

## 3-way TPC valve

### Limited operating pressure specification

The 3-way TPC valve is divided into two categories as follows:

Normally Closed (NC) : Port 1~Port 2 is Closed when Pilot air supply is OFF

Normally Open (NO) : Port 1~Port 2 is Open when Pilot air supply is OFF

When using 3-way TPC valve, it is necessary to pay full attention to allowable maximum operating pressure at Port 3 as it is limited as below chart (See Table 1 and Table 2).

Table 1: Maximum allowable operating pressure at Port 3 of 3-way TPC Normally Closed valve (NC)  
when Pilot Air is ON (When Port 2- Port 3 is closed)

Unit : MPa

Valve size	Pilot Air pressure		
	0.25	0.3	0.35
DN08,10,15	0.3	1.7	3.1
DN20	1.1	2.7	3.2
DN25	1.8	3.2	3.2
DN32	0.6	1.8	2.9
DN40	0.8	1.8	2.7

※ Maximum operating pressure for Port 1, Port 2 is 3.2MPa.

Table 2: Maximum allowable operating pressure at Port 3 of 3-way TPC Normally Open valve (NO)  
when Pilot Air is OFF (When Port 2- Port 3 is closed)

Unit : MPa

Size	
DN08,10,15	1.2
DN20	1.4
DN25	1.7
DN40	0.5

※ Maximum operating pressure for Port 1, Port 2 is 3.2MPa.  
(except that Port 2 for DN40 is maximum 2.0MPa)

The reason of these lower pressure is because 3-way TPC valve is initially designed with the assumption that Port 3 shall be connected to exhaust line.

For above reason, we recommend to use our 3-way TPC valve by connecting Port 3 to exhaust side.

3-way TPC Normally Closed (NC) valve also can be used as 2-way TPC Normally Open (NO) valve by shutting Port 1 with plug or blind flange; however in this case, maximum allowable operating pressure at Port 3 will be also according to Table 1.

Reference Drawing attached

- IG-TPC2311-R6 (TPC NC / Thread)
- IG-TPC2312-R4 (TPC NC / Flange)
- IG-TPC2321-R4 (TPC NO / Thread)
- IG-TPC2322-R3 (TPC NO / Flange)

For the model and order code of TPC valve, please refer to our website:

<https://www.rocky-ichimaru.co.jp/en/>