



# Company Profile

A decorative graphic consisting of a thin orange line forming a square shape with a small orange square at the top right corner.

*Mechanical and Fluid Control Systems*

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



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# 1

## About Us





# Our Mission & Vision



**GOAL**



**MISSION**



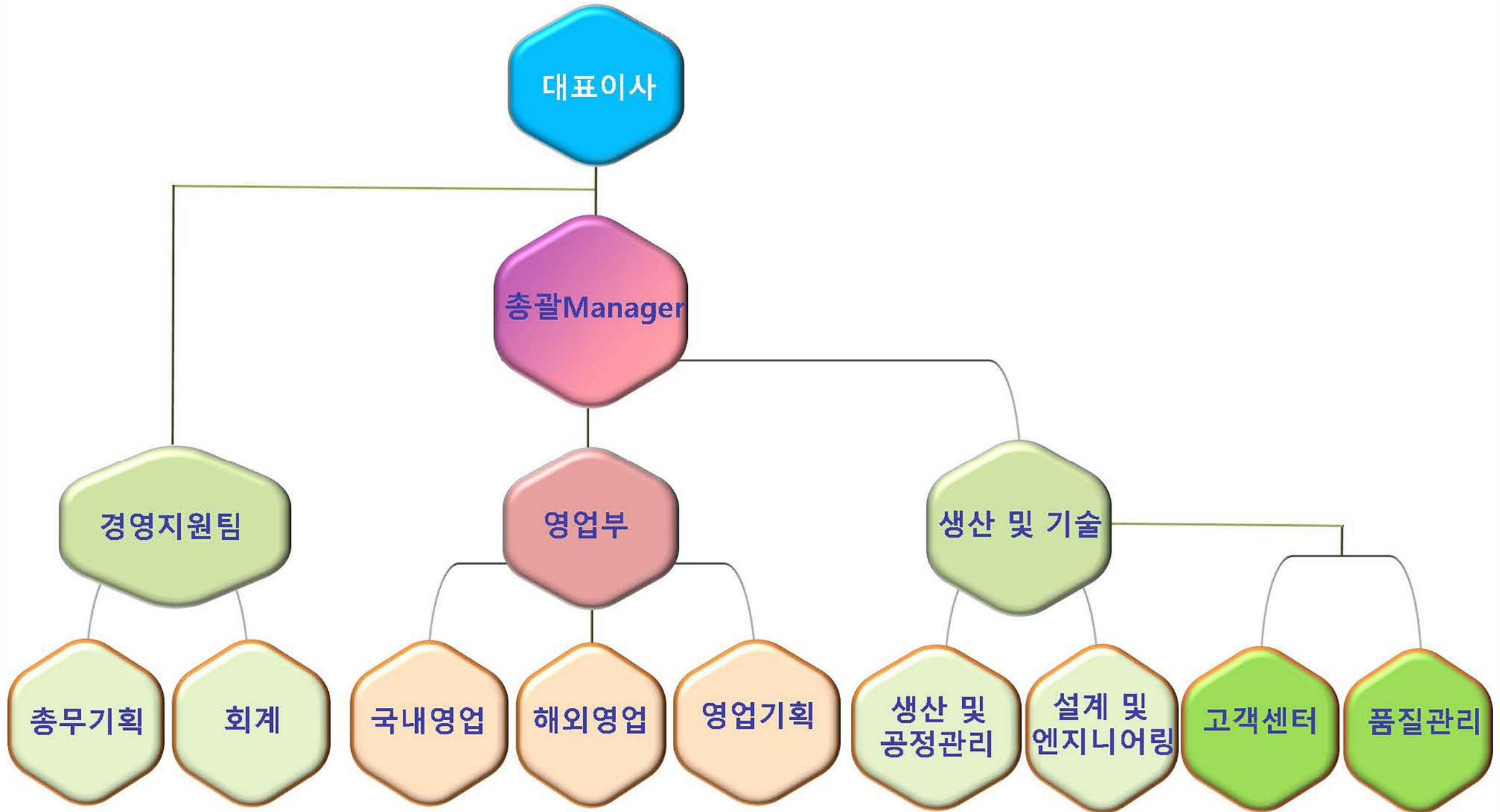
**VISION**

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

“더 높은 표준을 향하는 기업, 사회의 빛과 소금이 되는 기업”  
"Be the highest of standards, be the light and salt of the society"

# Organization Chart



# 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 of Hanhwa Power System)

- 중국 생산 공장 및 한국 한화테크윈 창원 공장에 표준품 및 주문형 밸브 납품  
Supplied standard products and customized valves to Hanwha's China production 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 by Hanwha Techwin)

2018.02 고온, 고압, 고차압 Butterfly Valve 개발 한화파워시스템 주문형 압축기 라인 공급  
Develop High Tem. ,High Pre. ,and High Differential Pressure Butterfly Valves, Supply Hanwha Power System  
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) PROJECT

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



## Experienced team

Our team has years of experience in the industry and is committed to providing our customers with the best possible service



## 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



## Excellent customer service

We pride ourselves on providing excellent customer service. Our team is always available to answer your questions and provide you with the support you need

# 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

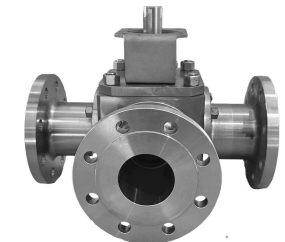


## 3-WAY BALL VALVE

**Size:** 1/2"-8"

**Class:** 150-600LB

**Fluid:** Water, Steam, Gas,Oil,Chemical proess



# Products 2.



## GLOBLE CONTROL VALVE

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



## DOUBLE OFFSET BUTTERFLY VALVE

**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 balance  
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&Lug  
**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



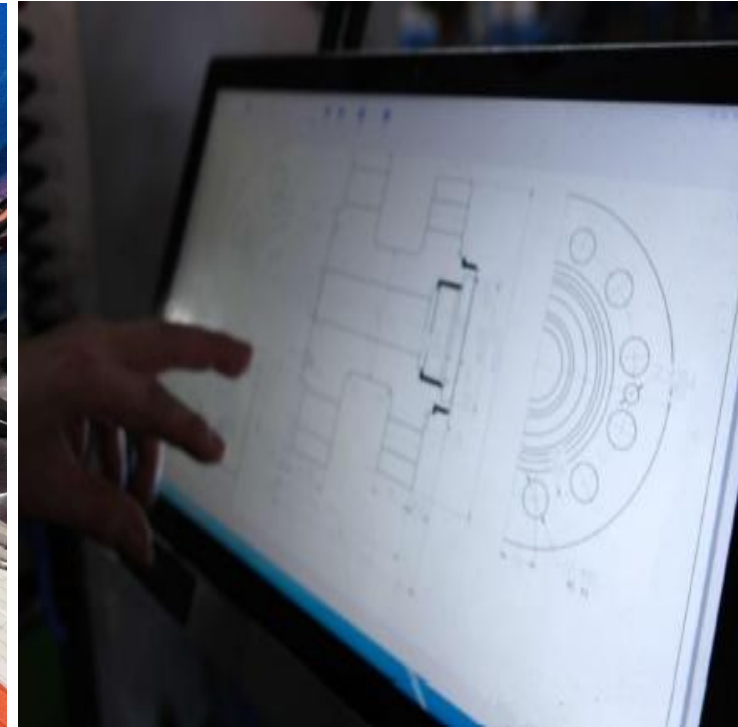
# Pigging Valve



# Electric Valve and Multi-way Valve

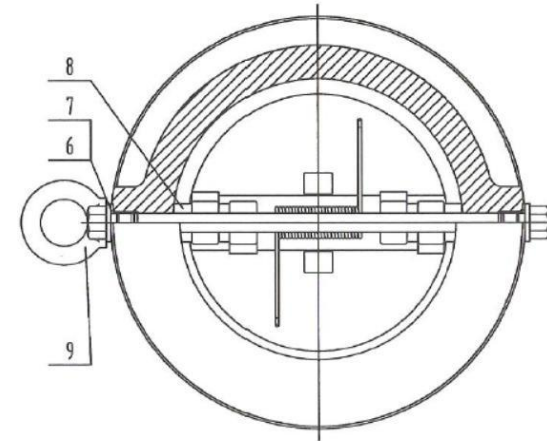


# Traceability





## STANDARD DESIGN



WCB+PTFE DISC(TIGHTEN BY SCREW)

# Inspection & Test

## Test



MT(Magnetic Particle Inspection)

According to API 598 Test

## UT(Ultrasonic Examination)



## Test

### PT(Dye Penetrant Inspection)



### Oil inspectionin



# Packing

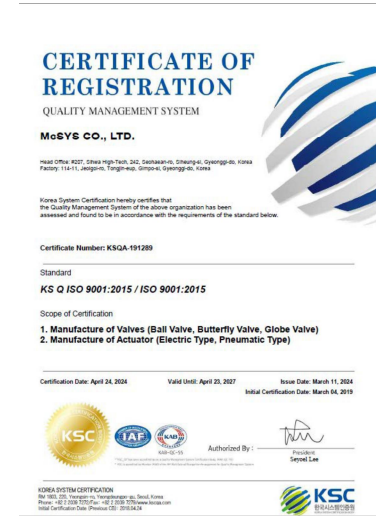


# Certificate- I

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



벤처기업확인서



ISO9001



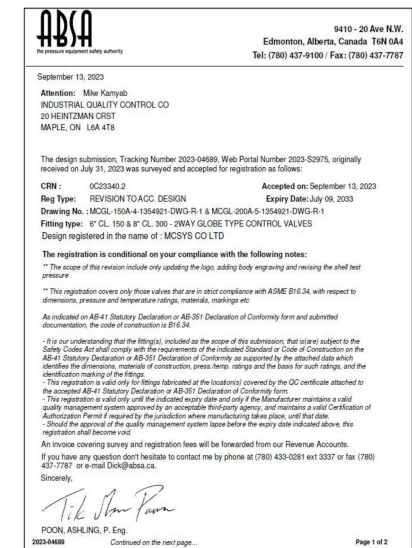
ISO14001



BV



TR/CU

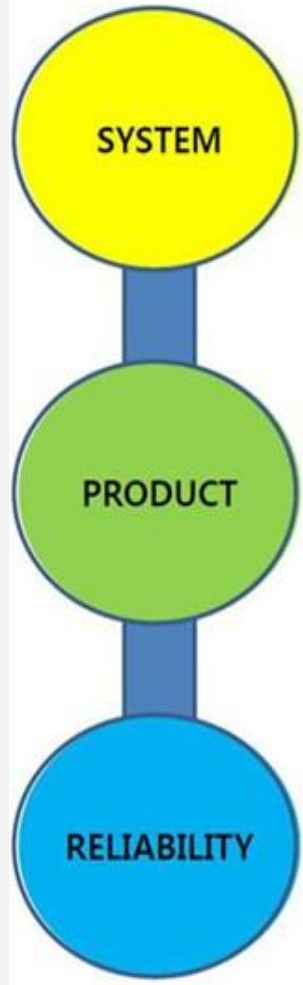


CRN

# 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 2013(1/2)

CUSTOMER	ITEM	REFERENCE
SAMSUNG ELECTRIC-CHINA	DWA-N30P6(ON-OFF)	24V,(30Nm)
HIH POWER PLANT	40A SCS13 16K	3-WAY MANUAL BALL V/V
BELLOWS VALVE	SW890T-15A	PNEUMATIC GLOBE V/V
SIEMENS KOREA	GLOBE CONTROL	
HIH POWER PLANT	40A,APL210,16K,SCS13	3-WAY MANUAL BALL V/V
HYUNDAI TEST BENCH	40A,2-WAY	BALL VALVE
SAMSUNG DISPLAY	PNEUMATIC CONTROL V/V	10K.CH WATER, SG-65A/290 DIA
	PNEUMATIC CONTROL V/V	10K.STEAM, SG-15A/250 DIA
HIH POWER PLANT	40A,16K,SCS13	3-WAY AUTO BALL V/V
ANSAN CITY	SG-25A(SUS304,10K) 2-Way,4-20mA	PNEUMATIC GLOBE V/V
	BELLOWS VALVE SW840G-15A	PNEUMATIC GLOBE V/V
	SW840G-65A	PNEUMATIC GLOBE V/V
	SW840G-100A	PNEUMATIC GLOBE V/V
	SW840G-65A	PNEUMATIC GLOBE V/V
	65A LIMIT&AUTO	3-WAY BALL V/V
	15A	PNEUMATIC GLOBE V/V
	SG-15A/250 DIA 10K.STEAM	PNEUMATIC GLOBE V/V
	SW840G-25A	PNEUMATIC GLOBE V/V
	SW800T-15A	PNEUMATIC GLOBE V/V
SAMSUNG DISPLAY	PNEUMATIC CONTROL V/V	10K,HOT WATER, CG-100A/370 DIA
	PNEUMATIC CONTROL V/V	10K.CH WATER, CG-200A/480 DIA
	PNEUMATIC CONTROL V/V	10K.HOT WATER, CG-80A/370 DIA
	PNEUMATIC CONTROL V/V	10K.STEAM, CG-100A/370 DIA
	PNEUMATIC CONTROL V/V	10K.STERM, CG-80A/370 DIA
	PNEUMATIC CONTROL V/V	10K.STEAM, SG-65A/290 DIA
	PNEUMATIC CONTROL V/V	10K.HOT WATER, SG-65A/290 DIA
	80A.Repair 3"	PNEUMATIC GLOBE V/V
	100A.Repair 4"	PNEUMATIC GLOBE V/V

# Manual & Control Valve Reference 2013(2/2)

CUSTOMER	ITEM	REFERENCE
HYUNDAI STEEL	BALL VALVE 4"	(RF)150#-H/A216-WCB
	3-WAY BALL	40A
4.2-1.4MPA ANSI600 RF	CG-80A/370 DIA	PNEUMATIC CONTROL VALVE 600#
	CG-100A/370 DIA	PNEUMATIC CONTROL VALVE 600#
	CG-100A/370 DIA	PNEUMATIC CONTROL VALVE 600#
1.4-1.2MPA ANAI300 RF	CG-100A/370 DIA	PNEUMATIC CONTROL VALVE 300#
1.4-1.2MPA ANSI600 RF	CG-200A/480 DIA	PNEUMATIC CONTROL VALVE 600#
POSCO ( KWANG YANG)	SG-50A	PNEUMATIC CONTROL VALVE
BELLOWS VALVE	SW840G-125A	PNEUMATIC GLOBE V/V
	SW840G-100A	PNEUMATIC GLOBE V/V
	SW890T-15A	PNEUMATIC GLOBE V/V
SAMSUNG ELECTRIC	SG-15A	20K,A216
	ACTUATOR	290ACTUATOR
	SG-50A(SUS304)	10K,RF
	ACTUATOR	290 ACTUATOR
	ACTUATOR	290 ACTUATOR
	ACTUATOR	250 ACTUATOR
SAMSUNG ELECTRIC (CHINA)	DWA-N30P6(ON-OFF)	24V,(30Nm)
POSCO( KWANGYANG )	CG-25A(20K) 2-WAY,4-20mA	CG-25A(20K)
HIH POWER PLANT	40A,16K,SCS13	3-WAY AUTO BALL V/V
HYUNDAI HEAVY INDUSTRY POWER PLANT	3-WAY AUTO BALL VALVE	40A,16K,SCS13
	3-WAY MANUAL BALL VALVE	40A SCS13 16K
	3-WAY AUTO BALL VALVE	40A,16K,SCS13
	3-WAY MANUAL BALL VALVE	40A,APL210,16K,SCS13
	3-WAY 65A BALL VALVE	LIMIT&AUTO

# Manual & Control Valve Reference 2014(1/3)

CUSTOMER	ITEM	REFERENCE
HYUNDAI STEEL	40A SCS13 16K, T-PORT, L-PORT	3-WAY MANUAL BALL V/V
SAMSUNG ELECTRIC	SW840G-100A	
	SW890G-15A	
	SW890G-20A	
	SW890T-15A	
POSCO ( KWANG YANG)	ACTUATOR	290 ACTUATOR
	VSD 21.50	BC SCREW 16K 2WAY
	DYA-S20	AC24V 0-10V
HYUNDAI STEEL	40A SCS13 16K	3-WAY MANUAL BALL V/V
	25A	3-WAY APL210 BALL V/V
POSCO ( KWANG YANG)	SG-25A(SUS304,10K)	2-Way,4-20mA, STEEM
	ACTUATOR	290 ACTUATOR
KOLON (GUMI)	VFD 32.80	FC 80A 20K 3WAY
SAMSUNG SDI	VBD 10K 400A 2-WAY	CHILLED WATER
HYUNDAI HEAVY INDUSTRIAL BANGLADESH	PRESSURE 16K	3-WAY MANUAL BALL V/V
	VALVE WITH PNEUMETIC ACTUATOR16K, SCS13	3-WAY AUTO BALL V/V
SAMSUNG ELECTRIC	SW840G-25A	
	SW840G-50A(10K)	
	SW840G-80A	
	SW840G-300A	RETROFIT
	SW840G-15A	2WAY 30K
	SW890G-15A	2WAY 30K
	SW890T-15A	2WAY 30K
	SW890G-15A	2WAY 30K FLANGE 25A
	SW890T-40A	
	SW840G-40A	RETROFIT
	SW840G-50A(10K)	

# Manual & Control Valve Reference 2014(2/3)

CUSTOMER	ITEM	REFERENCE
SAMSUNG SDI	SG-50A	20K,A216
HYUNDAI HEAVY INDUSTRY (BRAZIL GLOBAL SPARE VALVE)	BALL VALVE ON-OFF SCS13, 16K	3-WAY BALL 40A
		2-WAY AUTO BALL VALVE
SIN BO LYEONG POWER PLANT BLR SHUT-OFF VALVE MPS	CG22-DRS4/150A	A216 WCB, 300#, 2WAY CONTROL VALVE
	NO 1.2 PLANT	1,000MW
SAMSUNG ELECTRIC	SW890G-20A	
	ACTUATOR	YOKE CLAMP
	SW890T-15A~150A	250 ACTUATOR
	SW890G-300A	
	SW890T-400A	250 ACTUATOR
	SW890T-200A	251 ACTUATOR
POSCO ( KWANG YANG)	SG-25A(20K) ETC	2-WAY,4-20mA
HAITI / ES88H(220V)	BALL VALVE	2-WAY AUTO BALL VALVE
	40A,16K,SCS13	3-WAY AUTO BALL V/V
	40A ~200ASCS13 16K	3-WAY MANUAL BALL V/V
SAMSUNG ELECTRIC	SW840G-100A	TRIM
	SW840G-65A	TRIM
	SW840G-80A	cf8 370da
	PNEUMATIC SYSTEM ACTUATOR	DIAP
POSCO ( KWANG YANG)	CG-80A/370 DIA	10K.STERM
	SW890T-15A	CF8/PTFE
	SW840G-200A	316SS/480DA
	SW840G-100A	316SS/370RA
	SW840G-80A	316SS/370DA
	SW840G-65A	316SS/370RA
	SW840G-65A	316SS/290DA

# Manual & Control Valve Reference 2014(3/3)

CUSTOMER	ITEM	REFERENCE
HYUNDAI IRAQ KRG PROJECT	50A,10K	3-WAY MANUAL BALL V/V
	50A,16K,	3-WAY MANUAL BALL V/V
	50A,16K,	3-WAY MANUAI BALL V/V
	65A,10K,ON-OFF	2-WAY PNEUMATIC BALL V/V
	80A,10K,ON-OFF	2-WAY PNEUMATIC BALL V/V
HHI HAINA 1.7MW PPS	40A,16K	2-WAY MANUAL BALL V/V
SAMSUNG ELECTRIC	ACTUATOR	
	SW840G-80A	316SS/3780RB
	SW840G-40A	410SS/290DA
SAMSUNG ELECTRIC	SW890T-15A	
	SW840G-80A	WCB/316/370DA
	SW840G-80A	CF8/316/370RA
	SW840G-125A	CF8/316SS/480DA
	SW890G-20A	CF8
POSCO( KWANGYANG )	VFD22.15	15A, 2way FCD
	ACTUATOR	290 ACTUATOR
SAMSUNG ELECTRIC	SW840G-25A	
	SW840G-40A	
	SW840G-65A	
	SW840G-80A	
	SW840G-100A	
	SW840G-125A	
	SW840G-150A	

# Manual & Control Valve Reference 2015(1/2)

CUSTOMER	ITEM	REFERENCE
HYUNDAI HEAVY INDUSTRY	3way BALL VALVE	ON-OFF/10K
	3-WAYBALL VALVE	MANUAL/ SCS13 16K
POSCO (KWANG YANG)	ACTUATOR	290 RA
	GLOBE CONTROL VALVE SG-25A(SUS304,10K)	2-Way,4-20mA
SAMSUNG ELECTRIC	SW840G	
	SW890T	Bellows Valve
HYUNDAI HEAVY INDUSTRY	BALL VALVE	2-WAY 10K
	VM-1300-200A	PLUG RETROFIT
HYUNDAI HEAVY INDUSTRY	BALL VALVE	150LB ANSI
SAMSUNG ELECTRIC	GLOBE CONTROL VALVE SW890T	Bellows Valve / CF8 PTFE
	SW840G	WCB410SS370RA
	SW890G	Bellows Valve
SAMSUNG ELECTRIC	SW840G-40A(10K)	290DA,316SS
	SW840G-40A(10K)	290DR,410SS 20K
HYUNDAI STEEL	VM-1300-200A	TRIM교체/비례
	VM-1000-350A(40k)	TRIM 교체/ON-OFF
	VM-1000(MOR)20K	TRIM/PLUG교체
	550G-20K-250A	VKIX106-017
SAMSUNG ELECTRIC	SW840G-65A(20K)	316SS / 370 RA
	SW840G-80A(10K)	410SS / 290 RA
	SW840G-25A	410SS / 250 RA
	SW840G-40A(10K)	316SS / 290 DA
	SW840G-40A(10K)	410SS / 290 RA
	SW840G-300A	BELLOWS VALVE
HYUNDAI HEAVY INDUSTRY SURNECO PPS	3-WAY MANUAL BALL V/V	40A,16K
	3-WAY AUTO BALL V/V	40A,16K,SCS13
SAMSUNG ELECTRIC	840G-100A	TRIM CHANGE 410SS에서 316SS
	SW840G-40A(10K)	
POSCO (KWANG YANG)	ACTUATOR	290 ACTUATOR
	CG-50A	RF
SAMYANG BVP	BALL VALVE 40A	2-WAY 10K



# Manual & Control Valve Reference 2015(2/2)

CUSTOMER	ITEM	REFERENCE
POSCO (KWANG YANG)	SG SERIES	2-WAY,4-20mA
	SG-32A(10K)Water	2-way,sts304,yt1000I
SAMSUNG ELECTRIC	SW890T-15A	BELLOWS VALVE
	VM-1000-350A(40k)	ON-OFF
HYUNDAI STEEL	CG-065DS/ACT370mm	65A (10K)
Brazil Camacary 2&3 Dpp	BALL VALVE	40A,3-WAY
SAMSUNG ELECTRIC	SW840G-200A	BELLOWS VALVE
	SW840G-50A(10K)	
	SW840G-15A	
IRAQ KAR3 8.5MW	3-WAY MANUAL BALL V/V	L-PORT / APL210,16K,SCS13
HYUNDAI STEEL	501G-20K-250A	
PANAMA 57MW PPS	3-WAY APL210 BALL V/V	25A / L-PORT
	3-WAY MANUAL BALL V/V	40A SCS13 16K / T-PORT
	3-WAY MANUAL BALL V/V	40A SCS13 16K / L-PORT
LG CHEM- PAJU	2Way v/v Repair-ACP-200A	TRIM ,SEAT
	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	10K
		10K
	2-way Pneumatic Ball V/V	10K,ON-OFF

# Manual & Control Valve Reference 2016~2019

CUSTOMER	ITEM	REFERENCE
HYUNDAI STEEL	CG-200A/480 DIA	10K.CH WATER
SAMSUNG ELECTRIC	SW840G-40A(10K)	
FS CENTER	SW840G-50A(10K)	BELLOWS VALVE
	SW890G-15A	
	SW890T-15A	
POSCO (KWANG YANG)	CG 100A 10K㉔	HYDROGEN GAS
FS CENTER	SW840G-40A(10K)	
DAYOUNG TECH	ACTUATOR	290 ACTUATOR
SAMYOUNG PNP	CG-350A (40K)	YT3400L,4-20mA
HIH	SG-SERIES	(WATER)10K
	SG-SERIES FOR Water	
	CG-150A-RA480	
KOLON	CG-80A CF8M 300#	MIXING GAS
HYUNDAI STEEL	CG-250A (300#)	HYDROGEN GAS
DAYOUNG TECH	SG-SERIES	(WATER)10K
HYUNDAI STEEL	VM-1300-200A	RETROFIT
HYUNDAI ENGINEERING	GATE , GLOBE	PHILIPPINES THERMA VISAYAS 석탄화력 발전소
	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	ITEM
SAUDI ARAMCO JAZAN ON,OFF	BALL CONTROL VALVE (ON-OFF)
S-OIL AREA 3	CONTROL VALVE (ACTUATOR ASS`Y)
S-OIL AREA 2,4	CONTROL VALVE (ACTUATOR ASS`Y)
S-OIL OXIDATION	CONTROL VALVE (ACTUATOR ASS`Y)
TISINGO	CONTROL VALVE (ACTUATOR ASS`Y)
BIDBOLAND	CONTROL VALVE (ACTUATOR ASS`Y)
SAMSUNG ELECTRONIC	BUTTERFLY CONTROL VALVE (ON-OFF)
KIA HWASEONG BOV	BUTTERFLY CONTROL VALVE (MODULATING)
POSCO GWANGYANG	CONTROL VALVE (ACTUATOR ASS`Y)
ANYANG FGC	CONTROL VALVE (ACTUATOR ASS`Y)
KIA HWASEONG BLOCK	BUTTERFLY CONTROL VALVE (ON-OFF)
DSME MOL	CONTROL VALVE (ACTUATOR ASS`Y)
HYDROSTOR	CONTROL VALVE (ACTUATOR ASS`Y)
ALMALYK GOK IGV	CONTROL VALVE (ACTUATOR ASS`Y)
SAUDI ARAMCO ASPHALT	CONTROL VALVE (ACTUATOR ASS`Y)
KNPC ZOR	CONTROL VALVE (ACTUATOR ASS`Y)
FADHILI	CONTROL VALVE (ACTUATOR ASS`Y)
E_KW_HEC_KNPC AL-Zour LNGI Air COMP	CONTROL VALVE (ACTUATOR ASS`Y)
SPPC FGC IGV	CONTROL VALVE (ACTUATOR ASS`Y)
KAZANORGSINTEZ IGV	CONTROL VALVE (ACTUATOR ASS`Y)



# 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)
TAKHIATASH	CONTROL VALVE (ACTUATOR ASS'Y)

PROJECT	ITEM
HANWHA TOTAL TEST LEAGUE	CONTROL VALVE (ACTUATOR ASS'Y)
ASE BOEING	CONTROL VALVE (ACTUATOR ASS'Y)
LINDE TEMIRTAU IGV	CONTROL VALVE (ACTUATOR ASS'Y)
TEST LEAGUE GLOBE, BUTTERFLY	GLOBE, BUTTERFLY CONTROL VALVE
LINDE SEOSAN COOLING WATER	BUTTERFLY CONTROL VALVE (ON-OFF)
SMALL TEST LEAGUE	GLOBE CONTROL VALVE (MODULATING)
LINDE SEOSAN	CONTROL VALVE (ACTUATOR ASS'Y)
DONGYANG P&F	CONTROL VALVE (ACTUATOR ASS'Y)
COSMODAYN	CONTROL VALVE (ACTUATOR ASS'Y)
RUSSIA TAFNEFT	CONTROL VALVE (ACTUATOR ASS'Y)
LINDE SHALALA	CONTROL VALVE (ACTUATOR ASS'Y)
PRAXAIR	CONTROL VALVE (ACTUATOR ASS'Y)
ALMALKYK GOK IGV	CONTROL VALVE (ACTUATOR ASS'Y)
YEOSU Y4 NG BOOSTER IGV	CONTROL VALVE (ACTUATOR ASS'Y)
SSAB	GLOBE CONTROL VALVE (MODULATING)
YUANLI METAL	CONTROL VALVE (ACTUATOR ASS'Y)
HYDROSTOR TERRAMIN	BUTTERFLY CONTROL VALVE (MODULATING & ON-OFF)
HONGREN GAS	CONTROL VALVE (ACTUATOR ASS'Y)
SIAD BAC, MAC	CONTROL VALVE (ACTUATOR ASS'Y)



# Control Valve Reference 2019

PROJECT	ITEM
LINDE (KIHEUNG)	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	ITEM
APUS CARSON IGV	CONTROL VALVE (ACTUATOR ASS`Y)
SUZHOU OXYGEN BNC_RCV	GLOBE CONTROL VALVE (MODULATING)
LG CHEMICAL 여수 IGV	CONTROL VALVE (ACTUATOR ASS`Y)
GS CALTEX IGV	CONTROL VALVE (ACTUATOR ASS`Y)
SIAD NORWAY IGV	CONTROL VALVE (ACTUATOR ASS`Y)
APUS CARSON IGV	CONTROL VALVE (ACTUATOR ASS`Y)
APUS BIG RIVER RCV	GLOBE CONTROL VALVE (MODULATING)
APUS BIG RIVER STEEL IGV	CONTROL VALVE (ACTUATOR ASS`Y)
US APCI	CONTROL VALVE (ACTUATOR ASS`Y)
SUZHOU OXYGEN IGV	CONTROL VALVE (ACTUATOR ASS`Y)
MESSER TATRAGAS	CONTROL VALVE (ACTUATOR ASS`Y)
CN_MingJu Gas_LOX3200	CONTROL VALVE (ACTUATOR ASS`Y)
LINDE TAIWAN TAICHUNG NIC	CONTROL VALVE (ACTUATOR ASS`Y)

# Manual & Control Valve Reference 2020

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 MASIAN 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	ITEM
E_EU_Air Liquide Cryowin MR	CONTROL VALVE (ACTUATOR ASS'Y)
BALIKAPAPAN IGV	CONTROL VALVE (ACTUATOR ASS'Y)
SIAD L43137 RUSSIA MAC IGV	CONTROL VALVE (ACTUATOR ASS'Y)
Cosmodyne Algeria RAC	GLOBE CONTROL VALVE (MODULATING)
RUSSIA SIAD L43137 RNG IGV	CONTROL VALVE (ACTUATOR ASS'Y)
국책과제 시험리그 BFV ON-OFF	BUTTERFLY CONTROL VALVE (ON-OFF)
ALMALYK IGV	CONTROL VALVE (ACTUATOR ASS'Y)
YNCC IGV	CONTROL VALVE (ACTUATOR ASS'Y)
ASTURIAS	BUTTERFLY CONTROL VALVE (MODULATING)
POSCO CERAMIC V-BALL	CERAMIC V-BALL MANUAL
POSCO SCS13 BOV	BUTTERFLY CONTROL VALVE
Bahrain Refinery Modernization Project	T.F LINED BALL MANUAL
탈색공정 회수유지 보관탱크 교체	BALL MANUAL
POSCO 포항 고로 지관건조버너	V-BALL MANUAL
현대제철 V-NOTCH BALL V/V	V-BALL MANUAL
POSCO TFL LINED BF V/V	T.F LINED BUTTERFLY VALVE ON-OFF
POSCO JARKET PLUG VALVE	JARKET PLUG MANUAL
POSCO PVC BF V/V	PCV BUTTERFLY VALVE ON-OFF
JMC RDMP 1~2차	TOP ENTRY, SIDE ENTRY BALL VALVE MANUAL

# Manual & Control Valve Reference 2021~2022

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	ITEM	
Hyundai Engineering Indonesia Balikpapan Refinery Development Project (RDMP PJT)	3 <sup>rd</sup>	TOP ENTRY, SIDE ENTRY BALL VALVE
	3-1 <sup>rd</sup>	TOP ENTRY, SIDE ENTRY BALL VALVE
	4 <sup>th</sup> , 4-1 <sup>th</sup>	TOP ENTRY, SIDE ENTRY BALL VALVE
	5 <sup>th</sup>	TOP ENTRY, SIDE ENTRY BALL VALVE
	6 <sup>th</sup>	TOP ENTRY, SIDE ENTRY BALL VALVE
	6 <sup>th</sup> -1 <sup>th</sup>	MANUAL BALL VALVE
	7 <sup>th</sup>	TOP ENTRY, SIDE ENTRY BALL VALVE
	8 <sup>th</sup>	TOP ENTRY, SIDE ENTRY BALL VALVE
	9 <sup>th</sup>	TOP ENTRY, SIDE ENTRY BALL VALVE
Samsung Engineering Bahrain BAPCO Modernization Program (BMP PJT)	1 <sup>st</sup>	TEFLON LINED BALL VALVE
	2 <sup>nd</sup>	TEFLON LINED BALL VALVE
	3 <sup>rd</sup>	TEFLON LINED BALL VALVE
	4 <sup>th</sup>	TEFLON LINED BALL VALVE
	5 <sup>th</sup>	TEFLON LINED BALL VALVE
CP MEIJI #2101	BUTTERFLY CONTROL VALVE	
GUANGXI JINHAI STS	BUTTERFLY CONTROL VALVE	
KAIFENG SAIPU AS #28	BUTTERFLY CONTROL VALVE	
SICHUAN RONGHANG TEXTILE	BUTTERFLY CONTROL VALVE	
LUCHUAN GAS BOV	GLOBE CONTROL VALVE	
ANOPC AHC IAC IGV	CONTROL VALVE (ACTUATOR ASS'Y)	



# Manual & Control Valve Reference 2021~2022

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



# Manual & Control Valve Reference 2021~2022

PROJECT	ITEM
MSC EJECTOR	TEFLON LINED BUTTERFLY VALVE ON-OFF
22MT026 유니슨HKR	BUTTERFLY CONTROL VALVE
MSC EJECTOR	TEFLON LINED PLUG VALVE / BUTTERFLY CONTROL VALVE
22MT069	BALL MANUAL
22MT080 유니슨_신화인터텍 BFV	BUTTERFLY MANUAL VALVE
BUTTERFLY MANUAL VALVE	BUTTERFLY MANUAL VALVE
송풍지관 건조장치	V-NOTCH BALL
SEGMENT BALL V/V(긴급)	V-NOTCH BALL
Petrobras HHI P-78 PJT	BALL MANUAL / BUTTERFLY CONTROL VALV
6코크스	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 2023~2025

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 추가건	BUTTERFLY CONTROL VALVE
RDMP PJT 11차	BALL MANUAL
MMR PJT	BALL MANUAL
SHI Cedar	BUTTERFLY CONTROL VALVE
RDMP 12차	BALL MANUAL

PROJECT	ITEM
6코크스	BUTTERFLY CONTROL VALVE
POSCO Argentina 2단계 상공정 PJT	BUTTERFLY CONTROL VALVE
Hyundai Steel COG 품질공사 PJT	BUTTERFLY CONTROL VALVE
Exotic Valves_추가분	KNIFE GATE / CHECK / GATE / BALL MANUAL
RDMP 13차	BALL MANUAL
Murim P&P-보일러PKG_1차분	BALL MANUAL
Murim P&P-보일러PKG_2차분	BALL MANUAL
RDMP 14차	BALL MANUAL
Hyundai Rotem	BUTTERFLY CONTROL VALVE
Murim P&P-보일러PKG_3차분	BALL MANUAL
Murim P&P GSGP PJT	BALL MANUAL
포항 포스코 3파이넥스 화재 복구건	V-NOTCH BALL
NOC RUYA Project	BUTTERFLY CONTROL VALVE
POSCO GATUN PROJECT	BALL MANUAL
S-OIL 온산공장	PFA T.F LINED BALL VALVE

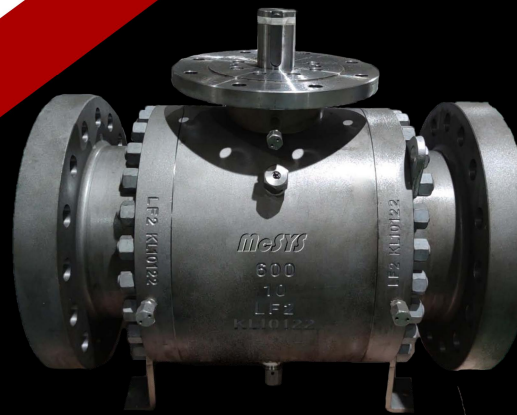
# Shipyard Reference 2021 ~ 2024

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	ITEM
PETROBRAS P-79 (DSME)	GLOBE CONTROL VALVE 6" AND 4 OTHER SIZE
PETROBRAS P-79 (CARRIER)	MANUAL BALL VALVE 3' AND 2 OTHER SIZE
PETROBRAS P-79 (CARRIER)	"Y" STRAINER 3" AND 1 OTHER SIZE
ARCTIC LNG2 GBS1	2WAY PNEUMATIC ON/OFF VALVE 2WAY PNEUMATIC CONTROL VALVE
ARCTIC LNG2 GBS2	2WAY PNEUMATIC ON/OFF VALVE 2WAY PNEUMATIC CONTROL VALVE
ARCTIC LNG2 GBS3	2WAY PNEUMATIC ON/OFF VALVE 2WAY PNEUMATIC CONTROL VALVE
DSME JANSZ IO	2WAY MOTORIZED VALVE (SUPER DUPLEX)
SHI PETRONAS ZLNG	2WAY MOTORIZED VALVE 3WAY CONTROL VALVE

# 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



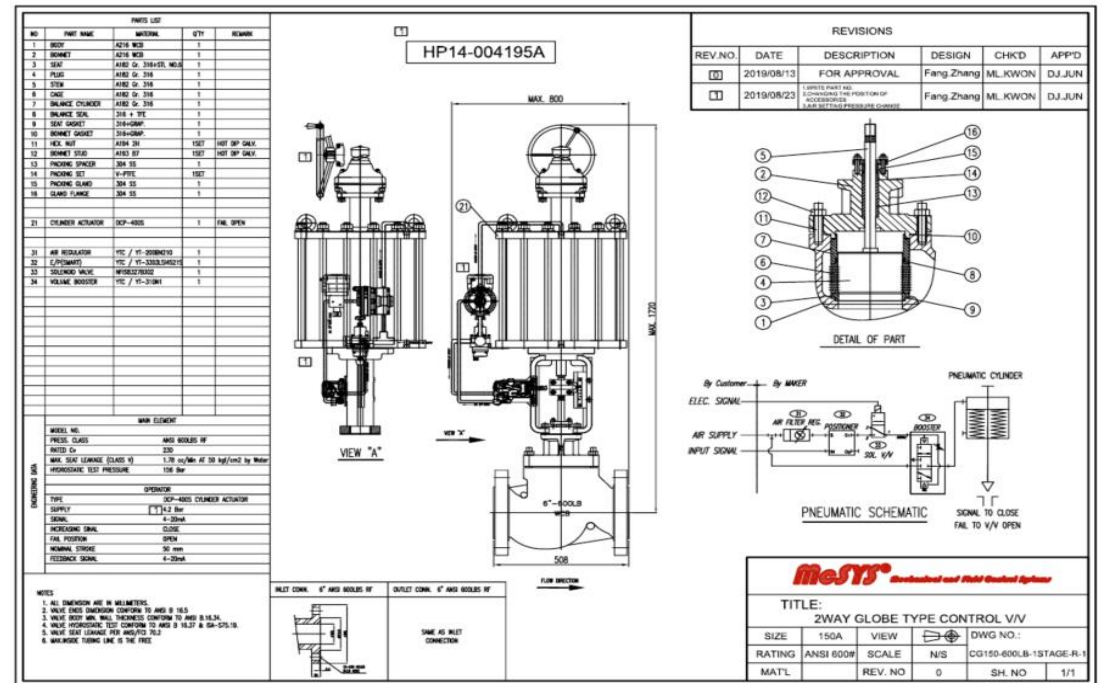
# Globe Control Valve

## Projects:

- UAE LAYYAH CCPP FGC
- HAEMI 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>McSYS</b>		Project	UAE Layyah CAPP FGC, RCV			Tag No.				
		Customer				Qty	SHT. No. 1			
		Utl. Client				Revision No.	Date 19/8/23			
		Inq./P.O. No.				Serial No.				
Process										
Application										
Fluid		GAS	AIR	Critical Pr.	BarA	Critical Tr.	Deg C			
UNITS		RECYCLE	MIN. at 49hz	MIN. at 50hz	MIN. at 51hz					
Flow Rate		Kg/hr	63108	20556	20268	18756				
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				
GENERAL		Inlet Pipe Size	12 Inch	STD	Sch.	Type	E/P (SMART-HART)			
		Outlet Pipe Size	12 Inch	STD	Sch.	Mfr / Model	YT-3303LS145215			
		Design Pressure	[Min]	[Max]	50 BarG	Input Signal	4 - 20 mA DC			
		Design Temperature	[Min]	-20	[Max]	150 Deg C	Increase Signal To	VALVE CLOSE		
		Max. Shut-Off Dp.	50	Bar						
VALVE BODY / BONNET		Model No.								
		Body Type	2WAY 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							
VALVE TRIM		Trim Type	MULTI HOLE (1 - STAGE)							
		Port Size	5 in	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	A182 Gr. 316							
		Plug /Disc /Ball	A182 Gr. 316							
		Seat Ring	A182 Gr. 316 + STL NO 6							
		Cage /Retainer	A182 Gr. 316							
		Balance Seal	316 + TFE							
		Packing	V - PTFE							
		Gasket	316+GRAP. - SPIRAL WOUND							
ACTUATOR		Actuator Type	PNEUMATIC CYLINDER							
		Mfr / Model	DCP-4005							
		Actuator Size	16in CYL							
		Failure Mode	VALVE OPEN							
		Supply (Max)	4.2 Barg							
		Manual Override	TOP/SIDE HANDLE (BLOCK)							
Notes / Special Instruction										
		Bolt / Nut : A193 Gr. B7/A194 Gr. 2H + Hot Dip Galv.								
		(Stud bolt / Heavy hex nuts)								
C										
B										
A		2019-08-23 For Approval								
No.		Date	Revision Description	Prepared By	Reviewed By	Approved By				

CONTROL VALVE CALCULATION SHEET					
Valve Sizing : Gas Flow					
Tag Number :					
Trim Type	MULTI HOLE (1 - STAGE)		Rated Cv	230	
Body Size	6" (150A)		Rangeability	30	
Inlet Line Size	12	Inch	Modified Ratio	0.00	
Outlet Line Size	12	Inch			
Outlet Line Schedule	STD	Sch.			
Flow Rate Unit	Kg/hr		Temperature Unit	Deg C	
Pressure Unit	BarA		Velocity Unit	m/sec	
	Transi.	Transi.	Turb.	Turb.	Turb.
Condition Title	RECYCLE	MIN. at 49hz	MIN. at 50hz	MIN. at 51hz	
Flow Rate	63108	20556	20268	18756	
Inlet Pressure	40.77	40.77	40.77	40.77	
Outlet Pressure	29.913	29.913	29.913	29.913	
Diff. Pressure	10.857	10.857	10.857	10.857	
Inlet Temperature	142	127	113	130	
Molecular Weight	17.13	17.13	17.13	17.13	
Specific Heat Ratio	1.29	1.3	1.32	1.3	
Compressibility	0.9873	0.9835	0.9795	0.9843	
Calculated Cv	178.810	56.430	54.430	51.690	
Stroke % (EQ%)	84.7	48.0	47.4	46.5	
Stroke % (Linear)	77.0	21.9	21.0	19.8	
Stroke % (Modified)	77.0	21.9	21.0	19.8	
Allow. Dp-Choked [Psi]	425.3	428.6	435.2	428.6	
Acoustic Velocity	509.9	502.5	497.4	504.4	
Outlet Valve Velocity	64.7	20.3	19.3	18.7	
Outlet Line Velocity	16.2	5.1	4.8	4.7	
Choked Flow	None	None	None	None	
Noise Level [dBA]	75	< 70	< 70	< 70	
Mach No.	0.031	0.01	0.009	0.009	

# Order Process(2)Data Sheet

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

McSYS <small>Mechanical and Fluid Control Systems</small>		DATA SHEET	
DATE : 2019-11-29		CUSTOMER :	
PROJECT : UAE Layyah CCPP FGC_RCV		REVISION : 2	
		PART NO : PNEUMATIC GLOBE	
<b>GENERAL</b>			
1	TAG NO.		
2	QUANTITY	P & ID NO.	
3	LINE SIZE	LINE SCHEDULE	
4	SERVICE		
5	ENCLOSURE		
<b>BODY &amp; TRIM</b>			
6	TYPE OF BODY	GLOBE CONTROL VALVE	
7	BODY SIZE	PORT SIZE	6"
8	END CONNECTION & RATING	BODY	ANSI 800# RF
9		DISC	ACT18-RCS
10		STEM	SUS 316
11	MATERIAL	BEAT	SUS 316 + STL NO.8
12		ETC	MFR STD.
13			MFR STD.
14	BONNET TYPE		MFR STD.
15	TRIM FORM		MULTI HOLE (MULTI - 1SEAGE)
<b>ACTUATOR</b>			
16	ACTUATOR		PNEUMATIC CYLINDER / DCP-426B
17	ACTUATOR MANUAL OVERRIDE		TOP/SIDE HANDLE (BLOCK)
18	ACTUATOR MAT'L		STEEL
19	AIR SUPPLY PRESSURE (BAR)		4.2 BAR
20	ACTION		AIR TO CLOSE
21	FAIL POSITION		OPEN
22	IP GRADE		IP65
<b>POSITIONER</b>			
23	MODEL NO.		YT-2531L245219
24	TYPE		E/POSMART / HART / FEEDBACK
25	IN, OUT PUT SIGNAL		4-20mA
26	AMB TMP.		-20°C~70°C (선택사항에 해당하지는 않습니다)
27	ELECTRIC CONNECTION		1/2" NPT
28	EXPLOSION PROOF		Ex Ia IIC T4 (SEC2)
29	IP GRADE		IP65
30	AIR SUPPLY PRESSURE (BAR)		4-7 BAR
31	SH. CERT.		SH. 2
32	GAUGE		5531# 제품
<b>SOLENOID</b>			
33	MODEL NO.		ASCO / NF1860279502
34	TYPE		3-way, Direct acting
35	MAT'L		SS316
36	ELECTRIC CONNECTION		1/2" NPT
37	INSULATION CLASS		H
38	VOLTAGE		DC 24V
39	RESET		AUTO
40	EXPLOSION PROOF		Ex Ia IIC T4 (SEC2)
41	IP GRADE		IP67
42	SH. CERT.		SH. 2
43	AMB TEMP.		-20°C~70°C (선택사항에 해당하지는 않습니다)
44	WATT		0.5 W
<b>AIR SET</b>			
45	MODEL NO.		YT-2003N10
46	PREL. CONN.		3/4" NPT
47	AMB TMP.		-20°C~70°C
48	FILTER		5 micron
49	GAUGE		5531# 제품
<b>VOLUME BOOSTER</b>			
50	MODEL NO.		YT-312N1
51	AMB TMP.		-20°C~70°C
<b>PROCESS CONDITIONS</b>			
52	FLUID		
53	FLOW RATE UNIT	STATE	
54	FLOW RATE	MS/hr	
55	INLET PRESSURE	PSI	
56	OUTLET PRESSURE	PSI	
57	TEMPERATURE	°C	
58	MAX. SHUT OFF ΔP	PSI	
59	VISCOSITY		
60	CALCULATED Cr		
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; 5s</li> <li>= SOLENOID : 직렬회로용으로 사용 (POSITIONER &lt;-&gt; VOLUME BOOSTER 사이 분리)</li> <li>= HANDLE COLOR : BLACK</li> <li>= Bolt / Nut : A193 Gr. B7/A194 Gr. 2H + Hot Dip Galv. (Stud bolt / Heavy hex nuts)</li> <li>= PAINT : MFR STD.</li> <li>= FITTING : SWAGelok SS316 이상</li> <li>= TUBING : BWABELOK(OEM) SS316 이상</li> </ul>
63	REVISION :		<ul style="list-style-type: none"> <li>- 1 : VALVE SIZE 변경 / 액츄에이터 변경 / 액세서리 부품명 변경 (선택 COMMENT 생략)</li> <li>- 2 : FITTING MAKER 변경 / STROKE TIME 변경 / VALVE SIZE 변경</li> <li>- 3 : AIR CONN. SIZE 변경</li> <li>- 4 : 용접부품도면 추가, TUBING 변경</li> <li>- 5 : 입력 요점에 따른 ACCESSORY 위치 변경</li> <li>- 6 : 입력 요점에 따른 ACCESSORY 위치 변경</li> <li>- 7 : 포트 상 AIR SET GAUGE 필사 수역</li> <li>- 8 : SETTING PRESSURE 변경</li> <li>- 9 : STROKE TIME 단축을 위해 AIR CONN. 3/4" NPT 제품</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

REVISIONS				
REV NO	DATE	DESCRIPTION	DESIGN	CHKD / APP'D
△	2023/04/17	FOR APPROVAL	Tao.Zou	ML.KWON / DJ.JUN
△	2023/06/09	1.LIMIT SWITCH MODIFY 2.ADD NAME PLATE	Tao.Zou	ML.KWON / DJ.JUN
△	2023/07/24	1.BODY MATERIAL MODIFY 2.LIMIT SWITCH MODIFY	Tao.Zou	ML.KWON / DJ.JUN
△	2023/09/29	1.Replace the electrical model	Tao.Zou	ML.KWON / DJ.JUN

**NAME PLATE**

Fill in the content according to the project (Configured in languages as needed)

PART LIST			
NO.	PART NAME	QTY	MATL / MODEL
1	BODY	1	A105M
2	BALL	1	SS316
3	SEAT	1	DEVLON
4	STEM	1	17-4PH-ENP
ACCESSORY			
5	ACTUATOR	1	EAS250
6	DECLUTCH GEAR BOX	1	M9
7	AIR SET	1	TS300NS1
8	SOLENOID VALVE	1	JE6327B102
9	VOLUME BOOSTER	1	TS120NS
10	QUICK EXHAUST VALVE	1	AQ5000-N06
11	LIMIT SWITCH	1	2549ABYN0022FAN-R2
12	Plate	1	

**NOTE**

Size: 10"  
 Rating: ANSI 600# RF  
 Power: DC24V

1. Connection: RF  
 2. Actuator: Single acting (S&Y)  
 • Air fail action: CLOSE  
 • Signal fail action: CLOSE  
 • Supply air: 4.5 barg  
 3. Function: On-off type  
 4. Installation status: HORI  
 5. Stroke Time(Sec): QUICK CLOSE <5s / NORMAL CLOSE & Open <10s

**mesys**® Mechanical and Fluid Control Systems

TITLE: PNEUMATIC BALL VALVE ASSEMBLY

SIZE	10"	VIEW	IS	DWG NO.:
RATING	ANSI 600#	SCALE	N/S	MSBLOCK 2640-EAS250-R-3
MATL		REV. NO	△	SH. NO 1/1





# Order Process(2) Data Sheet

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

McSYS (주) 맥시스 Mechanical and Fluid Control Systems		DATA SHEET	
DATE : 2024-07-26		CUSTOMER : 香港特快有限公司	
PROJECT : Ostroleka CCGT FGC - BV & OBV		REVISION : 1	
		PART NO : PNEUMATIC BALL	
GENERAL			
1	TAG NO.		
2	QUANTITY	P & ID NO.	
3	LINE SIZE	LINE SCHEDULE	
4	SERVICE		
5	ENCLOSURE	SEE SCHED SHEET	
BODY & TRIM			
7	TYPE OF BODY	3-WAY TRUNCION BALL (FULL BORE) / 3/8" (NPT FPM)	
8	END CONNECTION & RATING	1"	
9	FIRE SAFE DESIGN	ANSI 550# RP	
10		API 607	
11		2500 LPS	
12	MATERIAL	BODY	316L F316
13		BALL	316L F316
14		STEM	316L F316
15		SEAL	316L F316 + O-RING
16	ORIGIN	316L Gr. 307524 Gr. 316 + Hel 316 gals.	
17	GERT.	OTHER	
ACTUATOR			
18	TYPE OF ACTUATOR	PNEUMATIC ROTARY ACTUATOR - 3/4"	
19	MODEL NO.	340000	
20	END POSITION	2-WAY TO OPEN (CLOSE)	
21	SP GRADE	GRADE 100	
22	AIR SUPPLY PRESSURE	100psi	
23	WEYERSEL	ALUMINIUM	
24	TEMPERATURE	-40 ~ 70degC	
25	MANUAL OVERRIDE	YES / -40 ~ 70degC / DUOTILE IRON / SP GRADE x / NPT MODEL / OE	
SOLENOID			
26	MODEL NO.	5500 / 501837211	
27	TYPE	3-WAY	
28	CONDUIT	NPT	
29	SOLENOID INSULATION	R	
30	POWER	24 VDC	
31	RESET	AUTO	
32	Explosion proof	No 2 - EXEX	
33	SP GRADE	316L F316	
34	GERT.	OE, NPL	
35	BODY MATERIAL	316L F316	
36	TEMPERATURE	-40 ~ 70degC (압축기용 배압 장벽용 금속 사용)	
LIMIT SWITCH			
37	MODEL NO.	TOPWORK / KIP-2CONNS	
38	TYPE	PROXIMITY	
39	Q.T.Y.	3-60DT, OPEN / CLOSE	
40	Defacts / Rating	24 VDC	
41	Electrical Connection	M2	
42	Explosion proof	No 2 - EXEX	
43	SP GRADE	316L F316	
44	GERT.	OE, NPL	
45	ENCLOSURE MATERIAL	ALUMINIUM	
46	TEMPERATURE	-40 ~ 70degC (압축기용 배압 장벽용 금속 사용)	
AIR SEAT			
47	MODEL NO.	VSEENL1	
48	SETTING PRESS.	8 BAR	
49	PREL. CORR.	1/4" NPT	
50	GRADE	316L F316	
51	PLYER	E-MOTION	
52	MATERIAL	ALUMINIUM	
53	TEMPERATURE	-40 ~ 70degC	
GUIDE EXHAUST VALVE			
54	MODEL NO.	GE-6-115-EP	
55	SIZE	1/4" NPT	
56	TEMPERATURE	-40 ~ 70degC	
57	MATERIAL	316L F316	
VOLUME BOOSTER			
58	MODEL NO.	TB100NL	
59	MATERIAL	ALUMINIUM	
60	TEMPERATURE	-40 ~ 70degC	
PROCESS CONDITIONS			
61	FLUID		
62	FLOW RATE UNIT	STATE	
63	FLOW RATE	M3/hr	
64	INLET PRESSURE	Bar	
65	OUTLET PRESSURE	Bar	
66	TEMPERATURE	°C	
67	MAX. GPP / GPP ΔP	Bar	
68	VISCOSITY		
69	DELUATED CV		
70	MODEL NO.		
71	NOTE:	<ul style="list-style-type: none"> <li>• STROKE TIME : OPEN &amp; CLOSE &lt;10s</li> <li>• PAINT : PUT SPED 700</li> <li>• FITTING : 300# DOUBLE FERRULE</li> <li>• TUBING : 300# &amp; 300#L DUAL</li> <li>• NAME PLATE &amp; TAG : PUT SPED 700 (여기 전 항목 300#만 후 제작)</li> </ul>	

# 3 Control valve & GGC Valves

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



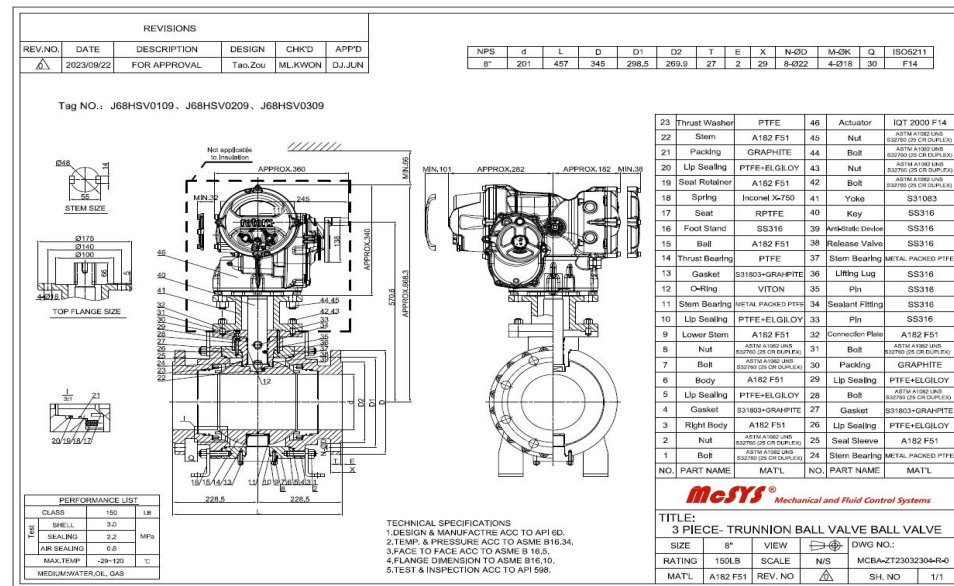
# Motor Actuated Ball ON-OFF Valve

## Projects:

- JANSZ IO FCS PJT

## Valve Spec:

- 2 PIECES-FLOATING BALL VALVE
  - 3 PIECE- TRUNNION BALL VALVE
- ▷ 40A~200A 150LB A182F51



# Motor Actuated Globe Control Valve

## Project:

- SHI Petronas ZLNG

## Valve Spec:

- 3-WAY globe control valve
- ▷ 50A~150A 150LB A216WCB

NO.	PART NAME	MATERIAL	QTY	REMARK
1	BODY	A216 WCB	1	MEP/NO
2	SEAT (UP/DOWN)	316SS	2	
3	PLUG	316SS (CF8M)	1	
4	STEM	316SS	1	
5	SEAT GASKET	TFELON	2	
6	HEX. NUT SET	A194 2H	1	
7	HEX. STUD BOLT SET	A193 B7	1	
8	PACKING HOUSING	BC8	1	
9	PACKING SET	WPTFE	1	
10	NUT SET	316SS	1	
11	INDICATOR	SS	1	

ACTUATOR	
MODEL	HL25NAPCU
POWER	AC 230V 2PH 50Hz
IP GRADE	IP68
SIGNAL	4-20 mA
PART - Actuator	CIM
PART - Valve	Maner Standard

WEIGHT (kg)	
ACTUATOR	33
VALVE	120
TOTAL	153

NOTES  
 1. ALL DIMENSION ARE IN MILLIMETERS.  
 2. VALVE BODY MIN. WALL THICKNESS CONFORM TO ANSI B16.34.  
 3. VALVE HYDROSTATIC TEST CONFORM TO ANSI B 16.37 & ISA475.15.  
 4. VALVE SEAT LEAKAGE PER ANSI/API 6D & MSS-SP41.

INLET CONN. 6" ASME 150# RF    OUTLET CONN. 6" ASME 150# RF

SAVE AS INLET CONNECTION

PAIRING SPECIFICATION

Lower Valve (Control Valve)	Exc. Item 1 (V10)	100	ISA	Exc. Item 1
Upper Valve (Control Valve)	Control Valve	100	ISA	Exc. Item 1
Actuator for control valve	Maner (L) 250 702 250V	1	ISA	Exc. Item 1





# Special Material Valve I

## Projects:

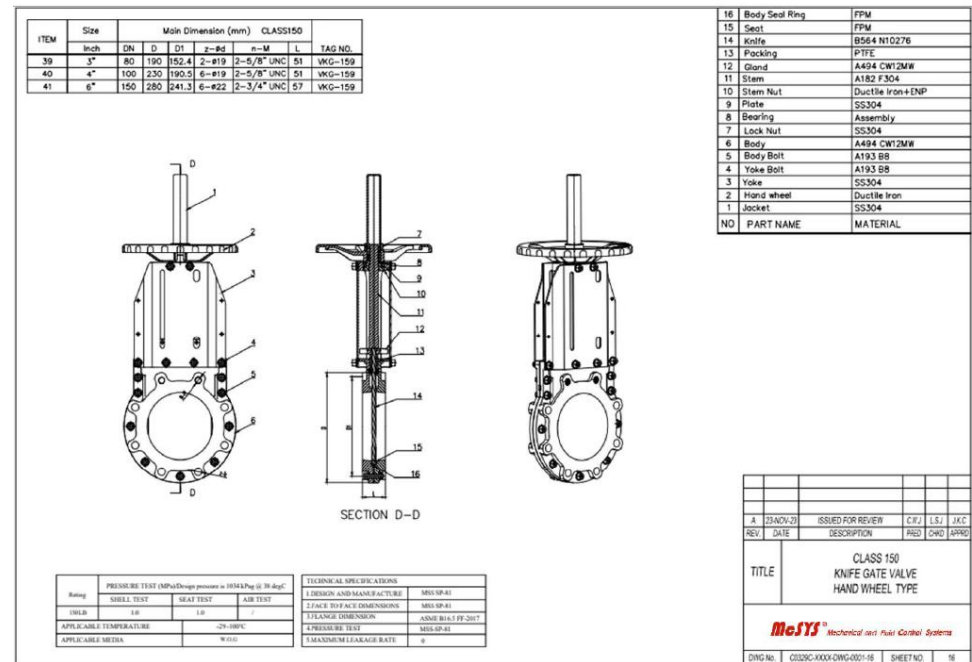
- PT. Free Port  
(Exotic Valve PKG PJT)

## Valve Spec:

Knif gate valve

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

Requirement : 3.2 CET'



# Special Material Valve II

## Project:

- PT. Free Port  
(Exotic Valve PKG PJT)

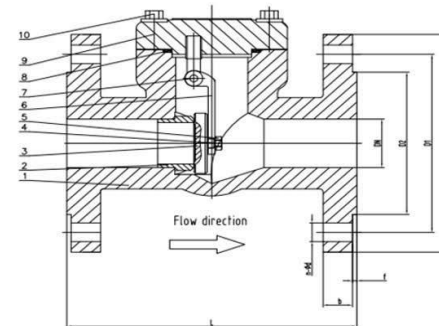
## Valve Spec:

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-ød	L	r	TAG NO
48	1 1/2"	40	125	98.4	73	12.7	4-ø16	165	2	VCL-TB

10	Cover Bolt	A193 BIM
9	Cover	A182 F51
8	Gasket	2205+Graphite
7	Hinge Pin	A182 F51
6	Arm	A182 F51
5	Disc Nut	A194 IM
4	Pin	A182 F51
3	Disc	A182 F51
2	Seal Ring	A182 F51
1	Body	A182 F51
NO.	PART NAME	MATERIAL



TECHNICAL SPECIFICATIONS			
1. DESIGN AND MANUFACTURE	ASME B16.38		
2. FACE TO FACE DIMENSIONS	ASME B16.38		
3. END DIMENSIONS	ASME B16.38-2017		
4. PRESSURE TEST	ASME B16.38		
RATING: PRESSURE TEST (MPa) Design Pressure 2000 kPag @ 38 degC			
INSTR	SEAT TEST	SEAT TEST	SEAT TEST
INSTR	1.0	2.2	2.2
APPLICABLE TEMPERATURE	-29 ~ 550C		
APPLICABLE MEDIA	W.OIL		

REV	DATE	DESCRIPTION	PREP	CHKD	APPRD
A	23-NOV-23	ISSUED FOR REVIEW	CRJ	LSJ	JAC

TITLE: SWING CHECK VALVE CLASS 150

MeSYS Technical and Field Control Systems

DWG No. C0329C-XXXX-DWG-0001-07 SHEET NO. 7



# Special Material Valve III

## Project:

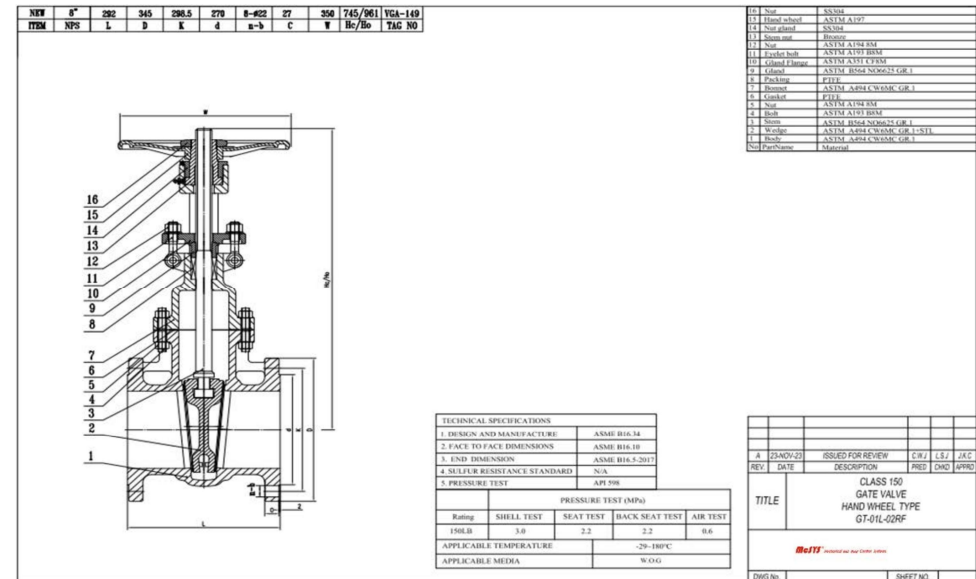
- PT. Free Port  
(Exotic Valve PKG PJT)

## 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:

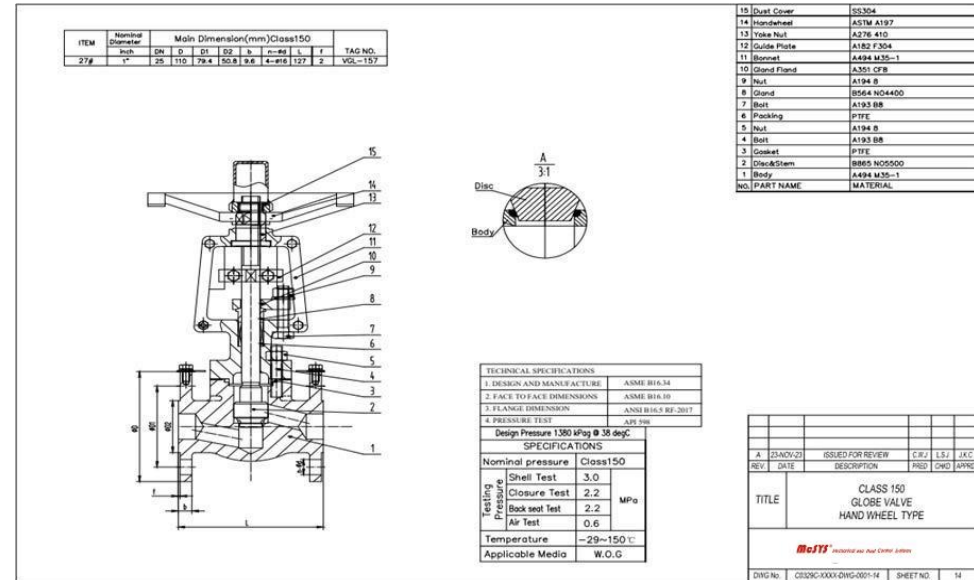
- PT. Free Port  
(Exotic Valve PKG PJT)

## 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:

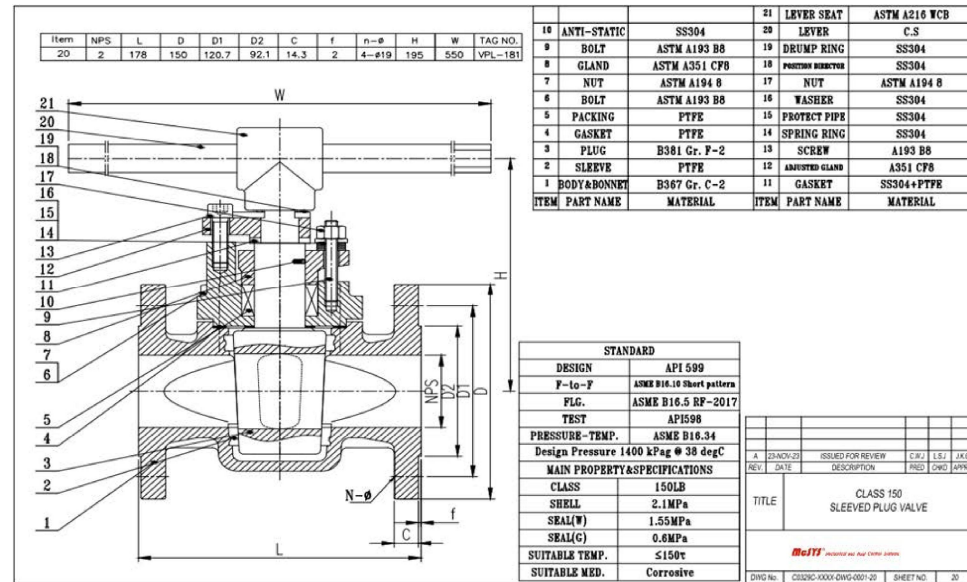
- PT. Free Port  
(Exotic Valve PKG PJT)

## 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:

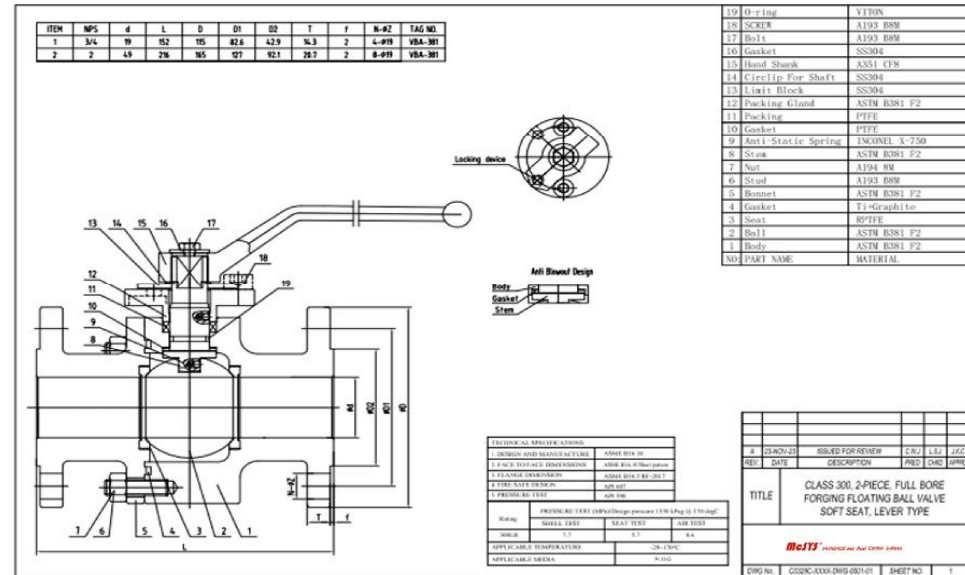
- PT. Free Port  
(Exotic Valve PKG PJT)

## 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

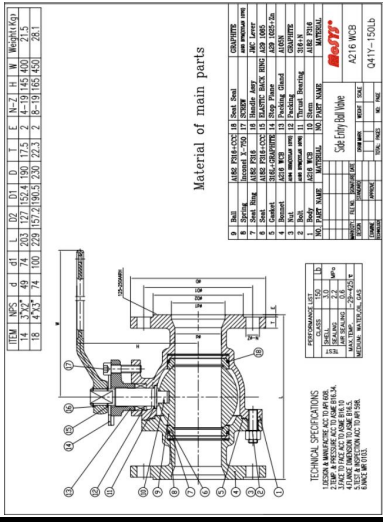
TECHNICAL  
PARAMETER

FLOATING  
SIDE BALL VALVE  
SIZE: 3"~6"  
CLASS:150LB/300LB  
BODY:WCB/LCB/LC3/  
CF8M/CN7M/CF10  
BALL:F316/F20+CCC  
SEAT:F316/F20+CCC  
STEM:F316  
BOLTING:B7/2H,L7/7,  
L7M/7M,B8M/8M

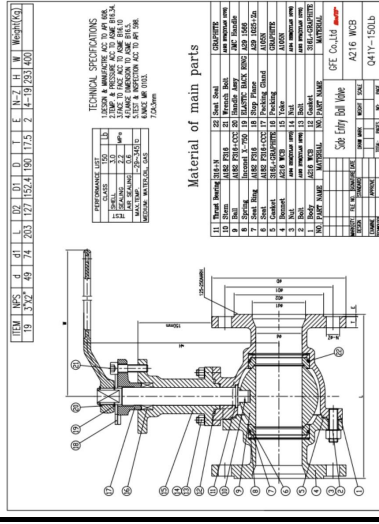


PHOTO

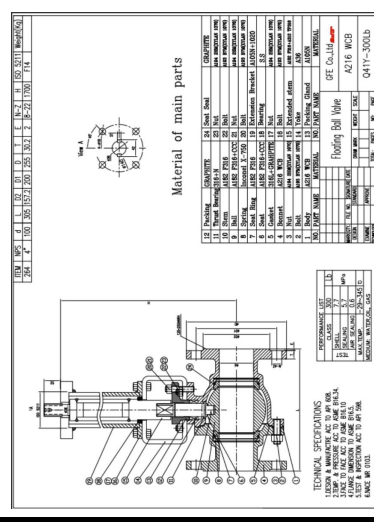
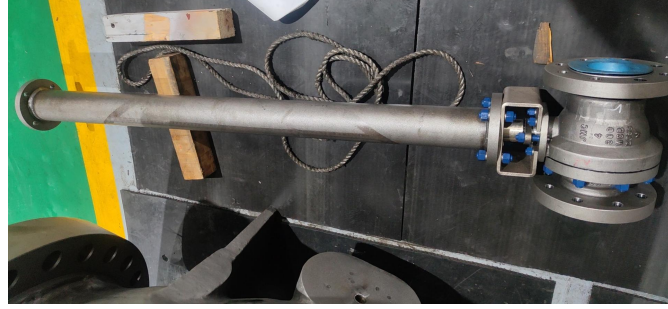
DRAWING



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



FLOATING  
SIDE BALL VALVE  
(SPECIAL EXT)  
SIZE: 3"~6"  
CLASS:150LB/300LB  
BODY:WCB/LCB  
BALL:F316+CCC  
SEAT:F316+CCC  
STEM:F316  
BOLTING:B7/2H,L7/7,  
L7M/7M



# RDMP 1차 ~ 14차 ITEM 별 자료

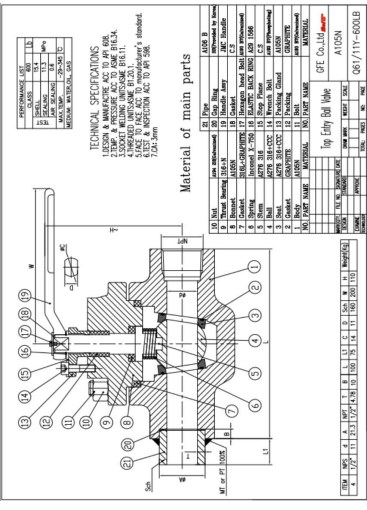
TECHNICAL  
PARAMETER

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

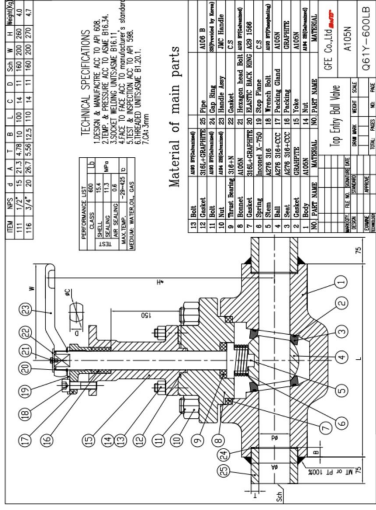
PHOTO



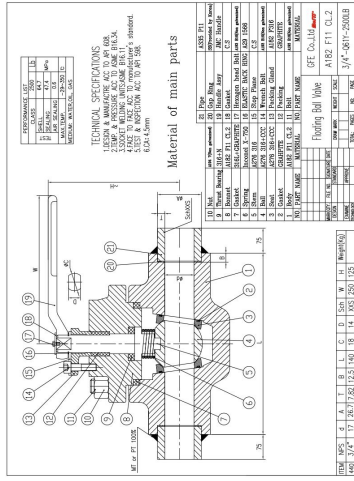
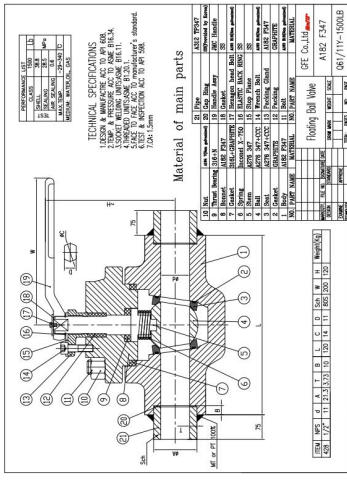
DRAWING



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



FLOATING  
TOP BALL VALVE  
(HIGH PRESSURE)  
SIZE: 3"~6"  
CLASS:1500LB/2500LB  
BODY:F347/F11  
BALL:F347/F316+CCC  
SEAT:F347/F316+CCC  
STEM:F347/F316  
BOLTING:B16/7



# 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

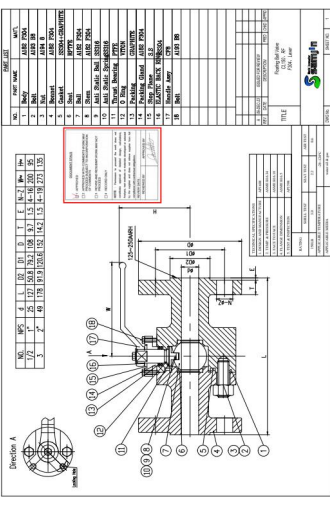
## TECHNICAL PARAMETER

FLOATING  
2-PC SIDE BALL VALVE  
(SOFT SEAL)  
SIZE: 1", 2"  
CLASS:150LB/300LB/  
600LB  
BODY:A105N/F304  
BALL:F304  
SEAT:RTFE  
STEM:F304  
BOLTING:B7/2H,B8/8

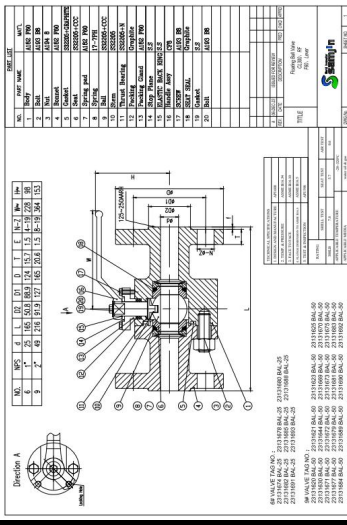


## PHOTO

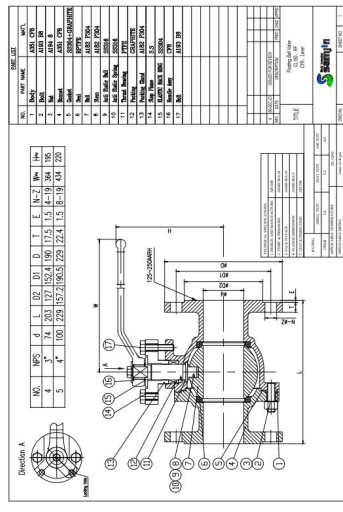
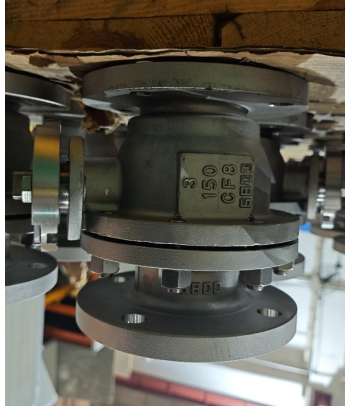
## DRAWING



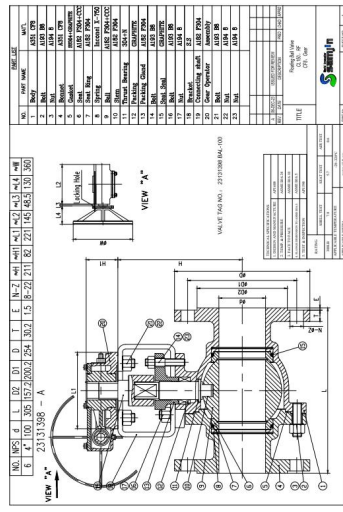
FLOATING  
2-PC SIDE BALL VALVE  
(RIGIDITY SEAL)  
SIZE: 1", 2"  
CLASS:150LB/300LB  
BODY:F304/F60  
BALL:F304/F60+CCC  
SEAT:F304/F60+CCC  
STEM:F304/F60  
BOLTING:B8/8



FLOATING  
2-PC SIDE BALL VALVE  
(SOFT SEAL)  
SIZE: 3", 4"  
CLASS:150LB  
BODY:CF8  
BALL:F304  
SEAT:RPTFE  
STEM:F304  
BOLTING:B8/8



FLOATING  
2-PC SIDE BALL VALVE  
(RIGIDITY SEAL)  
SIZE: 3", 4"  
CLASS:150LB/300LB  
BODY:CF8/CD3MN  
BALL:F304/F60  
SEAT:F304/F60+CCC  
STEM:F304/F60  
BOLTING:B8/8



# 무림PNP ITEM 별 자료

TECHNICAL  
PARAMETER

PHOTO

DRAWING

TRUNNION  
2-PC SIDE BALL VALVE  
(SOFT SEAL)

SIZE: 6"~10"

CLASS:150LB

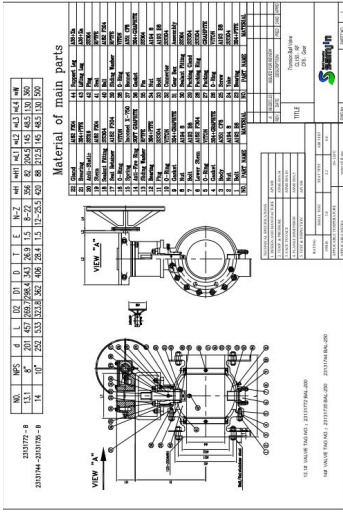
BODY:CF8

BALL:F304

SEAT:RTFE

STEM:F304

BOLTING:B8/8



TRUNNION  
2-PC SIDE BALL VALVE  
(RIGIDITY SEAL)

SIZE: 6", 8"

CLASS:150LB/300LB

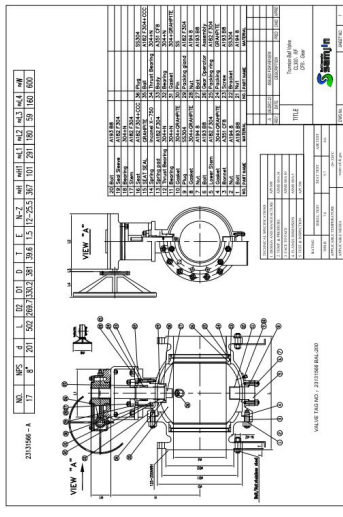
BODY:CF8/CD3MN

BALL:F304/F60+CCC

SEAT:F304/F60+CCC

STEM:F304/F60

BOLTING:B8/8



FLOATING  
3-PC SIDE BALL VALVE  
(SOFT SEAL)

SIZE: 0.38"~2"

CLASS:600LB

BODY:F304/A105N

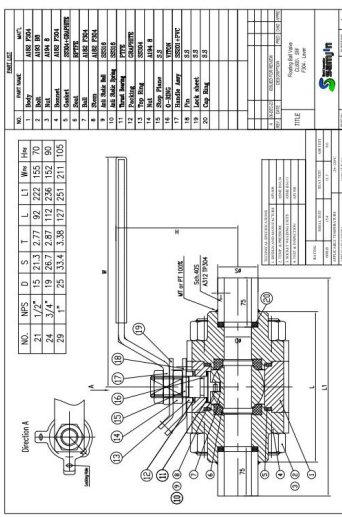
BALL:F304

SEAT:RPTFE

STEM:F304

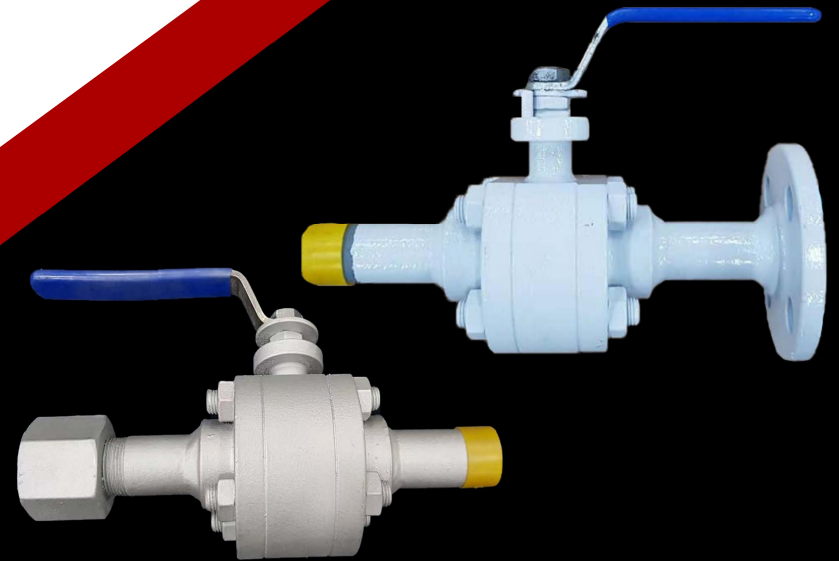
BOLTING:B8/8

E/C:SW/NPT



# 6 P-78 PROJECT

- SW Ball valves





# 7

## Teflon Lined Ball Valve



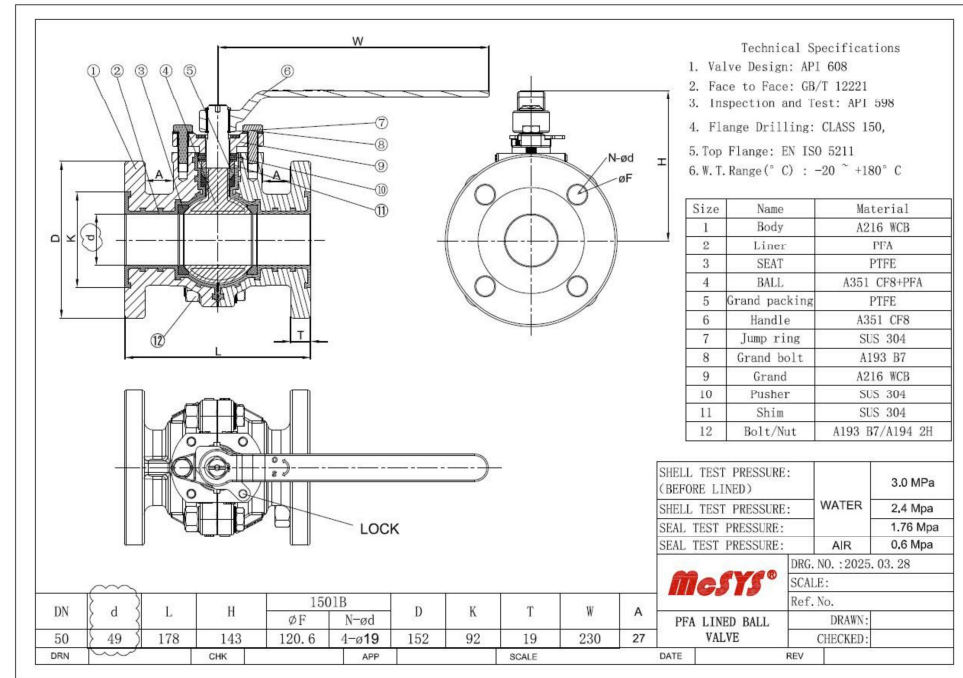
# TEFLON LINED BALL VALVE

## Project:

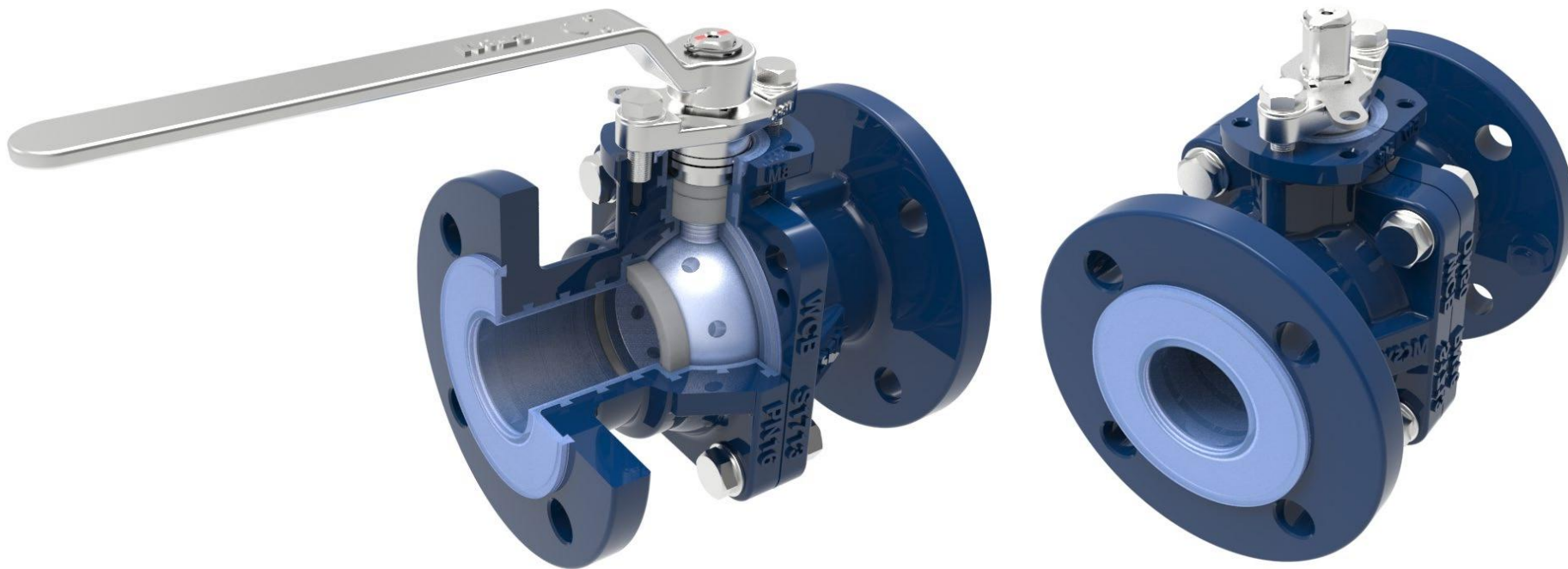
- S-OIL 온산공장

## Valve Spec:

- 2" PFA TEFLON LINED BALL VALVE



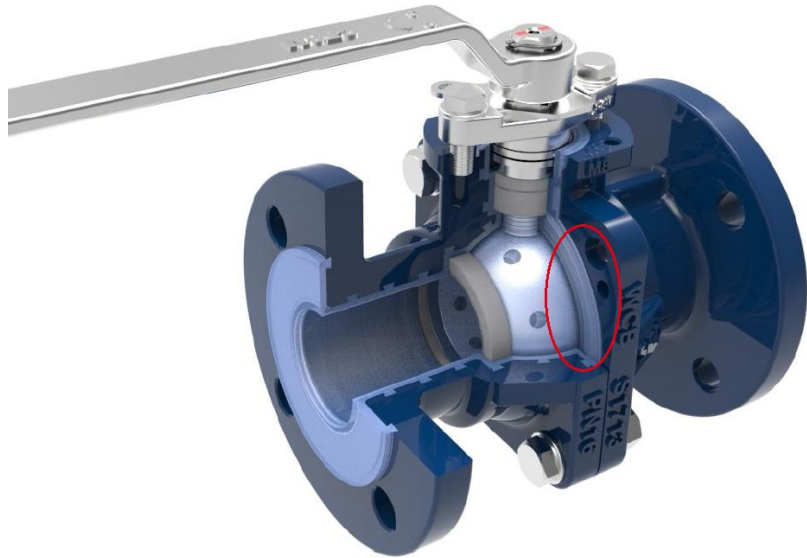
# TEFLON LINED BALL VALVE



# TEFLON LINED BALL VALVE

BODY 연결 부위 V형 밀폐홈 설계로 온도의 변화, 차압 등 작업 조건에도 밀봉 성능이 잘 되고 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 중심에 BALL이 위치하여 토크 분포가 균일하고 작동이 안정적이며, 배관에 설치시 볼트와 너트는 보디와 간섭이 되지 않도록 충분한 공간이 확보되었다.

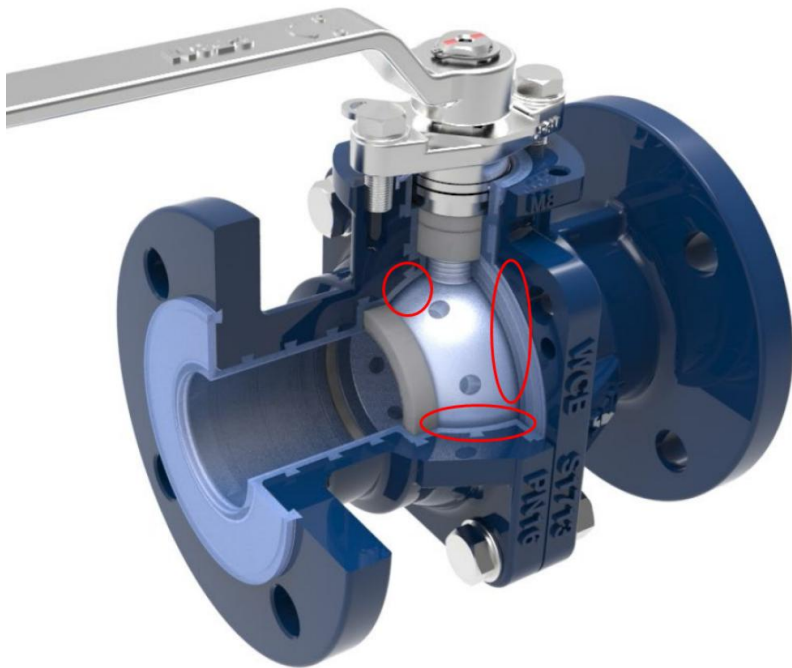
The ball and stem feature an integrated design, with the ball centered in the body. This configuration ensures uniform torque distribution and stable operation. When installed in piping systems, ample clearance is provided for bolts and nuts to prevent interference with the body.



# 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 구조 로 라이닝면과 유로 내벽이 단단히 부착되어 있어 탈착되지 않으므로 진공 환경에서도 사용할 수 있으며 고온 또는 저온 조건에서 인장 및 팽창 방지 능력도 매우 뛰어나다.

The entire flow path features a dovetail design structure, ensuring the lining surface and the inner wall of the flow path are firmly bonded without detachment. This allows it to be used in vacuum environments and provides excellent resistance to tension and expansion under high or low temperature conditions



# TEFLON LINED BALL VALVE

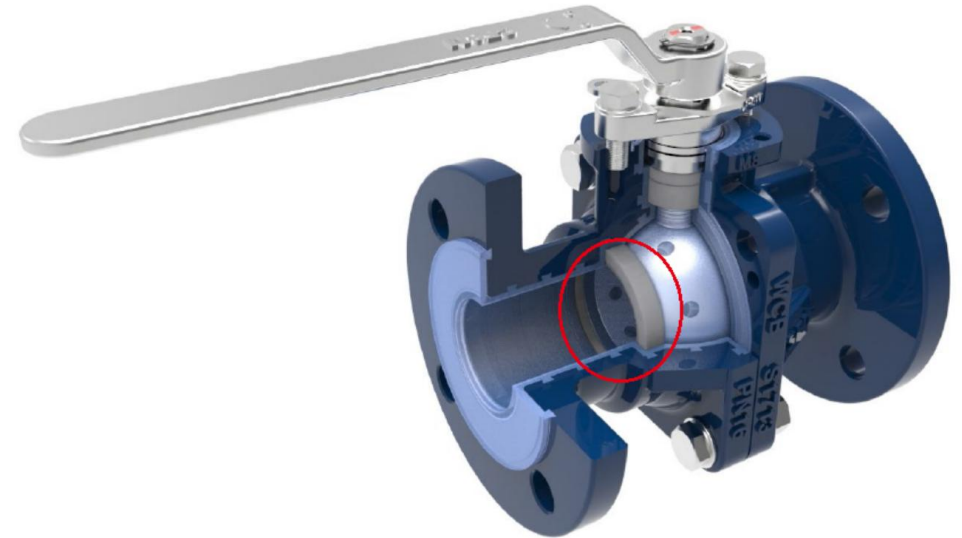
STEM 2-PIECES PACKING 은 GLAND가 눌리며 PACKING에 압력을 가하여 PACKING 이 STEM으로 밀착되어 STEM을 통하여 유체가 누수되는 것을 방지하면서 STEM 에 과도한 힘이 전달되지 않게 2-PIECE 일체형 구조로 설계되어 TORQUE 가 증가되지 않는다.

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..

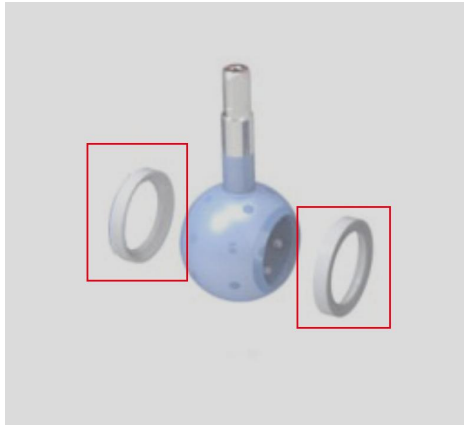


적용하는 SEAT는 PTFE이며 고정밀 가공으로 표면이 매우 매끄러워 자체 윤활성을 가지며 불과 완벽하게 접촉되어 적은 토크와 동시에 완벽한 TIGHT SEATING 을 보장한다.

The PTFE seat is precision-machined to ensure a super-smooth surface, providing self-lubrication and perfect ball contact for low-torque operation and reliable tight seating.



# TEFLON LINED BALL VALVE

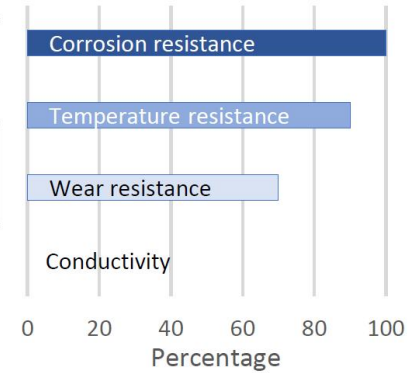


**PTFE**

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

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

사용온도 : -29~150°

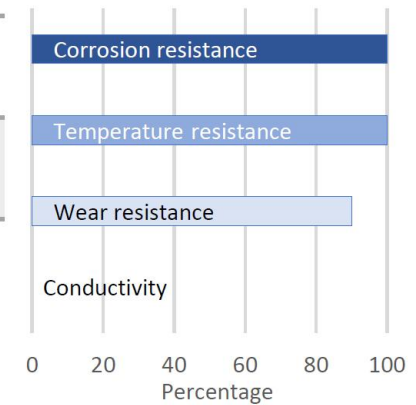


**PFA**

**Service temperature**  
-40° ~ +200°

Excellent chemical resistance and temperature  
resistance,

사용온도 : -29~170°



# 8

## Teflon Lined Butterfly Valve



# TEFLON LINED BUTTERFLY VALVES



# TEFLON LINED BUTTERFLY VALVES

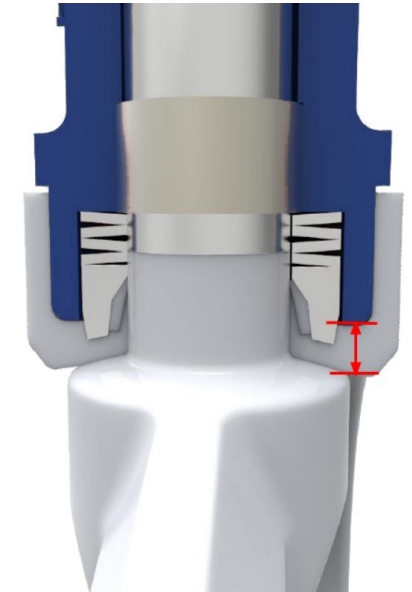
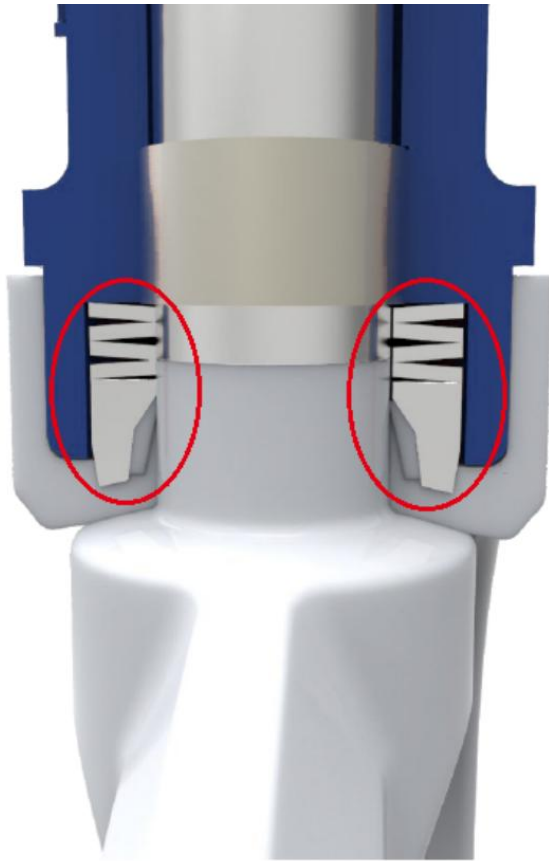
하중 접시형 스프링을 사용하여 밸브 시트로 지속적으로 압력을 가하여 밸브 시트의 1차 밀봉을 제공하며 엄격한 테스트를 통하여 밀봉 성능이 매우 안정적이고 신뢰할 수 있음을 확인했다.

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 VALVES

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)

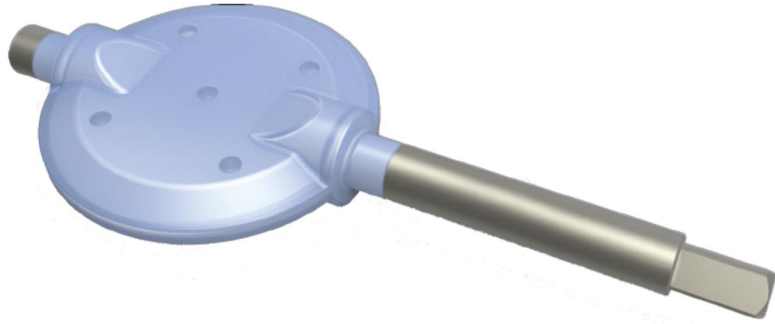
밸브 시트 뒷면에는 실리콘 재질의 Back up Pad 를 장착하여 시트와 보디 사이의 밀봉을 보장할 뿐만 아니라 PTFE의 가장 큰 약점인 탄력성을 보완한다.

A silicon-based Back up Pad is installed on the 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 for the seat back, which is resistant to extrusion deformation and internal vacuum pumping of fluid.



# TEFLON LINED BUTTERFLY VALVES



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 face of the valve body to draw the PTFE seat, which will not change due to the change of temperature difference.



밸브 시트 공정: PTFE를 밸브 시트로 사용하는 경우 MOLD가 아닌 전체 PTFE 원재료로 가공된다. 따라서 밀도와 성능은 몰드일 경우 보다 높다.

Valve seat process: When PTFE is used for valve seats, it is machined from solid PTFE stock rather than molded. This results in higher density and superior performance compared to molded alternatives.



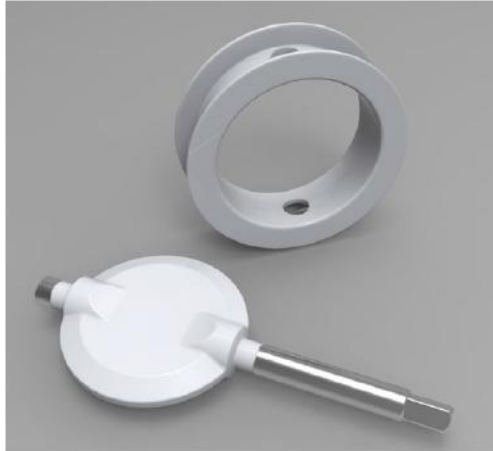
유로구의 홈설계 : 테플론 라이닝 밸브가 파이프에 설치시 밸브 시트 PTFE는 압력을 받아 변형되며 라이닝 표면 처리 홈은 밸브 시트의 라이닝 변형을 위한 공간을 확보하도록 설계되어 라이닝에 의한 밸브 시트의 압출 변형을 감소하며 토크를 줄인다.

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.

진공용 밸브의 시트라이닝에 적합한 소재는 PTFE와 RPTFE이다. PFA 라이닝은 몰드 공정으로 이루어져 있기 때문에, 진공용 밸브의 시트라이닝에는 적용이 불가능

Suitable materials for seat lining in vacuum valves are PTFE and RPTFE. Since PFA lining is produced through a molding process, it cannot be applied to seat lining in vacuum valves

# TEFLON LINED BUTTERFLY VALVES



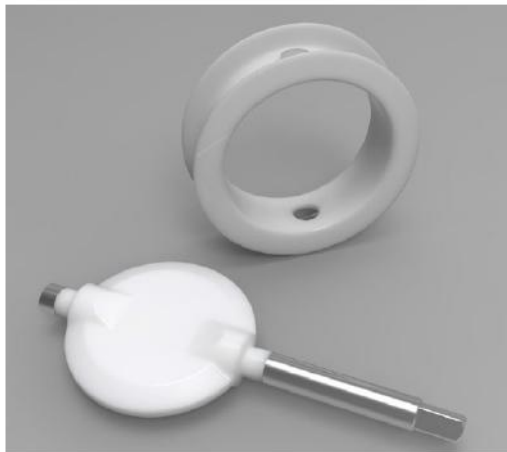
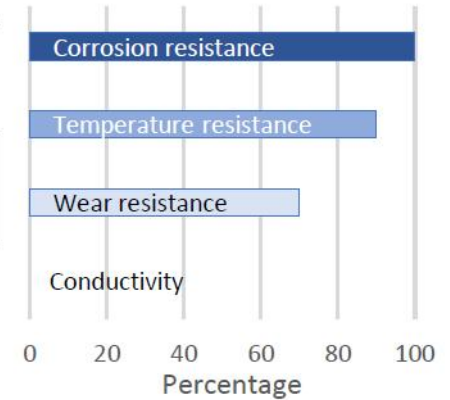
**PTFE**

**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℃~70℃



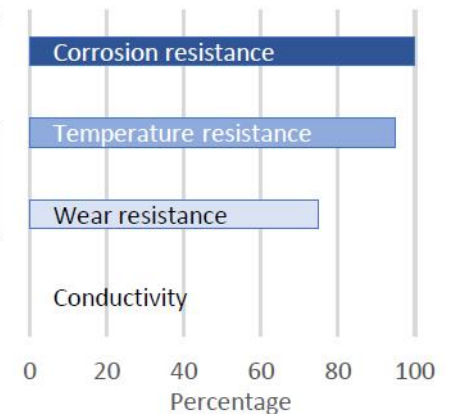
**RPTFE (M111)**

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

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

사용온도 : -29~150°

진공(-0.1Mpa미만) : -10℃~70℃



# TEFLON LINED BUTTERFLY VALVES



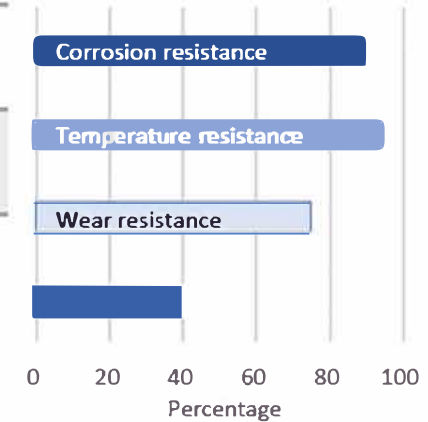
**PTFE/SUS316**

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

High purity PTFE, Polished disc, For food grade occasions

사용온도 : -29~150°

진공(-0.1Mpa미판) : -10℃~70℃

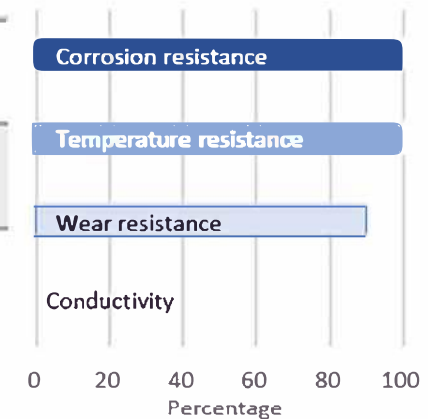


**PFA**

**Service temperature**  
-40° ~ +200°

Excellent chemical resistance and temperature resistance,

사용온도 : -29~170°



# Thank you for attention !

