

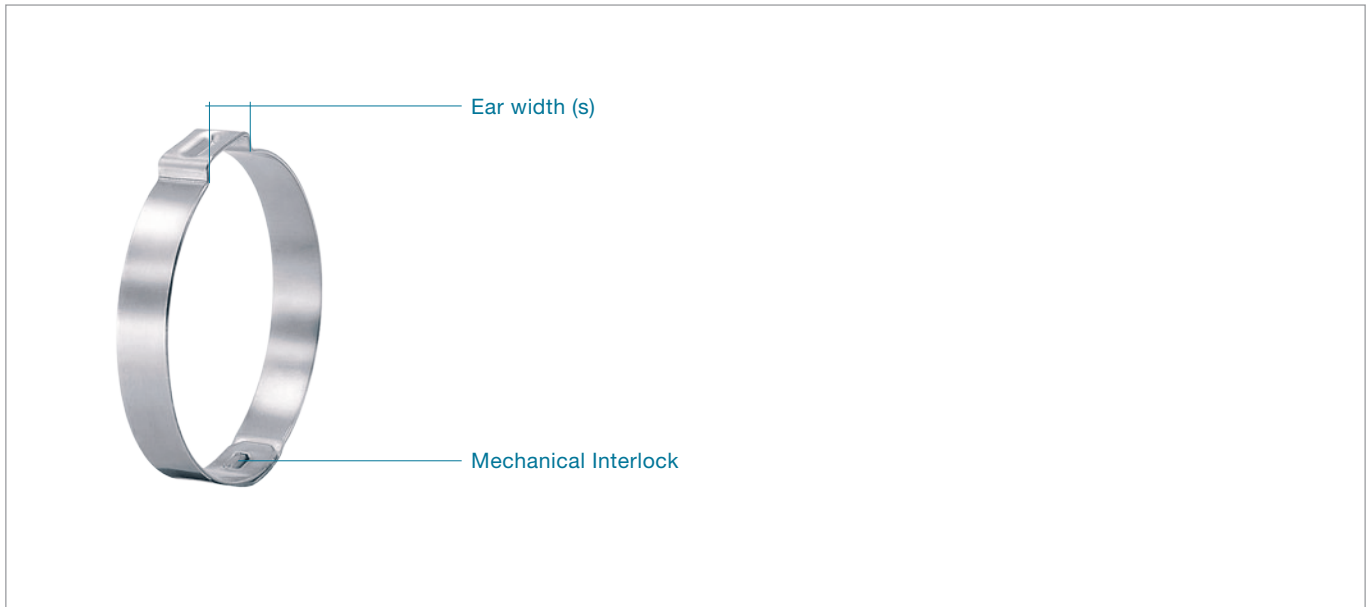
Technical Data Sheet

1-Ear Clamp with mechanical interlock

Product Group 105 & 155



Connecting Technology



Mechanical interlock: for pre-coated material

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

Dimple: increases clamping force, spring-effect compensates for changes in diameter due to thermal and mechanical effects

Specially formed strip edges: reduced risk of damage to parts being clamped

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

Material

105 Galvanized or zinc-plated steel band

155 Stainless Steel, Material no. 1.4301/UNS S30400

Series

Size range	width x thickness
10.5 – 116.0 mm	7.0 x 0.6/0.75 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

As a guide, the clamp nominal diameter should be selected so that the outside diameter of the hose, after it has been pushed on to the component to which it is to be fastened (e.g. a hose nipple), is approximately in the middle of the diameter range of the chosen clamp.

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).

Clamp installation monitoring equipment and process data collection are available by incorporating an “Electronically Controlled Assembly Tool” OETIKER ELK01 in the assembly process.

Closing force

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

Average applied closing force

Material dimensions	Closing force GALFAN/Stainless	Manual pincer*	Recommended pneumatic pincer**
10.5 – 17.0	1200 N	14100082, 14100083	HO 2000
18.5 – 116.0	2000 N	14100082, 14100083	HO 2000

* 14100082 Standard pincer

14100083 Standard pincer with side jaws

** With appropriate closing force setting

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)
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1-Ear Clamp with mechanical Interlock, stainless
Band width 7 mm, thickness 0.6 mm

15500000	0105.0R	5	8.9 – 10.5
15500001	0113.0R	5	9.7 – 11.3
15500002	0123.0R	6	10.4 – 12.3
15500003	0133.0R	6	11.4 – 13.3
15500004	0135.0R	6.5	11.5 – 13.5
15500005	0138.0R	6	11.9 – 13.8
15500006	0140.0R	6.5	11.9 – 14
15500007	0145.0R	6	12.6 – 14.5
15500008	0157.0R	7	13.5 – 15.7
15500009	0170.0R	6	15.1 – 17
15500010	0185.0R	9	15.7 – 18.5
15500011	0198.0R	9	17 – 19.8
15500012	0210.0R	9	18.2 – 21
15500013	0226.0R	9	19.8 – 22.6
15500014	0241.0R	9	21.3 – 24.1
15500015	0256.0R	9	22.8 – 25.6
15500016	0271.0R	10	24 – 27.1
15500017	0286.0R	10	25.5 – 28.6
15500018	0301.0R	10	27 – 30.1
15500019	0316.0R	10	28.5 – 31.6
15500020	0331.0R	10	30 – 33.1
15500021	0346.0R	10	31.5 – 34.6
15500022	0361.0R	10	33 – 36.1
15500023	0376.0R	10	34.5 – 37.6
15500024	0381.0R	10	35 – 38.1
15500025	0396.0R	10	36.5 – 39.6

Item No.	Ref. No.	Ear width inside (mm)	Size range (mm)
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1-Ear Clamp with mechanical Interlock, stainless
Band width 7 mm, thickness 0.6 mm

15500026	0410.0R	10	37.9 – 41
15500027	0425.0R	10	39.4 – 42.5
15500028	0440.0R	10	40.9 – 44
15500029	0455.0R	10	42.4 – 45.5
15500030	0470.0R	10	43.9 – 47
15500031	0485.0R	10	45.4 – 48.5
15500032	0500.0R	10	46.9 – 50
15500033	0515.0R	10	48.4 – 51.5
15500034	0530.0R	10	49.9 – 53
15500035	0545.0R	10	51.4 – 54.5
15500036	0560.0R	10	52.9 – 56
15500037	0575.0R	10	54.4 – 57.5
15500038	0590.0R	10	55.9 – 59
15500039	0605.0R	10	57.4 – 60.5
15500040	0620.0R	10	58.9 – 62
15500041	0635.0R	10	60.4 – 63.5
15500042	0650.0R	10	61.9 – 65
15500043	0665.0R	10	63.4 – 66.5
15500044	0680.0R	10	64.9 – 68
15500045	0695.0R	10	66.4 – 69.5
15500046	0710.0R	10	67.9 – 71
15500047	0725.0R	10	69.4 – 72.5
15500048	0740.0R	10	70.9 – 74
15500049	0755.0R	10	72.4 – 75.5
15500050	0770.0R	10	73.9 – 77
15500051	0785.0R	10	75.4 – 78.5

Order information

Item No.	Ref. No.	Ear width inside (mm)	Size range (mm)
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1-Ear Clamp with mechanical Interlock, stainless
Band width 7 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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