

No. 1 Total Solution Company For the chemical & Process Industry



# TYI-Safety Cover http://www.tyind.co.kr

## Clear type - Flange cover





→ Acid (or Alkali)type - Flange cover





**┥** Valve cover





Expansion Joint









### ◀ 소개 Introduction

- 화학제품 누출 차단으로 근로자 작업의 안전 및 건강 보호
- 화학제품, 자외선, 빗물 등 설비 부식에 대한 보호
- 미세한 화학제품 누출 시 색상의 변화로 누출여부 판단으로 사고 대응 (Leak of ACID: YELLOW change to RED / Leak of Alkali: WHITE change to BLUE)
- 독성 화학제품에 대해 내식성이 강한 특수 소재로 제조
- 투명한 소재를 사용하여 육안으로 누수 여부 확인
- 탈부착식 커버로 유지 보수 후 재사용 가능
- 설치 및 분리 용이
- 특허 (제 10-0919108호 )
- Protect to workers' health and safety by intercepting to leaking chemicals & gas
- Protect of equipments corrosion from chemical, UV, water, and oil.
- PH indicating patch signals change in color when leakage of acid or alkali occurs (Leak of ACID: YELLOW change to RED / Leak of Alkali: WHITE change to BLUE)
- Safety cover raw materials are good characteristic of heat-resistant, chemical-resistant, and wear resistant.
- Clear Teflon strip in center of shields allows for visual inspection
- Can be used again after dismantling
- Quick and Easy to install
- Flange Cover Patent No. 10-0919108

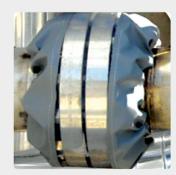


### ◀ 종류 Type



#### Standard type

- · PTFE coated fiberglass (Gray)
- · PTFE Thread
- · Velcro
- · PP Rope



### Clear type

- · PTFE coated fiberglass (Gray)
- · PTFE Thread
- · Velcro
- · PP Rope or Polyester
- · PFA Film(Clear)



### Acid or Alkali type

- · PTFE coated Fiberglass (Gray)
- PTFE Film WITH Acthing
- · PTFE Thread
- · ACID or Alkali Detector
- Velcro
- · Polyester Rope or PP Rope



### Heat Insulation type

- · PTFE coated Fiberglass (Gray)
- · High Temperature Fiberglass
- · PTFE Thread
- · AeroTherm / Aerogel
- · Antiflaming Velcro
- · Polyester Rope or Ceramic Rope
- · SUS316 Hook

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## ◀ 개질 / Material

#### Resistance to Acids

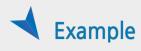
- PTFE Coated Fiberglass Fabric [Gray] Max. Temp.: 287°C
- PFA Film [Clear] Max. Temp.: 260℃
- PTFE Sewing Thread Temp.: -190 ~ 260℃
- Detector [Acid: Yellow] [Akali: White]
- Velcro
- Rope



# ◀ 적용 / Application

TYPE	STANDARD	CLEAR	ACID (YELLOW -> RED)	AKALI (WHITE -> BLUE)	
CHEMICALI	염산/ 질산/ 황산/ 인산/ 가성소다/ 디젤 / 해수/ 불산/ 수산화나트륨/ 수산화칼륨/ 암모니아 등 hydrochloric acid / nitric acid/ sulfuric acid / phosphoric acid / caustic soda/ Diesel / seawater/ HF/ sodium hydroxide/ potassium hydroxide / Ammonia/ etc				
DETECT CHEMICAL			염산 / 불산 / 옥살산 / 질산 / 황산 / 인산 / 빙초산 / 과염소산 / TFA (반도체 공정가스) hydrochloric acid / HF / oxalic acid / nitric acid / sulfuric acid / phosphoric acid / glacial acetic acid / perchloric acid / TFA	수산화나트륨 / 수산화칼륨 / 수산화 칼슘 / 수산화암모늄 / 수산화루비듐 / 인산나트륨 / 암모니아 sodium hydroxide / potassium hydroxide / calcium hydroxide / ammonium hydroxide / disodium phosphate / Ammonia / 가스	
TEMP	- 20℃ ~ 200℃				
USAGE	FLANGE / PIPE / VALVE/ EXPASION JOINT / FITTING / INSULATED BLANKETS / COUPLINGS / CUSTOMS.				
SIZE	ANSI / JIS / DIN / REQUEST BY CUSTOMERS				





TYPE	CHEMICAL	APPLICATION PLANT	
CLEAR TYPE	디니트로톨루엔(dinitro toluene ) (150 ~200'C)	BASF Korea	
	질산 (Nitric Acid 65 ~ 99.8%) 황산 ( Sulfuric acid 165~180'C )	Huchems	
	수산화나트륨(sodium hydroxide) 탈염수( desalted water ) 디젤 (Diesel)	GULF TOTAL TRACTEBEL POWER  COMPANY	
	염산 ( Hydrochloric acid)	PETROFAC GS JV [ Abu Dhabi]	
	염산 (Hydrochloric acid 33%) 가성소다 (caustic soda 50%)	Doosan Heavy Industries [UAE -DOSING SYSTEM ]	
	HF • KOH • Ethylene Glycol	Air Product & OCI Materials	
ACID DETECTOR TYPE	황산 (sulfuric acid 92.5%) 인산 (phosphoric acid)	JAPAN Mitsubishi Heavy Industries	
	황산 (sulfuric acid )	GS Caltex	
	염산 (hydrochloric acid) 황산 (sulfuric acid 120 ~ 150'C)	Cheil Industries	
	염산(hydrochloric acid) 황산 (sulfuric acid)	LG Display	
	염산(hydrochloric acid) 질산(Nitric Acid)	Samsung SDI Samsung Electro-Mechanics	
	황산 (sulfuric acid ) 질산 (Nitric Acid)	Kumho Mitsui Chemicals	

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## 유지관리 Maintenance method

- · 플랜지 커버는 최소 6개월에 한번씩 검사를 해주어야 합니다.
- · 플랜지커버 장착 시 벨크로를 잘 부착하시고, 줄을 잡아당겨서 묶어주시면 됩니다.
- · 로프 길이가 남는 것은 파이프를 감아서 묶어주십시오.
- · 플랜지커버의 원재료는 테프론으로 되어 있어 부식이 되지 않으나, 벨크로 부위는 손상이 될 수 있으므로 주의 해주십시오.
- · 플랜지 커버가 장착된 주변에서는 날카로운 물체에 의해서 손상이 되지 않게 주의 해주십시오.
- · Clear type에서 누수가 일어났을 경우, 해체하여, 약품을 씻어 내고 건조시킨 후 재사용하시면 됩니다.
- · Acid type에서 누수가 일어났을 경우, 색상의 변화를 통해 확인이 됩니다. (노랑->빨강) 기존의 산페인트 색상이 없어지므로, 당사로 A/S신청을 해주시면 됩니다
- \* At minimum, flange cover should be inspected once in every 6 months.
- \* For installation, please use Velcro fasteners and pull the string to tie together with flange cover.
- \* Please also tie the pipe, if there is extra length of string after installation.
- \* Flange cover will not be corroded because all materials used in this flange cover made of Teflon.

  However, please be aware of that the Velcro fastener which is not corrosion resistance material could be corroded.
- \* Please be careful not to be damaged flange cover to sharp edge near around the point of installed.
- \* When the leakage is found while you're using clear type of flange cover, please wash out all the liquid on the surface and dry it completely. Then, it is no problem to use this flange cover again.
- \* When the leakage is found while you're using acid type of flange cover, it can be visually checked with its color. When the color changes from yellow to red, acid detecting paint is no longer in use.

  If you want to use this function again, please ask us to do painting work for acid detecting.





# ◀ 설치 / Installation

- · 연결부위를 플랜지커버로 감쌉니다. ( 누수감지부분은 안쪽으로 오게 하세요)
- · 플랜지커버가 겹쳐지게 하며 벨크로 접착해주세요.
- · 로프를 잡아당겨서 묶어주세요. (남은 로프는 파이프에 여러 번 감아주세요)
- \* Wrap Flange cover shield around connection. ( with leak indicating patch facing inwards)
- \* Overlap Flange cover shield and attach velco patches together.
- \* Pull the rope and tie it. (coil the remaining rope on the pipe)



### 제품주문 / How to Order

#### > FLANGE

- · SIZE: 1"[25A], 1-1/2"[40A], ....
- · RATING: ANSI[150#,300#..] JIS[10K,20K..]
- · CONNECTION: FLANGE TO FLANGE, LOOSE FLANGE OR LAP JOINT, ETC...
- · SELECT: CLEAR OR ACID [ALKAIL] TYPE
- · SPECIALTY REQUIREMENT BY CUSTOMER

#### > VALVE

- · SIZE: 1"[25A], 1-1/2"[40A], ···.
- · RATING: ANSI[150#,300#..] JIS[10K,20K..]
- · TYPE: BALL VALVE, DIAPHRAGM VALVE, BUTTERFLY VALVE, GATE VALVE, GLOBE VALVE, ETC...
- · MANUFACTURE OR MODEL NO.
- · CONNECTION: FLANGE TO FLANGE, SOCKET WELD OR THREAD
- · SELECT : CLEAR OR ACID [ALKAIL] TYPE
- · SPECIALTY REQUIREMENT BY CUSTOMER

#### > OTHERS

1. Email or fax drawing / contact to us.









2002년 설립이래로, 동양인더스트리는 화학 및 여러 산업 분야에서 내부식성이 높은 재질의 제품을 설계, 제작, 공급 등을 하고 있습니다. 우리는 우수한 품질의 제품과 기술을 가지고 고객에게 다가가기 위해 노력하고 있습니다.

Since our foundation in 2002, we "TongYang Industry" manufacture, design and supply products made of high Corrosion resistance materials in Chemical and many other industrial fields. We are making every efforts to get closer to our customers with our superior quality products and technology.



### **TYI Business Area**

- \*\* Engineering: Polyurethane Chemicals, Evaporation & Crystallization, Nitric Acid, Hydrogen Peroxide, Miscellaneous
- \*\* Equipment: Glass lined Equipments, Teflon Lined Equipments, Tantalum Heat exchanger Graph ite heat exchanger
- \* Environment Products: TYI- Safety cover
- \* Trading

## 주 동양인더스트리

TONGYANG INDUSTRY Co., Ltd.

전남 여수시 소라면 원봉두 2길 8

8, Wonbongdu 2Gil, Sora-Myeon, Yeosu-Si, Jeollanam-do, Korea 556-812

T 82-61-684-7885

F 82-61-686-5881

E tyind@tyind.co.kr

http://www.tyind.co.kr