

# Technical Data Sheet

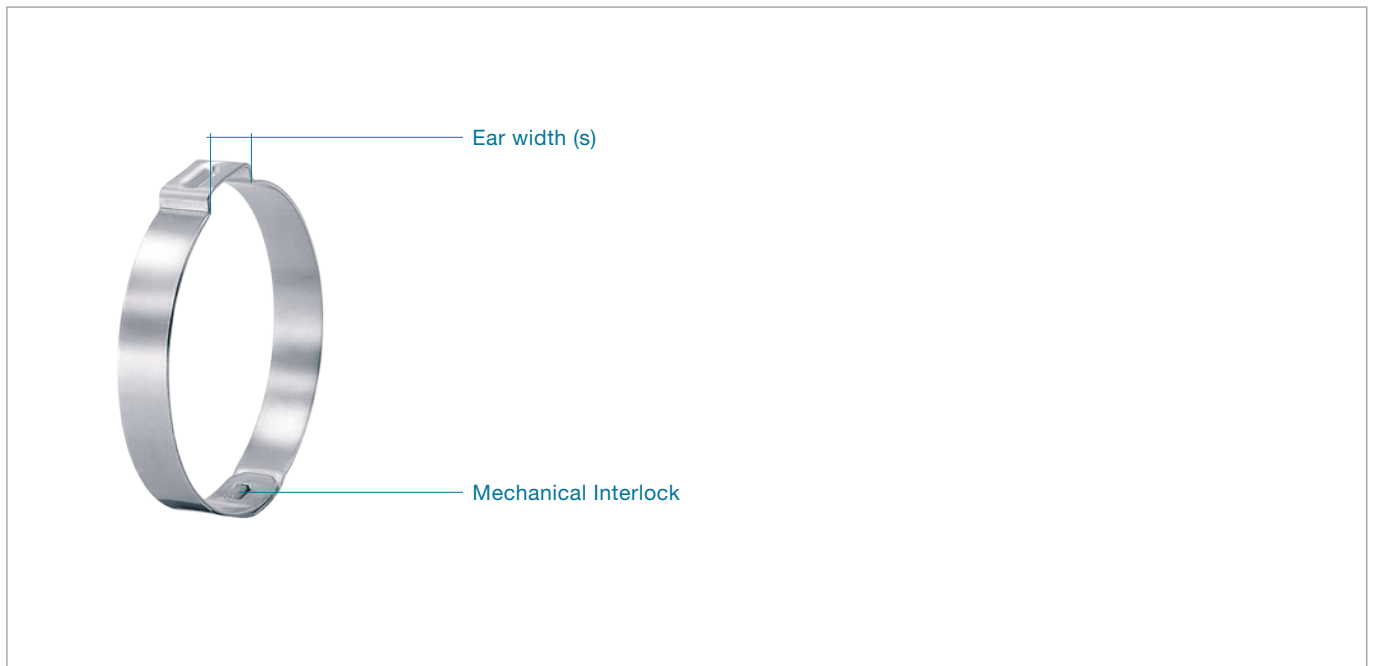
## 1-Ear Clamp with mechanical interlock

### Product Group 105 & 155

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Connecting Technology



Clamp ear: fast and simple installation, visible deformation provides evidence of proper closure

Dimple: increases clamping force

Burr-free strip edges: reduced risk of damage to parts being clamped

## 1-Ear Clamp with mechanical interlock Product Group 105 & 155

### Material

PG 105 Galvanized or zinc-plated steel band

PG 155 Stainless Steel, Material no. 1.4301/UNS S30400

### Corrosion resistance according to DIN EN ISO 9227

PG 105  $\geq$  144 h

PG 155  $\geq$  1000 h

### Series

| Size range      | width x thickness |
|-----------------|-------------------|
| 10.5 – 116.0 mm | 7.0 x 0.6/0.8 mm  |

Some sizes are only available if an appropriate minimum quantity is ordered.

PG 105 only available on request.

Using tools designed or endorsed by Oetiker, the clamp is closed by drawing together the lower radii of the “ear”. The maximum diameter reduction is proportional to the open “ear” width. The theoretical maximum reduction in diameter is given by the formula:

$$\text{Max. diameter reduction} = \frac{\text{Ear width (s)}}{\pi}$$

To ensure perfect sealing, clamp ears must be correctly closed during installation.

### Clamp diameter

The following applies as a guideline: To determine the correct clamp diameter, push the hose onto the attaching material, (e.g. the nipple), and then measure the outer diameter of the hose. The value of the outer diameter must be slightly above the average value of the diameter range of the clamp to be selected.

### Mechanical interlock

The mechanical interlock is a mechanical connection which keeps the clamp securely closed. By using a mechanical interlock instead of spot-welding, corrosion around the closure elements is reduced.

**Assembly recommendations**

The clamp ear should be closed with a constant tool jaw force, this practice is referred to as “force priority closure”. This assembly method ensures that a uniform and repeatable stress is applied to the application with a constant tensile force on the mechanical interlock.

Employing this methodology when closing 105 & 155 series clamps will compensate for any component tolerance variations, and ensure that the clamp applies a constant radial force to the application. Fluctuations in component tolerances are absorbed by variations in the “ear” gap (the space between the lower radii after installation).

**Closing force**

It is important to realize that there is in a very close relationship between the desired compression of the material being clamped and the closing force selected. The table below gives maximum closing forces in relation to the size of the part being clamped.

**Important**

Single tool stroke closure only, do not apply secondary crimping force.

**Installation data**

| Size (mm)    | Closing force max. (N) | Installation tools force-monitored <sup>1</sup> : |            |          |
|--------------|------------------------|---|------------|----------|
|              |                        | Manual  | Pneumatic  | Cordless |
| 10.5 – 17.0  | 1200                   | HMK 01/S01  | HO ME 2000 | CP 01    |
| 18.5 – 116.0 | 2000                   | HMK 01/S01  | HO ME 2000 | CP 01    |

For an alternative option, see our manual pincers on page 104

<sup>1</sup> Further information on page 84

**Important note**

These figures are intended as a guide, they may vary depending on the type and tolerances of parts being clamped. To ensure optimum clamp selection, we recommend making functional tests with several assemblies.

## Order information

| Item No.  | Ref. No. | Ear width inside (mm) | Size range (mm) | Item No.  | Ref. No. | Ear width inside (mm) | Size range (mm) |
|---|----------|-----------------------|-----------------|---|----------|-----------------------|-----------------|
| 1-Ear Clamp with mechanical Interlock, stainless<br>Band width 7.0 mm, thickness 0.6 mm |          |                       |                 | 1-Ear Clamp with mechanical Interlock, stainless<br>Band width 7.0 mm, thickness 0.6 mm |          |                       |                 |
| 15500000  | 0105.0R  | 5                     | 8.9 – 10.5      | 15500026  | 0410.0R  | 10                    | 37.9 – 41       |
| 15500001  | 0113.0R  | 5                     | 9.7 – 11.3      | 15500027  | 0425.0R  | 10                    | 39.4 – 42.5     |
| 15500002  | 0123.0R  | 6                     | 10.4 – 12.3     | 15500028  | 0440.0R  | 10                    | 40.9 – 44       |
| 15500003  | 0133.0R  | 6                     | 11.4 – 13.3     | 15500029  | 0455.0R  | 10                    | 42.4 – 45.5     |
| 15500004  | 0135.0R  | 6.5                   | 11.5 – 13.5     | 15500030  | 0470.0R  | 10                    | 43.9 – 47       |
| 15500005  | 0138.0R  | 6                     | 11.9 – 13.8     | 15500031  | 0485.0R  | 10                    | 45.4 – 48.5     |
| 15500006  | 0140.0R  | 6.5                   | 11.9 – 14       | 15500032  | 0500.0R  | 10                    | 46.9 – 50       |
| 15500007  | 0145.0R  | 6                     | 12.6 – 14.5     | 15500033  | 0515.0R  | 10                    | 48.4 – 51.5     |
| 15500008  | 0157.0R  | 7                     | 13.5 – 15.7     | 15500034  | 0530.0R  | 10                    | 49.9 – 53       |
| 15500009  | 0170.0R  | 6                     | 15.1 – 17       | 15500035  | 0545.0R  | 10                    | 51.4 – 54.5     |
| 15500010  | 0185.0R  | 9                     | 15.7 – 18.5     | 15500036  | 0560.0R  | 10                    | 52.9 – 56       |
| 15500011  | 0198.0R  | 9                     | 17 – 19.8       | 15500037  | 0575.0R  | 10                    | 54.4 – 57.5     |
| 15500012  | 0210.0R  | 9                     | 18.2 – 21       | 15500038  | 0590.0R  | 10                    | 55.9 – 59       |
| 15500013  | 0226.0R  | 9                     | 19.8 – 22.6     | 15500039  | 0605.0R  | 10                    | 57.4 – 60.5     |
| 15500014  | 0241.0R  | 9                     | 21.3 – 24.1     | 15500040  | 0620.0R  | 10                    | 58.9 – 62       |
| 15500015  | 0256.0R  | 9                     | 22.8 – 25.6     | 15500041  | 0635.0R  | 10                    | 60.4 – 63.5     |
| 15500016  | 0271.0R  | 10                    | 24 – 27.1       | 15500042  | 0650.0R  | 10                    | 61.9 – 65       |
| 15500017  | 0286.0R  | 10                    | 25.5 – 28.6     | 15500043  | 0665.0R  | 10                    | 63.4 – 66.5     |
| 15500018  | 0301.0R  | 10                    | 27 – 30.1       | 15500044  | 0680.0R  | 10                    | 64.9 – 68       |
| 15500019  | 0316.0R  | 10                    | 28.5 – 31.6     | 15500045  | 0695.0R  | 10                    | 66.4 – 69.5     |
| 15500020  | 0331.0R  | 10                    | 30 – 33.1       | 15500046  | 0710.0R  | 10                    | 67.9 – 71       |
| 15500021  | 0346.0R  | 10                    | 31.5 – 34.6     | 15500047  | 0725.0R  | 10                    | 69.4 – 72.5     |
| 15500022  | 0361.0R  | 10                    | 33 – 36.1       | 15500048  | 0740.0R  | 10                    | 70.9 – 74       |
| 15500023  | 0376.0R  | 10                    | 34.5 – 37.6     | 15500049  | 0755.0R  | 10                    | 72.4 – 75.5     |
| 15500024  | 0381.0R  | 10                    | 35 – 38.1       | 15500050  | 0770.0R  | 10                    | 73.9 – 77       |
| 15500025  | 0396.0R  | 10                    | 36.5 – 39.6     | 15500051  | 0785.0R  | 10                    | 75.4 – 78.5     |

## Order information

| Item No. | Ref. No. | Ear width<br>inside (mm) | Size range (mm) |
|----------|----------|--------------------------|-----------------|
|----------|----------|--------------------------|-----------------|

1-Ear Clamp with mechanical Interlock, stainless  
Band width 7.0 mm, thickness 0.6 mm

|          |         |    |               |
|----------|---------|----|---------------|
| 15500052 | 0800.0R | 10 | 76.9 – 80     |
| 15500053 | 0815.0R | 10 | 78.4 – 81.5   |
| 15500054 | 0830.0R | 10 | 79.9 – 83     |
| 15500055 | 0845.0R | 10 | 81.4 – 84.5   |
| 15500056 | 0860.0R | 10 | 82.9 – 86     |
| 15500057 | 0875.0R | 10 | 84.4 – 87.5   |
| 15500058 | 0890.0R | 10 | 85.9 – 89     |
| 15500059 | 0905.0R | 10 | 87.4 – 90.5   |
| 15500060 | 0920.0R | 10 | 88.9 – 92     |
| 15500061 | 0935.0R | 10 | 90.4 – 93.5   |
| 15500062 | 0950.0R | 10 | 91.9 – 95     |
| 15500063 | 0965.0R | 10 | 93.4 – 96.5   |
| 15500064 | 0980.0R | 10 | 94.9 – 98     |
| 15500065 | 0995.0R | 10 | 96.4 – 99.5   |
| 15500066 | 1010.0R | 10 | 97.9 – 101    |
| 15500067 | 1025.0R | 10 | 99.4 – 102.5  |
| 15500101 | 1040.0R | 10 | 100.9 – 104   |
| 15500068 | 1055.0R | 10 | 102.4 – 105.5 |
| 15500102 | 1070.0R | 10 | 103.9 – 107   |
| 15500103 | 1085.0R | 10 | 105.4 – 108.5 |
| 15500104 | 1100.0R | 10 | 106.9 – 110   |
| 15500105 | 1115.0R | 10 | 108.4 – 111.5 |
| 15500106 | 1130.0R | 10 | 109.9 – 113   |
| 15500107 | 1145.0R | 10 | 111.4 – 114.5 |
| 15500069 | 1160.0R | 10 | 112.9 – 116   |

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