

ER5K Series Kits

Electropneumatic Controllers/Motors

DER5K2092X012

Description

ER5000 PRESSURE CONTROL KIT

Provides a complete pressure control system to get you up and running with minimum effort. All components of the kit are completely assembled, professionally plumbed together, and tested for proper operation. Easy to set up and configure. Saves money and setup time.

Kit (assembled on plate or in enclosure) includes:

- ER5000FI-1
- Pressure reducing regulator:
Flow booster, DK dome loaded, DK air loaded,
26-2000 air loaded
OR
Back pressure regulator:
54-2100 air loaded or 26-1700 air loaded
- 4-20 mA Feedback Transducer; 0.125% accuracy
- ER supply regulator with relief valve
- All connections and fittings
- Electrical Junction Box
- Documentation package which includes
ER5000 User Kit:
 - ER5000 Getting Started Manual
 - ER5000 User Support Software & Manual CDER5K Kit Manual:
 - Operating Manual
 - Regulator drawing and wiring diagram



ER5K Series
Enclosure Assembly



ER5K Series
Plate Assembly

Applications

- Component testing and development
- Pressure sensor calibration and testing
- Superplastic and metal forming
- Coating applications
- Flow meter calibration
- Catheter / rupture disk testing
- Pump discharge control
- Burst and proof testing
- Reactor vessel pressure control

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressures

ER Supply Regulator:

3500 psig / 241 bar

Process Pressure Supply:

See specifications for Kit Regulator Type

Power Requirements

90-264 VAC

Setpoint Signal

Analog: 4-20 mA or 1-5 V DC

Serial: RS485, USB

Communication Protocol

USB and RS485

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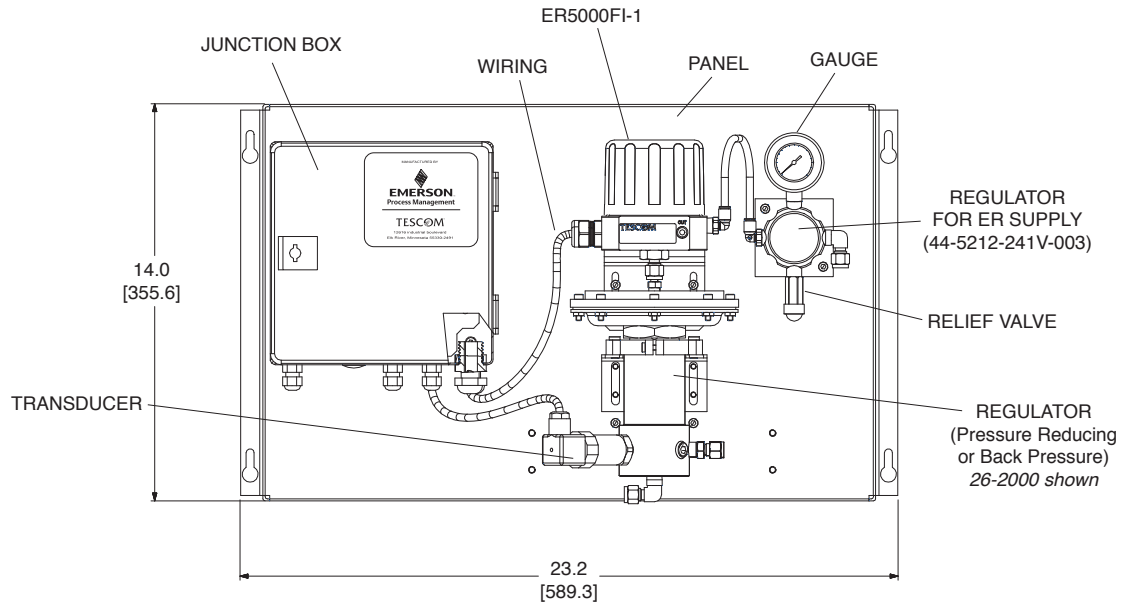
Features and Benefits

- Complete automated pressure control system, pre-assembled and tested, ready for use
- Closed loop control provides precise accuracy
- TESCOM ERTune™ program included for setup, tuning, and data acquisition
- Set-up Wizard loads PID parameters for quicker start-up
- Captured venting with 26-2000 and DK Series - ideal for liquid applications
- Venting regulator with gauge and relief valve for ER supply

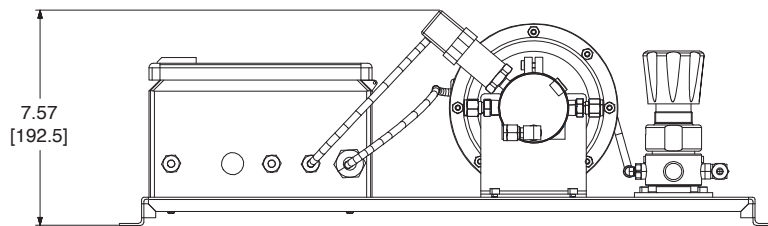
ER5K Series Kit Drawings

ER5K SERIES KIT ASSEMBLED ON PLATE

All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

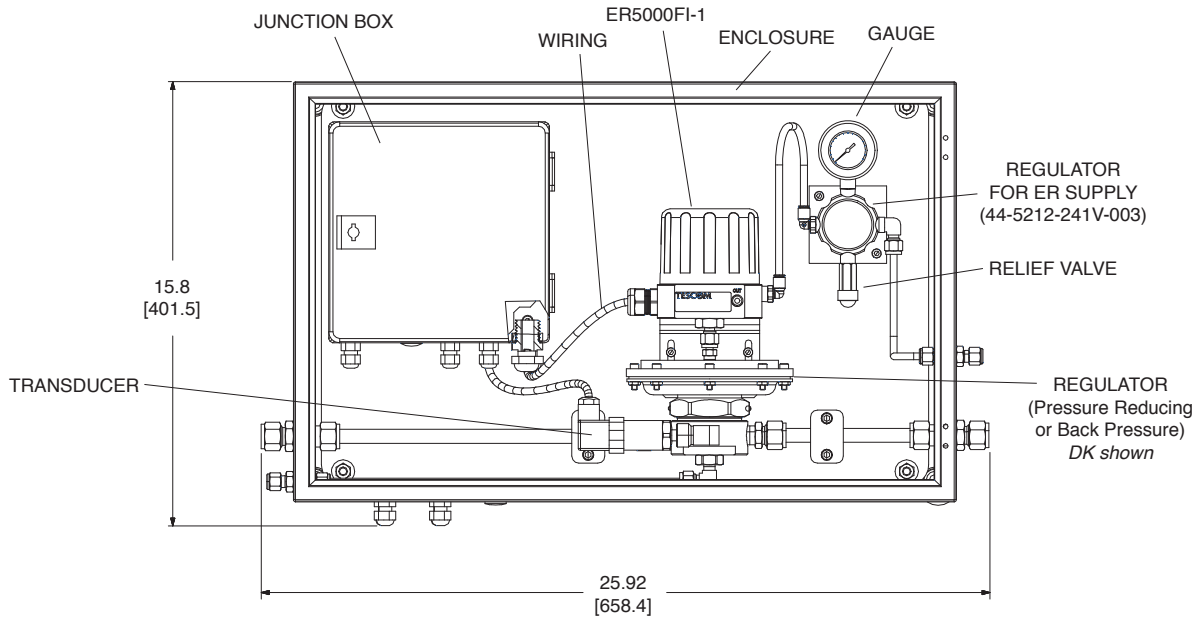


BOTTOM VIEW

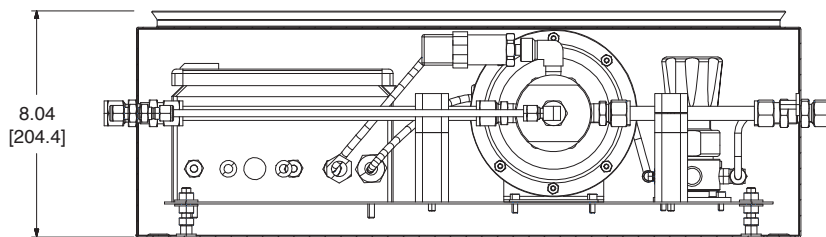


ER5K SERIES KIT IN AN ENCLOSURE (all components included)

All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets



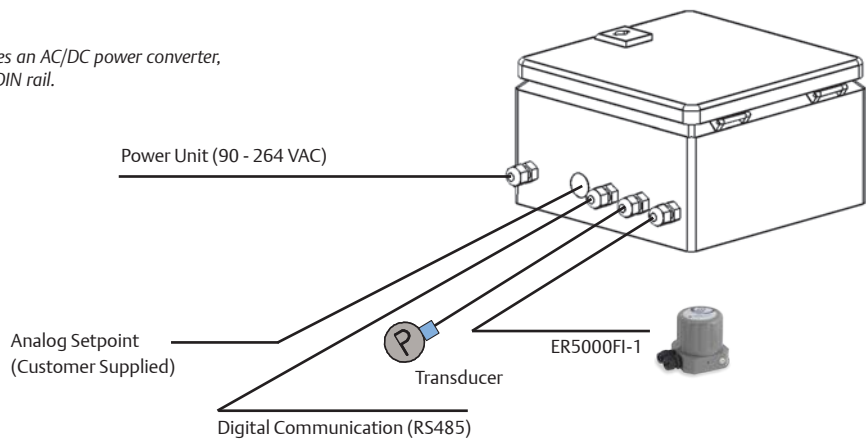
BOTTOM VIEW



JUNCTION BOX

The Junction box is internally wired and includes an AC/DC power converter, fuses and wire terminal blocks mounted on a DIN rail.

Footprint: 7.9" x 7.9" [200 x 200 mm]
Height: 4.7" [120 mm]



ER5000 Kit Types – with pressure reducing regulators

Flow Booster Kit



Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

- Maximum Inlet Pressure**
300 psig / 20.7 bar
- Maximum Outlet Pressure**
ER5000 inlet minus 10 psig / 0.7 bar
- Temperature Range**
40°F to 120°F / 4°C to 48°C
- Body**
Zinc
- Venting Regulator**
Constant bleed through diaphragm
Brass bottom plug

See Part Number Selector for additional information

DK Series Kit



Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

- Maximum Inlet Pressure**
1000 psig / 69 bar
- Maximum Outlet Pressure**
See Part Number Selector
- Design Proof Pressure**
150 % maximum rated pressure
- Leakage**
Bubble-tight
- Temperature Range**
-15°F to 165°F / -26°C to 74°C
- Body**
316 Stainless Steel
- Filter**
40 micron Sintered 316 Stainless Steel
- Remaining Parts**
300 Series Stainless Steel

See Part Number Selector for additional information

26-2000 Series Kit



Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

- Maximum Inlet Pressure**
Stainless Steel: 10,000 psig / 690 bar
- Outlet Pressure Ranges**
See Part Number Selector
- Design Proof Pressure**
150% maximum rated pressure
- Leakage**
Bubble-tight
- Operating Temperature**
-15°F to 165°F / -26°C to 74°C
- Body**
316 Stainless Steel
- Back-up Ring**
Teflon®
- Filter**
300 Series Stainless Steel
- Remaining Parts**
316 Stainless Steel and 17-4 Stainless Steel

See Part Number Selector for additional information

ER5000 Kit Types – with back pressure regulators

54-2100 Series Kit



Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure

10.000 psig / 690 bar

Controlled Pressure Ranges

See Part Number Selector

Design Proof Pressure

150 % maximum rated pressure

Leakage

Maximum 2 drops/minute at 150 SUS at 2500 psig /172 bar

Operating Temperature

-15°F to 165°F / -26°C to 74°C

Body

316 Stainless Steel

Back-up Ring

Teflon®

Remaining Parts

300 Series Stainless Steel

See Part Number Selector for additional information

26-1700 Series Kit



Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure

Stainless Steel: 10.000 psig / 690 bar

Outlet Pressure Ranges

See Part Number Selector

Design Proof Pressure

150 % maximum rated pressure

Leakage

Bubble-tight

Operating Temperature

-40°F to 165°F / -40°C to 74°C

Body

316 Stainless Steel

Back-up Ring

Teflon®

Trim

300 Series Stainless Steel

Remaining Parts

300 Stainless Steel

See Part Number Selector for additional information

ER5K Series Kit Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

| BASIC SERIES | ASSEMBLY | REGULATOR SERIES | BODY | MAXIMUM CONTROL PRESSURE BY TRANSDUCER | | SEAT | C _v | PORTING/TUBING SIZE | | O-RING MATERIAL | PORTING/TUBING |
|---------------------------|-------------------------------------|--|--------|--|--------|----------------|----------------|---------------------|----------|---|--|
| | | | | bar | psig | | | METRIC | IMPERIAL | | |
| | | | | | | | | | | | |
| ER5K | L – Parts assembled on plate | A – Flow booster Pressure reducing | Zinc | 6 | 100 | Buna | 1.5 | 12 mm | 1/2" | D – Buna (NBR) only option with flow booster | A – Metric System B – Imperial System |
| | | B – Flow booster Pressure reducing | Zinc | 6 | 100 | Buna | 2.2 | 12 mm | 1/2" | | |
| | E – Parts assembled in an enclosure | C – DK (Dome-loaded) Pressure reducing | SST | 6 | 100 | PCTFE | 0.35 | 12 mm | 1/2" | D – Buna (NBR) T – Viton® (FKM) U – Urethane (PUR) Z – EP (EPDM) | |
| | | D – DK (Air-loaded) Pressure reducing | SST | 40 | 600 | PCTFE | 0.35 | 12 mm | 1/2" | | |
| | | F – 26-2000 Pressure reducing | SST | 100 | 1500 | Vespel® | 0.06 | 6 mm | 1/4" | | |
| | | G – 26-2000 Pressure reducing | SST | 160 | 3000 | Vespel® | 0.06 | 6 mm | 1/4" | | |
| | | H – 26-2000 Pressure reducing | SST | 400 | 6000 | Vespel® | 0.06 | 6 mm | 1/4" | | |
| | | J – 26-2000 Pressure reducing | SST | 690 | 10,000 | Vespel® | 0.06 | 6 mm | 1/4" | | |
| | | K – 54-2100 Back pressure | SST | 100 | 1500 | 17-4 SST | 0.08 | 6 mm | 1/4" | | |
| | | L – 54-2100 Back pressure | SST | 160 | 3000 | 17-4 SST | 0.08 | 6 mm | 1/4" | | |
| | | M – 54-2100 Back pressure | SST | 400 | 6000 | 17-4 SST | 0.08 | 6 mm | 1/4" | | |
| | | N – 54-2100 Back pressure | SST | 690 | 10,000 | 17-4 SST | 0.08 | 6 mm | 1/4" | | |
| | | P – 26-1700 Back pressure | SST | 100 | 1500 | Teflon® (PTFE) | 0.14 | 6 mm | 1/4" | | |
| | | R – 26-1700 Back pressure | SST | 160 | 3000 | PCTFE | 0.10 | 6 mm | 1/4" | | |
| | | S – 26-1700 Back pressure | SST | 400 | 6000 | PCTFE | 0.10 | 6 mm | 1/4" | | |
| T – 26-1700 Back pressure | SST | 690 | 10,000 | PCTFE | 0.10 | 6 mm | 1/4" | | | | |

NOTES:

Power Requirements: All kits include a prewired electrical junction box with a 24 VDC power supply. 90-264 VAC customer supplied input required.

Communications: ER5000 has built in USB communication capability; cable is provided. RS485 converter, if desired, may be purchased separately.

WARNING! Do not attempt to select, install, use or maintain this product until you have read and fully understood the TESCOM Safety, Installation and Operation Precautions.