

Product name

Features

Construction

Service range

Recommended service range

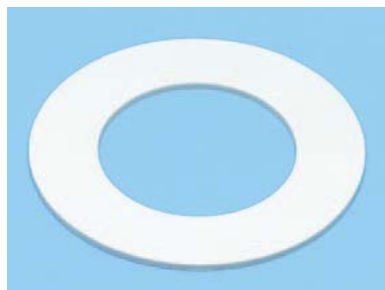
Line up

TOMBO No.

## 9007

NAFLON™ PTFE cut gasket

 Conforms to the Standards and criteria for food and food additives, etc. (3-D-2, Public Notice No. 370 of the Ministry of Health & Welfare, 1959) stipulated by the Food Sanitation Act

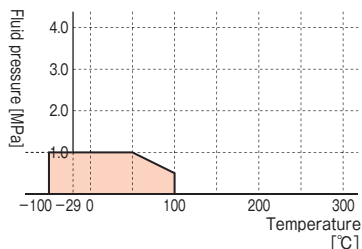


- This is a pure PTFE sheet, so it is suitable for use with fluids that are not permitted to become contaminated.
- This gasket is resistant to virtually all conceivable chemicals, but cannot be used at a temperature of 100°C or higher because deformation due to creep becomes large.

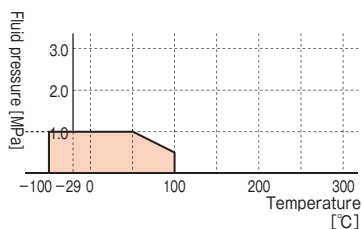
Main constituents: PTFE

\* Compared to a gasket that contains a filler, this gasket is liable to creep. Use it with a grooved flange (T&G) as a general rule.

Water-type, oil-type or corrosive fluids



Gas-type fluid



TOMBO No.9007-ST

Denatured PTFE gasket. Compared to TOMBO No.9007, this gasket has high creep resistance, so it can be used up to 150°C.

TOMBO No.

## 9007-LP

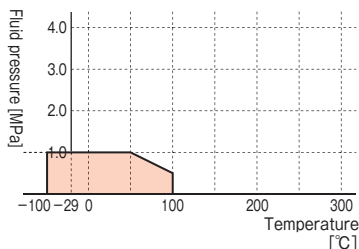
NAFLON™ LP gasket



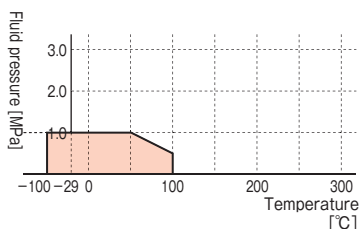
- This gasket is less permeable than PTFE when used with a chemical liquid or gas. It is thus suitable for use with highly permeable halogen-based fluid, for example.

Main constituents: PFA

Water-type, oil-type or corrosive fluids



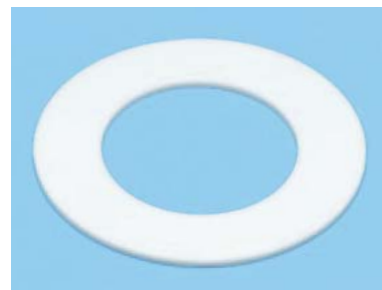
Gas-type fluid



TOMBO No.

## 9007-G20

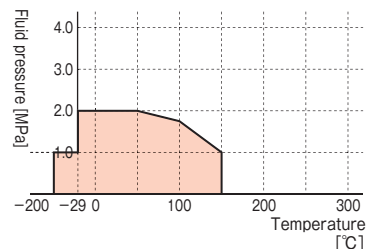
NAFLON™ glass fiber-filled PTFE cut gasket



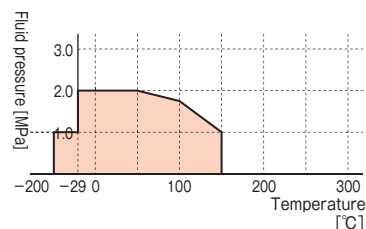
- Standard PTFE gasket containing a filler.
- Cannot be used with hydrofluoric acid or strong alkali.

Main constituents: PTFE, glass fiber

Water-type, oil-type or corrosive fluids



Gas-type fluid





## Design criteria

TOMBO No.	1133	9007-SC	9007-LC	9007-GL	9007-FD	9096-SGM	9007	9007-LP	9007-G20	
Gasket coefficient m [—]	1.0 t	3.50	—	3.50	—	—	2.50	3.50	—	3.50
	1.5 t	2.75	3.20	3.20	—	—	2.50	3.20	—	3.20
	2.0 t	2.75	3.00	3.00	—	—	2.50	3.00	3.00	3.00
	3.0 t	2.00	2.50	2.50	2.50	2.50	2.50	2.50	—	2.50
Minimum design seating stress y [N/mm <sup>2</sup> ]	1.0 t	44.8	—	24.5	—	—	19.6	24.5	—	24.5
	1.5 t	25.5	22.5	22.5	—	—	19.6	22.5	—	22.5
	2.0 t	25.5	19.6	19.6	—	—	19.6	19.6	19.6	19.6
	3.0 t	11.0	19.6	19.6	19.6	19.6	19.6	19.6	—	19.6
Minimum seating stress $\sigma^3$ [N/mm <sup>2</sup> ]	Water-type or oil-type fluid	14.7	14.7	14.7	14.7	14.7	19.6	10.8	14.7	12.7
	Gas-type fluid	34.3	29.4	24.5	14.7	—	39.2	19.6 <sup>*1</sup> 14.7 <sup>*2</sup>	14.7	24.5 <sup>*1</sup> 19.6 <sup>*2</sup>
Allowable seating stress [N/mm <sup>2</sup> ]	150.0	58.8	49.0	39.2	39.2	117.6 <sup>*3</sup>	39.2	29.4	49.0	

\*1 : Minimum seating stress for a thickness of 1.0t or 1.5t.

\*2 : Minimum seating stress for a thickness of 2.0t or 3.0t.

\*3 : The allowable seating stress for a thickness of 2.0t or 3.0t is 78.4N/mm<sup>2</sup>.

## Standard dimensions

TOMBO No.	1133	9007-SC	9007-LC	9007-GL	9007-FD	9096-SGM	9007	9007-LP	9007-G20
Maximum O.D. [mm]	1.0 t	φ 610	—	φ 1200	—	φ 1380	φ 1200	φ 277	φ 1200
	1.5 t	φ 1250	φ 1200						
	2.0 t	φ 1250	φ 1200						
	3.0 t	φ 1430	φ 1200	φ 1430	φ 600				
Standard thickness	1.0 t	●	—	●	—	—	●	—	●
	1.5 t	●	●	●	—	—	●	—	●
	2.0 t	●	●	●	—	—	●	●	●
	3.0 t	●	●	●	●	●	●	—	●

\* Gaskets indicated by the yellow areas in the drawing can be made larger than that indicated by employing welding.

## Basic physical properties

TOMBO No.	1133	9007-SC	9007-LC	9007-GL	9007-FD	9007	9007-LP	
Thickness [mm]	1.5	1.5	1.5	3.0	3.0	1.5	2.0	
Specific gravity [g/cm <sup>3</sup> ]	2.74	2.06	2.30	1.94	1.62	2.18	2.18	
Tensile strength [N/mm <sup>2</sup> ]	18	24	18	22	17	34	28	
Compression ratio [%]	34.3MPa	5	4	5	7	10	9	
Recovery [%]		47	67	55	73	57	48	78
Stress relaxation ratio [%]	100°C × 22h	27	56	50	62	71	73	65
	200°C × 22h	59	79	74	87	90	—	—

\* The above values are measured values. They are not standard values.

## Precautions for fluororesin products

### Precautions concerning design and selection

#### ● Finish of the gasket seat

The recommended gasket seat when using a fluororesin gasket is as follows.

- For sealing liquid: 6.3 μm Ra
- For sealing gas: 3.2 μm Ra

### Precautions for use

#### ● Fluids for which a fluororesin gasket is not suitable.

- Do not use a PTFE gasket with molten alkali metal, high-temperature fluorine, chlorine trifluoride or other fluid that corrodes PTFE.
- When a fluororesin gasket is used with a monomer-based fluid, the fluid may permeate into the gasket, resulting in polymerization. In such a case, it is recommended that you either replace the gasket at shorter intervals, or use a vortex™ gasket.

#### ● Gas-type fluid

- When using a fluororesin gasket to seal gas, use TOMBO No.9400 (NAFLON™ paste) together in order to improve the sealing performance.