

Packings for plungers and valves

NAFLON™ PTFE Molded Packing

TOMBO™ No.9027

Construction

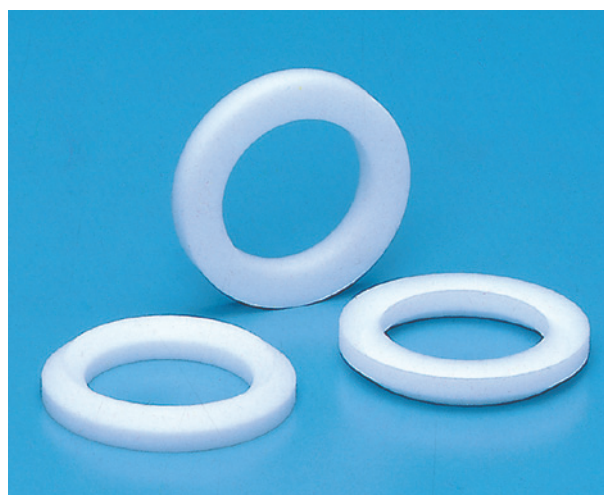
This is a self lip seal type packing machined from PTFE resin, available in VH, VL, and D type cross-sections. For high temperature and high pressure services, packings made of filled PTFE is also available.

Features

1. Can be used with almost any fluid.
2. Because this packing is made from PTFE, it has low frictional resistance with the stem and will not stick.
3. Will not contaminate the fluids.
4. By selecting suitable fillers, products for high temperature, pressure and wear resistant application are also available.

Fluid

Water base fluids (water, steam etc.), oil base fluids (oil, heat transfer oil etc.), organic solvent, hydrocarbons, gas type fluids (hydrogen, ammonia, etc.), chemical products, corrosive fluids (other than oxidizing fluids).



TOMBO™ No.9027

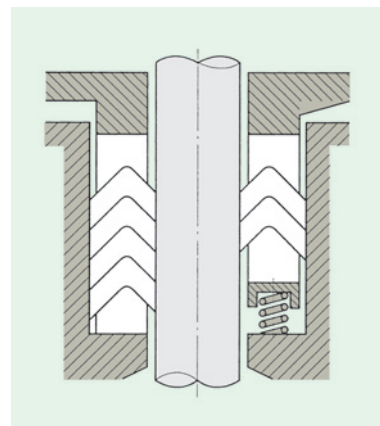
Service Range

Max. Temperature	200°C (Filled PTFE) 120°C (Pure PTFE)
Max. Pressure	30MPa Can be used with high pressure when combined with metal spacers.

Service Pressure, Number of Packings, Application, and Shape

Item	Type	VH-type	VL-type	D-type
Service Pressure MPa		2 ~ 30	~ 3	~ 2
Number of Packing		2 ~ 5MPa 3pcs {20 ~ 50kgf/cm ² }	3 ~ 4pcs	1 ~ 3pcs
		5 ~ 15MPa 4pcs {50 ~ 150kgf/cm ² }		
		15 ~ 30MPa 6pcs {150 ~ 300kgf/cm ² }		
Application		High pressure valves, pistons, and plungers	Low pressure valves and control valves	Low pressure valves and mechanical seals
Shape				

Typical application of NAFLON™ PTFE Molded Packing



Type of Nafion PTFE Molded Packings with Fillers

Product	Shape
TOMBO™ No.9027- H- G20 (with glass fibers)	VH- type
TOMBO™ No.9027- L- G20 (with glass fibers)	VL- type
TOMBO™ No.9027- D- G20 (with glass fibers)	D- type
TOMBO™ No.9027- H- GGR (with glass fibers and graphite)	VH- type
TOMBO™ No.9027- L- GGR (with glass fibers and graphite)	VL- type
TOMBO™ No.9027- D- GGR (with glass fibers and graphite)	D- type
TOMBO™ No.9027- H- CF10 (with 10% carbon fiber)	VH- type
TOMBO™ No.9027- L- CF10 (with 10% carbon fiber)	VL- type
TOMBO™ No.9027- D- CF10 (with 10% carbon fiber)	D- type

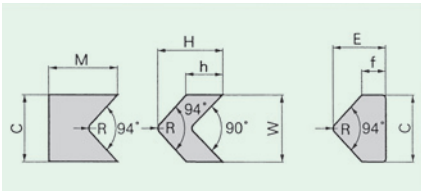
- ⚠ Caution: Apply TOMBO™ No.9401 (PTFE Grease) to the packing and ensure that the lip is not damaged.
- ⚠ Caution: For low pressure gas, apply TOMBO™ No.9401 (PTFE Grease) to the packing and use with a spring (recommended spring pressure: 0.8MPa[8kgf/cm²])
- ⚠ Caution: Shaft surface finishing should be at least 1.6μmRa.
- ⚠ Caution: When used at temperatures over 120°C, use filled PTFE.
- ⊘ This packing may not be used for alkali metal, quite strong oxidizing agent etc.

Stem diameter & Width of PTFE Molded Packing unit : mm

Stem diameter (d)	Packing width
5 ~ 10	3 ~ 5
10 ~ 20	4 ~ 6.5
20 ~ 30	5 ~ 8
30 ~ 40	5 ~ 10
40 ~ 65	7 ~ 10
65 ~ 125	8 ~ 12.5
125 ~ 250	9.5 ~ 16

Standard dimensions of PTFE Molded Packing

VH-type



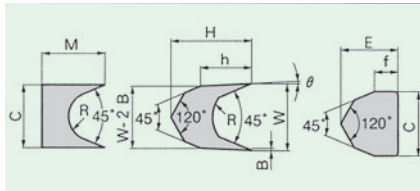
Cross Section Dimensions of VH-type
unit : mm

W	H	h	E	f	R
3	2.8	1.6	2.2	1.0	0.5
4	3.7	2.1	2.9	1.3	1.0
5	4.7	2.7	3.7	1.7	1.0
6	5.6	3.2	4.4	2.0	1.0
7	6.6	3.7	5.2	2.3	1.0
8	7.4	4.2	5.9	2.7	1.5
9	8.4	4.8	6.6	3.0	1.5
10	9.4	5.3	7.4	3.3	1.5
11	10.4	5.8	8.2	3.6	1.5
12	11.4	6.4	9.0	4.0	1.5
13	12.3	6.9	9.7	4.3	2.0
14	13.2	7.4	10.5	4.7	2.0
15	14.2	8.0	11.2	5.0	2.0
16	15.2	8.5	12.0	5.3	2.0
17	16.2	9.0	12.8	5.6	2.0
18	17.1	9.5	13.6	6.0	2.0
19	18.1	10.0	14.4	6.3	2.0
20	19.1	10.5	15.3	6.7	2.0

M=W C=W-0.2

Packing Height : M+nh+f (n=No. of packing)

VL-type



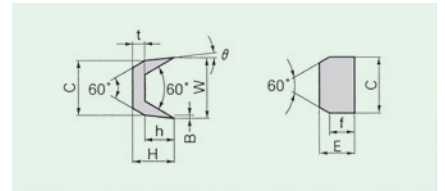
Cross Section Dimensions of VL-type
unit : mm

W	H	h	B	R	E	f	C
3	3.1	1.8	0.15	1.0	3.3	2	2.5
4	4.2	2.4	0.15	1.5	3.8	2	3.5
5	5.2	3.0	0.15	2.0	4.2	2	4.5
6	6.3	3.6	0.15	2.0	4.7	2	5.5
7	7.3	4.2	0.2	2.5	5.1	3	6.4
8	8.3	4.8	0.2	3.0	5.5	3	7.4
9	9.4	5.4	0.25	3.5	7.5	3.5	8.3
10	10.4	6.0	0.25	4.0	8.4	4	9.3
11	11.4	6.6	0.3	4.5	8.8	4	10.2
12	12.5	7.2	0.3	4.5	10.3	5	11.2
13	13.5	7.8	0.35	5.0	11.7	6	12.1
14	14.5	8.4	0.35	5.5	12.1	6	13.1
15	15.6	9.0	0.4	6.0	12.6	6	14.0
16	16.6	9.6	0.4	6.0	14.0	7	15.0
17	17.7	10.2	0.4	6.5	14.5	7	16.0
18	18.8	10.8	0.5	7.0	16.0	8	16.8
19	19.8	11.4	0.5	7.5	16.4	8	17.8
20	20.8	12.0	0.5	8.0	17.8	9	18.8

M=W

Packing Height : M+nh+f (n=No. of packing)

D-type



Cross Section Dimensions of D-type
unit : mm

W	H	h	t	B	E	f
3	3	2	1	0.1	3	2
3.5	3	2	1	0.1	3	2
4	3	2	1	0.1	3	2
4.5	3.5	2.5	1	0.1	3	2
5	4	3	1	0.1	3	2
5.5	4	3	1	0.1	3	2
6	4	3	1	0.1	3	2
6.5	4.25	3.25	1	0.1	3.5	2.5
7	4.5	3.5	1	0.1	4	3
8	5.5	4	1.5	0.1	4.5	3
9	6	4.5	1.5	0.15	5	3.5
10	7	5	2	0.15	6	4
11	7.5	5.5	2	0.2	6	4
12	8	6	2	0.2	7	5
13	8.5	6	2.5	0.2	7.5	5
14	9	6.5	2.5	0.2	8.5	6
15	9.5	7	2.5	0.2	8.5	6
16	10	7.5	2.5	0.2	9.5	7

W dimension less than 10mm, C=W-0.4

W dimension more than 11mm, C=W-0.6

Packing Height : nh+E (n=No. of packing)