

Distribution System Gas Management Systems

The pipeline distribution system is an integral part of all medical Gas Management Systems. It serves to bring all required medical gases and vacuum to areas where they are needed. Without a properly designed, installed, and maintained distribution system, the security of the whole hospital can be at risk.



Benefits

Distribution System

The distribution system of every Dräger Gas Management System is designed to meet all requirements in terms of planning, material selection, craftsmanship, testing, and certification.

The systems are based on the ISO 7396-1 standard (Medical gas pipeline systems – pipeline systems for compressed medical gases and vacuum) and over 50 years of experience in this field, always keeping up with latest trends and developments. But it takes more to achieve the level of quality our customers have come to expect; Dräger ensures this through a combination of high-quality materials and trained and experienced site engineers and fitters.

In accordance with ISO 7396-1, Dräger only uses medical-grade copper pipes according to EN 13348 (seamless, round copper tubes for medical gases or vacuum) for our Gas Management Systems (8 mm to 54 mm). The EN 13348 standard specifies the use of only pipes with a diameter of up to 54 mm; pipes with a bigger diameter are nevertheless manufactured and tested according to the same specifications (64 mm to 108 mm).

These pipes can be used for all relevant gases like oxygen, compressed air, nitrous oxide, helium, xenon, carbon dioxide, anesthetic Gases, mixtures of all these gases, and vacuum.

To ensure the quality and distinctiveness, each individual tube is marked according to EN 13348 with the denomination, the number of the standard, the temper designation, and the dimensions (e.g. "copper tube – EN 13348 – R290 – 12 x 1.0"). Besides the excellent mechanical properties, copper pipes also have bactericide and fungicide characteristics and have no effect on the gases used.

To ensure they remain free from defects, each tube is eddy current tested in accordance with EN 1971. All tubes are clean and smooth on the inside and have residual carbon levels below 0.02 g/m², tested in accordance with EN 723. In order to maintain this cleanliness, each tube is sealed with caps at both ends until final installation.

Installation and joining technology also conform with the requirements for mechanical and thermal stability and absolute cleanliness. To achieve this, flux-free hard soldering with inert gas shielding is applied, guaranteeing mechanical durability for ambient temperatures up to 600°C and ensuring the pipes are free of tinder.

Ordering Information

HARD COPPER PIPE THICK-WALLED (R360)

| Dimensions d x s in mm | Weight kg/m | Max. interval between supports according to EN ISO 7396-1 | Designation* | Order No.* |
|---------------------------|-------------|---|-----------------------|------------|
| 8 x 1 | 0.20 | 1.5 | Copper pipe 8 x 1 | 1128825 |
| 12 x 1 | 0.31 | 1.5 | Copper pipe 12 x 1 | 1128876 |
| 15 x 1 | 0.39 | 1.5 | Copper pipe 15 x 1 | 1128930 |
| 22 x 1 | 0.59 | 2 | Copper pipe 22 x 1 | 1128892 |
| 28 x 1.5 | 1.11 | 2 | Copper pipe 28 x 1.5 | 1128949 |
| 35 x 1.5 | 1.41 | 2.5 | Copper pipe 35 x 1.5 | 1128906 |
| 42 x 1.5 | 1.70 | 2.5 | Copper pipe 42 x 1.5 | 1128914 |
| 54 x 2 | 2.91 | 2.5 | Copper pipe 54 x 2 | 1128957 |
| 64 x 2 | 3.47 | 3 | Copper pipe 64 x 2 | 1129325 |
| 76,1 x 2 | 4.14 | 3 | Copper pipe 76.1 x 2 | 1129333 |
| 88,9 x 2 | 4.86 | 3 | Copper pipe 88.9 x 2 | 1129341 |
| 108 x 2.5 | 7.37 | 3 | Copper pipe 108 x 2.5 | 1129368 |

HARD COPPER PIPE THIN-WALLED (R290)

| Dimensions d x s in mm | Weight kg/m | Max. interval between supports according to EN ISO 7396-1 | Designation* | Order no.* |
|---------------------------|-------------|---|-----------------------------------|------------|
| 12 x 0.8 | 0.25 | 1.5 | Copper pipe EN 13348-R290-12 | G42101 |
| 15 x 0.7 | 0.28 | 1.5 | Copper pipe EN 13348-R290-15 | G42102 |
| 22 x 0.9 | 0.53 | 2 | Copper pipe EN 13348-R290-22 | G42103 |
| 28 x 0.9 | 0.76 | 2 | Copper pipe EN 13348-R290-28 | G42104 |
| 35 x 1.2 | 1.13 | 2.5 | Copper pipe EN 13348-R290-35 | G42105 |
| 42 x 1.2 | 1.37 | 2.5 | Copper pipe EN 13348-R290-42 | G42106 |
| 54 x 1.2 | 1.77 | 2.5 | Copper pipe EN 13348-R290-54 | G42107 |
| 64 x 1.2 | 2.11 | 3 | Copper pipe EN 13348-R290-64 | G42108 |
| 76 x 1.5 | 3.13 | 3 | Copper pipe EN 13348-R290-76 | G42109 |
| 88,9 x 1.5 | 3.67 | 3 | Copper pipe EN 13348-R290-88,9 | G42110 |
| 108 x 1.5 | 4.47 | 3 | Copper pipe EN 13348-R290-108 | G42111 |

SOFT COPPER PIPE THICK-WALLED (R220)

| Dimensions d x s in mm | Weight kg/m | Designation* | Order no.* |
|------------------------|-------------|--------------------|------------|
| 8 x 1 | 0.20 | Copper pipe 8 x 1 | 1128817 |
| 12 x 1 | 0.31 | Copper pipe 12 x 1 | 1128868 |
| 15 x 1 | 0.39 | Copper pipe 15 x 1 | 1128922 |

* Please state when ordering

Notes

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