A GLOBAL INDUSTRY LEADER AND

DRIVING INNOVATION FOR THE FUTURE

DH CONTROLS

SCR & EGR & GAS CONTROL SYSTEM

Specialized Valve Solution

DH controls

DH CONTROLS

MARINE ENGINE
& SHIPBUILDING

ONSHORE &
OFFSHORE PLANT

NET ZERO
CARBON EMISSION





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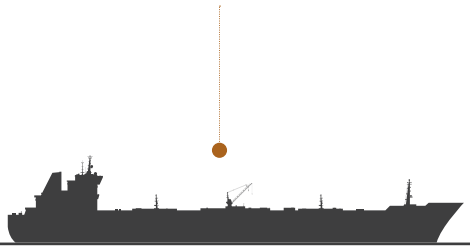
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COMPANY INFORMATION

MARINE ENGINE
& SHIPBUILDING



COMPANY HISTORY

2009
- Incorporated in Busan Metropolitan City, Korea

2011
- The World First Development of Screw Down Valve & Hydraulic Actuator
- Development of Watertight Cylinder-Type Position Transmitter

2012
- Acquired ISO 9001 and ISO 14001 Certifications
- Certified as a Venture Enterprise
- Designated as a Promising SME in Export

2013
- Established R&D Center
- Honored with the Gyeongnam SME Award
  경상남도 중소기업대상 수상 (중소기업청)

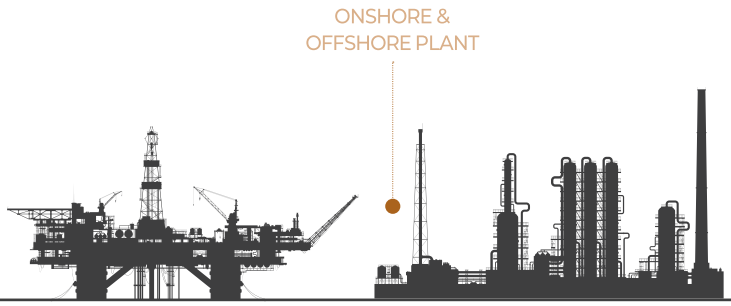
2014
- Established a Partnership with Major Shipbuilders Such as HMD, DSME, DH Shipbuilding, and Daesun Shipbuilding
- Expanded with the Second Factory

2015
- Established a Partnership with Major Shipbuilders Including SHI, STX Shipbuilding, and HJSC
- Honored with the Trade Promotion Commendation (Ministry of Trade, Industry and Energy)
  무역진흥 표창 수상 (산업통상자원부)

2016
- Acquired Inno-Biz Certification
- Established a Partnership with HHI-Engine & Machinery
- Headquarters Expansion and Relocation to Changwon City

2017
- Acquired KOSHA Safety Valve Certification Development of Valve System for SCR & EGR
- Initiation for SCR-LP Supply to Hyundai Heavy Industries

2018
- Acquired the First Certification of Approval (MAN Energy Solutions)
- Honored with the Commendation for Industry Innovation Movement (National Commission for Corporate Partnership)
- Established a Partnership with KOSPO Under a Mutual Growth Contract



2019
- Certified as an IP Management Enterprise
- Acquired ISO 45001 Certification
- Certified as a Specialized Enterprise in Materials, Components, and Equipment (KEIT)
- Established a Partnership with HPS and Supplied a Damper System for Scrubber
- Achieved Annual Revenue of KRW 10 Billion

2020
- Headquarters Expansion and Relocation to Busan Metropolitan City
- Acquired K-Star Enterprise Certification (KTL)
- Certified for MAN Diesel & Turbo Tier III Valve (Group 1~4)
- Acquired Risk Assessment Certificate (KOSHA)

2021
- Honored with the Digital Innovation Grand Prize (Ministry of Science and ICT and The Hankook Ilbo)
- Honored with the Commendation for Contributions to the Promotion of the Materials, Components, and Equipment Industry (Ministry of Trade, Industry and Energy)
  소재·부품·장비 산업 진흥 유공 표창 수상 (산업통상자원부)
- Designated as One of the National Top 1,000 Innovative Companies (Ministry of Trade, Industry and Energy)
- Designated as a Busan Regional Star Company (Busan Metropolitan City)
- Designated as a Promising SME (BNK Bank)
- Established a Partnership with HSD Engine and Supplied a Valve System for the EGR System

2022
- Introduction of ESG Management Practices
- Acquired ISO 37001 Certification
- Honored with the 2nd Digital Innovation Grand Prize (Ministry of Science and ICT and The Hankook Ilbo)
- Designated as a K-Pre-Unicorn Candidate Company (KOSME)
- Formalized a Strategic Business Partnership with the Busan Hydrogen Alliance
- Development of Key Components for Alternative Fuel Propulsion Vessels
  - Methanol and Ammonia Safety Valve Units
  - Dampers for iCER & iSCR

2023
- Established a R&D Partnership (SK E&S)
- Initiation of Development for Key Components for Alternative Fuel Propulsion Vessels
  - SCR for Simultaneous Reduction of NOx and N_2O in Ammonia Ships (~2027)
  - Methanol and Ammonia FVT
- Acquired the First Supplier Approval (WinGD)
- Designated as an Excellent ESG Company (KCCP)
- Designated as a Clean Energy Tech-Innovation Company (Busan Metropolitan City)
- Honored with the 3rd Digital Innovation Grand Prize (Ministry of Science and ICT and The Hankook Ilbo)
- Honored for Contributions to Technology (Innovation Innobiz Association)
- Honored for Contributions to the Advancement of Environmental Technology (Ministry of Environment)
  친환경 기술진흥 유공 표창 수상 (환경부)
- Achieved Annual Revenue of KRW 20 Billion

2024
- Established a Partnership with Hitachi Zosen Marine Engine (Japan) and Supplied a Valve System for SCR HP
- Established a Partnership with YCMP and HHM (China) to Supply a Valve System for SCR HP
- Established a Partnership with SCE and Hengli (China) to Supply a Valve System for SCR HP/EGR
- Designated as a Regional Specialization Regend 50+ (Busan Metropolitan City)
- Designated as a Global Small Giants 1000+ (Ministry of MEs)
- Designated as an IP Star Company (Korea Invention Promotion Association)
- Designated as a Company in the Core Manufacturing Industries (Korea Institute of Industrial Technology)
- Designated as a Busan Leading Company (Busan Metropolitan City)
- Honored for Contributions to Public Technology Commercialization (Ministry of Science and ICT)
  공공기술 사업화 유공 표창 수상 (과학기술정보통신부)

AWARD


제10587호

표 창 장

제17회 경남중소기업대상
(창업벤처부문)

(주)디에이치콘트롤스
대표이사 진 종 근

귀하는 기술개발과 경영혁신으로 기업을 건실하게 경영하여 지역경제 발전에 기여한 공이 크므로 이에 표창합니다.

2013년 10월 24일

중소기업청장 한 정 화

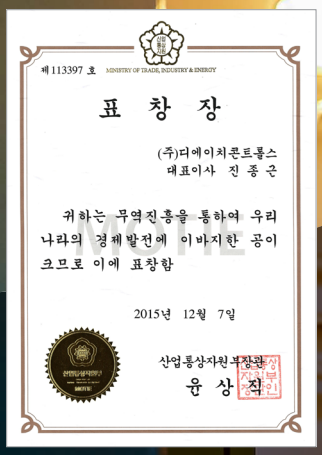

제113397 호 MINISTRY OF TRADE, INDUSTRY & ENERGY

표 창 장

(주)디에이치콘트롤스
대표이사 진 종 근

귀하는 무역진흥을 통하여 우리나라의 경제발전에 이바지한 공이 크므로 이에 표창함

2015년 12월 7일

산업통상자원부장관 윤 상 직


제2017-044호

표 창 장

주식회사 디에이치콘트롤스

귀사는 산업혁신운동 사업의 모범적인 추진을 통하여 국가산업발전에 기여한 공이 크므로 이에 표창합니다.

2017년 9월 25일

동반성장위원회 위원장 안 충 영

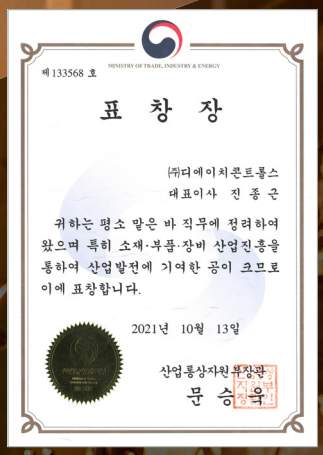

제133568 호 MINISTRY OF TRADE, INDUSTRY & ENERGY

표 창 장

㈜디에이치콘트롤스
대표이사 진 종 근

귀하는 평소 맡은 바 직무에 정려하여 왔으며 특히 소재·부품·장비 산업진흥을 통하여 산업발전에 기여한 공이 크므로 이에 표창합니다.

2021년 10월 13일

산업통상자원부장관 문 승 욱

CERTIFICATE


QUALITY MANAGEMENT SYSTEM CERTIFICATE

DH CONTROLS Co., Ltd.

74, Mieumgukje 4-ro, Gangseo-gu, Busan, Korea

This is to certify that organization above has been audited and registered by KOTRIC-CC for the standard and scope described as follows:

ISO 9001:2015

CERTIFICATE NUMBER : IQS 9722

SCOPE :
Design, development and manufacture of control valves, screw down valves, hypro actuators & transmitters, damper valves for scrubber systems, safety valves, damper valves for SCR systems, triple incentric valves for EGR systems, remote valves for ship engines, nyogenic valves and shut-off valves, methanol safety valve unit

[IAF CODE : 18, 19]

EXCLUDED REQUIREMENT [None]

Valid Until : January 03, 2027
Initial Date : January 04, 2018
Issued Date : December 15, 2023

President

KOTRIC Certification Center


ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE

DH CONTROLS Co., Ltd.

74, Mieumgukje 4-ro, Gangseo-gu, Busan, Korea

This is to certify that organization above has been audited and registered by KOTRIC-CC for the standard and scope described as follows:

ISO 14001:2015

CERTIFICATE NUMBER : IES 4362

SCOPE :
Manufacture of control valves, screw down valves, hypro actuators & transmitters, damper valves for scrubber systems, safety valves, damper valves for SCR systems, triple incentric valves for EGR systems, remote valves for ship engines, nyogenic valves and shut-off valves, methanol safety valve unit

[IAF CODE : 18, 19]

EXCLUDED REQUIREMENT [None]

Valid Until : January 03, 2027
Initial Date : January 04, 2018
Issued Date : December 15, 2023

President

KOTRIC Certification Center


OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATE

DH CONTROLS Co., Ltd.

74, Mieumgukje 4-ro, Gangseo-gu, Busan, Korea

This is to certify that organization above has been audited and registered by KOTRIC-CC for the standard and scope described as follows:

ISO 45001:2018

CERTIFICATE NUMBER : IOS 8067

SCOPE :
Manufacture of control valves, screw down valves, hypro actuators & transmitters, damper valves for scrubber systems, safety valves, damper valves for SCR systems, triple incentric valves for EGR systems, remote valves for ship engines, nyogenic valves and shut-off valves, methanol safety valve unit

[IAF CODE : 18, 19]

EXCLUDED REQUIREMENT [None]

Valid Until : December 17, 2026
Initial Date : December 19, 2020
Issued Date : December 15, 2023

President

KOTRIC Certification Center

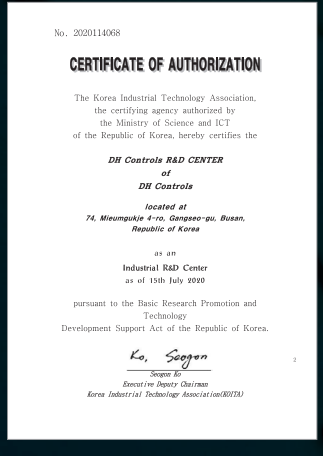

NO 2023-68

Certificate of Excellent ESG

Company DH Controls., Ltd.
Representative JIN JONG KEUN
Expiration March, 9, 2025

We hereby certify that the company named above is a SME(Small and Medium Enterprise) that fulfills corporate social responsibility of the global standard, based on the 2022 ESG implementation of examination conducted by KCCP(Korea Commission for Corporate Partnership).

KCCP


No. 2020114068

CERTIFICATE OF AUTHORIZATION

The Korea Industrial Technology Association,
the certifying agency authorized by
the Ministry of Science and ICT
of the Republic of Korea, hereby certifies the

DH Controls R&D CENTER
of
DH Controls

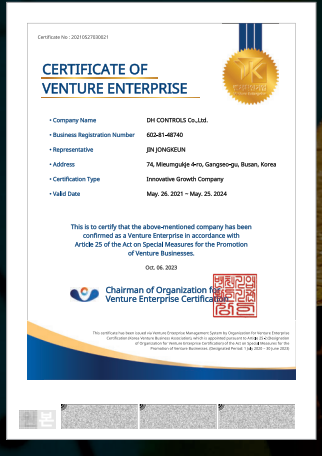
located at
74, Mieumgukje 4-ro, Gangseo-gu, Busan,
Republic of Korea

as an
Industrial R&D Center
as of 15th July 2020

pursuant to the Basic Research Promotion and Technology
Development Support Act of the Republic of Korea.

Ko, Seogan

Seogan Ko
Executive Deputy Chairman
Korea Industrial Technology Association(KOITA)


Certificate No : 20210527830621

CERTIFICATE OF VENTURE ENTERPRISE

• Company Name	DH CONTROLS Co.,Ltd.
• Business Registration Number	602-81-48740
• Representative	JIN JONGKEUN
• Address	74, Mieumgukje 4-ro, Gangseo-gu, Busan, Korea
• Certification Type	Innovative Growth Company
• Valid Date	May. 26. 2021 ~ May. 25. 2024

This is to certify that the above-mentioned company has been confirmed as a Venture Enterprise in accordance with Article 25 of the Act on Special Measures for the Promotion of Venture Businesses.

Oct. 06. 2023

Chairman of Organization for Venture Enterprise Certification


Certificate No : R160201 - 00686

CERTIFICATE OF Inno-Biz

Company : DH CONTROLS CO., LTD.
C E O : JIN JONG KEUN
Address : 74, MIEUMGUKJE 4-RO, GANGSEO-GU, BUSAN, REPUBLIC OF KOREA
Validity of Certificate : 2022. 09. 29 ~ 2025. 09. 28

This is to certify that the above mentioned company is a Technology Innovation-Oriented Small and Medium Enterprise(Inno-Biz) selected by the Ministry of SMEs and Startups in accordance with the Act on the Promotion of Technology Innovation of Small and Medium Enterprises.

AUG 25, 2023

Minister

Ministry of SMEs and Startups
Republic of Korea


2019-0110

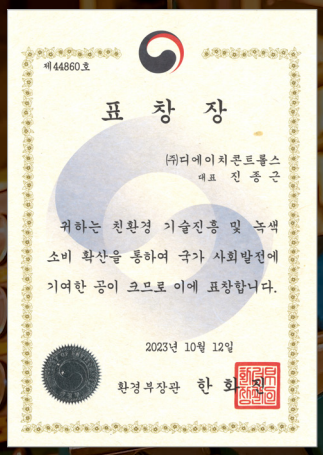
Certificate of IP Management Enterprise

Name of Company : DH Controls Ltd.
Representative : JONG KEN JIN
Certificate Number : 2019-0110
Valid Period : 2019. 12. 24 ~ 2026. 1. 9

This is to certify that the above-mentioned Company is an Intellectual Property Management Enterprise in accordance with Article 32 of the 「Framework Act on Intellectual Property」 and Article 24-2 of the 「Invention Promotion Act」.

2022. 12. 30

Korean Intellectual Property Office



제44860호

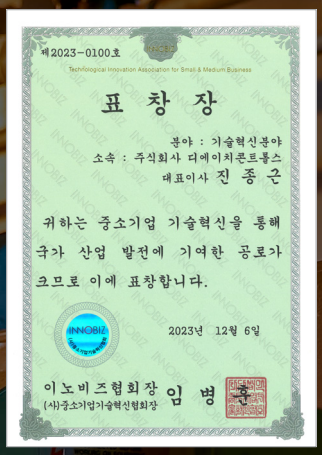
표 창 장

(주)디에이치콘트롤스
대표 진 종 근

귀하는 친환경 기술진흥 및 녹색 소비 확산을 통하여 국가 사회발전에 기여한 공이 크므로 이에 표창합니다.

2023년 10월 12일

환경부장관 한 화



제2023-0100호

Technological Innovation Association for Small & Medium Business

표 창 장

분야 : 기술혁신분야
소속 : 주식회사 디에이치콘트롤스
대표이사 진 종 근

귀하는 중소기업 기술혁신을 통해 국가 산업 발전에 기여한 공로가 크므로 이에 표창합니다.

2023년 12월 6일

이노비즈협회장 임 병
(사)중소기업기술혁신협회장



제 24-02967 호

표 창 장

(주)디에이치콘트롤스

귀 기관은 대학 및 공공기관 연구 성과의 기술사업화에 기여한 공로가 크므로 이에 표창을 수여합니다.

2024년 11월 19일

과학기술정보통신부장관 유 상



HD현대중공업

품질우수협력회사
(Hyundai Integrated Quality)

(주)디에이치콘트롤스

귀사는 투철한 품질관리와 납기준수 노력으로 당사의 경쟁력 강화에 기여한 공이 크므로 2024년 품질우수협력회사로 선정하여 이 상을 드립니다.

2025년 1월 17일

HD현대중공업(주)
사장 이 상 균
사장 노 진 율

not carry out
repairs when the
engine operates!



KOREA INVENTION PROMOTION ASSOCIATION

제 2024-0185 호 IP기반 해외진출지원사업

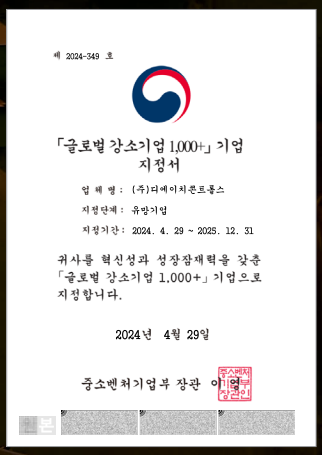
글로벌 IP스타기업
지정 확인서

기 업 명 : (주)디에이치콘트롤스
사업자등록번호 : 602-81-48740
대 표 자 : 진 종 근
지 정 지 역 : 부 산
※ 연차평가를 통해 조기탈락 또는 지정취소 될 수 있음

위 기업은 2024년도 글로벌 IP스타기업으로 지정되었음을 확인합니다.

2024년 5월 13일

한국발명진흥회장 황 철



제 2024-349 호

「글로벌 강소기업 1,000+」 기업
지정서

업 체 명 : (주)디에이치콘트롤스
지정단체 : 유망기업
지정기간 : 2024. 4. 29 ~ 2025. 12. 31

귀사를 혁신성과 성장잠재력을 갖춘 「글로벌 강소기업 1,000+」 기업으로 지정합니다.

2024년 4월 29일

중소벤처기업부 장관 이영



제2024-부산지사-45호

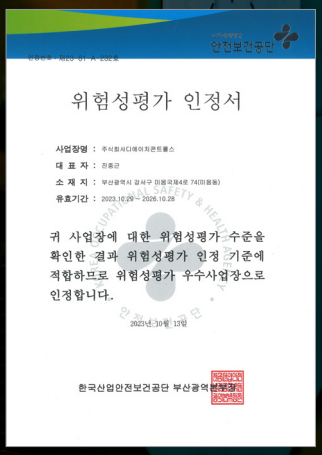
지역특화 프로젝트「레전드 50+」
참여기업 선정확인서

기 업 명 : 디에이치콘트롤스 (602-81-48740)
대 표 자 : 진 종 근
소 재 지 : 부산 강서구 미음국제4로 74
선정기간 : 2024.03.06. ~ 2026.12.31

위 기업을 지역특화 프로젝트「레전드 50+」 참여기업으로 선정하였음을 확인합니다.

2024년 03월 06일

부산광역시장 박 형 준



안전보건공단

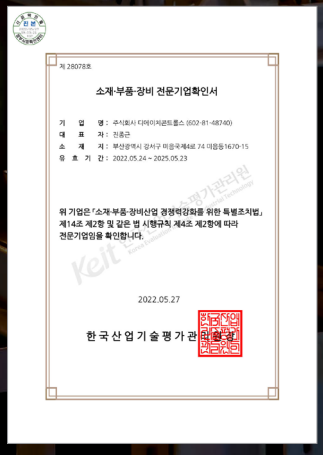
위험성평가 인정서

사업장명 : 주식회사디에이치콘트롤스
대 표 자 : 진종근
소 재 지 : 부산광역시 강서구 미음국제4로 74(미음동)
유효기간 : 2023.10.29 ~ 2026.10.28

귀 사업장에 대한 위험성평가 수준을 확인한 결과 위험성평가 인정 기준에 적합하므로 위험성평가 우수사업장으로 인정합니다.

2023년 10월 13일

한국산업안전보건공단 부산광역



제 28078호

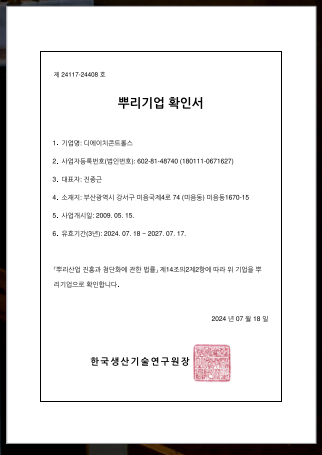
소재·부품·장비 전문기업확인서

기 업 명 : 주식회사 디에이치콘트롤스 (602-81-48740)
대 표 자 : 진종근
소 재 지 : 부산광역시 강서구 미음국제4로 74 미음동1670-15
유 효 기 간 : 2022.05.24 ~ 2025.05.23

위 기업은 「소재·부품·장비산업 경쟁력강화를 위한 특별조치법」 제14조 제2항 및 같은 법 시행규칙 제4조 제2항에 따라 전문기업임을 확인합니다.

2022.05.27

한국산업기술평가관리원



제 24117-24408 호

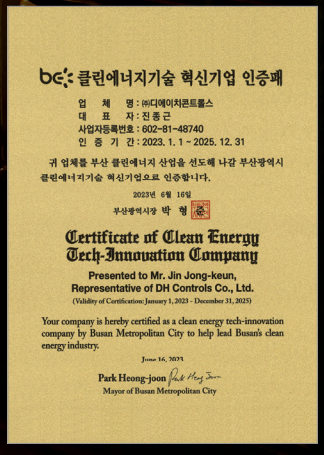
뿌리기업 확인서

1. 기업명: 디에이치콘트롤스
2. 사업자등록번호(법인번호): 602-81-48740 (180111-0671627)
3. 대표자: 진종근
4. 소재지: 부산광역시 강서구 미음국제4로 74 (미음동) 미음동1670-15
5. 사업개시일: 2009. 05. 15.
6. 유효기간(주년): 2024. 07. 18 ~ 2027. 07. 17.

「뿌리산업 진흥과 첨단화에 관한 법률」 제14조의2제2항에 따라 위 기업을 뿌리기업으로 확인합니다.

2024 년 07 월 18 일

한국생산기술연구원장



bc: 클린에너지기술 혁신기업 인증패

업 체 명 : ㈜디에이치콘트롤스
대 표 자 : 진종근
사업자등록번호 : 602-81-48740
인 증 기 간 : 2023. 1. 1 ~ 2025. 12. 31

귀 업체를 부산 클린에너지 산업을 선도해 나갈 부산광역시 클린에너지기술 혁신기업으로 인증합니다.

2023년 6월 16일

부산광역시장 박 형 준

Certificate of Clean Energy Tech-Innovation Company

Presented to Mr. Jin Jong-keun, Representative of DH Controls Co., Ltd.
(Validity of Certification: January 1, 2023 - December 31, 2025)

Your company is hereby certified as a clean energy tech-innovation company by Busan Metropolitan City to help lead Busan's clean energy industry.

June 16, 2023

Park Heong-joon
Mayor of Busan Metropolitan City



LEADING COMPANY CERTIFICATE

- Strategic Industry : Future Mobility Industry
- Company Name : DH Controls
- Representative : Jin jongkeun
- Tax ID No : 602-81-48740
- Certificate No : 2025-Future Mobility Industry-6
- Term of Certification : 2025. 1. 1. ~ 2027. 12. 31.

Your company is hereby certified as a leading company in one of Busan Metropolitan City Government's strategic industries and is commended for its efforts and achievements in revitalizing Busan's economy.

December 24, 2024

Park Heong-joon
Mayor of Busan Metropolitan City

ENGINE MANUFACTURER CERTFITICATE


SUPPLIER APPROVAL

DH Controls Co. Ltd.
74, Mieumgukje-4-ro, Gangseo-gu, Busan
Korea

is approved to supply

Butterfly valves for ICER application

in accordance to drawings and operational requirements of WinGD design group.

This certificate is valid for 3 years from the date of approval.

Winterthur, May 1st 2023

Dr. Rudolf Hottacker
Director Operations
Winterthur Gas & Diesel Ltd.

Dr. Monika Damani
GM Production Support
Winterthur Gas & Diesel Ltd.

WIN GD
Winterthur Gas & Diesel


SUPPLIER APPROVAL

DH Controls Co. Ltd.
74, Mieumgukje-4-ro, Gangseo-gu
Busan
Republic of Korea

is approved to supply

Exhaust Flow Control Valve (EFCV) for iSCR

In accordance with designs and operational requirements of WinGD design group 8155

This certificate is valid for 3 years from the date of approval.

Winterthur, February 1st 2025

Dr. Rudolf Hottacker
Director Customer Support
WinGD Ltd.

Dr. Monika Damani
GM Supply Chain Management
WinGD Ltd.

WIN GD
Winterthur Gas & Diesel


MAN Energy Solutions

Certificate of Approval

This is to certify that

DH Controls Co., Ltd.
74, Mieumgukje-4-ro, Gangseo-gu, Busan, Korea

is approved by MAN Energy Solutions for the manufacture and supply of:

Tier III Standard Valve
Valve group 1, 2 and 3 (DN80-DN900)
MAN ES Valve Design
For RBV, RTV, RSV, TCV, CBV and EGB

for MAN B&W engines (two-stroke) in accordance with the Terms and Conditions stated in Appendix A.

issued on 2022-03-29 expires on 2027-03-29

Certificate no.: 2700-2022-742.1

MAN Energy Solutions

Ole Fogh
Nicolai Brocks


MAN Energy Solutions

Provisional Certificate of Approval

This is to certify that

DH Controls Co., Ltd.
74, Mieumgukje-4-ro, Gangseo-gu, Busan, Korea

is provisionally approved by MAN Energy Solutions for the design, manufacture and supply of:

Tier III Standard Valve
Valve Group 1, 2, 3 and 4 (DN80-DN1600)
For RBV, RTV, RSV, TCV, CBV and EGB

Type: DHC Butterfly wafer type #150 – 21"
triple offset metal seat type

for MAN B&W engines (two-stroke) in accordance with the Terms and Conditions stated in Appendix A.

issued on 2022-03-29 expires on 2027-03-29

Certificate no.: 2700-2022-622.2

MAN Energy Solutions

Ole Fogh
Nicolai Brocks


MAN Energy Solutions
Future in the making

Certificate of Approval

This document certifies that:

DH Controls Co.,Ltd.
74, Mieumgukje 4-ro, Gangseo-gu, Busan, Republic of Korea, Korea

Has been granted a Certificate of Approval by MAN Energy Solutions for manufacture and supply of:

Tier III Valve
Butterfly Valve, Acid resistant
Valve group 1, 2, 3, and 4 (DN80-DN1600)
MAN ES Valve Design
for BTV, BBV and SOV

For MAN B&W engines (two-stroke) in accordance with the Terms and Conditions stated in Appendix A

Issue date: 21/01/2025
Expiration date: 29/03/2027
Certificate No.: 0741.2

Lasse Bøgede Andersen
Thomas Wolters


MAN Energy Solutions

Provisional Certificate of Approval

This is to certify that

DH Controls Co., Ltd.
74, Mieumgukje-4-ro, Gangseo-gu, Busan, Korea

is provisionally approved by MAN Energy Solutions for the manufacture and supply of:

Tier III Acid Resistant Valve
Valve group 1, 2 and 3 (DN80-DN900)
MAN ES Valve Design
For CCV

for MAN B&W engines (two-stroke) in accordance with the Terms and Conditions stated in Appendix A.

issued on 2022-03-29 expires on 2027-03-29

Certificate no.: 2700-2022-857.0

MAN Energy Solutions

Ole Fogh
Nicolai Brocks


MAN Energy Solutions

Provisional Certificate of Approval

This is to certify that

DH Controls Co., Ltd.
74, Mieumgukje-4-ro, Gangseo-gu, Busan, Korea

is provisionally approved by MAN Energy Solutions for the design, manufacture and supply of:

Tier III Acid Resistant Valve
Valve group 1, 2, 3 and 4 (DN80-DN1600)
For BTV, CCV, BBV and SOV

Type: DHC Butterfly wafer type #150 – 21"
triple offset metal seat type

for MAN B&W engines (two-stroke) in accordance with the Terms and Conditions stated in Appendix A.

issued on 2022-03-29 expires on 2027-03-29

Certificate no.: 2700-2022-623.2

MAN Energy Solutions

Ole Fogh
Nicolai Brocks


MAN Energy Solutions
Future in the making

Provisional Certificate of Approval

This document certifies that:

DH Controls Co.,Ltd.
74, Mieumgukje 4-ro, Gangseo-gu, Busan, Republic of Korea, Korea

Has been granted a Provisional Certificate of Approval by MAN Energy Solutions for design, manufacture and supply of:

Tier III Valve
Butterfly Valve
Acid Resistant Valve
Valve groups 2 and 3 (250 ≤ DN < 900)
DH Controls Valve Design
for CCV

For MAN B&W engines (two-stroke) in accordance with the Terms and Conditions stated in Appendix A

Issue date: 24/10/2024
Expiration date: 07/03/2029
Certificate No.: 1019.1

Lasse Bøgede Andersen
Thomas Wolters

MAN Energy Solutions


MAN Energy Solutions

Provisional Certificate of Approval

This is to certify that

DH Controls Co., Ltd.
74, Mieumgukje-4-ro, Gangseo-gu, Busan, Korea

is provisionally approved by MAN Energy Solutions for the design, manufacture and supply of:

Tier III Acid Resistant Valve
EGR Throttle Valve (ETV)
Valve group 1 & 2 (DN80-DN500)

for MAN B&W engines (two-stroke) in accordance with the Terms and Conditions stated in Appendix A.

issued on 2022-03-11 expires on 2027-03-01

Certificate no.: 2700-2022-855.2

MAN Energy Solutions

Ole Fogh
Nicolai Brocks


MAN Energy Solutions

Provisional Certificate of Approval

This is to certify that

DH Controls Co., Ltd.
74, Mieumgukje-4-ro, Gangseo-gu, Busan, Korea

is provisionally approved by MAN Energy Solutions for the design, manufacture and supply of:

Tier III Standard Valve
Eco Cylinder Bypass Valve (eCBV)
Valve group 1 & 2 (DN80-DN500)

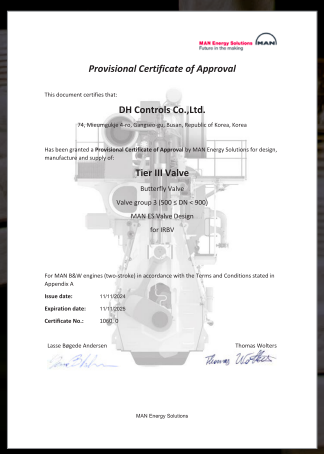
for MAN B&W engines (two-stroke) in accordance with the Terms and Conditions stated in Appendix A.

issued on 2022-03-11 expires on 2027-03-01

Certificate no.: 2700-2022-854.2

MAN Energy Solutions

Ole Fogh
Nicolai Brocks


MAN Energy Solutions
Future in the making

Provisional Certificate of Approval

This document certifies that:

DH Controls Co.,Ltd.
74, Mieumgukje 4-ro, Gangseo-gu, Busan, Republic of Korea, Korea

Has been granted a Provisional Certificate of Approval by MAN Energy Solutions for design, manufacture and supply of:

Tier III Valve
Butterfly Valve
Valve group 3 (500 ≤ DN < 900)
MAN ES Valve Design
for IRBV

For MAN B&W engines (two-stroke) in accordance with the Terms and Conditions stated in Appendix A

Issue date: 11/11/2024
Expiration date: 11/11/2025
Certificate No.: 1092.0

Lasse Bøgede Andersen
Thomas Wolters

MAN Energy Solutions

ENGINE MANUFACTURER CERTFITICATE LIST

No	Certificate Title	Certificate No.	Product	Design
1	WinGD Supplier Approval iCER Valve		Butterfly Valve for iCER	
2	WinGD Supplier Approval Exhaust Control Valve for iSCR		EFCV for iSCR	
3	MAN-ES Certificate of Approval Tier III Standard Valve group 1, 2, 3	2700-2022-742.1	RBV, RTV, RSV, TCV, CBV, EGB	MAN-ES
4	MAN-ES Provisional Certificate of Approval Tier III Standard Valve group 1, 2, 3, 4	2700-2022-622.2	RBV, RTV, RSV, TCV, CBV, EGB	DH
5	MAN-ES Certificate of Approval Tier III Acid Resistant Valve group 1, 2, 3, 4	2700-2022-741.2	BTV, BBV, SOV	MAN-ES
6	MAN-ES Provisional Certificate of Approval Tier III Acid Resistant Valve group 1, 2, 3	2700-2022-857.0	CCV	MAN-ES
7	MAN-ES Provisional Certificate of Approval Tier III Acid Resistant Valve group 1, 2, 3, 4	2700-2022-623.2	BTV, CCV, BBV, SOV	DH
8	MAN-ES Provisional Certificated of Approval Tier III Valve group 2, 3	1019.1	CCV	DH
9	MAN-ES Provisional Certificate of Approval Tier III Acid Resistant Valve Group 1, 2	2700-2022-855.2	EGR Throttle Valve	MAN-ES
10	MAN-ES Provisional Certificate of Approval Tier III Standard Valve group 1, 2	2700-2022-854.2	Eco Cylinder Bypass Valve	MAN-ES
11	MAN-ES Provisional Certificate of Approval Tier III Standard Valve group 3	1060.0	IRBV	MAN-ES

PATENT


특허증
CERTIFICATE OF PATENT
특허청
Korean Intellectual Property Office
특허청장
COMMISSIONER, KOREAN INTELLECTUAL PROPERTY OFFICE
박 원주
김 용래
特許証
CERTIFICATE OF PATENT
伊藤 仁
小宮義則
宗像直子
发明专利证书
申长雨

CLASS APPROVAL AND PATENT LIST

CLASS APPROVAL LIST

No	Class Approval Title	Certificate No.	Class
1	SCR HP		ABS
2	SCR HP		BV
3	SCR HP		CCS
4	SCR HP		LR
5	2-way Control Valve	17-BK1666114-PDA	ABS
6	Butterfly Valve	18-BK1813813-PDA	ABS
7	Cryogenic Valve	21-BK2125762-PDA	ABS
8	2-way Control Valve	BTS / ENG / M170466	LR
9	By-pass Valve	CWN32775-VV001	KR

DOMESTIC PATENT LIST

No	Patent Title	Patent Number
1	Apparatus and Method for Founding a Remote Controller	10-1296836
2	Valve in the Depth of Water	10-1308553
3	Apparatus for Remotely Detecting Position using Oil Hydraulic Motor	10-1371344
4	Apparatus for Remotely Detecting Position of Multirotation Actuator	10-1383068
5	3 Way Control Valve	10-1444193
6	Butterfly valve	10-1444195
7	Ballast Tank Watering Valve Indicator for Ship	10-1512299
8	Apparatus for Detecting Position of Underwater Valve	10-1657942
9	Hydraulic Actuator for Quarter-turn Valve	10-1657945
10	System for Adjusting Viscosity of Fuel	10-1658218
11	Manual Hydraulic Remote Control Apparatus for Multi Valve Operation	10-1707174
12	Safety Valve for Shipping Engine	10-1847052
13	Air Pressure Valve for Diesel Engine	10-1944054
14	Vapor Ejector for the Heat Recovery Steam Generator of a Thermoelectric Power Plant	10-1981889
15	LNG Bunkering Monitoring System with Cryogenic Valve Operated by Hydraulic Actuator	10-1981064
16	Flushing Water Supply System for Cleaning Storage Tank	10-1984529
17	3-Way Valve with Non-linear Flow Characteristic	10-1999440
18	Cryogenic Valve System	10-2041458
19	3-Way Electronic Valve with the Function of the High Performance of Flow Rate	10-2044025
20	System for Adjusting Viscosity of Fuel having Viscosity Sensor using Photoacoustic Effect	10-2153389
21	Sensing and Measurement Assembly for Viscosity Control System of Fuel Oil using at Vessel	10-2178584
22	High Temperature Air Sealing Butterfly Valve	10-2188910
23	Air Sealing Control Valve with Improved Emission Reduction of Exhaust Gas	10-2295552
24	Exhaust Gas Control Valve for Diverter Type Scrubber	10-2329529
25	System For Real-Time Collecting Temperature and Predicting Failure of selective catalytic Reduction Valve	10-2523774

OVERSEAS PATENT LIST

No	Patent Title	Country	Patent Number
1	Apparatus for remotely detecting position using oil hydraulic motor	JAPAN	5872630
2	Apparatus for remotely detecting position of multirotation actuator	JAPAN	5731619
3	Hydraulic actuator for quarter-turn valve	JAPAN	6087992
4	Apparatus for detecting position of underwater valve	JAPAN	6203902
5	High temperature air sealing butterfly valve	JAPAN	6853336
6	Hydraulic actuator for quarter-turn valve	CHINA	ZL201610388163.0
7	LNG Bunkering Monitoring System with Cryogenic Valve Operated by Hydraulic Actuator	CHINA	ZL201911101002.9



PROPDUCTS INFORMATION

DH CONTROLS, at the forefront of
global maritime equipment excellence

01 SCR LP [Low Pressure] Damper





SPECIFICATIONS

MODEL		SCR-LP					
Type		Controllable	On / Off	Controllable	On / Off	Controllable	On / Off
Application Position		RTV	RBV / RSV	RBV / RSV	ASV	EGB-BV	BTV / EGB-SV
Working Fluids		Warm exhaust gas					
Temperature Range		20°C ~ 420°C / 20°C ~ 500°C					
Valve Type		Flange / Damper					
Actuator Type		Pneumatic					
Action		Double / single acting					
Valve Size		200A ~ 3200A					
End Connection		JIS / DIN / ISO / ANSI Standard					
Material	Body	Carbon Steel (~ 420°C) / Carbon-silicon, killed Steel (~ 500°C)					
	Trim	Stainless Steel					
Accessories (option)		Smart Positioner, Air filter regulator, Solenoid valve, Limit Switch, Junction Box, Air Tank, PDT					

Specifications listed in the catalog may change without notice for quality improvement and improvement

02 SCR HP [High Pressure] Valve

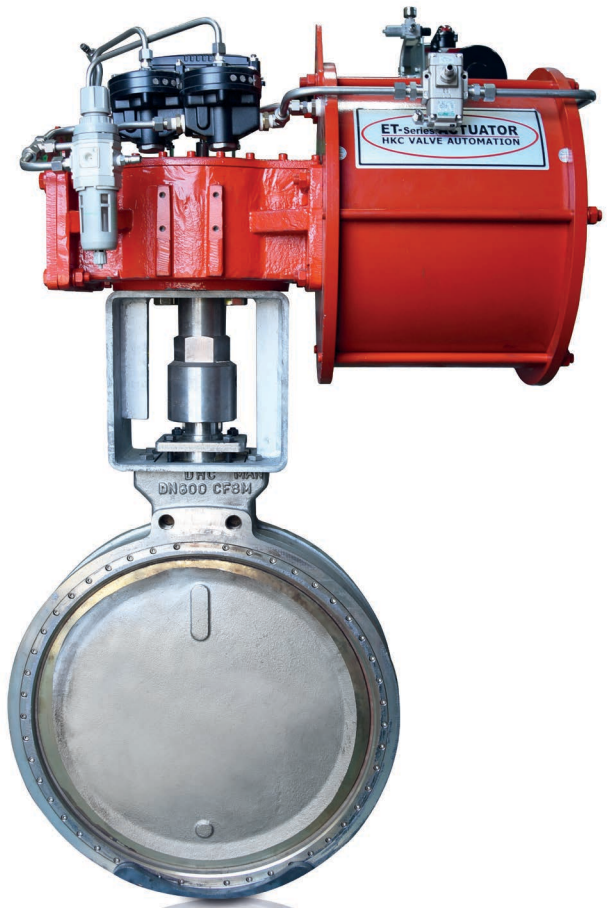


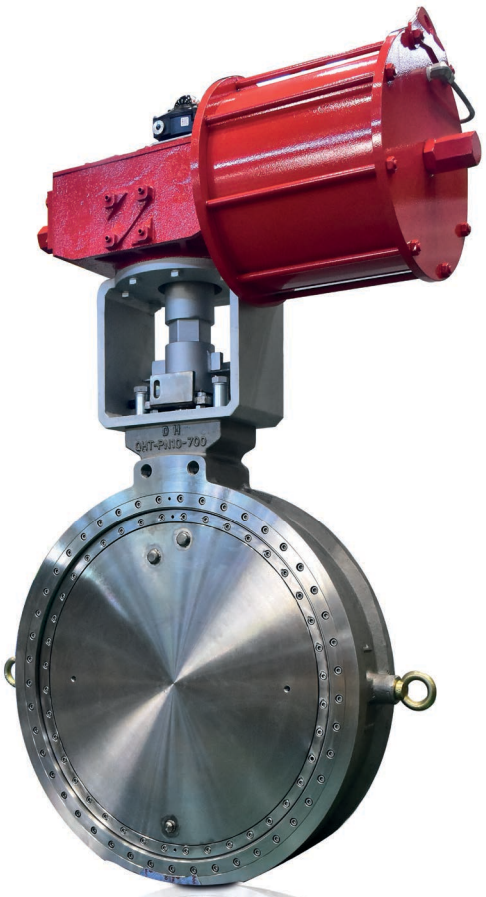


SPECIFICATIONS

MODEL		SCR HP	
Type		Controllable	On / Off
Application Position		RTV, RBV, EGB, CBV, IRBV	RSV
Working Fluids		Warm exhaust gas or Air	
Temperature Range		200 ~ 500°C (Max. 550°C)	
Valve Type		Wafer	
Actuator Type		Pneumatic	
Action		Double / Single acting	
Valve Size		Φ50 ~ DN1600	
End Connection		JIS / DIN / ISO / ANSI Standard	
Material	Body	Carbon moly alloy steel	
	Trim	Stainless Steel	
Accessories (option)		Smart Positioner, Air filter regulator, Solenoid valve, Limit Switch	

03 EGR Valve





SPECIFICATIONS

MODEL		EGR-Standard		EGR-Acid Resistant	
Type		Controllable	On / Off	Controllable	On / Off
Application Position		EGB, CBV	TCV	BTV	CCV, BBV, SOV
Working Fluids		Warm exhaust gas or air		Wet and / or cold exhaust gas	
Temperature Range		20°C ~ 420°C / 20°C ~ 500°C		25 ~ 75°C (Max. 200°C)	25 ~ 75°C (Max. 200°C) or 25 ~ 500°C (Max. 550°C)
Valve Type		Wafer		Wafer	
Actuator Type		Pneumatic		Pneumatic	
Valve Size		Φ50 ~ DN1600		Φ50 ~ DN1600	
End Connection		JIS / DIN / ISO / ANSI Standard		JIS / DIN / ISO / ANSI Standard	
Material	Body	Cabon moly alloy steel		Casted Stainless Steel	
	Trim	Stainless Steel		Stainless Steel	
Accessories (option)		Smart Positioner, Air regulator, Solenoid valve, Limit Switch		Smart Positioner, Air regulator, Solenoid valve, Limit Switch	

Specifications listed in the catalog may change without notice for quality improvement and improvement

04 iSCR Valve

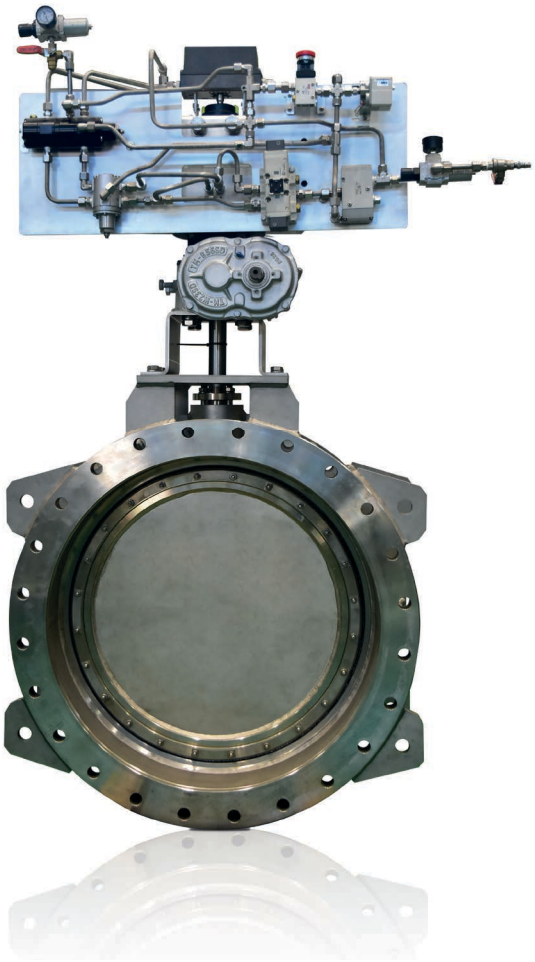




SPECIFICATIONS

MODEL		EFCV
Working Fluid		(Ammonia Fuel) Exhaust Gas
Working Pressure		6 bar
Working Temperature		380°C
Material	Body	SB450M
	Flap	
	Spindle	
Accessories (option)		Inductive sensor, Positioner

05 iCER Valve

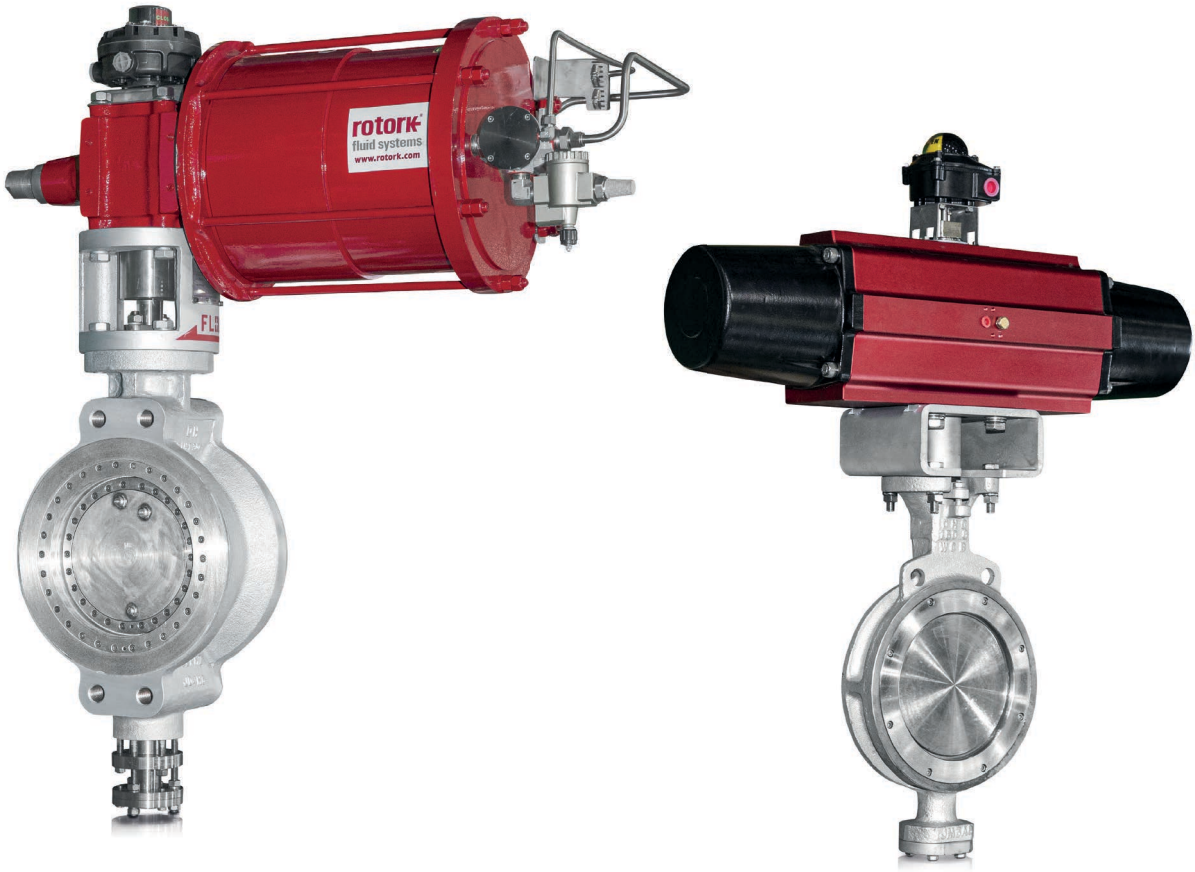




SPECIFICATIONS

MODEL		iCER Valve	
Type		Controllable	On / Off (Shut-off)
Application Position		BPV, FRV	SOV, FRV
Working Fluids		Exhaust gas	
Temperature Range		~ 380°C	
Valve Type		Butterfly valve, single or double disc	
Actuator Type		Double acting (alternatively, Single acting)	
Valve Size		DN400 ~ DN2700	
End Connection		DIN	
Material	Body	Stainless steel	
	Trim	Stainless steel	
Accessories (option)		Positioner, Air fiter regulator, Air tank, NCS Sensor, Solenoid valve	

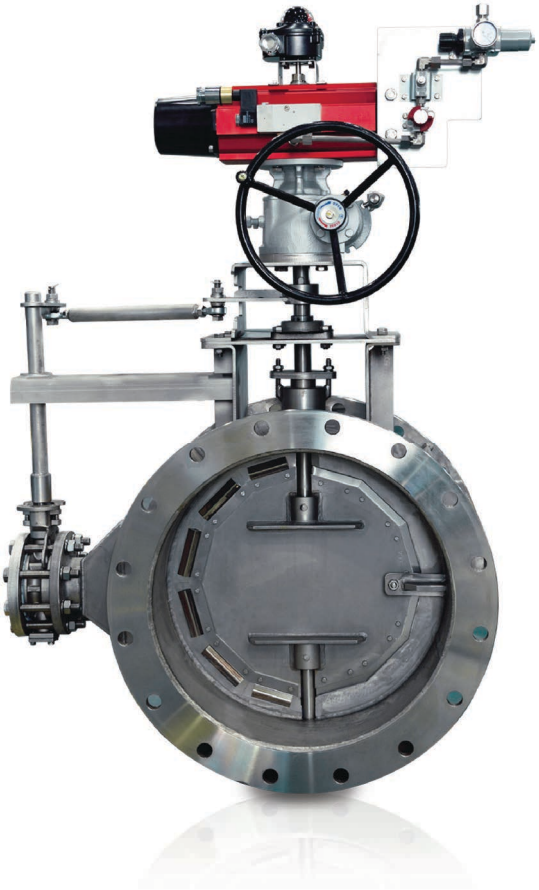
06 Compressor Air Bleed Valve



SPECIFICATIONS

MODEL		COMPRESSOR AIR BLEED VALVE
Working Fluid		Air
Working Pressure		4 ~ 12.5 bar
Workging Temperature		~ 425°C
Valve Type		Triple Offset Butterfly valve
Actuator type		Pneumatic (Double, Single acting)
Valve Size		150A ~ 450A
End Connection		ASME / DIN / ISO / JIS Standard
Material	Body	Cast steel / Stainless steel
	Trim	Solid Seat / Laminate Seat
Accessories (option)		Positioner, Air fiter regulator, Solenoid valve

07 Air Sealing Damper





SPECIFICATIONS

MODEL		DAMPER			
Type		Air seal damper			
Application Position		Main Engine	Generator Engine	Aux. Boiler	Comp. Boiler
Working Fluids		Warm exhaust gas			
Temperature Range		20°C ~ 500°C			
Valve Type		Flange / Damper			
Actuator Type		Pneumatic			
Action		Single acting			
Valve Size		200A ~ 3200A			
End Connection		JIS / DIN / ISO / ANSI Standard			
Material	Body	Cabon Steel (~400°C) / Stainless Steel (~500°C)			
	Trim	Stainless Steel			
Test Procedure		Seal air pressure : Over 500mmWC			
Accessories (option)		Air filter regulator, Solenoid valve, Limit Switch, Speed controller			

MODEL	SEAL AIR FAN
Type	STF-4HB-IM
Air Volume	16 ~ 150m^3 / min
Static pressure	752mmAq
Revolution	20°C
Gas composition	Air -18 ~ 45°C R.H.80%
Material	Cabon Steel
Installation	IN DOOR

Specifications listed in the catalog may change without notice for quality improvement and improvement

08 Screw Down Valve Control System



SPECIFICATIONS

MODEL		DHGT-MR	DHGL-MR	DHAG-MR
Operating Fluid		Mineral Oil (ISO VG15 ~ 32)		
Temperature Range		-20°C ~ 80°C		
Actuator Type		Multi Turn Hydraulic		
Operating Pressure (max.)		135 bar		
Working Pressure	Open	110 bar		
	Close	100 bar		
Applicable Valve Type		Gate	Globe	Angle
Valve Size		50A ~ 750A	50A ~ 600A	
Accessories (option)		Local Position Indicator		

09 Hydrogen Valve



SPECIFICATIONS

MODEL	FLOW CONTROL VALVE	STOP VALVE	CHECK VALVE
Working Fluid	Hydrogen		
Grade	H70		
Working Temperature	-40 ~ 85°C		
Size	3/8", 9/16", 3/4"	3/8", 9/16"	3/8", 9/16", 3/4"
End Connection	3/8"(LF6), 9/16"(LF9), 3/4"(LF12)		
Material	SUS316L		

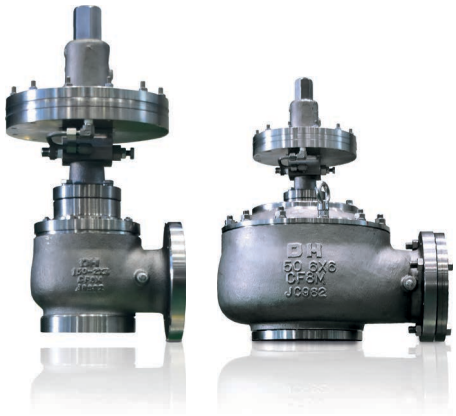
10 Cryogenic Control Valve



SPECIFICATIONS

MODEL		DHGT-MR		
Operating Fluid		Liquefied GaAS / LNG / LPG / LN^2		
Temperature Range		-196°C ~ 80°C		
Rating		ANSI 150LBS ~ 300LBS / JIS 10K ~ 20K		
Valve Size		1/2" ~ 12" (DN15 ~ DN300)		
Material	Body	ASTM A351 - CF8, CF8M, CF3M		
	Trim	Stainless Steel		
Applicable Valve Type		Globe, Angle, Ball, Butterfly		
Actuator Type		Multi Turn Hydraulic	Pneumatic	Motor
Operating Source		80 bar ~ 90 bar	0.2 ~ 1.0 bar / 0.4 ~ 2.0 bar	4 ~ 20mA
Accessories (option)		Limit Switch, Manual Handle		

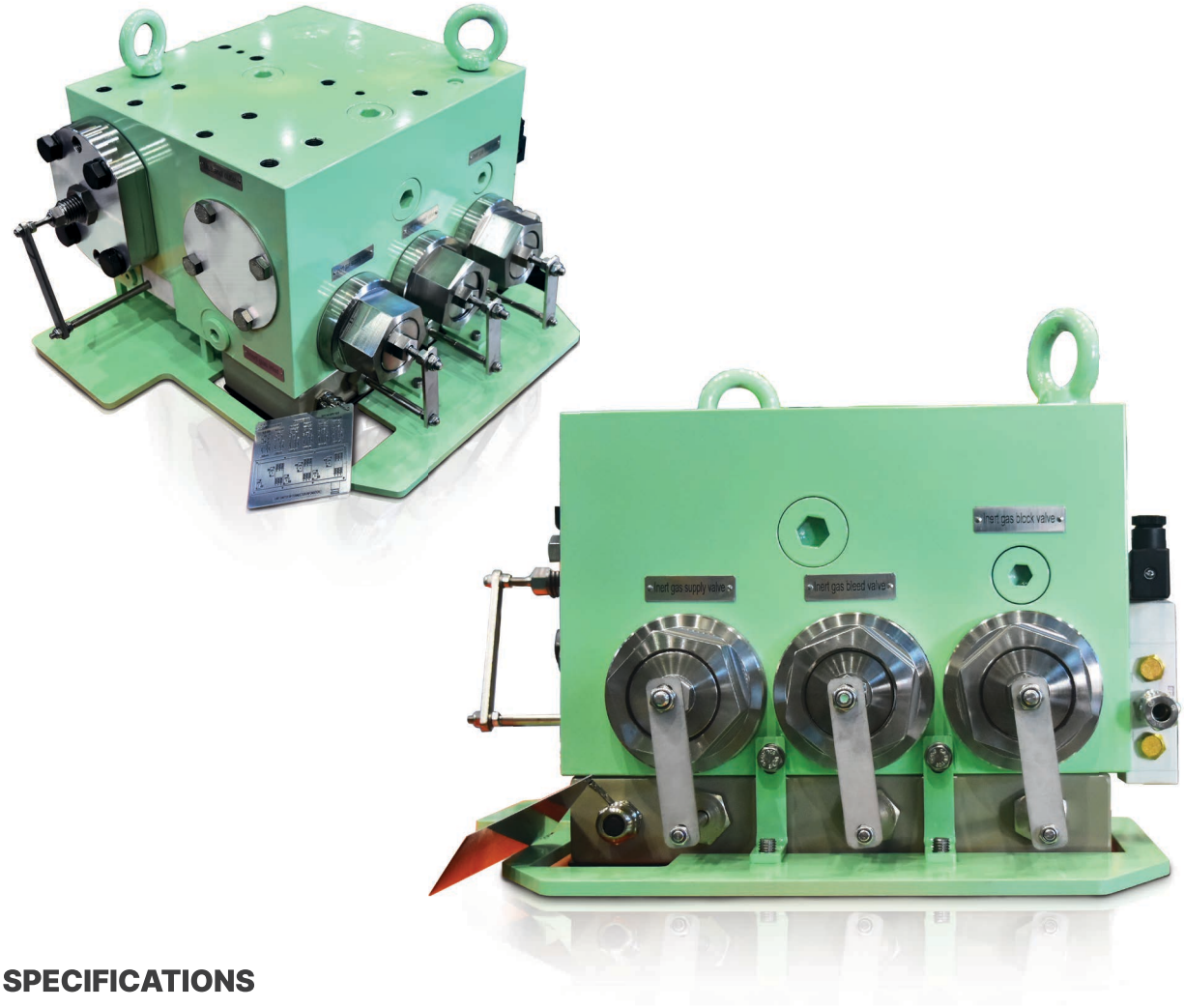
10 Cryogenic Safety Valve



SPECIFICATIONS

MODEL		DHGT-MR
Operating Fluid		Liquedfied Gas / LNG / LPG / LEG / LN^2 / LO^2 / LAr
Workging Pressure		0.15 ~ 7 PSI / 0.01 ~ 0.5 kgf/cm^2 / 0.001 ~ 0.05 Mpa
Working Temperature		- 196°C ~ 125°C
Size (Inlet x Outlet) inch		2×3, 3×4, 4×6, 6×6, 8×10, 10×12
End Connection		ANSI / JIS Standard
Material	Body	A351 CF8M, B26 356-T6
	Trim	Stainless steel
Design Codee		ASME / API

11 Alternative Fuel Safety Valve Unit



SPECIFICATIONS

MODEL		DSVU-MM	DSVU-AMM
Working Fluid		Methanol	Ammonia
Working Pressure		300 ~ 600 bar	700 bar
Workging Temperature		-20°C ~ 60°C	
Size (Inlet x Oulet)		25A x 50A	
Material	Body	Carbon steel	
	Trim	Stainless Steel	

12 Multiturn Actuator



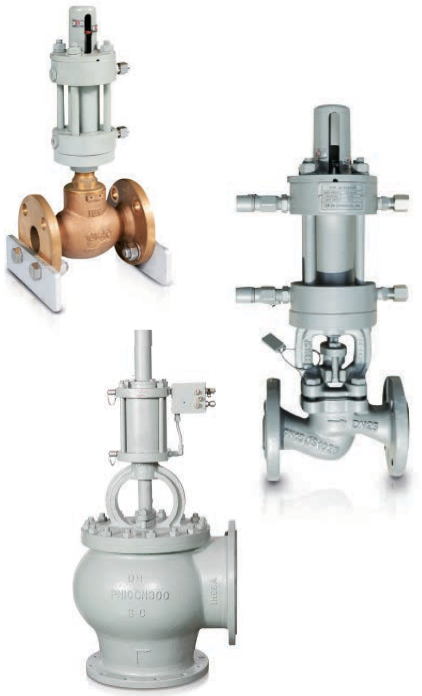


SPECIFICATIONS

MODEL		HBT-MH
Type		Mineral Oil (ISO VG15 ~ 32)
Application Position		-20°C ~ 80°C
Working Fluids		Multi Turn Hydraulic Motor
Temperature Range		135 bar
Working Pressure	Open	110 bar
	Close	100 bar
Applicable Valve Type		Butterfly
Accessory (option)		Manual Handpump Type, VRCS HPU Type
Valve Size		50A ~ 2200A
Accessories (option)		Relief Valve
		Manual Handle + Bypass Valve + Relief Valve Limit Switch

Specifications listed in the catalog may change without notice for quality improvement and improvement

12 Linear Actuator



SPECIFICATIONS

MODEL		HAL
Operating Fluid		Hydraulic Oil (ISO VG15 ~ 32)
Temperature Range		-20°C ~ 80°C
Actuator Type		Linear Cylinder
Operating Pressure (max.)		100 bar
Working Pressure	Open	90 bar
	Close	80 bar
Applicable Valve Type		Globe, Angle, Gate, Surface, Storm
Applicable Manual Hydraulic Power Unit		Solo Type, Multi Type
Valve Size		50A ~ 750A
Accessories (option)		Lock Valve
		Manual Handle + Bypass Valve Limit Switch

12 Rotary Actuator



SPECIFICATIONS

MODEL		HAR
Operating Fluid		Mineral Oil (ISO VG15 ~ 32)
Temperature Range		-20°C ~ 80°C
Actuator Type		Rotary Cylinder
Operating Pressure (max.)		100 bar
Working Pressure	Open	90 bar
	Close	80 bar
Applicable Valve Type		Butterfly, Ball
Applicable Manual Hydraulic Power Unit		Solo Type, Multi Type
Valve Size		50A ~ 900A
Accessories (option)		Lock Valve
		Manual Handle + Bypass Valve Limit Switch

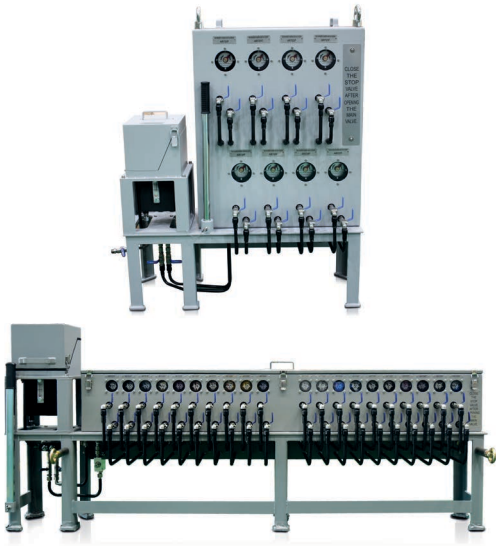
12 Transmitter Solo Type



SPECIFICATIONS

MODEL		DS
Operating Fluid		Mineral Oil (ISO VG15 ~ 32)
Temperature Range		-20°C ~ 80°C
Hyd. Power Unit Type		Manual Rotating Pump
Operating Pressure (max.)		120 bar
Working Pressure	Open	90 bar
	Close	80 bar
Applicable Hyd. Actuator		Rotary Type, Linear Type
Accessories (option)		Check Valve, Relief Valve, Self-seal coupling, Lamp Box

12 Transmitter Multi Type

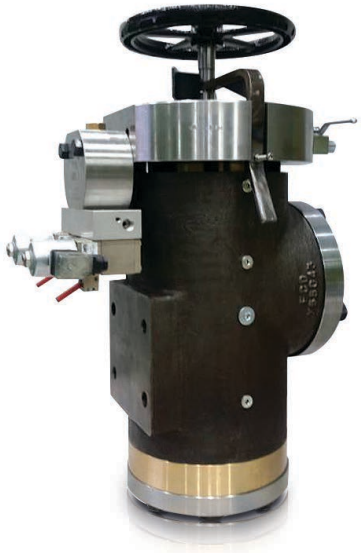


SPECIFICATIONS

MODEL		LMH-ML	IMH-ML	MT-ML
Operating Fluid		Hydraulic Oil (ISO VG15 ~ 32)		
Temperature Range		-20°C ~ 80°C		
Hyd. Power Unit Type		Lamp Manual Handpump	Indicator Manual Handpump	Electric Motor
Operating Pressure (max.)		120 bar		
Working Pressure	Open	110 bar		
	Close	100 bar		
Applicable Hyd. Actuator		Rotary Type, Linear Type		
Accessories (option)		Check Valve, Relief Valve, Self-seal coupling		
		2 Sets ~ 20 Sets		

Specifications listed in the catalog may change without notice for quality improvement and improvement

13 Shut Off Valve



SPECIFICATIONS

MODEL		SUF-SA
Operating Fluid		Air
Temperature Range		Max. 55°c
Actuator Type		Pnematically operated by solenoid valve of control valve ass'y
Valve Size		125A ~ 200A
End Connection		JIS / ISO Standard
Material	Body	Ductile Cast Iron
	Trim	Bronze
Accessories (option)		Solenoid valve, Proximity sensor

13 Relief Valve



SPECIFICATIONS

MODEL		SUF-RE
Operating Fluid		Air
Temperature Range		Max. 55°c
Type		Spring
Setting Pressure		33 bar (Max. 35 bar)
Valve Size		125A ~ 200A
End Connection		JIS / ISO Standard
Material	Body	Ductile Cast Iron
	Trim	Carbon Steel

13 Air Waste Valve



SPECIFICATIONS

MODEL		DAWS-GT
Working Fluids		Air
Temperature Range		0°C ~ 60°C
Noise Reduction		Min 30dB
Valve Type		Gate
Valve Size		50A
End Connection		JIS / DIN / ISO / ANSI Standard
Material	Body	A6061-T6
	Trim	Stainless Steel
Accessories (option)		Silencer

13 Air Waste Valve Manual, Motor Type



SPECIFICATIONS

MODEL		DAWS-BF	DAWS-HD	DAWS-MT
Working Fluids		Air, Gas		
Temperature Range		0°C ~ 80°C		
Type		Lever	Handle	Motor
Valve Type		Butterfly (Lug, Flange, Wafer)		
Valve Size		40A ~ 200A		
End Connection		JIS / DIN / ISO / ANSI Standard		
Material	Body	Cast Steel, Ductile Cast Iron		
	Trim	Stainless Steel, NBRm Teflon		
Accessories (option)		Silencer		

Specifications listed in the catalog may change without notice for quality improvement and improvement

13 3-way Rotary Valve



SPECIFICATIONS

MODEL		D3RT-MT	D3RT-CY
Working Fluids		Fresh Water, Sea Water, Oil	
Temperature Range		0°C ~ 100°C	
Valve Size		80A ~ 600A	
End Connection		JIS / DIN / ISO / ANSI Standard	
Material	Open	Ductile Cast Iron	
	Close	Stainless Steel , Cast Bronze , Carbon Steel	
Flow Characteristics		Linear, On-off	
Actuator Type		Elec. Motor	Cylinder
Operating Source		110 / 220V AC	4 bar Air
Accessories (option)		Controller (E/P, P/P), Sensor (Temperature), Positioner (E/P, P/P), Air Regulator	

13 2-way Control Valve



SPECIFICATIONS

MODEL		D2CT-MT	D2CT-DP
Working Fluids		Steam, Water, Oil	
Temperature Range		0°C ~ 180°C	
Valve Size		15A ~ 300A	
End Connection		JIS / DIN / ISO / ANSI Standard	
Material	Body	Cast Steel, Ductile Cast Iron, Cast Bronze	
	Trim	Stainless Steel	
Flow Characteristics		Equal Percentage, Linear, Quick Opening	
Actuator Type		Elec. Motor	Diaphragm
Operating Source		110 / 220V AC	0.2 ~ 1 bar or 0.4 ~ 2 bar
Accessories (option)		Controller (E/P, P/P),Sensor (Temperature/Pressure), Positioner (E/P, P/P), Air Regulator, Solenoid valve, Y-Strainer	

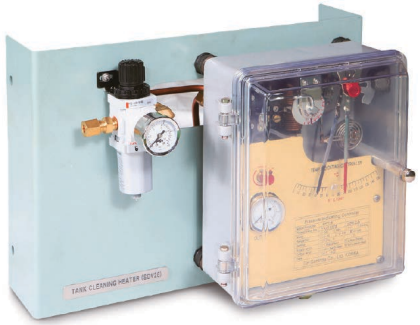
13 Electro & Electro-Pnuematic Controller



SPECIFICATIONS

MODEL	EPC-TP	EPC-PS
Power Supply	110 / 220V AC, 50 / 60Hz	
Supply Air Pressure	2.4 bar	
Control Mode	On-Off, P, PI, PID	
Control Action	Direct, Reverse	
Signal Input	RTD (Pt100Ω), 4 ~ 20 mA	
Control Output	0.2 ~ 1 bar / 0.4 ~ 2 bar : Electro-pneumatic	
Accessories (option)	Temperature Sensor, Pressure Sensor, Air Regulator	

13 Pnuematic Controller



SPECIFICATIONS

MODEL		PPC-TP	PPC-PS
Supply Air Pressure		2.4 bar	
Control Mode		On-Off, P, PI	
Control Action		Direct, Reverse	
Signal Input	Temp	Temp. sensor with capillary tube (5m)	
	Press	Direct or through oil separator	
Control Action		0.2 ~ 1.0 bar, 0.4 ~ 2.0 bar	
Control Range	Body	0 ~ 70°C, 0 ~ 100°C, 0 ~ 150°C, 50 ~ 120°C, 50 ~150°C	
	Trim	0 ~ 10 bar, 0 ~ 16 bar, 0 ~ 25 bar	
Accessories (option)		Positioner (P/P), Air Regulator	

Specifications listed in the catalog may change without notice for quality improvement and improvement

14 Pressure Regulating Valve



SPECIFICATIONS

MODEL		DRG-CY	DRG-DP	DRG-PL
Working Fluids		Air, Water, Liquid, Oil		
Temperature Range / Press		150°C / 20K		
Valve Type		Cylinder	Diaphragm	Pilot
Valve Size		15A ~ 150A	15A ~ 150A	32A~200A
End Connection		JIS / DIN / ISO / ANSI Standard		
Material	Body	Cast Steel, Ductile Cast Iron, Cast Bronze		
	Trim	Stainless Steel		
Accessories (option)		Glycerin Port, Y-Strainer, Press. Gauge		

14 Pressure Reducing Valve



SPECIFICATIONS

MODEL		DRD-CY	DRD-DP	DRD-PL	DRD-DH	DRD-CH
Working Fluids		Air, Gas, Liquid		Steam	Air	
Temperature Range / Press		150°C / 20K		220°C / 20K	150°C / 30K	
Valve Type		Cylinder	Diaphragm	Pilot	Handle	
Valve Size		15A ~ 150A	15A ~ 150A	15A ~ 200A	15A ~ 50A	
End Connection		JIS / DIN / ISO / ANSI Standard				
Working Pressure	Body	Cast Steel, Ductile Cast Iron, Cast Bronze				
	Trim	Stainless Steel				
Accessories (option)		Glycerin Port, Y-Strainer				

14 2-way Temperature Regulating Valve



SPECIFICATIONS

MODEL		DTR-DT	DTR-BL	DTR-PL
Working Fluids		Steam, Water, Liquid, Oil, Thermal oil		
Temperature Range / Press		0°C ~ 150°C / 16K		
Valve Type		Direct	Bellows	Pilot
Valve Size		15A ~ 50A	15A ~ 50A	32A ~ 125A
End Connection		JIS / DIN / ISO / ANSI Standard		
Material	Body	Cast Steel, Ductile Cast Iron, Cast Bronze		
	Trim	Stainless Steel		
Accessories (option)		Heat sensor, Manual Handle		

14 3-way Wax Temperature Regulating Valve

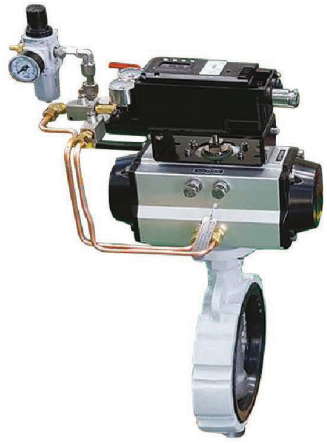


SPECIFICATIONS

MODEL		D3TR-WA
Working Fluids		Water, Oil, Liquid
Temperature Range		Max. 110°C
Differential Pressure		3.0 bar
Valve type		Wax
Valve Size		25A ~ 200A
End Connection		JIS / DIN / ISO / ANSI Standard
Material	Mixing	Normal (B → A), High Temp. (C → A)
	Dividing	Normal (A → B), High Temp. (A → C)
Operation	Body	Cast Bronze, Cast
	Trim	Bronze
Accessories (option)		Manual Handle (Option)

Specifications listed in the catalog may change without notice for quality improvement and improvement

15 Pnuematic Actuator Control Valve



SPECIFICATIONS

MODEL		D3BA-SO
Working Fluids		Sea Water
Temperature Range / Press		Max. 80°C
Actuator Type		Rack & Pinion, Scotch yoke
Action		Double Acting
Operating angle		90°± 5°
Valve Type		Butterfly (Lug, Flange, Wafer)
Valve Size		25A ~ 1200A
End Connection		JIS / DIN / ISO / ANSI Standard
Material	Body	Ductile Cast Iron
	Trim	Stainless Steel
Accessories (option)		Speed Controller, E/P Positioner, Air regulator

15 Safety Relief Valve



SPECIFICATIONS

MODEL	DSV-OL, CC, CL	DSL-OL,CC	DSH-OL, CC
Working Fluids	Steam, Air, Water, Liquid		
Temperature Range / Press	0°C ~ 200°C / 30K		
Valve Type	Full Bore	Low Lift	High Lift
Cap / Lever Type	Close Cap, Close Lever, Open Lever		
Valve Size	15A ~ 200A	15A ~ 50A	15A ~ 50A

15 3-way Ball Valve



SPECIFICATIONS

MODEL		DHGT-MR	D3BA-SW
Working Fluids		Air, Water, Liquid	Air, Water, Liquid
Temperature Range / Press		0°C ~ 150°C	0°C ~ 150°C
Actuator Type		"L"TYPE ,"T"TYPE	"L"TYPE ,"T"TYPE
Action		15A ~ 100A	3/8"~ 2"
Operating angle		JIS / DIN / ISO / ANSI Standard	
Material	Body	Cast Steel, Ductile Cast Iron, Stainless Steel	
	Trim	Stainless Steel	
Accessories (option)		Limit Switch	

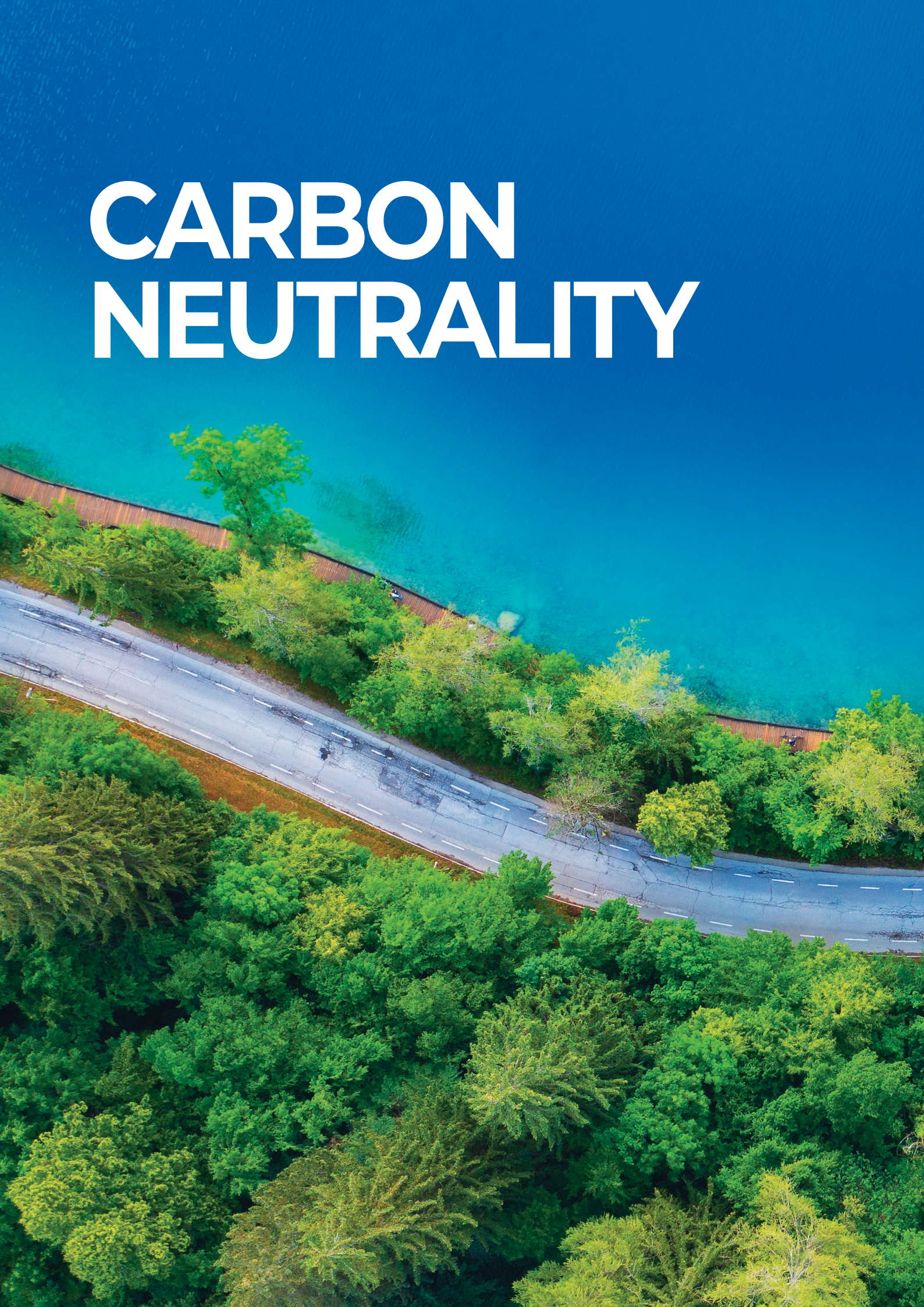
15 By-pass Valve



SPECIFICATIONS

MODEL		DBPS-PS
Operating Fluid		Oil, Liquid
Temperature Range / Press		Max. 150°C
Valve Type		40A
Cap / Lever Type		JIS / DIN / ISO / ANSI Standard
Material	Body	Carbon Steel
	Trim	Carbon Steel

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