

Technical Data Sheet

Multi Crimp Rings

Product Group 150



Connecting Technology



Full material cross-section over 360°: constant pressure applied uniformly around the circumference

Flexible diameter reduction: high, adjustable surface pressure, very easy to install

Low installed height: minimum space requirement, no imbalance on rotating parts

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

Aluminum version*: reduced weight

Multi Crimp Rings MCR Product Group 150

MCR with Puzzle lock design

Material

Aluminum, material EN AW-5754

Corrosion resistance according to DIN EN ISO 9227

PG 150 \geq 400h

Size range

24.5 – 120.0 mm

Material dimensions

7.0 x 1.5 mm

10.0 x 1.5 mm

Diameter reduction*

Ø 24.5 – Ø 26.5 mm: max. up to Ø 21.9 mm

Ø 27.0 – Ø 40.0 mm: max. 5 mm

Ø 40.5 – Ø 120.0 mm: max. 6 mm

Puzzle design (interlock)

The interlock is a mechanical connection employing very precise mating elements. Its design creates a positive mechanical connection. It ensures secure connection of the ring ends within the permissible load range.

Field of application

The MCR with a puzzle lock is universally applicable due to its large diameter area, but is especially suitable for thermoplastics.

The data in this catalog are based on many years experience. They are intended for reference, not as design specifications.

MCR spirally welded

Material

Stainless steel, material no. 1.4307/UNS S30403

Corrosion resistance according to DIN EN ISO 9227

PG 150 \geq 800h

Size range

5.0 – 50.0 mm

Material dimensions

On request

Diameter reduction*

Standard (non-annealed)

 \varnothing 5.0 – \varnothing 19.0 mm: application-specific \varnothing 19.5 – \varnothing 50.0 mm: max. 12%

Non-standard (annealed)

 \varnothing 5.0 – \varnothing 19.0 mm: application-specific \varnothing 19.5 – \varnothing 30.0 mm: max. 20% \varnothing 30.5 – \varnothing 50.0 mm: max. 6 mm

Field of application

The spirally welded MCR is especially suitable for cooling and heating water circuits as well as for airbag systems.

Individual diameters and product variants are only available in appropriate minimum quantities.

* The diameter reduction is dependent on the nominal diameter of the MCR.

Material dimensions

Oetiker Multi Crimp Rings are available in a range of dimensions and materials. The band dimensions should be chosen to take into account the required radial force, the nature of the hose, to ensure the necessary sealing and/or retention properties under the relevant ambient conditions, and any mechanical loads on the MCR.

Diameter reduction

The maximum possible diameter reduction is dependent on the MCR's nominal diameter. The MCR's nominal diameter should be kept as small as possible in relation to the diameter of the parts being clamped in order to shorten shrinking times, simplify positioning, and reduce the material load on the MCR.

Oetiker will be pleased to help you find the correct choice for your specific application.

A change in the material structure and the band sizes must necessarily take place during assembly. Bear in mind that the smaller the corresponding MCR diameter is, the more drastic these changes will be. The reason for this is the material quantity in relation to the diameter.

The required degree of compression, or the surface pressure exerted on the part being clamped by an MCR depends on the radial force which, in turn, determines the retention and sealing properties.

Each surface pressure must be determined according to the specific application. If the Oetiker shrinking tools specially developed for this purpose are used, an approximately 360° surface pressure of the parts being clamped is achieved without any overlap due to the inner surfaces of the MCR.

Recommendations for installing MCRs

Oetiker Multi Crimp Rings should be closed using the swaging tools developed for them. The Oetiker Swaging Tool ELS 01 offers many advantages for industrial use, for example, opening of the fixture for optimum accessibility and automatic locking, through to the electronic verification of process parameters for force-priority closure. Alternatively, conventional multi segment hydraulic and pneumatic swaging tools are commercially

available. For small lots in the diameter range 5.0 – 25.0 mm, Oetiker provides the Cordless Crimp Pincer CC 01.

Tolerance compensation

Tolerance compensation when installing Oetiker Multi Crimp Rings depends entirely on the function sequence of the installation tool. Fundamentally, with diameter-priority installation of Oetiker Multi Crimp Rings, tolerance compensation is impossible, because the MCR is simply closed to a specified diameter. This means that the tolerances of components exert their full effect on the degree of compression or the surface pressure applied to the part being clamped. With this type of installation, everything else is subjugated to achieving a defined diameter.

Thus, tolerance compensating installation of an MCR can only be achieved with force-priority regulation. Or, to put it a different way, the basic principle here is not pressing to a given diameter, but achieving an empirically determined closing force, and so the surface pressure associated with it.

With the innovative closure concept of the "Oetiker ELS 01", high process reliability combined with the force-priority, verified installation of Oetiker Multi Crimp Rings is assured. Gauges for checking the closing force are also available.

Order information

For detailed order information, please contact your local Oetiker branch.

The Oetiker Group: www.oetiker.com

Headquarters Switzerland
Hans Oetiker AG
Maschinen- und Apparatefabrik
Oberdorfstrasse 21
CH-8810 Horgen (Zürich)
T +41 44 728 55 55
info@ch.oetiker.com

Austria
Hans Oetiker
Maschinen- und Apparatebau
Ges.m.b.H.
Eduard-Klinger-Strasse 19
A-3423 St. Andrä-Wördern
T +43 2242 33 994-0
info@at.oetiker.com

Brazil
Oetiker do Brasil Imp. e Com. Ltda.
Av. Hugo Fumagali, nr. 586 - Sala B
07220-080 Cid. Industrial Satélite
Guarulhos (SP)
T +55 11 2303 7486
info@br.oetiker.com

Canada
Oetiker Limited
203 Dufferin Street South
P. O. Box 5500
Alliston, Ontario L9R 1W7
T +1 705 435 4394
info@ca.oetiker.com

P. R. China
Oetiker Industries (Tianjin) Ltd.
10 Shuangchenzhong Road
Beichen High Tech Industrial Park
Tianjin 300400
T +86 22 2697 1183
info@cn.oetiker.com

Czech Republic
Hans Oetiker spol. s r. o.
Václavská 116
CZ-37833 Nová Bystřice
T +420 384 386513
info@cz.oetiker.com

France
Oetiker Sarl
Parc d'activités du Bel Air
1, rue Charles Cordier
77164 Ferrières-en-Brie
T +33 1 79 74 10 90
info@fr.oetiker.com

Germany
Hans Oetiker
Metallwaren- & Apparatefabrik GmbH
Üsenbergerstrasse 13
D-79346 Edingen a. K.
T +49 76 42 6 84-0
info@de.oetiker.com

Kurt Allert GmbH & Co. KG
Postfach 1160
Austrasse 36
D-78727 Oberndorf a. N.
T +49 74 23 87 70-0
info@allert.oetiker.com

Hong Kong
Oetiker Far East Limited
2210 Tuen Mun Central Square
22 Hoi Wing Road
Tuen Mun NT
T +852 2459 8211
info@hk.oetiker.com

Hungary
Oetiker Hungaria KFT
Vasvári P. U. 11
H-9800 Vasvár
T +36 94 370 630
info@hu.oetiker.com

India
Oetiker India Private Ltd.
N-14, Additional Patalganga
Industrial Area
Village Chavane, Khalapur
Rasayani 410 220
Dist. Raigad, Maharashtra
T +91 2192 250107-12
info@in.oetiker.com

Japan
Oetiker Japan Co. Ltd.
Kaneko Bldg. A
5-3-5 Nakamachi-dai, Tsuzuki-ku
Yokohama 224-0041, Kanagawa
T +81 45 949 3151
info@jp.oetiker.com

Mexico
Oetiker Servicios S de RL de CV
Ave. José María Pino Suárez 853 Nte.
Col. Centro, CP 64000
Monterrey, Nuevo León
T +52 81 8390 0237
info@mx.oetiker.com

Netherlands
Oetiker Benelux B. V.
Hertzstraat 38
NL-6716 BT Ede
T +31 318 63 71 71
info@nl.oetiker.com

Spain
Oetiker España, S. A.
Pol. Ind. Las Salinas
C/Puente, 18
E-11500 El Puerto
de Santa María (Cádiz)
T +34 956 86 04 40
info@es.oetiker.com

South Korea
Oetiker Far East Limited
Korea Liaison Office
Postal Zip Code 135-880
1401 LG Twintel 1-Cha 157-8
Samseong 1-dong
Gangnam-gu, Seoul
T +82 2 2191 6100
info@kr.oetiker.com

United Kingdom
Oetiker UK Limited
Foundry Close
GB-Horsham, Sussex RH13 5TX
T +44 1403 26 04 78
info@uk.oetiker.com

USA
Oetiker, Inc.
6317 Euclid Street
Marlette, Michigan 48453-0217
T +1 989 635 3621
800 959 0398 (toll-free)
info@us.oetiker.com

www.oetiker.com

