

# azbil

# PREX™ 3000

## Pneumatic Differential Pressure/ Pressure Transmitters

### Higher TDR, Higher Accuracy, Higher Reliability-At a Lower Price

## Table of Measuring Ranges

		0.1 {10}	1 {10 <sup>2</sup> }	10 {10 <sup>3</sup> }	100 {10 <sup>4</sup> }
Differential Pressure	Low-Low ΔP Type	KDP44	0-0.1 to 1.2 {0-10 to 120}		
	Low ΔP Type	KDP33		0-0.5 to 6 {0-50 to 600}	
	Medium ΔP Type	KDP22			0-2.5 to 53.9 {0-250 to 5,500}
	High ΔP Type	KDP11			0-25 to 500 {0-2,500 to 50,000}
	High Static Pressure Type	KDP82		0-2.5 to 53.9 {0-250 to 5,500}	
		KDP81			0-25 to 500 {0-2,500 to 50,000}
	Flange Type	KDP62		0-2.5 to 53.9 {0-250 to 5,500}	
		KDP61			0-25 to 500 {0-2,500 to 50,000}
Remote-sealed Diaphragm Type	KDP72		0-2.5 to 53.9 {0-250 to 5,500}		
	KDP71			0-25 to 500 {0-2,500 to 50,000}	

		1 {0.01}	10 {0.1}	10 <sup>2</sup> {1}	10 <sup>3</sup> {10}	10 <sup>4</sup> {10 <sup>2</sup> }	10 <sup>5</sup> {10 <sup>3</sup> }	
Pressure	Gauge Pressure Type	KKP 18	0-0.7 to 13.3 {0-5 to 100}					
		17		0-3.4 to 66.6 {0-25 to 500}				
		16/76			0-10 to 196 {0-0.1 to 2}			
		15/75				0-35 to 686 {0-0.35 to 7}		
		14/74					0-175 to 3,500 {0-1.75 to 35}	
	Remote-sealed Diaphragm Type	13/73					0-350 to 7,000 {0-3.5 to 70}	
		12/72				0-1.25 to 25 MPa {0-12.5 to 250}		
		11/71					0-5 to 70 MPa {0-50 to 700}	
		Absolute Pressure Type	KKP 28	0-0.7 to 13.3 abs. {0-5 to 100 mmHg abs.}				
			27		0-3.4 to 66.6 abs. {0-25 to 500mmHg abs.}			
26				0-10 to 196 abs. {0-0.1 to 2 kgf/cm <sup>2</sup> abs.}				
25					0-35 to 686 abs. {0-0.35 to 7 kgf/cm <sup>2</sup> abs.}			

## No Adversity is Too Adverse for The PREX3000



▲ Dustproof

▲ Waterproof

▲ Low-temperature resistant

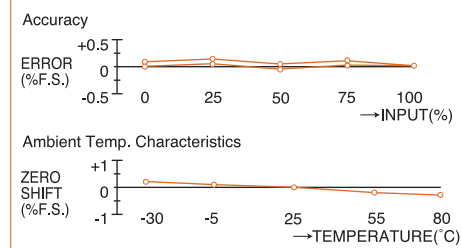
▲ Vibration resistant

### Standard Specification

<b>Air supply</b>	140±44 kPa {1.4±0.14 kgf/cm <sup>2</sup> }
<b>Output</b>	20 to 100 kPa {0.2 to 1.0 kgf/cm <sup>2</sup> }
<b>Air consumption</b>	5 Nℓ/minute or less (when balanced at 100% output)
<b>Accuracy(KDP22)</b>	±0.25 % F.S. (for spans 0-5 to 0-53.9 kPa {0-500 to 0-5,500 mmH <sub>2</sub> O}) ±0.5 % F.S. (for spans 0-2.5 to 0-less than 5 kPa {0-250 to 0-less than 500 mmH <sub>2</sub> O})
<b>Dead band</b>	0.1 % F.S.
<b>Operating pressure range(KDP22)</b>	-0.05 to 10 MPa {-0.5 to +100 kgf/cm <sup>2</sup> }
<b>Operating temperature</b>	
<b>Meter body</b>	-40 to +120 °C
<b>Transmitter(ambient)</b>	-30 to +80 °C
<b>Weight(KDP22)</b>	Approx. 8 kg

### Example of data

(Model KDP22, Range 0-53.9 kPa {0-5,500 mmH<sub>2</sub>O})



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## Azbil Corporation

Advanced Automation Company

Yamatake Corporation changed its name to Azbil Corporation on April 1, 2012.

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- Higher TDR
- Higher Accuracy
- Higher Reliability
- Simplified Zero and Span Adjustment
- Smaller and Lighter

# Higher TDR, Higher Accuracy, Higher Reliability-At a Lower Price

## Sometimes, Digitalization Just Doesn't Make Cents.

Process Control instrumentation is being increasingly dominated by digital systems, but it doesn't always pay to jump on the bandwagon.

If your plant is already pneumatic, digitalization would mean substantial investment and reinstallation of signal transmission lines and power supplies. But there is an alternative :

### PREX3000 Pneumatic Devices for Today ...And Tomorrow

Completely compatible with digital systems, the PREX3000 series is simpler, more economical and far more advanced than conventional pneumatic equipment.

The PREX3000 series features none of the drawbacks common to pneumatic instrumentation : no more need for costly P/I converters, no more excessive space requirements, no more extensive parts inventories, no more time wasted on adjustments and maintenance.

With the PREX3000, you get higher turn-down ratio (TDR), higher accuracy, higher reliability, higher resistance to adverse environments -- all at a lower cost.



Pneumatic Transmitters for Every Pressure Measurement

## Features

### Higher TDR

Azbil Corporation patented vector-involute mechanism boosts TDR (ratio between the minimum and maximum spans) much higher than conventional equipment. Since it is possible to adjust the TDR to 30, the PREX3000 provides a much wider range and can thus accommodate a wider variety of applications. This makes it extremely economical to operate, as well as reducing costs for replacement spares.

### Higher Accuracy

When it comes to measuring accuracy, the PREX3000 measures up to digital control systems :

+0.25 % F.S. (TDR 1 : 10)  
(Medium/ high differential pressure models)

### Higher Reliability

The PREX3000's body complies with IEC, NEMA and other standards. All but the low differential pressure model are welded. There are no internal pipes, thus eliminating potential deterioration with age, and the pilot relay is internal.

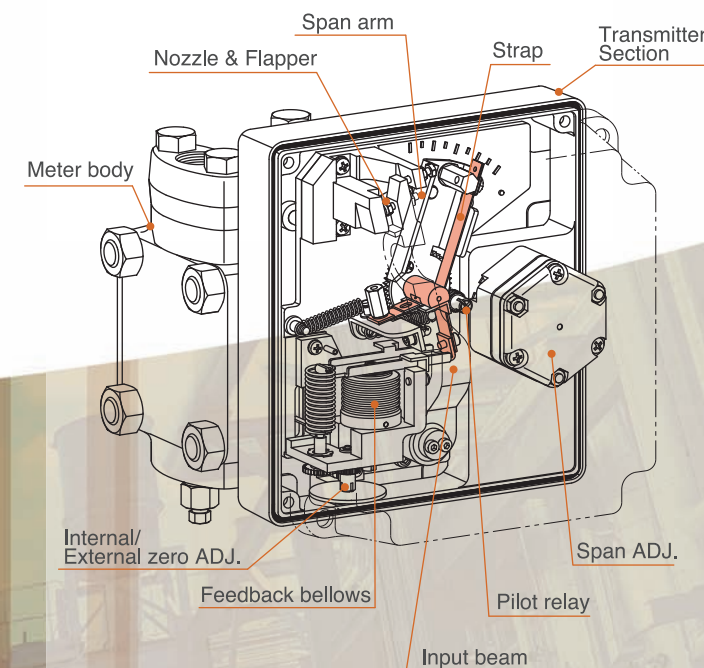
### Simplified Zero and Span Adjustment

The vector-involute system has greatly reduced zero shift caused by span changes, and made range adjustments much easier and more rapid to do.

### Smaller and Lighter

The PREX3000 is smaller and 30% lighter than conventional models, typically weighing only 8kg.

## Structure



### Azbil Corporation's Patented Vector-Involute Mechanism

The conventional vector balance mechanism has a fixed strap and thus limits TDR. Azbil Corporation's patented vector-involute system adjusts the position of the strap along an involute curve (shown below) thereby enabling changes in vector direction and increasing TDR. The Azbil Corporation mechanism also greatly reduces the mutual interference between zero and span adjustment.

