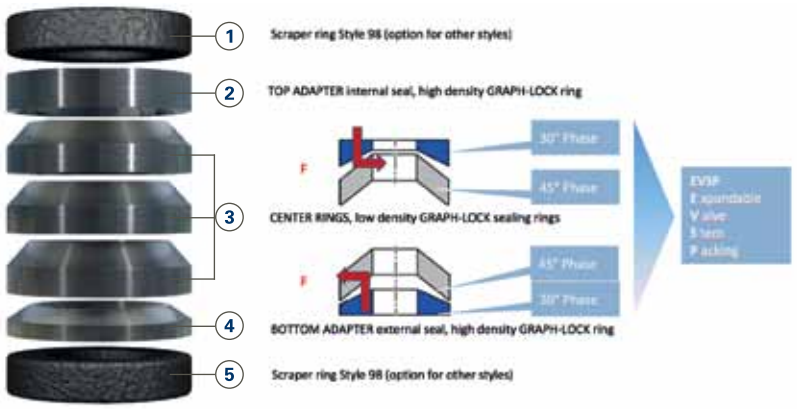
Garlock Compression Packing

Engineering set with Cup & Cone design

Description

The Cup & Cone design pack sets utilize the angular power transmission and the good density and friction factor of graphite. Since the center rings are only compacted during installation, they adapt particularly well to the available installation space. The different angles result in a high radial expansion. During pressing, the top and bottom rings determine the geometry and are not pressed further themselves. Thus the friction only occurs on the other rings. With the different designs, a very wide range of applications can be covered.



Main Segments

» Oil & Gas Industry
» Chemical Industry
» Valve OEM
» Valve Maintanance

Key Benefits

» Flexible design to adapt the customer requirement
» High pressure up to 690 bar
» Low friction up to 20% less than braided packing
» High radial expansion
» Available in solid and spilt
» Available for Low Emission Standards

Certificates/Declarations [1)]

» API 622
» ISO 15848 BH
» TA-Luft
» Fire safe API 607 and 589
» Certifiable to less than 50 ppm leachable chlorides

[1)] Depending on product and application details.

9001 QUICKSET®	9001 QUICKSET-M®	9000-EVSP®	8093 DSA for pumps
			
Features [1)]	**Features [1)]**	**Features [1)]**	**Features [1)]**
» Installation in one row	» Best for Low Emission	» Optimizing through different end rings	» Up to dry running combination of style selected to application
» T: -200 up to +455°C in Steam up to +650°C	» T: -200 up to +400°C	» T: -200 up to +455°C in Steam up to +650°C	» T: -200 up to +455°C depending on the combination
» Pressure: up to 690 bar	» Pressure: up to 690 bar	» Pressure: up to 690 bar	» Pressure: up to 35 bar
» pH 0 - 14	» pH 0 - 14	» pH 0 - 14	» pH 0 - 14
			» Speed up to 20 m/s

[1)] Depending on product and application details.

Garlock Compression Packing

Engineering set with Cup & Cone design

Reciprocating Frictional Force Formula

$$F = \pi * d * H * LF * 400$$

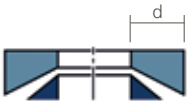
Rotating Frictional Torque Formula

$$T = \frac{\pi * d \wedge 2 * LF}{500000}$$

Calcuation of aproximate friction

Symbol	Description
F	Calculated Friction Force (N)
d	Stem Diameter (mm)
H	Uncompressed Packing Height (mm)
LF	Load Factor (bar) 1.5*System Pressure or 265 bar
T	Calculated Frictional Torque (Nm)

Installation Height of Valve Stem Packing Sets

Cross section d in mm	9001 QUICKSET® uncompressed height in mm	9001 QUICKSET-M® uncompressed height in mm	9000-EVSP® uncompressed height in mm
			
2,7 - 4,2	15,9	22,3	22,2
4,3 - 5,8	23,8	31,8	33,3
5,9 - 7,4	31,8	41,3	44,5
8,0 - 9,0	39,7	50,8	55,6
9,1 - 0,5	47,6	60,4	66,7
10,6 - 12,2	55,6	69,9	77,8
12,3 - 13,7	63,5	79,4	88,9
13,8 - 15,3	71,4	88,9	100,0
15,4 - 16,9	79,4	98,5	111,1
17,0 - 18,5	87,3	108,0	122,2
18,6 - 20,1	95,3	117,5	133,4
20,2 - 21,7	103,2	127,0	144,5
21,8 - 23,2	111,1	136,6	155,6
23,3 - 24,8	119,1	146,1	166,7
24,9 - 26,4	127,0	155,6	177,8

Optimal compression for 9001 QUICKSET® and 9000-EVSP® is ca. 20 - 25 %, for normal applications.

Optimal compression for 9001 QUICKSET® and 9000-EVSP® is ca. 30 %, for high service and low emission applications.

Optimal compression for 9001 QUICKSET-M® is ca. 15 - 20 %, for normal applications.

GARLOCK GMBH
an Enpro Company

Falkenweg 1, 41468 Neuss, Germany
+49 2131 349 0
garlockgmbh@ garlock.com
www.garlock.com