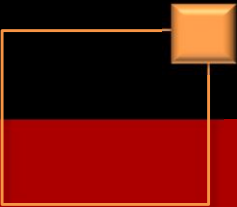


회사소개서



Mechanical and Fluid Control Systems

WWW.J-MCSYS.COM



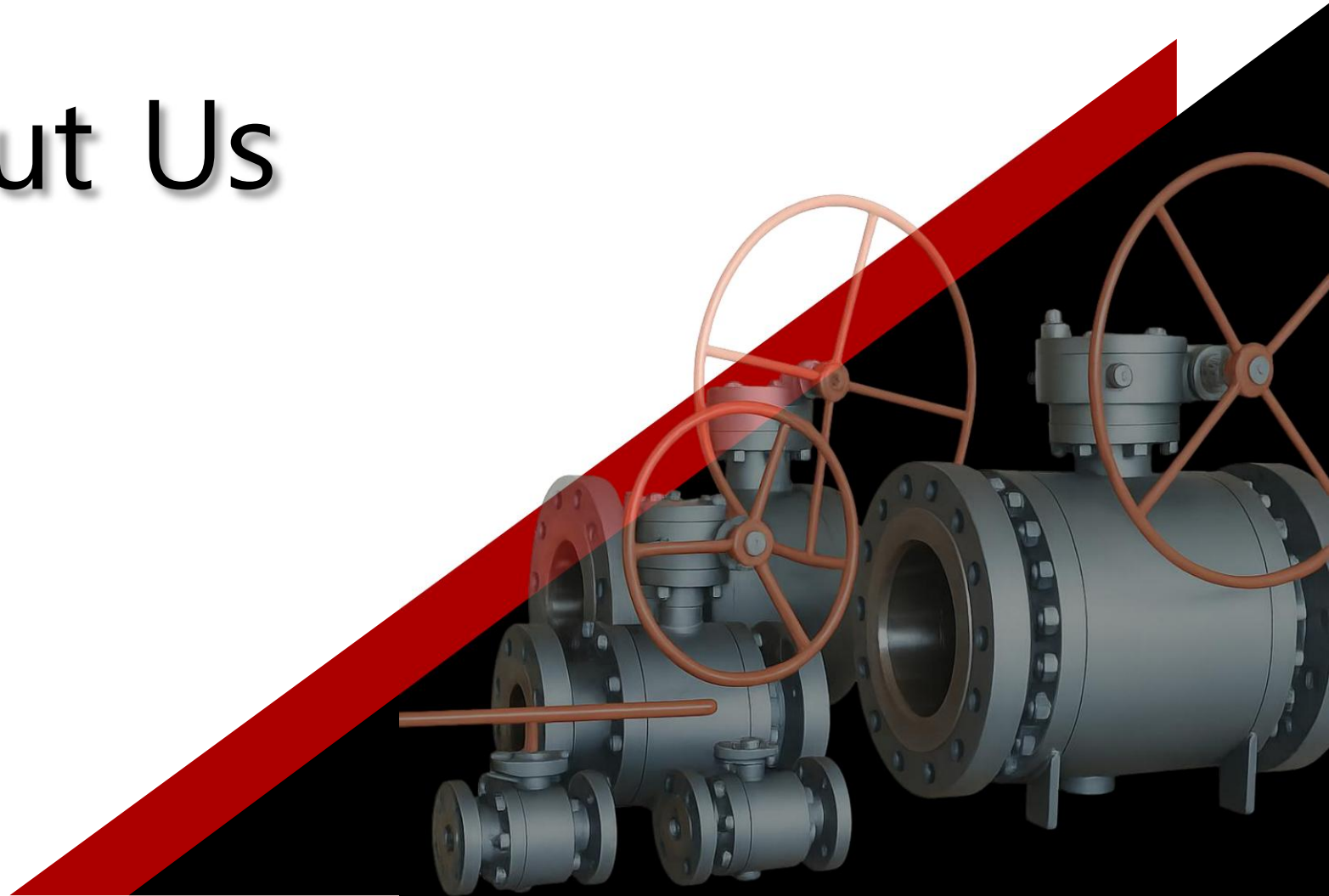
CONTENTS

- 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



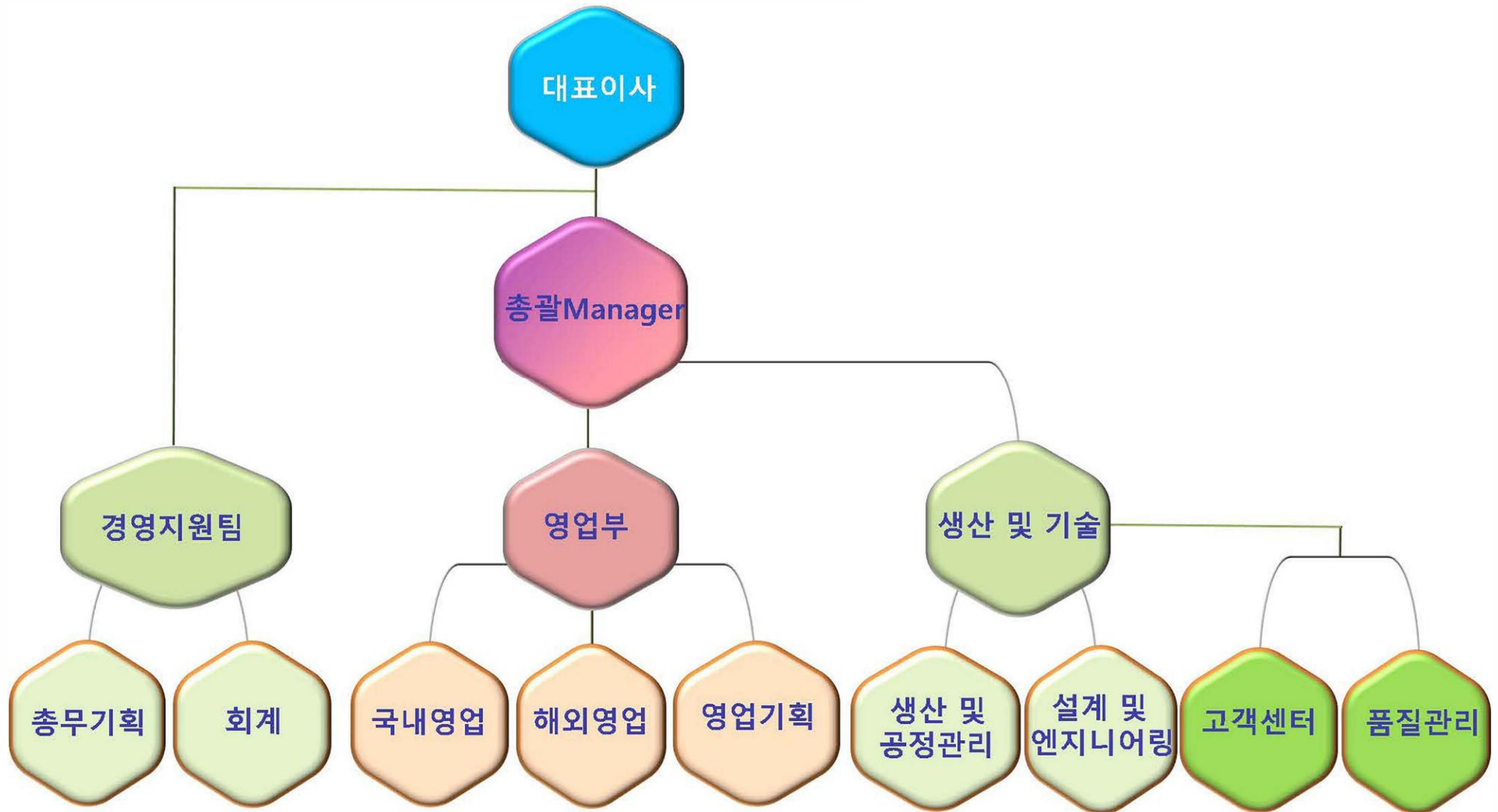
VISION

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 CTCl 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



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



McSYS®

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



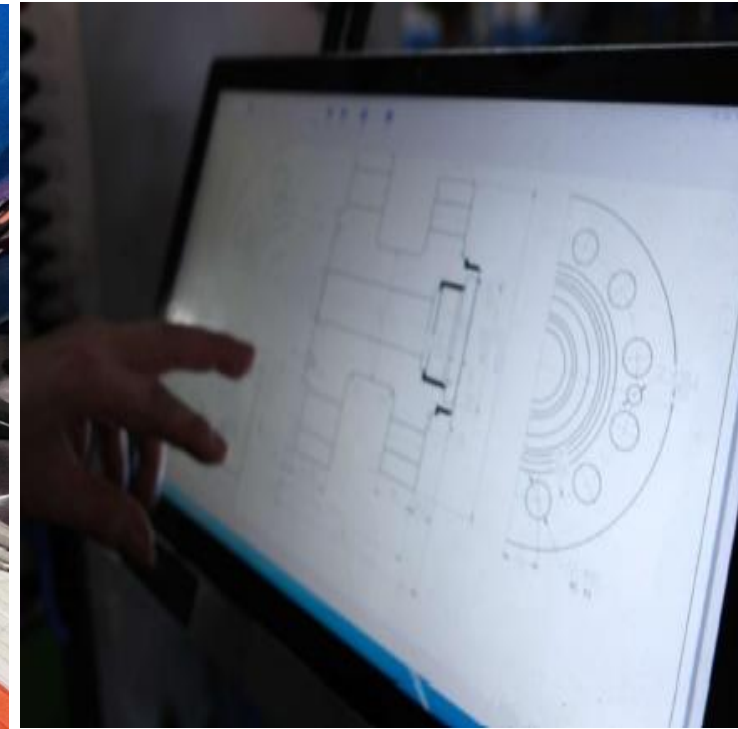
Pigging Valve



Electric Valve and Multi-way Valve

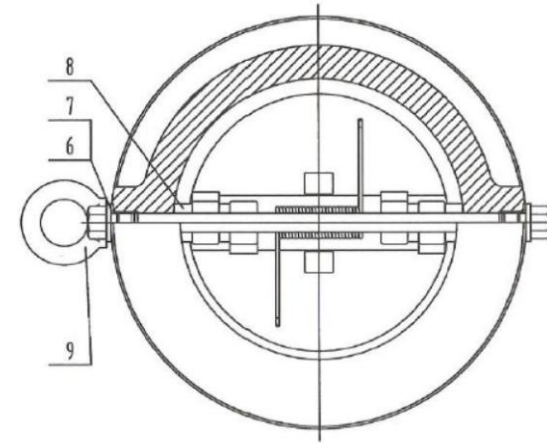


Traceability





STANDARD DESIGN



WCB+PTFE DISC(TIGHTEN BY SCREW)

Inspection & Test

Test



MT(Magnetic Particle Inspection)

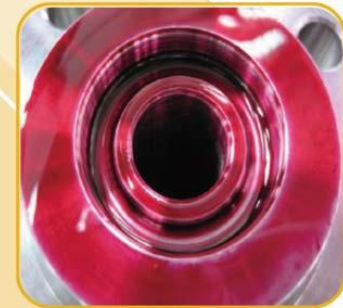
According to API 598 Test

UT(Ultrasonic Examination)



Test

PT(Dye Penetrant Inspection)



Oil inspectionin



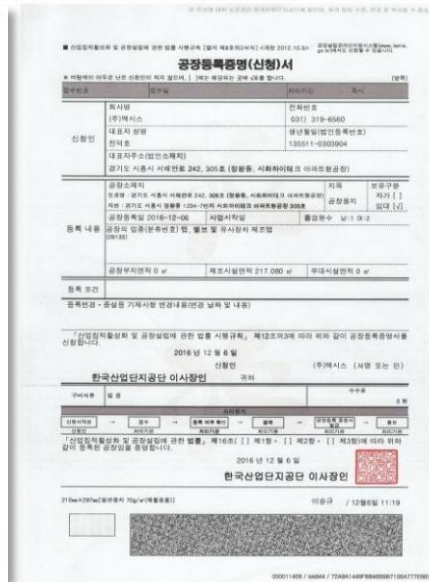
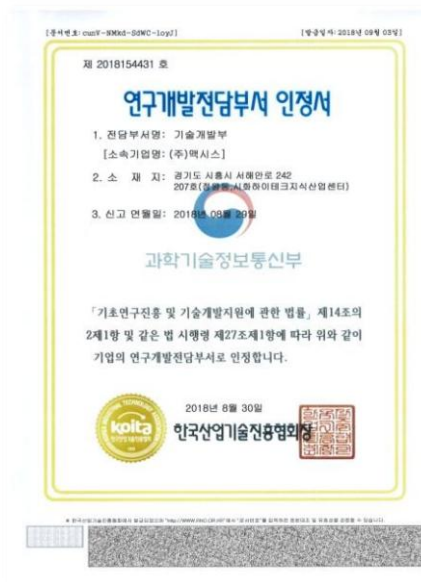
Packing



Certificate- I

- TR-CU 010/2011
- ISO 9001 : 2015
- Research and Development

- Factory Registration Certificate
- Business License



Certificate- II

* Including Partnership*

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



BV



TR/CU



ISO 9001



Our Customers





Manual & Control Valve Reference 2013(1/2)

CUSTOMER	ITEM	REFERENCE
SAMSUNG ELECTRIC-CHINA	DWA-N30P6(ON-OFF)	24V,(30Nm)
HH POWER PLANT	40A SCS13 16K	3-WAY MANUAL BALL V/V
BELLOWS VALVE	SW890T-15A	PNEUMATIC GLOBE V/V
SIEMENS KOREA	GLOBE CONTROL	
HH 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
HH 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 ANSI300 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)
HH 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 ACTUATOR 16K, 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 MANUAL 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 10K외	HYDROGEN GAS
FS CENTER	SW840G-40A(10K)	
DAYOUNG TECH	ACTUATOR	290 ACTUATOR
SAMYOUNG PNP	CG-350A (40K)	YT3400L,4-20mA
HH	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
PJT. : PROVISION OF ENGINEERING, PROCUREMENT AND CONSTRUCTION (EPC) OF WATER MANAGEMENT SYSTEM (PHASE 1) FOR PETRONAS CARIGALI IRAQ HOLDING B.V.'S GARRAF OPERATIONS	
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 LNG 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 MITSUBI 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)
ALMALYK 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)
JMC RDMP 1ts	TOP ENTRY, SIDE ENTRY BALL VALVE
JMC RDMP 2nd	TOP ENTRY, SIDE ENTRY BALL VALVE



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 rd	TOP ENTRY, SIDE ENTRY BALL VALVE
	3-1 rd	TOP ENTRY, SIDE ENTRY BALL VALVE
	4 th , 4-1 th	TOP ENTRY, SIDE ENTRY BALL VALVE
	5 th	TOP ENTRY, SIDE ENTRY BALL VALVE
	6 th	TOP ENTRY, SIDE ENTRY BALL VALVE
	6 th -1 th	MANUAL BALL VALVE
	7 th	TOP ENTRY, SIDE ENTRY BALL VALVE
	8 th	TOP ENTRY, SIDE ENTRY BALL VALVE
	9 th	TOP ENTRY, SIDE ENTRY BALL VALVE
Samsung Engineering Bahrain BAPCO Modernization Program (BMP PJT)	1 st	TEFLON LINED BALL VALVE
	2 nd	TEFLON LINED BALL VALVE
	3 rd	TEFLON LINED BALL VALVE
	4 th	TEFLON LINED BALL VALVE
	5 th	TEFLON LINED BALL VALVE
CP MEIJ #2101		BUTTERFLY CONTROL VALVE
GUANGXI JINHA 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
TERAPOW 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 2023

PROJECT	ITEM
POSCO ARGENTINA COMMERCIALIZATION OF LITHIUM HYDROGEN CHLORIDE_1ST	BUTTERFLY /BaII CONTROL VALVE
POSCO ARGENTINA COMMERCIALIZATION OF LITHIUM HYDROGEN CHLORIDE_2ND	BUTTERFLY /BaII CONTROL VALVE
MEXICO TR PROJECT	IBV /OBV DBB SPE TYPE



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



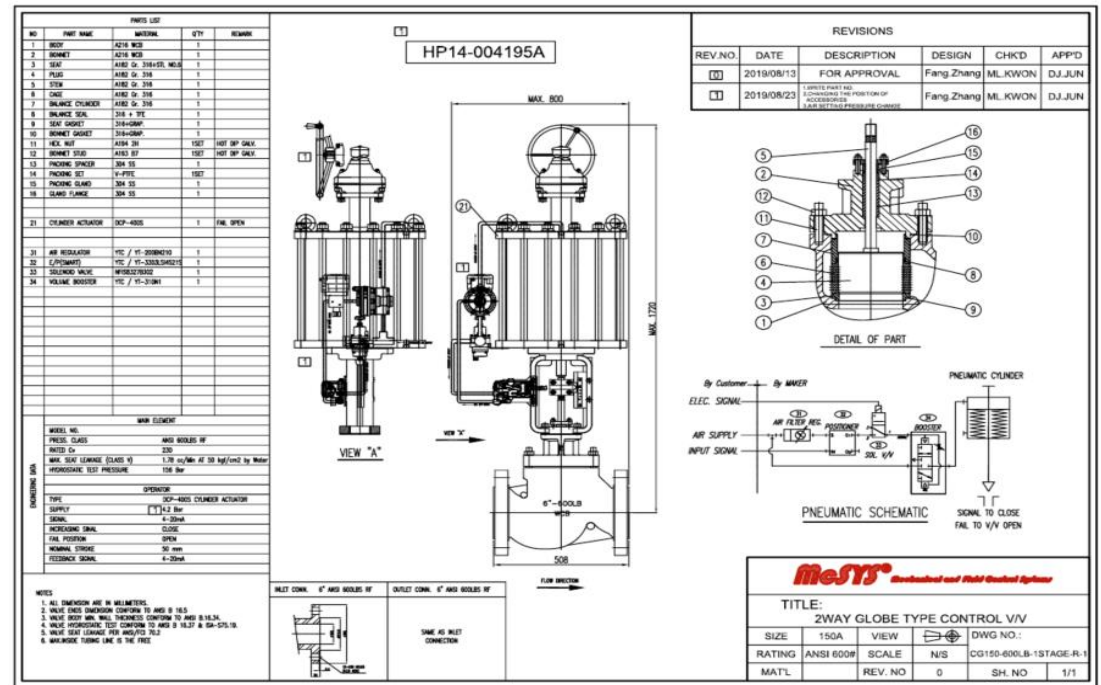
Globe Control Valve

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									
McSYS		Project		UAE Layyah CCPP FGC, RCV		Tag No.			
		Customer				Qty		SHT. No. 1	
		Ult. Client				Revision No.		Date 15/8/23	
		Inq./P.O. No.				Serial No.			
		Process							
Application									
Fluid		GAS		AIR		Critical Pr.		BarA	
Units		RECYCLE		MIN. at 49hz		MIN. at 50hz		MIN. at 51hz	
Flow Rate		Kg/hr		63108		20556		18756	
Inlet Pressure		BarA		40.77		40.77		40.77	
Outlet Pressure		BarA		29.913		29.913		29.913	
Differential Pressure		Bar		10.857		10.857		10.857	
Inlet Temperature		Deg C		142		127		113	
Molecular Weight		MW		17.13		17.13		17.13	
Specific Heat Ratio		k		1.29		1.3		1.3	
Compressibility		Z		0.9873		0.9835		0.9843	
Required Capacity		Cv		178.81		56.43		54.43	
Opening Travel		%LIN		76.97		21.93		19.8	
Predicted SPL		dBA		75		< 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)		-20 [Max]		150 Deg C			
Max. Shut-Off Pp.		50 Bar							
Model No.						Type		E/P (SMART-HART)	
Body Type		2WAY GLOBE				Mfr / Model		YT-3303LSI45215	
Body Size		6" (150A)				Input Signal		4 - 20 mA DC	
Pr. Rating		ANSI 600 LBS				Increase Signal To		VALVE CLOSE	
End Connection		RF FLANGED				Type		3/2 - WAY	
Bonnet Type		STD				Mfr / Model		N/A	
Flow Direction		FLOW TO OPEN				Contact Point		N/A	
Lining		N/A							
Trim Type		MULTI HOLE (1 - STAGE)				Filter Regulator		YT-200BN210	
Port Size		5 in		Rated Cv		230			
Flow Character.		LINEAR		Stroke		50 mm			
Plug Type		BALANCED				Air Operator Valve		N/A	
Seat Leakage		ANSI Class V				Lock-Up V/V		N/A	
Body/Bonnet		A216 Gr. WCB (SCPH 2)				Speed Controller		N/A	
Stem		A182 Gr. 316				Quick Exh. Valve		N/A	
Plug/Disc/Ball		A182 Gr. 316				Safety Valve		N/A	
Seat Ring		A182 Gr. 316 + STL NO.6				IP-Converter		N/A	
Cage/Retainer		A182 Gr. 316				Check V/v		N/A	
Balance Seal		316 + TFE				Main Tube Pipe Size		N/A	
Packing		V - PTFE				Signal Tube Pipe Size		N/A	
Gasket		316+GRAP. - SPIRAL WOUND				Tubing Material		S.S 316 (MFR STD.)	
Actuator Type		PNEUMATIC CYLINDER				Stroke Time(Sec)		OPEN < 1s / CLOSE < 5s	
Mfr / Model		DCP-400S				Actuator Fix Type		STD-BOLTING	
Actuator Size		16in CYL.				Air Connection		NPT 1/2"	
Failure Mode		VALVE OPEN				Elec. Connection		NPT 1/2"	
Supply (Max)		4.2 Barg				Body Paint Spec		Maker Std.	
Manual Override		TOP/SIDE HANDLE (BLOCK)				Actuator Paint Spec		Maker Std.	
Leakage Test Fluid		Air							
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		MLKWON			
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
	Transl.	Transl.	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

MeSYS Mechanical and Fluid Control Systems		DATA SHEET	
DATE : 2019-11-29		CUSTOMER :	
PROJECT : UAE Layyah CCPP FGC_RCV		REVISION : 9	
		PART NO : PNEUMATIC GLOBE	
GENERAL			
1	TAG NO.		
2	QUANTITY	P & ID NO.	
3	LINE SIZE	LINE SCHEDULE	
4	SERVICE		
5	ENCLOSURE		
BODY & TRIM			
6	TYPE OF BODY	GLOBE CONTROL VALVE	
7	BODY SIZE	PORT SIZE	8"
8	END CONNECTION & RATING	ANSI 600# RF	
9		A216-WCB	
10		SUS 316	
11		SUS 316	
12		SUS 316 + STL NO. 8	
13		MFR STD.	
14	BONNET TYPE	MFR STD.	
15	TRIM FORM	MULTI HOLE (MULTI - 1STAGE)	
ACTUATOR			
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	P GRADE	IP65	
POSITIONER			
23	MODEL NO.	YT-2003LS45219	
24	TYPE	E/PSMART / HART / FEEDBACK	
25	I, OUT PUT SIGNAL	4-20mA	
26	AMB TMP.	-25°C ~ 60°C	
27	ELECTRIC CONNECTION	(선택사항에 해당되는 온도조건 미함)	
28	EXPLOSION PROOF	1/2" NPT	
29	P GRADE	Ex Ia IIC T4 (ECEx)	
30	AIR SUPPLY PRESSURE (BAR)	4-7 BAR	
31	SL. CERT.	SS, 2	
32	GAUGE	SS316 적용	
SOLENOID			
33	MODEL NO.	ASCO / NF1860279302	
34	TYPE	3-way, Direct acting	
35	MAT'L	SS316L	
36	ELECTRIC CONNECTION	1/2" NPT	
37	INSULATION CLASS	H	
38	VOLTAGE	DC 24V	
39	RESET	AUTO	
40	EXPLOSION PROOF	Ex Ia IIC T4 (ECEx)	
41	P GRADE	IP67	
42	SL. CERT.	SS, 2	
43	AMB TEMP.	-25°C ~ 60°C	
44	WATT	(선택사항에 해당되는 온도조건 미함)	
45	AIR SET	0.5 W	
46	MODEL NO.	YT-2003NS10	
47	PREU. CONN.	3/4" NPT	
48	AMB TMP.	-20°C ~ 73°C	
49	FILTER	5 MICRON	
50	GAUGE	SS316 적용	
VOLUME BOOSTER			
51	MODEL NO.	YT-312N1	
52	AMB TMP.	-20°C ~ 73°C	
PROCESS CONDITIONS			
53	FLUID		
54	FLOW RATE UNIT	STATE	
55	FLOW RATE	MS/hr	
56	INLET PRESSURE	PSI	
57	OUTLET PRESSURE	PSI	
58	TEMPERATURE	°C	
59	MAX. SHUT OFF ΔP	PSI	
60	VISCOSITY		
61	CALCULATED C _v		
62	MODEL NO.		
NOTE:			
- STROKE TIME 단락을 위해 VOLUME BOOSTER 추가 - OPEN < 1s, CLOSE < 6s - SOLENOID : 전압/전류/주파수 사용 (POSITIONER <-> VOLUME BOOSTER 사이 연결) - HANDLE COLOR : BLACK - Base / Nut : A193 Gr. B7/A194 Gr. 2H + Hot Dip Galv. (Blud bolt / Heavy hex nuts) - PAINT : MFR STD. - FITTING : SWAGelok SS316 이상 - TUBING : SWAGelok(OEM) SS316 이상			
REVISION :			
1 : VALVE SIZE 변경 / 액세서리 부품 변경 (선택 COMMENT 반영) 2 : FITTING MAKER 변경 / STROKE TIME 변경 / VALVE SIZE 변경 3 : AIR CONN. SIZE 변경 4 : 솔레노이드용 수기, TUBING 변경 5 : 입력 조건에 따른 ACCESSORY 위치 변경 6 : 입력 조건에 따른 ACCESSORY 위치 변경 7 : 포트 상 AIR SET GAUGE 할당 수해 8 : SETTING PRESSURE 변경 9 : STROKE TIME 단락을 위해 AIR CONN. 3/4" NPT 적용			

Ball Control Valve

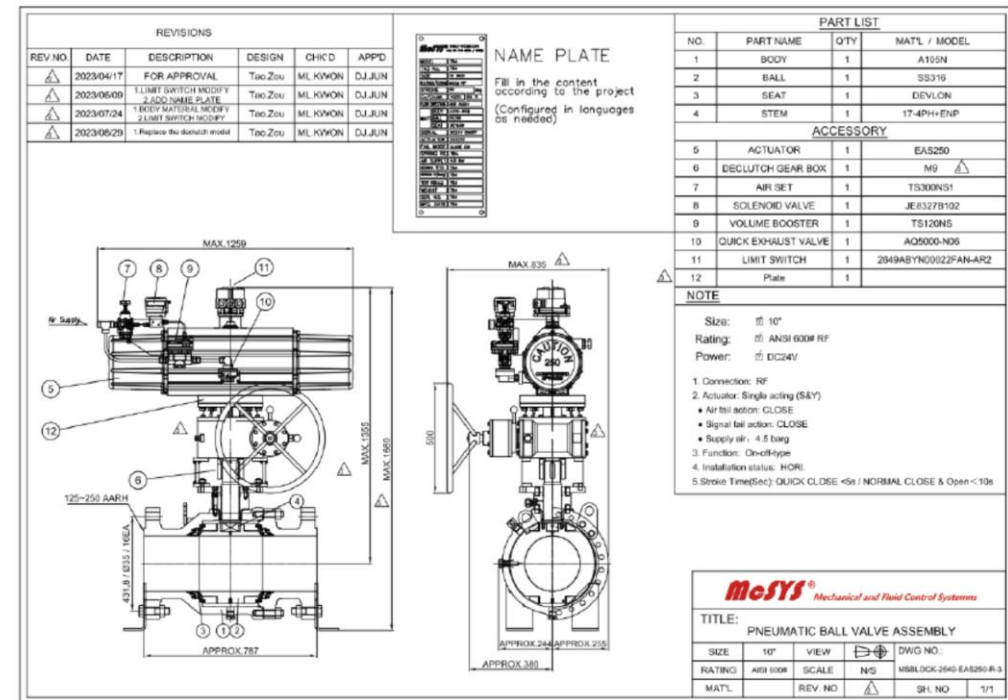
Projects:

- 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 Sheet

CONTROL VALVE DATA SHEET										
McSYS		Project		Ostroleka CCGT FGC		Tag No.				
		Customer				Q'ty		SHT. No.		
		Ult. Client				Revision 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	N 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					
	Model No.									
	Body Type	2WAY BALL								
	Body Size	10" (250A)								
	Pr. Rating	ANSI 600 LBS								
	End Connection	RF FLANGED								
	Bonnet Type	STD								
	Flow Direction	SEE DRAWING								
	Uning	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								
	Seat Leakage	ANSI Class VI								
	Body/Bonnet									
	Stem									
	Plug/Disc/Ball									
	Seat Ring									
	Cage/Retainer									
	Balance Seal									
	Packing									
	Gasket									
MATERIAL	Actuator Type									
	Mfr / Model									
	Actuator Size									
	Failure Mode									
	Supply (Max)									
	Manual Override									
	Notes / Special Instruction									
ACTUATOR	Actuator Type									
	Mfr / Model									
	Actuator Size									
	Failure Mode									
	Supply (Max)									
	Manual Override									
	Notes / Special Instruction									
LIMIT SW.	Positioner									
	Type									
	Mfr / Model									
	Input Signal									
	Increase Signal To									
	Type									
	Mfr / Model									
	Contact Point									
	Filter Regulator									
	Volume Booster									
	Position Feedback									
	Air Operator Valve									
	Lock-Up V/V									
Speed Controller										
Quick Exh. Valve										
Safety Valve										
IP-Converter										
Check V/v										
Main Tube Pipe Size										
Signal Tube Pipe Size										
Tubing Material										
Stroke Time(Sec)										
Actuator Fix Type										
Air Connection										
Elec. Connection										
Body Paint Spec										
Actuator Paint Spec										
Leakage Test Fluid										
ACC. OTHERS										
	C									
A										
	No.									
Date										
	Revision Description									
Prepared By										
	Reviewed By									
Approved By										

CONTROL VALVE CACULATION SHEET					
Valve Sizing - Gas Flow					
Tag Number :					
Trim Type	2WAY BALL	Rated Cv	14250		
Body Size	10" (250A)	Rangeability	50		
Inlet Line Size	10 Inch	Modified Ratio	0.60		
Outlet Line Size	10 Inch				
Outlet Line Schedule	STD Sch.				
Flow Rate Unit	Kg/hr	Temperature Unit	Deg C		
Pressure Unit	BarA	Velocity Unit	m/sec		
	Transi.	Turb.	Turb.	Turb.	Turb.
Condition Title	IN MAX P & T	MAX P & MIN	GURANTEEG		
Flow Rate	100584	100584	100584		
Inlet Pressure	57.013	57.013	28.613		
Outlet Pressure	57	57	28.6		
Diff. Pressure	0.013	0.013	0.013		
Inlet Temperature	10	0	10		
Molecular Weight	16.37	16.37	16.37		
Specific Heat Ratio	1.4295	1.4517	0.9406		
Compressibility	0.9285	0.9169	0.9406		
Calculated Cv	4946.730	4828.190	7031.590		
Stroke % (EQ%)	56.7	56.1	66.4		
Stroke % (Linear)	33.4	32.5	48.3		
Stroke % (Modified)	67.0	66.6	74.4		
Allow. Dp-Choked [Psi]	253.5	257.4	83.7		
Acoustic Velocity	453.5	448.9	367.8		
Outlet Valve Velocity	13.9	13.4	27.7		
Outlet Line Velocity	13.8	13.4	27.6		
Choked Flow	None	None	None		
Noise Level [dBA]	< 70	< 70	< 70		
Mach No.	0.03	0.029	0.075		

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 : 2024-07-25		CUSTOMER : 한국수력·원자력	
PROJECT : Ostroleka CCGT FGC -BV & OBV		REVISION : 1	
		PART NO : PNEUMATIC BALL	
GENERAL			
1	TYPE NO.		
2	QUANTITY	P & ID NO.	
3	LINE SIZE	LINE SCHEDULE	
4	SERVICE		
5	ENCLOSURE		
BODY & TRIM			
6	TYPE OF BODY	3-WAY TRUNNION BALL (FULL BORE) / ORB TYPE TYPE	
7	BODY SIZE	PORT SIZE	
8	END CONNECTION & RATING	END: 800# RF	
9	FACE SAFE DESIGN	API 607	
10		2500 LPS	
11		Δ152 F118	
12	MATERIAL	Δ152 F61	
13		Δ152 F61 + ORB/ON	
14		Δ152 OR, 57/Δ154 OR, 57 + Hst 45 gal.	
15	ORIGIN	CHINA	
16	ERT	OR/EPD	
ACTUATOR			
17	TYPE OF ACTUATOR	PNEUMATIC ROTARY ACTUATOR - MAY	
18	MODEL NO.	Δ4333N	
19	OPEN	Δ152 TO OPEN (DOWN)	
20	FAIL POSITION	CLOSE (ON)	
21	P GRADE	IP65	
22	AIR SUPPLY PRESSURE	(Bar)	
23	MATERIAL	ALUMINIUM	
24	TEMPERATURE	-40 ~ 75degC	
25	MANUAL OVERRIDE	YES / -55 ~ 75degC / QUOTILE IRON / P GRADE z / N10 MODEL / DE	
BURNING			
26	MODEL NO.	Δ500 / J0178378211	
27	TYPE	S-WAY	
28	CONDUIT	N40	
29	INSULATED INSULATION	N	
30	POWER	3K VDO	
31	PROT	AUTO	
32	Explosion proof	N5 2 - EXEX	
33	P GRADE	IP65/67	
34	ERT	OE, SIL	
35	BODY MATERIAL	BRASS	
36	TEMPERATURE	-40 ~ 105degC (보통사용용) 해당 항목(보통용) 적용	
LIMIT SWITCH			
37	MODEL NO.	TOPWORK / K1P-Δ30MM	
38	TYPE	PROXIMITY	
39	S.T.T	S-SPDT, OPEN / CLOSE	
40	Contacts / Rating	24 VDO	
41	Electrical Connection	M20	
42	Explosion proof	N5 2 - EXEX	
43	P GRADE	IP65/67	
44	ERT	OE, SIL	
45	ENCLOSURE MATERIAL	ALUMINIUM	
46	TEMPERATURE	-40 ~ 70degC (보통사용용) 해당 항목(보통용) 적용	
AIR SET			
47	MODEL NO.	P5222N1	
48	SETTING PRESS.	5 BAR	
49	PREL. DOWN	Δ1/4" NPT	
50	SAFETY	YES	
51	PLATE	E-MARK	
52	MATERIAL	ALUMINIUM	
53	TEMPERATURE	-40 ~ 75degC	
QUICK EXHAUST VALVE			
54	MODEL NO.	QE-Δ115-EP	
55	SIZE	Δ1/4" NPT	
56	TEMPERATURE	-40 ~ 75degC	
57	MATERIAL	SS316	
VOLUME BOOSTER			
58	MODEL NO.	TB100NL	
59	MATERIAL	ALUMINIUM	
60	TEMPERATURE	-40 ~ 75degC	
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. GROSS FLOW ΔP	Bar	
68	VELOCITY		
69	ORIFICE COEFF.		
70	MODEL NO.		
71	NOTE:	• STROKE TIME : OPEN & CLOSE <10s • PAINT : PUT GRD 70s • FITTING : 300s DOUBLE FERRULE • TUBING : 300s & 300s DUAL • NAME PLATE & TAG : PUT GRD 70s (제작 전 항목 CONFIRM 후 제작)	

3 Control valve & GGC Valves

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



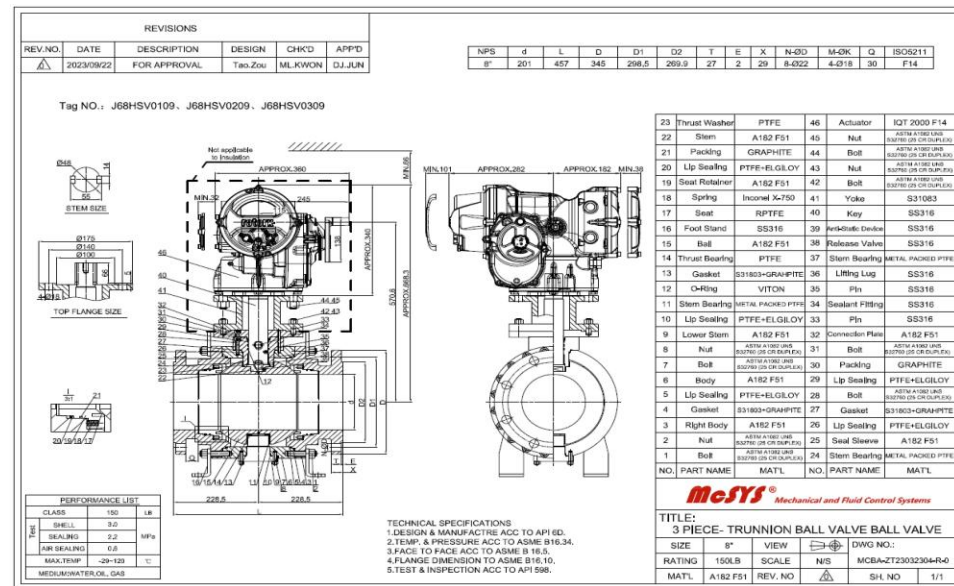
Motor Actuated Ball ON-OFF Valve

Projects:

- JANSZ IO FCS PJT

Valve Spec:

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



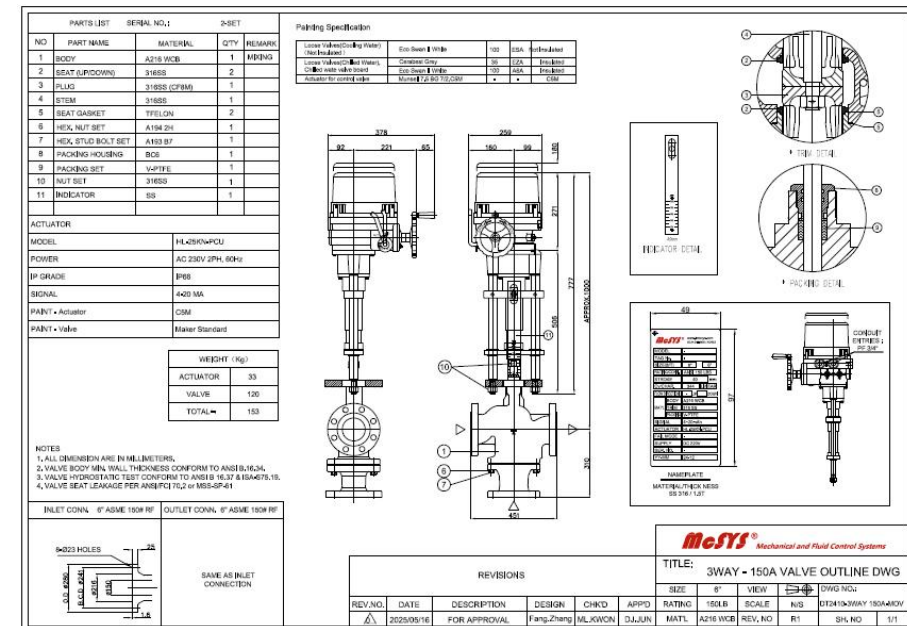
Motor Actuated Globe Control Valve

Project:

- SHI Petronas ZLNG

Valve Spec:

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



CONTROL VALVE SIZING SHEET					
mesys [®]	Project SHI PETRONAS ZLNG CONTROL VALVE			Revision No.	
	Customer			SHT. No.	
	Ult. Client			Prepared By	
	Tag No. 500MOV-210			Date 24/03/05	
Valve Sizing : Water Flow					
Body Size	2-1/2" (65A)		Flow Rate Unit	M3/hr	
Inlet Line Size	2 1/2		Pressure Unit	BarA	
Outlet Line Size	2 1/2		Temperature Unit	Deg C	
Outlet Line Schedule	STD		Velocity Unit	m/sec	
Trim Type	MIXING		Critical Pressure	221	
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	3.02			
Outlet Valve Velocity	2.0	2.0			
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, "Flow Equations For Sizing Control Valves".					

Special Material Valve I

Projects:

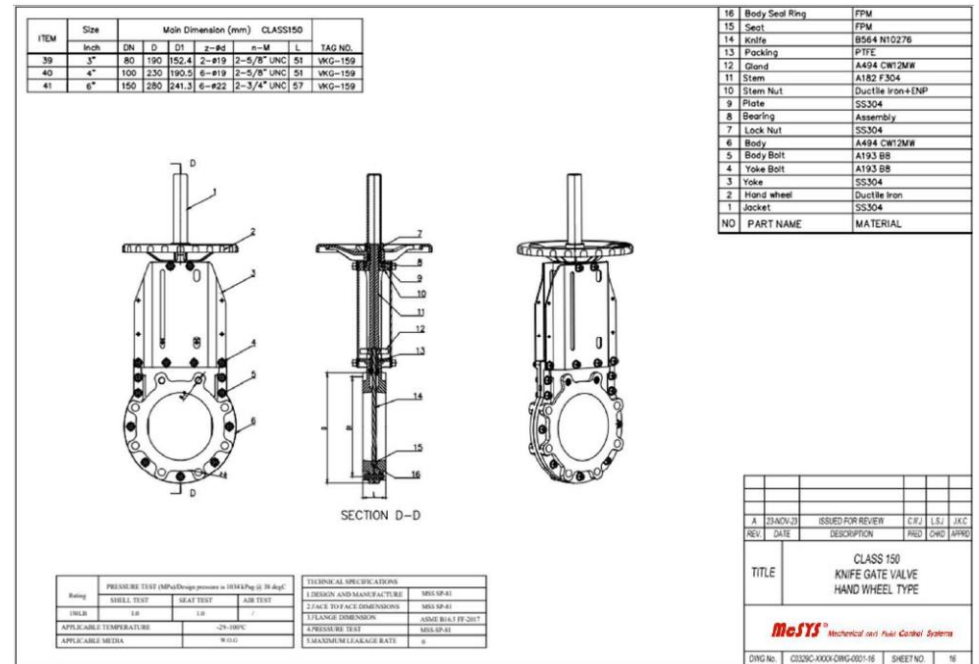
- PT. Free Port
(Exotic Valve PKG PJT)

Valve Spec:

Knif gate valve

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

Requirement : 3.2 CET'



Special Material Valve II

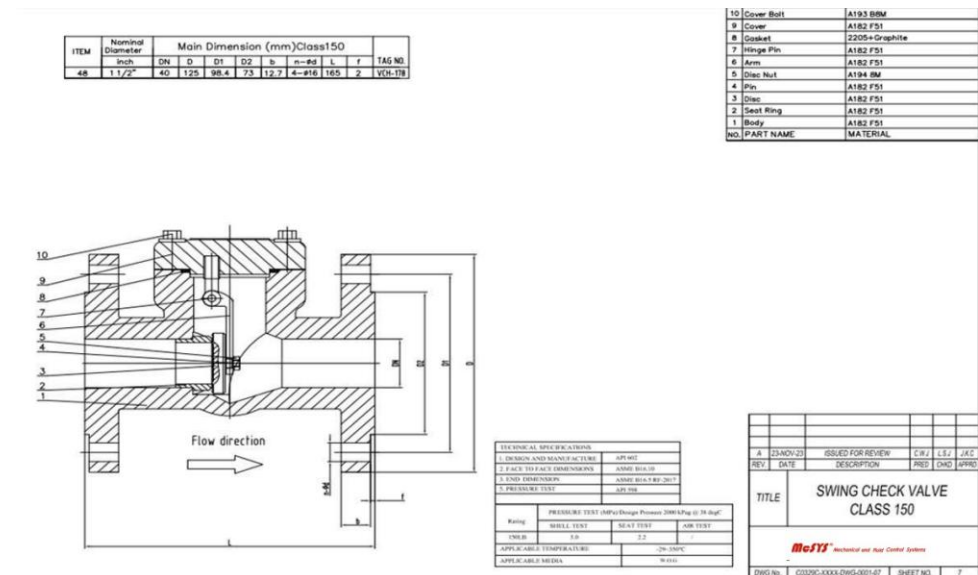
Project:

- 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



Special Material Valve III

Project:

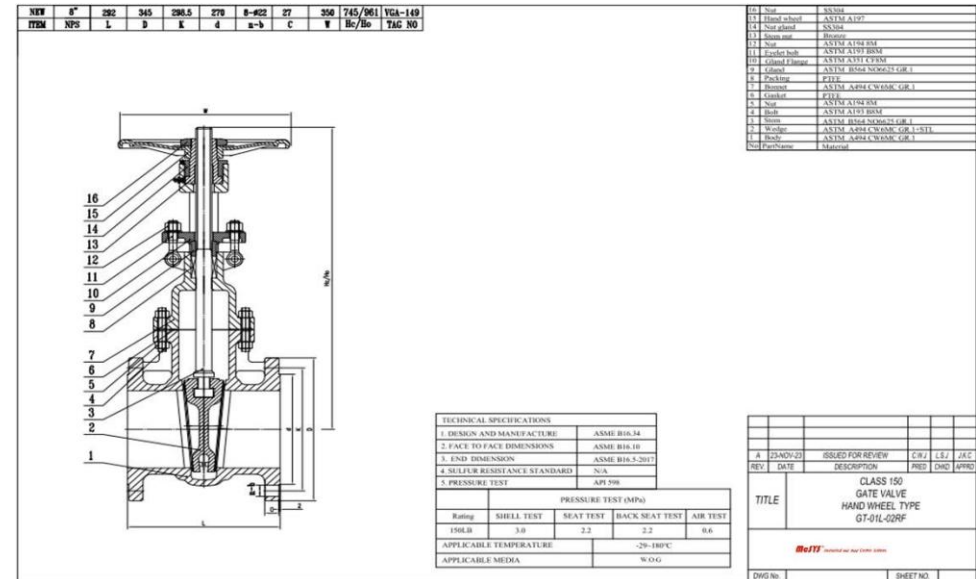
- PT. Free Port
(Exotic Valve PKG PJT)

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:

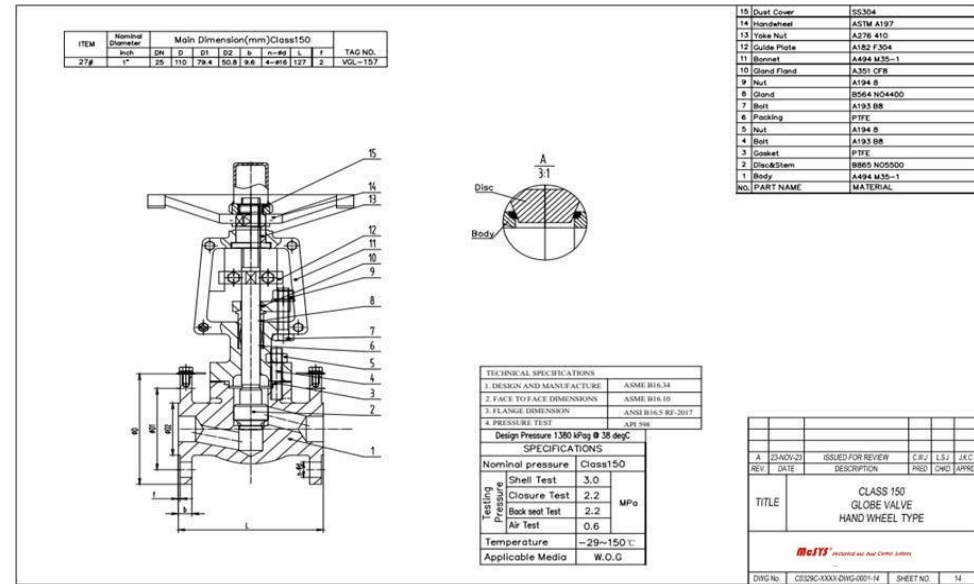
- PT. Free Port
(Exotic Valve PKG PJT)

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:

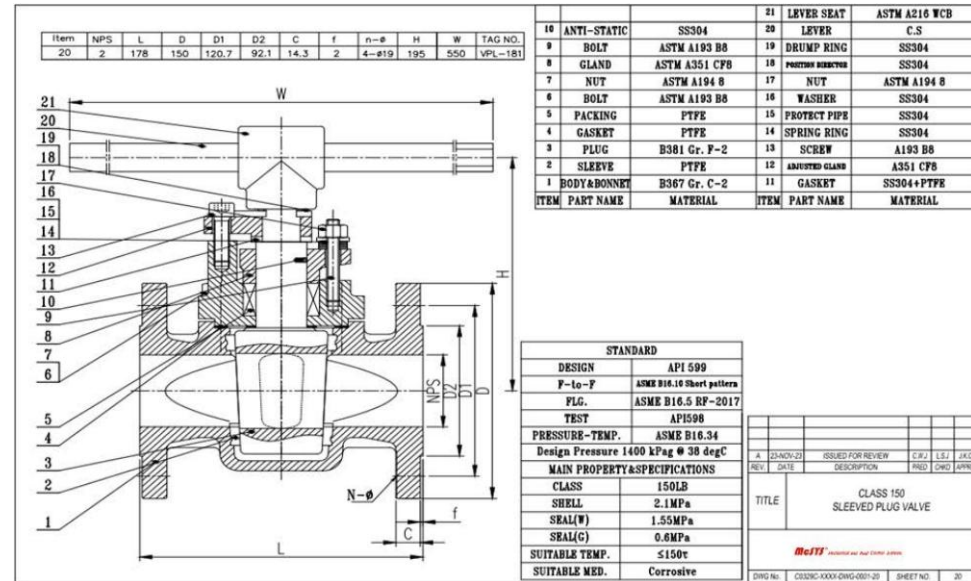
- PT. Free Port
(Exotic Valve PKG PJT)

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:

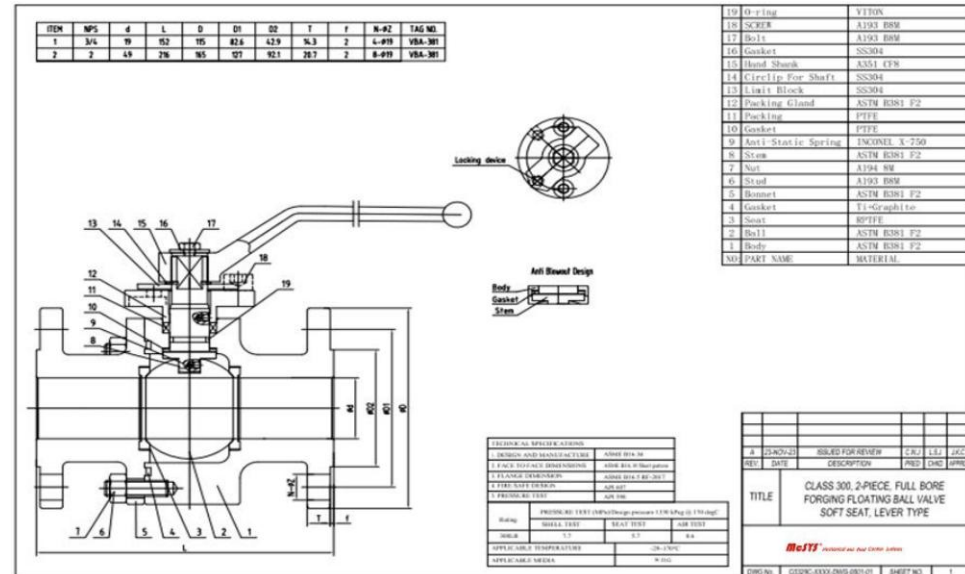
- PT. Free Port
(Exotic Valve PKG PJT)

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



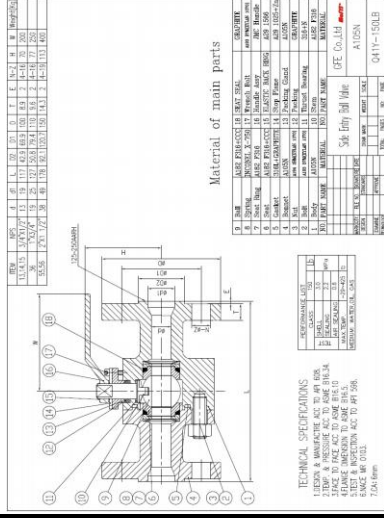
RDMP 1차 ~ 14차 ITEM 별 자료

TECHNICAL
PARAMETER

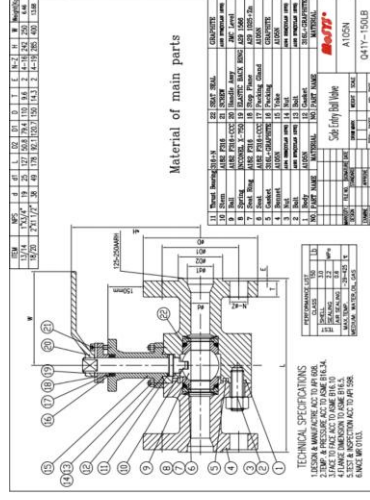
PHOTO

DRAWING

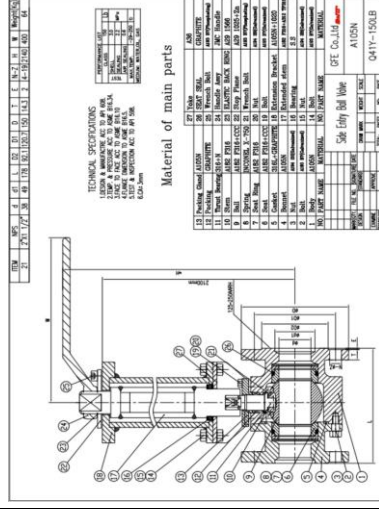
FLOATING
SIDE BALL VALVE
SIZE: 1/2"~6"
CLASS:150LB/300LB/
600LB
BODY:A105N/LF2/
LF3/F316/F20/F5A
BALL:F316+CCC
SEAT:F316+CCC
STEM:F316
BOLTING:B7/2H,L7/7,
L7M/7M,B8M/8M



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



FLOATING
SIDE BALL VALVE
(SPECIAL EXT)
SIZE: 2~3"
CLASS:150LB/300LB
BODY:A105N/LF2/F316
BALL:F316+CCC
SEAT:F316+CCC
STEM:F316
BOLTING:B7/2H,L7/7,
L7M/7M,B8M/8M



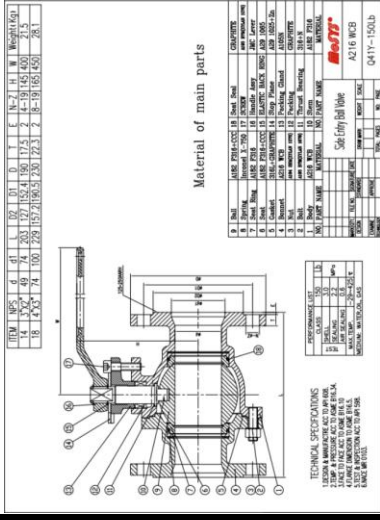
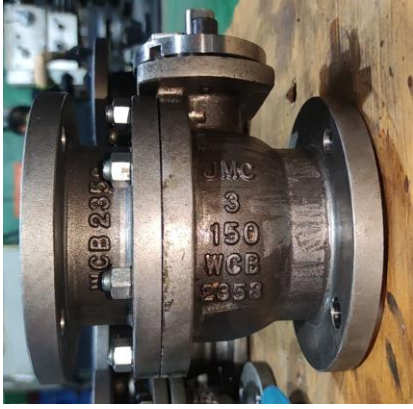
RDMP 1차 ~ 14차 ITEM 별 자료

TECHNICAL
PARAMETER

PHOTO

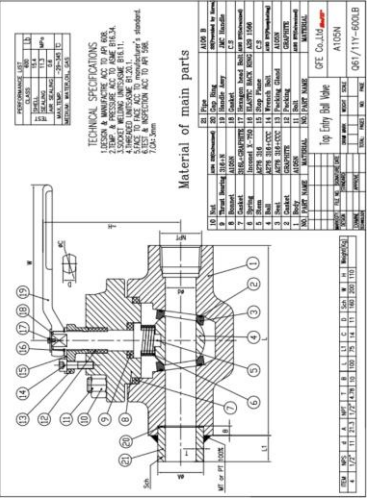
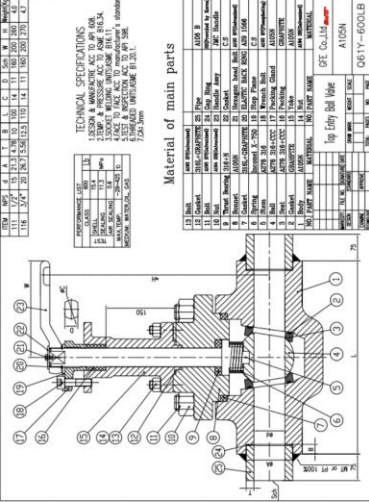
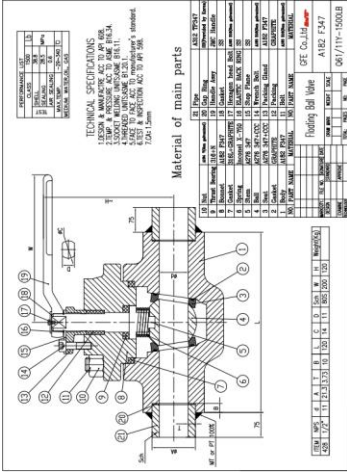
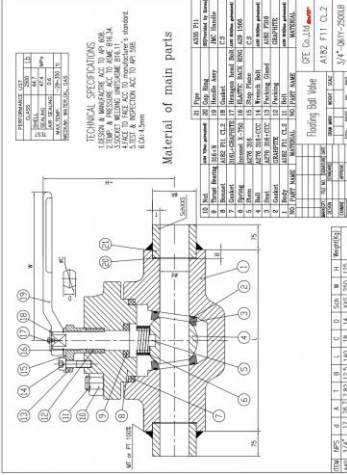
DRAWING

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



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

RDMP 1차 ~ 14차 ITEM 별 자료

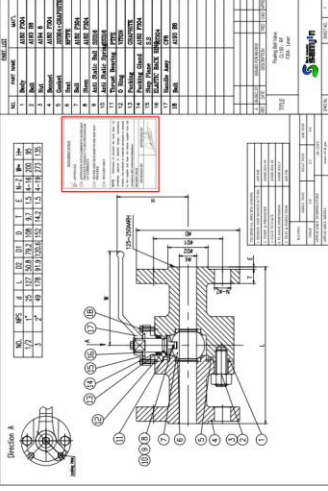
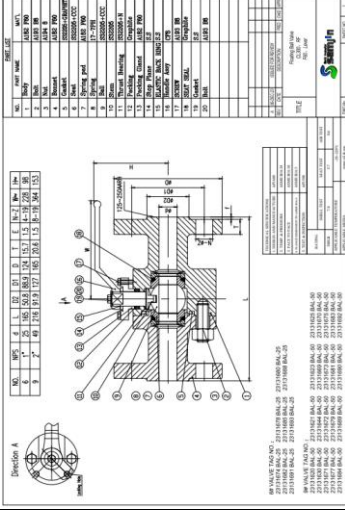
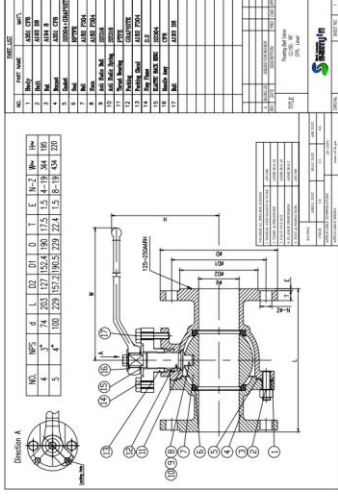
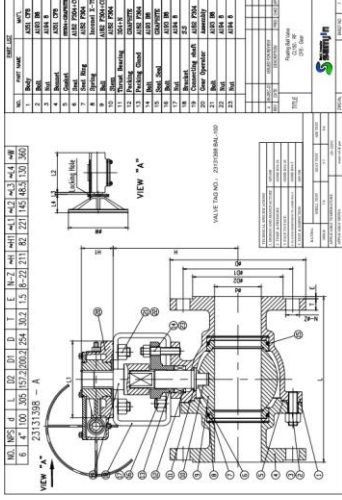
TECHNICAL PARAMETER	PHOTO	DRAWING
FLOATING TOP BALL VALVE SIZE: 1/2"~2" CLASS: 600LB BODY:A105N/LF2/F316 BALL:F316+CCC SEAT:F316+CCC STEM:F316 BOLTING:B7/2H,L7/7, B8M/8M		
FLOATING TOP BALL VALVE (EXT STEM) SIZE: 1/2"~2" CLASS: 600LB BODY:A105N/LF2/F316 BALL:F316+CCC SEAT:F316+CCC STEM:F316 BOLTING:B7/2H,L7/7,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

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



무림PNP ITEM 별 자료

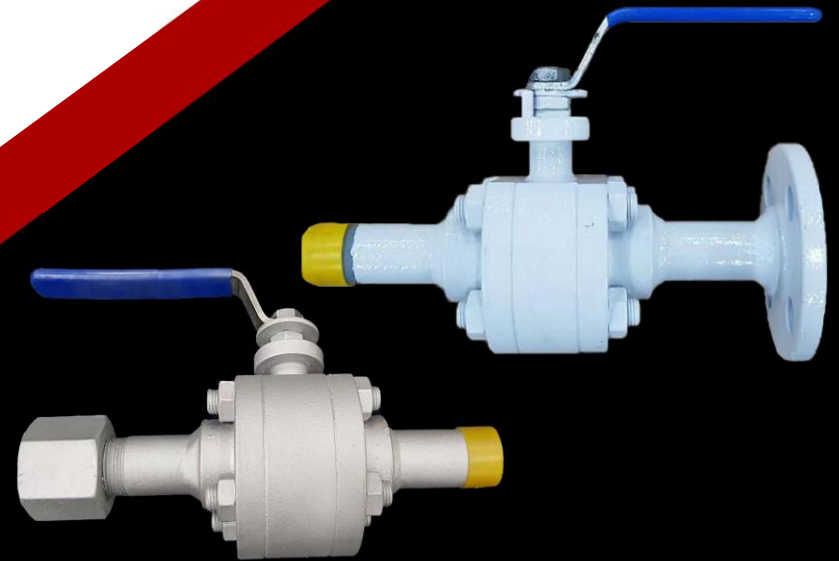
TECHNICAL PARAMETER	PHOTO	DRAWING
FLOATING 2-PC SIDE BALL VALVE (SOFT SEAL) SIZE: 1" 2" CLASS:150LB/300LB/ 600LB BODY:A105N/F304 BALL:F304 SEAT:RTFE STEM:F304 BOLTING:B7/2H,B8/8		
FLOATING 2-PC SIDE BALL VALVE (RIGIDITY SEAL) SIZE: 1" 2" CLASS:150LB/300LB BODY:F304/F60 BALL:F304/F60+CCC SEAT:F304/F60+CCC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



P-78 ITEM 별 자료

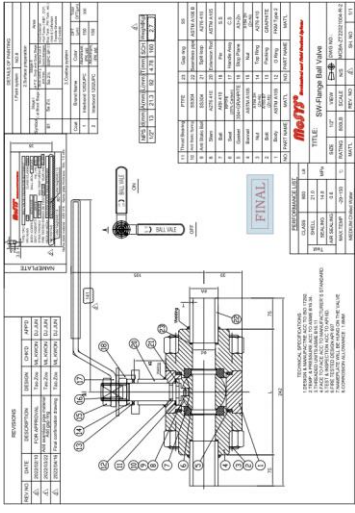
TECHNICAL
PARAMETER

SW
3PC-SIDE ENTRY
BALL VALVE
SIZE: 1/2"
CLASS:800LB
BODY:A105
BALL:AISI 410
SEAT:RTFE
STEM:AISI 410
BOLTING:B7/2H

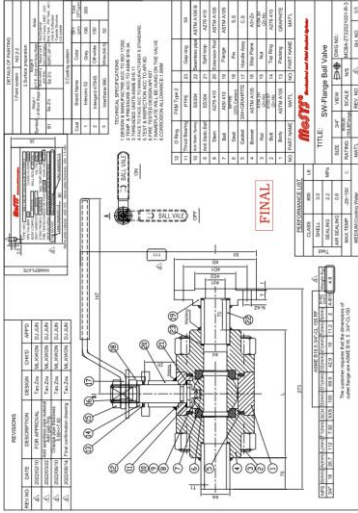
PHOTO



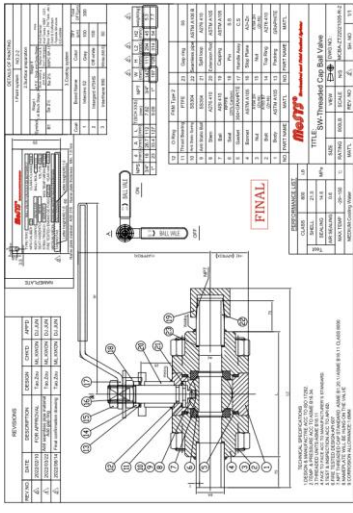
DRAWING



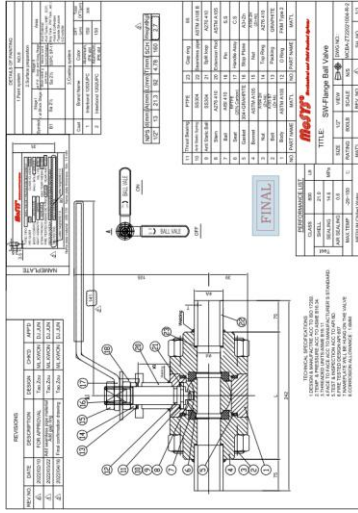
SW/FLANGE
3PC-SIDE ENTRY
BALL VALVE
SIZE: 3/4"
CLASS:800LB
BODY:A105
BALL:AISI 410
SEAT:RTFE
STEM:AISI 410
BOLTING:B7/2H



SW/CAP
3PC-SIDE ENTRY
BALL VALVE
SIZE: 3/4", 1"
CLASS:800LB
BODY:A105
BALL:AISI 410
SEAT:RTFE
STEM:AISI 410
BOLTING:B7/2H



SW/BOTH RF
3PC-SIDE ENTRY
BALL VALVE
SIZE: 2"
CLASS:800LB
BODY:A105
BALL:AISI 410
SEAT:RTFE
STEM:AISI 410
BOLTING:B7/2H

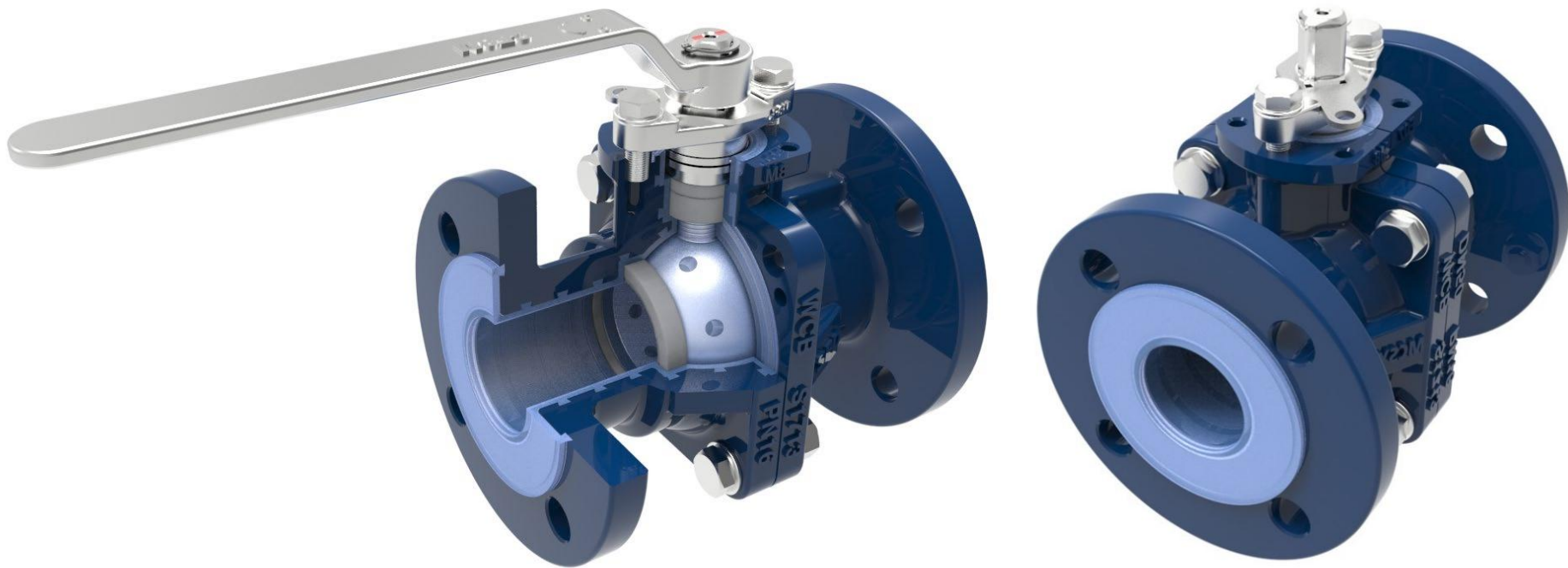


7

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.

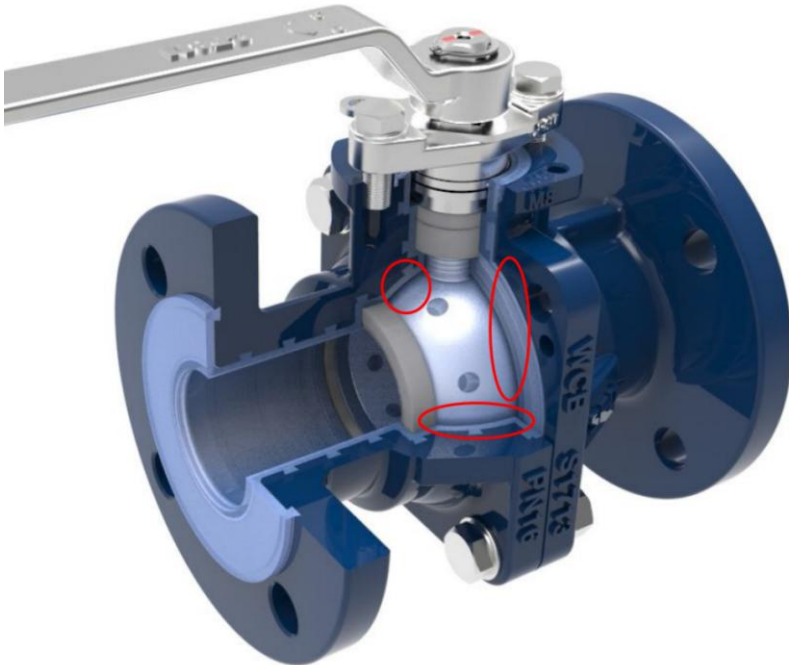


Ball과 Stem이 일체형으로 설계되었으며 BODY 중심에 BALL이 위치하여 토크 분포가 균일하고 작동이 안정적이며, 배관에 설치시 볼트와 너트는 보디와 간섭이 되지 않도록 충분한 공간이 확보되었다.



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.



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.

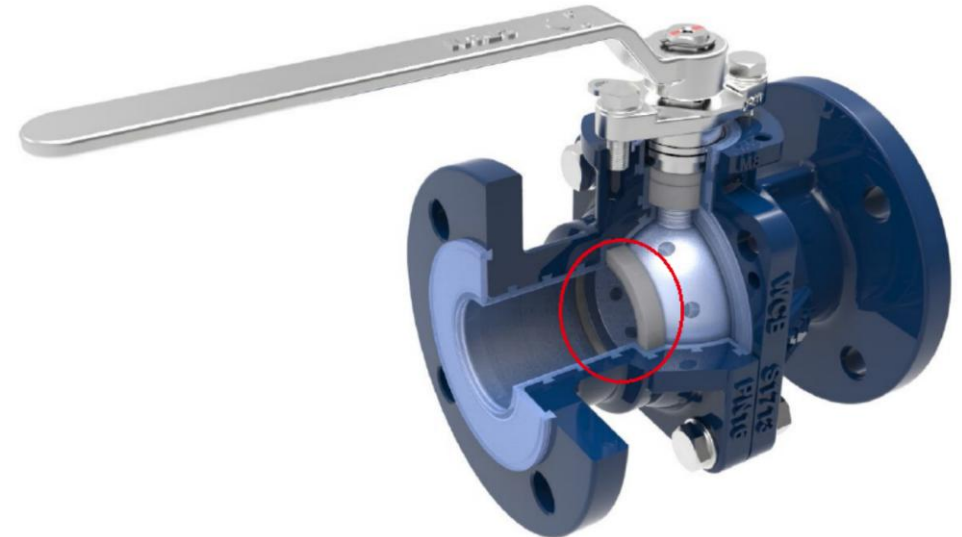


TEFLON LINED BALL VALVE

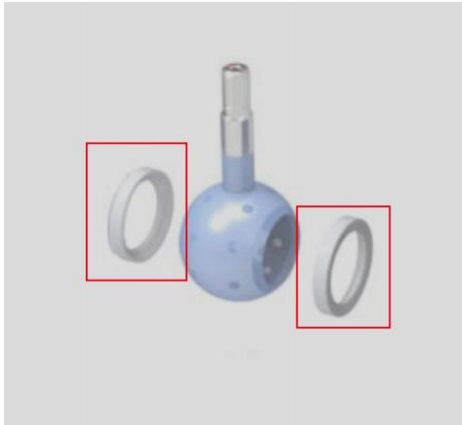
STEM 2-PIECES PACKING 은 GLAND가 눌리며 PACKING에 압력을 가하여 PACKING 이 STEM으로 밀착되어 STEM을 통하여 유체가 누수되는 것을 방지하면서 STEM 에 과도한 힘이 전달되지 않게 2- PIECE 일체형 구조로 설계되어 TORQUE 가 증가되지 않는다.



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



TEFLON LINED BALL VALVE

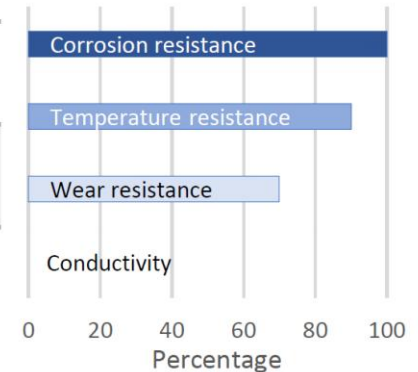


PTFE

Service temperature
-40° ~ +180°

High crystallinity, Material density > 2.16g/cm³,
Lining thickness ≥ 3.5mm

사용온도 : -29~150°

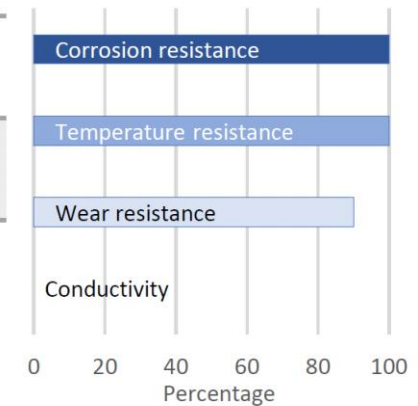


PFA

Service temperature
-40° ~ +200°

Excellent chemical resistance and temperature resistance,

사용온도 : -29~170°



8

Teflon Lined Butterfly Valve

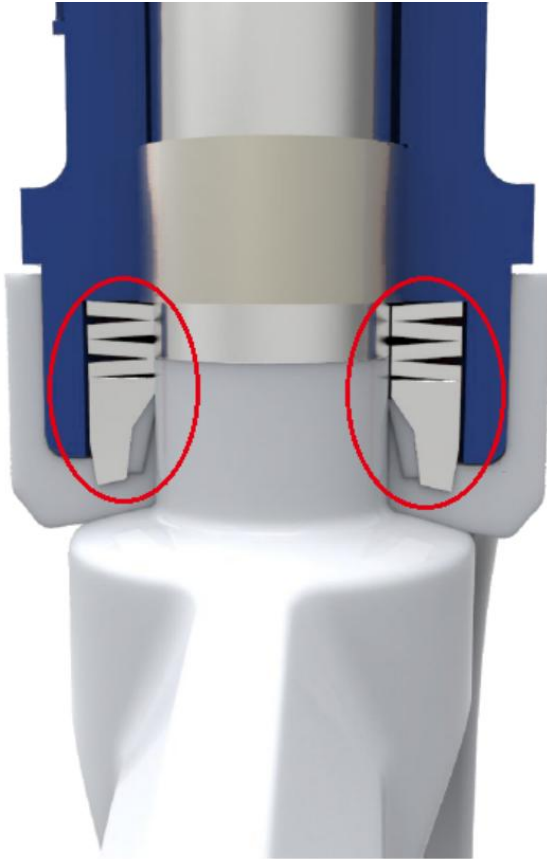


TEFLON LINED BUTTERFLY VALVES



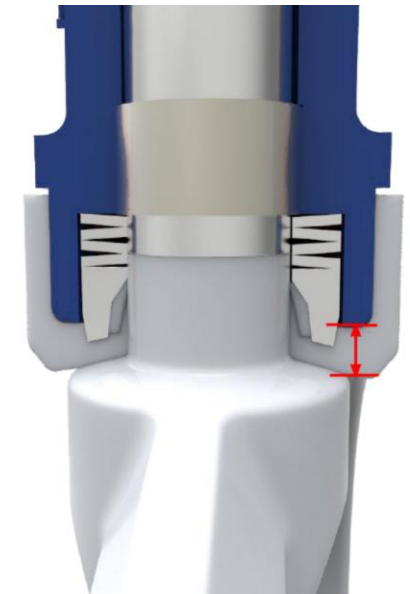
TEFLON LINED BUTTERFLY VALVES

하중 접시형 스프링을 사용하여 밸브 시트로 지속적으로 압력을 가하여 밸브 시트의 1차 메인 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.



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.



TEFLON LINED BUTTERFLY VALVES



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

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

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.



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.



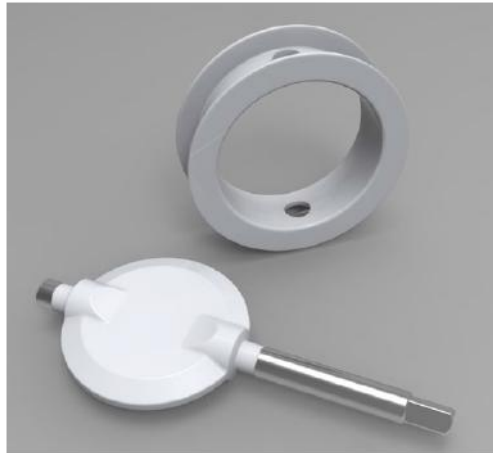
유로구의 홈설계 : 테프론 라이닝
밸브가 파이프에 설치시 밸브 시트 PTFE는 압력을 받아 변형되며 라이닝 표면 처리 홈은 밸브 시트의 라이닝 변형을 위한 공간을 확보하도록 설계되어 라이닝에 의한 밸브 시트의 압출 변형을 감소하며 토크를 줄인다.



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

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

TEFLON LINED BUTTERFLY VALVES



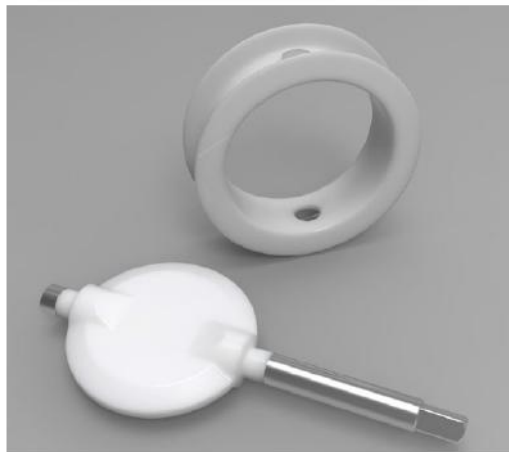
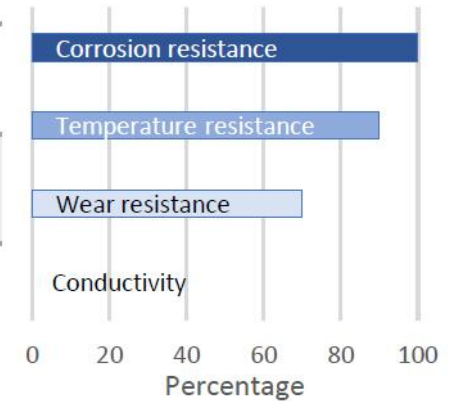
PTFE

Service temperature
-40° ~ +180°

High crystallinity, Material density > 2.16g/cm³,
Lining thickness ≥ 3.5mm

사용온도 : -29~150°

진공(-0.1Mpa미만) : -10℃~70℃



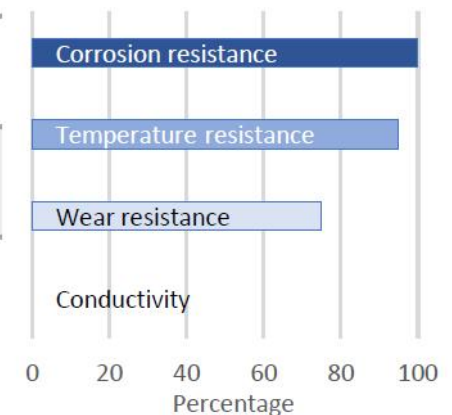
RPTFE (M111)

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



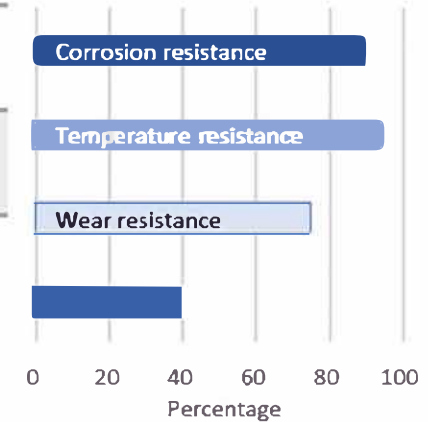
PTFE/SUS316

Service temperature
-40° ~ +180°

High purity PTFE, Polished disc, For food grade occasions

사용온도 : -29~150°

진공(-0.1Mpa미만) : -10℃~70℃

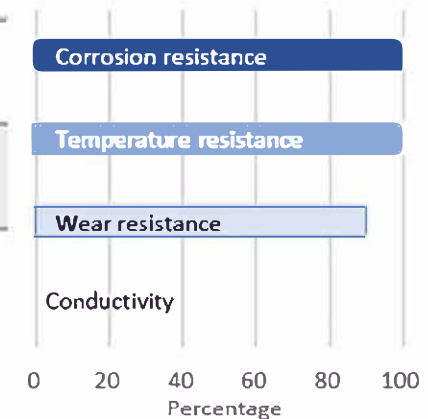


PFA

Service temperature
-40° ~ +200°

Excellent chemical resistance and temperature resistance,

사용온도 : -29~170°



Thank you for attention !

