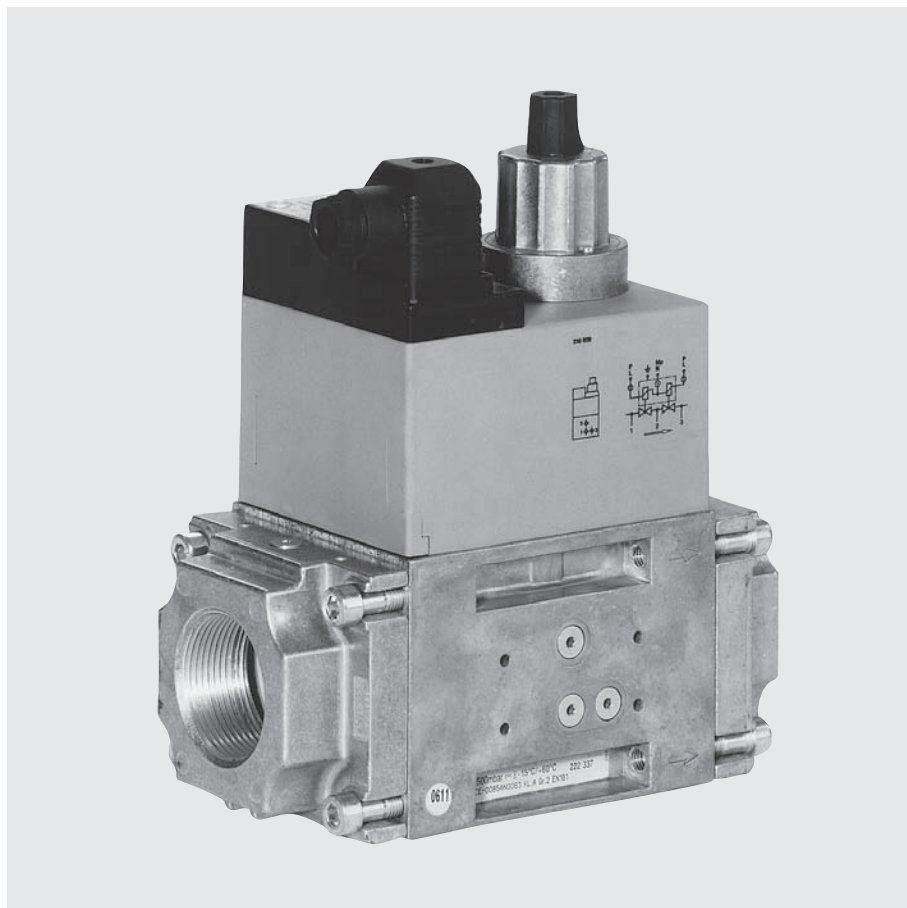


Double solenoid valve Rp 3/8 - Rp 2 nominal diameters

DMV-D/11
DMV-DLE/11

DUNGS®

7.30



Technical description

The DUNGS double solenoid valve DMV integrates two solenoid valves in one compact fitting.

- Automatic shut-off valves as per DIN EN 161 Class A Group 2
- Two A valves in one housing
- Double seat valves
- High flow rates
- Max. operating pressure up to 0.5 bar
- Fast closing
- Fast opening (DMV-D/11) or slow opening (DMV-DLE/11) with adjustable fast stroke for start gas volume
- Adjustable main volume
- DC solenoid
- Mountable closed position signal contact
- Threaded flange
- Compact, light-weight

Application

Double solenoid valves are used where two single valve were mounted previously. In connection with DUNGS gas regulators and additional components, a wide variety of regulating tasks can be performed.

It does not contain any non-ferrous metals, suitable for gases of up to max. 0.1 vol.% H₂S, dry. Suitable for gases of families 1, 2, 3 and other neutral gaseous media.

Approvals

EC type test approval as per EC Gas Appliance Directive:

DMV-...503-525/11 CE-0085 AN 2801

EC type test approval as per EC Pressure Equipment Directive:

DMV-...503-525/11 CE0036

Approvals for the North American market: UL, FM and CSA as well as approvals in other important gas consuming countries.

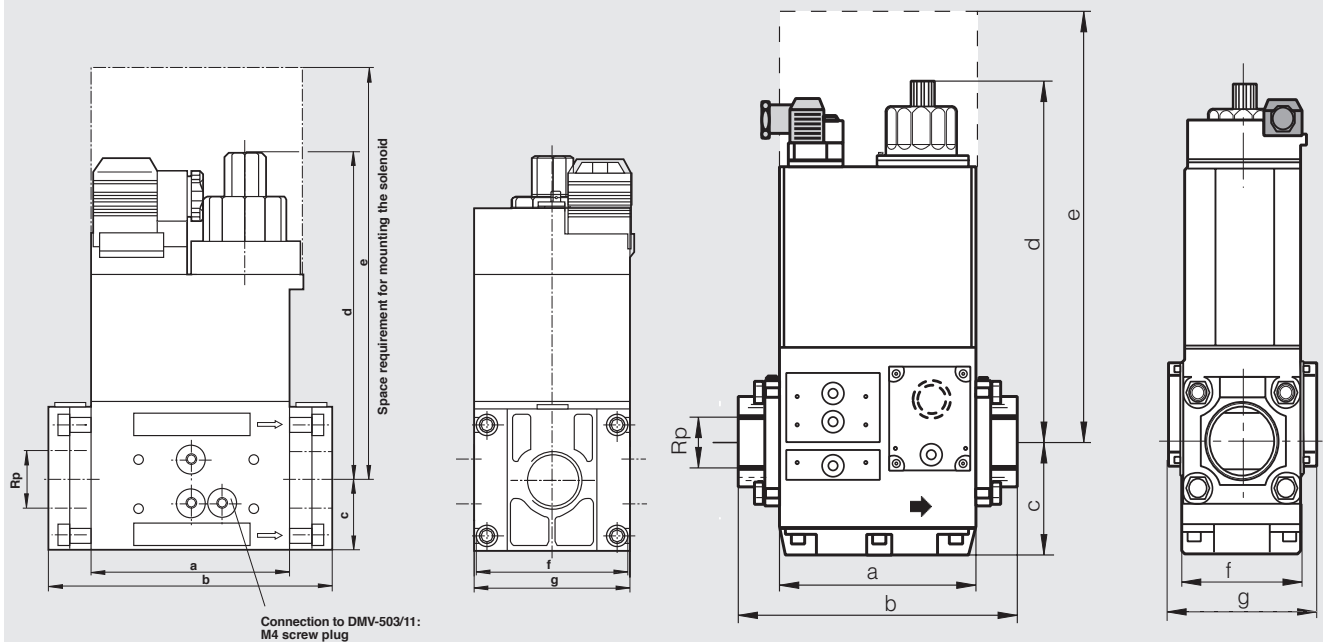
DMV-D/11 Two single-stage solenoid valves normally closed, fast opening, fast closing. Manual limitation of flowing gas volume by main volume setting (D) at valve 1 (V1). Main volume setting (D) of DMV-D 503/11 at valve 2 (V2).

DMV-DLE/11 Two single-stage solenoid valves normally closed, slow opening (L), fast closing. Opening time setting (E) with fast stroke section at valve 2 (V2). Manual limitation of flowing gas volume by main volume setting (D) at valve 1 (V1). Main volume setting (D) of DMV-D 503/11 at valve 2 (V2).

Specifications

| | | | | |
|--|--|--|---|-----------------|
| Nominal diameters Flange with pipe thread as per ISO 7-1 | DMV 503 Rp 3/8,Rp 1/2 and their combinations | DMV 507 Rp 1/2,Rp 3/4,Rp 1 | DMV 512, 520 Rp 1,Rp 1 1/4,Rp 1 1/2,Rp 2 | DMV 525 Rp 2 |
| Max. operating pressure | 500 mbar (50 kPa) | | | |
| Solenoid valve V1 | Automatic shut-off valve as per EN 161: Class A, Group 2 | | | |
| Solenoid valve V2 | Automatic shut-off valve as per EN 161: Class A, Group 2 | | | |
| Closing time | < 1 s | | | |
| Opening time | DMV-D.../11: < 1 s DMV-DLE.../11: approx. 20 s at room temperature +20 °C and without fast stroke | | | |
| Fast stroke | Adjustable | | | |
| Main volume restrictor | DMV-D.../11 and DMV-DLE adjustable at V1, DMV-503/11 at V2 | | | |
| Materials of gas conveying parts | Housing: Seals at valve seat: | aluminium, steel, no non-ferrous metals NBR basis, suitable for gases as per G260/1 | | |
| Ambient temperature | -15 °C to +60 °C | | | |
| Installation position | Solenoid vertically upright to lying horizontally | | | |
| Dirt trap | Sieve installed. To protect the complete gas train we recommend you to install an upstream gas filter (refer to Datasheet 11.02) | | | |
| Measuring gas connection | G 1/8 DIN ISO 228 on both sides upstream of V1, between V1 and V2, downstream of V2 at input and output flanges. Pressure switch can be mounted to input and output flanges. By mounting a pressure switch, measuring/ignition gas connection can be partly excluded. | | | |
| Ignition gas connection | G 1/2 ignition gas flange as per ISO 228, possible on both sides between V1 and V2 | | | |
| Burner pressure monitor p_{Br} | Connection downstream of V2 GW...A2 pressure switch can be mounted to the adapter laterally and to the flange | | | |
| Voltage/frequency | 50 - 60 Hz, 220 V - 240 V AC, -15 % +10 %, further voltages on request Other preferred voltages: 50 - 60 Hz, 110 V - 120 V AC, 24 V - 28 V DC | | | |
| Rating / power consumption | at 230 V AC, +20 °C: refer to type overview | | | |
| Degree of protection | IP 54 | | | |
| Switch-on duration | 100 % | | | |
| Electrical connection | Plug connection as per DIN EN 175301-803, PG* 11 cable gland on request (* = heavy-gauge conduit thread) | | | |
| Radio interference | Degree of interference N | | | |
| Closed position signal contact | Type K01/1 (DIN tested), can be mounted to V1 and V2, DMV-503/11 only to V2 | | | |

Dimensions for DMV-D/11 and DMV-DLE/11



| Version | Order No. | p _{max.} [bar] | Connection Rp | Dimensions [mm] | | | | | | | Rating [VA] | Solenoid No. | Switching rate h ¹⁾ | Weight [kg] |
|-----------------------|-----------|-------------------------|-----------------|-----------------|-----|----|-----|-----|-----|-----|-------------|--------------|--------------------------------|-------------|
| | | | | a | b | c | d | e | f | g | | | | |
| DMV-D 503/11 | 222 326 | 0.5 | Rp 3/8 - Rp 1/2 | 77 | 121 | 30 | 109 | 190 | 73 | 73 | 35 | 1011 | 1000 | 1.7 |
| DMV-D 507/11 | 222 331 | 0.5 | Rp 1/2 - Rp 1 | 93 | 141 | 35 | 134 | 232 | 73 | 73 | 45 | 1111 | 1000 | 2.1 |
| DMV-D 512/11 | 222 336 | 0.5 | Rp 1 - Rp 2 | 124 | 174 | 45 | 150 | 254 | 99 | 101 | 65 | 1211 | 1000 | 4.6 |
| DMV-D 520/11 | 221 924 | 0.5 | Rp 1 - Rp 2 | 124 | 201 | 45 | 190 | 333 | 99 | 101 | 90 | 1212 | 1000 | 5.6 |
| DMV-D 525/11 | 223 367 | 0.5 | Rp 2 | 162 | 239 | 88 | 255 | 400 | 103 | 123 | 110 | 1411 | 1000 | 12.1 |
| DMV-DLE 503/11 | 222 327 | 0.5 | Rp 3/8 - Rp 1/2 | 77 | 121 | 30 | 125 | 190 | 73 | 73 | 35 | 1011 | 100 | 1.8 |
| DMV-DLE 507/11 | 222 332 | 0.5 | Rp 1/2 - Rp 1 | 93 | 141 | 35 | 160 | 232 | 73 | 73 | 45 | 1111 | 100 | 2.2 |
| DMV-DLE 512/11 | 222 337 | 0.5 | Rp 1 - Rp 2 | 124 | 174 | 45 | 179 | 254 | 99 | 101 | 65 | 1211 | 100 | 4.7 |
| DMV-DLE 520/11 | 222 599 | 0.5 | Rp 1 - Rp 2 | 124 | 201 | 45 | 218 | 333 | 99 | 101 | 90 | 1212 | 100 | 5.7 |
| DMV-DLE 525/11 | 223 373 | 0.5 | Rp 2 | 162 | 239 | 88 | 275 | 400 | 103 | 123 | 110 | 1411 | 100 | 12.3 |

1) Switching rate of DMV-DLE 50.../11 depends on opening time setting

Flange

for DMV .../11

| | | | | |
|-----------------|---------|------------------|---------|-------------------------|
| Rp 3/8 | 217 471 | – | – | DMV 503/11 |
| Rp 1/2 | 217 472 | – | – | DMV 503/11 |
| Rp 1/2 | 222 341 | NPT 1/2 | 222 371 | DMV 507/11 |
| Rp 3/4 | 222 342 | NPT 3/4 | 222 368 | DMV 507/11 |
| Rp 1 | 222 001 | NPT 1 | 221 999 | DMV 507/11 |
| Rp 1 | 222 343 | NPT 1 | 222 369 | DMV 512/11 - DMV 520/11 |
| Rp 1 1/4 | 222 344 | NPT 1 1/4 | 222 370 | DMV 512/11 - DMV 520/11 |
| Rp 1 1/2 | 221 884 | NPT 1 1/2 | 222 003 | DMV 512/11 - DMV 520/11 |
| Rp 2 | 221 926 | NPT 2 | 221 997 | DMV 512/11 - DMV 520/11 |
| Rp 2 | 215 384 | NPT 2 | 232 407 | DMV 525/11 |


Plug connection 210 319 DMV 503/11 - DMV 525/11
as per
DIN EN 175301-803

Important: Always order flange, plug connection and system accessories separately.

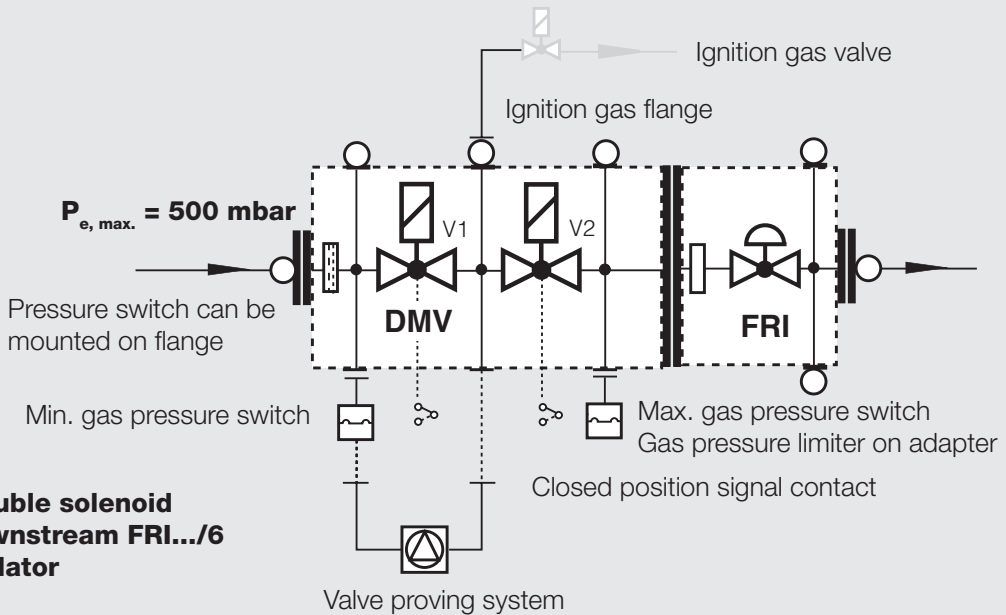
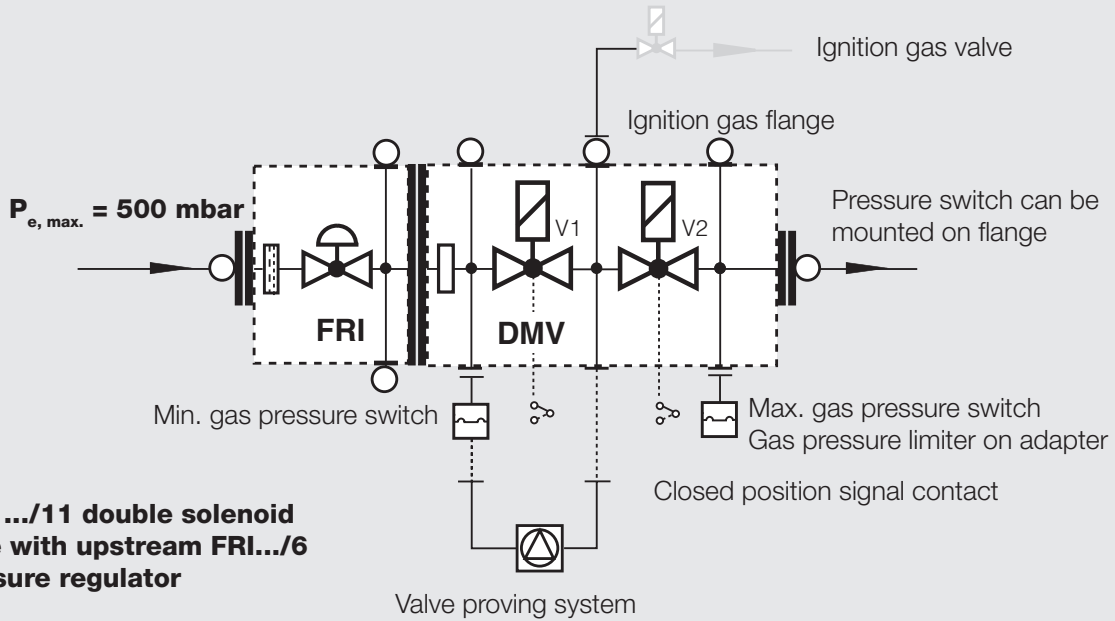
| Equipment variants of DMV.../11 double solenoid valve, single-stage mode | DMV 503/11 | DMV 507/11 | DMV 512/11 | DMV 520/11 | DMV 525/11 |
|--|------------|------------|------------|------------|------------|
| DMV-D | ◆ | ◆ | ◆ | ◆ | ◆ |
| DMV-DLE | ◆ | ◆ | ◆ | ◆ | ◆ |
| Sieve | ◆ | ◆ | ◆ | ◆ | ◆ |
| Microfilter element, two-layer Refer to pressure losses | (◆) | (◆) | (◆) | (◆) | - |
| Gas pressure switch can be mounted: | | | | | |
| on flange | ◆ | ◆ | ◆ | ◆ | ◆ |
| downstream of sieve | ◆ | ◆ | ◆ | ◆ | ◆ |
| downstream of valve 2 to adapter | ◆ | ◆ | ◆ | ◆ | - |
| downstream of valve 2 | - | - | - | - | ◆ |
| Valve V1, double-seat | ◆ | ◆ | ◆ | ◆ | ◆ |
| Valve V2, single-seat | ◆ | - | - | - | - |
| Valve V2, double-seat | - | ◆ | ◆ | ◆ | ◆ |
| Valves opening separately | ◆ | ◆ | ◆ | ◆ | ◆ |
| Flange | | | | | |
| Rp 3/8 | ◆ | - | - | - | - |
| Rp 1/2 | ◆ | ◆ | - | - | - |
| Rp 3/4 | - | ◆ | - | - | - |
| Rp 1 | - | ◆ | ◆ | ◆ | - |
| Rp 1 1/4 | - | - | ◆ | ◆ | - |
| Rp 1 1/2 | - | - | ◆ | ◆ | - |
| Rp 2 | - | - | ◆ | ◆ | ◆ |
| G 1/2 ignition gas flange can be mounted | ◆ | ◆ | ◆ | ◆ | ◆ |
| G 3/4 ignition gas flange can be mounted | - | - | - | - | ◆ |

◆ = standard
(◆) = on request
-- = not possible

Flow losses in (m³/h) air when installing the microfilter element

|  Pressure loss [mbar] | DMV 503/11 | DMV 507/11 | DMV 512/11 | DMV 520/11 | DMV 525/11 |
|---|------------|------------|------------|------------|------------|
| 2 | 0.15 | 1.20 | 9.0 | 17.5 | - |
| 5 | 0.25 | 1.70 | 11.0 | 21.5 | - |
| 10 | 0.30 | 1.80 | 13.2 | 27,0 | - |
| 20 | 0.33 | 1.90 | 16.0 | 34.5 | - |
| 40 | 0.36 | 2.30 | 18.4 | 45.0 | - |
| 70 | 0.39 | 2.50 | 22.5 | 56.0 | - |

Double solenoid valve modular system



Gas pressure regulator, type FRI

The DMV-507-520/11 double solenoid valve is already prepared for connection with the gas pressure regulator, type FRI.../6 at the factory.

The pressure regulator can be installed upstream or downstream of the double solenoid valve depending on the task.

FRI.../6 mounting set to DMV.../11

Order No. 219 967

FRI 705 - 707/6 to DMV 507/11

Order No. 219 968

FRI 710-712/6 to DMV 512/11-520/11

Information on system accessories

VPS 504 valve proving system

Pressure regulator with integrated FRI gas filter

Pressure limiter ÜB, NB...A2 for multiple actuators

Compact pressure switch for multiple actuators GW...A5

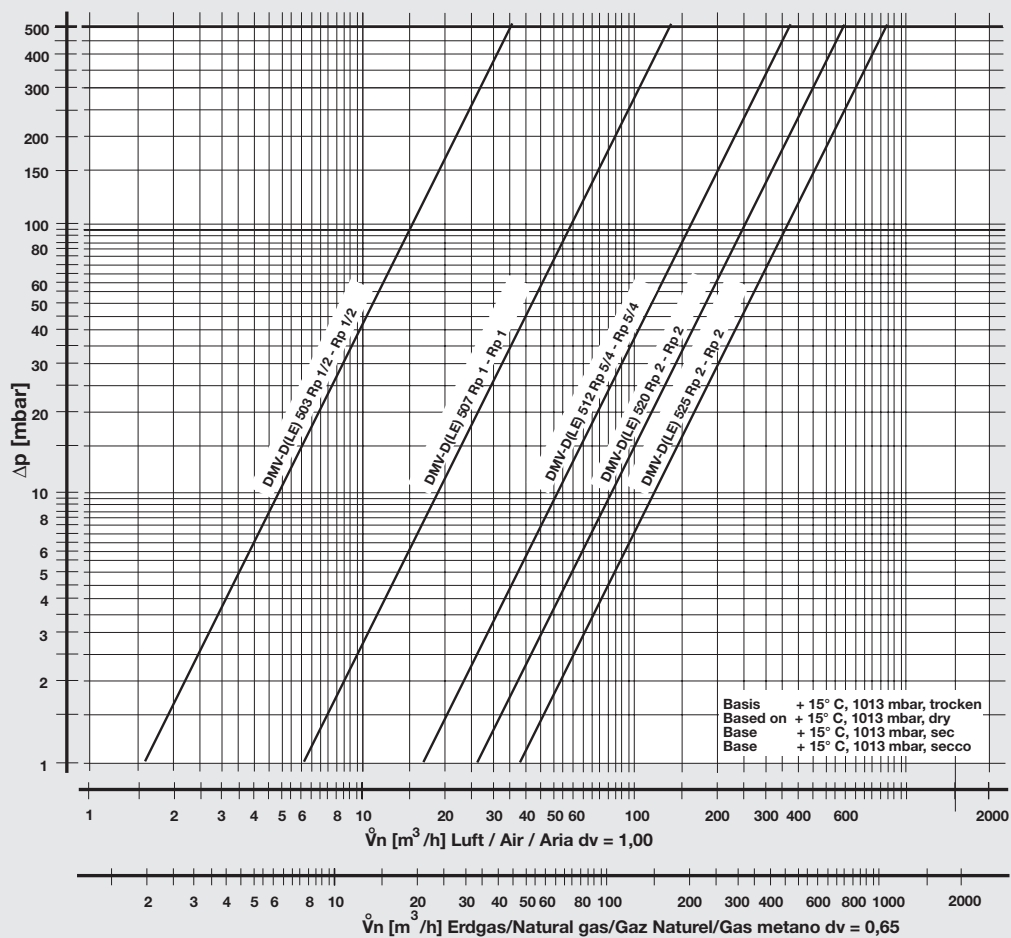
K01/1 closed position signal contact to monitor closed position of valves

⚠ If a system accessory is added, it may not be possible to mount further devices.

Double solenoid valve
Flow diagram
Rp 3/8 - Rp 2
nominal diameters

DMV-D/11
DMV-DLE/11

DUNGS®



f =

Dichte Luft
 Spec. weight air
 poids spécifique de l'air
 peso específico aria

Dichte des verwendeten Gases
 Spec. weight of gas used
 poids spécifique du gaz utilisé
 peso específico del gas utilizado

| Gas type | Density [kg/m³] | dv | f |
|----------|-----------------|------|------|
| Nat. gas | 0.81 | 0.65 | 1.24 |
| City gas | 0.58 | 0.47 | 1.46 |
| LPG | 2.08 | 1.67 | 0.77 |
| Air | 1.24 | 1.00 | 1.00 |

$$\dot{V}_{\text{verwendetes Gas/gas used/gaz utilisé/gas utilizzato}} = \dot{V}_{\text{Luft/air/aria}} \times f$$

We reserve the right to make any changes in the interest of technical progress.

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