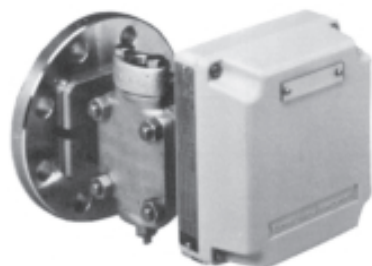


PREX 3000 Vector Involute Type Pneumatic Differential Pressure Transmitters Model KDP61/62 (Flange Type)



The PREX3000 instruments are pneumatic type transmitters which employ a combination of vector balance mechanism and involute mechanism.

The instruments are featured by high resistance against adverse environments, high turn-down ratio, high accuracy, and ease of maintenance.

Standard Specifications

Item	Specifications
Measuring range (continuously adjustable)	KDP 61: 0–25 to 0–500 kPa {0–2,500 to 0–50,000 mmH ₂ O} KDP 62: 0–2.5 to 0–53.9 kPa {0–250 to 0–5,500 mmH ₂ O}
Process connection	Measuring side (liquid level): Flange connection { Flush diaphragm type 80 mm-JIS 10K, 30K (RF) equivalent flange 3"-ANSI 150, 300 (RF) equivalent flange Extended diaphragm type 100 mm-JIS 10K, 30K (RF) equivalent flange 4"-ANSI 150, 300 (RF) equivalent flange Reference side: Rc 1/2 or 1/2 NPT internal thread
Air supply connection	Rc 1/4 or 1/4 NPT internal thread
Air supply pressure	140±14 kPa {1.4±0.14 kgf/cm ² }
Output	20–100 kPa {0.2–1.0 kgf/cm ² }
External load	ID 4 mm × Length 3 m+20 cm ³ or over
Air supply capacity	20Nℓ/minute or over, with 6.7 kPa {50 mmHg} change
Air consumption	5Nℓ/minute or less (when balanced at output 100%)
Accuracy	KDP 61: ±0.5% FS (for spans 0–50 to 0–500 kPa {0–5,000 to 0–50,000 mmH ₂ O}) ±1.0% FS (for spans 0–25 to 0–less than 50 kPa {0–2,500 to 0–Less than 5,000 mmH ₂ O}) KDP 62: ±0.5% FS (for spans 0–5 to 0–53.9 kPa {0–500 to 0–5,500 mmH ₂ O}) ±1.0% FS (for spans 0–2.5 to 0–less than 5 kPa {0–250 to 0–Less than 500 mmH ₂ O})
Dead band	0.1% FS
Working pressure	–50 kPa {–0.5 kgf/cm ² } to maximum flange rated pressure, (differs by material of cover) [refer to Fig. 1, 4]
Operating temperature	Meter body (process fluid): –40 to +120°C Transmitter (ambient): –30 to +80°C
Operating humidity	10 to 90% RH [refer to Fig. 1]
Overload protection	Up to maximum flange rated pressure in either direction.
Construction	Dustproof and waterproof, meets IEC IP54, NEMA Type 3R, JIS F8001 Class 3 splashproof, JIS C0920 rainproof

Item	Specifications
Materials	Center body: SUS304 Wetted parts of flange side and those of center body: SUS316 (diaphragm: SUS316L), SUS316L, Monel, Tantalum Meter body cover: Reference side: Carbon steel (SF45A), SUS316, Monel, PVC (reinforced with SUS304 plates, working pressure range: -0.01 to 1.5 MPa {-0.1 to +15 kgf/cm ² }) operating temperature range: 0 to 55°C) Measuring side: Carbon steel (SF45A), SUS304 Flange: Carbon steel (SF45A), SUS304 Gasket (reference pressure side): Teflon Transmitter case: Aluminium alloy
Finish	Acryl baking finish Color: Light beige (munsell 4Y 7.2/1.3)
Mounting	Directly flange mounted to process flange.
Net weight	Approx. 13 kg (80 mm-JIS 10K flange, add 0.8 kg for air-set)

Optional Specifications

Item	Specifications			
(1) Suppression and elevation	(unit: kPa {mmH ₂ O})			
	Model No.	Span	Suppression (max.)	Elevation (max.)
	KDP 61	25 to 500{2,500–50,000}	500{50,000}	475{47,500}
	KDP 62	2.5 to 53.9{250–5,500}	53.9{5,500}	51.4{5,250}
	(note: elevation+span≤maximum span, suppression≤maximum span)			
(2) Air-set (filter and pressure regulator)	Primary pressure: 200 to 990 kPa {2–9.9 kgf/cm ² } Secondary pressure: 140 kPa {1.4 kgf/cm ² } Filter mesh diameter: 5 microns Connections: Rc1/4 or 1/4NPT internal thread			

Optional Semi-standard Specifications

Item	Specifications
(1) For vacuum use (Y23)	Y169, Y182 and Y183 are not available for Y23. [refer to Fig. 3, 4]
(2) SUS304 bolts for meter body clamping (Y66)	Maximum working pressure: Carbon steel, SUS316, or Monel cover: 6 MPa {60 kgf/cm ² } PVC cover: 1.5 MPa {15 kgf/cm ² }
(3) Corrosion-resistant and silver finish (Y138)	Corrosion resistant (acryl baking) finish (Y138A): Resistant against corrosive gases. Corrosionproof (epoxy baking) finish (Y138B): Resistant against corrosive liquids. Silver-normal (acryl baking) finish (Y138C): To prevent temperature rise of instrument caused by direct sunlight or radiation from other source of heat. Silver-corrosion-resistant (acryl baking) finish (Y138D): To prevent temperature rise the same as above, plus resistance against corrosive gases (Note: Silver finish is not applicable for alkaline gases)
(4) Damping adjustment (Y169) (continuously adjustable)	Time constant: Minimum 3 sec. or less, Maximum 15 sec. or over (when KDP61 is incorporated with Y182 or Y183, the minimum time constant is) 0.5 sec. or less and the maximum time constant is 3 sec. or more.
(5) For oxygen measurement (Y182)	Measuring element material: SUS316 or SUS316L Liquid fill: Fluorine oil (specific gravity: 1.915 at 25°C) Operating temperature (fluid and ambient temperature): -10 to +60°C Wetted parts treatment: Treated for degreasing [refer to Fig. 2, 4]
(6) For chlorine gas measurement (Y183)	Measuring element material: Tantalum Liquid fill: Fluorine oil (specific gravity: 1.915 at 25°C) Operating temperature (fluid and ambient temperature): -10 to +80°C Wetted parts treatment: Treated for degreasing [refer to Fig. 2, 4]
(7) Output pressure gauge (Y185)	Pressure gauge (100 mm diameter)  TRANSMITTER OUTPUT GAUGE(φ100)
(8) High vibration resistant type (Y188)	High vibration resistant type with dashpot.

Model Number Table

Ex: KDP62-1122100A1-5, 7

Basic Model No.	Flange & Cover Mat'l		Wetted Parts Mat'l		Flange Rating	Length of Extended Part of Flange	Air Piping Connection	Pressure unit / Output	Options	Description
	Measuring Side	Reference Side	Measuring Side	Reference Side						
KDP 61										0-25 to 0-500 kPa(0-2,500 to 0-50,000 mmH ₂ O)
KDP 62										0-2.5 to 0-53.9 kPa(0-250 to 0-5,500 mmH ₂ O)
	-1									Carbon steel (SF45A)
	-7									SUS304
		1								Carbon steel (SF45A)
		2								SUS316
		3								Monel
		5								PVC
			2							SUS316 (diaphragm: SUS316L)
			3							Monel (excluding extended diaphragm type)
			4							Tantalum (excluding extended diaphragm type)
			8							SUS316L
				2						SUS316 (diaphragm: SUS316L)
				3						Monel
				4						Tantalum
				8						SUS316L
					1					Flush diaphragm type 80mm-JIS10K (RF) equiv. flange
					2					Flush diaphragm type 80mm-JIS30K (RF) equiv. flange
					3					Flush diaphragm type 3"-ANSI150 (RF) equiv. flange
					4					Flush diaphragm type 3"-ANSI300 (RF) equiv. flange
					5					Extended diaphragm type 100mm-JIS10K (RF) equiv. flange
					6					Extended diaphragm type 100mm-JIS30K (RF) equiv. flange
					7					Extended diaphragm type 4"-ANSI150 (RF) equiv. flange
					8					Extended diaphragm type 4"-ANSI300 (RF) equiv. flange
						00				Flush diaphragm type
						10				Extended diaphragm type 100 mm
						15				Extended diaphragm type 150 mm
							A			Rc 1/4 internal thread
							B			1/4 NPT internal thread
								1		kgf/cm ² (or mmH ₂ O) / 0.2 to 1.0 kgf/cm ²
								2		PSI / 3 to 15 PSI
								3		bar / 0.2 to 1.0 bar
								4		Pa / 20 to 100 kPa
								8		Pa / 19.6 to 98.1 kPa (equality to 0.2 to 1.0 kgf/cm ²)
								-X		No option
								-5		Elevation
								-6		Suppression
								-7		Air-set

Note)

When ordering "Y" options, please write as:
KDP62Y-112100A1-5,7 (Y □).

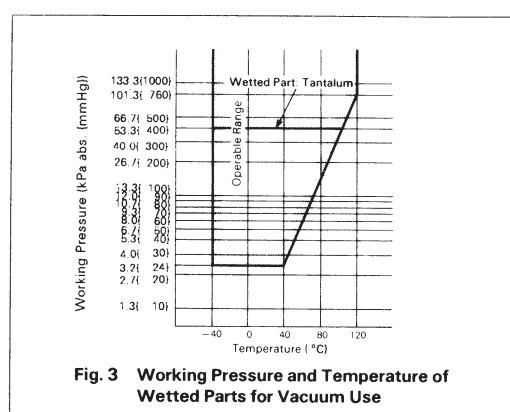
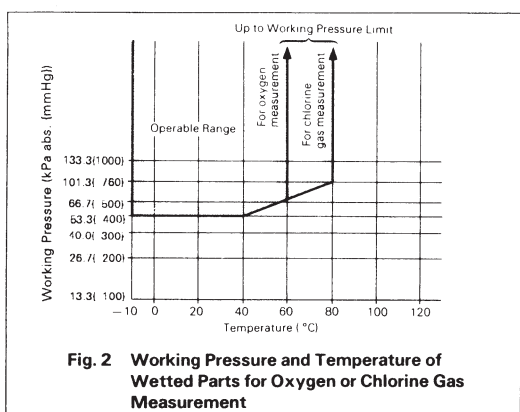
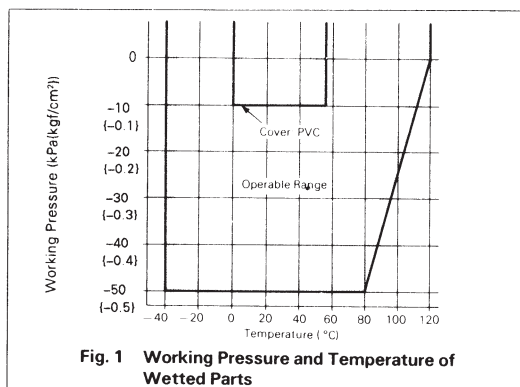
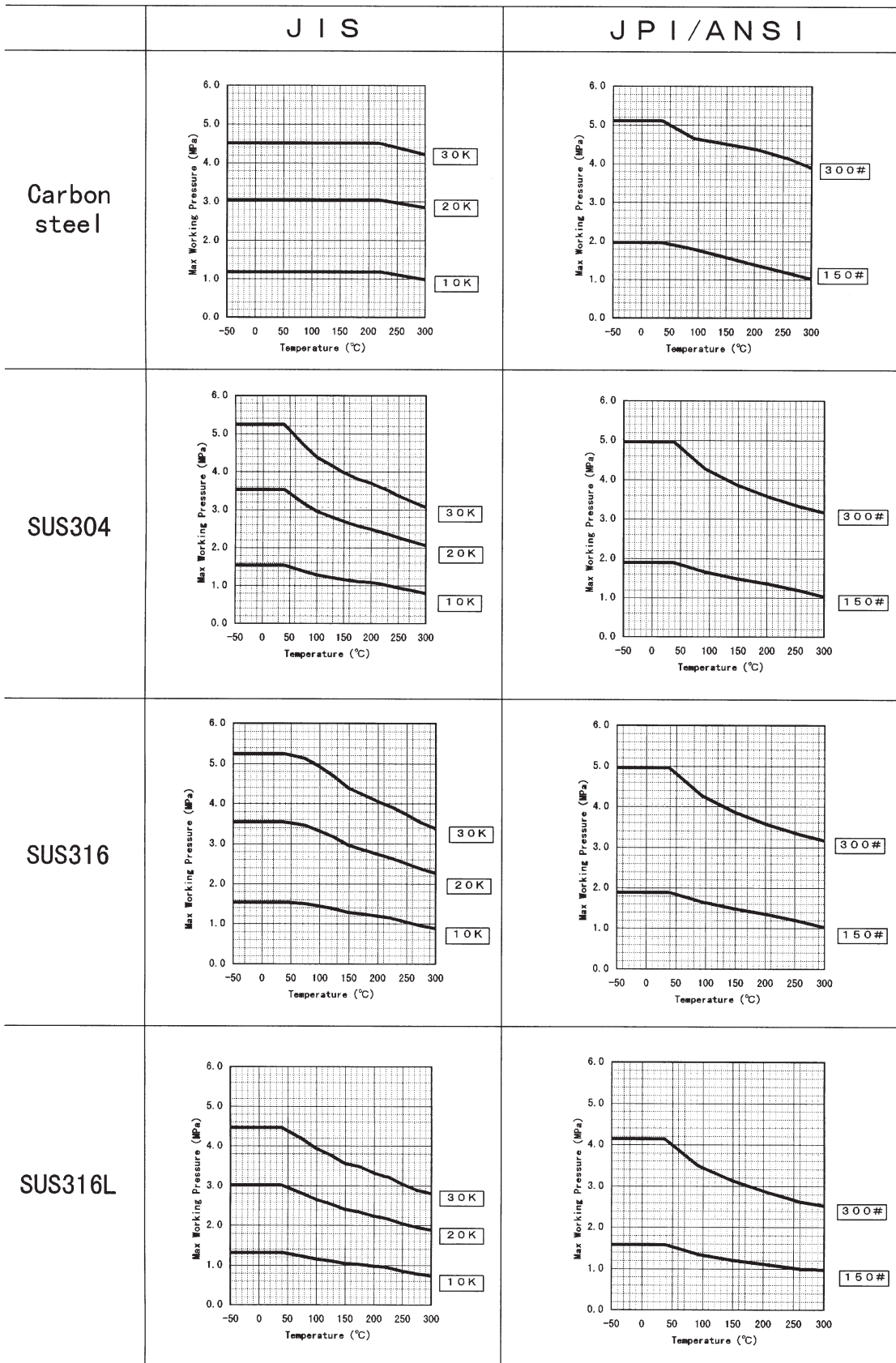


Fig4. Max Working Pressure

Note1. Max Working Pressure depends on flange rating , flange materials and operating temperature. Please refer to the following data.

Operating range of temperature depends on specification of transmitters

Note2. In case of remote sealed type (KKP75,KFKB□□-75), Max Working Pressure depends on the smaller value of either 1.05MPa or following data.



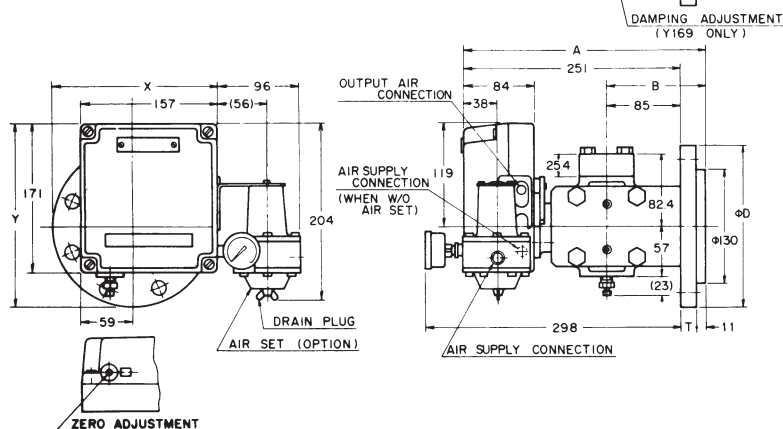
Dimensions

Flush Diaphragm Type

(Unit:mm)

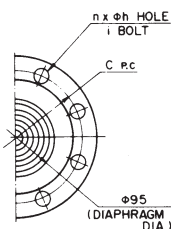
Main Dimensions

ITEM	FLANGE RATING	A	B	X	Y
1	80 mm JIS 10K RF	280	114	190.5	211.5
2	80 mm JIS 30K RF	290	124	203	224
3, A	3" ANSI/JPI 150 RF	286	120	193.5	214.5
4, B	3" ANSI/JPI 300 RF	291	125	203	224



Flange Dimensions

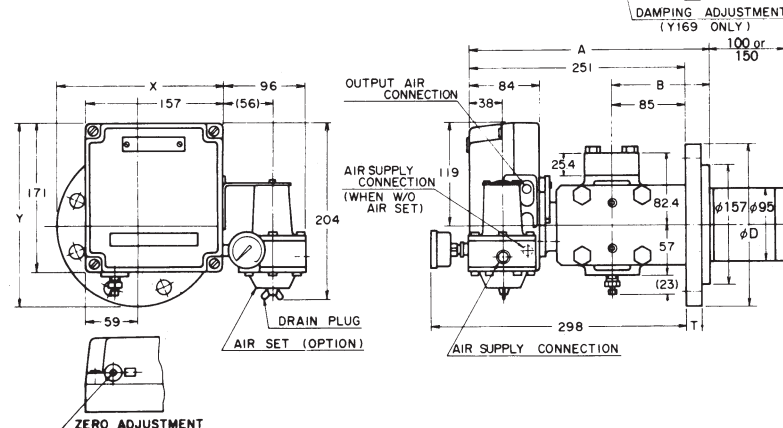
ITEM	FLANGE RATING	D	T	C	n	h	i BOLT
1	80 mm JIS 10K RF	185	18	150	8	19	M16
2	80 mm JIS 30K RF	210	28	170	8	23	M20
3	3" ANSI 150 RF	191	24	152.4	4	19	5/8
4	3" ANSI 300 RF	210	29	168.3	8	22	3/4
A	3" JPI 150 RF	191	24	152.4	4	19	5/8
B	3" JPI 300 RF	210	29	168.3	8	22	3/4



Extended Diaphragm Type

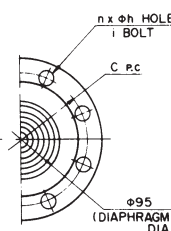
Main Dimensions

ITEM	FLANGE RATING	A	B	X	Y
5	100 mm JIS 10K RF	280	114	203	224
6	100 mm JIS 30K RF	294	128	218	239
7, C	4" ANSI/JPI 150 RF	286	120	212.5	233.5
8, D	4" ANSI/JPI 300 RF	294	128	225	246



Flange Dimensions

ITEM	FLANGE RATING	D	T	C	n	h	i BOLT
5	100 mm JIS 10K RF	210	18	175	8	19	M16
6	100 mm JIS 30K RF	240	32	195	8	25	M22
7	4" ANSI 150 RF	229	24	190.5	8	19	5/8
8	4" ANSI 300 RF	254	32	200	8	22	3/4
C	4" JPI 150 RF	229	24	190.5	8	19	5/8
D	4" JPI 300 RF	254	32	200	8	22	3/4



Ordering Information

When ordering, please specify:

- 1) Model No.
- 2) Measuring range

Note) PREX3000 Transmitter covers a wide measuring range. At a span close to the minimum range point, however, the instrument exhibits particular characteristics. When operating the instrument at this span, refer to Instrumentation Data Sheet ID2-522-002.

- 3) Optional specification
- 4) Optional semi-standard specification

Note) For any combination of two or more Y-specification items, please consult us.

Reference instruction manual . . .

OM2-5220-0000/

OM2-5220-1100

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