

UNDERGROUND MODULES

MIC Series - MIR/65 - MI/150



MIC Series - MIR/65 - MI/150 Underground Modules

Underground Modules

Underground Modules are designed to reduce environmental impact that is not provided by traditional cabinet installations or masonry structures.

This solution reduces noise pollution and environmental impact, provides protection against impact and damage due to acts of vandalism or accidents.

The module consists of two main parts:

- Metal underground container
- Gas control unit

The metal container is a non-pressurized type and supplies with connections suitable for direct welding to inlet and outlet piping.

The gas control unit is contained inside the metal container, consisting of a regulating line complete with by-pass (MIR/ series excluded) assembled with standard version equipment. The gas control unit is easily accessible for maintenance or replacement purposes.

Main advantages compared to traditional installations:

- ***Only ventilation ducts installed above-ground***
- ***Environmental impact reduction***
- ***Noise pollution reduction***
- ***Protection against impact and damage***
- ***Reduced administrative installation procedures***



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Available Models

In order to offer a very versatile product, we have designed three series of underground module available in different models according to the flow rate required:



MIC Series

This series is composed by three models MIC/25, MIC/50 and MIC/80, employs pilot operated pressure regulators type Cronos with regulator, monitor and slam-shut functions.

Inlet and outlet valves together with the regulating line system by-pass and the relief valve are placed inside the container.



MIR/65

The model MIR/65 employs spring loaded pressure regulators type MBN/ and slam shut valve type BM5/.

Inlet and outlet valves together with the relief valve are placed inside the container.



MI/150

The model MI/150 employs pilot operated pressure regulators type FL-BP in monitor and regulator configuration, and slam shut valve type BM5/.

Inlet and outlet valves together with the regulating line system by-pass and the relief valve are placed inside the container.

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MIC Series



Technical Features

| | |
|--------------------------------------|---------------------|
| Permissible inlet pressure | $P_{u,max}$: 6 bar |
| Design temperature | : -10 °C +60 °C |
| Min. operating differential pressure | : 0.3 bar |
| Accuracy class | AC : up to 2.5 |
| Lock-up pressure class | SG : up to 10 |

Construction Features

| Parts | MIC/25 | MIC/50 | MIC/80 |
|----------------------------------|---------------|---------------|---------------|
| Inlet pipe | DN 50 | DN 100 | DN 150 |
| Inlet valve | DN 50 | DN 100 | DN 150 |
| Filter cartridge | G 1 | G 2 | G 3 |
| Regulator, monitor and slam-shut | Cronos CCB/25 | Cronos CCB/50 | Cronos CCB/80 |
| Outlet valve | DN 80 | DN 150 | DN 250 |
| Outlet pipe | DN 80 | DN 150 | DN 250 |
| By-pass* | DN 25 | DN 50 | DN 80 |
| Relief valve | 1" | 1" | 1" |

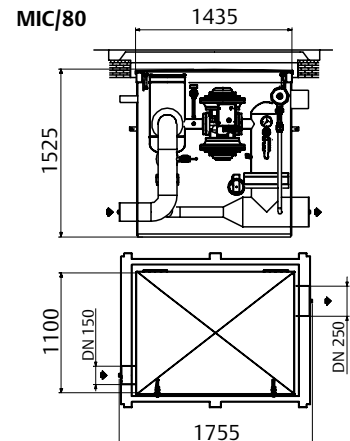
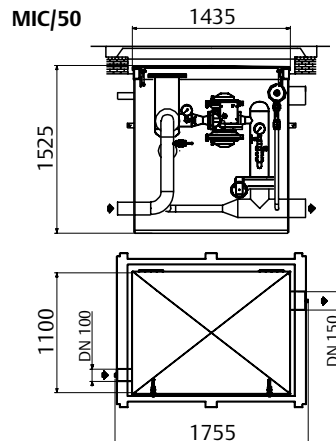
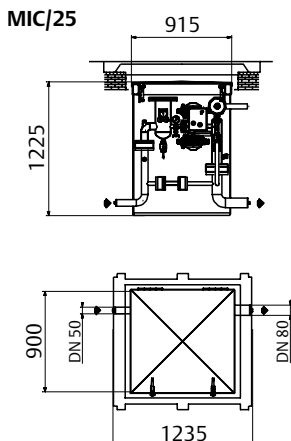
(*) Second reducing line available on request.

Flow Rate Table (Stm³/h)

| Pd ▼ / Pu ► | MIC/25 | | | MIC/50 | | | MIC/80 | | |
|-------------|--------|-----|-----|--------|------|------|--------|------|------|
| | 0.5 | 1.5 | 5 | 0.5 | 1.5 | 5 | 0.5 | 1.5 | 5 |
| 0.02 | 345 | 390 | 390 | 1300 | 1300 | 1300 | 2900 | 3750 | 3750 |
| 0.15 | 320 | 415 | 415 | 1300 | 1430 | 1430 | 2900 | 3960 | 3960 |
| 1 | - | 450 | 700 | - | 1700 | 2600 | - | 4100 | 5850 |
| 3 | - | - | 700 | - | - | 2750 | - | - | 7500 |

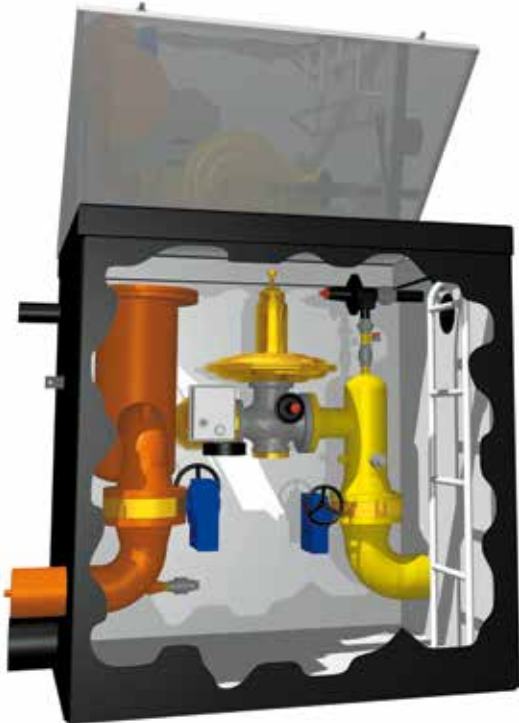
Pu= Inlet pressure bar - Pd= Outlet pressure bar

Overall Dimensions (mm)



MIC Series - MIR/65 - MI/150 Underground Modules

MIR Series



Technical Features

| | |
|--------------------------------------|---------------------|
| Permissible inlet pressure | $P_{u,max}$: 6 bar |
| Design temperature | : -10 °C +60 °C |
| Min. operating differential pressure | : 0.3 bar |
| Accuracy class | AC : up to 2.5 |
| Lock-up pressure class | SG : up to 10 |

Construction Features

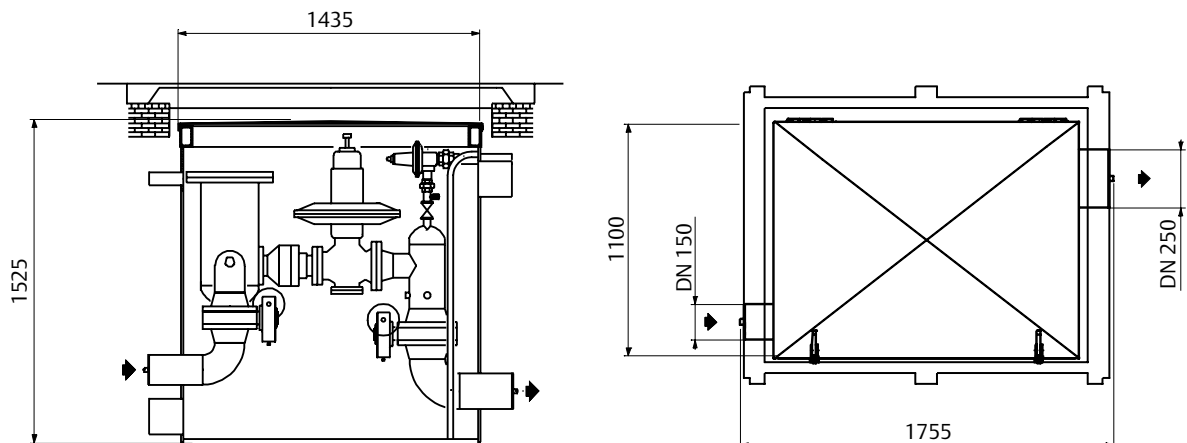
| Parts | MIR/65 |
|------------------|------------|
| Inlet pipe | DN 125 |
| Inlet valve | DN 125 |
| Filter cartridge | G 2.5 |
| Slam-shut valve | BM5/65 |
| Regulator | MBN/65x100 |
| Outlet valve | DN 150 |
| Outlet pipe | DN 150 |
| Relief valve | 1" |

Flow Rate Table (Stm³/h)

| Pd ▼ | MIR/65 | | | |
|------|--------|------|------|------|
| | Pu ► | 0.5 | 1.5 | 5 |
| 0.02 | | 1400 | 1600 | 1600 |
| 0.15 | | 1300 | 1700 | 1700 |
| 1 | | - | 2000 | 3200 |
| 3 | | - | - | 4000 |

Pu= Inlet pressure bar - Pd= Outlet pressure bar

Overall Dimensions (mm)



MIC Series - MIR/65 - MI/150 Underground Modules

MI/150



Technical Features

| | |
|--------------------------------------|----------------------|
| Permissible inlet pressure | $P_{u,max}$: 19 bar |
| Design temperature | : -10 °C +60 °C |
| Min. operating differential pressure | : 0.3 bar |
| Accuracy class | AC : up to 2.5 |
| Lock-up pressure class | SG : up to 10 |

Construction Features

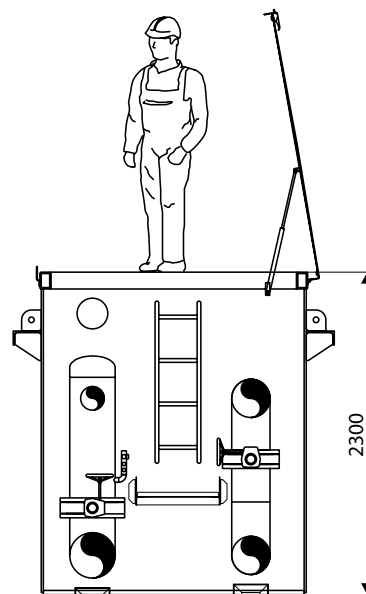
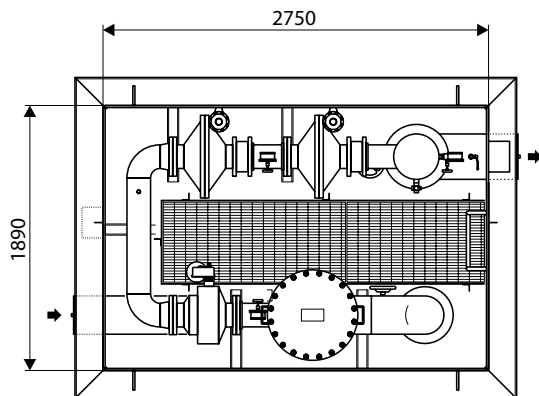
| Parts | MI/150 |
|------------------|-----------|
| Inlet pipe | DN 250 |
| Inlet valve | DN 250 |
| Filter cartridge | G 5 |
| Slam-shut valve | BM5/150 |
| Regulator | FL-BP/150 |
| Monitor | FL-BP/150 |
| Outlet valve | DN 300 |
| Outlet pipe | DN 300 |
| By-pass | DN 150 |
| Relief valve | 1" |

Flow Rate Table (Stm³/h)

| Pd ▼ Pu ► | MI/150 | | |
|--------------|--------|-------|-------|
| | 0,5 | 1,5 | 5 |
| 0,02 | 6600 | 6600 | 6600 |
| 0,15 | 7000 | 7400 | 7400 |
| 1 | - | 11100 | 13000 |
| 3 | - | - | 17500 |

Pu= Inlet pressure bar - Pd= Outlet pressure bar

Overall Dimensions (mm)



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Accessories

Proportional travel indicator

In the series MIF/ and MIC/ like a regulator accessory, in order to communicate the valve position, a potentiometer-type straightaway position transmitter is used connected to the regulator travel indicator.

Thanks to this transducer, it is possible to know accurately the valve position and thus have correct information on the regulator operating condition.



Proximity Switch

In order to send the shut off or the regulator/monitor opening/closing signal, a proximity switch suitable for installation in hazardous area is used.

The use of this switch foresees the application of an intrinsic safety separation barrier which should be installed in safe area.

On request it is possible to supply the shut off device in the version with two proximity switches in order to indicate extreme positions of valve opening/closing.



Industrial Regulators

Emerson Process Management Regulator Technologies, Inc.

USA - Headquarters

McKinney, Texas 75070 USA
Tel: +1 800 558 5853
Outside US: +1 972 548 3574

Europe

Bologna 40013, Italy
Tel: +39 051 419 0611

Asia-Pacific

Shanghai 201206, China
Tel: +86 21 2892 9000

Middle East and Africa

Dubai, United Arab Emirates
Tel: +971 4811 8100

Natural Gas Technologies

Emerson Process Management Regulator Technologies, Inc.

USA - Headquarters

McKinney, Texas 75070 USA
Tel: +1 800 558 5853
Outside US: +1 972 548 3574

Europe

Bologna 40013, Italy
Tel: +39 051 419 0611
Chartres 28008, France
Tel: +33 2 37 33 47 00

Asia-Pacific

Singapore 128461, Singapore
Tel: +65 6770 8337

Middle East and Africa

Dubai, United Arab Emirates
Tel: +971 4811 8100

LP-Gas Equipment

Emerson Process Management Regulator Technologies, Inc.

USA - Headquarters

McKinney, Texas 75070 USA
Tel: +1 800 558 5853
Outside US: +1 972 548 3574

TESCOM

Emerson Process Management Tescom Corporation

USA - Headquarters

Elk River, Minnesota 55330-2445 USA
Tel: +1 763 241 3238
+1 800 447 1250

Europe

Selmsdorf 23923, Germany
Tel: +49 38823 31 287

Asia-Pacific

Shanghai 201206, China
Tel: +86 21 2892 9499

For further information visit www.emersonprocess.com/regulators

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O.M.T. **Officina Meccanica Tartarini S.R.L.**, Via P. Fabbri 1, I-40013 Castel Maggiore (Bologna), Italy
R.E.A 184221 BO Cod. Fisc. 00623720372 Part. IVA 00519501209 N° IVA CEE IT 00519501209, Cap. Soc. 1.548 000 Euro i.v. R.I. 00623720372 - M BO 020330

Francel SAS, 3 Avenue Victor Hugo, CS 80125, Chartres 28008, France
SIRET 552 068 637 00057 APE 2651B, N° TVA : FR84552068637, RCS Chartres B 552 068 637, SAS capital 534 400 Euro

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