

## 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 CD
  - ER5K 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

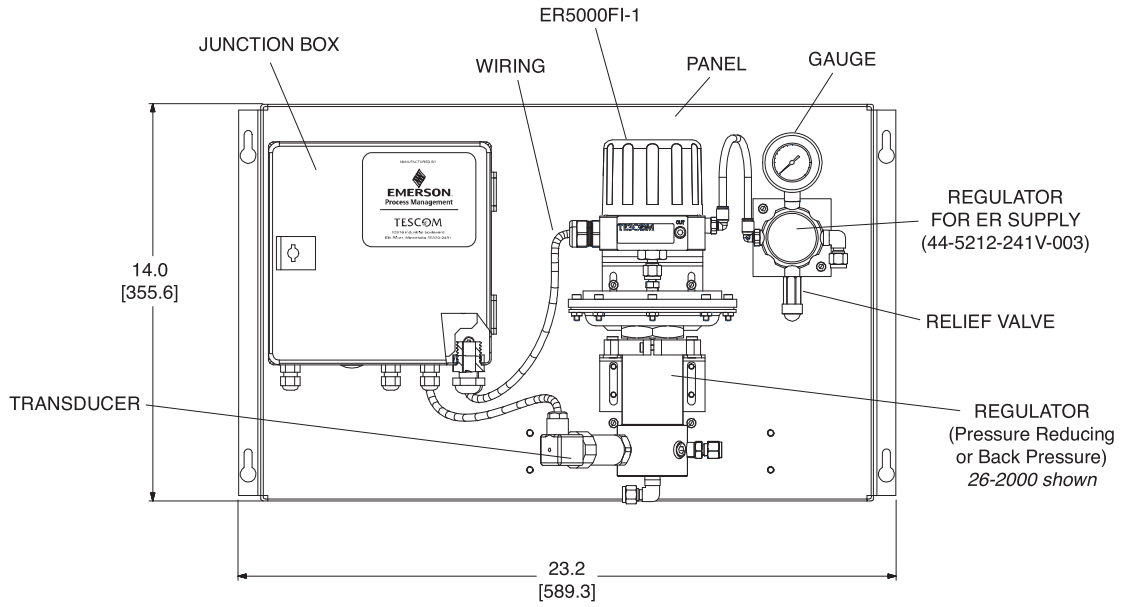
- Complete automated pressure control system, pre-assembled and tested, ready for use
- Closed loop control provides precise accuracy
- TESCOM ERTune™ program included for setup, tuning, and data acquisition
- Set-up Wizard loads PID parameters for quicker start-up
- Captured venting with 26-2000 and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

# ER 5K SERIES KITS

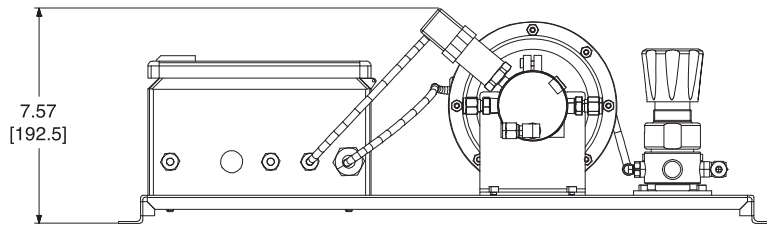
## ER5K Series Kit Drawings

### ER5K SERIES KIT ASSEMBLED ON PLATE

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

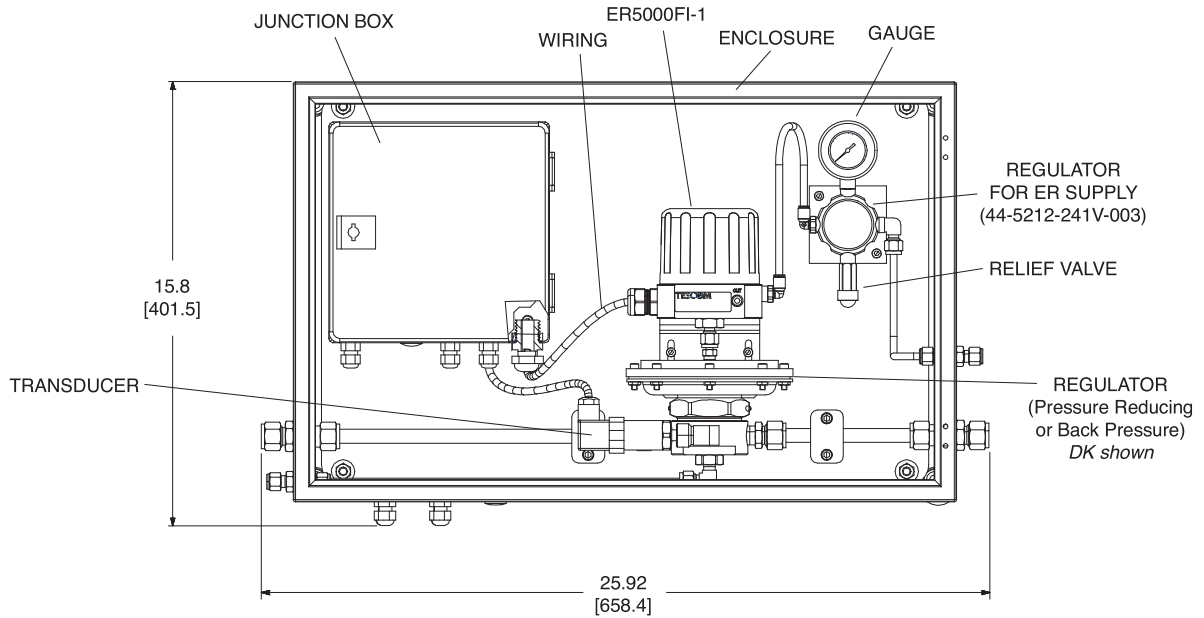


### BOTTOM VIEW

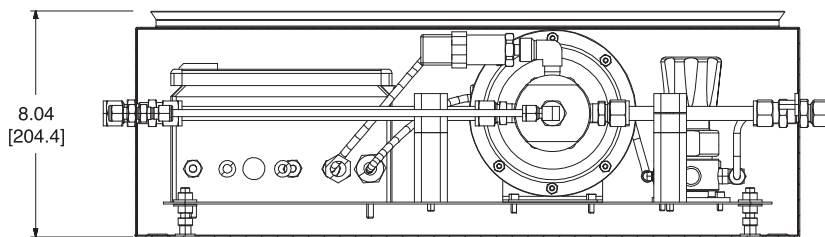


## ER5K SERIES KIT IN AN ENCLOSURE (all components included)

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



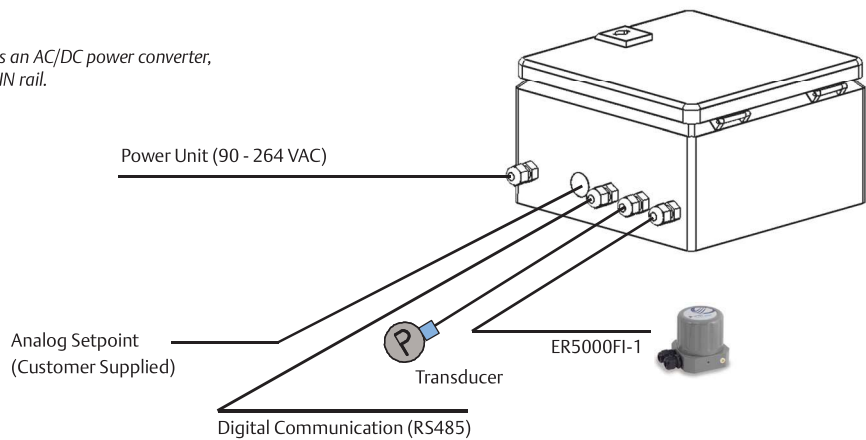
### BOTTOM VIEW



## 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]



# ER 5K SERIES KITS

## 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

# ER 5K SERIES KITS

## 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 <sub>v</sub>	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	Nitrile, Buna-N	1.5	12 mm	1/2"	D – Nitrile, Buna-N (NBR) only option with flow booster	A – Metric System B – Imperial System
		B – Flow booster Pressure reducing	Zinc	6	100	Nitrile, Buna-N	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 – Nitrile, Buna-N (NBR)	
		D – DK (Air-loaded) Pressure reducing	SST	40	600	PCTFE	0.35	12 mm	1/2"	T – FKM (Viton®-A)	
		F – 26-2000 Pressure reducing	SST	100	1500	Polyimide (Vespel®)	0.06	6 mm	1/4"	U – Urethane (PUR) Z – EP (EPDM)	
		G – 26-2000 Pressure reducing	SST	160	3000	Polyimide (Vespel®)	0.06	6 mm	1/4"		
		H – 26-2000 Pressure reducing	SST	400	6000	Polyimide (Vespel®)	0.06	6 mm	1/4"		
		J – 26-2000 Pressure reducing	SST	690	10,000	Polyimide (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	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.