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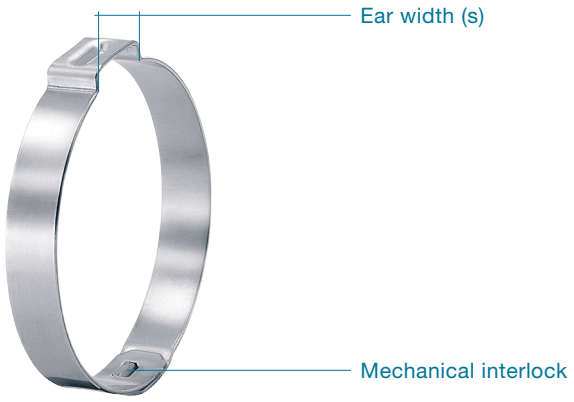
Technical Data Sheet
1-Ear Clamp with mechanical interlock
Product Group 105 & 155

OETIKER®

Reliable Connections



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
Mechanical interlock: keeps the clamp securely closed
ToolFit technology: pre-crimped clamp ear provides a secure, non-slip tool fit for quick and effortless installation

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 ≥ 144 h
PG 155 ≥ 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[1]: 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

[1] 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)
1-Ear Clamp with mechanical Interlock, stainless Band width 7.0 mm, thickness 0.6 mm			
15500000	105	5	8.9 – 10.5
15500001	113	5	9.7 – 11.3
15500002	123	6	10.4 – 12.3
15500003	133	6	11.4 – 13.3
15500004	135	6.5	11.5 – 13.5
15500005	138	6	11.9 – 13.8
15500006	140	6.5	11.9 – 14
15500007	145	6	12.6 – 14.5
15500008	157	7	13.5 – 15.7
15500009	170	6	15.1 – 17
15500010	185	9	15.7 – 18.5
15500011	198	9	17 – 19.8
15500218*	210	9	18.2 – 20.1
15500013	226	9	19.8 – 22.6
15500014	241	9	21.3 – 24.1
15500015	256	9	22.8 – 25.6
15500219*	271	10	24 – 26.2
15500017	286	10	25.5 – 28.6
15500018	301	10	27 – 30.1
15500019	316	10	28.5 – 31.6
15500220*	331	10	30 – 32.2
15500021	346	10	31.5 – 34.6
15500022	361	10	33 – 36.1
15500023	376	10	34.5 – 37.6
15500024	381	10	35 – 38.1
15500025	396	10	36.5 – 39.6

Item No.	Ref. No.	Ear width inside (mm)	Size range (mm)
1-Ear Clamp with mechanical Interlock, stainless Band width 7.0 mm, thickness 0.6 mm			
15500026	410	10	37.9 – 41
15500027	425	10	39.4 – 42.5
15500028	440	10	40.9 – 44
15500029	455	10	42.4 – 45.5
15500030	470	10	43.9 – 47
15500031	485	10	45.4 – 48.5
15500032	500	10	46.9 – 50
15500033	515	10	48.4 – 51.5
15500034	530	10	49.9 – 53
15500035	545	10	51.4 – 54.5
15500036	560	10	52.9 – 56
15500037	575	10	54.4 – 57.5
15500038	590	10	55.9 – 59
15500039	605	10	57.4 – 60.5
15500040	620	10	58.9 – 62
15500041	635	10	60.4 – 63.5
15500042	650	10	61.9 – 65
15500043	665	10	63.4 – 66.5
15500044	680	10	64.9 – 68
15500045	695	10	66.4 – 69.5
15500046	710	10	67.9 – 71
15500047	725	10	69.4 – 72.5
15500048	740	10	70.9 – 74
15500049	755	10	72.4 – 75.5
15500050	770	10	73.9 – 77
15500051	785	10	75.4 – 78.5

*includes ToolFit technology (pre-crimped clamp ear)

Order information

Item No.	Ref. No.	Ear width inside (mm)	Size range (mm)
1-Ear Clamp with mechanical Interlock, stainless Band width 7.0 mm, thickness 0.6 mm			
15500052	800	10	76.9 – 80
15500053	815	10	78.4 – 81.5
15500054	830	10	79.9 – 83
15500055	845	10	81.4 – 84.5
15500056	860	10	82.9 – 86
15500057	875	10	84.4 – 87.5
15500058	890	10	85.9 – 89
15500059	905	10	87.4 – 90.5
15500060	920	10	88.9 – 92
15500061	935	10	90.4 – 93.5
15500062	950	10	91.9 – 95
15500063	965	10	93.4 – 96.5
15500064	980	10	94.9 – 98
15500065	995	10	96.4 – 99.5
15500066	1010	10	97.9 – 101
15500067	1025	10	99.4 – 102.5
15500101	1040	10	100.9 – 104
15500068	1055	10	102.4 – 105.5
15500102	1070	10	103.9 – 107
15500103	1085	10	105.4 – 108.5
15500104	1100	10	106.9 – 110
15500105	1115	10	108.4 – 111.5
15500106	1130	10	109.9 – 113
15500107	1145	10	111.4 – 114.5
15500069	1160	10	112.9 – 116