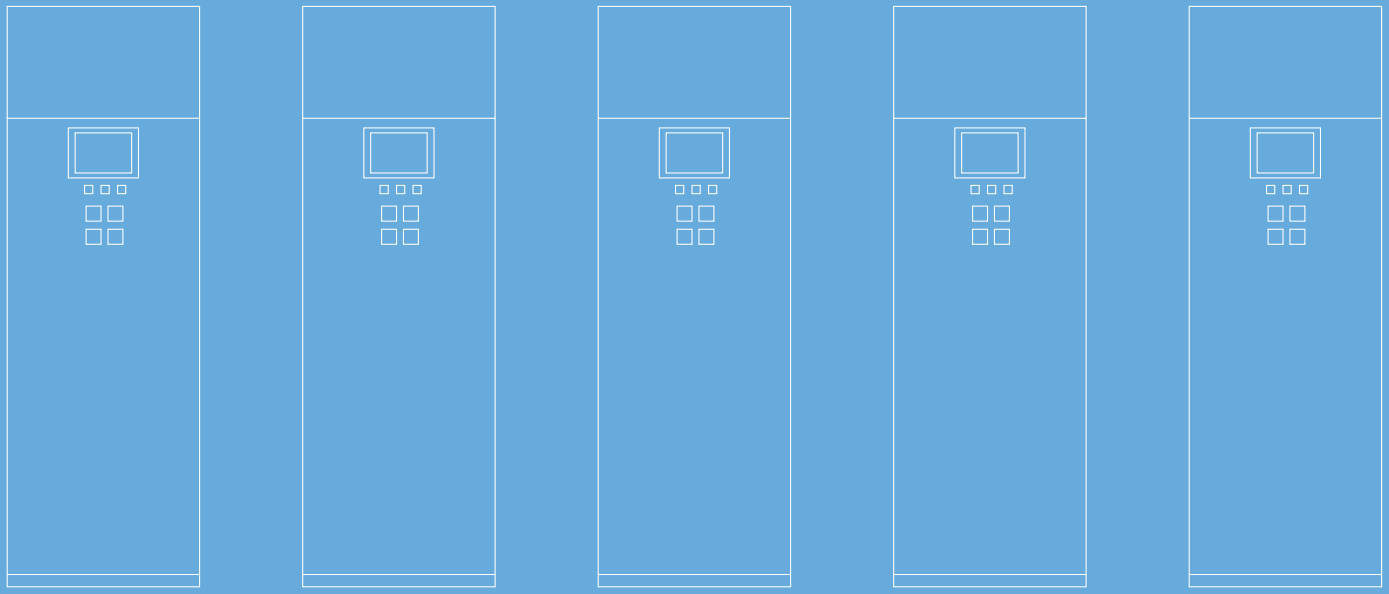
NIPPON SANSO

Puremate-1400 Series

Purifiers for high-purity gas



Puremate series

Puremate-1400 series						
Purification method	**Gases** (throughput in Nm^3 hr indicated in parentheses)					
Normal temperature adsorption (Catalyst + adsorption)	N_2 (6 to 2,000)	Ar (6 to 100)	He (6 to 100)	O_2 (3 to 100)	H_2 (6 to 100)	N_2 (6 to 300)
Getter		Ar (0.3 to 30)	He (0.3 to 30)			
Cryogenic purification					H_2 (10 to 500)	

Puremate-1100 series					
Purification method	**Gases** (throughput in Nm^3 hr indicated in parentheses)				
Normal temperature adsorption (Catalyst + adsorption)	N_2 (3.6)	Ar (3.6)	He (3.6)	O_2 (2.3)	H_2 (3.6)

Puremate 1100 is an entry level model for customers wishing to use small flow rates of high purity gas.

Inert gas purifiers
SPNP, SPAP, SPRP series

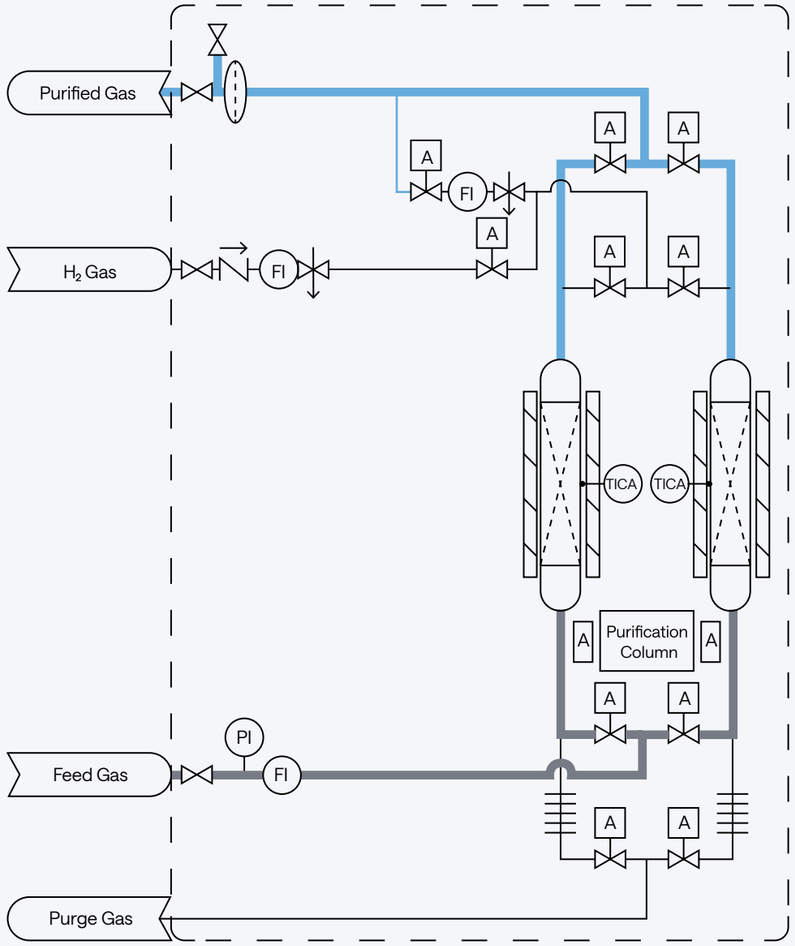
N2: SPNP / Ar: SPAP / He: SPRP

Removes O_2, CO, and H_2 by catalysis and CO_2 and H_2O by adsorption.

SPNP	**INLET** ppb	**OUTLET** ppb
O_2	1,000	≤ 0.1 *
CO_2	500	≤ 0.1 *
CO	1,000	≤ 0.1 *
H_2	1,000	≤ 0.5 *
H_2O	2,600	≤ 0.1 *
Particles	-	≤ 1pce/cft , ≥ 0.1μm
Pressure	0.5MPaG	≥ 0.4MPaG

* ≤ 1 ppb for Puremate - 1100

Throughput (Nm^3/h)	**Dimensions** W x D x H (mm)
1100 Series	
3	450 x 600 x 1,650
6	
1400 Series	
6	400 x 600 x 1,750
10	
20	
30	450 x 600 x 1,750
50	600 x 700 x 1,750
100	
200	1,100 x 850 x 1,750
300	1,300 x 1,000 x 1,850
400	1,300 x 1,050 x 1,850
500	1,400 x 1,100 x 1,850
1,000	1,650 x 1,300 x 1,850
1,500	1,650 x 1,900 x 2,050
2,000	1,750 x 2,000 x 2,200



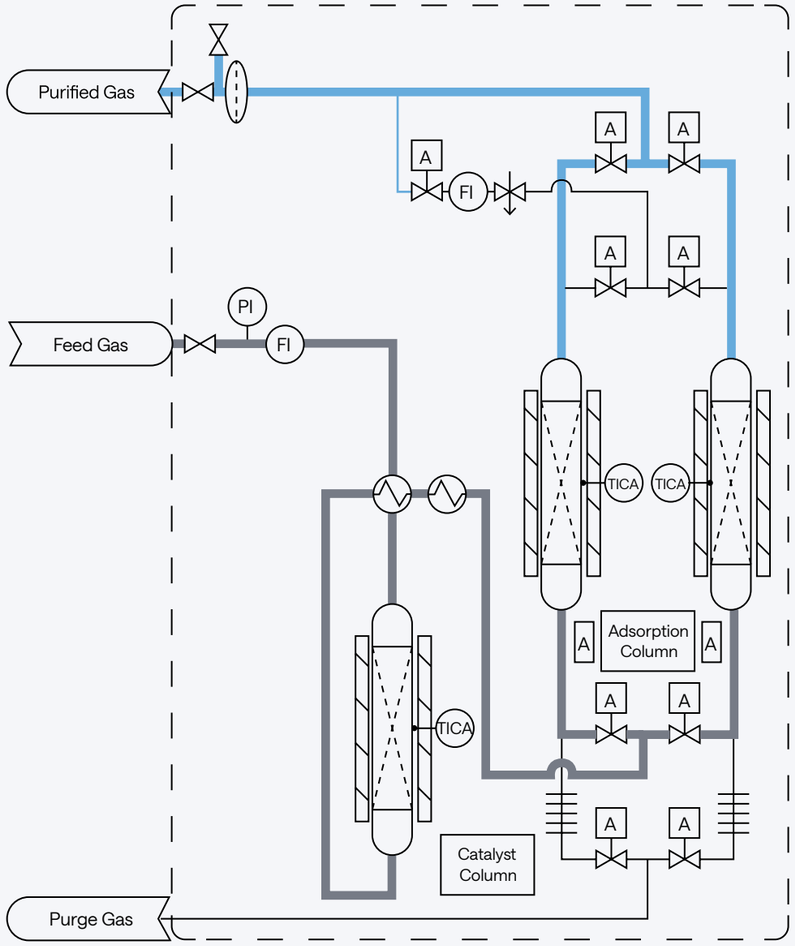
O_2 purifiers
SPOP series

Removes H_2, CO, and CH_4 by catalysis and CO_2 and H_2O by adsorption.

SPOP	**INLET** ppb	**OUTLET** ppb
CH_4	30,000	≤ 0.1 *
CO_2	2,000	≤ 0.1 *
CO	1,000	≤ 0.1 *
H_2	1,000	≤ 0.5 *
H_2O	2,600	≤ 0.1 *
Particles	-	≤ 1pce/cft , ≥ 0.1μm
Pressure	0.5MPaG	≥ 0.4MPaG

* ≤ 1 ppb for Puremate - 1100

Throughput (Nm^3/h)	**Dimensions** W x D x H (mm)
1100 Series	
2	450 x 600 x 1,650
3	450 x 600 x 1,750
1400 Series	
3	400 x 600 x 1,750
6	700 x 700 x 1,750
10	
20	750 x 700 x 1,750
30	850 x 900 x 1,750
50	1,000 x 1,000 x 1,950
100	1,250 x 1,250 x 1,950



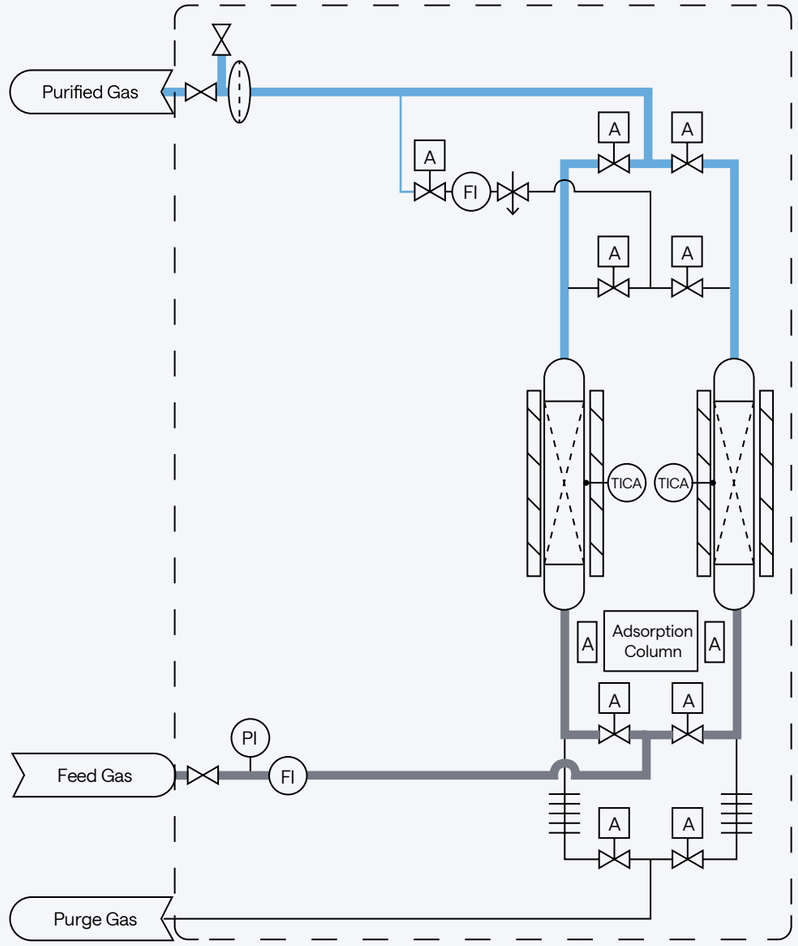
H_2 purifiers
SPHP series

Removes O_2 and CO by catalysis and CO_2 and H_2O by adsorption.

SPHP	INLET ppb	OUTLET ppb
O_2	5,000	≤ 0.1 *
CO_2	1,000	≤ 0.1 *
CO	1,000	≤ 0.1 *
H_2O	10,000	≤ 1 *
Particles	-	≤ 1pce/cft , ≥ 0.1μm
Pressure	0.5MPaG	≥ 0.4MPaG

* ≤ 1 ppb for Puremate - 1100

Throughput (Nm^3/h)	**Dimensions** W x D x H (mm)
1100 Series	
3	450 x 600 x 1,650
6	
1400 Series	
6	400 x 600 x 1,750
10	
20	
30	450 x 600 x 1,750
50	600 x 700 x 1,750
100	



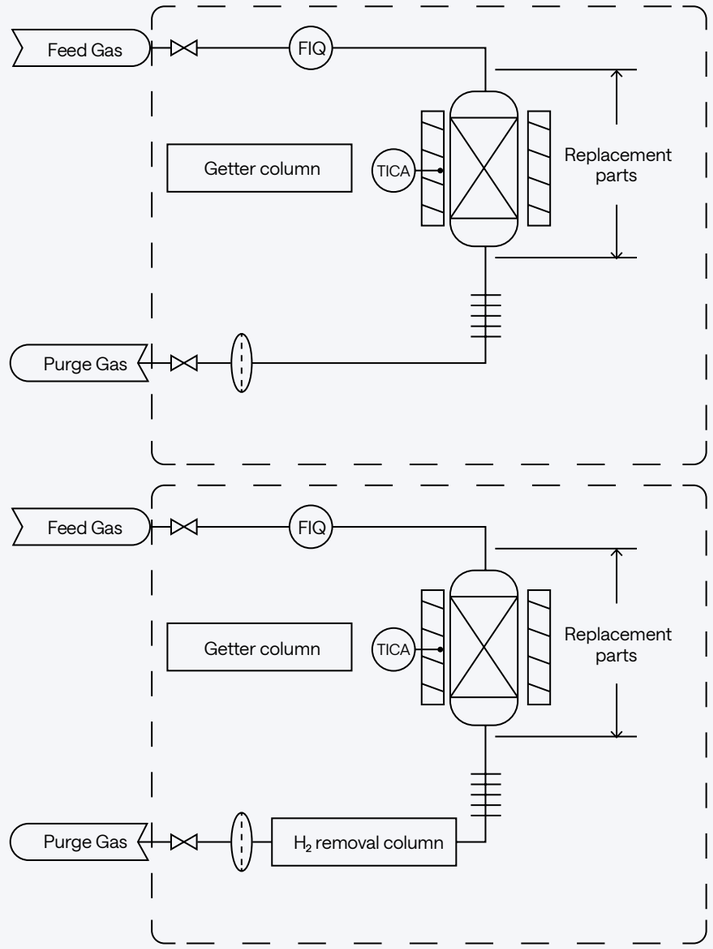
Getter purifiers
SPAG, SPRG series

- Ar: APAG / He: SPRG
- Removes impurities to the maximum extent possible through gettering reaction using a special getter

SPAG	**INLET** ppb	**OUTLET** ppb
N_2	2,000	≤ 0.1
CO_2	100	≤ 0.1
O_2	100	≤ 0.1
CO_2	100	≤ 0.1
CO	100	≤ 0.1
H_2 *	100	≤ 0.5
H_2O	2,600	≤ 0.1
Particles	-	≤ 1pce/cft , ≥ 0.1μm
Pressure	0.5MPaG	≥ 0.4MPaG

* ≤ 1 ppb for Puremate - 1100

Throughput (Nm^3/h)	**Dimensions** W x D x H (mm)
1400 Series	
1	600 x 400 x 1,100
3	
6	600 x 500 x 1,550
10	700 x 500 x 1,650
15	900 x 600 x 1,750
20	
30	1,100 x 700 x 1,800

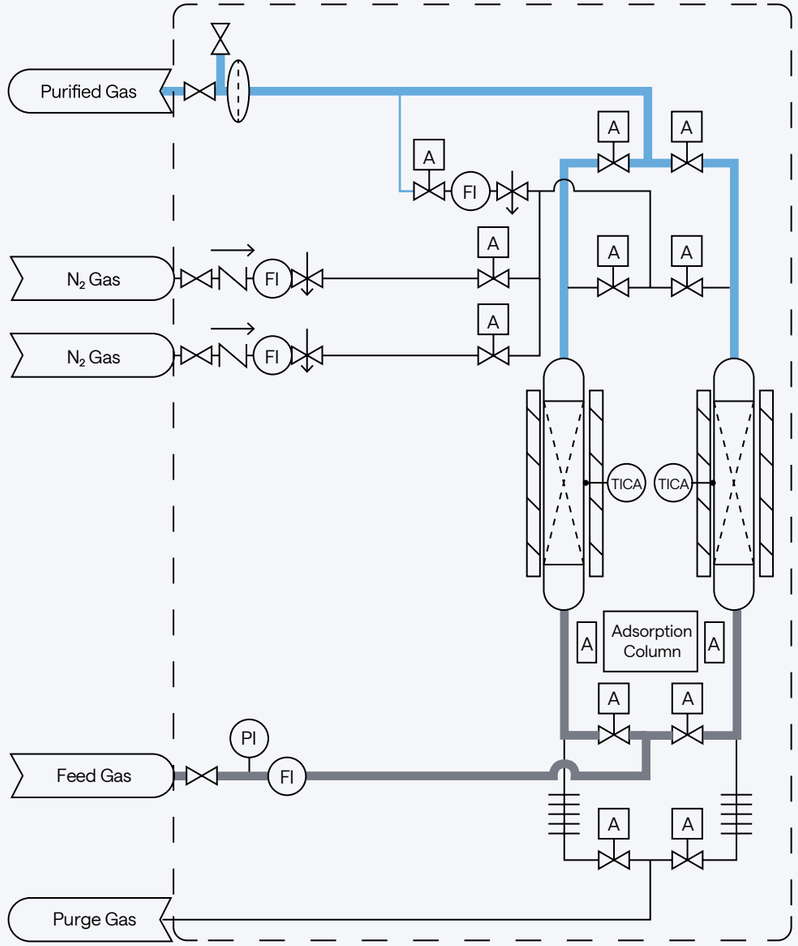


NH_3 purifiers
SPMP series

Removes O_2 by catalysis and H_2O by adsorption.

SPMP	INLET ppb	OUTLET ppb
O_2	5,000	≤ 5
H_2O	10,000	≤ 10
Particles	-	≤ 1pce/cft , ≥ 0.1μm
Pressure	0.3MPaG	≥ 0.2MPaG

Throughput (Nm^3/h)	**Dimensions** W x D x H (mm)
1400 Series	
6	500 x 650 x 1,750
10	800 x 750 x 1,750
20	900 x 800 x 1,750
30	
60	1,000 x 900 x 1,750
100	1,400 x 1,100 x 1,850
200	
300	1,700 x 1,300 x 1,850



Puremate 1400



Making life better through gas technology



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