

## Line Up

Eight types of Prescale and six types of Sheet Type are supplied according to pressure level. Select appropriate Prescale.

Product (Code)	Pressure range [MPa] 1MPa≒10.2kgf/cm <sup>2</sup>		Prescale Product size W(mm)×L(m)	Prescale Sheet Type Product size W(mm)×L(mm)	Type
	0.05	0.2 0.5 0.6 2.5 10 50 130 300			
	Pressure range [psi] 1psi≒6895pa				
Super high pressure (HHS)			270 × 12	270 × 200 (5 sheets)	Mono-sheet type
High pressure (HS)			270 × 12	270 × 200 (5 sheets)	Mono-sheet type
Medium pressure (MS)			270 × 12	270 × 200 (5 sheets)	Mono-sheet type
Medium pressure (MW)			270 × 12	—	Two-sheet type
Low pressure (LW)			270 × 12	270 × 200 (5 sheets)	Two-sheet type
Super low pressure (LLW)			270 × 6	270 × 200 (5 sheets)	Two-sheet type
Ultra super low pressure (LLLW)			270 × 5	270 × 200 (5 sheets)	Two-sheet type
Extreme low pressure (4LW)			310 × 3	—	Two-sheet type

Notes: W in the product codes indicates two-sheet type, S indicates mono-sheet type

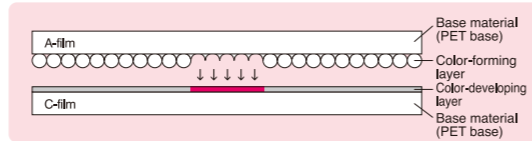
## Technology

**Two-sheet type** extreme low pressure, ultra super low pressure, super low pressure, low pressure, medium pressure (5 types)

Composed of two kinds of films: A-film and C-film

- **A-film:** Base material (PET base) coated with a color-forming material (microcapsules)
- **C-film:** Base material (PET base) coated with a color-developing material

The coated sides of each film (color-forming and color-developing) must face each other. These are the sides with the matt finish. When pressure is applied, the microcapsules are broken and the color-forming material transfers to the color-developing material and reacts, thereby generating a red color.

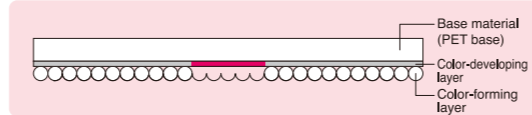


**Mono-sheet type** medium pressure, high pressure, super high pressure (3 types)

Measurement is possible with a single sheet of film.

- A color-developing material and color-forming material (microcapsules) are coated, one above the other, on a single base material (PET base).

When pressure is applied, the microcapsules are broken and the color-developing material absorbs the color-forming material and reacts, thereby generating a red color.



## Specification and Operational Environment

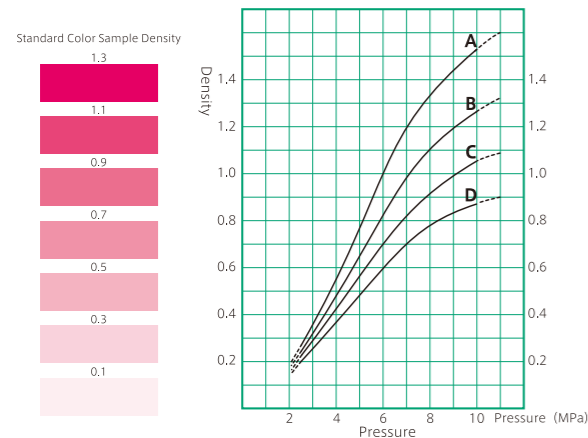
Prescale (Two-sheet type / Mono-sheet type)			
Accuracy	±10% or less (when measured with densitometer at 23°C/73.4°F, 65% RH)		
Recommended temperature	20°C~35°C (68°F ~95°F) *1	Recommended humidity	35%RH~80%RH *2.*3
Thickness	Mono-sheet : ca.110μ Two-sheet : A-film : ca.90μm, C-film : ca.90μm *Each type of products has different thickness.		

\*1: 4LW, HHS:15~30°C \*2: 4LW:20%RH~75%RH \*3: HHS:35%RH~70%RH

## Pressure Chart (Low Pressure < LW > case)

### Continuous pressure

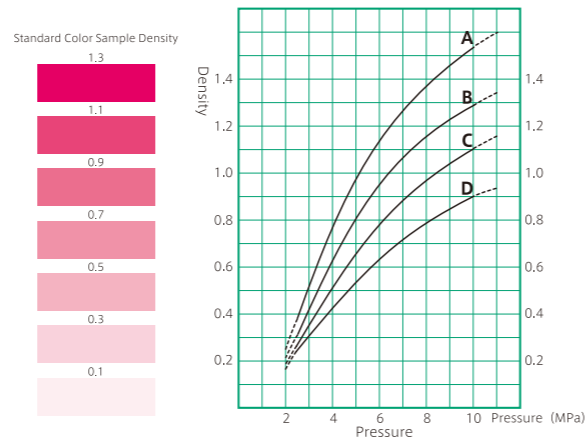
Measurement pressure range: Low pressure (2.5~10MPa)  
Pressure application condition: Time to reach the pressure 2min.  
Time of retention at the pressure 2min.



As the pressure indicated by the broken line may exceed the permissible error range, please use the data for reference purpose only.

### Momentary pressure

Measurement pressure range: Low pressure (2.5~10MPa)  
Pressure application condition: Time to reach the pressure 5sec.  
Time of retention at the pressure 5sec.



As the pressure indicated by the broken line may exceed the permissible error range, please use the data for reference purpose only.

\*: Talking the temperature and humidity condition into consideration, select a curve among A, B, C and D.

\*Specifications and performance capabilities are subject to change without notice.

**FUJIFILM**

FUJIFILM Corporation

<http://www.fujifilm.com/products/prescale/>

Ref. No. IB-0807E (SK-10-05-F1099) Printed in Japan ©2010 FUJIFILM Corporation

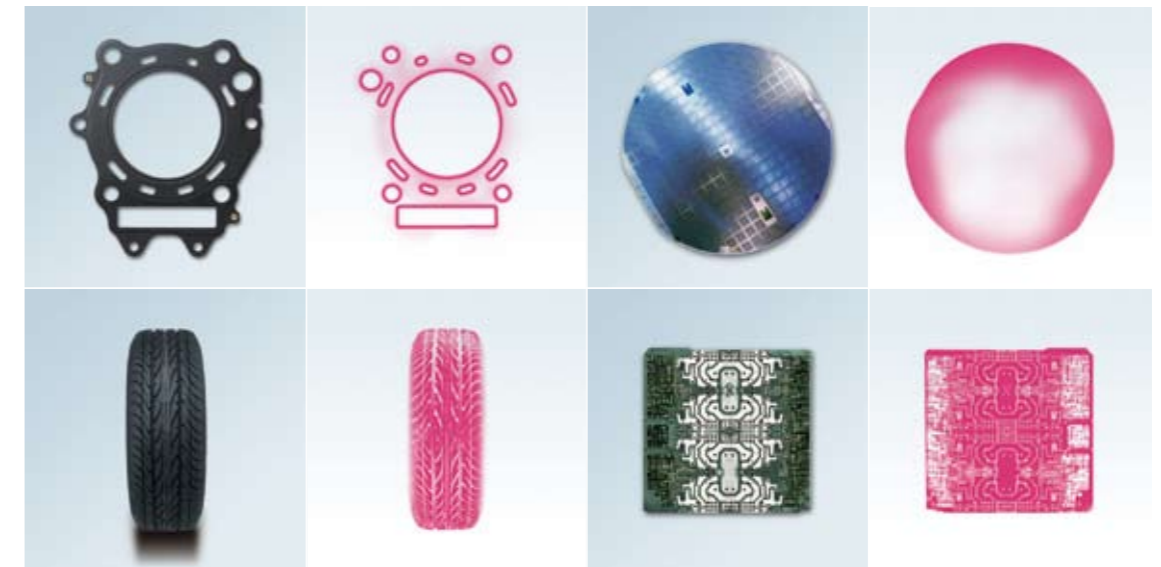
**FUJIFILM**

**PRESCALE**

# Pressure Measurement Film PRESCALE

## PRODUCTS GUIDE

The only film in the world for measuring pressure and pressure distribution



An Introduction to a Wide Range of Applications and Measurement Techniques





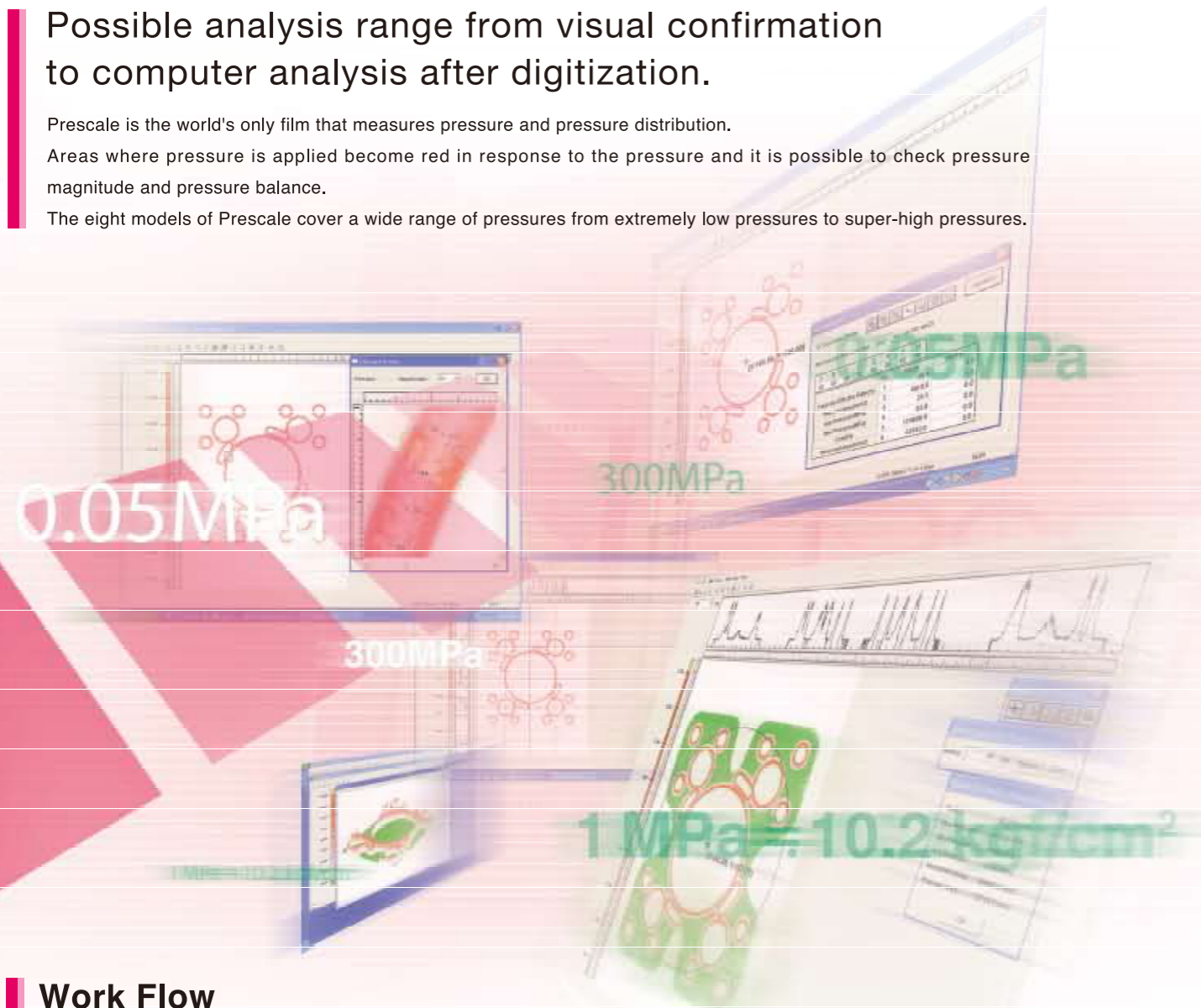
# Simply insert and measure pressure distribution by color density.

Possible analysis range from visual confirmation to computer analysis after digitization.

Prescale is the world's only film that measures pressure and pressure distribution.

Areas where pressure is applied become red in response to the pressure and it is possible to check pressure magnitude and pressure balance.

The eight models of Prescale cover a wide range of pressures from extremely low pressures to super-high pressures.



Enables anyone to measure pressure easily.  
Just insert between two surfaces.

## EASY VISUAL CHECK

- Measure pressure by color density
- Not just force at a single location, it measures the distribution of it

## EASY OPERATION

- No power source required
- Cut and fit any dimensions

## EASY DIGITIZATION

- Digitize by scanner
- Convert pressure density into quantifiable values

## Higher quality

Compared to estimating pressure from the results of trial or actual production runs, measuring pressure with Prescale enables accurate mechanical setting and adjustment.

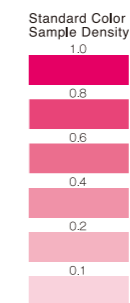
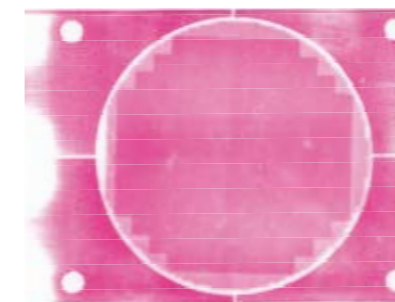
## Higher productivity

Since mechanical device setting and adjustment, as well as switching between production items, can be performed based on measurement results; these take less time and have fewer defects.

## Troubleshooting

Even if a defect occurs, mechanical and device states can be checked by measuring pressure and pressure distribution; using Prescale to quickly investigate the cause of the problem.

## Visualization of surface pressure by color change

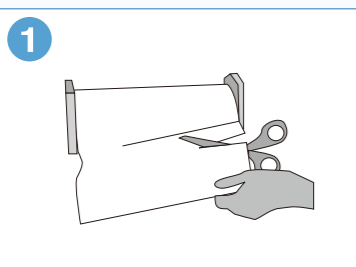


**Pressure is detected by color density; unevenness and bias in surface pressure distribution can be checked.**

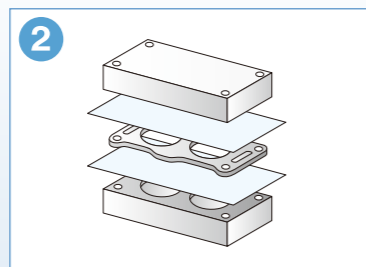
Areas of the film where pressure is applied become red and the color density varies according to the intensity of the applied pressure. The density of red allows visual evaluation of the strength of the pressure. Also, scanning allows a quantifiable pressure map analysis to be performed.

## Work Flow

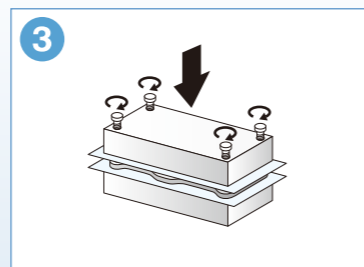
### Measurement method



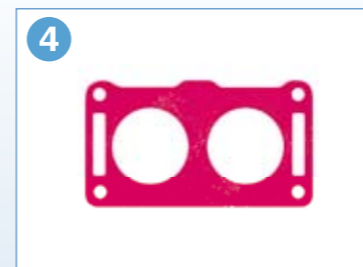
1 Cut Prescale to desired dimensions.



2 Insert Prescale between the pressure surfaces to be measured.

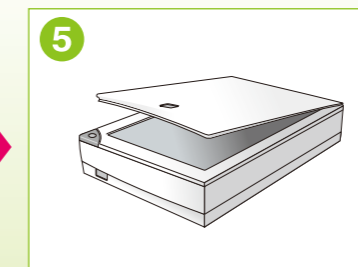


3 Apply normal operating pressure.



4 Remove Pressure and Prescale and you can now see and check the pressure and its distribution.

### Digitizing



5 Use a scanner (recommended model) to read the colorized Prescale sheet.



6 Use FPD-8010E software for analysis.