

**MeSYS®**

# Company Profile



*Mechanical and Fluid Control Systems*

[www.j-mcsys.com](http://www.j-mcsys.com)



# CONTENTS

---

- 1 About Us
- 2 Control Valve Project Reference
- 3 RDMP 1차~14차 Project
- 4 무림 PNP Project
- 5 P-78 Project
- 6 Teflon Lined Ball Valve
- 7 Teflon Lined Butterfly Valve



# 1

# About Us





# Our Mission & Vision



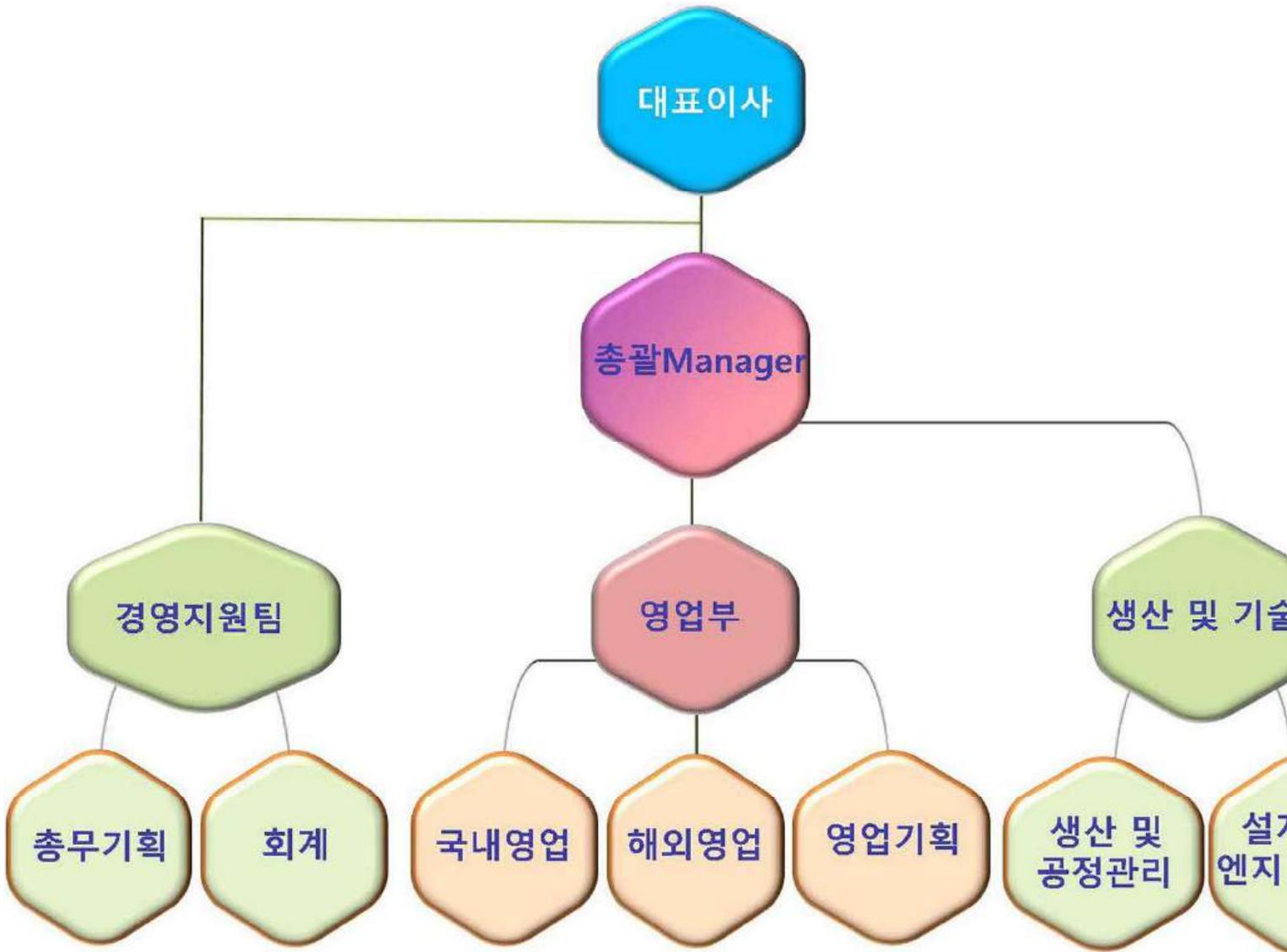
**GOAL**



**MISSION**

고객과 파트너에게 최고 수준의 엔지니어링 및 디자인 작업을 제공함  
Providing the highest standards of engineering and design work for our customers and partners.

책임지는 품질 Responsible Quality  
혁신적인 사고 Innovative Thinking  
감동 있는 서비스 Impressive Service



# Korea

- Headquarters and R&D Center



# Our History

## 2010.06 MCSYS 설립 ( Establishment )

- 이태리 미국으로 부터 석유화학용 밸브 수입 판매
- Import and sales of petrochemical valves from Italy and USA

## 2012.04 MCSYS 자체 생산(MCSYS'S Productions)

- Teflon Lined Valve, Forged Ball Valve
- Mega Valve, V-Notch Valve, Ceramic Valve

## 2013.02 호주 FLUOR 등록 (Australia FLUOR Registration)

- 호주 LNG 이송용 Ball Valve 수주 (48" 600# : 4.5MIL USD)
- Australia Ball Valve order for LNG transport (48" 600# : 4.5MIL USD)

## 2014.04 중국 석유화학(China Petrochemical Engineering)

- Iraq Garaff Project수주 (3.5MIL USD)

## 2015.02 디토사 와 GLOBE CONTROL VALVE 아이템 공유 및 제조 (Globe control valve manufacture sharing with DITO)

- DITO : Globe Control Valve, BAS Valve

## 2015.05 한화 파워시스템 (구 삼성 테크윈) 업체 등록 (Registered as a supplier)

- 중국 생산 공장 및 한국 한화테크윈 창원 공장에 표준품 및 주문형 밸브  
Supplied standard products and customized valves to Hanwha's China plant and Hanwha Power System Changwon factory in Korea



# Our History

2015.12 Mega Valve 특허출원 ( Mega Valve Patent Application)

2016.01 Iraq DGS Project 수주 (Order of Iraq DGS Project)

2016.06 Petronas Carigali Iraq GARRAF Project 수주

2017.05 한화테크윈 동반성장기업 선정(Selected As a Joint Venture Company)

2018.02 고온, 고압, 고차압 Butterfly Valve 개발 한화파워시스템 주문형 압축기  
On-Demand Compressor Production Line

2018.02 Malaysia CTCI Track #4 Project 수주

- Ball Control Valve, Butterfly Control Valve

2018. 05 Uzbekistan Takhiatash Project 수주

- Globe Control Valve

2019. 06 UAE Layyah Project 수주

- Globe Control Valve



# Our History

2020~2023 인도네시아 REFINERY DEVELOPMENT MASTER PLAN (RDMP)

2022.08 브라질 해양 PLANT P78.79 PROJECT 수주

2023.01 벤처기업 등록

2023.02 밸브용 누설 시험장치 및 방법 특허 등록 (제 10-25008779 호)

2022 ~ 2024 POSCO ARGENTINA - Sal de Oro Project

2023.08 MEXICO TR PROJECT 수주

2023 ~ 2025 PT Manyar Maju Refinery (PTMMR): MMR Project

2024 TEFLON LINED BUTTERFLY VALVE, BALL VALVE 개발

2025 S-OIL 온산공장 PFA TEFLON LINED BALL VALVE 수주



# Our Advantages



## High-quality products

We use only the highest quality materials and employ strict quality control measures to ensure that our products meet the highest standards



## Competitive pricing

We offer competitive pricing without sacrificing quality. Our goal is to provide our customers with the best value for their money



## Customization

We offer customization services to meet the unique needs of our customers. We can work with you to create a product that meets your specific requirements



## Timely delivery

We understand the importance of timely delivery and we work hard to ensure that our products are delivered on time, every time

# Products 1.



## FLOATING BALL VALVE

**Size:** 3/8"-8"  
**Class:** 150-1500LB  
**Type:** Floating  
**Structure:** Side&Top  
Entry



## TRUNNION BALL VALVE

**Size:** 2"-48"  
**Class:** 150-2500LB  
**Type:** Trunnion  
**Structure:** Side&Top  
Entry

## FULLY WELDED BURIED BALL VALVE

**Size:** 2"-48"  
**Class:** 150-2500LB  
**Fluid:** water,oil,stem,acid medium  
**OP.**  
Handle,Worm,Electric ,Pneumatic



## PIGGING VALVE

**Size:** 2"-16"  
**Class:** 150-600 LB  
**Fluid:** water,oil, natural  
gas,etc.

## CRYOGENIC BALL VALVE

**Size:** 1/2"-24"  
**Class:** 150-2500LB  
**Temp.:** -196°C-350°C  
**OP.:**  
Handle,Worm,Electric ,Pneumatic



## 3-WAY BALL VALVE

**Size:** 1/2"-8"  
**Class:** 150-600LB  
**Fluid:** Water, Steam,  
Gas,Oil,Chemical proess



## GLOBLE CONTROL VALVE

**Size:** 1"-20"  
**Class:** 150-4500LB  
**Characteristic:** Equal %,  
Liner, Modified%,  
Custom Engineerd



## DOUBLE OFFSET BUTT

**Size:** 2"-24"  
**Class:** 150-300LB  
**Type:** Double Offset  
**Structure:** Wafer,  
Flange&Lug

## TRIPLE OFFSET BUTTERFLY VALVE

**Size:** 2"-104"  
**Class:** 150-1500LB  
**Type:** Triple Offset  
**Structure:** Wafer,  
Flange&Lug



## PLUG VALVE

**Size:** 1/2"-24"  
**Class:** 150-2500LB  
**Type:** Sleeve , Pressure  
and Dbb plug valve

# Products 3.



## TEFLON LINED BALL VALVE

**Size:** 1/2"~8"  
**Class:** JIS10K 150LB PN10  
**Teflon lined:** PFA  
**Working Temperature:** -20°C ~ 180°C



## TEFLON LINED BUTTERFLY VALVE

**Size:** 1/2"~36"  
**Class:** JIS10K 150LB PN10  
**Teflon lined:** PFA,PTFE  
**Structure:** Wafer, Flange&  
**Working Temperature:** -20°C ~ 180°C

## TEFLON LINED DIAPHRAGM VALVE

**Size:** 1/2"~12"  
**Class:** 150LB  
**Teflon lined:** PFA  
**Working Temperature:** -20°C ~ 180°C



## TEFLON LINED CHECK VALVE

**Size:** 1/2"~24"  
**Class:** JIS10K 150LB  
PN10 **Teflon lined:** PFA  
**Type:** Ball/Swing

## CERAMIC BALL VALVE

**Size:** 1/2"-10"  
**Class:** 150LB  
**Liner:** High-strength structural ceramics  
**Working Temperature:** ≤200°C



## HEAVY DUTY PINCH VALVE

**Size:** 2"-12"  
**Class:** PN10 PN16 150LB  
**Materials:** Aluminum  
**Working Temperature:** 40~160°C

# Pigging Valve



# Electric Valve and Multi-way Valve

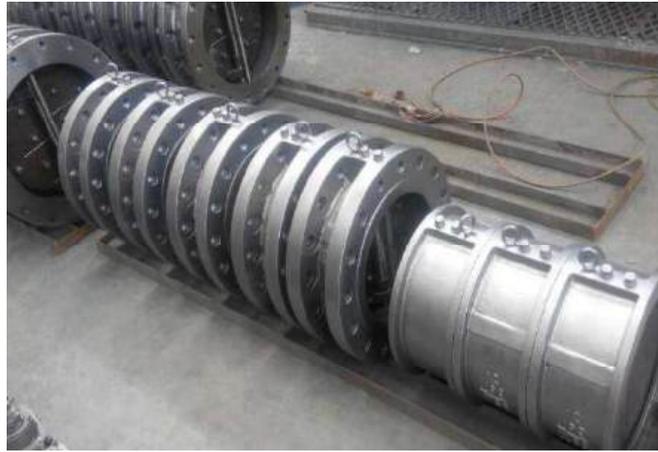
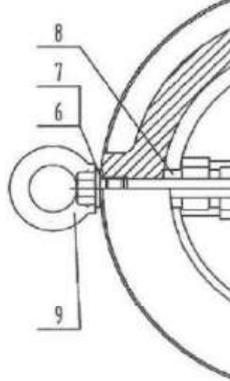


# Traceability





STANDA



WCB+PTFE DISC(TIGHTEN BY SCREW)

# Inspection & Test

Test



MT(Magnetic Particle Inspection)

According to API 598 Test

UT(Ultrasonic Examination)



Test



Oil inspectionin



# Packing



# Certificate- I

- CERTIFICATE OF VENTURE ENTERPRISE
- ISO9001
- ISO14001
- BV
- TR/CU
- CRN



벤처기업확인서



ISO9001



BV

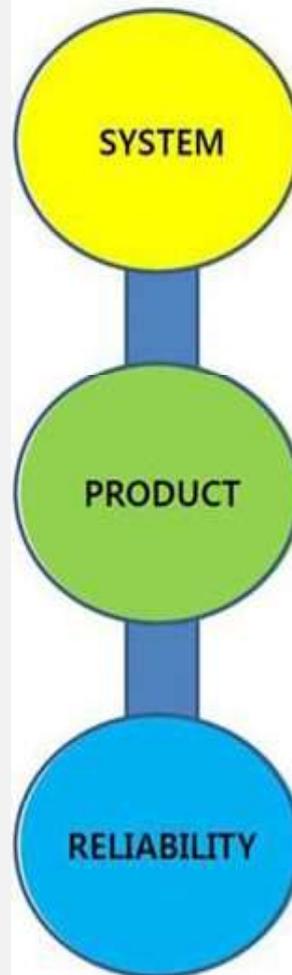


TR/CU

# Certificate- II

\* Including Partnership\*

- ISO9001
- ISO14001
- OHSAS18001
- APIQ1
- ISO/TS 29001
- API 6D
- API6A
- CE/PED
- ABS
- KOGAS
- API607
- API6FA
- API RP6F
- SIL (FBV)
- SIL (TBV)



# Our Customers





# Manual & Control Valve Reference

CUSTOMER	ITEM	
SAMSUNG ELECTRIC-CHINA	DWA-N30P6(ON-OFF)	
HH POWER PLANT	40A SCS13 16K	3-WAY
BELLOWS VALVE	SW890T-15A	PN
SIEMENS KOREA	GLOBE CONTROL	
HH POWER PLANT	40A,APL210,16K,SCS13	3-WAY
HYUNDAI TEST BENCH	40A,2-WAY	
SAMSUNG DISPLAY	PNEUMATIC CONTROL V/V	10K.CH
	PNEUMATIC CONTROL V/V	10K.S
HH POWER PLANT	40A,16K,SCS13	3-WAY
ANSAN CITY	SG-25A(SUS304,10K) 2-Way,4-20mA	PN
	BELLOWS VALVE SW840G-15A	PN
	SW840G-65A	PN
	SW840G-100A	PN
	SW840G-65A	PN
	65A LIMIT&AUTO	
	15A	PN
	SG-15A/250 DIA 10K.STEAM	PN
	SW840G-25A	PN
	SW800T-15A	PN
SAMSUNG DISPLAY	PNEUMATIC CONTROL V/V	10K,HOT V
	PNEUMATIC CONTROL V/V	10K.CH V
	PNEUMATIC CONTROL V/V	10K.HOT
	PNEUMATIC CONTROL V/V	10K.ST
	PNEUMATIC CONTROL V/V	10K.S
	PNEUMATIC CONTROL V/V	10K.S
	PNEUMATIC CONTROL V/V	10K.HOT
	80A.Repair 3"	PN
100A.Repair 4"	PN	

# Manual & Control Valve Reference

CUSTOMER	ITEM	
HYUNDAI STEEL	BALL VALVE 4"	(RF)
	3-WAY BALL	
4.2-1.4MPA ANSI600 RF	CG-80A/370 DIA	PNEUMAT
	CG-100A/370 DIA	PNEUMAT
	CG-100A/370 DIA	PNEUMAT
1.4-1.2MPA ANSI300 RF	CG-100A/370 DIA	PNEUMAT
1.4-1.2MPA ANSI600 RF	CG-200A/480 DIA	PNEUMAT
POSCO ( KWANG YANG)	SG-50A	PNEUM
BELLOWS VALVE	SW840G-125A	PN
	SW840G-100A	PN
	SW890T-15A	PN
SAMSUNG ELECTRIC	SG-15A	
	ACTUATOR	
	SG-50A(SUS304)	
	ACTUATOR	
	ACTUATOR	
SAMSUNG ELECTRIC (CHINA)	DWA-N30P6(ON-OFF)	
POSCO( KWANGYANG )	CG-25A(20K) 2-WAY,4-20mA	
HH POWER PLANT	40A,16K,SCS13	3-
HYUNDAI HEAVY INDUSTRY POWER PLANT	3-WAY AUTO BALL VALVE	
	3-WAY MANUAL BALL VALVE	
	3-WAY AUTO BALL VALVE	
	3-WAY MANUAL BALL VALVE	40
	3-WAY 65A BALL VALVE	



# Manual & Control Valve Reference

CUSTOMER	ITEM	
HYUNDAI STEEL	40A SCS13 16K, T-PORT, L-PORT	3-WAY
SAMSUNG ELECTRIC	SW840G-100A	
	SW890G-15A	
	SW890G-20A	
	SW890T-15A	
POSCO ( KWANG YANG)	ACTUATOR	
	VSD 21.50	
	DYA-S20	
HYUNDAI STEEL	40A SCS13 16K	3-WAY
	25A	3-WAY
POSCO ( KWANG YANG)	SG-25A(SUS304,10K)	
	ACTUATOR	
KOLON (GUMI)	VFD 32.80	
SAMSUNG SDI	VBD 10K 400A 2-WAY	
HYUNDAI HEAVY INDUSTRIAL BANGLADESH	PRESSURE 16K	3-WAY
	VALVE WITH PNEUMETIC ACTUATOR16K, SCS13	3-WAY
SAMSUNG ELECTRIC	SW840G-25A	
	SW840G-50A(10K)	
	SW840G-80A	
	SW840G-300A	
	SW840G-15A	
	SW890G-15A	
	SW890T-15A	
	SW890G-15A	2-WAY
	SW890T-40A	
	SW840G-40A	
SW840G-50A(10K)		



# Manual & Control Valve Referen

CUSTOMER	ITEM	
SAMSUNG SDI	SG-50A	
HYUNDAI HEAVY INDUSTRY (BRAZIL GLOBAL SPARE VALVE)	BALL VALVE ON=OFF SCS13, 16K	2-W
SIN BO LYEONG POWER PLANT BLR SHUT-OFF VALVE MPS	CG22-DRS4/150A	A216 WCB, 30
	NO 1.2 PLANT	
SAMSUNG ELECTRIC	SW890G-20A	
	ACTUATOR	
	SW890T-15A~150A	
	SW890G-300A	
	SW890T-400A	
	SW890T-200A	
POSCO ( KWANG YANG)	SG-25A(20K) ETC	
HAITI / ES88H(220V)	BALL VALVE	2-W
	40A,16K,SCS13	3-W
	40A ~200ASCS13 16K	3-W
SAMSUNG ELECTRIC	SW840G-100A	
	SW840G-65A	
	SW840G-80A	
	PNEUMATIC SYSTEM ACTUATOR	
POSCO ( KWANG YANG)	CG-80A/370 DIA	
	SW890T-15A	
	SW840G-200A	
	SW840G-100A	
	SW840G-80A	
	SW840G-65A	



# Manual & Control Valve Referen

CUSTOMER	ITEM	
HYUNDAI IRAQ KRG PROJECT	50A, 10K	3-W
	50A, 16K,	3-W
	50A, 16K,	3-V
	65A, 10K, ON-OFF	2-WA
	80A, 10K, ON-OFF	2-WA
HHI HAINA 1.7MW PPS	40A, 16K	2-W
SAMSUNG ELECTRIC	ACTUATOR	
	SW840G-80A	
	SW840G-40A	
SAMSUNG ELECTRIC	SW890T-15A	
	SW840G-80A	
	SW840G-80A	
	SW840G-125A	
	SW890G-20A	
POSCO( KWANGYANG )	VFD22.15	
	ACTUATOR	
SAMSUNG ELECTRIC	SW840G-25A	
	SW840G-40A	
	SW840G-65A	
	SW840G-80A	
	SW840G-100A	
	SW840G-125A	
	SW840G-150A	



# Manual & Control Valve Referen

CUSTOMER	ITEM	
HYUNDAI HEAVY INDUSTRY	3way BALL VALVE	
	3-WAYBALL VALVE	
POSCO (KWANG YANG)	ACTUATOR	
	GLOBE CONTROL VALVE SG-25A(SUS304,10K)	
SAMSUNG ELECTRIC	SW840G	
	SW890T	
HYUNDAI HEAVY INDUSTRY	BALL VALVE	
	VM-1300-200A	
HYUNDAI HEAVY INDUSTRY	BALL VALVE	
SAMSUNG ELECTRIC	GLOBE CONTROL VALVE SW890T	
	SW840G	
	SW890G	
SAMSUNG ELECTRIC	SW840G-40A(10K)	
	SW840G-40A(10K)	
HYUNDAI STEEL	VM-1300-200A	
	VM-1000-350A(40k)	
	VM-1000(MOR)20K	
	550G-20K-250A	
SAMSUNG ELECTRIC	SW840G-65A(20K)	
	SW840G-80A(10K)	
	SW840G-25A	
	SW840G-40A(10K)	
	SW840G-40A(10K)	
HYUNDAI HEAVY INDUSTRY SURNECO PPS	3-WAY MANUAL BALL V/V	
	3-WAY AUTO BALL V/V	
SAMSUNG ELECTRIC	840G-100A	TRI
	SW840G-40A(10K)	
POSCO (KWANG YANG)	ACTUATOR	
	CG-50A	
SAMYANG BVP	BALL VALVE 40A	



# Manual & Control Valve Referen

CUSTOMER	ITEM	
POSCO (KWANG YANG)	SG SERIES	
	SG-32A(10K)Water	
SAMSUNG ELECTRIC	SW890T-15A	
	VM-1000-350A(40k)	
HYUNDAI STEEL	CG-065DS/ACT370mm	
Brazil Camacary 2&3 Dpp	BALL VALVE	
SAMSUNG ELECTRIC	SW840G-200A	
	SW840G-50A(10K)	
	SW840G-15A	
IRAQ KAR3 8.5MW	3-WAY MANUAL BALL V/V	L-PO
HYUNDAI STEEL	501G-20K-250A	
PANAMA 57MW PPS	3-WAY APL210 BALL V/V	
	3-WAY MANUAL BALL V/V	40A
	3-WAY MANUAL BALL V/V	40A
LG CHEM- PAJU	2Way v/v Repair-ACP-200A	
	2Way v/v Repair-HCB-200A	
	2Way v/v Repair-Valmac-VM1100	
	2Way v/v Repair-AGVB-80A	
	2Way v/v Repair-AGVB-100A	
HYUNDAI STEEL	VM-1000-100A	
	VM-1000-200A	
SAMSUNG ELECTRIC	SW840G-50A(10K)	
	SW840G-100A(10K)	
	SW840G-80A(10K)	
	SW840G-40A(10K)	
	SW840G-150A(20K)	
	SW840G-65A(20K)	
	SW840G-40A(10K)	
	SW840G-40A(10K)	
HYUNDAI STEEL	GLOBE CONTROL VALVE	
	2-way Pneumatic Ball V/V	



# Manual & Control Valve Reference

CUSTOMER	ITEM	
HYUNDAI STEEL	CG-200A/480 DIA	
SAMSUNG ELECTRIC	SW840G-40A(10K)	
FS CENTER	SW840G-50A(10K)	
	SW890G-15A	
	SW890T-15A	
POSCO (KWANG YANG)	CG 100A 10K외	
FS CENTER	SW840G-40A(10K)	
DAYOUNG TECH	ACTUATOR	
SAMYOUNG PNP	CG-350A (40K)	
HH	SG-SERIES	
	SG-SERIES FOR Water	
	CG-150A-RA480	
KOLON	CG-80A CF8M 300#	
HYUNDAI STEEL	CG-250A (300#)	
DAYOUNG TECH	SG-SERIES	
HYUNDAI STEEL	VM-1300-200A	
HYUNDAI ENGINEERING	GATE , GLOBE	PHILIPP
	SWING CHECK , LIFT CHECK	
	Y-LIFE CHECK VALVE	
BAHRAIN BMP(SAMJIN JMC)	TEFLON LINED BALL VALVE	
HYUNDAI ROTEM	BUTTERFLY 600# TRIPPLE OFF-SET	



# Control Valve Reference 2016~2017

PROJECT	ITEM
<b>PJT. : PROVISION OF ENGINEERING, PROCUREMENT AND CONSTRUCTION (EPCC) OF WATER MANAGEMENT SYSTEM (PHASE 1) FOR PETRONAS CARIGALI IRAQ HOLDING B.V.'S GARRAF OPERATIONS</b>	
SAMSUNG ELECTRONIC	BUTTERFLY CONTROL VALVE (ON-OFF)
HANWHA GENERAL CHEMICAL	CONTROL VALVE (ACTUATOR ASS'Y)
LINDE GRODNO	CONTROL VALVE (ACTUATOR ASS'Y)
LINDE VOGAR	CONTROL VALVE (ACTUATOR ASS'Y)
MALYK GOK BOV	BUTTERFLY CONTROL VALVE (MODULATING)
GANGXIN	CONTROL VALVE (ACTUATOR ASS'Y)
KUMHO	BUTTERFLY CONTROL VALVE (MODULATING)
TRISONIC	CONTROL VALVE (ACTUATOR ASS'Y)
SAUDI ARAMCO JAZAN IGV	CONTROL VALVE (ACTUATOR ASS'Y)

PROJECT
SAUDI ARAMCO JAZAN ON,OFF
S-OIL AREA 3
S-OIL AREA 2,4
S-OIL OXIDATION
TISINGO
BIDBOLAND
SAMSUNG ELECTRONIC
KIA HWASEONG BOV
POSCO GWANGYANG
ANYANG FGC
KIA HWASEONG BLOCK
DSME MOL
HYDROSTOR
ALMALYK GOK IGV
SAUDI ARAMCO ASPHALT
KNPC ZOR
FADHILI
E_KW_HEC_KNPC AL-Zour LNGI Air COMP
SPPC FGC IGV
KAZANORGSINTEZ IGV



# Control Valve Reference 2018

PROJECT	ITEM
HANWHA GTG IGV	CONTROL VALVE (ACTUATOR ASS`Y)
YUANLI METAL	CONTROL VALVE (ACTUATOR ASS`Y)
CTCI TRACK 4A	CONTROL VALVE (ACTUATOR ASS`Y)
FARABI IGV	CONTROL VALVE (ACTUATOR ASS`Y)
CTCI IGV	CONTROL VALVE (ACTUATOR ASS`Y)
HANWHA CHEMICAL Y.S.	CONTROL VALVE (ACTUATOR ASS`Y)
CJ PASURUAN	CONTROL VALVE (ACTUATOR ASS`Y)
BRAZIL BRASKEM CAPUAVA	CONTROL VALVE (ACTUATOR ASS`Y)
GANGXIN	CONTROL VALVE (ACTUATOR ASS`Y)
MOZAMBIQUE IGV	CONTROL VALVE (ACTUATOR ASS`Y)
TEST LEAGUE	CONTROL VALVE (ACTUATOR ASS`Y)
KUMHO MITSUI CHEMICALS	CONTROL VALVE (ACTUATOR ASS`Y)
HYUNDAI POWERTECH	CONTROL VALVE (ACTUATOR ASS`Y)
HYUNDAI TRANSYS	CONTROL VALVE (ACTUATOR ASS`Y)
LINDE GIHENG	CONTROL VALVE (ACTUATOR ASS`Y)
HYUNDAI MOTOR JUNJU	CONTROL VALVE (ACTUATOR ASS`Y)
2018 FADHILI	CONTROL VALVE (ACTUATOR ASS`Y)
TAKHATASH	CONTROL VALVE (ACTUATOR ASS`Y)

PROJECT
HANWHA TOTAL TEST LEAGUE
ASE BOEING
LINDE TEMIRTAU IGV
TEST LEAGUE GLOBE, BUTTERFLY
LINDE SEOSAN COOLING WATER
SMALL TEST LEAGUE
LINDE SEOSAN
DONGYANG P&F
COSMODAYN
RUSSIA TAFNEFT
LINDE SHALALA
PRAXAIR
ALMALYK GOK IGV
YEOSU Y4 NG BOOSTER IGV
SSAB
YUANLI METAL
HYDROSTOR TERRAMIN
HONGREN GAS
SIAD BAC, MAC



# Control Valve Reference 2019

PROJECT	ITEM
LINDE (KHEUNG)	CONTROL VALVE (ACTUATOR ASS'Y)
LINDE (TEMIRTAU)	CONTROL VALVE (ACTUATOR ASS'Y)
ROMANIA DURO	CONTROL VALVE (ACTUATOR ASS'Y)
TAMBAK	CONTROL VALVE (ACTUATOR ASS'Y)
ARAMCO BERRI GAS IGV	CONTROL VALVE (ACTUATOR ASS'Y)
TEST LIGUE	GLOBE CONTROL VALVE (MODULATING)
PRAXAIR IGV	CONTROL VALVE (ACTUATOR ASS'Y)
LINDE 3.5 IGV	CONTROL VALVE (ACTUATOR ASS'Y)
SHENZHEN REJUN IGV	CONTROL VALVE (ACTUATOR ASS'Y)
NANYANG YIDA GAS GLOBE	GLOBE CONTROL VALVE(MODULATING)
HONGYUAN GAS IGV	CONTROL VALVE (ACTUATOR ASS'Y)
FORTUNE AA IGV	CONTROL VALVE (ACTUATOR ASS'Y)
HANWHA GENERAL CHEMICAL IGV	CONTROL VALVE (ACTUATOR ASS'Y)
LINDE VOGAR IGV	CONTROL VALVE (ACTUATOR ASS'Y)
UAE LAYYAH GAS	CONTROL VALVE (ACTUATOR ASS'Y)
LAYYAH IGV	CONTROL VALVE (ACTUATOR ASS'Y)

PROJECT
APUS CARSON IGV
SUZHOU OXYGEN BNC_RCV
LG CHEMICAL 여수 IGV
GS CALTEX IGV
SIAD NORWAY IGV
APUS CARSON IGV
APUS BIG RIVER RCV
APUS BIG RIVER STEEL IGV
US APCI
SUZHOU OXYGEN IGV
MESSER TATRAGAS
CN_MingJu Gas_LOX3200
LINDE TAIWAN TAICHUNG NIC



# Manual & Control Valve Reference

PROJECT	ITEM
YNCC IGV	CONTROL VALVE (ACTUATOR ASS`Y)
KOGAS TEG IGV	CONTROL VALVE (ACTUATOR ASS`Y)
KOGAS TEG BYPASS	BUTTERFLY CONTROL VALVE
KOGAS TEG QCV	BUTTERFLY ON-OFF VALVE
SIEMENS MASJAN IGV	CONTROL VALVE (ACTUATOR ASS`Y)
SUZHOU OXYGEN IGV	CONTROL VALVE (ACTUATOR ASS`Y)
CN_GuangXing Gas_MNC IGV	CONTROL VALVE (ACTUATOR ASS`Y)
ARAMCO MARJAN PKG12 IGV	CONTROL VALVE (ACTUATOR ASS`Y)
AIR FIRST DAESAN IGV	CONTROL VALVE (ACTUATOR ASS`Y)
JINCHENG STEEL	BUTTERFLY CONTROL VALVE
GUANGJU GLOBAL MOTORS	BUTTERFLY CONTROL VALVE
CN_Sito Bio Technology_MAC IGV	CONTROL VALVE (ACTUATOR ASS`Y)
PETRONAS GAS IGV	CONTROL VALVE (ACTUATOR ASS`Y)
ARAMCO MARJAN #6 IGV	CONTROL VALVE (ACTUATOR ASS`Y)
ARAMCO MARJAN #12 IGV	CONTROL VALVE (ACTUATOR ASS`Y)
ARAMCO HUGRS IGV	CONTROL VALVE (ACTUATOR ASS`Y)
S_KR_Air First Mac IN YK Steel	CONTROL VALVE (ACTUATOR ASS`Y)
S_HU_MESSER BORSOD CHEM	GLOBE CONTROL VALVE (MODULATING)

PROJECT
E_EU_Air Liquide Cryowin MR
BALIKAPAPAN IGV
SIAD L43137 RUSSIA MAC IGV
Cosmodyne Algeria RAC
RUSSIA SIAD L43137 RNG IGV
국책과제 시험리그 BFV ON-OFF
ALMALYK IGV
YNCC IGV
ASTURIAS
POSCO CERAMIC V-BALL
POSCO SCS13 BOV
Bahrain Refinery Modernization Project
탈색공정 회수유지 보관탱크 교체
POSCO 포항 고로 지관건조버너
현대제철 V-NOTCH BALL V/V
POSCO TFL LINED BF V/V
POSCO JARKET PLUG VALVE
POSCO PVC BF V/V
JMC RDMP 1~2차

# Manual & Control Valve Reference

PROJECT	ITEM
MESSER DELTA IGV	CONTROL VALVE (ACTUATOR ASS'Y)
MICRO LEAGUE	BUTTERFLY CONTROL VALVE (MODULATING)
DSME NRS PILOT IGV	CONTROL VALVE (ACTUATOR ASS'Y)
CN_GUANGXING GAS_MNC_IGV	CONTROL VALVE (ACTUATOR ASS'Y)
LG CAMICAL Y.S. IGV	CONTROL VALVE (ACTUATOR ASS'Y)
ALECH POSCO IGV	CONTROL VALVE (ACTUATOR ASS'Y)
ARAMCO MARJAN #9	CONTROL VALVE (ACTUATOR ASS'Y)
ARAMCO HECO1 BOV	ELECTRIC BUTTERFLY CONTROL VALVE
AKSK UZBEKISTAN TASHKENT FGC IGV	CONTROL VALVE (ACTUATOR ASS'Y)
APUS BIG RIVER STEEL IGV	CONTROL VALVE (ACTUATOR ASS'Y)
APUS BIG RIVER STEEL GLOBE	GLOBE CONTROL VALVE
STATE-RUN INDUSTRY LDC_VGD IGV	CONTROL VALVE (ACTUATOR ASS'Y)
E_CN_LUCHUAN GAS MAC	GLOBE CONTROL VALVE
SIAD L43209 Vyksa BAC IGV	CONTROL VALVE (ACTUATOR ASS'Y)
SIAD L43209 Vyksa MAC IGV	CONTROL VALVE (ACTUATOR ASS'Y)
TPSK Long Son Petrochemical (TPSK LSP PJT)	TEFLON LINED BALL VALVE
LINDE LEVEDINSKY NIC	CONTROL VALVE (ACTUATOR ASS'Y)
ALECh SK GEP Ph1 N2 cycle	GLOBE CONTROL VALVE

PROJECT	
Hyundai Engineering Indonesia Balikpapan Refinery Development Project (RDMP PJT)	3 <sup>rd</sup>
	3-1 <sup>rd</sup>
	4 <sup>th</sup> , 4-1 <sup>th</sup>
	5 <sup>th</sup>
	6 <sup>th</sup>
	6 <sup>th</sup> -1 <sup>th</sup>
	7 <sup>th</sup>
	8 <sup>th</sup>
	9 <sup>th</sup>
Samsung Engineering Bahrain BAPCO Modernization Program (BMP PJT)	1 <sup>st</sup>
	2 <sup>nd</sup>
	3 <sup>rd</sup>
	4 <sup>th</sup>
	5 <sup>th</sup>
CP MEIJI #2101	
GUANGXI JINHAI STS	
KAI FENG SAIPU AS #28	
SICHUAN RONGHANG TEXTILE	
LUCHUAN GAS BOV	
ANOPC AHC IAC IGV	



# Manual & Control Valve Reference

PROJECT	ITEM
Aldan Gold #2	BUTTERFLY CONTROL VALVE
HPSS_ANPUNG STEEL	BUTTERFLY CONTROL VALVE
STEICO	BUTTERFLY CONTROL VALVE
KSC_SFA 반도체 PLC	BUTTERFLY CONTROL VALVE
HANIL CEMENT DANYANG	BUTTERFLY CONTROL VALVE
DIG CJ(5P/9P) MAC&BAC	CONTROL VALVE (ACTUATOR ASS'Y)
KOREA BASF YEOSU_2201	GLOBE CONTROL VALVE
HYUNDAI MOTOR ULSAN	BUTTERFLY CONTROL VALVE
HANIL CEMENT DANYANG_EXPANSION	BUTTERFLY CONTROL VALVE
SIAD #6 L43219	CONTROL VALVE (ACTUATOR ASS'Y)
MICRO LEAGUE_EXPERIMENTAL	GLOBE CONTROL VALVE
LINDE PHOENIX TSMC NIC IGV	CONTROL VALVE (ACTUATOR ASS'Y)
KSC_21-178_POSCO GWANGYANG PLANT 2	BUTTERFLY CONTROL VALVE
ARAMCO_Berri Development(SAIPEM)	CONTROL VALVE (ACTUATOR ASS'Y)
SAIPEM_ARAMCO Marjan PKG#10 E_ES_ARAMCO_Berri Development (SAIPEM)	CONTROL VALVE (ACTUATOR ASS'Y)
MX_HPSA-114_HW-225_SP	BUTTERFLY CONTROL VALVE
KAIXING AS EPC #18 (RONGXIN STEEL #2)	BUTTERFLY CONTROL VALVE

PROJECT
LindeMu Port Qasim MAC RFQ
Linde AFIPSKY
Vysokoe #1
LG INNOTEK VIETNAM _2221
SEOUL FGC
SICHUAN AS (LIYANG XINGANG #4)
CDY_Massey Gas
AZOVSTEEL #4
Taiwan 200T N2 liquefier No.3
HYUNDAI HIMS POHANG_2021
TERAPOWER 2021_P1
US_HPSA-108_ADEL
SAMSUNG SDI ULSAN_2021
IKPP JAMBI #2101
POSCO GWANGYANG PLANT 2_2.1EXPANSION
KAIYUAN ZHONGXIAO AS #7
HANWHA SOLUTION JINCHEON_2021
CP MEIJI #2101
Jolitex 2021 #1, #2
LINDE LIENHWA FUXIN SEMICONDUCTOR CDA



# Manual & Control Valve Reference

PROJECT	ITEM
MSC EJECTOR	TEFLON LINED BUTTERFLY VALVE ON
22MT026 유니슨HKR	BUTTERFLY CONTROL VALVE
MSC EJECTOR	TEFLON LINED PLUG VALVE / BUTTERFLY CO
22MT069	BALL MANUAL
22MT080 유니슨_신화인티텍 BFV	BUTTERFLY MANUAL VALVE
BUTTERFLY MANUAL VALVE	BUTTERFLY MANUAL VALVE
송풍지관 건조장치	V-NOTCH BALL
SEGMENT BALL V/V(간규)	V-NOTCH BALL
Petrobras HHI P-78 PJT	BALL MANUAL / BUTTERFLY CONTROL
6코코스	BUTTERFLY MANUAL VALVE
Saudi Aramco YANBU#4	BALL MANUAL
EHA DEMO PLANT	V-NOTCH BALL CONT
SPRING SINGAPORE PJT	BALL MANUAL
(HAK)DSME P-79 PJT	GLOBE CONTROL VALVE
(CARRIER)DSME P-79PJT	BALL MANUAL
YANBU #4 추가분	BALL MANUAL
POSCO GATUN PROJECT	BALL MANUAL
POSCO 아르헨티나 염수리튬 상업화 PJT	BUTTERFLY CONTROL VALVE



# Manual & Control Valve Reference

PROJECT	ITEM
TANAJIB PJT	BALL ON-OFF
MC-062 BMP 현장 추가분	BALL MANUAL
23MT057	BUTTERFLY CONTROL VALVE
POSCO 아르헨티나	BUTTERFLY CONTROL VALVE
Oman Sharqiyah IWP RO PJT	BALL MANUAL
JANSZ ON-OFF VALVE	BALL ON-OFF
TR Mexico FGC BALL VALVE	BALL MANUAL
POSCO Argentina 염수리튬 상업화 PJT_하공정	BUTTERFLY CONTROL VALVE
RDMP PJT 10차	BALL MANUAL
SHI Petronas ZLNG	BUTTERFLY CONTROL VALVE
POSCO 아르헨티나 염수리튬 상업화 PJT 1단계 상공정 추가분	BUTTERFLY CONTROL VALVE
RDMP PJT 11차	BALL MANUAL
MMR PJT	BALL MANUAL
SHI Cedar	BUTTERFLY CONTROL VALVE
RDMP 12차	BALL MANUAL

PROJECT
6코크스
POSCO Argentina 2단계 상공정 PJT
Hyundai Steel COG 품질공사 PJT
Exotic Valves_추가분
RDMP 13차
Murim P&P-보일러PKG_1차분
Murim P&P-보일러PKG_2차분
RDMP 14차
Hyundai Rotem
Murim P&P-보일러PKG_3차분
Murim P&P GSGP PJT
포항 포스코 3파이넥스 화재 복구건
NOC RUYA Project
POSCO GATUN PROJECT
S-OIL 온산공장

PROJECT	ITEM
HHI BOTAS IGV	CONTROL VALVE (ACTUATOR ASS'Y)
SHI JAWA	CONTROL VALVE (ACTUATOR ASS'Y)
DSME MOL. IGV-BOGC	CONTROL VALVE (ACTUATOR ASS'Y)
DSME MOL. IGV-COMPANDER	CONTROL VALVE (ACTUATOR ASS'Y)
DSME MOL. IGV-VGN	CONTROL VALVE (ACTUATOR ASS'Y)
DSME MOL. IGV-FCG	CONTROL VALVE (ACTUATOR ASS'Y)
PETROBRAS P-78 (HHI)	BALL VALVE 1" AND 3 OTHER SIZE
PETROBRAS P-78 (HHI)	BUTTERFLY VALVE 1" AND 5 OTHER SIZE

PROJECT	
PETROBRAS P-79 (DSME)	G
PETROBRAS P-79 (CARRIER)	
PETROBRAS P-79 (CARRIER)	
ARCTIC LNG2 GBS1	
ARCTIC LNG2 GBS2	
ARCTIC LNG2 GBS3	
DSME JANSZ IO	
SHI PETRONAS ZLNG	

# 2 Control Valve Project Reference

- UAE LAYYAH CCPP FGC
- HAEMI Expander
- TR MEXICO CCC - GO, MERIDA, SLRDC, VA
- FUSINA GAS POWER BLOCK VALVE
- Ostroleka CCGT FGC-IBV,OBV



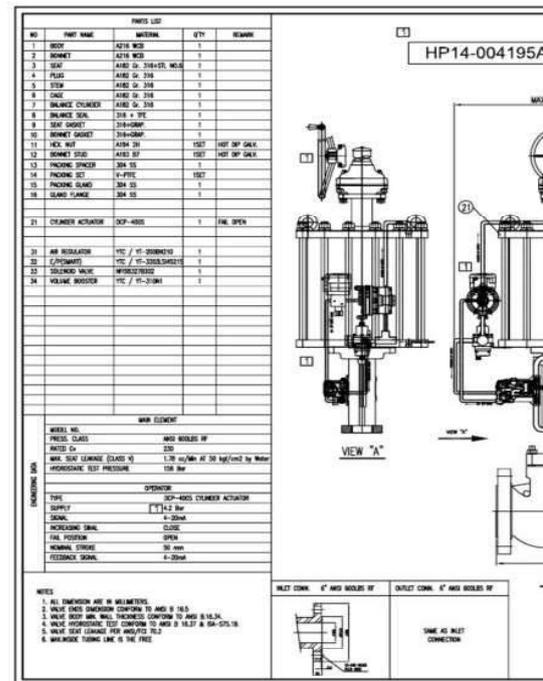
# Globe Control Valve

## Projects:

- UAE LAYYAH CCPP FGC
- HAEM I Expander

## Valve Spec:

- 2/3-Way Globe Control Valve
  - 15A-50A VSD 21/31 Series
  - 15A-150A VFD 21/31 Series
  - 15A-150A VFD 22/32 Series
- 2/3-Way SCPH2/SUS Valve
  - 100A-350A VBD 21/31 Series



# Order Process(1)Sizing Sheet

CONTROL VALVE DATA SHEET										
<b>mesys</b>		Project	UAE Layyah CCPP FGC, RCV			Tag No.				
		Customer				QTY				
		URL Client				Revision No.	SHT. No.	1		
		Inq./P.O. No.				Serial No.	Date	19/8/23		
Process		Application								
Fluid		GAS	AIR	Critical Pt.	BarA	Critical Tr.	Deg C			
Flow Rate		UNITS	RECYCLE	MIN. at 49Hz	MIN. at 50Hz	MIN. at 51Hz				
Inlet Pressure		BarA	40.77	40.77	40.77	40.77				
Outlet Pressure		BarA	29.913	29.913	29.913	29.913				
Differential Pressure		Bar	10.857	10.857	10.857	10.857				
Inlet Temperature		Deg C	142	127	113	130				
Molecular Weight		MW	17.13	17.13	17.13	17.13				
Specific Heat Ratio		k	1.29	1.3	1.32	1.3				
Compressibility		Z	0.9873	0.9835	0.9795	0.9843				
Required Capacity		Cv	178.81	56.43	54.43	51.69				
Opening Travel		%-LIN	76.97	21.93	21.03	19.8				
Predicted SPL		dBA	75	< 70	< 70	< 70				
Inlet Pipe Size		12	Inch	STD	Sch.					
Outlet Pipe Size		12	Inch	STD	Sch.					
Design Pressure		(Min)	(Max)	50	BarG					
Design Temperature		(Min)	(Max)	150	Deg C					
Max. Shut-Off Op.		50		Bar						
Model No.										
Body Type		ZWAY GLOBE								
Body Size		6" (150A)								
Pr. Rating		ANSI 600 LBS								
End Connection		RF FLANGED								
Bonnet Type		STD								
Flow Direction		FLOW TO OPEN								
Lining		N/A								
Trim Type		MULTI HOLE (1 - STAGE)								
Port Size		5	Inch	Rated Cv	230					
Flow Character.		LINEAR		Stroke	50 mm					
Plug Type		BALANCED								
Seat Leakage		ANSI Class V								
Body /Bonnet		A216 Gr. WCB (SCPH 2)								
Stem		A192 Gr. 316								
Plug /Disc /Ball		A192 Gr. 316								
Seat Ring		A192 Gr. 316 + STL NO.6								
Cage /Retainer		A192 Gr. 316								
Balance Seal		316 + TFE								
Packing		V - PTFE								
Gasket		316+GRAP. - SPIRAL WOUND								
Actuator Type		PNEUMATIC CYLINDER								
Mfr / Model		DCP-4005								
Actuator Size		1.5in CYL.								
Failure Mode		VALVE OPEN								
Supply (Max)		4.2 Barg								
Manual Override		TOP/SIDE HANDLE (BLOCK)								
Notes / Special Instruction										
Bolt / Nut : A193 Gr. 87/A194 Gr. 2H + Hot Dip Galv.										
(Stud bolt / Heavy hex nuts)										
C										
B										
A										
2019-08-23 For Approval MLKWON										
Date Revision Description Prepared By Reviewed By Approved By										

CONTROL VALVE DATA SHEET		
Valve Sizing : G		
Tag Number		
Trim Type	MULTI HOLE (1 - STAGE)	
Body Size	6" (150A)	
Inlet Line Size	12	Inch
Outlet Line Size	12	Inch
Outlet Line Schedule	STD	Sch.
Flow Rate Unit	Kg/hr	
Pressure Unit	BarA	
Condition Title	RECYCLE	MIN. at 49Hz
Flow Rate	63108	20556
Inlet Pressure	40.77	40.77
Outlet Pressure	29.913	29.913
Diff. Pressure	10.857	10.857
Inlet Temperature	142	127
Molecular Weight	17.13	17.13
Specific Heat Ratio	1.29	1.3
Compressibility	0.9873	0.9835
Calculated Cv	178.810	56.430
Stroke % (EQ%)	84.7	40.0
Stroke % (Linear)	77.0	21.9
Stroke % (Modified)	77.0	21.9
Allow. Dp-Choked [Pa]	425.3	428.6
Acoustic Velocity	509.9	502.5
Outlet Valve Velocity	64.7	20.3
Outlet Line Velocity	16.2	5.1
Choked Flow	None	None
Noise Level [dBA]	75	< 70
Mach No.	0.031	0.01



# Order Process(2)Data Sheet

- Ex. : UAE LAYYAH CCPP FGC\_RCV  
Design according to customer requirements

METS Mechanical Syst. Control Systems		METS	
DATE : 2019-11-29		CUSTOMER :	
PROJECT : UAE Layyah CCPP FGC_RCV			
GENERAL			
1	VALV NO.		
2	QUANTITY		P & ID NO.
3	LINE SIZE		LINE SCHEDULE
4	SERVICE		
5	ENCLOSURE		
BODY & TRM			
6	TYPE OF BODY		
7	BODY SIZE		PORT SIZE
8	END CONNECTION & RATING		
9			BODY
10			DISC
11	MATERIAL		STEM
12			SEAT
13			ETC
14	SONNET TYPE		
15	TRM / FORM		
ACTUATOR			
16	ACTUATOR		
17	ACTUATOR MANUAL OVERRIDE		
18	ACTUATOR MATL		
19	AIR SUPPLY PRESSURE		(BAR)
20	ACTION		
21	FAIL POSITION		
22	P GRADE		
POSITIONER			
23	MODEL NO.		
24	TYPE		
25	N. OUT PUT SIGNAL		
26	AIR SUPPLY PRESSURE		(BAR)
27	ELECTRIC CONNECTION		
28	EXPLOSION PROOF		
29	P GRADE		
30	AIR SUPPLY PRESSURE		(BAR)
31	SE. CERT.		
32	GAUGE		
SOLENOID			
33	MODEL NO.		
34	TYPE		
35	MATL		
36	ELECTRIC CONNECTION		
37	INSULATION CLASS		
38	VOLTAGE		
39	RESET		
40	EXPLOSION PROOF		
41	P GRADE		
42	SE. CERT.		
43	AIR SUPPLY PRESSURE		(BAR)
44	WATT		
AIR SET			
45	MODEL NO.		
46	WELL CONN.		
47	AIR SUPPLY PRESSURE		(BAR)
48	FILTER		
49	GAUGE		
VOLUME BOOSTER			
50	MODEL NO.		
51	AIR SUPPLY PRESSURE		(BAR)
PROCESS CONDITIONS			
52	FLUID		
53	FLOW RATE UNIT		STATE
54	FLOW RATE		MM <sup>3</sup> /h
55	INLET PRESSURE		PSI
56	OUTLET PRESSURE		PSI
57	TEMPERATURE		°F
58	MAX. SHUT OFF ΔP		PSI
59	VISCOSITY		
60	CALCULATED Cv		
61	MODEL NO.		
62	NOTE :		
			<ul style="list-style-type: none"> <li>- STROKE TIME 단축을 위해 VOLUME BOOSTER 추가</li> <li>- OPEN &lt; 1s, CLOSE &lt; 4s</li> <li>- SOLENOID : 직상자일 경우로 사용 (POSITIONER &lt;-&gt; VOLUME BOOSTER 사용)</li> <li>- HANDLE COLOR : BLACK</li> <li>- Bolt / Nut : A193 Gr. B7/A194 Gr. 2H → Hot Dip Galv. 08std bolt / nut</li> <li>- PAINT : MFR STD.</li> <li>- FITTING : SWAGelok SS219 사용</li> <li>- TUBING : SWAGelok(OEM) SS219 사용</li> </ul>
63	REVISION :		
			<ul style="list-style-type: none"> <li>- 1 : VALVE SIZE 변경 / 부속품으로 변경 / 액세서리 부속품 변경 (선택 C)</li> <li>- 2 : FITTING MAKER 변경 / STROKE TIME 변경 / VALVE SIZE 변경</li> <li>- 3 : AIR CONN. SIZE 변경</li> <li>- 4 : 용접수용도일 경우, TUBING 변경</li> <li>- 5 : 선택 부품에 따른 ACCESSORY 추가 변경</li> <li>- 6 : 선택 부품에 따른 ACCESSORY 제거 변경</li> <li>- 7 : 포트 상 AIR SET GAUGE 추가/제거</li> <li>- 8 : SETTING PRESSURE 변경</li> <li>- 9 : STROKE TIME 단축을 위해 AIR CONN. 3/4" NPT 사용</li> </ul>

# Ball Control Valve

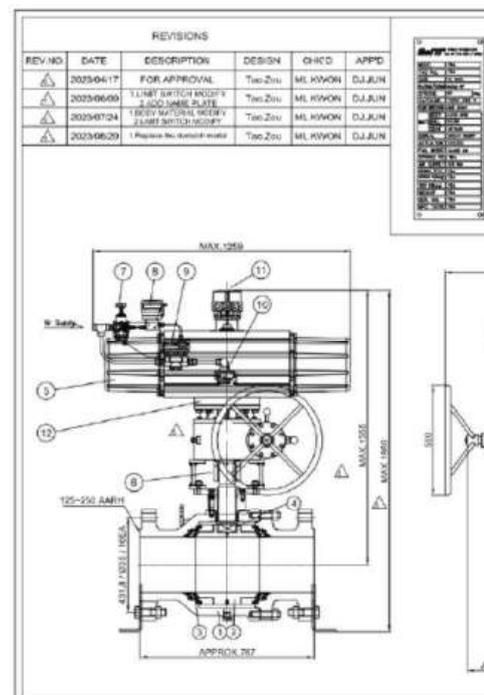
## Projects:

- TR MEXICO CCC - GO, MERIDA, SLRDC, VA
- FUSINA GAS POWER BLOCK VALVE
- Ostroleka CCGT FGC-IBV,OBV

## Valve Spec:

2-WAY TRUNNION BALL (FULL BORE) / DBB (SPE TYPE)

▷ 200A~300A 600LB A360LF2





# Order Process(1)Sizing She

CONTROL VALVE DATA SHEET										
<b>McSYS</b>		Project	Ostroleka CCGT FGC			Tag No.				
		Customer				Q'ty				
		Ult. Client				Revision No.	SHT. No.	Date		
		Inq./P.O. No.				Serial No.	23/7/25			
Process										
Application		INLET BLOCK VALVE								
SERVICE CONDITIONS	Fluid	GAS		Critical Pr.	BarA		Critical Tr.	Deg C		
		UNITS	IN MAX P & T	IN MAX P & MIN	GURANTEEG					
	Flow Rate	Kg/hr	100584	100584	100584					
	Inlet Pressure	BarA	57.013	57.013	28.613					
	Outlet Pressure	BarA	57	57	28.6					
	Differential Pressure	Bar	0.013	0.013	0.013					
	Inlet Temperature	Deg C	10	0	10					
	Molecular Weight	MW	16.37	16.37	16.37					
	Specific Heat Ratio	k	1.4295	1.4517	0.9406					
	Compressibility	Z	0.9285	0.9169	0.9406					
	Required Capacity	Cv	4946.73	4828.19	7031.59					
	Opening Travel	%-EQ	56.68	56.13	66.39					
	Predicted SPL	dBA	< 70	< 70	< 70					
GENERAL	Inlet Pipe Size	10	Inch	STD	Sch.					
	Outlet Pipe Size	10	Inch	STD	Sch.					
	Design Pressure	[Min]	[Max]	84	BarG					
	Design Temperature	[Min]	-35	[Max]	90	Deg C				
Max. Shut-Off Dp.	84		Bar							
VALVE BODY / BONNET	Model No.									
	Body Type	2WAY BALL								
	Body Size	10" (250A)								
	Pr. Rating	ANSI 600 LBS								
	End Connection	RF FLANGED								
	Bonnet Type	STD								
VALVE TRIM	Flow Direction	SEE DRAWING								
	Lining	N/A								
VALVE TRIM	Trim Type	2WAY BALL								
	Port Size	10 in	Rated Cv	14250						
	Flow Character.	EQ - %		Stroke		90 deg.				
	Plug Type	N/A								
VALVE TRIM	Seat Leakage	ANSI Class VI								
	Body /Bonnet									
MATERIAL	Stem									
	Plug /Disc /Ball									
	Seat Ring									
	Cage /Retainer									
	Balance Seal									
	Packing									
ACTUATOR	Gasket									
	Actuator Type									
	Mfr / Model									
	Actuator Size									
	Failure Mode									
	Supply (Max)									
Notes / Special Instruction	Manual Override									
C										
B										
A										
2023-07-25		For Approval			MLKWON					
No.	Date	Revision Description			Prepared By	Reviewed By	Approved By			

CONTROL VALVE	
Trim Type	2WAY BALL
Body Size	10" (250A)
Inlet Line Size	10
Outlet Line Size	10
Outlet Line Schedule	STD
Flow Rate Unit	Kg/hr
Pressure Unit	BarA
Transi.	
Condition Title	IN MAX P & MA
Flow Rate	100584
Inlet Pressure	57.013
Outlet Pressure	57
Diff. Pressure	0.013
Inlet Temperature	10
Molecular Weight	16.37
Specific Heat Ratio	1.4295
Compressibility	0.9285
Calculated Cv	4946.730
<input checked="" type="radio"/> Stroke % (EQ%)	56.7
<input type="radio"/> Stroke % (Linear)	33.4
<input type="radio"/> Stroke % (Modified)	67.0
Allow. Dp-Chocked [Psi]	253.5
Acoustic Velocity	453.5
Outlet Valve Velocity	13.9
Outlet Line Velocity	13.8
Choked Flow	None
Noise Level [dBA]	< 70
Mach No.	0.03

41 | Ball control valve



# Order Process(2)Data Sheet

- Ex. : Ostroleka CCGT FGC -BV & OBV
- Design according to customer requirements

McFFY 兩韓시스	
Manufactured Control System	
DATE : 2009-07-26	CUSTOMER : 兩韓시스
PRODUCT : Ostroleka CCGT FGC - BV & OBV	
GENERAL	
1 YRS NO	
2 QUANTITY	P & ID NO
3 LINE SIZE	LINE SCHEDULE
4 SERVICE	
BODY & TRIM	
6 TYPE OF BODY	
7 BODY SIZE	PORT SIZE
8 END CONNECTION & RATING	
9 FIRE RPT DESIGN	
10	BODY
11	BALL
12 MATERIAL	STEM
13	KEY
14	BODY NUT
15 DESIGN	
16 DET	
ACTUATOR	
17 TYPE OF ACTUATOR	
18 MODEL NO	
19 ACTION	
20 FAIL POSITION	
21 SP GRADE	
22 AIR SUPPLY PRESSURE	Bar
23 MATERIAL	
24 TEMPERATURE	
25 MANUAL OVERRIDE	YES / NO
INSULATED	
26 MODEL NO	
27 TYPE	
28 CONDUIT	
29 INSULATED INSULATION	
30 POWER	
31 RESET	
32 Explosion proof	
33 SP GRADE	
34 DET	
35 BODY MATERIAL	
36 TEMPERATURE	
LAST SECTION	
37 MODEL NO	
38 TYPE	
39 O T F	
40 Gaskets / Rating	
41 Intrinsic Explosion	
42 Explosion proof	
43 SP GRADE	
44 DET	
45 INSULATION MATERIAL	
46 TEMPERATURE	
AIR SET	
47 MODEL NO	
48 BITTER PRESS	
49 PRESS. COEFF	
50 GRADE	
51 FILTER	
52 MATERIAL	
53 TEMPERATURE	
GAUGE: EXHAUST VALVE	
54 MODEL NO	
55 SIZE	
56 TEMPERATURE	
57 MATERIAL	
VOLUME METER	
58 MODEL NO	
59 MATERIAL	
60 TEMPERATURE	
PROCESS CONDITIONS	
61 FLUID	
62 FLOW RATE UNIT	STATE
63 FLOW RATE	M/hr
64 INLET PRESSURE	Bar
65 OUTPUT PRESSURE	Bar
66 TEMPERATURE	°C
67 MAX. SHOCK OFF ΔP	Bar
68 VISCOSITY	
69 CALCULATED ΔP	
70 MODEL NO	
71	NOTE: - STROKE TIME : OPEN & CLOSE <10s - PAINT : RUT SPED 兩韓 - FITTING : 900H DOUBLE PERBALL - TUBING : 900H & 900H CUEL - NAME PLATE & TAG : RUT SPED 兩韓 (제자) 兩韓 兩韓 兩韓

# 3

# Control valve GGC Valves

- JANSZ IO FCS PJT
- SHI Petronas ZLNG
- PT. Free Port  
(Exotic Valve PKG PJT)



# Motor Actuated Ball ON-OFF Valve

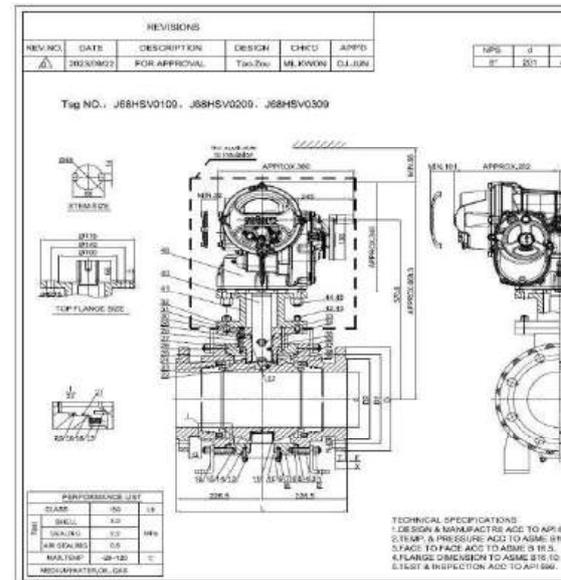
## Projects:

- JANSZ IO FCS PJT

## Valve Spec:

- 2 PIECES-FLOATING BALL VALVE
- 3 PIECE- TRUNNION BALL VALVE

▷ 40A~200A 150LB A182F51





# Order Process Sizing Sheet

CONTROL VALVE DATA SHEET										
<b>McSYS</b>		Project	SHI PETRONAS ZLNG_CONTROL VALVE		Tag No.	500MOV-210				
		Customer			Q'ty	1	SHT. No.	1		
		Ult. Client			Revision No.	1	Date	24/03/05		
		Inq./P.O. No.			Serial No.					
		Process								
		Application	Fresh water							
SERVICE CONDITIONS	Fluid	WATER		Critical Pr.	221	BarA	Critical Tr.		Deg C	
		UNITS	A	B						
	Flow Rate	M3/hr	22.9	22.9						
	Inlet Pressure	BarA	4	3.75						
	Outlet Pressure	BarA	3.7	3.45						
	Differential Pressure	Bar	0.3	0.3						
	Inlet Temperature	Deg C	6	12						
	Specific Gravity	SG	1	0.999						
	Vapor Pressure	BarA	0.009	0.014						
	Viscosity	cp	1	1						
	Required Capacity	Cv	48.32	48.29						
	Opening Travel	% LIN	82.73	82.68						
	Predicted SPL	dBA	< 70	< 70						
GENERAL	Inlet Pipe Size	2 1/2	Inch	STD	Sch.	41	Type	N/A		
	Outlet Pipe Size	2 1/2	Inch	STD	Sch.	56	Mfr / Model	N/A		
	Design Pressure	[Min]	[Max]	5	BarG	57	Input Signal	N/A		
	Design Temperature	[Min]	[Max]	80	Deg C	58	Increase Signal To	N/A		
	Max. Shut-Off Dp.			5	Bar	59	N/A	N/A		
VALVE BODY / BONNET	Model No.	TG Series				60	Type	N/A		
	Body Type	3WAY GLOBE				61	Mfr / Model	N/A		
	Body Size	2-1/2" (65A)				62	Energized To	N/A		
	Pr. Rating	ANSI 150 LBS				63				
	End Connection	RF FLANGED				64	Type	N/A		
VALVE BODY / BONNET	Bonnet Type	N/A				65	Mfr / Model	N/A		
	Flow Direction	FLOW TO OPEN				66	Contact Point	N/A		
	Lining	N/A				67				
	Trim Type	MIXING				68	Filter Regulator	N/A		
	Port Size	2-1/2 in	Rated Cv	58		69	Volume Booster	N/A		
VALVE TRIM	Flow Character.	LINEAR		Stroke	40 mm	70	Position Feedback	N/A		
	Plug Type	UNBALANCED				71	Air Operator Valve	N/A		
	Seat Leakage	ANSI Class IV				72	Lock-Up V/V	N/A		
	Body / Bonnet	A216 Gr. WCB (SCPH 2)				73	Speed Controller	N/A		
	Stem	316SS				74	Quick Exh. Valve	N/A		
MATERIAL	Plug / Disc / Ball	316SS				75	Safety Valve	N/A		
	Seat Ring	316SS				76	IP-Converter	N/A		
	Cage / Retainer	316SS				77	Check V/v	N/A		
	Balance Seal	N/A				78	Main Tube Pipe Size	MAKER STD.		
	Packing	V - PTFE				79	Signal Tube Pipe Size	MAKER STD.		
ACTUATOR	Gasket	316+GRAP. - SPIRAL WOUND				80	Tubing Material	S.S 316		
	Actuator Type	ELECTRIC MOTOR				81	Stroke Time(Sec)			
	Mfr / Model	HL-10KN-PCU-DKD				82	Actuator Fix Type	STD-BOLTING		
	Actuator Size	TBA				83	Air Connection	N/A		
	Failure Mode	VALVE IN PLACE				84	Elec. Connection	PT 3/4"		
Notes / Special Instruction	Supply (Max)	220V AC				85	Body Paint Spec	Maker Std.		
	Manual Override	SIDE HANDLE				86	Actuator Paint Spec	Maker Std.		
						87	Leakage Test Fluid	Air		
A	2023.03.13.	For Information								
No.	Date	Revision Description	Prepared By	Reviewed By	Approved By					

CONTROL VALVE DATA SHEET		
<b>McSYS</b>		Project SHI PETRONAS ZLNG_CONTROL VALVE
		Customer
		Ult. Client
		Tag No. 500MOV-210
Valve Sizing : Water Flow		
Body Size	2-1/2" (65A)	
Inlet Line Size	2 1/2	
Outlet Line Size	2 1/2	
Outlet Line Schedule	STD	
Trim Type	MIXING	
Rated Cv	58	
Rangeability	30	
Service Conditions		
	A	B
Flow Rate	22.9	22.9
Inlet Pressure	4	3.75
Outlet Pressure	3.7	3.45
Diff. Pressure	0.3	0.3
Inlet Temperature	6	12
Specific Gravity	1	0.999
Vapor Pressure	0.009	0.014
Viscosity [Cp]	1	1
Sizing Output		
Calculated Cv	48.32	48.29
Stroke % (EQ%)	88.5	88.5
Stroke % (Linear)	82.7	82.7
Stroke % (Modified)	82.7	82.7
Cavitation / Flashing	None	None
Choked Flow	None	None
	3.23	3.0
Outlet Valve Velocity	2.0	2.1
Outlet Line Velocity	2.1	2.1
Noise Level [dBA]	< 70	< 70
Notes		
1. Single phase control valve sizing is based on ISA S75.01.		

45 | Motor actuated ball on-off valve

Ex. :SHI PETRONAS ZLNG\_CONTROL VALVE  
Design according to customer requirements

# Special Material Valve I

## Projects:

- PT. Free Port  
(Exotic Valve PKG PJT)

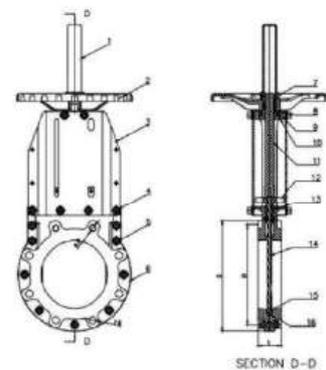
## Valve Spec:

Knif gate valve

- ▷ 80A~150A 150LB Titanium B367Gr.C-2
- ▷ A494 CW12MW(Hastelloy C276)

Requirement : 3.2 CET'

ITEM	Size	Main Dimension (mm)						CLASS150	TAG NO.
		GA	D	CS	Z-82	n-M	L		
39	3"	80	190	152.4	2-#19	2-5/8" UNC	53	WRG-159	
40	4"	100	230	190.5	6-#19	2-5/8" UNC	51	WRG-159	
41	6"	150	282	241.3	6-#22	2-3/4" UNC	57	WRG-159	



Part No.	Part Name	Material	Quantity	Remarks
1	VALVE BODY	TITANIUM B367Gr.C-2	1	
2	VALVE GATE	HASTELLOY C276	1	
3	VALVE STEM	TITANIUM B367Gr.C-2	1	
4	VALVE NUT	TITANIUM B367Gr.C-2	1	
5	VALVE WASHER	TITANIUM B367Gr.C-2	1	
6	VALVE GASKET	ASBESTOS	1	



# Special Material Valve II

## Project:

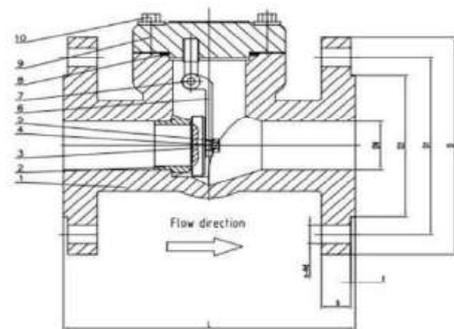
- PT. Free Port  
(Exotic Valve PKG PJT)

## Valve Spec:

Check valve (swing)

- ▷ 40A~150A 150LB/300LB
- ▷ Duplex A182 F51
- ▷ A494 CW12MWHastelloy C276
- ▷ A494 CW6MC GR.1Inconel 625
- ▷ Titanium B367 Gr.C-2

ITEM	Nominal Diameter	Main Dimension (mm) Class150								
		DN	D	D1	D2	h	n=46	L	F	TAG NO
48	1 1/2"	40	125	98.4	73	12.7	4-#18	183	7	VENL079



# Special Material Valve III

## Project:

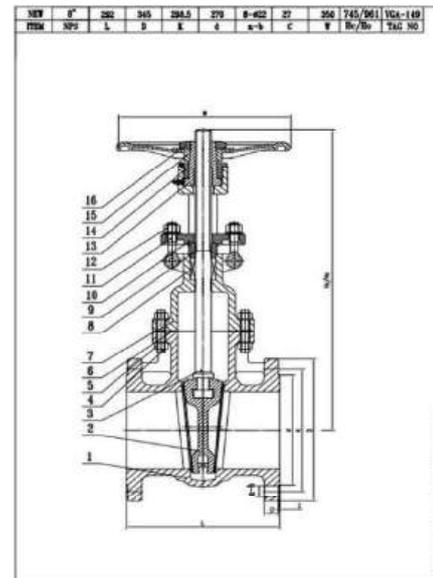
- PT. Free Port  
(Exotic Valve PKG PJT)

## Valve Spec:

Gate valve

- ▷ 25A~200A 150LB/300LB
- ▷ A494 CW6MC GR.1(Inconel 625 Gr.1)
- ▷ Titanium B381Gr.F-2
- ▷ Titanium B367 Gr.C-2

Requirement : 3.2 CET'



# Special Material Valve IV

## Project:

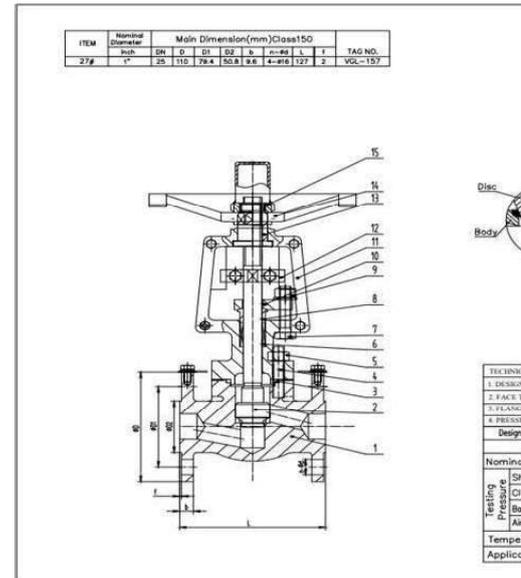
- PT. Free Port  
(Exotic Valve PKG PJT)

## Valve Spec:

### Globe Valve

- ▷ 40A~80A 150LB
- ▷ Titanium B367 Gr.C-2
- ▷ A494 M35-1(Monel 400)
- ▷ A494 CW12MW(Hastelloy C276)
- ▷ A995 4A Duplex A182 F51

Requirement : 3.2 CET'



# Special Material Valve V

## Project:

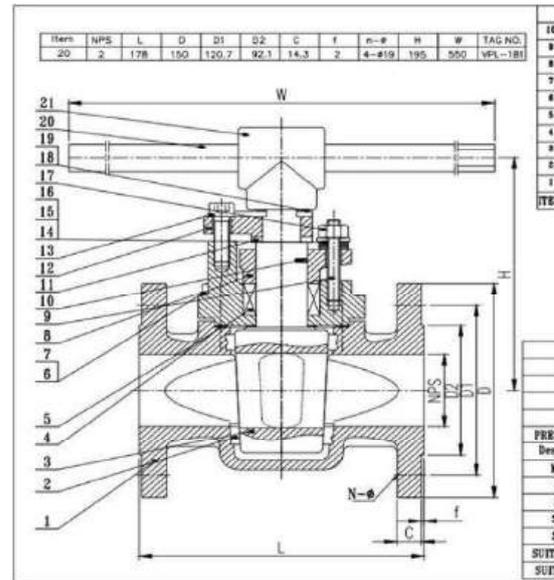
- PT. Free Port  
(Exotic Valve PKG PJT)

## Valve Spec:

Plug Valve

- ▷ 40A~100A 150LB/300LB
- ▷ Titanium B367 Gr.C-2
- ▷ A494 CW12MW(Hastelloy C276)

Requirement : 3.2 CET'



# Special Material Valve IV

## Project:

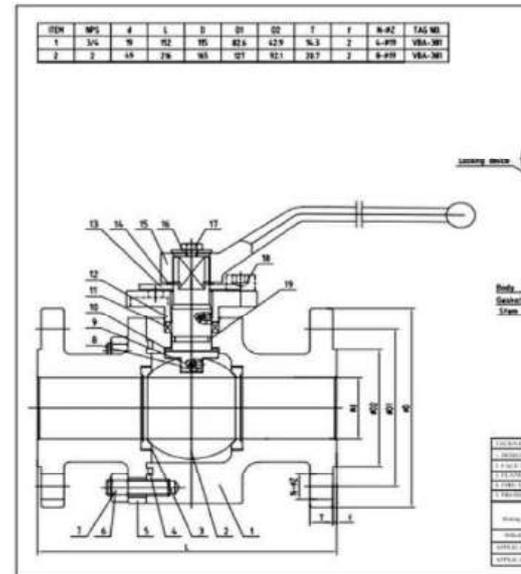
- PT. Free Port  
(Exotic Valve PKG PJT)

## Valve Spec:

### Ball Valve

- ▷ 15A~50A 150LB/300LB
- ▷ Titanium B367 Gr.C-2
- ▷ Titanium B381Gr.F-2
- ▷ A494 M35-1(Monel 400)
- ▷ A494 CW12MW(Hastelloy C276)
- ▷ A995 4A Duplex A182 F51
- ▷ B564 N06625 GR.1 (Inconel625 Gr.1)

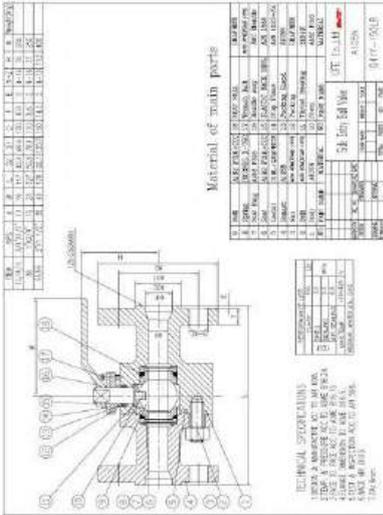
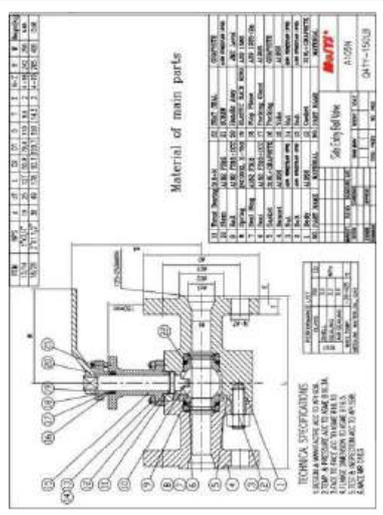
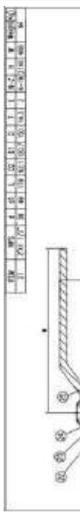
Requirement : 3.2 CET'



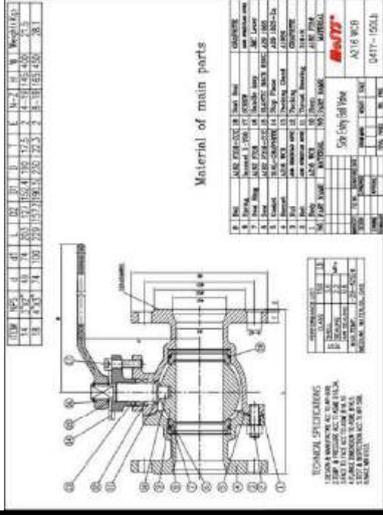
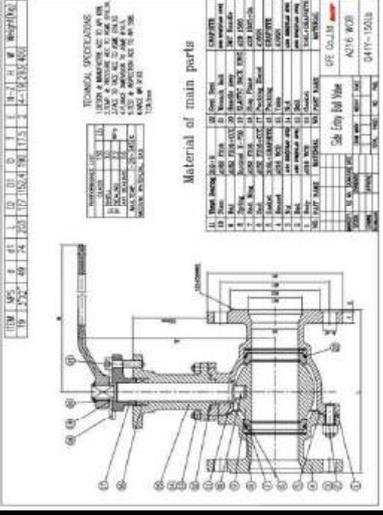
# 4 RDMP 1차~14차 PROJECT

- FLOATING 2-PC SIDE BALL VALVE
  - FLOATING 2-PC TOP BALL VALVE
- 

# RDMP 1차 ~ 14차 ITEM 별 자료

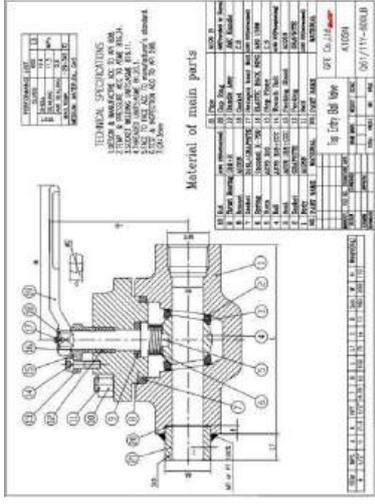
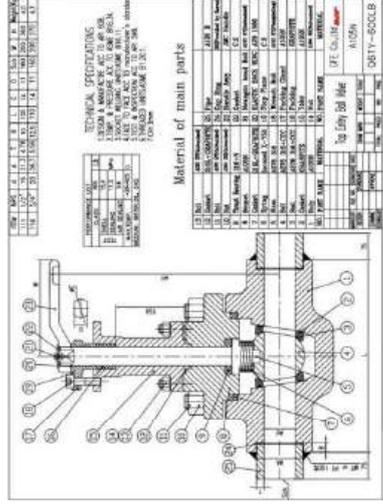
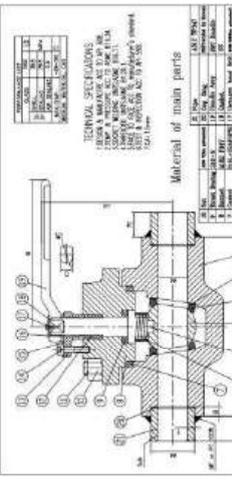
TECHNICAL PARAMETER	PHOTO	DRAWING
<p>FLOATING SIDE BALL VALVE                      SIZE: 1/2"~6"                      CLASS:150LB/300LB/                      600LB                      BODY:A105N/LF2/                      LF3/F316/F20/F5A                      BALL:F316+CCC                      SEAT:F316+CCC                      STEM:F316                      BOLTING:B7/2H,L7/7,                      L7M/7M,B8M/8M</p>		
<p>FLOATING SIDE BALL VALVE (EXT STEM)                      SIZE: 1/2"~6"                      CLASS:150LB/300LB/                      600LB                      BODY:A105N/LF2/                      LF3/F316/F20/F5A                      BALL:F316+CCC                      SEAT:F316+CCC                      STEM:F316                      BOLTING:B7/2H,L7/7,                      L7M/7M,B8M/8M</p>		
<p>FLOATING SIDE BALL VALVE (SPECIAL EXT)                      SIZE: 2~3"</p>		

# RDMP 1차 ~ 14차 ITEM 별 자료

TECHNICAL PARAMETER	PHOTO	DRAWING
<p>FLOATING SIDE BALL VALVE</p> <p>SIZE: 3"-6"</p> <p>CLASS:150LB/300LB</p> <p>BODY:WCB/LCB/LC3/CF8M/CN7M/CF10</p> <p>BALL:F316/F20+CCC</p> <p>SEAT:F316/F20+CCC</p> <p>STEM:F316</p> <p>BOLTING:B7/2H,L7/7,L7M/7M,B8M/8M</p>		
<p>FLOATING SIDE BALL VALVE (EXT STEM)</p> <p>SIZE: 3"-6"</p> <p>CLASS:150LB/300LB</p> <p>BODY:WCB/LCB/LC3/CF8M/CN7M/CF10</p> <p>BALL:F316/F20+CCC</p> <p>SEAT:F316/F20+CCC</p> <p>STEM:F316</p> <p>BOLTING:B7/2H,L7/7,L7M/7M,B8M/8M</p>		

<p>FLOATING SIDE BALL VALVE (SPECIAL EXT)</p>		
---	--	--

# RDMP 1차 ~ 14차 ITEM 별 자료

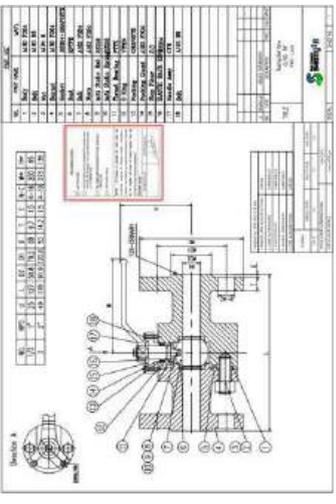
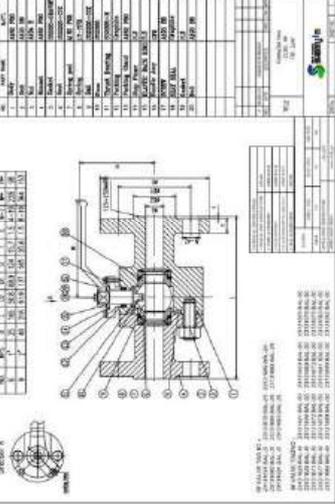
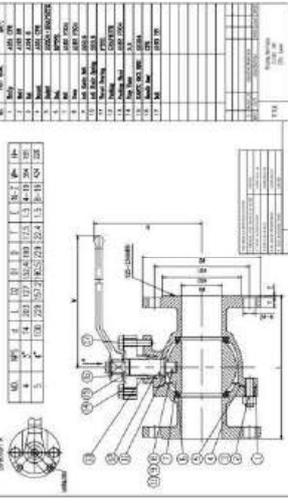
TECHNICAL PARAMETER	PHOTO	DRAWING
<p>FLOATING TOP BALL VALVE                      SIZE: 1/2"~2"                      CLASS: 600LB                      BODY:A105N/LF2/F316                      BALL:F316+CCC                      SEAT:F316+CCC                      STEM:F316                      BOLTING:B7/2H,L7/7, B8M/8M</p>		
<p>FLOATING TOP BALL VALVE (EXT STEM)                      SIZE: 1/2"~2"                      CLASS: 600LB                      BODY:A105N/LF2/F316                      BALL:F316+CCC                      SEAT:F316+CCC                      STEM:F316                      BOLTING:B7/2H,L7/7, B8M/8M</p>		
<p>FLOATING TOP BALL VALVE (HIGH PRESSURE)</p>		

# 5 무림 PNP PROJECT

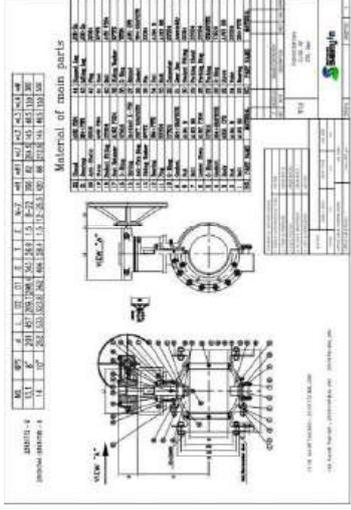
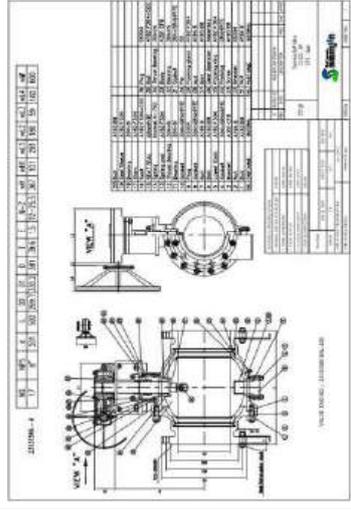
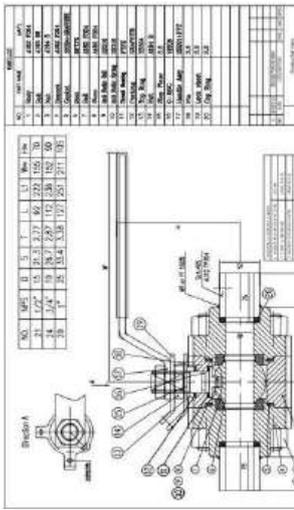
- FLOATING 2-PC SIDE BALL VALVE
- TRUNNION 2-PC SIDE BALL VALVE
- FLOATNG 3-PC SIDE BALL VALVE



# 무림PNP ITEM 별 자료

TECHNICAL PARAMETER	PHOTO	DRAWING
<p>FLOATING 2-PC SIDE BALL VALVE (SOFT SEAL)</p> <p>SIZE: 1" ,2"</p> <p>CLASS:150LB/300LB/ 600LB</p> <p>BODY:A105N/F304</p> <p>BALL:F304</p> <p>SEAT:RTFE</p> <p>STEM:F304</p> <p>BOLTING:B7/2H,B8/8</p>		
<p>FLOATING 2-PC SIDE BALL VALVE (RIGIDITY SEAL)</p> <p>SIZE: 1" ,2"</p> <p>CLASS:150LB/300LB</p> <p>BODY:F304/F60</p> <p>BALL:F304/F60+CCC</p> <p>SEAT:F304/F60+CCC</p> <p>STEM:F304/F60</p> <p>BOLTING:B8/8</p>		
<p>FLOATING 2-PC SIDE BALL VALVE (SOFT SEAL)</p> <p>SIZE: 3" ,4"</p> <p>CLASS:150LB</p> <p>BODY:CF8</p> <p>BALL:F304</p> <p>SEAT:RPTFE</p>		

# 무림PNP ITEM 별 자료

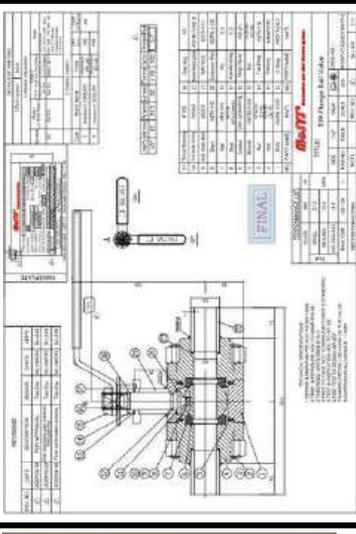
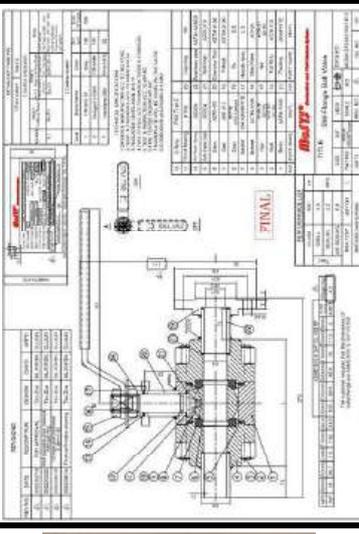
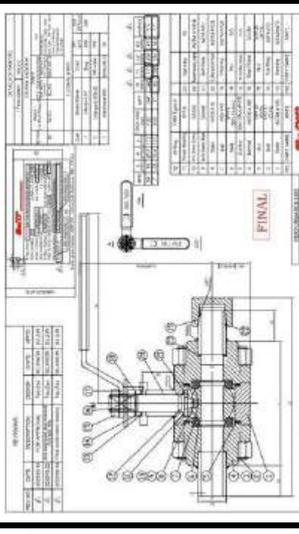
TECHNICAL PARAMETER	PHOTO	DRAWING
<p>TRUNNION 2-PC SIDE BALL VALVE (SOFT SEAL) SIZE: 6"~10" CLASS:150LB BODY:CF8 BALL:F304 SEAT:RTFE STEM:F304 BOLTING:B8/8</p>		
<p>TRUNNION 2-PC SIDE BALL VALVE (RIGIDITY SEAL) SIZE: 6",8" CLASS:150LB/300LB BODY:CF8/CD3MN BALL:F304/F60+CCC SEAT:F304/F60+CCC STEM:F304/F60 BOLTING:B8/8</p>		
<p>FLOATING 3-PC SIDE BALL VALVE (SOFT SEAL) SIZE: 0.38"~2" CLASS:600LB BODY:F304/A105N BALL:F304 SEAT:RPTFE STEM:F304</p>		

# 6 P-78 PROJECT

- SW Ball valves



# P-78 ITEM 별 자료

TECHNICAL PARAMETER	PHOTO	DRAWING
<p>SW 3PC-SIDE ENTRY BALL VALVE SIZE: 1/2" CLASS:800LB BODY:A105 BALL:AISI 410 SEAT:RTFE STEM:AISI 410 BOLTING:B7/2H</p>		
<p>SW/FLANGE 3PC-SIDE ENTRY BALL VALVE SIZE: 3/4" CLASS:800LB BODY:A105 BALL:AISI 410 SEAT:RTFE STEM:AISI 410 BOLTING:B7/2H</p>		
<p>SW/CAP 3PC-SIDE ENTRY BALL VALVE SIZE: 3/4", 1" CLASS:800LB BODY:A105 BALL:AISI 410 SEAT:RTFE STEM:AISI 410</p>		

# 7

## Teflon Lined Ball Valve



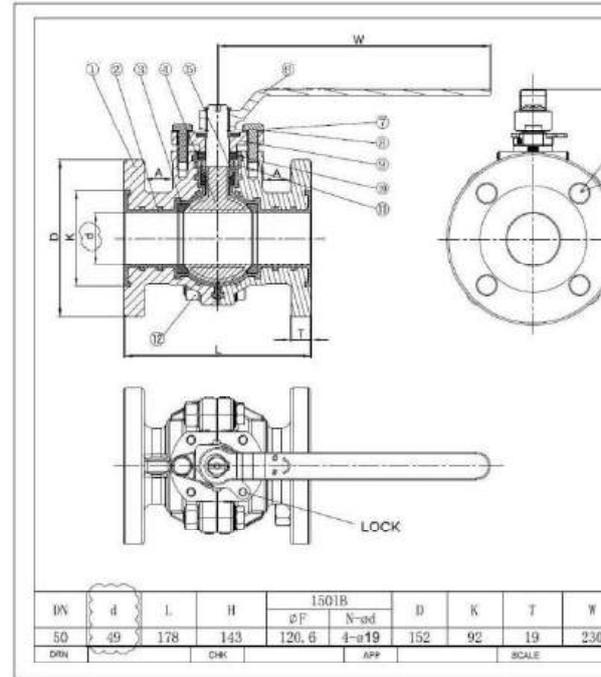
# TEFLON LINED BALL VALVE

## Project:

- S-OIL 온산공장

## Valve Spec:

- 2" PFA TEFLON LINED BALL VALVE



# TEFLON LINED BALL VALVE



# TEFLON LINED BALL VALVE

BODY 연결 부위 V형 밀폐홈 설계로 온도의 변화, 차압등작업조건에도 밀봉성능이 잘되고 수명을 보장된다.

The body connection part features a multi-V-groove sealing design, With extensive experience in environments where temperature changes and differential pressure may cause seat deformation, this design ensures long service life.



Ball과 Stem이 일체형으로 설계되며 BODY 중작동이 안정적이며, 배관에 설치시 볼트와 너트는 충분한 공간이 확보되었다 .

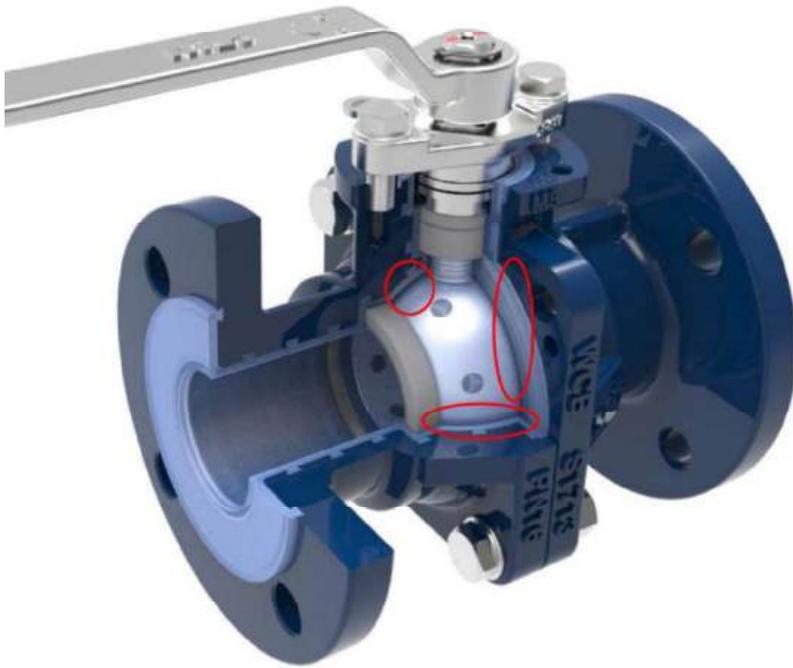
The ball and stem feature an integrated design configuration ensures uniform torque distribution in piping systems, ample clearance is provided for with the body.



# TEFLON LINED BALL VALVE

내벽이 상당히 부드럽고 NO CAVITY 구조로 설계 되어 있어 기존의 볼밸브가 가지고 있는 내부에 이물질이 고이므로 SEAT 에 손상을 일으키는 단점을 보완하여 이물질이 걸리지 않는 작동 구조로 의약,반도체, 식품위생,등의 배관에서 탁월한 성능을 보장한다 .

The inner wall is highly smooth with a no-cavity design, eliminating debris trapping. It addresses the flaw of traditional ball valves—where internal debris accumulation damages the seat—ensuring superior performance in pharmaceutical, semiconductor, food hygiene, and other critical pipelines..



유로 전체면은 DOVETAIL 설계 구조로 되어 있어 탈착되지 않으므로 진공 환경에서 또는 저온 조건에서 인장 및 팽창 방지 능

The entire flow path features a dovetail surface and the inner wall of the flow detachment. This allows it to be used excellent resistance to tension and expansion conditions



# TEFLON LINED BALL VALVE

STEM 2-PIECES PACKING 은 GLAND가 눌러며 PACKING에 압력을 가하여 PACKING 이 STEM으로 밀착되어 STEM을 통하여 유체가 누수되는 것을 방지하면서 STEM 에 과도한 힘이 전달되지 않게 2-PIECE 일체형 구조로 설계되어 TORQUE 가 증가되지 않는다.

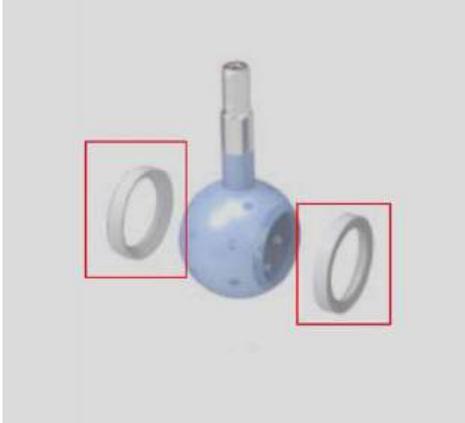
The two-piece packing continuously cages the stem under the pressure of the upper gland to prevent shaft leakage. Due to its unique caging technology, it does not exert excessive force on the stem, thus avoiding an increase in stem torque..



적용하는 SEAT는 PTFE이며 자체 윤활성을 가지며 볼과 완벽한 'TIGHT' SEATING 을

The PTFE seat is precision- surface, providing self-lubricating torque operation and reliable

# TEFLON LINED BALL VALVE



PTFE

Service temperature  
-40° ~ +180°

High crystallinity, Material density > 2.16g/cm<sup>3</sup>,  
Lining thickness ≥ 3.5mm

사용온도 : -29~150°



PFA

Service temperature  
-40° ~ +200°

Excellent chemical resistance and temperature  
resistance,

사용온도 : -29~170°

8

# Teflon Lined Butterfly Valve



# TEFLON LINED BUTTERFLY VALVE

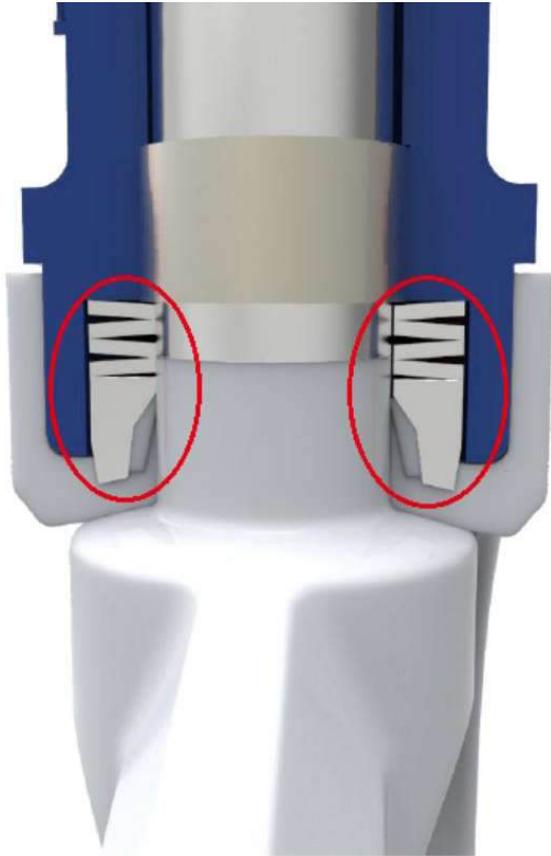


# TEFLON LINED BUTTERFLY VALVE

하중 접시형 스프링을 사용하여 밸브 시트로 지속적으로 압력을 가하여 밸브 시트의 1차 밀봉을 제공하며 엄격한 테스트를 통하여 밀봉 성능이 매우 안정적이고 신뢰할 수 있음을 확인했다.

위아래 두개의 V-RING은 상호 작용하여 시트 2차 밀봉되어 더욱 확고한 밀봉 성능을 보장한다.

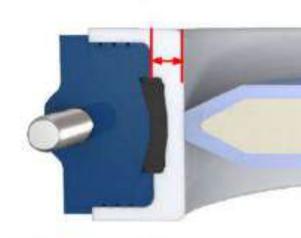
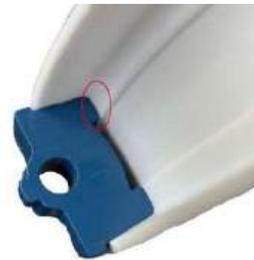
A four-stage loaded Belleville spring washer continuously applies pressure to the valve seat, providing the primary seal. Rigorously tested, it demonstrates exceptional stability and reliability. The upper and lower V-rings intersect with each other to achieve continuous tight sealing.



The fluid contact parts are thickened PTFE , thickness greater than 6mm, which will not be damaged quickly due to fluid scouring , and will be more resistant to vacuum environment than manufacturers with thinner design , which is our unique place.

NO CAVITY 구조로 설계되어 있어 의약, 반도체, 식품위생, 등의 배관에서 탁월한 성능을 보장한다.

Designed with a no-cavity structure, it ensures excellent performance in pipelines for pharmaceuticals, semiconductors, food hygiene, etc.



# TEFLON LINED BUTTERFLY VALVE



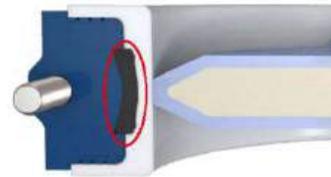
밸브 스템에는 자체 윤활 가능 베어링이 장착되어 있어 토그를 줄이며 오일 주입 없이 유지 보수할 있으므로 액추에이터 장착 작동시 경제적으로 적용하여 고객의 비용을 절감한다.

The valve rod is equipped with self-lubricating shaft bearing, which can reduce the torque and maintenance without oil filling (in contrast, smaller actuators can be selected to reduce the cost)

밸브 시트 뒷면에는 실리콘 재질의 Back up Pad 를 장착하여 시트와 보디 사이의 밀봉을 보장할 뿐만 아니라 PTFE의 가장 큰 약점인 탄력성을 보완한다.

A silicon-based Back up Pad is installed on rear surface of the valve seat to not only ensure sealing between the seat and the body but also compensate for the greatest weakness of PTFE, which is its lack of elasticity

The V-shaped structure is adopted in the inner groove of the valve body, which can reduce part of the torque and form an angle to the seat back, which is resistant to extrusion deformation and internal vacuum pumping of fluid.

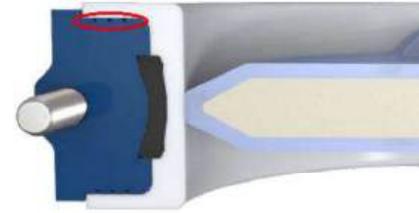


# TEFLON LINED BUTTERFLY VALVE



밸브 DISC와 STEM 일체형, BLOW OUT PROOF로 설계되어 DISC에 관통구멍이 있어 라이닝의 밀착력을 강화시켜 진공 및 열순환에 적합하다.

The valve disc and stem are integrated and designed to be blow out proof. A through-hole in the disc enhances the adhesion of the lining, making it suitable for vacuum and thermal circulation applications.



There is a serration on the end to draw the PTFE seat, which will prevent leakage due to change of temperature difference.



유로구의 홈설계 : 테프론 라이닝 밸브가 파이프에 설치시 밸브 시트 PTFE는 압력을 받아 변형되며 라이닝 표면 처리 홈은 밸브 시트의 라이닝 변형을 위한 공간을 확보하도록 설계되어 라이닝에 의한 밸브 시트의 압출 변형을 감소하며 토크를 줄인다.

Flow channel groove design: The lined valves are installed in pipes, the PTFE valve seat deforms under pressure. The lined surface-treated groove is engineered to provide space for seat lining deformation, reducing extrusion deformation of the seat caused by lining and lowering torque.

밸브 시트 공정: PTFE는 전체 PTFE 원재료보다 높다.

Valve seat process: PTFE is machined from solid PTFE, which results in higher density than molded alternative.

진공용 밸브의 시트 라이닝은 PFA 라이닝은 몰드 시트라이닝에는 적용

Suitable materials for vacuum applications are PFA and RPTFE. Since PFA is a process, it cannot be

# TEFLON LINED BUTTERFLY VALVE



**PTFE**

**Service temperature**  
**-40° ~ +180°**

High crystallinity, Material density > 2.16g/cm<sup>3</sup>,  
Lining thickness ≥ 3.5mm

사용온도 : -29~150°

진공(-0.1Mpa미만): -10°C~70°C



**RPTFE (M111)**

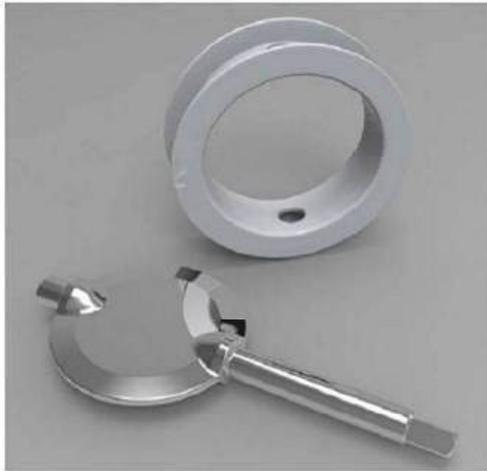
**Service temperature**  
**-40° ~ +180°**

Reinforced PTFE, Increased creep resistance,  
High temperature resistance will be much better

사용온도 : -29~150°

진공(-0.1Mpa미만): -10°C~70°C

# TEFLON LINED BUTTERFLY VALVE



PTFE/SUS316

Service temperature  
-40° ~ +180°

High purity PTFE, Polished disc, For food grade occasions

사용온도 : -29~150°

진공(-0.1Mpa미만): -10℃~70℃



PFA

Service temperature  
-40° ~ +200°

Excellent chemical resistance and temperature resistance,

사용온도 : -29~170°

**Thank you for attention**

