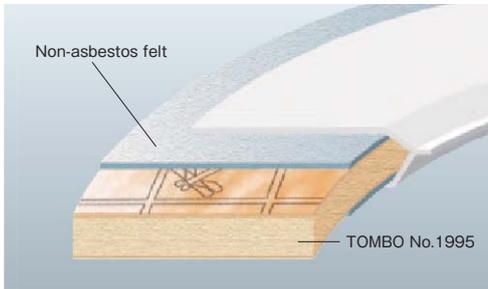




# TOMBO No. 9010-NA series

## NAFLON™ PTFE cushion gasket

Precautions for use  
P.23



This is a PTFE-clad type gasket consisting of a core made of a joint sheet, for example, covered with an outer PTFE skin. The sealing face is completely covered by a film of PTFE, providing resistance to contamination and also resistance to chemicals. This gasket is used in a wide variety of applications including fine chemicals, petrochemicals, pharmaceuticals, foodstuffs, and general industries.

■ How to read a TOMBO No. When placing an order, specify the following product specifications (TOMBO No.).

TOMBO No. **9010** — **NA** — **A** — **5**

Shape		Kind of core material
Shape	Indication symbol	Indication symbol
	Standard type <b>A</b>	 TOMBO No.1995 <b>5</b>
	Large bore type*1 <b>B</b>	 TOMBO No.1995 Felt <b>6</b>
	Right-angled type <b>AS</b>	 TOMBO No.1120 <b>7</b>
	Fully-covered type <b>R-A</b> <b>R-AS</b>	 TOMBO No.1120 Felt <b>8</b>
	For NAFLON-lined pipes*2 <b>FG</b>	 TOMBO No.1120 SUS mesh <b>9</b>

\*1 : Gaskets with an O.D. of 1000 mm or larger can be manufactured. However, because there is a heat seal at one location, the sealing performance is somewhat inferior to the A type (standard type). It is thus recommended that TOMBO No.9400 (NAFLON paste) be used as well.

\*2 : If you use a gasket of standard dimensions in a NAFLON-lined pipe, the dimensions will not match each other, which may result in leakage. For this reason, use the FG series gasket the dimension of which is appropriate for NAFLON-lined pipes. The construction of the FG series is the same as that of the A type or AS type.

### Other lineups

- TOMBO No.9010-NA-K (This product is sewn around the outer periphery.)
- TOMBO No.9010-NA-KH (This product is sewn around the outer periphery and also has a hand grip.)

## Examples of TOMBO No.

### 9010-NA-A-5

Type: Standard type      Core: TOMBO No.1995

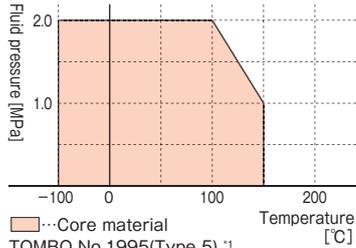
### 9010-NA-AS-7

Shape: Right-angled type      Core: TOMBO No.1120

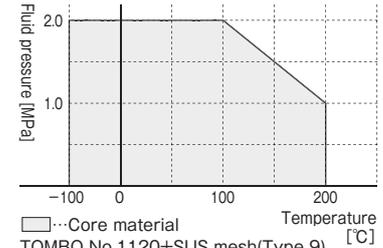
### 9010-NA-R-A-5

Shape: Fully-covered type      Core: TOMBO No.1995

## Service range



Core material  
TOMBO No.1995(Type 5) \*1  
TOMBO No.1995+Felt(Type 6) \*1  
TOMBO No.1120(Type 7)  
TOMBO No.1120+Felt (Type 8)



Core material  
TOMBO No.1120+SUS mesh(Type 9)

\*1 : It is not recommended that these gaskets be used in places where the temperature fluctuates 100°C or more, where the pressure frequently fluctuates, or where maintenance is difficult to carry out.

## Design criteria

Shape	Type A	Type B	Type AS	
Kinds of core materials [TOMBO No.]	1995 (Type 5) 1995+Felt (Type 6) 1120 (Type 7) 1120+Felt (Type 8)	1120+SUSMesh (Type 9)	1995 (Type 5) 1995+Felt (Type 6) 1120 (Type 7) 1120+Felt (Type 8) 1120+SUS mesh (Type 9)	
Gasket coefficient m [-]	3.50	3.50	4.00	
Minimum design seating stress $\gamma$ [N/mm <sup>2</sup> ]	14.7	19.6	19.6	
Minimum seating stress $\sigma_3$ [N/mm <sup>2</sup> ]	Water-type or oil-type fluids	9.8	14.7	14.7
	Gas-type fluid	14.7	19.6	19.6
Allowable seating stress [N/mm <sup>2</sup> ]	29.4	39.2	29.4	

## Standard dimensions

Shape	Type A	Type B	Type AS
Minimum I.D. [mm]	φ 16	φ 300	φ 20
Maximum O.D. [mm]	φ 1000	Arbitrary	φ 700

## ⚠️ Precautions for NAFLON™ PTFE cushion gaskets

PTFE-clad type gaskets can be used for a wide range of applications, but there is a possibility of trouble occurring in the following cases. It is recommended that you use a fluororesin gasket such as the TOMBO™ No.1133 or TOMBO No.9007 series, as far as possible.

Case	Assumed phenomenon	Remedy
Tightened with an excessive force.	A joint sheet may deform or break (compression breakage), resulting in leakage. This phenomenon is particularly liable to occur in small bore products or fluororesin-lined pipes.	<ul style="list-style-type: none"> <li>●Tighten the cushion gasket using a tightening torque that is lower than the allowable seating stress.</li> </ul>
Used with a permeable fluid Nitric acid, ethylene oxide, halogens (chlorine, bromine, etc.), molten sulfur, monochloroacetic acid.	During long-term use, the fluid may permeate into the gasket through the PTFE covering material, damaging the core material and causing the gasket to lose its function.	<ul style="list-style-type: none"> <li>●Replace the gasket at shorter intervals.</li> <li>●Use a PTFE cut gasket.</li> </ul>
A gasket of a type that was covered only on the inside diameter side (Type A, B and AS) was used on a pipe in a vacuum condition.	The PTFE outer skin may be drawn into the pipe.	<ul style="list-style-type: none"> <li>●Use a fully-covered type (Type R-A and R-AS) or a sewn-around-outer-periphery type (Type -K).</li> </ul>
Standard type (Type A) is used.	Fluid may accumulate around the gasket due to its construction.	<ul style="list-style-type: none"> <li>●Use a right-angled type (Type AS).</li> <li>●Use a gasket of the proper I.D.</li> </ul>
Gasket with core material of joint sheet + felt (Core type No.: 6 or 8) is used.	If the core material is wet by a fluid, the compression breakage strength will fall. If soapy water or rainwater penetrates the gasket, causing the felt to soften and be pushed outward, the seating stress of the gasket may fall, resulting in possible leakage.	<ul style="list-style-type: none"> <li>●Store the gasket in a waterproof pouch or the like.</li> <li>●After installing the gasket, take care that there is no ingress of rainwater.</li> <li>●Ensure that the tightening force is not insufficient.</li> </ul>
The gasket was installed at a location where there was insufficient space between the flange faces.	Defective sealing occurs due to breaking of the gasket or curling of the PTFE outer skin.	<ul style="list-style-type: none"> <li>●Use a fully-covered type (Type R-A and R-AS) or a sewn-around-outer-periphery type (Type -K).</li> </ul>
Air bubbles were found between the PTFE outer skin and the core material when an airtightness test was performed.	Air included in the core material and also air stagnating on the inner periphery side has been discharged.	<ul style="list-style-type: none"> <li>●Wait for a certain time after applying the internal pressure load before carrying out an airtightness test.</li> </ul> <p>* This phenomenon is particularly liable to occur in the case of a gasket that has felt core material (Core type No.: 6 or 8).</p>