



Solution Integration



무용접 피팅 프레스 락(Presslok)

(주)키텍코리아
www.keytechkorea.co.kr

EVANS 프레스락 : 최초 산업용 유일의 튜브 라인

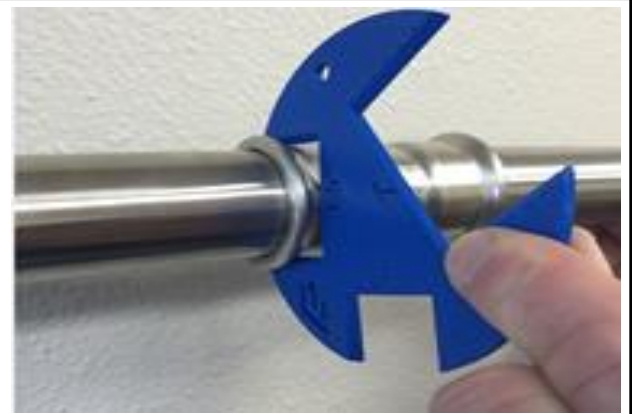
- 적용 분야 : PCW, CDA, 각종 Inert gas 및 Vacuum Exhaust 등
(가스라인은 물론 진공라인 모두 적용 가능)
- 배관 타입 : 튜브 라인용 (1/2 " ~ 4 " Tube) " Industry First "
- 누설 Rate : 보장된 헬륨 누설율 1×10^{-7} scc/sec 적합
(**Guaranteed He Leak Rate : 1×10^{-7} sccs**)



프레스락(Presslok): 피팅 및 밸브 공급



PRESSLOK® 게이지



게이지가 체결된 부위에 맞으면
매우 잘 조여진 것임.
(만약 체결 부위에 게이지가 들어
가지 않으면 잘못 조립된 것임)

프레스락(Presslok) 무용접 피팅

산업 배관용

- 튜브 배관용(Industry First)
- 주 적용 대상
 - 각종 Coolant
 - CDA, Inert gas, PCW
 - Vacuum Exhaust...
- 누설 테스트: 헬륨 누설 테스트
- 각종 밸브 대상 연결 타입 다양
- 품질보증(Warranty) 공식
- 반영구적 연결 타입

프레스락 무용접 피팅 (Inert Gas, CDA, PCW, Vacuum Exhaust..)

- 프레스락(Presslok)은 가장 단순하고 쉽게 조립되는 산업용 무용접 피팅 (industrial first)
: ASTM F1387 테스트 통과 인증
- Size 및 최대 온도 범위 : 튜브 1/2" ~ 4" (-30°C ~ 230°C)
- 허용 압력 : 300 psig (1/2" ~ 1 1/2")
- 허용 압력: 200 psig (2" ~ 4")
- 헬륨 누설율 : 1×10^{-7} scc/sec (보증 누설율)
(통상의 질소 누설율이 아닌 헬륨 누설율임)

기존 국내 무용접 피팅

- 적용 분야 : 상하수도 배관용(단일 용도)
- 배관 타입 : 수도 파이프 배관용
- 누설 테스트 : 공기압 누설 테스트(기포 발생 여부 체크)
- 외형과 연결 방식은 프레스락과 유사
- 가스배관 적용 불가



무용접 피팅 비교(산업배관용 vs 수도배관용)

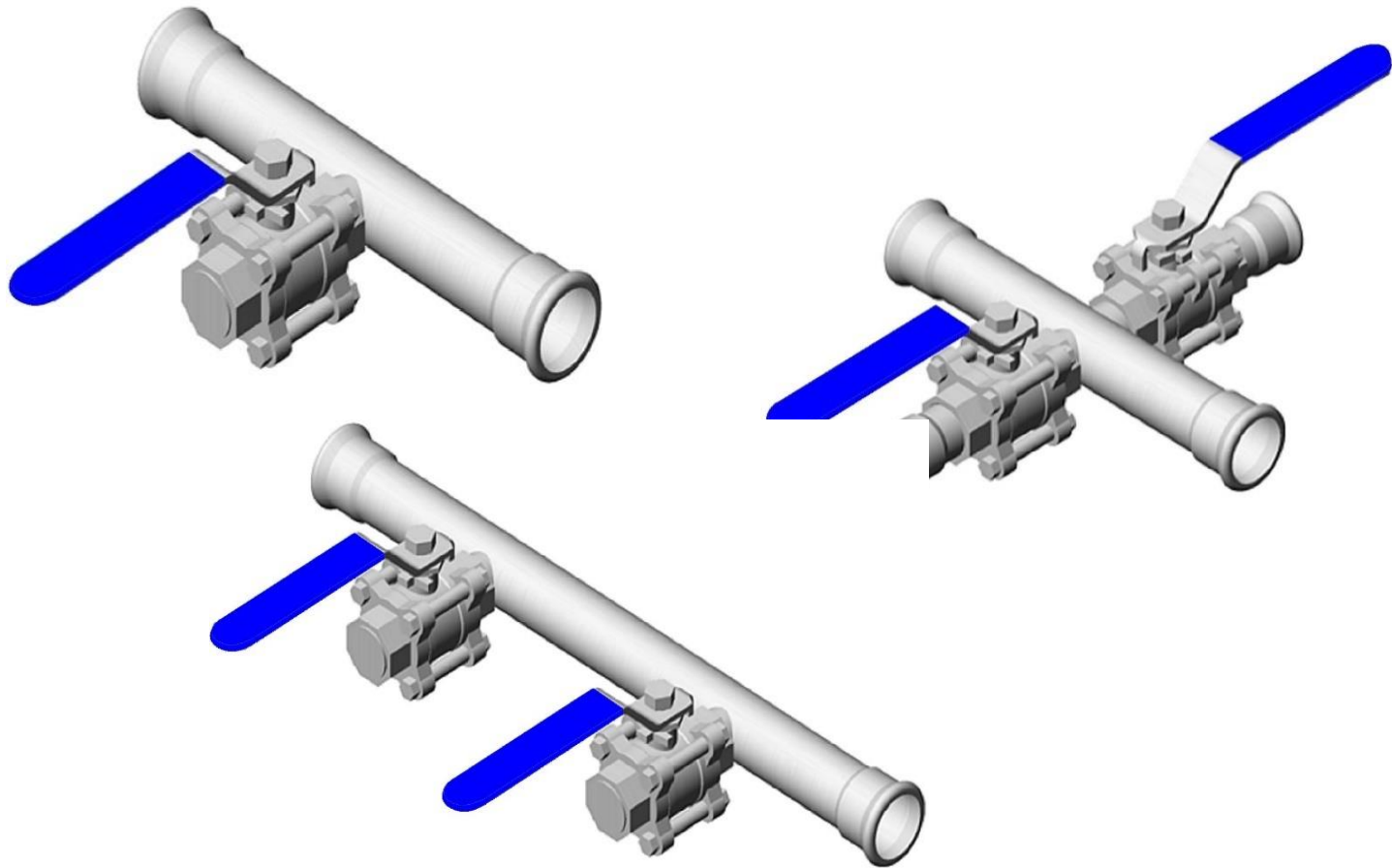
산업배관용(프레스락)

- 튜브 배관용(Industry First)
- 주 적용 대상
 - 각종 Coolant
 - CDA, Inert gas, PCW
 - Vacuum Exhaust...
- 누설 테스트: 헬륨 누설 테스트
- 각종 밸브 대상 연결 타입 다양
- 품질보증(Warranty) 공식
- 반영구적 연결 타입

수도배관용

- 파이프 배관용
- 주 적용 대상이 상,하수도 임.
- 각종 건물들에 사용중임.
- 누설 테스트 :
 - 단순 공기압 기포발생 테스트
- 밸브 등 연결 타입 공급이 제한적

프레스락(Presslok) 일체형 밸브



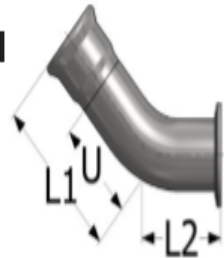
유지 보수를 위한 플렌지, 클램프 연결용 피팅 등



Style 567
Reducing Flange Adapter
ANSI 150# X Tube



Style 730
Presslok x KF 45° Elbow



Style 722
Presslok x KF Coupling
(NW 연결 타입 공급)



프레스락 버터플라이밸브 (Presslok Butterfly)



SB Series (Stainless)

- 2"- 4" Sizes
- PTFE Seat with stainless disc & stem
- Optional CFOS Cleaning and Bagging
- 3-pc Wafer style with Presslok® or Tube Extensions
- Optional Purge Ports or Purge Valve
- Helium leak tested to 1×10^{-7} scc/sec
- Reduced installation cost

DB Series (Epoxy Coated Ductile Iron)

- 2"- 4" Sizes
- EPDM Seat with stainless disc & stem
- 3-pc Full-Lug with Presslok®, Tube or Pipe Extensions
- Helium leak tested to 1×10^{-7} scc/sec
- Reduced installation cost

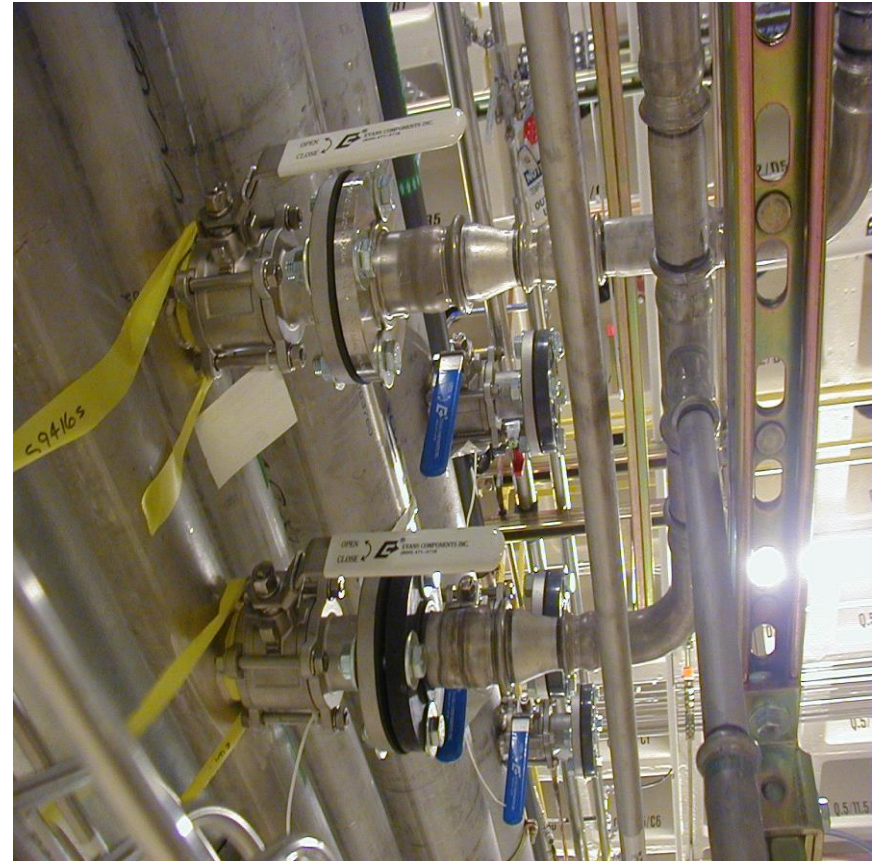
적용 사례 : 버터 플라이 밸브로 구성된 CDA 라인



적용 사례 : PCW 레터럴 연결

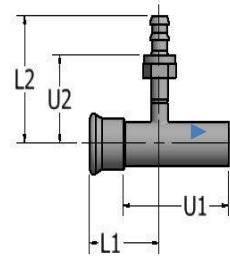
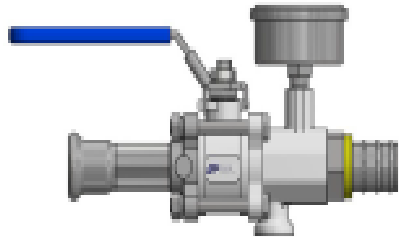
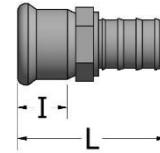


PVC/CPVC hook-up

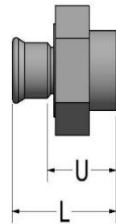


304L Presslok hook-up

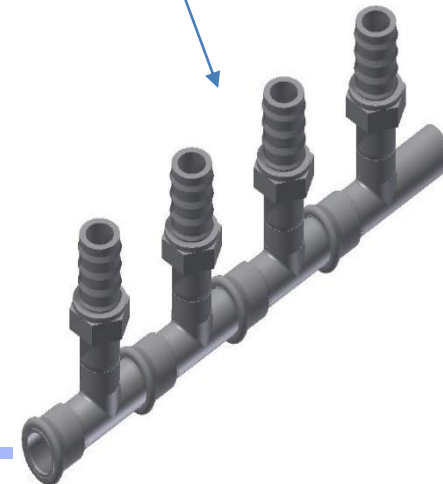
프레스락 PCW Water Stick & Hose 연결 피팅



Manifold Fittings



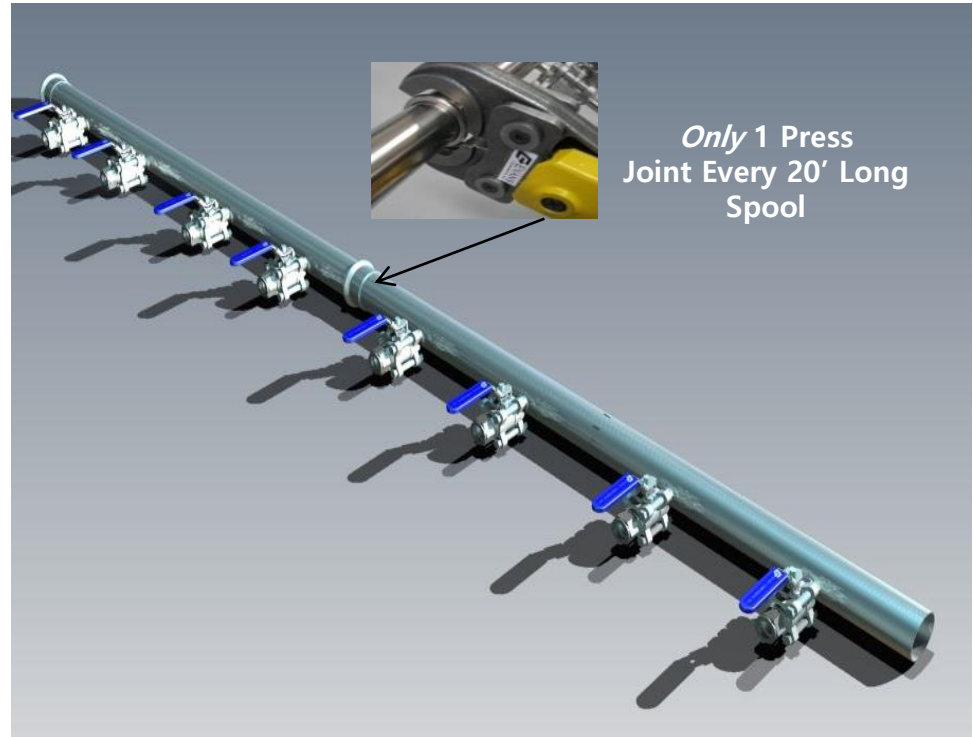
PVC/CPVC x
Presslok Adapter



프레스락과 용접 비교 : CFOS spool (아래와 같은 라인 구성)

PLHT Series (O2 Cleaned, HP bagged)

- 저렴한 설치 비용
- 설치 시간 획기적 단축
- 용접 작업 불필요
- 보증 He 누설율 : 10^{-7} sccs



프레스락 조립도구 (Presslok Tool)



700M Series (Sizes ½" - 1")



701 Series (Sizes ½" thru 3")



2-piece Jaw
2.5" ~ 4"



801 Series (2-1/2" - 4")
tool & jaws
sold separately

ASTM F1387 프레스락(Presslok) 테스트 통과

Pneumatic Proof : Fittings pressurized with N2 to 120% of rated working pressure and tested for leaks

Hydrostatic Proof : Fittings pressurized with water to 150% of rated working pressure and monitored for leaks

Impulse : After passing the first two tests the fittings are cycled with water at a rate of one cycle every 3-6 seconds. Fittings are pressurized 135% of rated pressure then depressurized. Test is completed after 1,000,000 cycles

Flexure Fatigue : Flexure stress levels were set at 2%, fatigue tests were conducted for 30,000 cycles at a rate of two cycles per second. Fittings were then filled with water and pressurized to working pressure.

Tensile : Fittings were placed in a constant strain rate tensile machine. Maximum applied load, shear stress and type of joint failure we assessed.

Hydrostatic Burst : Fittings were filled with water and burst tested to 3-times rated working pressure

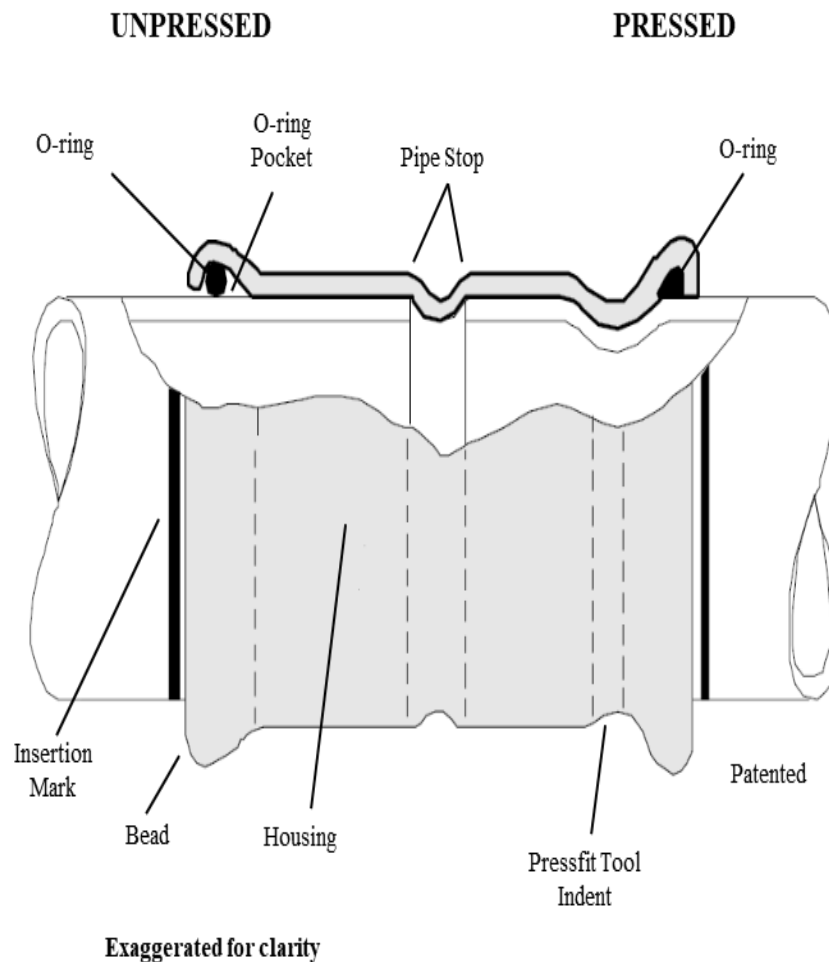
PRESSLOK® GO/NO-GO GAUGES



If Presslok® Go/No-Go Gauge slips over pressed section of fitting, press is acceptable. If gauge does not slip over pressed section, press is unacceptable.

프레스락 대표적 적용 업체 및 피팅 조립 전.후 내부

- **TSMC**
- **Micron**
- **Intel**
- Boeing
- Tesla
- Suntory
- **Global Foundries**
- 파나소닉
- 네슬레
- 오사카 세니터리
- Hoffman Construction 등



프레스 락(Presslok) 적용 사례

적용 분야 (어플리케이션)

- CFOS Grade Tool Installations
- CFOS Pre-fab Laterals (UN2, OFA, LCHe, etc)
- Process Cooling Water Tool Installations (PCW)
- Plant Air (PA)
- Bearing Air (BEA)
- Breathing Air (BA)
- Instrument Air (IA)
- Safety Shower / City Water (CW/SSH)
- (CW/SSH) Pre-fab Laterals

주요 마켓(Target Markets)

Target Markets

Semiconductor

Solar

Lithium Battery

Food & Beverage

Aerospace

Data Centers

TFT/LCD Flat Panel

LED Manufacturers

Nano-Tech Facilities at Universities

Power Plants / Refineries

Advanced Manufacturing Facilities



1. 글로벌 파운더리(PCW,CDA,GN2)

CUSTOMERS

- Lithium Battery
- Semi
- Food & Bev
- Solar
- Aerospace
- Contractors

APPLICATION:

PCW | CDA
| GN2



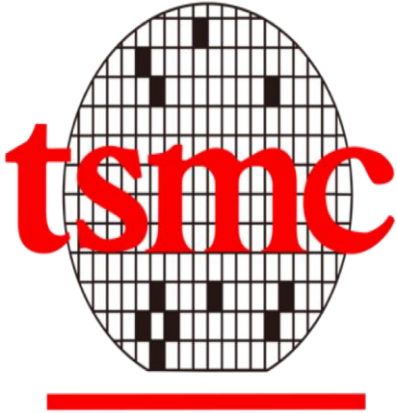
**GLOBAL
FOUNDRIES**



2. TSMC (PCW)

- CUSTOMERS
- Lithium Battery
- Semi
- Food & Bev
- Solar
- Aerospace
- Contractors

APPLICATION:
PCW





3. 테슬라 (GN2, PCW, CDA)

CUSTOMERS

- Lithium Battery
- Semi
- Food & Bev
- Solar
- Aerospace
- Contractors

APPLICATION:

GN2 | PCW
| CDA



EVANS
COMPONENTS, INC.®

4. 파나소닉 (GN2,PCW,PU,RO Water)

CUSTOMERS

Lithium Battery

Semi

Food & Bev

Solar

Aerospace

Contractors

APPLICATION:

GN2 | PCW
| PU

PCW | RO
Water

Panasonic



5. 네슬레 (CDA, Water)

CUSTOM
ERS

Lithium Ba
ttery

Semi

Food & B
ev

Solar

Aerospace

Contractor
s

APPLICATI
ON:

ON:

CDA |

INDUSTRIA
L WATER

Nestlé



6. 산토리 (CO2)

CUSTOM
ERS

Lithium Ba
ttery

Semi

Food & B
ev

Solar

Aerospace

Contractor
s

APPLICATI
ON:
CO2

SUNTORY



7. 솔라 시티 (CDA,GN2,PCW)

CUSTOM
ERS

Lithium Ba
ttery

Semi

Food & B
ev

Solar

Aerospace

Contractor
s

APPLICATI
ON:
CDA | GN2
| PCW



8. 보잉 (CDA)

CUSTOM
ERS

Lithium Ba
ttery

Semi

Food & B
ev

Solar

Aerospac
e

Contractor
s

APPLICATI
ON:
CDA



9.기타 : 오사카 세니타리..등 (CDA)

CUSTOMERS

- Lithium Battery
- Semi
- Food & Bev
- Solar
- Aerospace

Contractors

APPLICATION: CDA

The image displays a collection of logos for various contractors and companies. The logos are arranged in a grid-like fashion. The top row includes HARDER MECHANICAL CONTRACTORS (a blue and white diamond logo), Apollo MECHANICAL CONTRACTORS (a stylized black and white logo), and HOFFMAN CONSTRUCTION COMPANY (a yellow and black logo). The middle row features Kiewit (a yellow and black circular logo), meptagon (a colorful logo with the tagline 'head for a better process'), and OSAKA SANITARY (a red and black logo). The bottom row shows QPS FLINT CONSTRUCTION (a red and black logo with a stylized 'F').





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Office: +1-971-249-1600
Web: Evanscomponents.com



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Date: 4-30-2019

Subject: Presslok® Product Updates

To: SangHoon Choi / Keytech Korea

From: Kelly McDonald / Vice President

Dear Hoon,

I wanted to take this opportunity to update you on the great successes Evans has experienced with our Presslok® tubing system line of products to date, and also inform on other current works in progress with customers.

Growing Customer Base

Given the growing customer base in the semiconductor industry, we are currently working with Intel in Oregon who is in the final stages of Presslok® white paper approvals for a wide variety of systems both Liquid and Gas types. Intel has already identified laterals in the new MOD III expansion to be installed as Presslok® systems and intends to make Presslok® a global standard in the near future.

Globally we have more than 180,000 joints installed and in service across a wide variety of systems types. Many companies have either already made Presslok® POR or are in the process of doing so.

An example of this is **TSMC. Presslok® is the new standard for PCW from and including the laterals all the way up to the tool. To date the orders have exceeded 20,000 fittings in sizes ranging from 1/4" up to 2"** That places the TSMC install base at over 50,000 pressed joints with 100% success rate. TSMC is currently beta installing Presslok® into many other types of systems e.g CDA, UN2 and is looking to standardize on those systems as they did with PCW. Feedback from the field contractors in Taiwan is that Presslok® has decreased install time by roughly 50% in most cases and allowed them to free up highly skilled welding labor for other tasks. Another positive feedback point from the contractors was the fact that Presslok® allows them to use standard ASTM 269 tubing which is not offered by any other competing product.

White Papers

Intel - We are currently working with Intel in Oregon who is in the final stages of Presslok® white paper approvals for a wide variety of systems both Liquid and Gas types. Intel has already identified laterals in the new MOD III expansion to be installed as Presslok® systems and intends to make Presslok® a global standard in the near future.

CONFIDENTIAL

Samsung - We are currently working with Samsung USA to get a beta system identified for Presslok®. Feedback from management has been positive as they clearly see the value in cost savings as well as schedule benefits.

Micron - Micron has chosen Presslok® as POR for CFOS gas systems and PCW for the new VA facility.

Presslok® has already been installed at Micron's Boise B51 research fab for GN2, CDA and PCW systems with great continue success. Boise is targeting trials for other systems as they become available.

As a result of these successes, we will continue to innovate and bring real value to our customers.

Very Best Regards,



Kelly McDonald / Vice President

CONFIDENTIAL

분야별 적용 사진

적용 사진 “Oil Free” CDA Install



적용 사진 : Lithium Battery "Oil Free" CDA Install



적용 사진: CO2



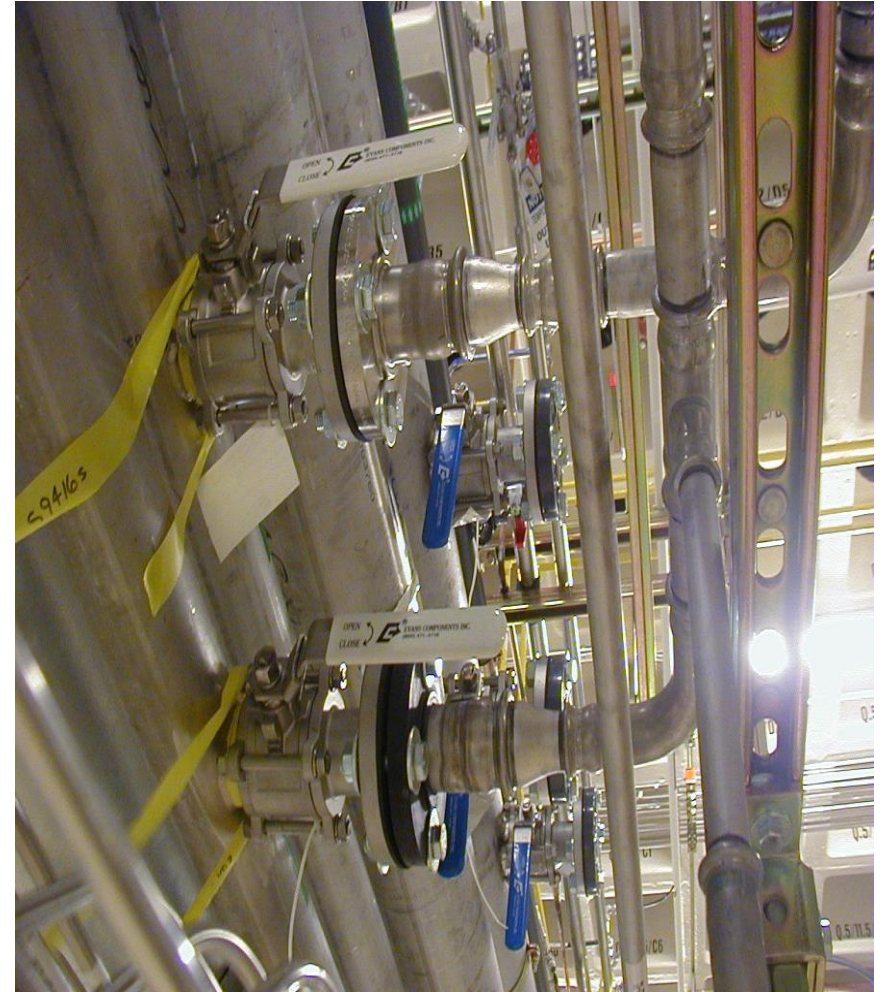
실제 적용 사진
(버터플라이밸브로 구성된 CDA 라인)



적용 사진: PCW 레터럴 연결



PVC/CPVC hook-up



304L Presslok hook-up

기타 적용 사진

- ARGON/N2 TANKS

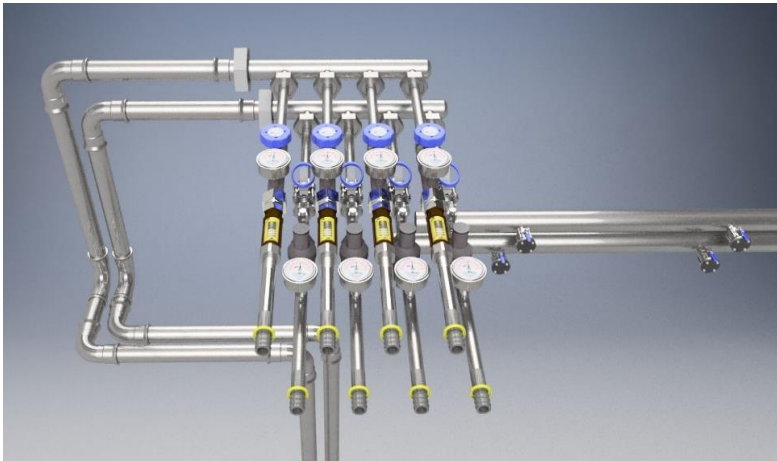
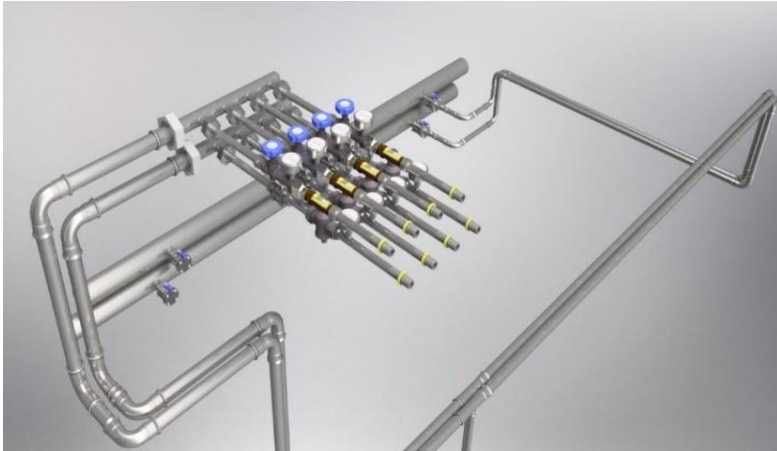


- IRRIGATION SYSTEM

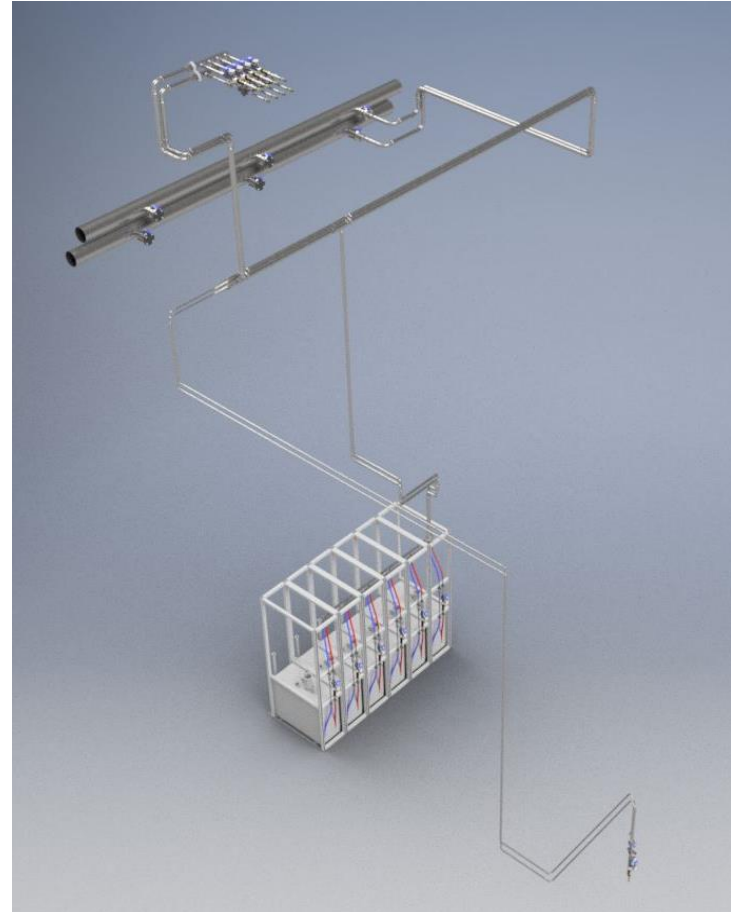


프레스락: 3-D MODELING

- PW STICKS WITH PRESSLOK FROM POC TO TOOL



- PW STICKS WITH PRESSLOK FROM POC TO TOOL/PUMPS





www.evanscomponents.com



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