | 88 | 89 | 90 | 90 | 89 | 88 | EX6 |
| | | | | | 143 | 177 | 201 | 217 | 229 | 237 | 242 | 245 | 247 | 247 | 246 | 241 | EX7 |
| | | | | | 382 | 473 | 535 | 578 | 609 | 631 | 645 | 654 | 657 | 658 | 655 | 642 | EX8 |
| -10 bubble/ -4.2 dew point | | | | | | | 5.1 | 7.0 | 8.2 | 9.0 | 9.6 | 10.0 | 10.2 | 10.4 | 10.4 | 10.4 | EX4 |
| | | | | | | | 15 | 21 | 25 | 27 | 29 | 30 | 31 | 31 | 32 | 31 | EX5 |
| | | | | | | | 37 | 51 | 59 | 65 | 70 | 72 | 74 | 75 | 76 | 75 | EX6 |
| | | | | | | | 101 | 140 | 164 | 180 | 191 | 199 | 204 | 207 | 208 | 208 | EX7 |
| | | | | | | | 270 | 372 | 436 | 480 | 510 | 531 | 544 | 552 | 556 | 554 | EX8 |
| -20 bubble/ -14.1 dew point | | | | | | | | | | 4.2 | 5.7 | 6.6 | 7.2 | 7.6 | 7.9 | 8.1 | EX4 |
| | | | | | | | | | | 13 | 17 | 20 | 22 | 23 | 24 | 25 | EX5 |
| | | | | | | | | | | 30 | 41 | 48 | 52 | 55 | 57 | 59 | EX6 |
| | | | | | | | | | | 83 | 113 | 132 | 144 | 152 | 157 | 162 | EX7 |
| | | | | | | | | | | 222 | 302 | 352 | 384 | 406 | 420 | 432 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R449A | | | | | | | | | | | | | | | | Valve type |
|--------------------------------|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------------|
| | Capacity (kW) | | | | | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | | | | | |
| | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | -35 | -40 | -45 | -50 | -55 | -60 | -70 | |
| 60 bubble/ 63.5 dew point | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 14.0 | 14.0 | 14.0 | 13.0 | 13.0 | 13.0 | 12.0 | 12.0 | 11.0 | 11.0 | 10.0 | EX4 |
| | 45 | 45 | 45 | 44 | 44 | 43 | 43 | 42 | 41 | 40 | 38 | 37 | 36 | 34 | 33 | 30 | EX5 |
| | 107 | 108 | 107 | 107 | 106 | 104 | 102 | 100 | 97 | 95 | 92 | 89 | 86 | 83 | 79 | 72 | EX6 |
| | 295 | 296 | 295 | 293 | 290 | 286 | 281 | 275 | 268 | 261 | 253 | 245 | 236 | 227 | 218 | 199 | EX7 |
| | 786 | 789 | 788 | 782 | 774 | 763 | 749 | 733 | 715 | 695 | 674 | 652 | 629 | 605 | 581 | 530 | EX8 |
| 50 bubble/ 54.1 dew point | 15.0 | 15.0 | 16.0 | 16.0 | 16.0 | 16.0 | 15.0 | 15.0 | 15.0 | 15.0 | 14.0 | 14.0 | 14.0 | 13.0 | 13.0 | 12.0 | EX4 |
| | 46 | 47 | 47 | 47 | 47 | 47 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 39 | 36 | EX5 |
| | 111 | 113 | 114 | 114 | 114 | 113 | 112 | 110 | 108 | 106 | 104 | 101 | 99 | 96 | 93 | 87 | EX6 |
| | 305 | 310 | 312 | 313 | 313 | 311 | 308 | 303 | 298 | 292 | 286 | 279 | 271 | 263 | 255 | 238 | EX7 |
| | 813 | 826 | 833 | 836 | 834 | 829 | 820 | 809 | 795 | 780 | 762 | 744 | 723 | 702 | 680 | 634 | EX8 |
| 40 bubble/ 44.6 dew point | 15.0 | 15.0 | 15.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 15.0 | 15.0 | 15.0 | 15.0 | 14.0 | 14.0 | 13.0 | EX4 |
| | 44 | 46 | 47 | 48 | 48 | 48 | 48 | 48 | 47 | 47 | 46 | 45 | 44 | 43 | 42 | 40 | EX5 |
| | 106 | 110 | 113 | 114 | 115 | 115 | 115 | 114 | 113 | 112 | 110 | 108 | 106 | 103 | 101 | 95 | EX6 |
| | 292 | 302 | 310 | 314 | 317 | 317 | 317 | 315 | 311 | 307 | 302 | 297 | 290 | 284 | 276 | 261 | EX7 |
| | 780 | 807 | 825 | 838 | 845 | 847 | 845 | 839 | 830 | 819 | 806 | 791 | 774 | 756 | 737 | 697 | EX8 |
| 30 bubble/ 34.9 dew point | 13.0 | 14.0 | 14.0 | 15.0 | 15.0 | 15.0 | 16.0 | 16.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 14.0 | 14.0 | EX4 |
| | 39 | 42 | 44 | 45 | 46 | 47 | 47 | 47 | 47 | 47 | 46 | 46 | 45 | 44 | 43 | 41 | EX5 |
| | 93 | 100 | 105 | 108 | 111 | 112 | 113 | 113 | 113 | 112 | 111 | 109 | 108 | 106 | 103 | 99 | EX6 |
| | 257 | 274 | 288 | 297 | 304 | 308 | 310 | 311 | 310 | 308 | 305 | 301 | 296 | 290 | 284 | 272 | EX7 |
| | 684 | 732 | 767 | 793 | 810 | 822 | 828 | 829 | 827 | 821 | 812 | 801 | 789 | 774 | 759 | 724 | EX8 |
| 20 bubble/ 25.2 dew point | 9.0 | 11.0 | 12.0 | 13.0 | 14.0 | 14.0 | 14.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 14.0 | 14.0 | 14.0 | 14.0 | EX4 |
| | 29 | 33 | 37 | 40 | 42 | 43 | 44 | 44 | 45 | 45 | 45 | 44 | 44 | 43 | 43 | 41 | EX5 |
| | 68 | 80 | 89 | 95 | 100 | 103 | 105 | 107 | 107 | 107 | 107 | 106 | 105 | 104 | 102 | 98 | EX6 |
| | 188 | 221 | 244 | 261 | 274 | 283 | 289 | 293 | 295 | 295 | 294 | 292 | 289 | 285 | 281 | 270 | EX7 |
| | 502 | 589 | 651 | 697 | 731 | 755 | 772 | 782 | 787 | 788 | 785 | 779 | 771 | 760 | 748 | 720 | EX8 |
| 10 bubble/ 15.4 dew point | | | 8.0 | 10.0 | 11.0 | 12.0 | 13.0 | 13.0 | 13.0 | 14.0 | 14.0 | 14.0 | 14.0 | 13.0 | 13.0 | 13.0 | EX4 |
| | | | 26 | 30 | 34 | 36 | 38 | 40 | 40 | 41 | 41 | 41 | 41 | 41 | 40 | 39 | EX5 |
| | | | 61 | 73 | 82 | 88 | 92 | 95 | 97 | 98 | 99 | 99 | 99 | 98 | 97 | 94 | EX6 |
| | | | 169 | 201 | 224 | 241 | 253 | 261 | 267 | 270 | 272 | 272 | 271 | 269 | 266 | 258 | EX7 |
| | | | 450 | 537 | 598 | 642 | 674 | 697 | 712 | 721 | 725 | 725 | 722 | 717 | 709 | 688 | EX8 |
| 0 bubble/ 5.6 dew point | | | | 7.0 | 9.0 | 10.0 | 11.0 | 11.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | EX4 |
| | | | | 21 | 26 | 30 | 32 | 34 | 35 | 36 | 36 | 37 | 37 | 36 | 36 | EX5 | |
| | | | | 51 | 63 | 71 | 77 | 81 | 84 | 86 | 87 | 88 | 88 | 87 | 86 | EX6 | |
| | | | | 140 | 174 | 197 | 213 | 224 | 232 | 237 | 240 | 242 | 242 | 240 | 236 | EX7 | |
| | | | | 373 | 463 | 524 | 567 | 598 | 619 | 633 | 641 | 644 | 644 | 641 | 629 | EX8 | |
| -10 bubble/ -4.3 dew point | | | | | | 5.0 | 7.0 | 8.0 | 9.0 | 9.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | EX4 | |
| | | | | | | 15 | 21 | 24 | 27 | 28 | 30 | 30 | 31 | 31 | 31 | EX5 | |
| | | | | | | 36 | 50 | 58 | 64 | 68 | 71 | 73 | 74 | 74 | 74 | EX6 | |
| | | | | | | 98 | 136 | 160 | 176 | 188 | 195 | 200 | 203 | 204 | 203 | EX7 | |
| | | | | | | 262 | 364 | 427 | 470 | 500 | 521 | 534 | 542 | 545 | 542 | EX8 | |
| -20 bubble/ -14.2 dew point | | | | | | | | | 4.0 | 6.0 | 6.0 | 7.0 | 7.0 | 8.0 | 8.0 | EX4 | |
| | | | | | | | | | 12 | 17 | 20 | 21 | 23 | 23 | 24 | EX5 | |
| | | | | | | | | | 29 | 40 | 47 | 51 | 54 | 56 | 58 | EX6 | |
| | | | | | | | | | 81 | 111 | 129 | 141 | 149 | 154 | 159 | EX7 | |
| | | | | | | | | | 215 | 295 | 344 | 376 | 397 | 411 | 423 | EX8 | |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R513A | | | | | | | | | | | | | | Valve type |
|-----------------------------|------------------------------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------------|
| | Capacity (kW) | | | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | | | |
| | 55 | 50 | 40 | 30 | 20 | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | |
| 80 | 8.4 | 8.9 | 9.4 | 9.4 | 9.2 | 8.6 | 8.3 | 7.9 | 7.5 | 7.1 | 6.7 | 6.2 | 5.7 | 5.2 | EX4 |
| | 25 | 27 | 28 | 29 | 28 | 26 | 25 | 24 | 23 | 22 | 20 | 19 | 17 | 16 | EX5 |
| | 61 | 64 | 68 | 69 | 67 | 63 | 60 | 58 | 55 | 52 | 48 | 45 | 42 | 38 | EX6 |
| | 168 | 177 | 187 | 189 | 183 | 173 | 166 | 159 | 151 | 142 | 133 | 124 | 114 | 104 | EX7 |
| | 447 | 473 | 500 | 503 | 489 | 461 | 444 | 424 | 403 | 380 | 356 | 330 | 305 | 278 | EX8 |
| 70 | 7.5 | 8.5 | 9.9 | 10.4 | 10.6 | 10.4 | 10.2 | 9.9 | 9.6 | 9.3 | 8.9 | 8.5 | 8.1 | 7.6 | EX4 |
| | 23 | 26 | 30 | 32 | 32 | 31 | 31 | 30 | 29 | 28 | 27 | 26 | 24 | 23 | EX5 |
| | 54 | 62 | 72 | 76 | 77 | 75 | 74 | 72 | 70 | 67 | 65 | 62 | 59 | 56 | EX6 |
| | 149 | 171 | 197 | 209 | 211 | 207 | 203 | 198 | 192 | 185 | 178 | 170 | 162 | 153 | EX7 |
| | 398 | 455 | 525 | 557 | 564 | 553 | 542 | 528 | 512 | 494 | 474 | 453 | 431 | 408 | EX8 |
| 60 | | 6.0 | 8.9 | 10.3 | 10.9 | 11.1 | 11.0 | 10.9 | 10.7 | 10.5 | 10.2 | 9.9 | 9.6 | 9.2 | EX4 |
| | | 18 | 27 | 31 | 33 | 34 | 33 | 33 | 33 | 32 | 31 | 30 | 29 | 28 | EX5 |
| | | 43 | 64 | 75 | 79 | 81 | 80 | 79 | 78 | 76 | 74 | 72 | 70 | 67 | EX6 |
| | | 119 | 177 | 205 | 218 | 222 | 221 | 218 | 215 | 210 | 205 | 198 | 192 | 184 | EX7 |
| | | 318 | 472 | 547 | 582 | 591 | 588 | 582 | 572 | 560 | 546 | 529 | 511 | 492 | EX8 |
| 55 | | | 7.7 | 9.7 | 10.7 | 11.1 | 11.2 | 11.1 | 11.0 | 10.8 | 10.6 | 10.4 | 10.1 | 9.7 | EX4 |
| | | | 23 | 29 | 32 | 34 | 34 | 34 | 33 | 33 | 32 | 31 | 30 | 30 | EX5 |
| | | | 56 | 71 | 78 | 81 | 81 | 81 | 80 | 79 | 77 | 75 | 73 | 71 | EX6 |
| | | | 153 | 194 | 214 | 222 | 223 | 222 | 220 | 217 | 212 | 207 | 201 | 195 | EX7 |
| | | | 408 | 517 | 571 | 593 | 595 | 593 | 587 | 578 | 566 | 552 | 537 | 520 | EX8 |
| 50 | | | 5.7 | 8.8 | 10.2 | 10.9 | 11.1 | 11.1 | 11.0 | 10.8 | 10.6 | 10.4 | 10.1 | EX4 | |
| | | | 17 | 27 | 31 | 33 | 34 | 34 | 34 | 33 | 33 | 32 | 31 | 31 | EX5 |
| | | | 41 | 64 | 74 | 79 | 81 | 81 | 81 | 80 | 79 | 77 | 75 | 73 | EX6 |
| | | | 113 | 175 | 205 | 218 | 221 | 222 | 222 | 220 | 217 | 212 | 208 | 202 | EX7 |
| | | | 302 | 468 | 546 | 583 | 590 | 593 | 591 | 586 | 578 | 567 | 554 | 539 | EX8 |
| 45 | | | | 7.3 | 9.5 | 10.5 | 10.8 | 10.9 | 11.0 | 11.0 | 10.9 | 10.7 | 10.5 | 10.3 | EX4 |
| | | | | 22 | 29 | 32 | 33 | 33 | 33 | 33 | 33 | 33 | 32 | 31 | EX5 |
| | | | | 53 | 69 | 76 | 78 | 80 | 80 | 80 | 79 | 78 | 77 | 75 | EX6 |
| | | | | 147 | 189 | 210 | 216 | 219 | 220 | 219 | 218 | 215 | 211 | 206 | EX7 |
| | | | | 391 | 505 | 561 | 575 | 583 | 586 | 585 | 580 | 572 | 562 | 550 | EX8 |
| 40 | | | | 5.0 | 8.3 | 9.9 | 10.3 | 10.6 | 10.7 | 10.8 | 10.8 | 10.7 | 10.5 | 10.4 | EX4 |
| | | | | 15 | 25 | 30 | 31 | 32 | 32 | 33 | 33 | 32 | 32 | 31 | EX5 |
| | | | | 37 | 61 | 72 | 75 | 77 | 78 | 78 | 78 | 78 | 77 | 75 | EX6 |
| | | | | 101 | 167 | 197 | 206 | 211 | 214 | 216 | 215 | 214 | 211 | 207 | EX7 |
| | | | | 268 | 445 | 526 | 548 | 563 | 572 | 575 | 574 | 570 | 562 | 553 | EX8 |
| 35 | | | | | 6.7 | 8.9 | 9.5 | 10.0 | 10.3 | 10.4 | 10.5 | 10.5 | 10.4 | 10.3 | EX4 |
| | | | | | 20 | 27 | 29 | 30 | 31 | 32 | 32 | 32 | 32 | 31 | EX5 |
| | | | | | 49 | 65 | 69 | 73 | 75 | 76 | 76 | 76 | 76 | 75 | EX6 |
| | | | | | 134 | 178 | 191 | 200 | 205 | 208 | 210 | 209 | 208 | 205 | EX7 |
| | | | | | 357 | 476 | 509 | 532 | 547 | 556 | 559 | 559 | 555 | 548 | EX8 |
| 30 | | | | | 4.0 | 7.6 | 8.5 | 9.2 | 9.6 | 9.9 | 10.0 | 10.1 | 10.1 | 10.0 | EX4 |
| | | | | | 12 | 23 | 26 | 28 | 29 | 30 | 30 | 31 | 31 | 30 | EX5 |
| | | | | | 29 | 55 | 62 | 67 | 70 | 72 | 73 | 74 | 74 | 73 | EX6 |
| | | | | | 80 | 152 | 171 | 183 | 192 | 198 | 201 | 202 | 202 | 201 | EX7 |
| | | | | | 212 | 406 | 455 | 488 | 512 | 527 | 536 | 539 | 539 | 536 | EX8 |
| 25 | | | | | | 5.7 | 7.1 | 8.1 | 8.7 | 9.1 | 9.4 | 9.6 | 9.7 | 9.7 | EX4 |
| | | | | | | 17 | 22 | 24 | 26 | 28 | 29 | 29 | 29 | 29 | EX5 |
| | | | | | | 42 | 52 | 59 | 63 | 66 | 69 | 70 | 70 | 70 | EX6 |
| | | | | | | 115 | 143 | 161 | 174 | 183 | 188 | 192 | 193 | 193 | EX7 |
| | | | | | | 306 | 380 | 430 | 464 | 487 | 503 | 512 | 516 | 516 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R450A | | | | | | | | | | | | | | Valve type |
|-----------------------------|------------------------------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------------|
| | Capacity (kW) | | | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | | | |
| | 55 | 50 | 40 | 30 | 20 | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | |
| 80 | 9.2 | 9.8 | 10.4 | 10.6 | 10.4 | 10.0 | 9.8 | 9.5 | 9.2 | 8.8 | 8.4 | 8.0 | 7.6 | 7.1 | EX4 |
| | 28 | 30 | 31 | 32 | 32 | 30 | 30 | 29 | 28 | 27 | 25 | 24 | 23 | 22 | EX5 |
| | 67 | 71 | 76 | 77 | 76 | 73 | 71 | 69 | 67 | 64 | 61 | 58 | 55 | 52 | EX6 |
| | 184 | 195 | 208 | 211 | 209 | 201 | 196 | 190 | 183 | 176 | 168 | 160 | 151 | 143 | EX7 |
| | 491 | 520 | 554 | 564 | 556 | 536 | 522 | 506 | 488 | 469 | 448 | 426 | 404 | 380 | EX8 |
| 70 | 7.7 | 8.8 | 10.2 | 10.9 | 11.1 | 11.0 | 10.9 | 10.7 | 10.4 | 10.1 | 9.8 | 9.5 | 9.1 | 8.7 | EX4 |
| | 23 | 27 | 31 | 33 | 34 | 33 | 33 | 32 | 32 | 31 | 30 | 29 | 28 | 27 | EX5 |
| | 56 | 64 | 74 | 79 | 81 | 80 | 79 | 78 | 76 | 74 | 71 | 69 | 66 | 64 | EX6 |
| | 154 | 177 | 204 | 218 | 222 | 220 | 217 | 213 | 208 | 203 | 197 | 190 | 183 | 175 | EX7 |
| | 412 | 471 | 545 | 581 | 593 | 587 | 579 | 569 | 556 | 541 | 524 | 506 | 487 | 467 | EX8 |
| 60 | | 5.9 | 8.8 | 10.3 | 11.0 | 11.2 | 11.2 | 11.1 | 11.0 | 10.8 | 10.6 | 10.3 | 10.0 | 9.7 | EX4 |
| | | 18 | 27 | 31 | 33 | 34 | 34 | 34 | 33 | 33 | 32 | 31 | 30 | 30 | EX5 |
| | | 43 | 64 | 75 | 80 | 82 | 82 | 81 | 80 | 79 | 77 | 75 | 73 | 71 | EX6 |
| | | 119 | 177 | 205 | 220 | 224 | 224 | 223 | 220 | 216 | 212 | 207 | 201 | 195 | EX7 |
| | | 317 | 471 | 548 | 586 | 598 | 598 | 594 | 587 | 577 | 565 | 551 | 536 | 519 | EX8 |
| 55 | | | 7.5 | 9.6 | 10.6 | 11.1 | 11.1 | 11.1 | 10.9 | 10.8 | 10.5 | 10.3 | 10.0 | EX4 | |
| | | | 23 | 29 | 32 | 34 | 34 | 34 | 33 | 33 | 32 | 31 | 30 | EX5 | |
| | | | 55 | 70 | 77 | 80 | 81 | 81 | 80 | 79 | 78 | 77 | 75 | 73 | EX6 |
| | | | 150 | 191 | 212 | 221 | 223 | 223 | 221 | 219 | 215 | 211 | 206 | 200 | EX7 |
| | | | 401 | 510 | 565 | 590 | 594 | 593 | 590 | 583 | 574 | 562 | 549 | 534 | EX8 |
| 50 | | | 5.5 | 8.5 | 10.0 | 10.7 | 10.9 | 11.0 | 11.0 | 10.9 | 10.8 | 10.6 | 10.4 | 10.2 | EX4 |
| | | | 17 | 26 | 30 | 32 | 33 | 33 | 33 | 33 | 33 | 32 | 32 | 31 | EX5 |
| | | | 40 | 62 | 73 | 78 | 79 | 80 | 80 | 79 | 78 | 77 | 76 | 74 | EX6 |
| | | | 109 | 170 | 200 | 214 | 218 | 219 | 219 | 218 | 216 | 212 | 208 | 203 | EX7 |
| | | | 291 | 455 | 533 | 571 | 581 | 585 | 585 | 581 | 575 | 566 | 555 | 543 | EX8 |
| 45 | | | | 7.0 | 9.1 | 10.2 | 10.5 | 10.6 | 10.7 | 10.7 | 10.7 | 10.6 | 10.4 | 10.2 | EX4 |
| | | | | 21 | 28 | 31 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 31 | EX5 |
| | | | | 51 | 66 | 74 | 76 | 77 | 78 | 78 | 78 | 77 | 76 | 74 | EX6 |
| | | | | 140 | 183 | 204 | 209 | 213 | 214 | 214 | 213 | 211 | 208 | 204 | EX7 |
| | | | | 374 | 487 | 543 | 558 | 567 | 572 | 572 | 569 | 563 | 554 | 544 | EX8 |
| 40 | | | | 4.6 | 7.9 | 9.4 | 9.9 | 10.1 | 10.3 | 10.4 | 10.4 | 10.4 | 10.3 | 10.1 | EX4 |
| | | | | 14 | 24 | 29 | 30 | 31 | 31 | 32 | 32 | 31 | 31 | 31 | EX5 |
| | | | | 34 | 58 | 69 | 72 | 74 | 75 | 76 | 76 | 75 | 75 | 73 | EX6 |
| | | | | 93 | 158 | 188 | 197 | 203 | 206 | 208 | 208 | 207 | 205 | 202 | EX7 |
| | | | | 248 | 423 | 502 | 526 | 541 | 550 | 555 | 555 | 552 | 547 | 539 | EX8 |
| 35 | | | | | 6.2 | 8.4 | 9.0 | 9.5 | 9.8 | 9.9 | 10.0 | 10.0 | 10.0 | 9.9 | EX4 |
| | | | | | 19 | 25 | 27 | 29 | 30 | 30 | 30 | 30 | 30 | 30 | EX5 |
| | | | | | 45 | 61 | 66 | 69 | 71 | 72 | 73 | 73 | 73 | 72 | EX6 |
| | | | | | 124 | 168 | 181 | 189 | 195 | 199 | 200 | 201 | 200 | 198 | EX7 |
| | | | | | 332 | 448 | 482 | 505 | 520 | 530 | 534 | 535 | 532 | 527 | EX8 |
| 30 | | | | | 3.3 | 7.0 | 7.9 | 8.6 | 9.0 | 9.3 | 9.5 | 9.6 | 9.6 | 9.5 | EX4 |
| | | | | | 10 | 21 | 24 | 26 | 27 | 28 | 29 | 29 | 29 | 29 | EX5 |
| | | | | | 24 | 51 | 58 | 62 | 65 | 68 | 69 | 70 | 70 | 69 | EX6 |
| | | | | | 67 | 141 | 159 | 171 | 180 | 186 | 190 | 191 | 192 | 191 | EX7 |
| | | | | | 178 | 375 | 423 | 457 | 480 | 496 | 505 | 510 | 511 | 509 | EX8 |
| 25 | | | | | | 5.0 | 6.5 | 7.4 | 8.0 | 8.5 | 8.8 | 8.9 | 9.0 | 9.1 | EX4 |
| | | | | | | 15 | 20 | 22 | 24 | 26 | 27 | 27 | 27 | 27 | EX5 |
| | | | | | | 37 | 47 | 54 | 58 | 62 | 64 | 65 | 66 | 66 | EX6 |
| | | | | | | 101 | 129 | 148 | 161 | 169 | 175 | 179 | 181 | 181 | EX7 |
| | | | | | | 269 | 345 | 394 | 428 | 468 | 477 | 482 | 483 | 483 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R134a | | | | | | | | | | | | | | Valve type |
|-----------------------------|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------------|
| | Capacity (kW) | | | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | | | |
| | 55 | 50 | 40 | 30 | 20 | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | |
| 80 | 10.1 | 10.7 | 11.5 | 11.8 | 11.8 | 11.5 | 11.2 | 10.9 | 10.6 | 10.3 | 9.9 | 9.5 | 9.1 | 8.6 | EX4 |
| | 31 | 32 | 35 | 36 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 27 | 26 | EX5 |
| | 73 | 78 | 84 | 86 | 86 | 83 | 82 | 80 | 77 | 75 | 72 | 69 | 66 | 63 | EX6 |
| | 201 | 214 | 230 | 237 | 236 | 229 | 224 | 219 | 212 | 205 | 198 | 190 | 181 | 172 | EX7 |
| | 537 | 572 | 614 | 631 | 628 | 611 | 598 | 583 | 566 | 548 | 527 | 506 | 483 | 459 | EX8 |
| 70 | 8.5 | 9.8 | 11.4 | 12.3 | 12.6 | 12.6 | 12.5 | 12.3 | 12.1 | 11.8 | 11.5 | 11.2 | 10.8 | 10.5 | EX4 |
| | 26 | 30 | 35 | 37 | 38 | 38 | 38 | 37 | 37 | 36 | 35 | 34 | 33 | 32 | EX5 |
| | 62 | 71 | 83 | 89 | 92 | 92 | 91 | 90 | 88 | 86 | 84 | 82 | 79 | 76 | EX6 |
| | 170 | 196 | 228 | 246 | 253 | 252 | 250 | 247 | 242 | 237 | 231 | 224 | 217 | 209 | EX7 |
| | 454 | 522 | 609 | 655 | 674 | 673 | 667 | 657 | 646 | 631 | 615 | 598 | 579 | 558 | EX8 |
| 60 | | 6.6 | 9.9 | 11.6 | 12.5 | 12.9 | 12.9 | 12.9 | 12.8 | 12.6 | 12.4 | 12.2 | 11.9 | 11.6 | EX4 |
| | | 20 | 30 | 35 | 38 | 39 | 39 | 39 | 39 | 38 | 38 | 37 | 36 | 35 | EX5 |
| | | 48 | 72 | 84 | 91 | 94 | 94 | 94 | 93 | 92 | 90 | 88 | 86 | 84 | EX6 |
| | | 132 | 198 | 232 | 250 | 257 | 258 | 257 | 255 | 252 | 248 | 243 | 237 | 231 | EX7 |
| | | 352 | 529 | 619 | 667 | 686 | 688 | 686 | 681 | 672 | 661 | 648 | 633 | 617 | EX8 |
| 55 | | | 8.5 | 10.8 | 12.1 | 12.7 | 12.8 | 12.9 | 12.8 | 12.7 | 12.6 | 12.4 | 12.1 | 11.9 | EX4 |
| | | | 26 | 33 | 37 | 38 | 39 | 39 | 39 | 39 | 38 | 37 | 37 | 36 | EX5 |
| | | | 61 | 79 | 88 | 92 | 93 | 93 | 93 | 93 | 91 | 90 | 88 | 86 | EX6 |
| | | | 169 | 216 | 242 | 254 | 256 | 257 | 256 | 254 | 251 | 247 | 243 | 237 | EX7 |
| | | | 451 | 577 | 644 | 676 | 683 | 686 | 684 | 678 | 670 | 660 | 647 | 633 | EX8 |
| 50 | | | 6.2 | 9.7 | 11.4 | 12.3 | 12.5 | 12.7 | 12.7 | 12.7 | 12.6 | 12.4 | 12.2 | 12.0 | EX4 |
| | | | 19 | 29 | 35 | 37 | 38 | 38 | 39 | 38 | 38 | 38 | 37 | 36 | EX5 |
| | | | 45 | 70 | 83 | 89 | 91 | 92 | 92 | 92 | 91 | 90 | 89 | 87 | EX6 |
| | | | 123 | 193 | 228 | 246 | 251 | 253 | 254 | 254 | 252 | 249 | 245 | 240 | EX7 |
| | | | 328 | 515 | 608 | 656 | 668 | 675 | 678 | 676 | 671 | 663 | 653 | 641 | EX8 |
| 45 | | | | 8.0 | 10.4 | 11.7 | 12.1 | 12.3 | 12.4 | 12.5 | 12.4 | 12.3 | 12.2 | 12.0 | EX4 |
| | | | | 24 | 32 | 35 | 37 | 37 | 38 | 38 | 38 | 37 | 37 | 36 | EX5 |
| | | | | 58 | 76 | 85 | 88 | 89 | 90 | 91 | 90 | 90 | 89 | 87 | EX6 |
| | | | | 160 | 209 | 234 | 241 | 246 | 248 | 249 | 249 | 247 | 244 | 241 | EX7 |
| | | | | 426 | 556 | 623 | 643 | 655 | 663 | 665 | 663 | 659 | 651 | 641 | EX8 |
| 40 | | | | 5.4 | 9.1 | 10.8 | 11.4 | 11.7 | 12.0 | 12.1 | 12.1 | 12.1 | 12.0 | 11.9 | EX4 |
| | | | | 16 | 28 | 33 | 34 | 36 | 36 | 37 | 37 | 37 | 36 | 36 | EX5 |
| | | | | 39 | 66 | 79 | 83 | 85 | 87 | 88 | 88 | 88 | 87 | 87 | EX6 |
| | | | | 107 | 182 | 217 | 227 | 235 | 239 | 242 | 243 | 242 | 241 | 238 | EX7 |
| | | | | 286 | 485 | 578 | 606 | 626 | 638 | 645 | 648 | 646 | 642 | 634 | EX8 |
| 35 | | | | | 7.2 | 9.7 | 10.4 | 11.0 | 11.3 | 11.6 | 11.7 | 11.7 | 11.7 | 11.6 | EX4 |
| | | | | | 22 | 29 | 32 | 33 | 34 | 35 | 35 | 36 | 35 | 35 | EX5 |
| | | | | | 52 | 71 | 76 | 80 | 82 | 84 | 85 | 85 | 85 | 85 | EX6 |
| | | | | | 144 | 194 | 209 | 219 | 227 | 231 | 234 | 235 | 234 | 233 | EX7 |
| | | | | | 384 | 518 | 557 | 585 | 604 | 616 | 623 | 626 | 625 | 620 | EX8 |
| 30 | | | | | 4.1 | 8.2 | 9.2 | 10.0 | 10.5 | 10.8 | 11.1 | 11.2 | 11.3 | 11.2 | EX4 |
| | | | | | 12 | 25 | 28 | 30 | 32 | 33 | 34 | 34 | 34 | 34 | EX5 |
| | | | | | 30 | 60 | 67 | 72 | 76 | 79 | 81 | 81 | 82 | 82 | EX6 |
| | | | | | 82 | 164 | 185 | 199 | 210 | 217 | 221 | 224 | 225 | 225 | EX7 |
| | | | | | 219 | 437 | 492 | 531 | 559 | 578 | 591 | 598 | 600 | 599 | EX8 |
| 25 | | | | | | 6.0 | 7.6 | 8.7 | 9.4 | 9.9 | 10.3 | 10.5 | 10.6 | 10.7 | EX4 |
| | | | | | | 18 | 23 | 26 | 29 | 30 | 31 | 32 | 32 | 32 | EX5 |
| | | | | | | 44 | 55 | 63 | 68 | 72 | 75 | 76 | 77 | 78 | EX6 |
| | | | | | | 121 | 152 | 173 | 188 | 199 | 206 | 210 | 213 | 214 | EX7 |
| | | | | | | 322 | 406 | 462 | 502 | 529 | 548 | 561 | 568 | 570 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R1234ze | | | | | | | | | | | | | | Valve type |
|-----------------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| | Capacity (kW) | | | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | | | |
| | 55 | 50 | 40 | 30 | 20 | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | |
| 80 | 8 | 9 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 6 | EX4 |
| | 26 | 27 | 29 | 29 | 29 | 27 | 27 | 26 | 25 | 24 | 22 | 21 | 20 | 19 | EX5 |
| | 62 | 65 | 69 | 70 | 69 | 66 | 64 | 62 | 59 | 57 | 54 | 51 | 48 | 45 | EX6 |
| | 170 | 180 | 191 | 193 | 189 | 181 | 176 | 170 | 163 | 156 | 148 | 140 | 132 | 123 | EX7 |
| | 452 | 479 | 509 | 515 | 505 | 483 | 469 | 452 | 434 | 415 | 395 | 374 | 352 | 329 | EX8 |
| 70 | 7 | 8 | 9 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | EX4 |
| | 21 | 24 | 28 | 30 | 30 | 30 | 29 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | EX5 |
| | 50 | 58 | 67 | 71 | 73 | 71 | 70 | 69 | 67 | 65 | 63 | 60 | 58 | 55 | EX6 |
| | 137 | 158 | 184 | 196 | 200 | 197 | 193 | 189 | 184 | 179 | 173 | 166 | 159 | 152 | EX7 |
| | 365 | 422 | 491 | 523 | 532 | 524 | 516 | 505 | 492 | 477 | 460 | 442 | 424 | 404 | EX8 |
| 60 | | 5 | 8 | 9 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 8 | EX4 |
| | | 15 | 23 | 28 | 30 | 30 | 30 | 30 | 29 | 29 | 28 | 27 | 26 | 26 | EX5 |
| | | 35 | 56 | 66 | 71 | 72 | 72 | 71 | 70 | 69 | 67 | 66 | 63 | 61 | EX6 |
| | | 97 | 155 | 182 | 195 | 199 | 198 | 196 | 193 | 190 | 185 | 180 | 175 | 169 | EX7 |
| | | 258 | 413 | 485 | 519 | 529 | 528 | 523 | 516 | 506 | 494 | 481 | 466 | 450 | EX8 |
| 55 | | | 6 | 8 | 9 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | EX4 |
| | | | 19 | 25 | 28 | 29 | 30 | 30 | 29 | 29 | 28 | 28 | 27 | 26 | EX5 |
| | | | 46 | 61 | 68 | 71 | 71 | 71 | 70 | 70 | 68 | 67 | 65 | 63 | EX6 |
| | | | 128 | 167 | 187 | 195 | 196 | 195 | 194 | 191 | 188 | 183 | 179 | 173 | EX7 |
| | | | 341 | 446 | 498 | 519 | 522 | 521 | 517 | 510 | 500 | 489 | 476 | 462 | EX8 |
| 50 | | | 4 | 7 | 9 | 9 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | EX4 |
| | | | 13 | 22 | 26 | 28 | 29 | 29 | 29 | 29 | 28 | 28 | 27 | 27 | EX5 |
| | | | 30 | 53 | 63 | 68 | 69 | 70 | 70 | 69 | 68 | 67 | 66 | 64 | EX6 |
| | | | 83 | 146 | 174 | 187 | 190 | 192 | 191 | 190 | 187 | 184 | 180 | 176 | EX7 |
| | | | 222 | 390 | 465 | 500 | 508 | 511 | 510 | 506 | 500 | 491 | 480 | 468 | EX8 |
| 45 | | | | 6 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | EX4 |
| | | | | 17 | 24 | 27 | 28 | 28 | 28 | 28 | 28 | 28 | 27 | 27 | EX5 |
| | | | | 42 | 57 | 64 | 66 | 67 | 68 | 68 | 67 | 66 | 65 | 64 | EX6 |
| | | | | 115 | 157 | 176 | 182 | 185 | 186 | 186 | 185 | 182 | 179 | 176 | EX7 |
| | | | | 307 | 418 | 470 | 485 | 493 | 496 | 496 | 493 | 487 | 478 | 468 | EX8 |
| 40 | | | | 3 | 7 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | EX4 |
| | | | | 9 | 20 | 24 | 26 | 26 | 27 | 27 | 27 | 27 | 27 | 26 | EX5 |
| | | | | 22 | 48 | 59 | 62 | 64 | 65 | 65 | 65 | 65 | 64 | 63 | EX6 |
| | | | | 62 | 132 | 161 | 169 | 175 | 178 | 179 | 179 | 178 | 176 | 173 | EX7 |
| | | | | 164 | 353 | 430 | 452 | 466 | 475 | 479 | 479 | 475 | 470 | 462 | EX8 |
| 35 | | | | | 5 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 8 | EX4 |
| | | | | | 15 | 21 | 23 | 24 | 25 | 26 | 26 | 26 | 26 | 26 | EX5 |
| | | | | | 35 | 51 | 56 | 59 | 61 | 62 | 62 | 62 | 62 | 61 | EX6 |
| | | | | | 97 | 141 | 153 | 161 | 167 | 170 | 172 | 172 | 171 | 169 | EX7 |
| | | | | | 257 | 376 | 408 | 430 | 445 | 453 | 457 | 458 | 455 | 450 | EX8 |
| 30 | | | | | 0 | 6 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | EX4 |
| | | | | | 1 | 17 | 20 | 22 | 23 | 24 | 24 | 25 | 25 | 25 | EX5 |
| | | | | | 3 | 41 | 48 | 52 | 55 | 57 | 58 | 59 | 59 | 59 | EX6 |
| | | | | | 9 | 113 | 131 | 143 | 152 | 157 | 161 | 162 | 163 | 162 | EX7 |
| | | | | | 23 | 301 | 349 | 382 | 405 | 420 | 429 | 433 | 434 | 432 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R452A | | | | | | | | | | | | | | | | Valve type |
|-------------------------------|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------------|
| | Capacity (kW) | | | | | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | | | | | |
| | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | -35 | -40 | -45 | -50 | -55 | -60 | -70 | |
| 60 bubble/ 62.4 dew point | 10.3 | 10.3 | 10.1 | 10.0 | 9.7 | 9.4 | 9.1 | 8.8 | 8.4 | 8.0 | 7.6 | 7.1 | 6.7 | 6.2 | 5.7 | 4.8 | EX4 |
| | 31 | 31 | 31 | 30 | 29 | 29 | 28 | 27 | 25 | 24 | 23 | 22 | 20 | 19 | 17 | 15 | EX5 |
| | 75 | 75 | 74 | 72 | 71 | 69 | 66 | 64 | 61 | 58 | 55 | 52 | 49 | 45 | 42 | 35 | EX6 |
| | 207 | 206 | 203 | 199 | 194 | 189 | 182 | 175 | 168 | 160 | 151 | 143 | 134 | 124 | 115 | 96 | EX7 |
| | 552 | 548 | 541 | 531 | 518 | 503 | 486 | 468 | 447 | 426 | 404 | 380 | 356 | 331 | 306 | 255 | EX8 |
| 50 bubble/ 53.1 dew point | 11.5 | 11.6 | 11.6 | 11.5 | 11.4 | 11.2 | 11.0 | 10.7 | 10.4 | 10.1 | 9.7 | 9.4 | 9.0 | 8.6 | 8.1 | 7.2 | EX4 |
| | 35 | 35 | 35 | 35 | 35 | 34 | 33 | 33 | 32 | 31 | 30 | 28 | 27 | 26 | 25 | 22 | EX5 |
| | 83 | 84 | 84 | 84 | 83 | 82 | 80 | 78 | 76 | 74 | 71 | 68 | 65 | 62 | 59 | 53 | EX6 |
| | 229 | 231 | 232 | 231 | 228 | 225 | 220 | 215 | 209 | 202 | 195 | 187 | 179 | 171 | 162 | 145 | EX7 |
| | 611 | 617 | 618 | 615 | 609 | 599 | 587 | 573 | 557 | 539 | 520 | 499 | 478 | 456 | 433 | 387 | EX8 |
| 40 bubble/ 43.6 dew point | 11.4 | 11.7 | 11.9 | 12.0 | 12.1 | 12.0 | 11.9 | 11.7 | 11.5 | 11.3 | 11.0 | 10.7 | 10.3 | 10.0 | 9.6 | 8.8 | EX4 |
| | 34 | 35 | 36 | 36 | 37 | 36 | 36 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 27 | EX5 |
| | 83 | 85 | 87 | 88 | 88 | 87 | 87 | 85 | 84 | 82 | 80 | 78 | 75 | 73 | 70 | 64 | EX6 |
| | 227 | 234 | 239 | 241 | 241 | 240 | 238 | 235 | 231 | 226 | 220 | 214 | 207 | 200 | 192 | 177 | EX7 |
| | 606 | 624 | 636 | 642 | 644 | 641 | 635 | 626 | 615 | 602 | 586 | 569 | 551 | 532 | 513 | 471 | EX8 |
| 30 bubble/ 33.9 dew point | 10.1 | 10.8 | 11.3 | 11.7 | 11.9 | 12.0 | 12.1 | 12.0 | 11.9 | 11.7 | 11.5 | 11.3 | 11.0 | 10.7 | 10.4 | 9.8 | EX4 |
| | 31 | 33 | 34 | 35 | 36 | 36 | 37 | 36 | 36 | 36 | 35 | 34 | 33 | 33 | 32 | 30 | EX5 |
| | 74 | 79 | 82 | 85 | 87 | 87 | 88 | 87 | 87 | 85 | 84 | 82 | 80 | 78 | 76 | 71 | EX6 |
| | 202 | 217 | 227 | 234 | 238 | 240 | 241 | 240 | 238 | 235 | 231 | 226 | 221 | 215 | 209 | 195 | EX7 |
| | 540 | 578 | 605 | 623 | 635 | 641 | 643 | 640 | 635 | 626 | 616 | 603 | 589 | 573 | 557 | 521 | EX8 |
| 20 bubble/ 24 dew point | 7.3 | 8.7 | 9.7 | 10.4 | 10.9 | 11.3 | 11.5 | 11.6 | 11.6 | 11.6 | 11.5 | 11.3 | 11.2 | 10.9 | 10.7 | 10.2 | EX4 |
| | 22 | 26 | 29 | 32 | 33 | 34 | 35 | 35 | 35 | 35 | 35 | 34 | 34 | 33 | 32 | 31 | EX5 |
| | 53 | 64 | 71 | 76 | 79 | 82 | 84 | 84 | 85 | 84 | 84 | 83 | 81 | 80 | 78 | 74 | EX6 |
| | 147 | 175 | 194 | 209 | 219 | 225 | 230 | 232 | 233 | 232 | 230 | 227 | 223 | 219 | 214 | 203 | EX7 |
| | 391 | 466 | 519 | 556 | 583 | 601 | 613 | 619 | 620 | 618 | 613 | 605 | 595 | 584 | 571 | 541 | EX8 |
| 10 bubble/ 14.1 dew point | | | 6.5 | 8.0 | 9.0 | 9.7 | 10.2 | 10.5 | 10.7 | 10.8 | 10.9 | 10.8 | 10.7 | 10.6 | 10.4 | 10.0 | EX4 |
| | | | 20 | 24 | 27 | 29 | 31 | 32 | 33 | 33 | 33 | 33 | 33 | 32 | 32 | 30 | EX5 |
| | | | 48 | 58 | 65 | 70 | 74 | 76 | 78 | 79 | 79 | 79 | 78 | 77 | 76 | 73 | EX6 |
| | | | 131 | 160 | 180 | 194 | 204 | 210 | 215 | 217 | 217 | 217 | 215 | 212 | 209 | 200 | EX7 |
| | | | 349 | 427 | 480 | 517 | 543 | 561 | 572 | 578 | 580 | 578 | 573 | 566 | 557 | 535 | EX8 |
| 0 bubble/ 4.1 dew point | | | | | 5.4 | 6.9 | 7.9 | 8.6 | 9.1 | 9.4 | 9.6 | 9.8 | 9.8 | 9.8 | 9.7 | 9.4 | EX4 |
| | | | | | 16 | 21 | 24 | 26 | 28 | 29 | 29 | 30 | 30 | 30 | 29 | 29 | EX5 |
| | | | | | 39 | 50 | 58 | 63 | 66 | 69 | 70 | 71 | 71 | 71 | 70 | 68 | EX6 |
| | | | | | 107 | 138 | 159 | 173 | 182 | 189 | 193 | 195 | 196 | 195 | 194 | 188 | EX7 |
| | | | | | 286 | 369 | 423 | 460 | 486 | 504 | 514 | 520 | 522 | 520 | 516 | 502 | EX8 |
| -10 bubble/ -5.9 dew point | | | | | | | 3.5 | 5.4 | 6.5 | 7.2 | 7.7 | 8.0 | 8.2 | 8.4 | 8.4 | 8.3 | EX4 |
| | | | | | | | 11 | 16 | 20 | 22 | 23 | 24 | 25 | 25 | 25 | 25 | EX5 |
| | | | | | | | 26 | 39 | 47 | 52 | 56 | 58 | 60 | 61 | 61 | 60 | EX6 |
| | | | | | | | 70 | 108 | 130 | 144 | 154 | 161 | 165 | 167 | 168 | 166 | EX7 |
| | | | | | | | 187 | 287 | 346 | 385 | 411 | 429 | 440 | 446 | 448 | 443 | EX8 |
| -20 bubble/ -16 dew point | | | | | | | | | | | 3.0 | 4.5 | 5.3 | 5.9 | 6.2 | 6.5 | EX4 |
| | | | | | | | | | | | 9 | 14 | 16 | 18 | 19 | 20 | EX5 |
| | | | | | | | | | | | 22 | 32 | 39 | 43 | 45 | 47 | EX6 |
| | | | | | | | | | | | 60 | 89 | 106 | 117 | 125 | 129 | EX7 |
| | | | | | | | | | | | 160 | 238 | 284 | 313 | 332 | 344 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R23 | | | | | | | | | | | | Valve type |
|-----------------------------|------------------------------|-----|-----|------|------|------|------|------|------|------|------|------|------------|
| | Capacity (kW) | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | |
| | -20 | -30 | -35 | -40 | -45 | -50 | -55 | -60 | -65 | -70 | -75 | -80 | |
| 10 | 16 | 17 | 18 | 18 | 18.6 | 18.8 | 18.9 | 18.9 | 18.9 | 18.8 | 18.6 | 18.4 | EX4 |
| | 48 | 53 | 54 | 56 | 56 | 57 | 57 | 57 | 57 | 57 | 56 | 56 | EX5 |
| | 115 | 127 | 131 | 133 | 136 | 137 | 138 | 138 | 137 | 137 | 136 | 134 | EX6 |
| | 318 | 348 | 359 | 367 | 373 | 377 | 379 | 379 | 378 | 376 | 373 | 369 | EX7 |
| 0 | 14 | 17 | 18 | 18 | 18.7 | 19.1 | 19.3 | 19.5 | 19.6 | 19.6 | 19.5 | 19.3 | EX4 |
| | 43 | 50 | 53 | 55 | 57 | 58 | 59 | 59 | 59 | 59 | 59 | 59 | EX5 |
| | 103 | 121 | 127 | 132 | 136 | 139 | 141 | 142 | 142 | 142 | 142 | 141 | EX6 |
| | 283 | 333 | 350 | 364 | 374 | 381 | 387 | 390 | 391 | 391 | 390 | 387 | EX7 |
| -10 | 10 | 14 | 16 | 17 | 17.4 | 18.1 | 18.5 | 18.9 | 19.1 | 19.2 | 19.3 | 19.2 | EX4 |
| | 29 | 43 | 47 | 50 | 53 | 55 | 56 | 57 | 58 | 58 | 58 | 58 | EX5 |
| | 71 | 103 | 113 | 121 | 127 | 131 | 135 | 137 | 139 | 140 | 140 | 140 | EX6 |
| | 195 | 283 | 311 | 332 | 349 | 362 | 371 | 378 | 382 | 384 | 385 | 384 | EX7 |
| -15 | | 12 | 14 | 15 | 16.4 | 17.2 | 17.8 | 18.2 | 18.5 | 18.7 | 18.8 | 18.9 | EX4 |
| | | 37 | 42 | 46 | 50 | 52 | 54 | 55 | 56 | 57 | 57 | 57 | EX5 |
| | | 88 | 101 | 111 | 119 | 125 | 129 | 133 | 135 | 136 | 137 | 137 | EX6 |
| | | 242 | 279 | 306 | 328 | 344 | 356 | 365 | 371 | 375 | 377 | 377 | EX7 |
| -20 | 9 | 12 | 14 | 15.0 | 16.0 | 16.8 | 17.4 | 17.8 | 18.1 | 18.2 | 18.3 | EX4 | |
| | 28 | 36 | 41 | 45 | 48 | 51 | 53 | 54 | 55 | 55 | 56 | EX5 | |
| | 66 | 86 | 99 | 109 | 116 | 122 | 126 | 129 | 131 | 133 | 133 | EX6 | |
| | 183 | 235 | 272 | 299 | 320 | 336 | 347 | 356 | 361 | 365 | 366 | EX7 | |
| -25 | | | 9 | 11 | 13 | 14 | 15.5 | 16.2 | 16.8 | 17.2 | 17.4 | 17.6 | EX4 |
| | | | 26 | 34 | 40 | 44 | 47 | 49 | 51 | 52 | 53 | 53 | EX5 |
| | | | 63 | 82 | 96 | 105 | 113 | 118 | 122 | 125 | 127 | 128 | EX6 |
| | | | 173 | 226 | 263 | 290 | 310 | 325 | 336 | 344 | 349 | 352 | EX7 |
| -30 | | | | 8 | 11 | 13 | 14 | 15 | 15.6 | 16.1 | 16.5 | 16.7 | EX4 |
| | | | | 24 | 33 | 38 | 42 | 45 | 47 | 49 | 50 | 51 | EX5 |
| | | | | 59 | 78 | 91 | 101 | 108 | 113 | 117 | 120 | 121 | EX6 |
| | | | | 161 | 215 | 252 | 278 | 297 | 312 | 322 | 329 | 334 | EX7 |
| -35 | | | | | 7 | 10 | 12 | 13 | 14 | 15 | 15.3 | 15.6 | EX4 |
| | | | | | 22 | 30 | 36 | 40 | 43 | 45 | 46 | 47 | EX5 |
| | | | | | 53 | 73 | 86 | 96 | 102 | 107 | 111 | 113 | EX6 |
| | | | | | 146 | 201 | 237 | 263 | 282 | 295 | 305 | 312 | EX7 |
| -40 | | | | | | 6 | 9 | 11 | 12 | 13 | 14 | 14 | EX4 |
| | | | | | | 19 | 28 | 33 | 37 | 40 | 42 | 43 | EX5 |
| | | | | | | 46 | 67 | 80 | 89 | 96 | 101 | 104 | EX6 |
| | | | | | | 127 | 184 | 220 | 246 | 264 | 277 | 286 | EX7 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R32 | | | | | | | | | | Valve type |
|-----------------------------|------------------------------|------|------|------|------|------|------|------|------|------|------------|
| | Capacity (kW) | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | |
| | 20 | 15 | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | |
| 65 | 26.2 | 27.1 | 27.8 | 28.4 | 28.9 | 29.3 | 29.5 | 29.7 | 29.7 | 29.7 | EX4 |
| | 79 | 82 | 84 | 86 | 88 | 89 | 89 | 90 | 90 | 90 | EX5 |
| | 190 | 197 | 202 | 207 | 210 | 213 | 215 | 216 | 216 | 216 | EX6 |
| | 523 | 542 | 557 | 569 | 578 | 585 | 590 | 593 | 595 | 594 | EX7* |
| | 1396 | 1445 | 1485 | 1517 | 1542 | 1561 | 1575 | 1583 | 1586 | 1585 | EX8* |
| 60 | 26.6 | 27.7 | 28.7 | 29.4 | 30.0 | 30.5 | 30.8 | 31.0 | 31.2 | 31.2 | EX4 |
| | 81 | 84 | 87 | 89 | 91 | 92 | 93 | 94 | 94 | 95 | EX5 |
| | 194 | 202 | 208 | 214 | 218 | 222 | 224 | 226 | 227 | 227 | EX6 |
| | 533 | 555 | 573 | 588 | 600 | 609 | 616 | 621 | 623 | 624 | EX7* |
| | 1421 | 1480 | 1529 | 1568 | 1600 | 1624 | 1643 | 1655 | 1662 | 1665 | EX8* |
| 50 | 25.4 | 27.0 | 28.3 | 29.4 | 30.3 | 31.0 | 31.5 | 31.9 | 32.2 | 32.4 | EX4 |
| | 77 | 82 | 86 | 89 | 92 | 94 | 96 | 97 | 98 | 98 | EX5 |
| | 185 | 196 | 206 | 214 | 220 | 225 | 229 | 232 | 234 | 236 | EX6 |
| | 509 | 540 | 566 | 588 | 605 | 619 | 630 | 639 | 645 | 648 | EX7* |
| | 1356 | 1441 | 1510 | 1568 | 1614 | 1652 | 1681 | 1703 | 1719 | 1728 | EX8* |
| 40 | 21.7 | 24.0 | 25.9 | 27.4 | 28.7 | 29.7 | 30.5 | 31.2 | 31.6 | 32.0 | EX4 |
| | 66 | 73 | 78 | 83 | 87 | 90 | 92 | 94 | 96 | 97 | EX5 |
| | 158 | 175 | 188 | 199 | 209 | 216 | 222 | 227 | 230 | 233 | EX6 |
| | 433 | 480 | 518 | 549 | 574 | 594 | 610 | 623 | 633 | 640 | EX7* |
| | 1156 | 1280 | 1381 | 1463 | 1530 | 1584 | 1627 | 1661 | 1687 | 1706 | EX8* |
| 30 | 14.4 | 18.4 | 21.3 | 23.6 | 25.4 | 26.9 | 28.1 | 29.0 | 29.8 | 30.3 | EX4 |
| | 43 | 56 | 65 | 72 | 77 | 82 | 85 | 88 | 90 | 92 | EX5 |
| | 104 | 134 | 155 | 172 | 185 | 196 | 204 | 211 | 216 | 221 | EX6 |
| | 287 | 367 | 427 | 472 | 509 | 538 | 562 | 581 | 595 | 607 | EX7* |
| | 765 | 980 | 1137 | 1260 | 1357 | 1435 | 1498 | 1548 | 1587 | 1617 | EX8* |
| 20 | | | 13.3 | 17.4 | 20.3 | 22.5 | 24.3 | 25.6 | 26.7 | 27.6 | EX4 |
| | | | 40 | 53 | 62 | 68 | 74 | 78 | 81 | 84 | EX5 |
| | | | 97 | 127 | 148 | 164 | 177 | 187 | 194 | 201 | EX6 |
| | | | 266 | 348 | 406 | 451 | 485 | 513 | 535 | 552 | EX7* |
| | | | 710 | 928 | 1083 | 1202 | 1294 | 1368 | 1426 | 1471 | EX8* |
| 10 | | | | | 11.7 | 15.8 | 18.7 | 20.8 | 22.5 | 23.7 | EX4 |
| | | | | | 35 | 48 | 57 | 63 | 68 | 72 | EX5 |
| | | | | | 85 | 115 | 136 | 152 | 163 | 173 | EX6 |
| | | | | | 234 | 317 | 374 | 417 | 450 | 475 | EX7* |
| | | | | | 623 | 845 | 997 | 1111 | 1199 | 1266 | EX8* |

Note1: *) Upgrade certification according to PED, from hazard category I to hazard category II is pending.

Note2: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R452B/R454B | | | | | | | | | | Valve type |
|-----------------------------|------------------------------|------|------|------|------|------|------|------|------|------|------------|
| | Capacity (kW) | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | |
| | 20 | 15 | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | |
| 65 bubble point | 19.0 | 19.5 | 19.9 | 20.2 | 20.4 | 20.5 | 20.5 | 20.4 | 20.3 | 20.2 | EX4 |
| | 57 | 59 | 60 | 61 | 62 | 62 | 62 | 62 | 62 | 61 | EX5 |
| | 138 | 142 | 145 | 147 | 148 | 149 | 149 | 149 | 148 | 147 | EX6 |
| | 379 | 390 | 398 | 403 | 407 | 409 | 410 | 409 | 407 | 403 | EX7* |
| | 1011 | 1039 | 1060 | 1076 | 1086 | 1092 | 1093 | 1091 | 1085 | 1076 | EX8* |
| 60 bubble point | 19.7 | 20.4 | 21.0 | 21.4 | 21.7 | 21.8 | 21.9 | 22.0 | 21.9 | 21.8 | EX4 |
| | 60 | 62 | 63 | 65 | 66 | 66 | 67 | 67 | 66 | 66 | EX5 |
| | 144 | 149 | 152 | 155 | 157 | 159 | 160 | 160 | 159 | 159 | EX6 |
| | 395 | 408 | 419 | 427 | 433 | 437 | 439 | 439 | 438 | 436 | EX7* |
| | 1053 | 1089 | 1117 | 1139 | 1155 | 1165 | 1170 | 1172 | 1169 | 1163 | EX8* |
| 50 bubble point | 19.4 | 20.5 | 21.3 | 22.0 | 22.5 | 22.9 | 23.2 | 23.3 | 23.4 | 23.4 | EX4 |
| | 59 | 62 | 65 | 67 | 68 | 69 | 70 | 71 | 71 | 71 | EX5 |
| | 141 | 149 | 155 | 160 | 164 | 167 | 169 | 170 | 170 | 170 | EX6 |
| | 388 | 409 | 426 | 440 | 450 | 458 | 464 | 467 | 469 | 469 | EX7* |
| | 1036 | 1092 | 1137 | 1173 | 1201 | 1221 | 1236 | 1245 | 1250 | 1250 | EX8* |
| 40 bubble point | 17.0 | 18.6 | 19.9 | 21.0 | 21.8 | 22.4 | 22.9 | 23.3 | 23.5 | 23.7 | EX4 |
| | 52 | 57 | 60 | 64 | 66 | 68 | 69 | 71 | 71 | 72 | EX5 |
| | 124 | 136 | 145 | 153 | 159 | 163 | 167 | 169 | 171 | 172 | EX6 |
| | 340 | 373 | 399 | 420 | 436 | 449 | 459 | 466 | 471 | 473 | EX7* |
| | 908 | 994 | 1064 | 1119 | 1163 | 1197 | 1223 | 1242 | 1255 | 1262 | EX8* |
| 30 bubble point | 11.9 | 14.8 | 16.9 | 18.5 | 19.7 | 20.7 | 21.5 | 22.1 | 22.6 | 22.9 | EX4 |
| | 36 | 45 | 51 | 56 | 60 | 63 | 65 | 67 | 68 | 69 | EX5 |
| | 87 | 107 | 123 | 134 | 144 | 151 | 157 | 161 | 164 | 166 | EX6 |
| | 239 | 295 | 337 | 369 | 395 | 415 | 430 | 442 | 451 | 458 | EX7* |
| | 637 | 787 | 899 | 985 | 1053 | 1106 | 1148 | 1180 | 1204 | 1220 | EX8* |
| 20 bubble point | | | 11.2 | 14.1 | 16.1 | 17.7 | 19.0 | 19.9 | 20.6 | 21.2 | EX4 |
| | | | 34 | 43 | 49 | 54 | 57 | 60 | 63 | 64 | EX5 |
| | | | 81 | 102 | 117 | 129 | 138 | 145 | 150 | 154 | EX6 |
| | | | 223 | 281 | 323 | 355 | 379 | 398 | 413 | 424 | EX7* |
| | | | 595 | 750 | 861 | 946 | 1011 | 1062 | 1101 | 1130 | EX8* |
| 10 bubble point | | | | | 9.9 | 12.9 | 14.9 | 16.5 | 17.7 | 18.5 | EX4 |
| | | | | | 30 | 39 | 45 | 50 | 54 | 56 | EX5 |
| | | | | | 72 | 94 | 109 | 120 | 128 | 135 | EX6 |
| | | | | | 198 | 257 | 299 | 330 | 353 | 371 | EX7* |
| | | | | | 527 | 687 | 797 | 879 | 942 | 989 | EX8* |

Note1: *) Upgrade certification according to PED, from hazard category I to hazard category II is pending.

Note2: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R410A Capacity (kW) | | | | | | | | | Valve type |
|-----------------------------|------------------------------|------|------|------|------|------|------|------|------|------------|
| | Evaporating temperature (°C) | | | | | | | | | |
| | 40 | 30 | 20 | 10 | 0 | -10 | -20 | -30 | -40 | |
| 68 | 11.4 | 13.0 | 13.9 | 14.5 | 14.6 | 14.5 | 14.2 | 13.7 | 13.0 | EX4 |
| | 35 | 39 | 42 | 44 | 44 | 44 | 43 | 41 | 39 | EX5 |
| | 83 | 94 | 101 | 105 | 106 | 106 | 103 | 100 | 95 | EX6 |
| | 228 | 259 | 279 | 289 | 293 | 291 | 284 | 274 | 260 | EX7 |
| | 609 | 691 | 743 | 771 | 781 | 775 | 758 | 730 | 694 | EX8 |
| 60 | 12.4 | 14.8 | 16.4 | 17.4 | 17.9 | 18.0 | 17.9 | 17.5 | 16.9 | EX4 |
| | 37 | 45 | 50 | 53 | 54 | 55 | 54 | 53 | 51 | EX5 |
| | 90 | 108 | 119 | 126 | 130 | 131 | 130 | 127 | 123 | EX6 |
| | 247 | 296 | 328 | 348 | 358 | 361 | 358 | 350 | 338 | EX7 |
| | 659 | 790 | 875 | 927 | 955 | 962 | 954 | 933 | 902 | EX8 |
| 50 | 9.7 | 14.0 | 16.6 | 18.3 | 19.3 | 19.8 | 19.9 | 19.7 | 19.3 | EX4 |
| | 29 | 42 | 50 | 55 | 58 | 60 | 60 | 60 | 59 | EX5 |
| | 71 | 102 | 121 | 133 | 140 | 144 | 145 | 143 | 140 | EX6 |
| | 194 | 280 | 333 | 366 | 386 | 396 | 398 | 395 | 386 | EX7 |
| | 518 | 747 | 887 | 975 | 1029 | 1056 | 1062 | 1052 | 1030 | EX8 |
| 40 | | 10.1 | 14.7 | 17.4 | 19.0 | 20.0 | 20.5 | 20.5 | 20.3 | EX4 |
| | | 31 | 45 | 53 | 58 | 61 | 62 | 62 | 62 | EX5 |
| | | 74 | 107 | 126 | 138 | 145 | 149 | 149 | 148 | EX6 |
| | | 203 | 294 | 348 | 381 | 400 | 409 | 411 | 406 | EX7 |
| | | 541 | 784 | 927 | 1015 | 1067 | 1091 | 1095 | 1084 | EX8 |
| 30 | | | 10.0 | 14.7 | 17.4 | 19.0 | 19.9 | 20.3 | 20.3 | EX4 |
| | | | 30 | 45 | 53 | 58 | 60 | 62 | 62 | EX5 |
| | | | 73 | 107 | 127 | 138 | 145 | 148 | 148 | EX6 |
| | | | 200 | 295 | 348 | 380 | 398 | 406 | 407 | EX7 |
| | | | 534 | 786 | 928 | 1013 | 1061 | 1083 | 1084 | EX8 |
| 20 | | | | 9.4 | 14.2 | 16.8 | 18.4 | 19.2 | 19.5 | EX4 |
| | | | | 28 | 43 | 51 | 56 | 58 | 59 | EX5 |
| | | | | 68 | 103 | 122 | 133 | 139 | 142 | EX6 |
| | | | | 188 | 284 | 337 | 367 | 383 | 390 | EX7 |
| | | | | 501 | 758 | 898 | 979 | 1023 | 1040 | EX8 |
| 10 | | | | | 8.3 | 13.2 | 15.8 | 17.2 | 17.9 | EX4 |
| | | | | | 25 | 40 | 48 | 52 | 54 | EX5 |
| | | | | | 60 | 96 | 115 | 125 | 130 | EX6 |
| | | | | | 166 | 265 | 315 | 344 | 358 | EX7 |
| | | | | | 443 | 706 | 841 | 917 | 956 | EX8 |

Note1: *) Upgrade certification according to PED, from hazard category I to hazard category II is pending.

Note2: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R407C | | | | | | | | | Valve type |
|------------------------------|------------------------------|------|------|------|------|------|------|------|------|------------|
| | Capacity (kW) | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | |
| | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | |
| 60 bubble/ 63.9 dew point | 16.6 | 16.7 | 16.7 | 16.6 | 16.5 | 16.3 | 16.0 | 15.7 | 15.4 | EX4 |
| | 50 | 51 | 51 | 50 | 50 | 49 | 49 | 48 | 47 | EX5 |
| | 121 | 121 | 121 | 121 | 120 | 118 | 117 | 114 | 112 | EX6 |
| | 332 | 334 | 334 | 332 | 329 | 325 | 321 | 315 | 308 | EX7 |
| | 885 | 890 | 890 | 886 | 878 | 868 | 855 | 839 | 822 | EX8 |
| 55 bubble/ 59.2 dew point | 16.8 | 17.0 | 17.1 | 17.1 | 17.0 | 16.8 | 16.6 | 16.4 | 16.1 | EX4 |
| | 51 | 51 | 52 | 52 | 51 | 51 | 50 | 50 | 49 | EX5 |
| | 122 | 123 | 124 | 124 | 123 | 122 | 121 | 119 | 117 | EX6 |
| | 336 | 340 | 341 | 341 | 340 | 337 | 333 | 328 | 322 | EX7 |
| | 896 | 905 | 910 | 910 | 905 | 898 | 887 | 874 | 859 | EX8 |
| 50 bubble/ 54.4 dew point | 16.7 | 17.0 | 17.2 | 17.3 | 17.2 | 17.2 | 17.0 | 16.8 | 16.6 | EX4 |
| | 51 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | 50 | EX5 |
| | 122 | 124 | 125 | 125 | 125 | 125 | 124 | 122 | 121 | EX6 |
| | 335 | 340 | 344 | 345 | 345 | 343 | 340 | 336 | 332 | EX7 |
| | 892 | 907 | 916 | 920 | 920 | 915 | 908 | 897 | 884 | EX8 |
| 45 bubble/ 49.6 dew point | 16.4 | 16.8 | 17.1 | 17.2 | 17.3 | 17.3 | 17.2 | 17.0 | 16.8 | EX4 |
| | 50 | 51 | 52 | 52 | 52 | 52 | 52 | 52 | 51 | EX5 |
| | 119 | 122 | 124 | 125 | 126 | 126 | 125 | 124 | 123 | EX6 |
| | 328 | 336 | 341 | 345 | 346 | 346 | 344 | 341 | 337 | EX7 |
| | 874 | 896 | 910 | 919 | 922 | 922 | 917 | 909 | 899 | EX8 |
| 40 bubble/ 44.9 dew point | 16 | 16 | 16.7 | 17.0 | 17.1 | 17.2 | 17.2 | 17.1 | 16.9 | EX4 |
| | 48 | 49 | 51 | 51 | 52 | 52 | 52 | 52 | 51 | EX5 |
| | 115 | 119 | 122 | 124 | 125 | 125 | 125 | 124 | 123 | EX6 |
| | 316 | 327 | 334 | 340 | 343 | 344 | 343 | 342 | 339 | EX7 |
| | 842 | 871 | 892 | 906 | 914 | 917 | 916 | 911 | 903 | EX8 |
| 35 bubble/ 40.1 dew point | 15 | 16 | 16 | 17 | 16.8 | 16.9 | 17.0 | 16.9 | 16.8 | EX4 |
| | 45 | 47 | 49 | 50 | 51 | 51 | 51 | 51 | 51 | EX5 |
| | 108 | 114 | 117 | 120 | 122 | 123 | 123 | 123 | 123 | EX6 |
| | 298 | 312 | 323 | 331 | 336 | 338 | 339 | 339 | 337 | EX7 |
| | 794 | 833 | 861 | 881 | 895 | 902 | 905 | 903 | 898 | EX8 |
| 30 bubble/ 35.2 dew point | 14 | 15 | 15 | 16 | 16 | 16 | 16.6 | 16.6 | 16.6 | EX4 |
| | 41 | 44 | 46 | 48 | 49 | 50 | 50 | 50 | 50 | EX5 |
| | 99 | 106 | 112 | 115 | 118 | 120 | 121 | 121 | 121 | EX6 |
| | 274 | 293 | 307 | 317 | 324 | 329 | 332 | 332 | 332 | EX7 |
| | 730 | 780 | 818 | 845 | 865 | 877 | 884 | 887 | 885 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R404A | | | | | | | | | | | | | | | | Valve type |
|-----------------------------|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|------------|
| | Capacity (kW) | | | | | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | | | | | |
| | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | -35 | -40 | -45 | -50 | -55 | -60 | -70 | |
| 60 | 9.3 | 9.3 | 9.2 | 9.1 | 8.9 | 8.6 | 8.3 | 8.0 | 7.6 | 7.3 | 6.9 | 6.5 | 6.0 | 5.6 | 5.1 | 4.2 | EX4 |
| | 28 | 28 | 28 | 27 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 18 | 17 | 16 | 13 | EX5 |
| | 68 | 68 | 67 | 66 | 64 | 63 | 60 | 58 | 56 | 53 | 50 | 47 | 44 | 41 | 37 | 31 | EX6 |
| | 187 | 186 | 184 | 181 | 177 | 172 | 166 | 160 | 153 | 145 | 137 | 129 | 121 | 112 | 103 | 84 | EX7 |
| | 498 | 497 | 491 | 483 | 472 | 459 | 443 | 426 | 408 | 388 | 366 | 344 | 321 | 298 | 274 | 225 | EX8 |
| 50 | 10.4 | 10.6 | 10.7 | 10.6 | 10.6 | 10.4 | 10.2 | 10.0 | 9.7 | 9.4 | 9.1 | 8.7 | 8.4 | 8.0 | 7.6 | 6.7 | EX4 |
| | 32 | 32 | 32 | 32 | 32 | 32 | 31 | 30 | 29 | 29 | 28 | 26 | 25 | 24 | 23 | 20 | EX5 |
| | 76 | 77 | 77 | 77 | 77 | 76 | 74 | 73 | 71 | 68 | 66 | 63 | 61 | 58 | 55 | 49 | EX6 |
| | 209 | 212 | 213 | 213 | 211 | 208 | 205 | 200 | 194 | 188 | 182 | 175 | 167 | 159 | 151 | 134 | EX7 |
| | 556 | 565 | 568 | 568 | 563 | 556 | 546 | 533 | 519 | 502 | 485 | 465 | 445 | 424 | 403 | 358 | EX8 |
| 40 | 10.3 | 10.7 | 11.0 | 11.2 | 11.2 | 11.2 | 11.2 | 11.0 | 10.9 | 10.6 | 10.4 | 10.1 | 9.8 | 9.5 | 9.1 | 8.4 | EX4 |
| | 31 | 32 | 33 | 34 | 34 | 34 | 34 | 33 | 33 | 32 | 31 | 31 | 30 | 29 | 28 | 25 | EX5 |
| | 75 | 78 | 80 | 81 | 82 | 82 | 81 | 80 | 79 | 77 | 76 | 73 | 71 | 69 | 66 | 61 | EX6 |
| | 205 | 214 | 220 | 223 | 225 | 225 | 223 | 221 | 217 | 213 | 208 | 202 | 196 | 189 | 182 | 167 | EX7 |
| | 548 | 571 | 586 | 595 | 600 | 599 | 596 | 589 | 580 | 568 | 554 | 539 | 522 | 504 | 485 | 446 | EX8 |
| 30 | 8.9 | 9.7 | 10.3 | 10.8 | 11.1 | 11.2 | 11.3 | 11.3 | 11.3 | 11.1 | 11.0 | 10.8 | 10.5 | 10.3 | 10.0 | 9.3 | EX4 |
| | 27 | 29 | 31 | 33 | 33 | 34 | 34 | 34 | 34 | 34 | 33 | 33 | 32 | 31 | 30 | 28 | EX5 |
| | 64 | 71 | 75 | 78 | 80 | 82 | 82 | 82 | 82 | 81 | 80 | 78 | 77 | 75 | 73 | 68 | EX6 |
| | 177 | 194 | 206 | 215 | 221 | 225 | 226 | 226 | 225 | 223 | 220 | 215 | 211 | 205 | 199 | 187 | EX7 |
| | 473 | 518 | 551 | 574 | 590 | 599 | 604 | 604 | 601 | 594 | 585 | 574 | 562 | 547 | 532 | 498 | EX8 |
| 20 | 5.4 | 7.3 | 8.5 | 9.4 | 10.0 | 10.4 | 10.7 | 10.9 | 11.0 | 11.0 | 10.9 | 10.8 | 10.7 | 10.5 | 10.3 | 9.8 | EX4 |
| | 16 | 22 | 26 | 28 | 30 | 32 | 32 | 33 | 33 | 33 | 33 | 33 | 32 | 32 | 31 | 30 | EX5 |
| | 39 | 53 | 62 | 68 | 73 | 76 | 78 | 79 | 80 | 80 | 80 | 79 | 78 | 76 | 75 | 71 | EX6 |
| | 109 | 146 | 170 | 187 | 200 | 209 | 214 | 218 | 220 | 220 | 219 | 217 | 213 | 210 | 205 | 195 | EX7 |
| | 289 | 389 | 454 | 500 | 533 | 556 | 572 | 581 | 586 | 586 | 583 | 578 | 569 | 559 | 547 | 520 | EX8 |
| 10 | | | 4.5 | 6.6 | 7.8 | 8.7 | 9.3 | 9.8 | 10.0 | 10.2 | 10.3 | 10.3 | 10.3 | 10.2 | 10.0 | 9.6 | EX4 |
| | | | 14 | 20 | 24 | 26 | 28 | 30 | 30 | 31 | 31 | 31 | 31 | 31 | 30 | 29 | EX5 |
| | | | 33 | 48 | 57 | 63 | 68 | 71 | 73 | 74 | 75 | 75 | 75 | 74 | 73 | 70 | EX6 |
| | | | 91 | 131 | 157 | 174 | 187 | 195 | 201 | 204 | 206 | 206 | 205 | 203 | 200 | 193 | EX7 |
| | | | 242 | 350 | 418 | 464 | 497 | 520 | 536 | 545 | 549 | 550 | 547 | 542 | 534 | 514 | EX8 |
| 0 | | | | | 3.1 | 5.5 | 6.8 | 7.7 | 8.3 | 8.8 | 9.0 | 9.2 | 9.3 | 9.3 | 9.3 | 9.0 | EX4 |
| | | | | | 9 | 17 | 21 | 23 | 25 | 27 | 27 | 28 | 28 | 28 | 28 | 27 | EX5 |
| | | | | | 22 | 40 | 50 | 56 | 61 | 64 | 66 | 67 | 68 | 68 | 67 | 66 | EX6 |
| | | | | | 61 | 109 | 136 | 154 | 167 | 175 | 181 | 184 | 186 | 186 | 185 | 181 | EX7 |
| | | | | | 163 | 292 | 364 | 411 | 444 | 467 | 482 | 491 | 496 | 496 | 494 | 483 | EX8 |
| -10 | | | | | | | | 3.8 | 5.4 | 6.4 | 7.0 | 7.4 | 7.7 | 7.9 | 8.0 | 8.0 | EX4 |
| | | | | | | | | 12 | 16 | 19 | 21 | 22 | 23 | 24 | 24 | 24 | EX5 |
| | | | | | | | | 28 | 39 | 46 | 51 | 54 | 56 | 57 | 58 | 58 | EX6 |
| | | | | | | | | 76 | 108 | 127 | 140 | 148 | 154 | 158 | 159 | 159 | EX7 |
| | | | | | | | | 204 | 288 | 339 | 373 | 396 | 411 | 420 | 425 | 424 | EX8 |
| -20 | | | | | | | | | | | | 3.2 | 4.4 | 5.2 | 5.7 | 6.0 | EX4 |
| | | | | | | | | | | | | 10 | 13 | 16 | 17 | 18 | EX5 |
| | | | | | | | | | | | | 23 | 32 | 38 | 41 | 43 | EX6 |
| | | | | | | | | | | | | 64 | 89 | 104 | 113 | 119 | EX7 |
| | | | | | | | | | | | | 170 | 236 | 276 | 302 | 318 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8 Quick selection: EXPANSION VALVE / LIQUID INJECTION – EXV

(included 1.5 bar pressure drop for liquid line components and distributor)

| Condensing temperature (°C) | R124 | | | | | | | | | Valve type |
|-----------------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| | Capacity (kW) | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | |
| | 40 | 35 | 30 | 25 | 20 | 15 | 10 | 5 | 0 | |
| 100 | 7.7 | 7.5 | 7.3 | 7.1 | 6.8 | 6.5 | 6.1 | 5.8 | 5.4 | EX4 |
| | 23 | 23 | 22 | 21 | 21 | 20 | 19 | 17 | 16 | EX5 |
| | 56 | 55 | 53 | 51 | 49 | 47 | 44 | 42 | 39 | EX6 |
| | 154 | 151 | 146 | 141 | 135 | 129 | 122 | 115 | 107 | EX7 |
| | 411 | 402 | 390 | 377 | 361 | 344 | 326 | 307 | 286 | EX8 |
| 90 | 8.5 | 8.5 | 8.4 | 8.2 | 8.0 | 7.8 | 7.5 | 7.2 | 6.9 | EX4 |
| | 26 | 26 | 25 | 25 | 24 | 24 | 23 | 22 | 21 | EX5 |
| | 62 | 62 | 61 | 60 | 59 | 57 | 55 | 53 | 50 | EX6 |
| | 171 | 170 | 168 | 165 | 161 | 156 | 151 | 145 | 139 | EX7 |
| | 456 | 453 | 448 | 440 | 429 | 417 | 402 | 387 | 370 | EX8 |
| 80 | 8.7 | 8.8 | 8.8 | 8.8 | 8.7 | 8.6 | 8.4 | 8.2 | 7.9 | EX4 |
| | 26 | 27 | 27 | 27 | 26 | 26 | 25 | 25 | 24 | EX5 |
| | 63 | 64 | 64 | 64 | 63 | 62 | 61 | 60 | 58 | EX6 |
| | 173 | 176 | 176 | 176 | 174 | 172 | 168 | 164 | 159 | EX7 |
| | 462 | 468 | 471 | 469 | 465 | 457 | 448 | 436 | 423 | EX8 |
| 75 | 8.4 | 8.7 | 8.8 | 8.9 | 8.8 | 8.8 | 8.6 | 8.5 | 8.3 | EX4 |
| | 26 | 26 | 27 | 27 | 27 | 27 | 26 | 26 | 25 | EX5 |
| | 61 | 63 | 64 | 64 | 64 | 64 | 63 | 62 | 60 | EX6 |
| | 169 | 173 | 176 | 177 | 177 | 175 | 173 | 169 | 165 | EX7 |
| | 451 | 463 | 470 | 472 | 471 | 467 | 460 | 451 | 440 | EX8 |
| 70 | 8.0 | 8.4 | 8.6 | 8.8 | 8.8 | 8.8 | 8.7 | 8.6 | 8.4 | EX4 |
| | 24 | 25 | 26 | 27 | 27 | 27 | 26 | 26 | 26 | EX5 |
| | 58 | 61 | 63 | 64 | 64 | 64 | 63 | 63 | 61 | EX6 |
| | 161 | 168 | 172 | 175 | 176 | 176 | 175 | 172 | 169 | EX7 |
| | 428 | 447 | 460 | 467 | 470 | 469 | 465 | 459 | 451 | EX8 |
| 65 | 7 | 8 | 8.3 | 8.5 | 8.6 | 8.7 | 8.7 | 8.6 | 8.5 | EX4 |
| | 22 | 24 | 25 | 26 | 26 | 26 | 26 | 26 | 26 | EX5 |
| | 54 | 57 | 60 | 62 | 63 | 63 | 63 | 63 | 62 | EX6 |
| | 148 | 158 | 165 | 170 | 173 | 174 | 174 | 173 | 171 | EX7 |
| | 394 | 422 | 441 | 454 | 461 | 464 | 464 | 461 | 455 | EX8 |
| 60 | 6 | 7 | 8 | 8 | 8.3 | 8.5 | 8.5 | 8.5 | 8.5 | EX4 |
| | 20 | 22 | 23 | 25 | 25 | 26 | 26 | 26 | 26 | EX5 |
| | 47 | 52 | 56 | 59 | 61 | 62 | 62 | 62 | 62 | EX6 |
| | 129 | 144 | 154 | 162 | 167 | 170 | 171 | 171 | 170 | EX7 |
| | 343 | 384 | 412 | 432 | 445 | 452 | 456 | 456 | 453 | EX8 |
| 55 | 5 | 6 | 7 | 7 | 8 | 8 | 8.3 | 8.3 | 8.3 | EX4 |
| | 15 | 19 | 21 | 23 | 24 | 25 | 25 | 25 | 25 | EX5 |
| | 37 | 45 | 51 | 54 | 57 | 59 | 60 | 61 | 61 | EX6 |
| | 101 | 124 | 139 | 150 | 157 | 162 | 165 | 167 | 167 | EX7 |
| | 269 | 330 | 371 | 399 | 419 | 432 | 440 | 444 | 444 | EX8 |
| 50 | 3 | 5 | 6 | 7 | 7 | 8 | 8 | 8 | 8 | EX4 |
| | 8 | 14 | 18 | 20 | 22 | 23 | 24 | 24 | 24 | EX5 |
| | 19 | 34 | 43 | 48 | 52 | 55 | 57 | 58 | 59 | EX6 |
| | 52 | 94 | 117 | 133 | 144 | 151 | 157 | 160 | 161 | EX7 |
| | 138 | 250 | 313 | 354 | 384 | 404 | 417 | 426 | 430 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX5-8: Quick selection: SUCTION PRESURE REGULATOR -SPR

(evaporator or crankcase)

| Condensing temperature (°C) | Pressure drop (bar) | Valve type | R744 subcritical | | | | | | | | | | | | Valve type | |
|-----------------------------|---------------------|------------|------------------------------|-------|-------|-------|-------|-------|-----|--|--|--|--|--|------------|-----|
| | | | Capacity (kW) | | | | | | | | | | | | | |
| | | | Evaporating temperature (°C) | | | | | | | | | | | | | |
| | | | | 5 | 0 | -5 | -10 | -20 | -30 | | | | | | | |
| 20 | 0.1 | EX5 | 3.5 | 3.3 | 3.1 | 2.9 | 2.5 | 2.1 | | | | | | | | EX5 |
| | | EX6 | 8.2 | 7.7 | 7.2 | 6.7 | 5.7 | 4.8 | | | | | | | | EX6 |
| | | EX7 | 29.1 | 27.3 | 25.5 | 23.8 | 20.4 | 17.2 | | | | | | | | EX7 |
| | | EX8 | 88.4 | 83 | 77.6 | 72.2 | 61.9 | 52.2 | | | | | | | | EX8 |
| | 0.15 | EX5 | 4.3 | 4 | 3.8 | 3.5 | 3 | 2.5 | | | | | | | | EX5 |
| | | EX6 | 10 | 9.4 | 8.8 | 8.2 | 7 | 5.9 | | | | | | | | EX6 |
| | | EX7 | 35.7 | 33.5 | 31.3 | 29.1 | 24.9 | 21 | | | | | | | | EX7 |
| | | EX8 | 108.3 | 101.6 | 95 | 88.4 | 75.8 | 63.9 | | | | | | | | EX8 |
| | 0.3 | EX5 | 6.1 | 5.7 | 5.3 | 5 | 4.3 | 3.6 | | | | | | | | EX5 |
| | | EX6 | 14.2 | 13.3 | 12.4 | 11.6 | 9.9 | 8.4 | | | | | | | | EX6 |
| | | EX7 | 50.4 | 47.3 | 44.2 | 41.2 | 35.3 | 29.7 | | | | | | | | EX7 |
| | | EX8 | 153.2 | 143.7 | 134.3 | 125.1 | 107.1 | 90.3 | | | | | | | | EX8 |
| 10 | 0.1 | EX5 | | 3.8 | 3.6 | 3.3 | 2.9 | 2.4 | | | | | | | | EX5 |
| | | EX6 | | 8.9 | 8.3 | 7.8 | 6.6 | 5.6 | | | | | | | | EX6 |
| | | EX7 | | 31.7 | 29.6 | 27.6 | 23.6 | 19.9 | | | | | | | | EX7 |
| | | EX8 | | 96.4 | 90 | 83.8 | 71.8 | 60.5 | | | | | | | | EX8 |
| | 0.15 | EX5 | | 4.7 | 4.4 | 4.1 | 3.5 | 3 | | | | | | | | EX5 |
| | | EX6 | | 10.9 | 10.2 | 9.5 | 8.1 | 6.9 | | | | | | | | EX6 |
| | | EX7 | | 38.9 | 36.3 | 33.8 | 28.9 | 24.4 | | | | | | | | EX7 |
| | | EX8 | | 118.1 | 110.3 | 102.6 | 87.9 | 74.1 | | | | | | | | EX8 |
| | 0.3 | EX5 | | 6.7 | 6.2 | 5.8 | 5 | 4.2 | | | | | | | | EX5 |
| | | EX6 | | 15.5 | 14.4 | 13.4 | 11.5 | 9.7 | | | | | | | | EX6 |
| | | EX7 | | 55 | 51.3 | 47.8 | 40.9 | 34.5 | | | | | | | | EX7 |
| | | EX8 | | 167 | 156 | 145.1 | 124.3 | 104.8 | | | | | | | | EX8 |
| 5 | 0.1 | EX5 | | | 3.8 | 3.5 | 3 | 2.6 | | | | | | | | EX5 |
| | | EX6 | | | 8.8 | 8.2 | 7 | 5.9 | | | | | | | | EX6 |
| | | EX7 | | | 31.4 | 29.2 | 25 | 21.1 | | | | | | | | EX7 |
| | | EX8 | | | 95.5 | 88.8 | 76.1 | 64.2 | | | | | | | | EX8 |
| | 0.15 | EX5 | | | 4.7 | 4.3 | 3.7 | 3.1 | | | | | | | | EX5 |
| | | EX6 | | | 10.8 | 10.1 | 8.6 | 7.3 | | | | | | | | EX6 |
| | | EX7 | | | 38.5 | 35.8 | 30.7 | 25.9 | | | | | | | | EX7 |
| | | EX8 | | | 117 | 108.8 | 93.2 | 78.6 | | | | | | | | EX8 |
| | 0.3 | EX5 | | | 6.6 | 6.1 | 5.2 | 4.4 | | | | | | | | EX5 |
| | | EX6 | | | 15.3 | 14.2 | 12.2 | 10.3 | | | | | | | | EX6 |
| | | EX7 | | | 54.5 | 50.6 | 43.4 | 36.6 | | | | | | | | EX7 |
| | | EX8 | | | 165.4 | 153.8 | 131.7 | 111.2 | | | | | | | | EX8 |
| 0 | 0.1 | EX5 | | | | 3.7 | 3.2 | 2.7 | | | | | | | | EX5 |
| | | EX6 | | | | 8.7 | 7.4 | 6.3 | | | | | | | | EX6 |
| | | EX7 | | | | 30.8 | 26.4 | 22.3 | | | | | | | | EX7 |
| | | EX8 | | | | 93.6 | 80.2 | 67.6 | | | | | | | | EX8 |
| | 0.15 | EX5 | | | | 4.6 | 3.9 | 3.3 | | | | | | | | EX5 |
| | | EX6 | | | | 10.6 | 9.1 | 7.7 | | | | | | | | EX6 |
| | | EX7 | | | | 37.8 | 32.3 | 27.3 | | | | | | | | EX7 |
| | | EX8 | | | | 114.7 | 98.2 | 82.8 | | | | | | | | EX8 |
| | 0.3 | EX5 | | | | 6.5 | 5.5 | 4.7 | | | | | | | | EX5 |
| | | EX6 | | | | 15 | 12.9 | 10.9 | | | | | | | | EX6 |
| | | EX7 | | | | 53.4 | 45.7 | 38.6 | | | | | | | | EX7 |
| | | EX8 | | | | 162.2 | 138.9 | 117.2 | | | | | | | | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX5-8: Quick selection: SUCTION PRESURE REGULATOR -SPR

(evaporator or crankcase)

| Condensing temperature (°C) | Pressure drop (bar) | Valve type | R448A/R449A | | | | | | R452A | | | | | | Valve type |
|-----------------------------|---------------------|------------|------------------------------|------|------|------|------|------|------------------------------|------|------|------|------|------|------------|
| | | | Capacity (kW) | | | | | | Capacity (kW) | | | | | | |
| | | | Evaporating temperature (°C) | | | | | | Evaporating temperature (°C) | | | | | | |
| | | | 5 | 0 | -5 | -10 | -20 | -30 | 5 | 0 | -5 | -10 | -20 | -30 | |
| 60 bubble point | 0.1 | EX5 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.4 | 0.8 | 0.7 | 0.6 | 0.6 | 0.4 | 7.9 | EX5 |
| | | EX6 | 2.4 | 2.2 | 1.9 | 1.7 | 1.3 | 1.0 | 1.9 | 1.7 | 1.5 | 1.3 | 1.0 | 2.6 | EX6 |
| | | EX7 | 8.6 | 7.7 | 6.9 | 6.1 | 4.7 | 3.5 | 6.8 | 6.1 | 5.4 | 4.7 | 3.6 | 0.7 | EX7 |
| | | EX8 | 26.0 | 23.3 | 20.9 | 18.5 | 14.3 | 10.6 | 20.7 | 18.4 | 16.3 | 14.3 | 10.8 | 0.3 | EX8 |
| | 0.15 | EX5 | 1.3 | 1.1 | 1.0 | 0.9 | 0.7 | 0.5 | 1.0 | 0.9 | 0.8 | 0.7 | 0.5 | 9.7 | EX5 |
| | | EX6 | 2.9 | 2.6 | 2.4 | 2.1 | 1.6 | 1.2 | 2.4 | 2.1 | 1.8 | 1.6 | 1.2 | 3.2 | EX6 |
| | | EX7 | 10.5 | 9.4 | 8.4 | 7.5 | 5.7 | 4.3 | 8.4 | 7.4 | 6.6 | 5.8 | 4.4 | 0.9 | EX7 |
| | | EX8 | 31.8 | 28.6 | 25.5 | 22.6 | 17.5 | 12.9 | 25.4 | 22.6 | 20.0 | 17.5 | 13.3 | 0.4 | EX8 |
| | 0.3 | EX5 | 1.8 | 1.6 | 1.4 | 1.3 | 1.0 | 0.7 | 1.4 | 1.3 | 1.1 | 1.0 | 0.7 | 13.6 | EX5 |
| | | EX6 | 4.2 | 3.7 | 3.3 | 3.0 | 2.3 | 1.7 | 3.3 | 3.0 | 2.6 | 2.3 | 1.7 | 4.5 | EX6 |
| | | EX7 | 14.8 | 13.3 | 11.9 | 10.5 | 8.1 | 6.0 | 11.8 | 10.5 | 9.3 | 8.2 | 6.2 | 1.3 | EX7 |
| | | EX8 | 45.0 | 40.4 | 36.1 | 32.0 | 24.7 | 18.3 | 35.9 | 31.9 | 28.2 | 24.8 | 18.8 | 0.5 | EX8 |
| 50 bubble point | 0.1 | EX5 | 1.2 | 1.1 | 1.0 | 0.9 | 0.7 | 0.5 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 10.3 | EX5 |
| | | EX6 | 2.8 | 2.5 | 2.3 | 2.0 | 1.6 | 1.2 | 2.4 | 2.1 | 1.9 | 1.7 | 1.3 | 3.4 | EX6 |
| | | EX7 | 10.0 | 9.0 | 8.0 | 7.2 | 5.6 | 4.2 | 8.4 | 7.5 | 6.7 | 5.9 | 4.6 | 1.0 | EX7 |
| | | EX8 | 30.3 | 27.3 | 24.4 | 21.8 | 16.9 | 12.6 | 25.6 | 22.9 | 20.4 | 18.1 | 13.9 | 0.4 | EX8 |
| | 0.15 | EX5 | 1.5 | 1.3 | 1.2 | 1.1 | 0.8 | 0.6 | 1.2 | 1.1 | 1.0 | 0.9 | 0.7 | 12.7 | EX5 |
| | | EX6 | 3.4 | 3.1 | 2.8 | 2.5 | 1.9 | 1.4 | 2.9 | 2.6 | 2.3 | 2.0 | 1.6 | 4.2 | EX6 |
| | | EX7 | 12.2 | 11.0 | 9.9 | 8.8 | 6.8 | 5.1 | 10.3 | 9.2 | 8.2 | 7.3 | 5.6 | 1.2 | EX7 |
| | | EX8 | 37.1 | 33.4 | 29.9 | 26.7 | 20.7 | 15.5 | 31.4 | 28.0 | 25.0 | 22.1 | 17.0 | 0.5 | EX8 |
| | 0.3 | EX5 | 2.1 | 1.9 | 1.7 | 1.5 | 1.2 | 0.9 | 1.8 | 1.6 | 1.4 | 1.2 | 1.0 | 17.9 | EX5 |
| | | EX6 | 4.9 | 4.4 | 3.9 | 3.5 | 2.7 | 2.0 | 4.1 | 3.7 | 3.3 | 2.9 | 2.2 | 5.9 | EX6 |
| | | EX7 | 17.3 | 15.6 | 13.9 | 12.4 | 9.6 | 7.2 | 14.6 | 13.1 | 11.6 | 10.3 | 7.9 | 1.7 | EX7 |
| | | EX8 | 52.5 | 47.3 | 42.3 | 37.7 | 29.2 | 21.9 | 44.4 | 39.6 | 35.4 | 31.3 | 24.0 | 0.7 | EX8 |
| 40 bubble point | 0.1 | EX5 | 1.4 | 1.2 | 1.1 | 1.0 | 0.8 | 0.6 | 1.2 | 1.1 | 1.0 | 0.8 | 0.7 | 12.5 | EX5 |
| | | EX6 | 3.2 | 2.9 | 2.6 | 2.3 | 1.8 | 1.4 | 2.8 | 2.5 | 2.2 | 2.0 | 1.5 | 4.1 | EX6 |
| | | EX7 | 11.3 | 10.2 | 9.1 | 8.1 | 6.4 | 4.8 | 9.8 | 8.8 | 7.9 | 7.0 | 5.5 | 1.2 | EX7 |
| | | EX8 | 34.2 | 30.9 | 27.7 | 24.7 | 19.3 | 14.6 | 29.9 | 26.9 | 24.0 | 21.3 | 16.6 | 0.5 | EX8 |
| | 0.15 | EX5 | 1.7 | 1.5 | 1.4 | 1.2 | 0.9 | 0.7 | 1.5 | 1.3 | 1.2 | 1.0 | 0.8 | 15.3 | EX5 |
| | | EX6 | 3.9 | 3.5 | 3.1 | 2.8 | 2.2 | 1.7 | 3.4 | 3.0 | 2.7 | 2.4 | 1.9 | 5.0 | EX6 |
| | | EX7 | 13.8 | 12.4 | 11.2 | 10.0 | 7.8 | 5.9 | 12.0 | 10.8 | 9.7 | 8.6 | 6.7 | 1.4 | EX7 |
| | | EX8 | 41.9 | 37.8 | 33.9 | 30.3 | 23.7 | 17.9 | 36.6 | 32.9 | 29.4 | 26.1 | 20.4 | 0.6 | EX8 |
| | 0.3 | EX5 | 2.4 | 2.1 | 1.9 | 1.7 | 1.3 | 1.0 | 2.1 | 1.9 | 1.7 | 1.5 | 1.1 | 21.6 | EX5 |
| | | EX6 | 5.5 | 5.0 | 4.4 | 4.0 | 3.1 | 2.3 | 4.8 | 4.3 | 3.9 | 3.4 | 2.7 | 7.1 | EX6 |
| | | EX7 | 19.5 | 17.6 | 15.8 | 14.1 | 11.0 | 8.3 | 17.0 | 15.3 | 13.7 | 12.2 | 9.5 | 2.0 | EX7 |
| | | EX8 | 59.2 | 53.5 | 48.0 | 42.8 | 33.5 | 25.3 | 51.7 | 46.5 | 41.6 | 36.9 | 28.8 | 0.9 | EX8 |
| 30 bubble point | 0.1 | EX5 | 1.5 | 1.4 | 1.2 | 1.1 | 0.9 | 0.7 | 1.3 | 1.2 | 1.1 | 1.0 | 0.8 | 14.5 | EX5 |
| | | EX6 | 3.5 | 3.2 | 2.8 | 2.6 | 2.0 | 1.5 | 3.1 | 2.8 | 2.5 | 2.3 | 1.8 | 4.8 | EX6 |
| | | EX7 | 12.5 | 11.3 | 10.1 | 9.1 | 7.1 | 5.4 | 11.2 | 10.0 | 9.0 | 8.0 | 6.3 | 1.3 | EX7 |
| | | EX8 | 37.9 | 34.3 | 30.8 | 27.6 | 21.6 | 16.3 | 33.9 | 30.5 | 27.4 | 24.4 | 19.1 | 0.6 | EX8 |
| | 0.15 | EX5 | 1.8 | 1.7 | 1.5 | 1.3 | 1.1 | 0.8 | 1.7 | 1.5 | 1.3 | 1.2 | 0.9 | 17.7 | EX5 |
| | | EX6 | 4.3 | 3.9 | 3.5 | 3.1 | 2.5 | 1.9 | 3.8 | 3.5 | 3.1 | 2.8 | 2.2 | 5.8 | EX6 |
| | | EX7 | 15.3 | 13.8 | 12.4 | 11.1 | 8.7 | 6.6 | 13.7 | 12.3 | 11.0 | 9.9 | 7.7 | 1.6 | EX7 |
| | | EX8 | 46.4 | 41.9 | 37.7 | 33.7 | 26.5 | 20.0 | 41.5 | 37.4 | 33.5 | 29.9 | 23.4 | 0.7 | EX8 |
| | 0.3 | EX5 | 2.6 | 2.4 | 2.1 | 1.9 | 1.5 | 1.1 | 2.3 | 2.1 | 1.9 | 1.7 | 1.3 | 25.1 | EX5 |
| | | EX6 | 6.1 | 5.5 | 4.9 | 4.4 | 3.5 | 2.6 | 5.4 | 4.9 | 4.4 | 3.9 | 3.1 | 8.3 | EX6 |
| | | EX7 | 21.6 | 19.5 | 17.5 | 15.7 | 12.3 | 9.3 | 19.3 | 17.4 | 15.6 | 13.9 | 10.9 | 2.3 | EX7 |
| | | EX8 | 65.6 | 59.3 | 53.3 | 47.7 | 37.4 | 28.3 | 58.7 | 52.8 | 47.4 | 42.3 | 33.1 | 1.0 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX5-8: Quick selection: SUCTION PRESURE REGULATOR -SPR

(evaporator or crankcase)

| Condensing temperature (°C) | Pressure drop (bar) | Valve type | R513A/R450A Capacity (kW) | | | | | R134a Capacity (kW) | | | | | Valve type |
|-----------------------------|---------------------|------------|------------------------------|------|------|------|------|------------------------------|------|------|------|------|------------|
| | | | Evaporating temperature (°C) | | | | | Evaporating temperature (°C) | | | | | |
| | | | 10 | 5 | 0 | -10 | -20 | 10 | 5 | 0 | -10 | -20 | |
| 60 bubble point | 0.1 | EX5 | 0.9 | 0.8 | 0.7 | 0.5 | 0.4 | 1.0 | 0.9 | 0.8 | 0.6 | 0.4 | EX5 |
| | | EX6 | 2.1 | 1.8 | 1.6 | 1.2 | 0.9 | 2.3 | 2.0 | 1.8 | 1.4 | 1.0 | EX6 |
| | | EX7 | 7.4 | 6.6 | 5.8 | 4.4 | 3.2 | 8.0 | 7.2 | 6.4 | 4.9 | 3.6 | EX7 |
| | | EX8 | 22.4 | 19.9 | 17.6 | 13.5 | 9.9 | 24.4 | 21.8 | 19.3 | 14.8 | 11.0 | EX8 |
| | 0.15 | EX5 | 1.1 | 1.0 | 0.9 | 0.7 | 0.5 | 1.2 | 1.1 | 0.9 | 0.7 | 0.5 | EX5 |
| | | EX6 | 2.5 | 2.3 | 2.0 | 1.5 | 1.1 | 2.8 | 2.5 | 2.2 | 1.7 | 1.2 | EX6 |
| | | EX7 | 9.0 | 8.0 | 7.1 | 5.4 | 4.0 | 9.9 | 8.8 | 7.8 | 6.0 | 4.4 | EX7 |
| | | EX8 | 27.4 | 24.4 | 21.5 | 16.5 | 12.1 | 29.9 | 26.7 | 23.7 | 18.2 | 13.5 | EX8 |
| | 0.3 | EX5 | 1.5 | 1.4 | 1.2 | 0.9 | 0.7 | 1.7 | 1.5 | 1.3 | 1.0 | 0.8 | EX5 |
| | | EX6 | 3.6 | 3.2 | 2.8 | 2.2 | 1.6 | 3.9 | 3.5 | 3.1 | 2.4 | 1.8 | EX6 |
| | | EX7 | 12.8 | 11.4 | 10.0 | 7.7 | 5.6 | 13.9 | 12.4 | 11.0 | 8.5 | 6.3 | EX7 |
| | | EX8 | 38.8 | 34.5 | 30.5 | 23.3 | 17.1 | 42.3 | 37.8 | 33.5 | 25.7 | 19.0 | EX8 |
| 50 bubble point | 0.1 | EX5 | 1.0 | 0.9 | 0.8 | 0.6 | 0.5 | 1.1 | 1.0 | 0.9 | 0.7 | 0.5 | EX5 |
| | | EX6 | 2.4 | 2.1 | 1.9 | 1.5 | 1.1 | 2.6 | 2.3 | 2.0 | 1.6 | 1.2 | EX6 |
| | | EX7 | 8.6 | 7.6 | 6.8 | 5.2 | 3.9 | 9.1 | 8.1 | 7.2 | 5.6 | 4.2 | EX7 |
| | | EX8 | 26.0 | 23.2 | 20.6 | 15.9 | 11.8 | 27.7 | 24.7 | 22.0 | 17.0 | 12.6 | EX8 |
| | 0.15 | EX5 | 1.3 | 1.1 | 1.0 | 0.8 | 0.6 | 1.3 | 1.2 | 1.1 | 0.8 | 0.6 | EX5 |
| | | EX6 | 2.9 | 2.6 | 2.3 | 1.8 | 1.3 | 3.1 | 2.8 | 2.5 | 1.9 | 1.4 | EX6 |
| | | EX7 | 10.5 | 9.4 | 8.3 | 6.4 | 4.8 | 11.2 | 10.0 | 8.9 | 6.9 | 5.1 | EX7 |
| | | EX8 | 31.8 | 28.4 | 25.2 | 19.5 | 14.5 | 33.9 | 30.3 | 26.9 | 20.8 | 15.5 | EX8 |
| | 0.3 | EX5 | 1.8 | 1.6 | 1.4 | 1.1 | 0.8 | 1.9 | 1.7 | 1.5 | 1.2 | 0.9 | EX5 |
| | | EX6 | 4.2 | 3.7 | 3.3 | 2.6 | 1.9 | 4.4 | 4.0 | 3.5 | 2.7 | 2.0 | EX6 |
| | | EX7 | 14.8 | 13.2 | 11.7 | 9.1 | 6.8 | 15.8 | 14.1 | 12.5 | 9.7 | 7.2 | EX7 |
| | | EX8 | 45.0 | 40.2 | 35.7 | 27.6 | 20.5 | 47.9 | 42.8 | 38.1 | 29.4 | 21.9 | EX8 |
| 40 bubble point | 0.1 | EX5 | 1.2 | 1.0 | 0.9 | 0.7 | 0.5 | 1.2 | 1.1 | 1.0 | 0.8 | 0.6 | EX5 |
| | | EX6 | 2.7 | 2.4 | 2.2 | 1.7 | 1.3 | 2.8 | 2.5 | 2.3 | 1.8 | 1.3 | EX6 |
| | | EX7 | 9.7 | 8.7 | 7.7 | 6.0 | 4.5 | 10.1 | 9.1 | 8.1 | 6.3 | 4.7 | EX7 |
| | | EX8 | 29.4 | 26.3 | 23.4 | 18.2 | 13.7 | 30.7 | 27.5 | 24.5 | 19.1 | 14.3 | EX8 |
| | 0.15 | EX5 | 1.4 | 1.3 | 1.1 | 0.9 | 0.7 | 1.5 | 1.3 | 1.2 | 0.9 | 0.7 | EX5 |
| | | EX6 | 3.3 | 3.0 | 2.7 | 2.1 | 1.6 | 3.5 | 3.1 | 2.8 | 2.2 | 1.6 | EX6 |
| | | EX7 | 11.8 | 10.6 | 9.4 | 7.3 | 5.5 | 12.4 | 11.1 | 9.9 | 7.7 | 5.7 | EX7 |
| | | EX8 | 36.0 | 32.2 | 28.7 | 22.3 | 16.8 | 37.6 | 33.7 | 30.0 | 23.4 | 17.5 | EX8 |
| | 0.3 | EX5 | 2.0 | 1.8 | 1.6 | 1.3 | 0.9 | 2.1 | 1.9 | 1.7 | 1.3 | 1.0 | EX5 |
| | | EX6 | 4.7 | 4.2 | 3.8 | 2.9 | 2.2 | 4.9 | 4.4 | 3.9 | 3.1 | 2.3 | EX6 |
| | | EX7 | 16.7 | 15.0 | 13.4 | 10.4 | 7.8 | 17.5 | 15.7 | 14.0 | 10.9 | 8.1 | EX7 |
| | | EX8 | 50.9 | 45.6 | 40.6 | 31.6 | 23.8 | 53.2 | 47.6 | 42.4 | 33.1 | 24.7 | EX8 |
| 30 bubble point | 0.1 | EX5 | 1.3 | 1.2 | 1.0 | 0.8 | 0.6 | 1.3 | 1.2 | 1.1 | 0.8 | 0.6 | EX5 |
| | | EX6 | 3.0 | 2.7 | 2.4 | 1.9 | 1.4 | 3.1 | 2.8 | 2.5 | 2.0 | 1.5 | EX6 |
| | | EX7 | 10.7 | 9.6 | 8.6 | 6.7 | 5.1 | 11.1 | 10.0 | 8.9 | 6.9 | 5.2 | EX7 |
| | | EX8 | 32.6 | 29.3 | 26.1 | 20.4 | 15.4 | 33.7 | 30.2 | 27.0 | 21.1 | 15.9 | EX8 |
| | 0.15 | EX5 | 1.6 | 1.4 | 1.3 | 1.0 | 0.8 | 1.6 | 1.5 | 1.3 | 1.0 | 0.8 | EX5 |
| | | EX6 | 3.7 | 3.3 | 3.0 | 2.3 | 1.8 | 3.8 | 3.4 | 3.1 | 2.4 | 1.8 | EX6 |
| | | EX7 | 13.1 | 11.8 | 10.5 | 8.2 | 6.2 | 13.6 | 12.2 | 10.9 | 8.5 | 6.4 | EX7 |
| | | EX8 | 39.9 | 35.8 | 32.0 | 25.0 | 18.9 | 41.2 | 37.0 | 33.0 | 25.8 | 19.4 | EX8 |
| | 0.3 | EX5 | 2.2 | 2.0 | 1.8 | 1.4 | 1.1 | 2.3 | 2.1 | 1.9 | 1.5 | 1.1 | EX5 |
| | | EX6 | 5.2 | 4.7 | 4.2 | 3.3 | 2.5 | 5.4 | 4.8 | 4.3 | 3.4 | 2.5 | EX6 |
| | | EX7 | 18.6 | 16.7 | 14.9 | 11.6 | 8.8 | 19.2 | 17.2 | 15.4 | 12.0 | 9.0 | EX7 |
| | | EX8 | 56.4 | 50.7 | 45.2 | 35.4 | 26.7 | 58.3 | 52.4 | 46.7 | 36.5 | 27.5 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX5-8: Quick selection: SUCTION PRESURE REGULATOR -SPR

(evaporator or crankcase)

| Condensing temperature (°C) | Pressure drop (bar) | Valve type | R1234ze Capacity (kW) | | | | | R407C Capacity (kW) | | | | | Valve type |
|-----------------------------|---------------------|------------|------------------------------|------|------|------|------|------------------------------|------|------|------|------|------------|
| | | | Evaporating temperature (°C) | | | | | Evaporating temperature (°C) | | | | | |
| | | | 10 | 5 | 0 | -10 | -20 | 10 | 5 | 0 | -10 | -20 | |
| 60 bubble point | 0.1 | EX5 | 0.8 | 0.7 | 0.6 | 0.5 | 0.3 | 1.2 | 1.1 | 0.9 | 0.7 | 0.6 | EX5 |
| | | EX6 | 1.9 | 1.6 | 1.4 | 1.1 | 0.8 | 2.7 | 2.5 | 2.2 | 1.7 | 1.3 | EX6 |
| | | EX7 | 6.6 | 5.8 | 5.1 | 3.8 | 2.7 | 9.7 | 8.8 | 7.9 | 6.2 | 4.7 | EX7 |
| | | EX8 | 20.0 | 17.7 | 15.5 | 11.6 | 8.3 | 29.5 | 26.6 | 23.9 | 18.8 | 14.4 | EX8 |
| | 0.15 | EX5 | 1.0 | 0.9 | 0.8 | 0.6 | 0.4 | 1.4 | 1.3 | 1.2 | 0.9 | 0.7 | EX5 |
| | | EX6 | 2.3 | 2.0 | 1.8 | 1.3 | 0.9 | 3.4 | 3.0 | 2.7 | 2.1 | 1.6 | EX6 |
| | | EX7 | 8.1 | 7.1 | 6.3 | 4.7 | 3.3 | 11.9 | 10.7 | 9.6 | 7.6 | 5.8 | EX7 |
| | | EX8 | 24.6 | 21.7 | 19.0 | 14.2 | 10.1 | 36.2 | 32.6 | 29.2 | 23.0 | 17.7 | EX8 |
| | 0.3 | EX5 | 1.4 | 1.2 | 1.1 | 0.8 | 0.6 | 2.0 | 1.8 | 1.6 | 1.3 | 1.0 | EX5 |
| | | EX6 | 3.2 | 2.8 | 2.5 | 1.9 | 1.3 | 4.7 | 4.3 | 3.8 | 3.0 | 2.3 | EX6 |
| | | EX7 | 11.4 | 10.1 | 8.9 | 6.6 | 4.7 | 16.8 | 15.2 | 13.6 | 10.7 | 8.2 | EX7 |
| | | EX8 | 34.7 | 30.6 | 26.9 | 20.1 | 14.3 | 51.2 | 46.0 | 41.3 | 32.6 | 25.0 | EX8 |
| 50 bubble point | 0.1 | EX5 | 0.9 | 0.8 | 0.7 | 0.5 | 0.4 | 1.3 | 1.2 | 1.1 | 0.9 | 0.7 | EX5 |
| | | EX6 | 2.1 | 1.9 | 1.6 | 1.2 | 0.9 | 3.1 | 2.8 | 2.5 | 2.0 | 1.6 | EX6 |
| | | EX7 | 7.5 | 6.6 | 5.8 | 4.4 | 3.2 | 11.1 | 10.0 | 9.0 | 7.2 | 5.5 | EX7 |
| | | EX8 | 22.7 | 20.1 | 17.7 | 13.4 | 9.6 | 33.8 | 30.5 | 27.4 | 21.8 | 16.8 | EX8 |
| | 0.15 | EX5 | 1.1 | 1.0 | 0.9 | 0.7 | 0.5 | 1.6 | 1.5 | 1.3 | 1.1 | 0.8 | EX5 |
| | | EX6 | 2.6 | 2.3 | 2.0 | 1.5 | 1.1 | 3.8 | 3.5 | 3.1 | 2.5 | 1.9 | EX6 |
| | | EX7 | 9.1 | 8.1 | 7.2 | 5.4 | 3.9 | 13.6 | 12.3 | 11.0 | 8.8 | 6.8 | EX7 |
| | | EX8 | 27.8 | 24.6 | 21.7 | 16.4 | 11.8 | 41.4 | 37.4 | 33.5 | 26.7 | 20.5 | EX8 |
| | 0.3 | EX5 | 1.6 | 1.4 | 1.2 | 0.9 | 0.7 | 2.3 | 2.1 | 1.9 | 1.5 | 1.2 | EX5 |
| | | EX6 | 3.6 | 3.2 | 2.8 | 2.1 | 1.5 | 5.4 | 4.9 | 4.4 | 3.5 | 2.7 | EX6 |
| | | EX7 | 12.9 | 11.5 | 10.1 | 7.6 | 5.5 | 19.3 | 17.4 | 15.6 | 12.4 | 9.6 | EX7 |
| | | EX8 | 39.3 | 34.8 | 30.7 | 23.2 | 16.6 | 58.5 | 52.8 | 47.4 | 37.7 | 29.1 | EX8 |
| 40 bubble point | 0.1 | EX5 | 1.0 | 0.9 | 0.8 | 0.6 | 0.4 | 1.5 | 1.4 | 1.2 | 1.0 | 0.8 | EX5 |
| | | EX6 | 2.3 | 2.1 | 1.8 | 1.4 | 1.0 | 3.5 | 3.2 | 2.8 | 2.3 | 1.8 | EX6 |
| | | EX7 | 8.3 | 7.4 | 6.5 | 5.0 | 3.6 | 12.4 | 11.2 | 10.1 | 8.1 | 6.3 | EX7 |
| | | EX8 | 25.2 | 22.5 | 19.8 | 15.1 | 10.9 | 37.7 | 34.1 | 30.7 | 24.5 | 19.0 | EX8 |
| | 0.15 | EX5 | 1.2 | 1.1 | 1.0 | 0.7 | 0.5 | 1.8 | 1.7 | 1.5 | 1.2 | 0.9 | EX5 |
| | | EX6 | 2.9 | 2.5 | 2.2 | 1.7 | 1.2 | 4.3 | 3.9 | 3.5 | 2.8 | 2.2 | EX6 |
| | | EX7 | 10.2 | 9.1 | 8.0 | 6.1 | 4.4 | 15.2 | 13.7 | 12.4 | 9.9 | 7.7 | EX7 |
| | | EX8 | 30.9 | 27.5 | 24.3 | 18.5 | 13.4 | 46.1 | 41.8 | 37.6 | 30.0 | 23.3 | EX8 |
| | 0.3 | EX5 | 1.7 | 1.5 | 1.4 | 1.0 | 0.8 | 2.6 | 2.4 | 2.1 | 1.7 | 1.3 | EX5 |
| | | EX6 | 4.1 | 3.6 | 3.2 | 2.4 | 1.8 | 6.0 | 5.5 | 4.9 | 3.9 | 3.1 | EX6 |
| | | EX7 | 14.4 | 12.8 | 11.3 | 8.6 | 6.2 | 21.5 | 19.4 | 17.5 | 14.0 | 10.8 | EX7 |
| | | EX8 | 43.7 | 38.9 | 34.4 | 26.2 | 18.9 | 65.3 | 59.0 | 53.2 | 42.4 | 33.0 | EX8 |
| 30 bubble point | 0.1 | EX5 | 1.1 | 1.0 | 0.9 | 0.7 | 0.5 | 1.6 | 1.5 | 1.3 | 1.1 | 0.8 | EX5 |
| | | EX6 | 2.6 | 2.3 | 2.0 | 1.6 | 1.1 | 3.8 | 3.5 | 3.1 | 2.5 | 2.0 | EX6 |
| | | EX7 | 9.1 | 8.2 | 7.2 | 5.5 | 4.0 | 13.6 | 12.4 | 11.1 | 8.9 | 7.0 | EX7 |
| | | EX8 | 27.8 | 24.8 | 21.9 | 16.8 | 12.2 | 41.4 | 37.5 | 33.8 | 27.1 | 21.1 | EX8 |
| | 0.15 | EX5 | 1.4 | 1.2 | 1.1 | 0.8 | 0.6 | 2.0 | 1.8 | 1.6 | 1.3 | 1.0 | EX5 |
| | | EX6 | 3.1 | 2.8 | 2.5 | 1.9 | 1.4 | 4.7 | 4.3 | 3.8 | 3.1 | 2.4 | EX6 |
| | | EX7 | 11.2 | 10.0 | 8.8 | 6.8 | 4.9 | 16.7 | 15.1 | 13.6 | 10.9 | 8.5 | EX7 |
| | | EX8 | 34.0 | 30.3 | 26.8 | 20.5 | 14.9 | 50.7 | 46.0 | 41.4 | 33.2 | 25.9 | EX8 |
| | 0.3 | EX5 | 1.9 | 1.7 | 1.5 | 1.2 | 0.8 | 2.9 | 2.6 | 2.3 | 1.9 | 1.5 | EX5 |
| | | EX6 | 4.5 | 4.0 | 3.5 | 2.7 | 2.0 | 6.6 | 6.0 | 5.4 | 4.3 | 3.4 | EX6 |
| | | EX7 | 15.8 | 14.1 | 12.5 | 9.6 | 6.9 | 23.6 | 21.4 | 19.3 | 15.4 | 12.0 | EX7 |
| | | EX8 | 48.1 | 42.9 | 38.0 | 29.1 | 21.1 | 71.8 | 65.0 | 58.6 | 46.9 | 36.6 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX5-8: Quick selection: SUCTION PRESURE REGULATOR -SPR

(evaporator or crankcase)

| Condensing temperature (°C) | Pressure drop (bar) | Valve type | R404A/R507 Capacity (kW) | | | | | | R410A Capacity (kW) | | | | | | Valve type |
|-----------------------------|---------------------|------------|------------------------------|------|------|------|------|------|------------------------------|------|------|------|------|------|------------|
| | | | Evaporating temperature (°C) | | | | | | Evaporating temperature (°C) | | | | | | |
| | | | 5 | 0 | -5 | -10 | -20 | -30 | 5 | 0 | -5 | -10 | -20 | -30 | |
| 60 bubble point | 0.1 | EX5 | 0.8 | 0.7 | 0.7 | 0.6 | 0.4 | 0.3 | 1.3 | 1.2 | 1.1 | 1.0 | 0.8 | 0.6 | EX5 |
| | | EX6 | 1.9 | 1.7 | 1.5 | 1.3 | 1.0 | 0.7 | 3.1 | 2.8 | 2.5 | 2.3 | 1.8 | 1.4 | EX6 |
| | | EX7 | 6.9 | 6.1 | 5.4 | 4.8 | 3.6 | 2.6 | 10.9 | 9.9 | 9.0 | 8.1 | 6.5 | 5.0 | EX7 |
| | | EX8 | 20.9 | 18.6 | 16.5 | 14.5 | 11.0 | 8.0 | 33.1 | 30.1 | 27.2 | 24.5 | 19.6 | 15.3 | EX8 |
| | 0.15 | EX5 | 1.0 | 0.9 | 0.8 | 0.7 | 0.5 | 0.4 | 1.6 | 1.5 | 1.3 | 1.2 | 1.0 | 0.7 | EX5 |
| | | EX6 | 2.4 | 2.1 | 1.9 | 1.6 | 1.2 | 0.9 | 3.8 | 3.4 | 3.1 | 2.8 | 2.2 | 1.7 | EX6 |
| | | EX7 | 8.4 | 7.5 | 6.6 | 5.9 | 4.4 | 3.2 | 13.3 | 12.1 | 11.0 | 9.9 | 7.9 | 6.2 | EX7 |
| | | EX8 | 25.6 | 22.8 | 20.2 | 17.8 | 13.5 | 9.8 | 40.5 | 36.8 | 33.3 | 30.1 | 24.0 | 18.7 | EX8 |
| | 0.3 | EX5 | 1.4 | 1.3 | 1.1 | 1.0 | 0.8 | 0.6 | 2.3 | 2.1 | 1.9 | 1.7 | 1.4 | 1.1 | EX5 |
| | | EX6 | 3.4 | 3.0 | 2.6 | 2.3 | 1.8 | 1.3 | 5.3 | 4.8 | 4.4 | 3.9 | 3.1 | 2.5 | EX6 |
| | | EX7 | 11.9 | 10.6 | 9.4 | 8.3 | 6.3 | 4.6 | 18.9 | 17.1 | 15.5 | 14.0 | 11.2 | 8.7 | EX7 |
| | | EX8 | 36.2 | 32.2 | 28.5 | 25.2 | 19.0 | 13.9 | 57.3 | 52.1 | 47.2 | 42.5 | 34.0 | 26.5 | EX8 |
| 50 bubble point | 0.1 | EX5 | 1.0 | 0.9 | 0.8 | 0.7 | 0.6 | 0.4 | 1.6 | 1.4 | 1.3 | 1.2 | 0.9 | 0.7 | EX5 |
| | | EX6 | 2.4 | 2.2 | 1.9 | 1.7 | 1.3 | 1.0 | 3.6 | 3.3 | 3.0 | 2.7 | 2.2 | 1.7 | EX6 |
| | | EX7 | 8.6 | 7.7 | 6.9 | 6.1 | 4.7 | 3.5 | 12.9 | 11.7 | 10.6 | 9.6 | 7.7 | 6.1 | EX7 |
| | | EX8 | 26.2 | 23.5 | 21.0 | 18.6 | 14.4 | 10.8 | 39.1 | 35.6 | 32.3 | 29.2 | 23.5 | 18.4 | EX8 |
| | 0.15 | EX5 | 1.3 | 1.1 | 1.0 | 0.9 | 0.7 | 0.5 | 1.9 | 1.7 | 1.6 | 1.4 | 1.1 | 0.9 | EX5 |
| | | EX6 | 3.0 | 2.7 | 2.4 | 2.1 | 1.6 | 1.2 | 4.4 | 4.0 | 3.7 | 3.3 | 2.7 | 2.1 | EX6 |
| | | EX7 | 10.5 | 9.5 | 8.4 | 7.5 | 5.8 | 4.3 | 15.8 | 14.3 | 13.0 | 11.8 | 9.5 | 7.4 | EX7 |
| | | EX8 | 32.0 | 28.8 | 25.7 | 22.8 | 17.6 | 13.2 | 47.9 | 43.6 | 39.6 | 35.8 | 28.8 | 22.6 | EX8 |
| | 0.3 | EX5 | 1.8 | 1.6 | 1.4 | 1.3 | 1.0 | 0.7 | 2.7 | 2.5 | 2.2 | 2.0 | 1.6 | 1.3 | EX5 |
| | | EX6 | 4.2 | 3.8 | 3.4 | 3.0 | 2.3 | 1.7 | 6.3 | 5.7 | 5.2 | 4.7 | 3.8 | 3.0 | EX6 |
| | | EX7 | 14.9 | 13.4 | 12.0 | 10.6 | 8.2 | 6.1 | 22.3 | 20.3 | 18.4 | 16.7 | 13.4 | 10.5 | EX7 |
| | | EX8 | 45.3 | 40.7 | 36.3 | 32.2 | 24.9 | 18.7 | 67.7 | 61.6 | 56.0 | 50.6 | 40.7 | 31.9 | EX8 |
| 40 bubble point | 0.1 | EX5 | 1.2 | 1.1 | 1.0 | 0.9 | 0.7 | 0.5 | 1.8 | 1.6 | 1.5 | 1.3 | 1.1 | 0.8 | EX5 |
| | | EX6 | 2.9 | 2.6 | 2.3 | 2.1 | 1.6 | 1.2 | 4.1 | 3.7 | 3.4 | 3.1 | 2.5 | 2.0 | EX6 |
| | | EX7 | 10.1 | 9.1 | 8.2 | 7.3 | 5.7 | 4.3 | 14.6 | 13.3 | 12.1 | 11.0 | 8.8 | 7.0 | EX7 |
| | | EX8 | 30.8 | 27.8 | 24.9 | 22.2 | 17.4 | 13.2 | 44.3 | 40.4 | 36.7 | 33.3 | 26.9 | 21.2 | EX8 |
| | 0.15 | EX5 | 1.5 | 1.4 | 1.2 | 1.1 | 0.8 | 0.6 | 2.2 | 2.0 | 1.8 | 1.6 | 1.3 | 1.0 | EX5 |
| | | EX6 | 3.5 | 3.1 | 2.8 | 2.5 | 2.0 | 1.5 | 5.0 | 4.6 | 4.2 | 3.8 | 3.0 | 2.4 | EX6 |
| | | EX7 | 12.4 | 11.2 | 10.0 | 8.9 | 7.0 | 5.3 | 17.9 | 16.3 | 14.8 | 13.4 | 10.8 | 8.5 | EX7 |
| | | EX8 | 37.7 | 34.0 | 30.5 | 27.2 | 21.3 | 16.1 | 54.2 | 49.5 | 45.0 | 40.8 | 32.9 | 25.9 | EX8 |
| | 0.3 | EX5 | 2.1 | 1.9 | 1.7 | 1.5 | 1.2 | 0.9 | 3.1 | 2.8 | 2.5 | 2.3 | 1.9 | 1.5 | EX5 |
| | | EX6 | 4.9 | 4.5 | 4.0 | 3.6 | 2.8 | 2.1 | 7.1 | 6.5 | 5.9 | 5.3 | 4.3 | 3.4 | EX6 |
| | | EX7 | 17.6 | 15.8 | 14.2 | 12.7 | 9.9 | 7.5 | 25.2 | 23.0 | 20.9 | 19.0 | 15.3 | 12.1 | EX7 |
| | | EX8 | 53.4 | 48.1 | 43.2 | 38.4 | 30.1 | 22.8 | 76.7 | 70.0 | 63.6 | 57.7 | 46.5 | 36.7 | EX8 |
| 30 bubble point | 0.1 | EX5 | 1.4 | 1.3 | 1.1 | 1.0 | 0.8 | 0.6 | 2.0 | 1.8 | 1.6 | 1.5 | 1.2 | 0.9 | EX5 |
| | | EX6 | 3.3 | 2.9 | 2.6 | 2.4 | 1.9 | 1.4 | 4.5 | 4.2 | 3.8 | 3.4 | 2.8 | 2.2 | EX6 |
| | | EX7 | 11.6 | 10.5 | 9.4 | 8.4 | 6.6 | 5.1 | 16.2 | 14.8 | 13.4 | 12.2 | 9.9 | 7.8 | EX7 |
| | | EX8 | 35.2 | 31.8 | 28.6 | 25.6 | 20.2 | 15.4 | 49.1 | 44.8 | 40.8 | 37.0 | 30.0 | 23.7 | EX8 |
| | 0.15 | EX5 | 1.7 | 1.6 | 1.4 | 1.2 | 1.0 | 0.8 | 2.4 | 2.2 | 2.0 | 1.8 | 1.5 | 1.2 | EX5 |
| | | EX6 | 4.0 | 3.6 | 3.2 | 2.9 | 2.3 | 1.8 | 5.6 | 5.1 | 4.6 | 4.2 | 3.4 | 2.7 | EX6 |
| | | EX7 | 14.2 | 12.8 | 11.5 | 10.3 | 8.1 | 6.2 | 19.8 | 18.1 | 16.4 | 14.9 | 12.1 | 9.6 | EX7 |
| | | EX8 | 43.1 | 38.9 | 35.0 | 31.3 | 24.7 | 18.9 | 60.1 | 54.9 | 50.0 | 45.3 | 36.7 | 29.0 | EX8 |
| | 0.3 | EX5 | 2.4 | 2.2 | 2.0 | 1.8 | 1.4 | 1.1 | 3.4 | 3.1 | 2.8 | 2.6 | 2.1 | 1.6 | EX5 |
| | | EX6 | 5.6 | 5.1 | 4.6 | 4.1 | 3.2 | 2.5 | 7.9 | 7.2 | 6.5 | 5.9 | 4.8 | 3.8 | EX6 |
| | | EX7 | 20.0 | 18.1 | 16.3 | 14.6 | 11.5 | 8.8 | 28.0 | 25.6 | 23.3 | 21.1 | 17.1 | 13.5 | EX7 |
| | | EX8 | 60.9 | 55.1 | 49.5 | 44.3 | 34.9 | 26.7 | 85.0 | 77.6 | 70.7 | 64.1 | 51.9 | 41.0 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8: Quick selection: HOT GAS BYPASS - HGB

| Condensing temperature (°C) | Capacity (kW) | | | | | | | | | Valve type |
|-----------------------------|---------------|-------|-------|-------|---------|-------|-----------------|----------------|-------|------------|
| | R407C | R134a | R513A | R450A | R1234ZE | R410A | R448A/ R449A | R404A/ R507 | R452A | |
| 60 bubble point | 5.5 | 3.6 | 3.3 | 3.1 | 2.7 | 7.0 | 5.4 | 4.1 | 4.3 | EX4 |
| | 17.7 | 11.7 | 10.8 | 10.1 | 8.7 | 22.5 | 17.5 | 13.3 | 14.1 | EX5 |
| | 41 | 27 | 25 | 23 | 20 | 52 | 40 | 31 | 33 | EX6 |
| | 146 | 96 | 88 | 83 | 71 | 185 | 144 | 109 | 116 | EX7 |
| | 442 | 292 | 269 | 252 | 217 | 562 | 437 | 331 | 351 | EX8 |
| 50 bubble point | 5.1 | 3.2 | 3.1 | 2.8 | 2.4 | 6.6 | 5.1 | 4.1 | 4.3 | EX4 |
| | 16.4 | 10.5 | 10.0 | 9.1 | 7.8 | 21.5 | 16.5 | 13.3 | 14.0 | EX5 |
| | 38 | 24 | 23 | 21 | 18 | 50 | 38 | 31 | 32 | EX6 |
| | 135 | 86 | 82 | 75 | 64 | 176 | 136 | 109 | 115 | EX7 |
| | 409 | 262 | 248 | 227 | 194 | 536 | 412 | 331 | 349 | EX8 |
| 40 bubble point | 4.5 | 2.8 | 2.7 | 2.4 | 2.1 | 6.0 | 4.6 | 3.8 | 4.0 | EX4 |
| | 14.7 | 9.1 | 8.9 | 7.9 | 6.7 | 19.5 | 14.9 | 12.5 | 13.1 | EX5 |
| | 34 | 21 | 20 | 18 | 16 | 45 | 35 | 29 | 30 | EX6 |
| | 120 | 75 | 73 | 65 | 55 | 160 | 123 | 102 | 107 | EX7 |
| | 366 | 227 | 221 | 197 | 168 | 486 | 373 | 311 | 326 | EX8 |
| 30 bubble point | 3.9 | 2.4 | 2.3 | 2.1 | 1.8 | 5.3 | 4.0 | 3.5 | 3.6 | EX4 |
| | 12.7 | 7.7 | 7.6 | 6.7 | 5.7 | 17.1 | 13.1 | 11.2 | 11.7 | EX5 |
| | 29 | 18 | 18 | 15 | 13 | 40 | 30 | 26 | 27 | EX6 |
| | 105 | 63 | 62 | 55 | 47 | 141 | 108 | 92 | 96 | EX7 |
| | 318 | 192 | 190 | 167 | 142 | 427 | 327 | 280 | 292 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX5-8: Quick selection: HEAT RECLAIM / HOT GAS FLOW - (HRC1/2)

| Condensing temperature (°C) | Pressure drop bar | Valve type | R448A/R449A Capacity (kW) | | | | | | R452A Capacity (kW) | | | | | | Valve type |
|-----------------------------|-------------------|------------|------------------------------|-------|-------|-------|-------|-------|------------------------------|-------|-------|-------|-------|-------|------------|
| | | | Evaporating temperature (°C) | | | | | | Evaporating temperature (°C) | | | | | | |
| | | | 5 | 0 | -10 | -20 | -30 | -40 | 5 | 0 | -10 | -20 | -30 | -40 | |
| 60 bubble point | 0.1 | EX5 | 2.2 | 2.1 | 2.0 | 1.8 | 1.7 | 1.6 | 1.7 | 1.7 | 1.5 | 1.4 | 1.2 | 1.1 | EX5 |
| | | EX6 | 5.0 | 4.9 | 4.6 | 4.2 | 3.9 | 3.6 | 4.0 | 3.8 | 3.5 | 3.2 | 2.8 | 2.5 | EX6 |
| | | EX7 | 17.9 | 17.4 | 16.3 | 15.1 | 13.9 | 12.7 | 14.2 | 13.6 | 12.5 | 11.2 | 10.0 | 8.8 | EX7 |
| | | EX8 | 54.5 | 52.8 | 49.4 | 45.9 | 42.3 | 38.6 | 43.2 | 41.4 | 37.9 | 34.2 | 30.4 | 26.6 | EX8 |
| | 0.5 | EX5 | 4.8 | 4.7 | 4.4 | 4.1 | 3.8 | 3.4 | 3.8 | 3.7 | 3.4 | 3.0 | 2.7 | 2.4 | EX5 |
| | | EX6 | 11.2 | 10.8 | 10.1 | 9.4 | 8.7 | 7.9 | 8.8 | 8.5 | 7.8 | 7.0 | 6.2 | 5.5 | EX6 |
| | | EX7 | 39.7 | 38.5 | 36.0 | 33.5 | 30.8 | 28.2 | 31.4 | 30.2 | 27.6 | 24.9 | 22.1 | 19.4 | EX7 |
| | | EX8 | 120.6 | 116.9 | 109.4 | 101.6 | 93.7 | 85.6 | 95.4 | 91.6 | 83.7 | 75.6 | 67.2 | 58.8 | EX8 |
| | 1.0 | EX5 | 6.8 | 6.6 | 6.1 | 5.7 | 5.3 | 4.8 | 5.3 | 5.1 | 4.7 | 4.2 | 3.8 | 3.3 | EX5 |
| | | EX6 | 15.6 | 15.1 | 14.2 | 13.2 | 12.1 | 11.1 | 12.3 | 11.8 | 10.8 | 9.8 | 8.7 | 7.6 | EX6 |
| | | EX7 | 55.4 | 53.8 | 50.3 | 46.8 | 43.1 | 39.4 | 43.8 | 42.0 | 38.4 | 34.7 | 30.9 | 27.1 | EX7 |
| | | EX8 | 168.3 | 163.3 | 152.8 | 142.0 | 131.0 | 119.8 | 133.0 | 127.7 | 116.7 | 105.4 | 93.9 | 82.2 | EX8 |
| 50 bubble point | 0.1 | EX5 | 2.3 | 2.2 | 2.1 | 2.0 | 1.8 | 1.7 | 1.9 | 1.9 | 1.7 | 1.6 | 1.5 | 1.3 | EX5 |
| | | EX6 | 5.3 | 5.2 | 4.9 | 4.6 | 4.3 | 3.9 | 4.5 | 4.3 | 4.0 | 3.7 | 3.4 | 3.0 | EX6 |
| | | EX7 | 18.9 | 18.4 | 17.3 | 16.2 | 15.1 | 14.0 | 15.8 | 15.3 | 14.2 | 13.1 | 12.0 | 10.8 | EX7 |
| | | EX8 | 57.3 | 55.8 | 52.6 | 49.3 | 45.9 | 42.5 | 48.1 | 46.6 | 43.3 | 39.9 | 36.4 | 32.9 | EX8 |
| | 0.5 | EX5 | 5.4 | 5.3 | 5.1 | 4.8 | 4.6 | 4.3 | 4.5 | 4.4 | 4.2 | 3.9 | 3.6 | 3.3 | EX5 |
| | | EX6 | 12.6 | 12.3 | 11.8 | 11.2 | 10.6 | 10.0 | 10.5 | 10.2 | 9.6 | 9.0 | 8.3 | 7.6 | EX6 |
| | | EX7 | 44.7 | 43.7 | 41.8 | 39.7 | 37.6 | 35.4 | 37.3 | 36.3 | 34.2 | 31.9 | 29.5 | 27.0 | EX7 |
| | | EX8 | 135.6 | 132.9 | 127.0 | 120.7 | 114.3 | 107.6 | 113.4 | 110.3 | 103.8 | 97.0 | 89.7 | 81.9 | EX8 |
| | 1.0 | EX5 | 7.1 | 6.9 | 6.5 | 6.1 | 5.7 | 5.3 | 5.9 | 5.7 | 5.3 | 4.9 | 4.5 | 4.1 | EX5 |
| | | EX6 | 16.3 | 15.9 | 15.0 | 14.1 | 13.1 | 12.2 | 13.7 | 13.2 | 12.3 | 11.4 | 10.4 | 9.4 | EX6 |
| | | EX7 | 58.0 | 56.5 | 53.3 | 50.0 | 46.6 | 43.2 | 48.6 | 47.0 | 43.8 | 40.4 | 36.9 | 33.4 | EX7 |
| | | EX8 | 176.2 | 171.6 | 161.9 | 151.9 | 141.6 | 131.2 | 147.6 | 142.8 | 132.9 | 122.6 | 112.1 | 101.3 | EX8 |
| 40 bubble point | 0.1 | EX5 | 2.3 | 2.3 | 2.2 | 2.0 | 1.9 | 1.8 | 2.0 | 2.0 | 1.8 | 1.7 | 1.6 | 1.5 | EX5 |
| | | EX6 | 5.4 | 5.2 | 5.0 | 4.7 | 4.4 | 4.1 | 4.6 | 4.5 | 4.2 | 4.0 | 3.7 | 3.4 | EX6 |
| | | EX7 | 19.1 | 18.6 | 17.7 | 16.7 | 15.6 | 14.6 | 16.5 | 16.0 | 15.1 | 14.1 | 13.0 | 12.0 | EX7 |
| | | EX8 | 58.0 | 56.6 | 53.6 | 50.6 | 47.5 | 44.4 | 50.1 | 48.7 | 45.7 | 42.7 | 39.5 | 36.3 | EX8 |
| | 0.5 | EX5 | 5.1 | 5.0 | 4.7 | 4.5 | 4.2 | 3.9 | 4.4 | 4.3 | 4.0 | 3.8 | 3.5 | 3.2 | EX5 |
| | | EX6 | 11.8 | 11.5 | 11.0 | 10.3 | 9.7 | 9.1 | 10.2 | 9.9 | 9.3 | 8.7 | 8.1 | 7.4 | EX6 |
| | | EX7 | 42.0 | 41.0 | 38.9 | 36.7 | 34.5 | 32.2 | 36.3 | 35.3 | 33.2 | 31.0 | 28.7 | 26.4 | EX7 |
| | | EX8 | 127.7 | 124.6 | 118.2 | 111.6 | 104.8 | 97.9 | 110.3 | 107.2 | 100.7 | 94.0 | 87.1 | 80.1 | EX8 |
| | 1.0 | EX5 | 7.1 | 6.9 | 6.6 | 6.2 | 5.8 | 5.5 | 6.1 | 6.0 | 5.6 | 5.2 | 4.9 | 4.5 | EX5 |
| | | EX6 | 16.4 | 16.0 | 15.2 | 14.4 | 13.5 | 12.6 | 14.2 | 13.8 | 12.9 | 12.1 | 11.2 | 10.3 | EX6 |
| | | EX7 | 58.4 | 57.0 | 54.1 | 51.1 | 48.0 | 44.8 | 50.3 | 48.9 | 46.0 | 43.0 | 39.8 | 36.6 | EX7 |
| | | EX8 | 177.3 | 173.0 | 164.2 | 155.1 | 145.7 | 136.2 | 152.8 | 148.6 | 139.7 | 130.5 | 121.0 | 111.3 | EX8 |
| 30 bubble point | 0.1 | EX5 | 2.3 | 2.2 | 2.1 | 2.0 | 1.9 | 1.8 | 2.0 | 2.0 | 1.9 | 1.8 | 1.6 | 1.5 | EX5 |
| | | EX6 | 5.3 | 5.2 | 4.9 | 4.7 | 4.4 | 4.1 | 4.7 | 4.5 | 4.3 | 4.0 | 3.8 | 3.5 | EX6 |
| | | EX7 | 18.8 | 18.4 | 17.5 | 16.6 | 15.7 | 14.7 | 16.5 | 16.1 | 15.3 | 14.4 | 13.4 | 12.5 | EX7 |
| | | EX8 | 57.1 | 55.9 | 53.2 | 50.5 | 47.6 | 44.7 | 50.3 | 49.0 | 46.4 | 43.7 | 40.8 | 37.9 | EX8 |
| | 0.5 | EX5 | 5.0 | 4.9 | 4.7 | 4.4 | 4.2 | 3.9 | 4.4 | 4.3 | 4.1 | 3.8 | 3.6 | 3.3 | EX5 |
| | | EX6 | 11.6 | 11.4 | 10.8 | 10.3 | 9.7 | 9.1 | 10.2 | 10.0 | 9.4 | 8.9 | 8.3 | 7.7 | EX6 |
| | | EX7 | 41.3 | 40.4 | 38.5 | 36.5 | 34.5 | 32.4 | 36.3 | 35.4 | 33.5 | 31.6 | 29.5 | 27.5 | EX7 |
| | | EX8 | 125.5 | 122.7 | 116.9 | 110.9 | 104.7 | 98.4 | 110.3 | 107.5 | 101.8 | 95.9 | 89.7 | 83.4 | EX8 |
| | 1.0 | EX5 | 7.0 | 6.8 | 6.5 | 6.2 | 5.8 | 5.5 | 6.1 | 6.0 | 5.6 | 5.3 | 5.0 | 4.6 | EX5 |
| | | EX6 | 16.1 | 15.7 | 15.0 | 14.2 | 13.4 | 12.6 | 14.1 | 13.8 | 13.0 | 12.3 | 11.5 | 10.7 | EX6 |
| | | EX7 | 57.1 | 55.8 | 53.2 | 50.5 | 47.7 | 44.8 | 50.1 | 48.9 | 46.3 | 43.6 | 40.8 | 38.0 | EX7 |
| | | EX8 | 173.3 | 169.5 | 161.6 | 153.4 | 144.9 | 136.2 | 152.3 | 148.5 | 140.7 | 132.5 | 124.0 | 115.4 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX5-8: Quick selection: HEAT RECLAIM / HOT GAS FLOW - (HRC1/2)

| Condensing temperature (°C) | Pressure drop (bar) | Valve type | R513A/R450A Capacity (kW) | | | | | | R134a Capacity (kW) | | | | | | Valve type |
|-----------------------------|---------------------|------------|------------------------------|-------|-------|-------|-------|-------|------------------------------|-------|-------|-------|-------|-------|------------|
| | | | Evaporating temperature (°C) | | | | | | Evaporating temperature (°C) | | | | | | |
| | | | 10 | 5 | 0 | -10 | -20 | -30 | 10 | 5 | 0 | -10 | -20 | -30 | |
| 60 bubble point | 0.1 | EX5 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.3 | 2.0 | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | EX5 |
| | | EX6 | 4.1 | 4.0 | 3.8 | 3.5 | 3.2 | 2.9 | 4.5 | 4.4 | 4.2 | 4.0 | 3.7 | 3.4 | EX6 |
| | | EX7 | 14.6 | 14.0 | 13.5 | 12.5 | 11.4 | 10.3 | 16.0 | 15.5 | 15.1 | 14.1 | 13.1 | 12.0 | EX7 |
| | | EX8 | 44.2 | 42.7 | 41.1 | 37.9 | 34.6 | 31.2 | 48.7 | 47.2 | 45.8 | 42.7 | 39.7 | 36.5 | EX8 |
| | 0.5 | EX5 | 3.9 | 3.8 | 3.6 | 3.3 | 3.1 | 2.8 | 4.3 | 4.2 | 4.0 | 3.8 | 3.5 | 3.2 | EX5 |
| | | EX6 | 9.0 | 8.7 | 8.4 | 7.7 | 7.0 | 6.4 | 9.9 | 9.6 | 9.3 | 8.7 | 8.1 | 7.5 | EX6 |
| | | EX7 | 32.0 | 30.9 | 29.7 | 27.4 | 25.0 | 22.6 | 35.2 | 34.2 | 33.1 | 31.0 | 28.7 | 26.5 | EX7 |
| | | EX8 | 97.2 | 93.8 | 90.3 | 83.3 | 76.0 | 68.7 | 107.0 | 103.8 | 100.6 | 94.0 | 87.3 | 80.4 | EX8 |
| | 1.0 | EX5 | 5.4 | 5.2 | 5.0 | 4.6 | 4.2 | 3.8 | 5.9 | 5.8 | 5.6 | 5.2 | 4.9 | 4.5 | EX5 |
| | | EX6 | 12.5 | 12.0 | 11.6 | 10.7 | 9.8 | 8.8 | 13.7 | 13.3 | 12.9 | 12.1 | 11.2 | 10.3 | EX6 |
| | | EX7 | 44.3 | 42.7 | 41.2 | 38.0 | 34.7 | 31.3 | 48.7 | 47.3 | 45.9 | 42.9 | 39.8 | 36.7 | EX7 |
| | | EX8 | 134.6 | 129.8 | 125.0 | 115.4 | 105.3 | 95.2 | 148.1 | 143.7 | 139.3 | 130.2 | 120.9 | 111.5 | EX8 |
| 50 bubble point | 0.1 | EX5 | 1.8 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 2.0 | 1.9 | 1.9 | 1.7 | 1.6 | 1.5 | EX5 |
| | | EX6 | 4.2 | 4.1 | 3.9 | 3.7 | 3.4 | 3.1 | 4.5 | 4.4 | 4.3 | 4.0 | 3.8 | 3.5 | EX6 |
| | | EX7 | 14.9 | 14.5 | 14.0 | 13.1 | 12.1 | 11.2 | 16.0 | 15.6 | 15.2 | 14.3 | 13.4 | 12.5 | EX7 |
| | | EX8 | 45.4 | 44.0 | 42.6 | 39.8 | 36.9 | 33.9 | 48.7 | 47.4 | 46.1 | 43.4 | 40.7 | 37.9 | EX8 |
| | 0.5 | EX5 | 4.0 | 3.9 | 3.8 | 3.6 | 3.3 | 3.1 | 4.3 | 4.3 | 4.2 | 4.0 | 3.8 | 3.5 | EX5 |
| | | EX6 | 9.2 | 9.1 | 8.8 | 8.3 | 7.7 | 7.1 | 9.9 | 9.9 | 9.7 | 9.2 | 8.7 | 8.1 | EX6 |
| | | EX7 | 32.7 | 32.4 | 31.4 | 29.3 | 27.2 | 25.1 | 35.1 | 35.3 | 34.4 | 32.6 | 30.8 | 28.9 | EX7 |
| | | EX8 | 99.4 | 98.3 | 95.4 | 89.1 | 82.7 | 76.4 | 106.7 | 107.3 | 104.6 | 99.1 | 93.6 | 87.9 | EX8 |
| | 1.0 | EX5 | 5.5 | 5.3 | 5.2 | 4.8 | 4.5 | 4.1 | 5.9 | 5.7 | 5.6 | 5.3 | 4.9 | 4.6 | EX5 |
| | | EX6 | 12.7 | 12.3 | 11.9 | 11.1 | 10.3 | 9.5 | 13.6 | 13.3 | 12.9 | 12.2 | 11.4 | 10.6 | EX6 |
| | | EX7 | 45.1 | 43.8 | 42.4 | 39.6 | 36.7 | 33.8 | 48.4 | 47.1 | 45.9 | 43.2 | 40.5 | 37.7 | EX7 |
| | | EX8 | 137.1 | 132.9 | 128.7 | 120.3 | 111.6 | 102.6 | 147.0 | 143.2 | 139.3 | 131.3 | 123.0 | 114.6 | EX8 |
| 40 bubble point | 0.1 | EX5 | 1.8 | 1.8 | 1.7 | 1.6 | 1.5 | 1.4 | 1.9 | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | EX5 |
| | | EX6 | 4.2 | 4.1 | 4.0 | 3.7 | 3.5 | 3.2 | 4.4 | 4.3 | 4.2 | 4.0 | 3.8 | 3.5 | EX6 |
| | | EX7 | 14.9 | 14.5 | 14.1 | 13.2 | 12.4 | 11.5 | 15.7 | 15.3 | 14.9 | 14.1 | 13.3 | 12.5 | EX7 |
| | | EX8 | 45.1 | 43.9 | 42.7 | 40.2 | 37.7 | 35.0 | 47.7 | 46.5 | 45.4 | 43.0 | 40.5 | 38.0 | EX8 |
| | 0.5 | EX5 | 4.0 | 3.8 | 3.7 | 3.5 | 3.3 | 3.1 | 4.2 | 4.1 | 4.0 | 3.8 | 3.5 | 3.3 | EX5 |
| | | EX6 | 9.1 | 8.9 | 8.6 | 8.1 | 7.6 | 7.1 | 9.6 | 9.4 | 9.2 | 8.7 | 8.2 | 7.7 | EX6 |
| | | EX7 | 32.4 | 31.6 | 30.7 | 28.9 | 27.1 | 25.2 | 34.2 | 33.4 | 32.6 | 30.8 | 29.1 | 27.3 | EX7 |
| | | EX8 | 98.5 | 95.8 | 93.2 | 87.8 | 82.2 | 76.4 | 103.9 | 101.4 | 98.9 | 93.7 | 88.4 | 82.9 | EX8 |
| | 1.0 | EX5 | 5.4 | 5.3 | 5.1 | 4.8 | 4.5 | 4.2 | 5.7 | 5.6 | 5.4 | 5.1 | 4.9 | 4.6 | EX5 |
| | | EX6 | 12.5 | 12.2 | 11.8 | 11.1 | 10.4 | 9.7 | 13.2 | 12.9 | 12.5 | 11.9 | 11.2 | 10.5 | EX6 |
| | | EX7 | 44.4 | 43.3 | 42.1 | 39.6 | 37.1 | 34.5 | 46.8 | 45.7 | 44.6 | 42.2 | 39.9 | 37.4 | EX7 |
| | | EX8 | 135.0 | 131.4 | 127.7 | 120.3 | 112.8 | 104.9 | 142.1 | 138.8 | 135.4 | 128.3 | 121.1 | 113.7 | EX8 |
| 30 bubble point | 0.1 | EX5 | 1.8 | 1.7 | 1.7 | 1.6 | 1.5 | 1.4 | 1.8 | 1.8 | 1.8 | 1.7 | 1.6 | 1.5 | EX5 |
| | | EX6 | 4.1 | 4.0 | 3.9 | 3.7 | 3.4 | 3.2 | 4.2 | 4.1 | 4.0 | 3.8 | 3.6 | 3.4 | EX6 |
| | | EX7 | 14.4 | 14.1 | 13.7 | 13.0 | 12.3 | 11.5 | 15.0 | 14.7 | 14.4 | 13.7 | 13.0 | 12.2 | EX7 |
| | | EX8 | 43.8 | 42.8 | 41.7 | 39.5 | 37.2 | 34.9 | 45.7 | 44.7 | 43.7 | 41.6 | 39.4 | 37.2 | EX8 |
| | 0.5 | EX5 | 3.8 | 3.7 | 3.6 | 3.4 | 3.2 | 3.0 | 4.0 | 3.9 | 3.8 | 3.6 | 3.4 | 3.2 | EX5 |
| | | EX6 | 8.8 | 8.6 | 8.4 | 7.9 | 7.5 | 7.0 | 9.2 | 9.0 | 8.8 | 8.3 | 7.9 | 7.5 | EX6 |
| | | EX7 | 31.3 | 30.5 | 29.8 | 28.2 | 26.6 | 24.9 | 32.6 | 31.8 | 31.1 | 29.6 | 28.1 | 26.5 | EX7 |
| | | EX8 | 95.1 | 92.8 | 90.4 | 85.7 | 80.8 | 75.8 | 98.9 | 96.7 | 94.5 | 90.0 | 85.3 | 80.5 | EX8 |
| | 1.0 | EX5 | 5.2 | 5.1 | 4.9 | 4.7 | 4.4 | 4.1 | 5.4 | 5.3 | 5.1 | 4.9 | 4.6 | 4.4 | EX5 |
| | | EX6 | 12.0 | 11.7 | 11.4 | 10.8 | 10.2 | 9.5 | 12.4 | 12.1 | 11.9 | 11.3 | 10.7 | 10.1 | EX6 |
| | | EX7 | 42.5 | 41.5 | 40.5 | 38.4 | 36.2 | 33.9 | 44.1 | 43.2 | 42.2 | 40.2 | 38.1 | 36.0 | EX7 |
| | | EX8 | 129.2 | 126.1 | 122.9 | 116.5 | 109.9 | 103.0 | 134.0 | 131.1 | 128.1 | 122.1 | 115.8 | 109.3 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX5-8: Quick selection: HEAT RECLAIM / HOT GAS FLOW - (HRC1/2)

| Condensing temperature (°C) | Pressure drop (bar) | Valve type | R1234ze | | | | | | R407C | | | | | | Valve type |
|-----------------------------|---------------------|------------|------------------------------|-------|-------|-------|------|------|------------------------------|-------|-------|-------|-------|-------|------------|
| | | | Capacity (kW) | | | | | | Capacity (kW) | | | | | | |
| | | | Evaporating temperature (°C) | | | | | | Evaporating temperature (°C) | | | | | | |
| | | | 10 | 5 | 0 | -10 | -20 | -30 | 10 | 5 | 0 | -10 | -20 | -30 | |
| 60 bubble point | 0.1 | EX5 | 1.6 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 2.3 | 2.3 | 2.2 | 2.1 | 1.9 | 1.8 | EX5 |
| | | EX6 | 3.7 | 3.6 | 3.5 | 3.2 | 3.0 | 2.7 | 5.4 | 5.3 | 5.1 | 4.8 | 4.5 | 4.1 | EX6 |
| | | EX7 | 13.3 | 12.9 | 12.4 | 11.5 | 10.6 | 9.7 | 19.2 | 18.7 | 18.1 | 17.0 | 15.9 | 14.7 | EX7 |
| | | EX8 | 40.5 | 39.1 | 37.7 | 35.0 | 32.2 | 29.5 | 58.4 | 56.7 | 55.1 | 51.7 | 48.2 | 44.6 | EX8 |
| | 0.5 | EX5 | 3.6 | 3.4 | 3.3 | 3.1 | 2.8 | 2.6 | 5.2 | 5.0 | 4.9 | 4.6 | 4.3 | 4.0 | EX5 |
| | | EX6 | 8.2 | 7.9 | 7.6 | 7.1 | 6.5 | 6.0 | 12.0 | 11.6 | 11.3 | 10.6 | 9.9 | 9.2 | EX6 |
| | | EX7 | 29.1 | 28.2 | 27.2 | 25.2 | 23.2 | 21.3 | 42.5 | 41.3 | 40.1 | 37.7 | 35.1 | 32.5 | EX7 |
| | | EX8 | 88.5 | 85.6 | 82.6 | 76.6 | 70.6 | 64.6 | 129.1 | 125.5 | 121.9 | 114.4 | 106.7 | 98.9 | EX8 |
| | 1.0 | EX5 | 4.9 | 4.7 | 4.6 | 4.2 | 3.9 | 3.6 | 7.2 | 7.0 | 6.8 | 6.4 | 6.0 | 5.5 | EX5 |
| | | EX6 | 11.3 | 10.9 | 10.5 | 9.8 | 9.0 | 8.2 | 16.7 | 16.2 | 15.8 | 14.8 | 13.8 | 12.8 | EX6 |
| | | EX7 | 40.1 | 38.7 | 37.4 | 34.7 | 32.0 | 29.3 | 59.3 | 57.7 | 56.0 | 52.6 | 49.1 | 45.5 | EX7 |
| | | EX8 | 121.7 | 117.7 | 113.6 | 105.3 | 97.1 | 88.9 | 180.1 | 175.2 | 170.2 | 159.8 | 149.1 | 138.2 | EX8 |
| 50 bubble point | 0.1 | EX5 | 1.6 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 2.4 | 2.3 | 2.3 | 2.2 | 2.0 | 1.9 | EX5 |
| | | EX6 | 3.8 | 3.6 | 3.5 | 3.3 | 3.1 | 2.9 | 5.6 | 5.4 | 5.3 | 5.0 | 4.7 | 4.4 | EX6 |
| | | EX7 | 13.3 | 13.0 | 12.6 | 11.8 | 11.0 | 10.2 | 19.8 | 19.3 | 18.8 | 17.7 | 16.7 | 15.6 | EX7 |
| | | EX8 | 40.5 | 39.3 | 38.1 | 35.7 | 33.3 | 30.8 | 60.0 | 58.5 | 57.0 | 53.9 | 50.6 | 47.3 | EX8 |
| | 0.5 | EX5 | 3.5 | 3.5 | 3.4 | 3.2 | 3.0 | 2.7 | 5.3 | 5.5 | 5.4 | 5.2 | 4.9 | 4.7 | EX5 |
| | | EX6 | 8.2 | 8.1 | 7.8 | 7.3 | 6.8 | 6.3 | 12.3 | 12.7 | 12.4 | 11.9 | 11.4 | 10.8 | EX6 |
| | | EX7 | 29.1 | 28.7 | 27.9 | 26.1 | 24.3 | 22.5 | 43.6 | 45.1 | 44.2 | 42.4 | 40.4 | 38.4 | EX7 |
| | | EX8 | 88.3 | 87.3 | 84.6 | 79.2 | 73.8 | 68.4 | 132.5 | 136.9 | 134.3 | 128.7 | 122.8 | 116.7 | EX8 |
| | 1.0 | EX5 | 4.8 | 4.7 | 4.6 | 4.3 | 4.0 | 3.7 | 7.4 | 7.2 | 7.0 | 6.6 | 6.3 | 5.8 | EX5 |
| | | EX6 | 11.2 | 10.8 | 10.5 | 9.8 | 9.2 | 8.5 | 17.1 | 16.7 | 16.2 | 15.4 | 14.4 | 13.5 | EX6 |
| | | EX7 | 39.7 | 38.5 | 37.4 | 35.0 | 32.6 | 30.3 | 60.7 | 59.2 | 57.7 | 54.6 | 51.3 | 48.0 | EX7 |
| | | EX8 | 120.7 | 117.1 | 113.5 | 106.3 | 99.1 | 91.9 | 184.4 | 179.9 | 175.3 | 165.8 | 155.9 | 145.8 | EX8 |
| 40 bubble point | 0.1 | EX5 | 1.6 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 2.4 | 2.4 | 2.3 | 2.2 | 2.1 | 1.9 | EX5 |
| | | EX6 | 3.7 | 3.6 | 3.5 | 3.3 | 3.1 | 2.9 | 5.6 | 5.4 | 5.3 | 5.0 | 4.8 | 4.5 | EX6 |
| | | EX7 | 13.1 | 12.7 | 12.4 | 11.7 | 11.0 | 10.2 | 19.7 | 19.3 | 18.8 | 17.9 | 16.9 | 15.9 | EX7 |
| | | EX8 | 39.7 | 38.6 | 37.6 | 35.4 | 33.3 | 31.1 | 60.0 | 58.6 | 57.2 | 54.3 | 51.3 | 48.3 | EX8 |
| | 0.5 | EX5 | 3.4 | 3.4 | 3.3 | 3.1 | 2.9 | 2.7 | 5.3 | 5.2 | 5.1 | 4.8 | 4.5 | 4.3 | EX5 |
| | | EX6 | 8.0 | 7.7 | 7.5 | 7.1 | 6.7 | 6.2 | 12.2 | 11.9 | 11.7 | 11.1 | 10.5 | 9.9 | EX6 |
| | | EX7 | 28.3 | 27.5 | 26.8 | 25.2 | 23.7 | 22.2 | 43.5 | 42.5 | 41.5 | 39.4 | 37.2 | 35.0 | EX7 |
| | | EX8 | 85.9 | 83.6 | 81.3 | 76.7 | 72.1 | 67.3 | 132.0 | 129.0 | 126.0 | 119.6 | 113.1 | 106.4 | EX8 |
| | 1.0 | EX5 | 4.7 | 4.5 | 4.4 | 4.2 | 3.9 | 3.7 | 7.3 | 7.2 | 7.0 | 6.7 | 6.3 | 5.9 | EX5 |
| | | EX6 | 10.8 | 10.5 | 10.2 | 9.6 | 9.0 | 8.5 | 17.0 | 16.6 | 16.2 | 15.4 | 14.5 | 13.7 | EX6 |
| | | EX7 | 38.3 | 37.3 | 36.3 | 34.2 | 32.1 | 30.1 | 60.3 | 58.9 | 57.5 | 54.7 | 51.7 | 48.7 | EX7 |
| | | EX8 | 116.3 | 113.2 | 110.1 | 103.9 | 97.7 | 91.3 | 183.0 | 178.9 | 174.7 | 166.1 | 157.1 | 147.9 | EX8 |
| 30 bubble point | 0.1 | EX5 | 1.5 | 1.5 | 1.5 | 1.4 | 1.3 | 1.2 | 2.3 | 2.3 | 2.2 | 2.1 | 2.0 | 1.9 | EX5 |
| | | EX6 | 3.5 | 3.4 | 3.4 | 3.2 | 3.0 | 2.8 | 5.4 | 5.3 | 5.2 | 4.9 | 4.7 | 4.4 | EX6 |
| | | EX7 | 12.6 | 12.2 | 11.9 | 11.3 | 10.7 | 10.0 | 19.3 | 18.9 | 18.5 | 17.6 | 16.7 | 15.8 | EX7 |
| | | EX8 | 38.1 | 37.2 | 36.3 | 34.4 | 32.5 | 30.5 | 58.6 | 57.3 | 56.1 | 53.4 | 50.7 | 47.9 | EX8 |
| | 0.5 | EX5 | 3.3 | 3.2 | 3.1 | 3.0 | 2.8 | 2.6 | 5.2 | 5.0 | 4.9 | 4.7 | 4.5 | 4.2 | EX5 |
| | | EX6 | 7.6 | 7.4 | 7.2 | 6.8 | 6.5 | 6.1 | 11.9 | 11.6 | 11.4 | 10.9 | 10.3 | 9.8 | EX6 |
| | | EX7 | 26.9 | 26.2 | 25.6 | 24.3 | 22.9 | 21.6 | 42.3 | 41.4 | 40.5 | 38.6 | 36.7 | 34.7 | EX7 |
| | | EX8 | 81.7 | 79.7 | 77.7 | 73.7 | 69.7 | 65.5 | 128.5 | 125.8 | 123.0 | 117.3 | 111.4 | 105.3 | EX8 |
| | 1.0 | EX5 | 4.4 | 4.3 | 4.2 | 4.0 | 3.7 | 3.5 | 7.1 | 7.0 | 6.8 | 6.5 | 6.2 | 5.8 | EX5 |
| | | EX6 | 10.1 | 9.9 | 9.6 | 9.1 | 8.6 | 8.1 | 16.4 | 16.1 | 15.7 | 15.0 | 14.3 | 13.5 | EX6 |
| | | EX7 | 35.9 | 35.1 | 34.2 | 32.4 | 30.7 | 28.8 | 58.3 | 57.1 | 55.9 | 53.3 | 50.7 | 47.9 | EX7 |
| | | EX8 | 109.1 | 106.5 | 103.8 | 98.5 | 93.2 | 87.5 | 177.2 | 173.6 | 169.8 | 162.0 | 153.9 | 145.6 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX5-8: Quick selection: HEAT RECLAIM / HOT GAS FLOW - (HRC1/2)

| Condensing temperature (°C) | Pressure drop (bar) | Valve type | R404A/R507 Capacity (kW) | | | | | | R410A Capacity (kW) | | | | | | Valve type |
|-----------------------------|---------------------|------------|------------------------------|-------|-------|-------|-------|-------|------------------------------|-------|-------|-------|-------|-------|------------|
| | | | Evaporating temperature (°C) | | | | | | Evaporating temperature (°C) | | | | | | |
| | | | 5 | 0 | -10 | -20 | -30 | -40 | 5 | 0 | -10 | -20 | -30 | -40 | |
| 60 bubble point | 0.1 | EX5 | 1.7 | 1.6 | 1.5 | 1.3 | 1.2 | 1.0 | 2.5 | 2.4 | 2.3 | 2.1 | 2.0 | 1.9 | EX5 |
| | | EX6 | 3.8 | 3.7 | 3.4 | 3.0 | 2.7 | 2.3 | 5.7 | 5.6 | 5.3 | 4.9 | 4.6 | 4.3 | EX6 |
| | | EX7 | 13.7 | 13.1 | 12.0 | 10.8 | 9.5 | 8.3 | 20.3 | 19.7 | 18.7 | 17.6 | 16.4 | 15.2 | EX7 |
| | | EX8 | 41.5 | 39.8 | 36.3 | 32.7 | 29.0 | 25.2 | 61.5 | 60.0 | 56.7 | 53.3 | 49.8 | 46.2 | EX8 |
| | 0.5 | EX5 | 3.7 | 3.5 | 3.2 | 2.9 | 2.6 | 2.2 | 5.5 | 5.3 | 5.1 | 4.8 | 4.4 | 4.1 | EX5 |
| | | EX6 | 8.5 | 8.1 | 7.4 | 6.7 | 5.9 | 5.2 | 12.6 | 12.3 | 11.7 | 11.0 | 10.2 | 9.5 | EX6 |
| | | EX7 | 30.2 | 28.9 | 26.4 | 23.8 | 21.1 | 18.3 | 45.0 | 43.8 | 41.5 | 39.0 | 36.4 | 33.8 | EX7 |
| | | EX8 | 91.6 | 87.9 | 80.2 | 72.2 | 64.0 | 55.7 | 136.6 | 133.1 | 126.0 | 118.4 | 110.6 | 102.6 | EX8 |
| | 1.0 | EX5 | 5.1 | 4.9 | 4.5 | 4.0 | 3.6 | 3.1 | 7.7 | 7.5 | 7.1 | 6.7 | 6.2 | 5.8 | EX5 |
| | | EX6 | 11.8 | 11.3 | 10.3 | 9.3 | 8.3 | 7.2 | 17.7 | 17.3 | 16.3 | 15.4 | 14.4 | 13.3 | EX6 |
| | | EX7 | 42.0 | 40.3 | 36.8 | 33.1 | 29.4 | 25.6 | 63.0 | 61.4 | 58.1 | 54.7 | 51.1 | 47.4 | EX7 |
| | | EX8 | 127.5 | 122.4 | 111.7 | 100.6 | 89.3 | 77.7 | 191.2 | 186.5 | 176.5 | 166.0 | 155.1 | 143.9 | EX8 |
| 50 bubble point | 0.1 | EX5 | 1.9 | 1.8 | 1.7 | 1.6 | 1.4 | 1.3 | 2.7 | 2.6 | 2.5 | 2.3 | 2.2 | 2.1 | EX5 |
| | | EX6 | 4.3 | 4.2 | 3.9 | 3.6 | 3.3 | 2.9 | 6.1 | 6.0 | 5.7 | 5.4 | 5.1 | 4.7 | EX6 |
| | | EX7 | 15.4 | 14.9 | 13.8 | 12.7 | 11.6 | 10.5 | 21.8 | 21.3 | 20.2 | 19.1 | 18.0 | 16.8 | EX7 |
| | | EX8 | 46.7 | 45.2 | 42.0 | 38.7 | 35.3 | 31.8 | 66.1 | 64.6 | 61.4 | 58.1 | 54.7 | 51.2 | EX8 |
| | 0.5 | EX5 | 4.4 | 4.3 | 4.0 | 3.8 | 3.5 | 3.2 | 6.4 | 6.4 | 6.2 | 6.0 | 5.8 | 5.5 | EX5 |
| | | EX6 | 10.1 | 9.9 | 9.3 | 8.7 | 8.0 | 7.4 | 14.8 | 14.7 | 14.3 | 13.8 | 13.3 | 12.7 | EX6 |
| | | EX7 | 36.0 | 35.0 | 33.0 | 30.8 | 28.5 | 26.2 | 52.8 | 52.2 | 50.7 | 49.1 | 47.2 | 45.2 | EX7 |
| | | EX8 | 109.4 | 106.4 | 100.2 | 93.6 | 86.7 | 79.5 | 160.3 | 158.4 | 154.1 | 149.1 | 143.5 | 137.4 | EX8 |
| | 1.0 | EX5 | 5.7 | 5.5 | 5.2 | 4.8 | 4.3 | 3.9 | 8.2 | 8.0 | 7.6 | 7.2 | 6.8 | 6.4 | EX5 |
| | | EX6 | 13.2 | 12.8 | 11.9 | 11.0 | 10.0 | 9.1 | 18.9 | 18.5 | 17.6 | 16.7 | 15.7 | 14.7 | EX6 |
| | | EX7 | 47.1 | 45.5 | 42.4 | 39.1 | 35.7 | 32.2 | 67.3 | 65.8 | 62.6 | 59.3 | 55.9 | 52.3 | EX7 |
| | | EX8 | 142.9 | 138.3 | 128.7 | 118.7 | 108.3 | 97.8 | 204.5 | 199.9 | 190.3 | 180.2 | 169.7 | 158.9 | EX8 |
| 40 bubble point | 0.1 | EX5 | 2.0 | 1.9 | 1.8 | 1.7 | 1.6 | 1.4 | 2.7 | 2.6 | 2.5 | 2.4 | 2.3 | 2.1 | EX5 |
| | | EX6 | 4.5 | 4.4 | 4.1 | 3.9 | 3.6 | 3.3 | 6.2 | 6.1 | 5.8 | 5.5 | 5.2 | 4.9 | EX6 |
| | | EX7 | 16.1 | 15.7 | 14.7 | 13.8 | 12.7 | 11.7 | 22.2 | 21.7 | 20.7 | 19.7 | 18.6 | 17.6 | EX7 |
| | | EX8 | 49.0 | 47.6 | 44.8 | 41.8 | 38.7 | 35.5 | 67.5 | 66.0 | 63.0 | 59.9 | 56.6 | 53.3 | EX8 |
| | 0.5 | EX5 | 4.3 | 4.2 | 4.0 | 3.7 | 3.4 | 3.1 | 6.0 | 5.9 | 5.6 | 5.3 | 5.0 | 4.7 | EX5 |
| | | EX6 | 10.0 | 9.7 | 9.1 | 8.5 | 7.9 | 7.3 | 13.8 | 13.5 | 12.9 | 12.3 | 11.6 | 10.9 | EX6 |
| | | EX7 | 35.5 | 34.5 | 32.4 | 30.3 | 28.0 | 25.8 | 49.1 | 48.0 | 45.9 | 43.6 | 41.3 | 38.9 | EX7 |
| | | EX8 | 107.7 | 104.7 | 98.5 | 91.9 | 85.2 | 78.3 | 149.1 | 145.9 | 139.4 | 132.5 | 125.4 | 118.0 | EX8 |
| | 1.0 | EX5 | 6.0 | 5.8 | 5.5 | 5.1 | 4.7 | 4.4 | 8.3 | 8.2 | 7.8 | 7.4 | 7.0 | 6.6 | EX5 |
| | | EX6 | 13.8 | 13.4 | 12.6 | 11.8 | 10.9 | 10.1 | 19.2 | 18.8 | 18.0 | 17.1 | 16.2 | 15.3 | EX6 |
| | | EX7 | 49.1 | 47.7 | 44.9 | 41.9 | 38.9 | 35.8 | 68.4 | 67.0 | 64.0 | 60.9 | 57.6 | 54.3 | EX7 |
| | | EX8 | 149.1 | 145.0 | 136.4 | 127.4 | 118.1 | 108.6 | 207.8 | 203.4 | 194.4 | 184.9 | 175.0 | 164.8 | EX8 |
| 30 bubble point | 0.1 | EX5 | 2.0 | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | 2.7 | 2.6 | 2.5 | 2.4 | 2.3 | 2.2 | EX5 |
| | | EX6 | 4.6 | 4.5 | 4.2 | 4.0 | 3.7 | 3.5 | 6.2 | 6.1 | 5.8 | 5.5 | 5.3 | 5.0 | EX6 |
| | | EX7 | 16.3 | 15.9 | 15.0 | 14.1 | 13.2 | 12.3 | 22.0 | 21.6 | 20.6 | 19.7 | 18.7 | 17.7 | EX7 |
| | | EX8 | 49.4 | 48.2 | 45.6 | 43.0 | 40.2 | 37.4 | 66.9 | 65.5 | 62.7 | 59.8 | 56.8 | 53.6 | EX8 |
| | 0.5 | EX5 | 4.3 | 4.2 | 4.0 | 3.8 | 3.5 | 3.3 | 5.9 | 5.8 | 5.5 | 5.3 | 5.0 | 4.8 | EX5 |
| | | EX6 | 10.0 | 9.8 | 9.3 | 8.7 | 8.2 | 7.6 | 13.7 | 13.4 | 12.8 | 12.2 | 11.6 | 11.0 | EX6 |
| | | EX7 | 35.6 | 34.8 | 32.9 | 31.0 | 29.0 | 27.0 | 48.5 | 47.6 | 45.5 | 43.4 | 41.2 | 39.0 | EX7 |
| | | EX8 | 108.2 | 105.6 | 100.0 | 94.2 | 88.2 | 82.0 | 147.4 | 144.5 | 138.3 | 131.9 | 125.3 | 118.5 | EX8 |
| | 1.0 | EX5 | 6.0 | 5.8 | 5.5 | 5.2 | 4.9 | 4.5 | 8.2 | 8.0 | 7.7 | 7.4 | 7.0 | 6.6 | EX5 |
| | | EX6 | 13.8 | 13.5 | 12.8 | 12.0 | 11.3 | 10.5 | 19.0 | 18.6 | 17.8 | 17.0 | 16.1 | 15.3 | EX6 |
| | | EX7 | 49.1 | 47.9 | 45.4 | 42.8 | 40.1 | 37.3 | 67.4 | 66.0 | 63.3 | 60.4 | 57.4 | 54.3 | EX7 |
| | | EX8 | 149.2 | 145.5 | 138.0 | 130.0 | 121.8 | 113.3 | 204.6 | 200.6 | 192.3 | 183.4 | 174.3 | 164.9 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8: Quick selection: CONDENSING PRESURE / LIQUID DUTY (0.35 bar pressure drop) – (CPR)

| Condensing temperature (°C) | R448A/R449A | | | | | | | | | | | | Valve type |
|--------------------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| | Capacity (kW) | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | |
| | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | -35 | -40 | -45 | |
| 30 bubble/ 34.9 dew point | 6.0 | 5.9 | 5.8 | 5.7 | 5.6 | 5.5 | 5.4 | 5.3 | 5.2 | 5.1 | 5.0 | 4.9 | EX4 |
| | 19.3 | 19.0 | 18.8 | 18.5 | 18.2 | 17.9 | 17.5 | 17.2 | 16.9 | 16.5 | 16.2 | 15.8 | EX5 |
| | 44.9 | 44.3 | 43.7 | 43.0 | 42.3 | 41.6 | 40.8 | 40.0 | 39.3 | 38.5 | 37.7 | 36.8 | EX6 |
| | 159.7 | 157.5 | 155.2 | 152.8 | 150.3 | 147.7 | 145.0 | 142.3 | 139.5 | 136.7 | 133.8 | 130.9 | EX7 |
| | 485.0 | 478.3 | 471.3 | 464.0 | 456.4 | 448.6 | 440.5 | 432.3 | 423.8 | 415.2 | 406.5 | 397.6 | EX8 |
| 20 bubble/ 25.3 dew point | 6.7 | 6.6 | 6.5 | 6.4 | 6.3 | 6.2 | 6.1 | 6.0 | 5.9 | 5.8 | 5.7 | 5.6 | EX4 |
| | 21.6 | 21.3 | 21.0 | 20.7 | 20.4 | 20.1 | 19.8 | 19.4 | 19.1 | 18.8 | 18.4 | 18.0 | EX5 |
| | 50.2 | 49.6 | 48.9 | 48.2 | 47.5 | 46.8 | 46.0 | 45.2 | 44.4 | 43.6 | 42.8 | 42.0 | EX6 |
| | 178.5 | 176.2 | 173.9 | 171.4 | 168.9 | 166.2 | 163.5 | 160.8 | 157.9 | 155.0 | 152.1 | 149.1 | EX7 |
| | 542.1 | 535.3 | 528.2 | 520.7 | 513.0 | 505.0 | 496.8 | 488.4 | 479.7 | 471.0 | 462.0 | 453.0 | EX8 |
| 10 bubble/ 15.5 dew point | | | 7.2 | 7.1 | 7.0 | 6.9 | 6.8 | 6.7 | 6.6 | 6.5 | 6.3 | 6.2 | EX4 |
| | | | 23.3 | 23.0 | 22.6 | 22.3 | 22.0 | 21.6 | 21.3 | 20.9 | 20.6 | 20.2 | EX5 |
| | | | 54.1 | 53.4 | 52.7 | 51.9 | 51.1 | 50.3 | 49.5 | 48.7 | 47.9 | 47.0 | EX6 |
| | | | 192.3 | 189.8 | 187.2 | 184.5 | 181.7 | 178.9 | 176.0 | 173.1 | 170.1 | 167.1 | EX7 |
| | | | 584.1 | 576.5 | 568.6 | 560.4 | 552.1 | 543.5 | 534.7 | 525.8 | 516.7 | 507.5 | EX8 |
| 0 bubble/ 5.7 dew point | | | | | 7.7 | 7.5 | 7.4 | 7.3 | 7.2 | 7.1 | 7.0 | 6.9 | EX4 |
| | | | | | 24.8 | 24.5 | 24.2 | 23.8 | 23.5 | 23.1 | 22.7 | 22.4 | EX5 |
| | | | | | 57.7 | 57.0 | 56.2 | 55.4 | 54.6 | 53.7 | 52.9 | 52.0 | EX6 |
| | | | | | 205.2 | 202.5 | 199.7 | 196.8 | 193.9 | 190.9 | 187.9 | 184.8 | EX7 |
| | | | | | 623.4 | 615.2 | 606.6 | 597.9 | 589.0 | 579.9 | 570.7 | 561.3 | EX8 |
| -10 bubble/ -4.2 dew point | | | | | | | 8.1 | 8.0 | 7.9 | 7.8 | 7.7 | 7.5 | EX4 |
| | | | | | | | 26.3 | 26.0 | 25.6 | 25.2 | 24.9 | 24.5 | EX5 |
| | | | | | | | 61.2 | 60.4 | 59.5 | 58.7 | 57.8 | 56.9 | EX6 |
| | | | | | | | 217.5 | 214.6 | 211.6 | 208.6 | 205.5 | 202.3 | EX7 |
| | | | | | | | 660.7 | 651.8 | 642.8 | 633.6 | 624.2 | 614.7 | EX8 |
| -20 bubble/ -14.1 dew point | | | | | | | | 8.5 | 8.4 | 8.3 | 8.2 | | EX4 |
| | | | | | | | | 27.7 | 27.4 | 27.0 | 26.6 | | EX5 |
| | | | | | | | | 64.5 | 63.6 | 62.7 | 61.8 | | EX6 |
| | | | | | | | | 229.2 | 226.1 | 223.0 | 219.8 | | EX7 |
| | | | | | | | | 696.2 | 686.8 | 677.3 | 667.7 | | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8: Quick selection: CONDENSING PRESURE / LIQUID DUTY (0.35 bar pressure drop) – (CPR)

| Condensing temperature (°C) | R452A | | | | | | | | | | | | Valve type |
|-------------------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| | Capacity (kW) | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | |
| | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | -35 | -40 | -45 | |
| 30 bubble/ 33.9 dew point | 4.7 | 4.6 | 4.5 | 4.4 | 4.3 | 4.2 | 4.1 | 4.0 | 3.9 | 3.8 | 3.7 | 3.6 | EX4 |
| | 15.3 | 15.0 | 14.7 | 14.4 | 14.1 | 13.7 | 13.4 | 13.0 | 12.7 | 12.3 | 12.0 | 11.6 | EX5 |
| | 35.6 | 34.9 | 34.2 | 33.5 | 32.7 | 31.9 | 31.2 | 30.4 | 29.5 | 28.7 | 27.9 | 27.0 | EX6 |
| | 126.5 | 124.1 | 121.6 | 119.0 | 116.3 | 113.5 | 110.7 | 107.9 | 105.0 | 102.0 | 99.1 | 96.0 | EX7 |
| | 384.3 | 376.9 | 369.3 | 361.4 | 353.3 | 344.9 | 336.4 | 327.7 | 318.9 | 309.9 | 300.9 | 291.7 | EX8 |
| 20 bubble/ 24 dew point | 5.4 | 5.3 | 5.2 | 5.1 | 5.0 | 4.9 | 4.8 | 4.7 | 4.6 | 4.4 | 4.3 | 4.2 | EX4 |
| | 17.5 | 17.2 | 16.9 | 16.5 | 16.2 | 15.9 | 15.5 | 15.2 | 14.8 | 14.4 | 14.1 | 13.7 | EX5 |
| | 40.6 | 39.9 | 39.2 | 38.5 | 37.7 | 36.9 | 36.1 | 35.3 | 34.4 | 33.6 | 32.7 | 31.9 | EX6 |
| | 144.4 | 141.9 | 139.3 | 136.7 | 133.9 | 131.1 | 128.3 | 125.3 | 122.4 | 119.4 | 116.3 | 113.2 | EX7 |
| | 438.6 | 431.1 | 423.3 | 415.2 | 406.9 | 398.3 | 389.6 | 380.7 | 371.7 | 362.6 | 353.3 | 344.0 | EX8 |
| 10 bubble/ 14.1 dew point | | | 5.8 | 5.7 | 5.6 | 5.5 | 5.4 | 5.3 | 5.2 | 5.1 | 5.0 | 4.9 | EX4 |
| | | | 19.0 | 18.7 | 18.3 | 18.0 | 17.6 | 17.3 | 16.9 | 16.5 | 16.1 | 15.8 | EX5 |
| | | | 44.1 | 43.4 | 42.6 | 41.8 | 41.0 | 40.1 | 39.3 | 38.4 | 37.5 | 36.7 | EX6 |
| | | | 156.9 | 154.2 | 151.4 | 148.5 | 145.6 | 142.6 | 139.6 | 136.5 | 133.4 | 130.3 | EX7 |
| | | | 476.6 | 468.3 | 459.8 | 451.1 | 442.3 | 433.2 | 424.0 | 414.7 | 405.2 | 395.7 | EX8 |
| 0 bubble/ 4.1 dew point | | | | | 6.3 | 6.2 | 6.1 | 6.0 | 5.8 | 5.7 | 5.6 | 5.5 | EX4 |
| | | | | | 20.4 | 20.0 | 19.7 | 19.3 | 18.9 | 18.6 | 18.2 | 17.8 | EX5 |
| | | | | | 47.5 | 46.6 | 45.8 | 44.9 | 44.1 | 43.2 | 42.3 | 41.4 | EX6 |
| | | | | | 168.7 | 165.7 | 162.8 | 159.7 | 156.7 | 153.5 | 150.4 | 147.2 | EX7 |
| | | | | | 512.3 | 503.5 | 494.4 | 485.2 | 475.9 | 466.4 | 456.8 | 447.1 | EX8 |
| -10 bubble/ -5.9 dew point | | | | | | | 6.7 | 6.6 | 6.5 | 6.4 | 6.2 | 6.1 | EX4 |
| | | | | | | | 21.8 | 21.4 | 21.0 | 20.6 | 20.2 | 19.8 | EX5 |
| | | | | | | | 50.6 | 49.7 | 48.8 | 47.9 | 47.0 | 46.1 | EX6 |
| | | | | | | | 179.8 | 176.7 | 173.6 | 170.4 | 167.2 | 164.0 | EX7 |
| | | | | | | | 546.2 | 536.8 | 527.3 | 517.7 | 507.9 | 498.1 | EX8 |
| -20 bubble/ -16 dew point | | | | | | | | | 7.1 | 7.0 | 6.9 | 6.7 | EX4 |
| | | | | | | | | | 23.0 | 22.6 | 22.2 | 21.9 | EX5 |
| | | | | | | | | | 53.6 | 52.7 | 51.7 | 50.8 | EX6 |
| | | | | | | | | | 190.4 | 187.2 | 183.9 | 180.6 | EX7 |
| | | | | | | | | | 578.4 | 568.6 | 558.7 | 548.7 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

EX4-8: Quick selection: CONDENSING PRESURE / LIQUID DUTY (0.35 bar pressure drop) – (CPR)



| Condensing temperature (°C) | R404A/R507 | | | | | | | | | | | | Valve type |
|-----------------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| | Capacity (kW) | | | | | | | | | | | | |
| | Evaporating temperature (°C) | | | | | | | | | | | | |
| | 10 | 5 | 0 | -5 | -10 | -15 | -20 | -25 | -30 | -35 | -40 | -45 | |
| 30 bubble | 4.6 | 4.5 | 4.5 | 4.4 | 4.3 | 4.2 | 4.1 | 4.0 | 3.9 | 3.8 | 3.6 | 3.5 | EX4 |
| | 15.0 | 14.8 | 14.5 | 14.2 | 13.9 | 13.5 | 13.2 | 12.9 | 12.5 | 12.2 | 11.8 | 11.5 | EX5 |
| | 35.0 | 34.3 | 33.7 | 33.0 | 32.2 | 31.5 | 30.7 | 29.9 | 29.1 | 28.3 | 27.5 | 26.7 | EX6 |
| | 124.4 | 122.1 | 119.7 | 117.2 | 114.6 | 111.9 | 109.2 | 106.4 | 103.5 | 100.7 | 97.7 | 94.8 | EX7 |
| | 377.7 | 370.8 | 363.5 | 355.9 | 348.0 | 339.9 | 331.6 | 323.2 | 314.5 | 305.8 | 296.9 | 287.9 | EX8 |
| 20 bubble | 5.3 | 5.2 | 5.1 | 5.0 | 4.9 | 4.8 | 4.7 | 4.6 | 4.5 | 4.4 | 4.3 | 4.2 | EX4 |
| | 17.3 | 17.0 | 16.7 | 16.4 | 16.0 | 15.7 | 15.4 | 15.0 | 14.7 | 14.3 | 14.0 | 13.6 | EX5 |
| | 40.1 | 39.5 | 38.8 | 38.1 | 37.3 | 36.5 | 35.8 | 35.0 | 34.1 | 33.3 | 32.5 | 31.6 | EX6 |
| | 142.6 | 140.3 | 137.8 | 135.2 | 132.6 | 129.9 | 127.1 | 124.2 | 121.3 | 118.4 | 115.4 | 112.3 | EX7 |
| | 433.2 | 426.1 | 418.6 | 410.8 | 402.8 | 394.5 | 386.0 | 377.4 | 368.5 | 359.6 | 350.5 | 341.2 | EX8 |
| 10 bubble | | | 5.8 | 5.7 | 5.6 | 5.5 | 5.4 | 5.3 | 5.2 | 5.1 | 4.9 | 4.8 | EX4 |
| | | | 18.8 | 18.5 | 18.2 | 17.8 | 17.5 | 17.1 | 16.8 | 16.4 | 16.1 | 15.7 | EX5 |
| | | | 43.8 | 43.0 | 42.3 | 41.5 | 40.7 | 39.9 | 39.0 | 38.2 | 37.3 | 36.5 | EX6 |
| | | | 155.6 | 153.0 | 150.3 | 147.5 | 144.6 | 141.7 | 138.8 | 135.8 | 132.7 | 129.6 | EX7 |
| | | | 472.6 | 464.6 | 456.4 | 448.0 | 439.4 | 430.5 | 421.5 | 412.4 | 403.1 | 393.7 | EX8 |
| 0 bubble | | | | | 6.2 | 6.1 | 6.0 | 5.9 | 5.8 | 5.7 | 5.6 | 5.5 | EX4 |
| | | | | | 20.3 | 19.9 | 19.6 | 19.2 | 18.9 | 18.5 | 18.1 | 17.7 | EX5 |
| | | | | | 47.2 | 46.4 | 45.6 | 44.7 | 43.9 | 43.0 | 42.1 | 41.3 | EX6 |
| | | | | | 167.7 | 164.8 | 161.9 | 159.0 | 156.0 | 152.9 | 149.8 | 146.6 | EX7 |
| | | | | | 509.3 | 500.7 | 491.9 | 482.9 | 473.8 | 464.5 | 455.0 | 445.4 | EX8 |
| 0 bubble | | | | | | | 6.7 | 6.6 | 6.4 | 6.3 | 6.2 | 6.1 | EX4 |
| | | | | | | | 21.7 | 21.3 | 20.9 | 20.5 | 20.2 | 19.8 | EX5 |
| | | | | | | | 50.4 | 49.5 | 48.7 | 47.8 | 46.9 | 46.0 | EX6 |
| | | | | | | | 179.0 | 176.0 | 173.0 | 169.8 | 166.7 | 163.5 | EX7 |
| | | | | | | | 543.8 | 534.7 | 525.4 | 515.9 | 506.3 | 496.6 | EX8 |
| 0 bubble | | | | | | | | | 7.1 | 7.0 | 6.8 | 6.7 | EX4 |
| | | | | | | | | | 23.0 | 22.6 | 22.2 | 21.8 | EX5 |
| | | | | | | | | | 53.4 | 52.5 | 51.6 | 50.7 | EX6 |
| | | | | | | | | | 189.8 | 186.6 | 183.4 | 180.2 | EX7 |
| | | | | | | | | | 576.5 | 566.9 | 557.2 | 547.4 | EX8 |

Note: For other operating conditions, please use free selection tool/program Navigator revision 2019.

Electrical Control Valves Series EX4-8

Technical data

| | |
|---|---|
| Compatibility <i>Note:</i> UL only for use with A1 refrigerants. | A1: R134a, R404A, R507, R407C, R450A, R513A, R452A, R448A, R449A, R410A, R744 (subcritical), R23, R124 A2L: R32, R452B, R454B, R454A, R454C, R1234ze, R123yf Mineral and POE lubricants |
| MOPD (maximum operating pressure differential) | EX4/EX5/EX6: 40 bar EX7: 35 bar EX8: 30 bar |
| Max. working pressure PS | EX4 (uni-flow): 90 bar EX4/5/6/7 (bi-flow): 60 bar EX8: 45 bar UL Approval: EX4/5/6/7: 60 bar UL Approval: EX8: 45 bar |
| Factory test pressure PT | EX4 (uni-flow): 99 bar EX4/5/6: 66 bar EX7: 86 bar EX8: 65 bar |
| Ambient temperature Storage temperature | -40...+55°C -40...+70°C |
| Medium inlet temperature Bi-flow version: Uni-flow version: | TS: -50...+80°C TS: -50...+100°C (UL-Approval based on $\geq -40^\circ\text{C}$) |

| | |
|--|---|
| Evaporating temperature | -100...+55°C |
| Salt spray test | non-corrosion stainless steel body |
| Connections | ODF stainless steel fittings |
| Humidity | 5 to 95% r.H. |
| Protection accordance to IEC 529, DIN 40050 | IP67 with EMERSON supplied cable connector assembly |
| Vibration for non-connected and fastened valve | 4g (0...1000 Hz, 1 octave /min.) |
| Shock | 20g at 11 ms 80g at 1 ms |
| Net weight (kg) | 0.5 kg (EX4), 0.52 kg (EX5), 0.60 kg (EX6), 1.1 kg (EX7), 1.5 kg (EX8) |
| External leakage | ≤ 3 gram / year |
| Seat leakage | Positive shut-off better than solenoid valves |
| Marking | EX4/5/6: None (Out of PED scope) EX7/8:  1017 (Module D1) EX4/5/6/7/8:  |

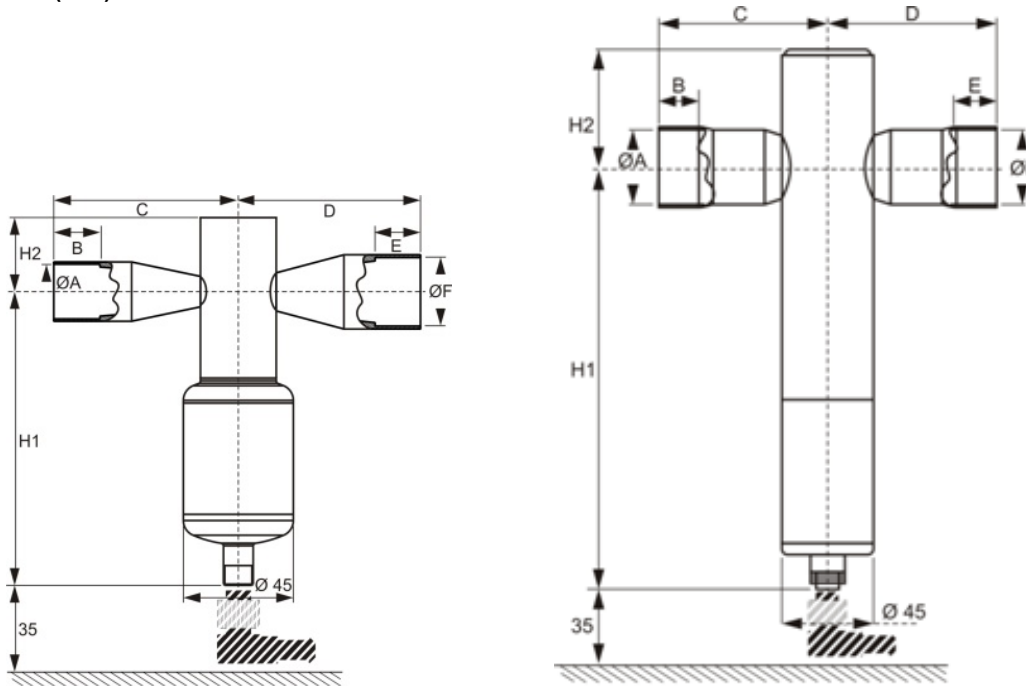
Electrical data

| | |
|-------------------------------|--|
| Stepper motor type | Bi-polar, phase current by chopper control (constant current) |
| Electrical connection | 4 pin terminal via plug |
| Recom. driver supply | 24 VDC (nominal) |
| Driver supply voltage range | 18...36 VDC |
| Phase current, operating | EX4/EX5/EX6: 500 max, -10% EX7: 750 mA $\pm 10\%$ EX8: 800 mA $\pm 10\%$ |
| Holding current | EX4/EX5/EX6: 100 mA EX7: 250 mA EX8: 500 mA |
| Nominal input power per phase | EX4/EX5/EX6: 3.5 W EX7/EX8: 5 W |
| Stepping rate | 500 Hz |

| | |
|------------------------------|---|
| Phase inductance | EX4/EX5/EX6: 30 mH $\pm 25\%$ EX7: 20 mH $\pm 25\%$ EX8: 22 mH $\pm 25\%$ |
| Step mode | 2 phase full step |
| Step angle | 1.8° per step $\pm 8\%$ |
| Reference position | Mechanical stop at fully close position |
| Total number of steps | EX4/EX5/EX6: 750 full steps EX7: 1600 full steps EX8: 2600 full steps |
| Winding resistance per phase | EX4/EX5/EX6: 14 Ohm $\pm 10\%$ EX7: 10 Ohm $\pm 10\%$ EX8: 7.5 Ohm $\pm 10\%$ |
| Full travel time | EX4/EX5/EX6: 1.5 seconds EX7: 3.2 seconds EX8: 5.2 seconds |

Electrical Control Valves Series EX4-8

Dimensions (mm)



| Type | Flow pattern | Part No. | Ø A x Ø F(ODF) | B | C | D | E | H1 | H2 |
|---------|--------------|----------|---------------------------------|----|----|----|----|-----|----|
| EX4-I21 | Uni-flow | 800615 | 3/8" x 5/8" | 8 | 45 | 55 | 11 | 113 | 25 |
| EX4-M21 | | 800616 | 10 x 16 mm | 8 | 45 | 55 | 11 | 113 | 25 |
| EX5-U21 | | 800618 | 5/8" x 7/8" (16 x 22 mm) | 11 | 55 | 65 | 16 | 113 | 25 |
| EX6-I21 | | 800620 | 7/8" x 1-1/8" | 16 | 65 | 75 | 19 | 113 | 25 |
| EX6-M21 | | 800621 | 22 x 28 mm | 16 | 65 | 75 | 19 | 113 | 25 |
| EX7-I21 | | 800624 | 1-1/8" x 1-3/8" | 20 | 78 | 83 | 20 | 158 | 42 |
| EX7-M21 | | 800625 | 28 x 35 mm | 20 | 78 | 83 | 20 | 158 | 42 |
| EX8-M21 | | 800629 | 42 x 42 mm | 20 | 80 | 80 | 20 | 200 | 56 |
| EX8-U21 | | 800630 | 1-3/8" (35 mm) x 1-3/8" (35 mm) | 20 | 80 | 80 | 20 | 200 | 56 |
| EX8-I21 | | 800631 | 1-5/8" x 1-5/8" | 20 | 80 | 80 | 20 | 200 | 56 |
| EX4-U31 | Bi-flow | 800617 | 5/8" x 5/8" (16 x 16 mm) | 11 | 55 | 55 | 11 | 113 | 25 |
| EX5-U31 | | 800619 | 7/8" x 7/8" (22 x 22 mm) | 16 | 65 | 65 | 16 | 113 | 25 |
| EX6-I31 | | 800622 | 1-1/8" x 1-1/8" | 19 | 75 | 75 | 19 | 113 | 25 |
| EX6-M31 | | 800623 | 28 x 28 mm | 19 | 75 | 75 | 19 | 113 | 25 |
| EX7-U31 | | 800626 | 1-1/8" (35 mm) x 1-1/8" (35 mm) | 23 | 83 | 83 | 23 | 158 | 42 |

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