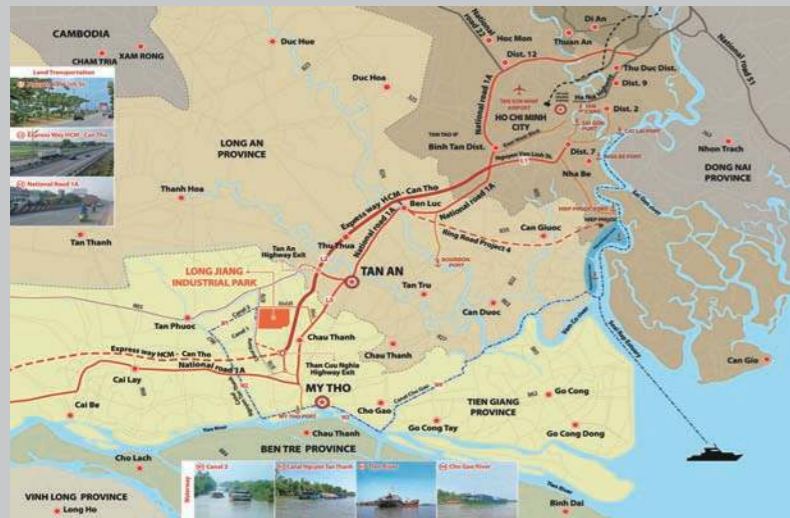


CANGZHOU KH FITTINGS CORP.
 120 Kilometers from TianJin airport
 240 Kilometers from BeiJing airport



WIN-VIET PRECISION MACHINERY COMPANY LTD.

ADD: NO.31 JIUHE EAST ROAD.DEVELOPMENT ZONE OF CANGZHOU, 061000
 Tel:0086-317-3093636; Fax: 0086-317-5533029; Mob: 0086-13703176300

E-mail: ok@czfittings.cn
 Web: <http://www.czfittings.cn> <http://www.stainlessfittings.com.cn>
 Skype: khfittings00

JAPANESE OFFICE:
 NIC CORP.
 4-11,3 CHOME,DOSHOUMACHI CHUO-KU,OSAKA,JAPAN541-0045
 Tel: 0081-6-6209 3070; Fax: 0081-6-62093130 E-mail: nic@nic-corporation.com

Factory in VIETNAM:
 WIN-VIET PRECISION MACHINERY COMPANY LTD.
 Add: Lot 131B3-131C2 Long Giang Industrial Park, Tan Phuoc 3 Commune,Dong Thap Province,Vietnam E-mail:
ww.winviet@gmail.com
 Web: <http://www.win-viet.net>
 Tel: +84-273-3642809



KH GROUP



Choosing KH is Bound To Succeed



➔ Brief Introduction

As a joint venture in Cangzhou, Hebei, China, we are invested by NIC Corp. (in Osaka, Japan). And we are specialized in supplying Stainless Steel Products for overseas customers, such as S/S screwed fittings, butt-welding fittings, Ball Disc, 1PC 2PC & 3PC S/S Ball Valve, Y-strainer, Check Valve, Welding Nipples, Barrel Nipples, Pipe Clamps, Hose Clamps, Unions (SMS, DIN, IDF, Tri-Clamps) Flange, sanitary valves and fittings as well as Bathroom & Kitchen Faucet, etc. With the guarantee of ISO 9001:2015 Certificate, PED 97/23/EC Certificate and CE Certificate, IATF16949 CERTIFICATE AD2000 CERTIFICATE, ETC. together with Japanese management idea, We supply you top-quality products as always. We have built our company policy on a foundation of quality service and reliable deliveries, in which the high standards of the product and its documentation are each an inherent part. For years of expansion, we now have over 450 workers in our plant and the annual production capacity is around 3000 Tons in 304/316 304L/316L stainless steel and carbon steel.

KH guarantees excellent customer service for its quality products. We see ourselves as your trusted business partner and have ample capacity to respond to unusual requests fast and efficiently.

We hope we can provide a complete product list to satisfy all your needs. We are also in position to supply top quality screwed fittings including standard item as well as OEM project.

For years of mfg, our products shipped to many countries including the U.S., Germany, Italy, Spain, British, Ireland, Austria, Denmark, Japan, and Dubai. In addition, our domestic sales is also growing and our customers including contractors and oil & petroleum distributor etc. Although our products gain a good honor from our customers, we never underestimate any potential risk that can affect our quality. Casting the Excellent is our business ideology. Please feel free to tell us about your thinking towards our company, products and services.

Pls believe us: Choosing KH is Bound To Succeed.



Professional supplier of precision pipe fittings



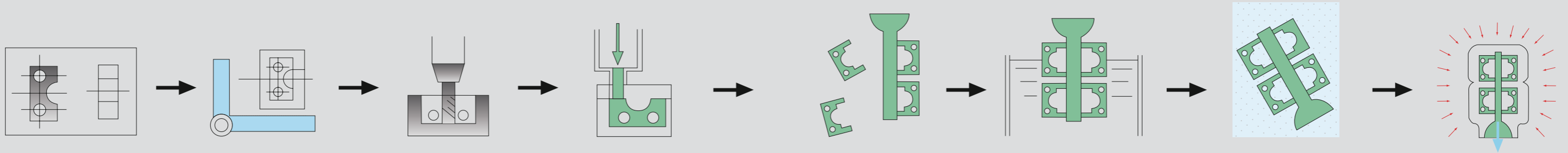
→ Brief Introduction

WIN-VIET PRECISION MACHINERY COMPANY LTD., established on July 1, 2018, is located in the scenic and conveniently located in Dong Thap Province, Vietnam. As a high-end manufacturing enterprise focusing on the field of precision casting, we have been deeply engaged in the precision casting industry for many years, and is committed to becoming a world leader in the field of stainless steel piping equipment manufacturing by virtue of advanced production technology and efficient management mode. With excellent quality, innovative spirit and international vision, the company continues to create value for customers, set a benchmark for the development of the industry and contribute to the society.

The company covers an area of 21,840 square meters, with a building area of 23,837 square meters, and the number of employees reach more than 270 in 2024, with annual sales exceeding \$12 million.

The company has won a number of honors such as ISO 9001:2015 quality management system certification, Japan Stainless Steel Association certification, which fully proves the strength of the company and the quality of its products. Also, we plan to pass PED-related certification in 2025.

INVESTMENT CASTING PROCESS



Confirmation:
make drawings according to customer's sample and drawings, the drawing and requirement must be confirmed by two parties.

Mould Designing:
design mould according to production batch and quality property.

Mould Making:
check the dimensions of mould before acceptance, then produce sample castings. If the samples are approved, then start the mass production.

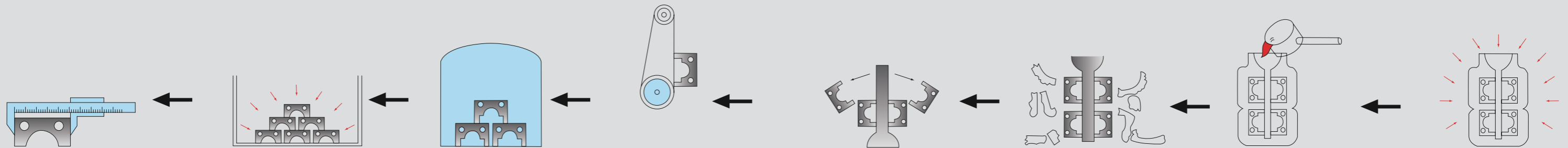
Injection of Wax:
use the wax injection machine to inject the treated wax into mould.

Assembly of Clusters:
check and fix the wax patterns, then assemble them into wax clusters.

Coating Refractory Slurry:
after washing up the wax clusters, the assembled wax patterns are dipped into ceramic slurry.

Stuccoing:
after coating drained and coated with sand, then drying. Repeat this operation several times until it reaches the requirement.

Dewaxing:
put the shell into a dewaxing autoclave to melt out the wax.



Inspecting & Straightening:
inspect and straighten the castings strictly to meet the quality requirement.

Heat Treating:
do heat treatment to meet the mechanical property requirement.

Shot Blasting:
make surface treatment according to surface quality requirement.

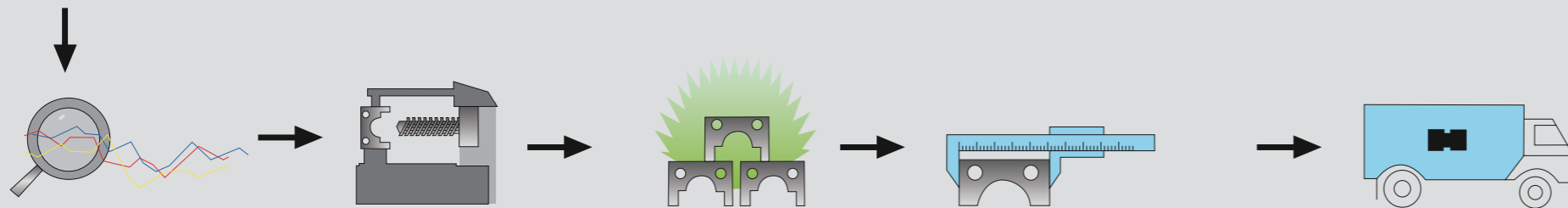
Grinding:
grinding off the remained roots of gating system.

Cutting Off:
cut castings away from the central sprue by a high-speed friction saw.

Knockout:
break down the ceramic shell, take out the casting cluster, separate the remaining sand aside.

Casting:
adjust the temperature and composition of the molten metal, pour it into the fired shell with high temperature.

Firing the Mould:
put the ceramic shell into a firing furnace, heat in a fixed time by adjusting temperature.



Specified Inspection:
if special inspection is required, a given inspection must be done. (X-rays, magnetic particle detection, fluorescent penetrant inspection)

Machining & Assembling:
do machining and assembling according to requirement.

Special Machining:
make polishing and other surface treatment according to product requirement.

Final Inspection:
make final inspection according to specification requirements, issue shipping instruction to the qualified products.

Packing & Shipping.



QUALIFICATION CERTIFICATE

KH CERTS

- ISO14001:2015
- ISO45001:2018
- PED(CE)-UK
- PEDM-UK
- PEDM-EU
- PED(CE)-EU
- ISO9001:2015
- AD2000
- BSCI
- CBAM
- CARBON FOOTPRINT
- GREENHOUSE GAS VERIFICATION STATEMENT

WIN-VIET CERTS

- JAPAN STAINLESS STEEL ASSOCIATION CERTIFICATION
- ISO9001:2015
- DVGW
- PED(CE)
- PEDM
- AD2000



PATENT CERTIFICATE

Utility Model Patent Certificate

—Heat Pump All-in-One Water-Cooled Air Conditioning System

—Stainless Steel Pipe and Fitting Automatic Cleaning System

—Stainless Steel Pipe Cutting Machine

—Polishing Device with Stable Support Function

—Stainless Steel Tubular Handle

—Stainless steel pipe polishing device

—Stainless Steel Pipe Outer Wall Polishing Device



QUALIFICATION CERTIFICATE

沧州坤兴不锈钢制品有限公司

河北省创新型中小企业

河北省工业和信息化厅

有效期三年：2022年12月—2025年12月

CERTIFICATE OF CONFORMITY
ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION

NO. 10424E00091R0M

This is to certify that the Environmental Management System of
CANGZHOU KH FITTINGS CORP.
(Registered Address: 31A, Jube East Road, Cangzhou Economic Development Zone, Hebei Province
Audit Address: No. 31, Jube East Road, Cangzhou Economic Development Zone, Hebei Province No. 52, Jube East Road,
Cangzhou Economic Development Zone, Hebei Province Unity Social Credit Code: 9113000746046096 Postal Code: 061000)

is in conformity with:
GB/T 24001-2016/ISO 14001:2015

This system is valid to:
* PRODUCTION OF STAINLESS STEEL PRECISION CASTINGS LOCATED AT NO. 31, JUBE EAST ROAD, CANGZHOU ECONOMIC DEVELOPMENT ZONE, HEBEI PROVINCE, AND PRODUCTION OF PIPE FITTINGS AND VALVES LOCATED AT NO. 52, JUBE EAST ROAD, CANGZHOU ECONOMIC DEVELOPMENT ZONE, HEBEI PROVINCE, AND RELATED EMS MANAGEMENT ACTIVITIES BY CANGZHOU KH FITTINGS CORP. *

Further clarifications regarding the scope of this certificate and the applicability of GB/T 24001-2016/ISO 14001:2015 requirements may be obtained by this body organization. Certificate is the state regulations administrative license, qualification, mandatory product certification received within the validity period, the regular supervision review of the case effectively. This certificate information is available on the official website of the agency and Certification & Accreditation Administration of the People's Republic of China (www.cca.gov.cn)

Issue date: 01-18-2024 Term of validity: 01-18-2024 TO 01-17-2027

Representative of the company (Director):
S. p. chun

SEATONE
世通国际认证

环境管理体系认证证书

证书编号: 10424E00091R0M

兹证明
沧州坤兴不锈钢制品有限公司
(注册地址: 河北省沧州市经济开发区九河东路31A 审核地址: 河北省沧州市经济开发区九河东路31号、
河北省沧州市经济开发区九河东路52号 统一社会信用代码: 9113000746046096 邮编: 061000)

环境管理体系符合标准:
GB/T 24001-2016/ISO 14001:2015

通过认证范围如下:
* 沧州坤兴不锈钢制品有限公司位于河北省沧州市经济开发区九河东路31号的不锈钢精密铸件的生产和位于河北省沧州市经济开发区九河东路52号的管件、阀门的生产及相关环境管理活动 *

涉及本证书的适用范围和 GB/T 24001-2016/ISO 14001:2015 要求的适用性问题, 可通过向本机构咨询得到进一步的解释。证书在国家规定的行政许可、资质、强制性产品认证有效期内, 定期接受监督审核并合格情况下继续有效。本证书信息可在本机构及国家认证认可监督管理委员会官方网站 (www.cca.gov.cn) 上查询。

发证日期: 2024年01月18日 有效期至: 2024年01月18日至2027年01月17日

签发人:
S. p. chun

SEATONE
世通国际认证

CERTIFICATE OF CONFORMITY
OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATION

NO. 10424S00078R0M

This is to certify that the Occupational Health And Safety Management System of
CANGZHOU KH FITTINGS CORP.
(Registered Address: 31A, Jube East Road, Cangzhou Economic Development Zone, Hebei Province
Audit Address: No. 31, Jube East Road, Cangzhou Economic Development Zone, Hebei Province No. 52, Jube East Road,
Cangzhou Economic Development Zone, Hebei Province Unity Social Credit Code: 9113000746046096 Postal Code: 061000)

is in conformity with:
GB/T 45001-2020/ISO 45001:2018

This system is valid to:
* PRODUCTION OF STAINLESS STEEL PRECISION CASTINGS LOCATED AT NO. 31, JUBE EAST ROAD, CANGZHOU ECONOMIC DEVELOPMENT ZONE, HEBEI PROVINCE, AND PRODUCTION OF PIPE FITTINGS AND VALVES LOCATED AT NO. 52, JUBE EAST ROAD, CANGZHOU ECONOMIC DEVELOPMENT ZONE, HEBEI PROVINCE, AND RELATED OHS MANAGEMENT ACTIVITIES BY CANGZHOU KH FITTINGS CORP. *

Further clarifications regarding the scope of this certificate and the applicability of GB/T 45001-2020/ISO 45001:2018 requirements may be obtained by this body organization. Certificate is the state regulations administrative license, qualification, mandatory product certification received within the validity period, the regular supervision review of the case effectively. This certificate information is available on the official website of the agency and Certification & Accreditation Administration of the People's Republic of China (www.cca.gov.cn)

Issue date: 01-18-2024 Term of validity: 01-18-2024 TO 01-17-2027

Representative of the company (Director):
S. p. chun

SEATONE
世通国际认证

职业健康安全管理体系认证证书

证书编号: 10424S00078R0M

兹证明
沧州坤兴不锈钢制品有限公司
(注册地址: 河北省沧州市经济开发区九河东路31A 审核地址: 河北省沧州市经济开发区九河东路31号、
河北省沧州市经济开发区九河东路52号 统一社会信用代码: 9113000746046096 邮编: 061000)

职业健康安全管理体系符合标准:
GB/T 45001-2020/ISO 45001:2018

通过认证范围如下:
* 沧州坤兴不锈钢制品有限公司位于河北省沧州市经济开发区九河东路31号的不锈钢精密铸件的生产和位于河北省沧州市经济开发区九河东路52号的管件、阀门的生产及相关职业健康安全活动 *

涉及本证书的适用范围和 GB/T 45001-2020/ISO 45001:2018 要求的适用性问题, 可通过向本机构咨询得到进一步的解释。证书在国家规定的行政许可、资质、强制性产品认证有效期内, 定期接受监督审核并合格情况下继续有效。本证书信息可在本机构及国家认证认可监督管理委员会官方网站 (www.cca.gov.cn) 上查询。

发证日期: 2024年01月18日 有效期至: 2024年01月18日至2027年01月17日

签发人:
S. p. chun

SEATONE
世通国际认证



QUALIFICATION CERTIFICATE

LRQA Current issue date: 17 January 2024
 Expiry date: 16 January 2027
 Certificate identity number: ISO 9001-2016-00028733 Original approval(s): ISO 9001-2016-00028733

Certificate of Approval

This is to certify that the Management System of
Cangzhou KH Fittings Corp.

No 31A and No 52, E. Jiuhe Road, Economic Development Zone of Cangzhou City, Hebei Province, China Unified Social Credit Code: 91130900745046596

has been approved by LRQA to the following standards:
ISO 9001:2015
GB/T 19001-2016

Approval number(s): ISO 9001 - 00028733

The scope of this approval is applicable to:
 Manufacture of stainless steel tube fittings (including precise machining) and valves sold abroad.

Davis Guan
 Regional Director, Greater China, Assessment
 LRQA Shanghai Office
 Issued by: LRQA Limited

The certificate can be checked for validity on CQC4 website www.cqc4.gov.uk 28 working days after the date of issuance. This approval is subject to surveillance assessment carried out in accordance with the LRQA assessment and certification procedures. LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable for any person for any loss, damage or expense caused by reliance on the information or advice in this document or otherwise provided, unless that person has agreed a contract with the relevant LRQA entity for the provision of the information or advice and in that case any responsibility or liability is excluded to the extent permitted by law. Issued by: LRQA Limited, 1 Trinity Park, Bickenhill Lane, Birmingham B37 7YS, United Kingdom. Page 1 of 1

LRQA 证书编号: ISO 9001-2016-00028733
 证书有效期至: 2027年1月16日
 证书批准日期: 2024年1月17日

认证证书

兹证明下列公司之管理体系：
沧州坤兴不锈钢制品有限公司

中国·河北省沧州市经济开发区九河东路31号 九河东路52号
 统一社会信用代码: 91130900745046596
 注册地址: 河北省沧州市经济开发区九河东路31号

通过LRQA之认证, 符合下列管理体系标准：
ISO 9001:2015
GB/T 19001-2016

证书编号: ISO 9001 - 00028733

该管理体系适用于：
 出口不锈钢管件(包括精密机加)、阀门的制造。

管大旺
 大中华区运营总监, 评审员
 资质编号: (上海) 00000000
 认证机构: 劳资质量认证有限公司

本证书的有效性可通过CQC4网站 www.cqc4.gov.uk 在发证日期后28个工作日内进行核查。此认证的有效性依赖于获证企业接受本机构的监督审核。LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable for any person for any loss, damage or expense caused by reliance on the information or advice in this document or otherwise provided, unless that person has agreed a contract with the relevant LRQA entity for the provision of the information or advice and in that case any responsibility or liability is excluded to the extent permitted by law. Issued by: LRQA Limited, 1 Trinity Park, Bickenhill Lane, Birmingham B37 7YS, United Kingdom. Page 1 of 1

Certificate No: BK200000873-W0-1 dated 17 January 2024

LRQA

ANNEX I

Products covered by this certificate:

No.	Product	Material Specification	Standard applied
1	Castings, size: Up to 4"	CF8, CF8M, CF3, CF3M	ASME SA351
2	Castings, size: Up to 4"	SCS13, SCS13A, SCS14, SCS14A	JIS G5121
3	Castings, size: Up to 4"	1.4301, 1.4401, 1.4308, 1.4408	EN 10213
4	Castings, size: Up to 4"	1.4571, 1.4541	EN 10088-1
5	Machining, size: Up to 4"	1.4301, 1.4401, 1.4307, 1.4404, 1.4571, 1.4541	EN 10216-5
6	Machining, size: Up to 4"	1.4301, 1.4401, 1.4307, 1.4404	EN 10217-7

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable for any person for any loss, damage or expense caused by reliance on the information or advice in this document or otherwise provided, unless that person has agreed a contract with the relevant LRQA entity for the provision of the information or advice and in that case any responsibility or liability is excluded to the extent permitted by law. Issued by: LRQA Limited, 1 Trinity Park, Bickenhill Lane, Birmingham B37 7YS, United Kingdom. Page 1 of 2

LRQA Certificate No: BK200000873-W0-1

CERTIFICATE

in accordance with the requirements of AD2000 W0

This is to certify that the Quality System of

Name of Manufacturer/Applicant: Cangzhou KH Fittings Corp.
 Address: No. 31, E Jiuhe Road, Economic Development Zone of Cangzhou City, Hebei Province, Extension Site: No. 52, E Jiuhe Road, Economic Development Zone of Cangzhou City, Hebei Province, People's Republic of China

has been examined by LRQA Nederland B.V. and provided evidence of fulfillment of the requirements according to:

AD 2000-Merkblatt: W 0
 Type of Material: Metal Material for Pressure Equipment
 Product description: Manufacture of stainless steel valve parts and stainless steel pipe fittings

For details see Annex I.

Approval is subject to the continued maintenance of the quality system in accordance with the requirements of the above-mentioned code.

Initial Approval: 9 August 2022 Certificate expiry date: 16 January 2027

Alfred Yao
 Alfred Yao
 Name, Signature and Stamp

Shanghai, 17 January 2024

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable for any person for any loss, damage or expense caused by reliance on the information or advice in this document or otherwise provided, unless that person has agreed a contract with the relevant LRQA entity for the provision of the information or advice and in that case any responsibility or liability is excluded to the extent permitted by law. Issued by: LRQA Limited, 1 Trinity Park, Bickenhill Lane, Birmingham B37 7YS, United Kingdom. Page 1 of 2

Monitoring summary report for Cangzhou KH Fittings Corp.
MONITORING ID: 23-0202017

amfori
 Trade with purpose

Monitored Party Cangzhou KH Fittings Corp.	amfori ID 156-048178-000	Address NO.52, JIUHE EAST ROAD, ECONOMIC DEVELOPMENT ZONE, 061000 CANGZHOU, Hebei Sheng, China
Monitoring Activity amfori Social Audit - Manufacturing	Monitoring Type Full Monitoring	Monitoring Partner TUV Rheinland
Monitoring Start Date 08/08/2023	Closing Meeting Finished Date 14/08/2023	Submission Date 17/08/2023
Expiration Date 17/08/2024	Announcement Type Semi Announced	
Site Cangzhou KH pipeline Corp	Site amfori ID 156-048178-001	

This is an extract of the online Monitoring Result, generated on 19/08/2023, and is only valid as an acknowledgement of the result. To see all the details, review the full monitoring result, which is available on the [amfori Sustainability Platform](#) - The English version is the legally binding one.
 amfori does not assume any liability with regard to the compliance of this extract, or any versions of this extract, with the Regulation (EU) 2016/679 (General Data Protection Regulation).
 All rights reserved. No part of this publication may be reproduced, translated, stored in a retrieval system, or transmitted, in any form or by any means electronic, mechanical, photocopying, recording or otherwise, be lent, re-sold, hired out or otherwise circulated without the amfori consent © amfori, 2021

OVERALL RATING

A B **C** D E None

SECTION RATING

PA1: Social Management System	C
PA 2: Workers Involvement and Protection	B
PA 3: The Rights of Freedom of Association and Collective Bargaining	A
PA 4: No Discrimination	A
PA 5: Fair Remuneration	B
PA 6: Decent Working Hours	D

MONITORING ID: 23-0202017 | Monitoring summary report for Cangzhou KH Fittings Corp. — 1 / 12

SEATONE
 SEATONE STQC C09/V0

Report No.: FSTRZ/2023CS189414500

Carbon Border Adjustment Mechanism (CBAM) Quarterly Report

Installation: **CANGZHOU KH FITTINGS CORP.**
 Reporting period: **01.2024**

Shandong Seatone International Certification Co., Ltd (STQC)
 Address: No. 2 Zhuyuan Road, High tech Zone, Qingdao, Shandong Province
 TEL: 0532-58089758/85781352/15192582596
 EMAIL: jishubu@seatonegroup.com HTTP://WWW.SEATONE.CN



QUALIFICATION CERTIFICATE

产品碳足迹证书
证书编号: STQC-PCF-20240001

山东世通国际认证有限公司根据相关核查程序发布本证书,对如下内容的真实性及有效性予以证明:

产品名称: 不锈钢管件
申请人名称及地址: 沧州坤兴不锈钢制品有限公司
河北省沧州市经济开发区九河东路 31 号、河北省沧州市经济开发区九河东路 52 号
生产企业名称地址: 沧州坤兴不锈钢制品有限公司
河北省沧州市经济开发区九河东路 31 号、河北省沧州市经济开发区九河东路 52 号

数据时间边界: 2022 年 1 月 1 日至 2022 年 12 月 31 日
核查依据标准及规则: ISO14067:2018 产品的碳足迹-量化和沟通的要求和指南
PAS 2050: 2011 商品和服务在生命周期内的温室气体排放评价规范
功能单位: 1 吨不锈钢管件
功能单位产品碳足迹: 4.05 吨二氧化碳当量
系统边界: 摇篮到大门

产品各阶段碳排放比例: 原材料获取: 89.75%; 产品生产: 10.25%

山东世通国际认证有限公司
发证日期: 2024 年 1 月 2 日
有效期至: 2027 年 1 月 1 日

Signature of general manager: S. p. chuan
Date of issue: January 2, 2024
Term of validity: January 1, 2027

Address: No.3 Zhunan Road, High-tech Zone, Qinghuo City, China
Tel: 86-471-8617 Web: www.seaton.net.cn

PRODUCT CARBON FOOTPRINT CERTIFICATE
NO. STQC-PCF-20240001

Shandong seaton international certification co.,ltd. issues this certificate in accordance with relevant verification procedures.The authenticity and validity of the following contents are proved

PRODUCT NAME: stainless steel pipe fittings
APPLICANT NAME AND ADDRESS: CANGZHOU KH FITTINGS CORP.
No. 31, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province
No. 52, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province
BUSINESS NAME AND ADDRESS: CANGZHOU KH FITTINGS CORP.
No. 31, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province
No. 52, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province

DATA TIME BOUNDARY: January 1, 2022 to December 31, 2022
VERIFICATION STANDARDS AND RULES: ISO 14067: 2018 Carbon footprint of products - requirements and guidelines for quantification and communication
PAS 2050:2011 Specifications for the assessment of greenhouse gas emissions of goods and services over the life cycle

FUNCTIONAL UNIT: 1 ton stainless steel pipe fittings
FUNCTIONAL UNIT PRODUCT CARBON FOOTPRINT: 4.05 tons of carbon dioxide equivalent
SYSTEM BOUNDARY: Cradle to gate
CARBON EMISSION RATIO OF EACH STAGE OF PRODUCT:
Raw material acquisition ratio: 89.75%; Product production ratio: 10.25%

Signature of general manager: S. p. chuan
Date of issue: January 2, 2024
Term of validity: January 1, 2027

Address: No.3 Zhunan Road, High-tech Zone, Qinghuo City, China
Tel: 86-471-8617 Web: www.seaton.net.cn

产品碳足迹证书
证书编号: STQC-PCF-20240001

山东世通国际认证有限公司根据相关核查程序发布本证书,对如下内容的真实性及有效性予以证明:

产品名称: 不锈钢精密管件、阀门产品
申请人名称及地址: 沧州坤兴不锈钢制品有限公司
河北省沧州市经济开发区九河东路 31 号、河北省沧州市经济开发区九河东路 52 号
生产企业名称地址: 沧州坤兴不锈钢制品有限公司
河北省沧州市经济开发区九河东路 31 号、河北省沧州市经济开发区九河东路 52 号

数据时间边界: 2022 年 1 月 1 日至 2022 年 12 月 31 日
核查依据标准及规则: ISO14067:2018 产品的碳足迹-量化和沟通的要求和指南
PAS 2050: 2011 商品和服务在生命周期内的温室气体排放评价规范
功能单位: 1 吨不锈钢精密管件、阀门产品
功能单位产品碳足迹: 16.14 吨二氧化碳当量
系统边界: 摇篮到大门

产品各阶段碳排放比例: 原材料获取: 91%; 产品生产: 9%

山东世通国际认证有限公司
发证日期: 2024 年 1 月 2 日
有效期至: 2027 年 1 月 1 日

Signature of general manager: S. p. chuan
Date of issue: January 2, 2024
Term of validity: January 1, 2027

Address: No.3 Zhunan Road, High-tech Zone, Qinghuo City, China
Tel: 86-471-8617 Web: www.seaton.net.cn

PRODUCT CARBON FOOTPRINT CERTIFICATE
NO. STQC-PCF-20240001

Shandong seaton international certification co.,ltd. issues this certificate in accordance with relevant verification procedures.The authenticity and validity of the following contents are proved

PRODUCT NAME: stainless steel valve castings and stainless steel pipe fittings
APPLICANT NAME AND ADDRESS: CANGZHOU KH FITTINGS CORP.
No. 31, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province
No. 52, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province
BUSINESS NAME AND ADDRESS: CANGZHOU KH FITTINGS CORP.
No. 31, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province
No. 52, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province

DATA TIME BOUNDARY: January 1, 2022 to December 31, 2022
VERIFICATION STANDARDS AND RULES: ISO 14067: 2018 Carbon footprint of products - requirements and guidelines for quantification and communication
PAS 2050:2011 Specifications for the assessment of greenhouse gas emissions of goods and services over the life cycle

FUNCTIONAL UNIT: 1 ton stainless steel valve castings and stainless steel pipe fittings
FUNCTIONAL UNIT PRODUCT CARBON FOOTPRINT: 16.14 tons of carbon dioxide equivalent
SYSTEM BOUNDARY: Cradle to gate
CARBON EMISSION RATIO OF EACH STAGE OF PRODUCT:
Raw material acquisition ratio: 91%; Product production ratio: 9%

Signature of general manager: S. p. chuan
Date of issue: January 2, 2024
Term of validity: January 1, 2027

Address: No.3 Zhunan Road, High-tech Zone, Qinghuo City, China
Tel: 86-471-8617 Web: www.seaton.net.cn

产品碳足迹证书
证书编号: STQC-PCF-20240001-1

山东世通国际认证有限公司根据相关核查程序发布本证书,对如下内容的真实性及有效性予以证明:

产品名称: 阀门铸件产品
申请人名称及地址: 沧州坤兴不锈钢制品有限公司
河北省沧州市经济开发区九河东路 31 号、河北省沧州市经济开发区九河东路 52 号
生产企业名称地址: 沧州坤兴不锈钢制品有限公司
河北省沧州市经济开发区九河东路 31 号、河北省沧州市经济开发区九河东路 52 号

数据时间边界: 2022 年 1 月 1 日至 2022 年 12 月 31 日
核查依据标准及规则: ISO14067:2018 产品的碳足迹-量化和沟通的要求和指南
PAS 2050: 2011 商品和服务在生命周期内的温室气体排放评价规范
功能单位: 1 吨阀门铸件产品
功能单位产品碳足迹: 14.25 吨二氧化碳当量
系统边界: 摇篮到大门

产品各阶段碳排放比例: 原材料获取: 78.15%; 产品生产: 21.85%

山东世通国际认证有限公司
发证日期: 2024 年 1 月 2 日
有效期至: 2027 年 1 月 1 日

Signature of general manager: S. p. chuan
Date of issue: January 2, 2024
Term of validity: January 1, 2027

Address: No.3 Zhunan Road, High-tech Zone, Qinghuo City, China
Tel: 86-471-8617 Web: www.seaton.net.cn

PRODUCT CARBON FOOTPRINT CERTIFICATE
NO. STQC-PCF-20240001-1

Shandong seaton international certification co.,ltd. issues this certificate in accordance with relevant verification procedures.The authenticity and validity of the following contents are proved

PRODUCT NAME: stainless steel valves and casting parts
APPLICANT NAME AND ADDRESS: CANGZHOU KH FITTINGS CORP.
No. 31, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province
No. 52, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province
BUSINESS NAME AND ADDRESS: CANGZHOU KH FITTINGS CORP.
No. 31, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province
No. 52, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province

DATA TIME BOUNDARY: January 1, 2022 to December 31, 2022
VERIFICATION STANDARDS AND RULES: ISO 14067: 2018 Carbon footprint of products - requirements and guidelines for quantification and communication
PAS 2050:2011 Specifications for the assessment of greenhouse gas emissions of goods and services over the life cycle

FUNCTIONAL UNIT: 1 ton stainless steel valves and casting parts
FUNCTIONAL UNIT PRODUCT CARBON FOOTPRINT: 14.25 tons of carbon dioxide equivalent
SYSTEM BOUNDARY: Cradle to gate
CARBON EMISSION RATIO OF EACH STAGE OF PRODUCT:
Raw material acquisition ratio: 78.15%; Product production ratio: 21.85%

Signature of general manager: S. p. chuan
Date of issue: January 2, 2024
Term of validity: January 1, 2027

Address: No.3 Zhunan Road, High-tech Zone, Qinghuo City, China
Tel: 86-471-8617 Web: www.seaton.net.cn

温室气体核查声明
证书编号: STQC-GHG-20240001

申请方名称: 沧州坤兴不锈钢制品有限公司
申请方地址: 河北省沧州市经济开发区九河东路 31 号、河北省沧州市经济开发区九河东路 52 号

核查依据: ISO 14064-1: 2018 温室气体第 1 部分: 组织层次上对温室气体排放和清除的量化与报告的规范及指南
PAS 2050: 2011 商品和服务在生命周期内的温室气体排放评价规范

核算边界及范围: 河北省沧州市经济开发区九河东路 31 号、河北省沧州市经济开发区九河东路 52 号物理边界内不锈钢精密铸件、阀门的生产及管理活动所涉及的所有 GHG 排放和清除。

报告期: 2022 年 1 月 1 日至 2022 年 12 月 31 日

经核查,沧州坤兴不锈钢制品有限公司温室气体排放量为 7311.323 吨 CO2 当量。

山东世通国际认证有限公司
发证日期: 2024 年 1 月 2 日

Signature of general manager: S. p. chuan
Date of issue: January 2, 2024

Address: No.3 Zhunan Road, High-tech Zone, Qinghuo City, China
Tel: 86-471-8617 Web: www.seaton.net.cn

GREENHOUSE GAS VERIFICATION STATEMENT
NO. STQC-GHG-20240001

NAME OF APPLICANT: CANGZHOU KH FITTINGS CORP.
ADDRESS OF APPLICANT: No. 31, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province
No. 52, Juhe East Road, Cangzhou Economic Development Zone, Hebei Province

BASIS FOR VERIFICATION: ISO 14064-1: 2018 GREENHOUSE GASES PART 1: ORGANIZATIONAL LEVEL NORMS AND GUIDELINES FOR QUANTIFICATION AND REPORTING OF GREENHOUSE GAS EMISSIONS AND REMOVALS
PAS 2050:2011 SPECIFICATIONS FOR THE ASSESSMENT OF GREENHOUSE GAS EMISSIONS OF GOODS AND SERVICES OVER THE LIFE CYCLE

ACCOUNTING BOUNDARY AND SCOPE: PRODUCTION OF STAINLESS STEEL VALVE CASTINGS AND STAINLESS STEEL PIPE FITTINGS WITHIN THE PHYSICAL BOUNDARY LOCATED AT NO. 31, JUHE EAST ROAD, CANGZHOU ECONOMIC DEVELOPMENT ZONE, HEBEI PROVINCE AND NO. 52, JUHE EAST ROAD, CANGZHOU ECONOMIC DEVELOPMENT ZONE, HEBEI PROVINCE AND ALL GHG EMISSIONS AND REMOVALS INVOLVED IN THE MANAGE ACTIVITIES

REPORTING PERIOD: January 1, 2022 to December 31, 2022
AFTER VERIFICATION, CANGZHOU KH FITTINGS CORP. GREENHOUSE GAS EMISSIONS OF 7311.323 TONS OF CO2 EQUIVALENT.

Signature of general manager: S. p. chuan
Date of issue: January 2, 2024

Address: No.3 Zhunan Road, High-tech Zone, Qinghuo City, China
Tel: 86-471-8617 Web: www.seaton.net.cn



PATENT CERTIFICATE





QUALIFICATION CERTIFICATE

認定番号第32227:23号
ステンレス協会規格合格認定証書
 ステンレス協会規格の審査規定により下記の
 ように認定する

令和5年5月24日
 ステンレス協会
 会長 久保田尚志
 ステンレス協会規格認定委員会
 委員長 井上純哉

記

事業場名称 オ-エヌ工業株式会社
 所在地 岡山県津山市上田邑3235-2
 認定規格名称 SAS322-一般配管用ステンレス鋼
 鋼管の管継手性能基準

接合方式 拡管式
 継手名称 ナイスジョイントNJ-X
 呼び方 13~60 Su
 種類 詳細は別紙による
 呼び圧力 2MPa, 1MPa
 登録年月日 令和5年5月24日
 認定期間 登録年月日から5年間

認定番号第32221:20号
ステンレス協会規格合格認定証書
 ステンレス協会規格の審査規定により下記の
 ように認定する

令和4年9月15日
 ステンレス協会
 会長 久保田尚志
 ステンレス協会規格認定委員会
 委員長 井上純哉

記

事業場名称 オ-エヌ工業株式会社
 所在地 岡山県津山市上田邑3235-2
 認定規格名称 SAS322-一般配管用ステンレス鋼
 鋼管の管継手性能基準

接合方式 拡管式
 継手名称 ナイスジョイント
 呼び方 75~100 Su
 種類 詳細は別紙による
 呼び圧力 2MPa
 登録年月日 令和2年6月11日
 認定期間 登録年月日から5年間

認定番号第32206:20号
ステンレス協会規格合格認定証書
 ステンレス協会規格の審査規定により下記の
 ように認定する

令和4年9月15日
 ステンレス協会
 会長 久保田尚志
 ステンレス協会規格認定委員会
 委員長 井上純哉

記

事業場名称 オ-エヌ工業株式会社
 所在地 岡山県津山市上田邑3235-2
 認定規格名称 SAS322-一般配管用ステンレス鋼
 鋼管の管継手性能基準

接合方式 拡管式
 継手名称 ナイスジョイント
 呼び方 13~60 Su
 種類 詳細は別紙による
 呼び圧力 1MPa及び2MPa
 登録年月日 令和2年10月26日
 認定期間 登録年月日から5年間

LRQA Current issue date: 02 August 2023
 Expiry date: 15 July 2025
 Certificate validity number: 18043601
 Original approval: ISO 9001:19 July 2019

Certificate of Approval

This is to certify that the Management System of:

WIN-VIET PRECISION MACHINERY COMPANY LIMITED

Tan Lap 1 Commune, Lot 131B3 - 131C2, Long Giang Industrial Park, Tan Phuoc District, 084708 Tien Giang Province, Vietnam

has been approved by LRQA to the following standards:

ISO 9001:2015

Approval number(s): ISO 9001 - 0072410

The scope of this approval is applicable to:
 Manufacture of stainless steel investment castings and associated machining.

Paul Graef
 Area Operations Manager, Europe
 Issued by: LRQA España, S.L.

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or for any other reason, whether or not caused in whole or in part by the information or advice in this document.

Page 1 of 1

DVGW CERT

DVGW type examination certificate

DVGW-Baumusterprüfzertifikat

DW-8511CU0344
 Registration Number

Field of Application: products of water supply
 Anwendungsbereich: Produkte der Wasserversorgung

Owner of Certificate: O.N. Industries Ltd.
 Zertifizierungsinhaber: Tsuyama, Okayama, JP-3235-2 Kamitanomura

Distributor: O.N. Industries Ltd.
 Vertrieber: Tsuyama, Okayama, JP-3235-2 Kamitanomura

Product Category: installation systems and system joints: pipe joint for pipes in drinking water installation systems (8511)
 Produktart

Product Description: mechanical connectors made from stainless steel for stainless steel pipes according to DVGW GW 541 (type M-MM)
 Produktbezeichnung

Model: O.N. Fitting
 Modell

Test Reports: type testing: K 19 0405 from 01.11.2019 (MPD)
 Prüfberichte

Test Basis: DVGW W 534-(P) (01.07.2015)
 Prüfgrundlagen: DVGW CERT ZP 8500 (09.03.2017)
 UBA METALLE (21.11.2018)
 UBA ELASTOM (16.03.2016)
 DVGW W 270 (01.11.2007)

Date of Expiry / File No.: 01.11.2024 / 18-0464-WNE
 Ablaufdatum / Aktenzeichen

12.11.2019 GI A-1/2
 Date, issued by: Sheet, Head of Certification Body
 Datum, bearbeitet: Blatt, Leiter der Zertifizierungsstelle

DVGW CERT GmbH is an accredited body by DAkkS according to DIN EN ISO/IEC 17065:2013 for certification of products for energy and water supply industry.

DVGW CERT GmbH ist von der DAkkS nach DIN EN ISO/IEC 17065:2013 akkreditierte Stelle für die Zertifizierung von Produkten der Energie- und Wasserversorgung.

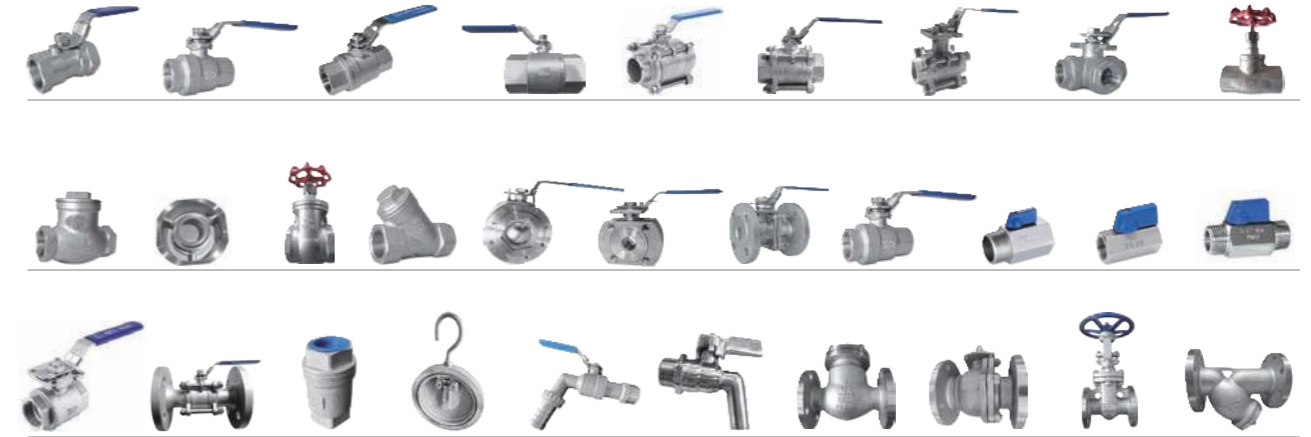
DVGW CERT GmbH
 Zertifizierungsstelle
 Josef-Wilmer-Str. 1-3
 53123 Bonn
 Tel. +49 228 91 88-888
 Fax +49 228 91 88-993
 www.dgw-cert.com
 info@dgw-cert.com

PRODUCT CATALOG

150 LBS S/S PIPE FITTINGS (03-30)



INDUSTRIAL VALVES (43-66)



HIGH PRESSURE S/S PIPE FITTINGS (31-34)



QUICK COUPLINGS (67-68)



SANITARY UNION (35-42)



BUTT WELD FITTINGS (69-72)

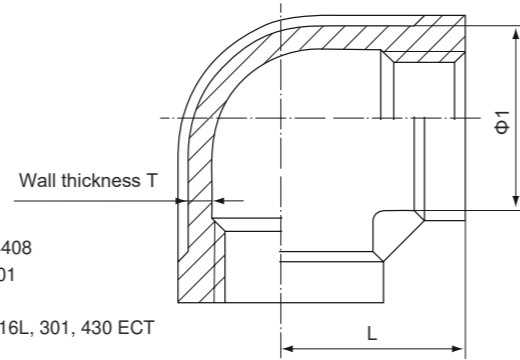


➔ Elbow 90° (LB 90°)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144 SP114 EN-10241 ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



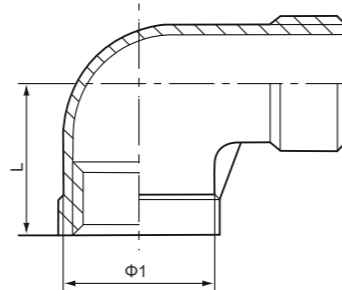
Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	Φ 1	12.6	16	19.5	23.4	29.1	36.4	45.3	51.5	64.1	80.7	93.7	120
	L	17	19	23	25	27.5	33	40	43	52	65	75	92
	T	2.3	2.5	2.55	1.1	1.2	1.35	1.5	1.6	2	2.4	2.6	3
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	13	16.5	20	24.5	30	37.5	46.5	53	65.5	82	95.5	121.5
	L	17	19	23	27	32	38	45	48	57	69	78	96
ISO4144	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	15	17.5	21.5	26.5	33	41	50.5	58	71.5	82.5	99	125.5
	L	19.5	19.5	22.5	27.2	32	36.5	43	47.2	55.5	66	75.5	95
SP-114	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	15	17.5	21.5	26.5	33	41	50.5	58	71.5	82.5	99	125.5
	L	19.5	19.5	22.5	27.2	32	36.5	43	47.2	55.5	66	75.5	95
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115

➔ Street Elbow 90° (SLB 90°)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144 SP114 EN-10241 ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



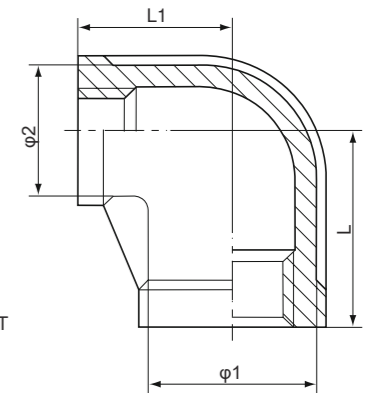
Diameter	SIZE	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4			
KH type	Φ1	23.8	29.5	36.8	45.3	52.2	64.5	80.7	93.7	120			
	L	24	27	32	39	41.5	51	65	75	90			
	T	1.3	1.4	1.6	1.5	2	2	2.4	2.6	3			
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	13	16.5	20	24.5	30	37.5	46.5	53	65.5	82	95.5	121.5
	L	17	19	23	27	32	38	45	48	57	69	78	96
ISO4144	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	15	17.5	21.5	26.5	33	41	50.5	58	71.5	82.5	99	125.5
	L	19.3	19.3	22.35	27	31.77	36.32	42.67	47	55.15	65.67	75.22	93.77
SP-114	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	15	17.5	21.5	26.5	33	41	50.5	58	71.5	82.5	99	125.5
	L	19.3	19.3	22.35	27	31.77	36.32	42.67	47	55.15	65.67	75.22	93.77
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	17	19	21	25	30	37	43	49	59	68	81	100
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	17	19	21	25	30	37	43	49	59	68	81	100
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	17	19	21	25	30	37	43	49	59	68	81	100
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	17	19	21	25	30	37	43	49	59	68	81	100
EN-10241	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	17	19	21	25	30	37	43	49	59	68	81	100

➔ Red Elbow 90° (RLB 90°)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144 SP114 EN-10241 ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



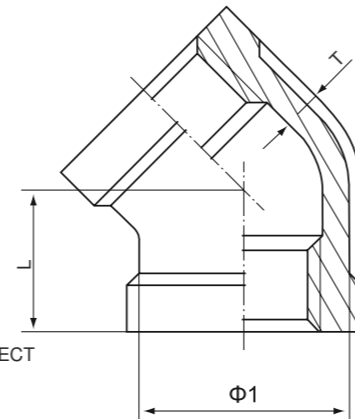
Standard	SIZE	1/4	3/8	1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1
ISO4144	Φ 1	16.5	20	24.5	24.5	30	30	37.5	37.5	46.5	46.5
	Φ 2	13	16.5	16.5	20	20	24.5	24.5	30	30	37.5
	L	18	22	24	25	28	30	33	35	40	42
	L1	18	20	24	26	28	29	32	34	38	40
	T1	2.75	2.8	1.65	1.65	1.75	1.75	2	2	2.25	2.25
ISO4144	SIZE	1 1/2		2		2 1/2					

➔ Elbow 45° (LB 45°)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144 SP114 EN-10241 ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



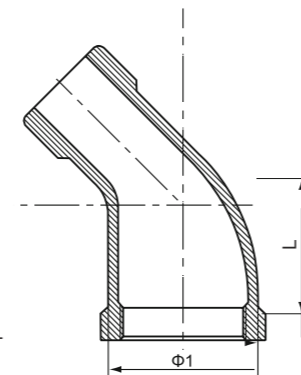
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	Φ1	12.6	16	19.5	23.4	29.1	36.4	45.3	51.5	64.1	80.7	93.7	120
	L	16	17	19	21	25	28	32	35	42	48	52	62
	T	2.5	2.75	2.8	1.65	1.75	2	2.25	2.5	2.85	3.25	3.75	4.25
ISO4144	Φ1	13	17.5	20	24.5	30	37.5	47	53	65.5	82	95.5	121.5
	L	16	17	19	21	25	29	33	37	42	49	54	64
	T	2.5	2.75	2.8	1.65	1.75	2	2.25	2.5	2.85	3.25	3.75	4.25
SP-114	Φ1	13.5	15.4	19.7	26.2	31.9	39.8	47.8	55.9	66.5	83.3	98.2	123
	L	19	21	23	25	30	32	33	36	44	50	54	58.5
	T	2.7	2.7	2.7	2.7	3.2	3.2	3.8	3.8	4	4.7	5.2	6.0
EN-10241	Φ1	18	21	25	29.5	35.6	43	52.4	58	72	87	100.3	125.5
	L	18	18	20	22	25	28	33	36	43	50	55	64
	T	5.0	5.0	5.3	4.15	4.55	4.75	5.2	5.0	6.1	5.75	6.15	6.25

➔ Street Elbow 45° (SLB 45°)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144 SP114 EN-10241 ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



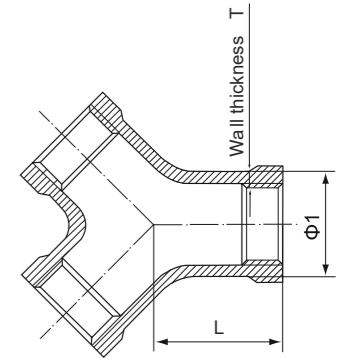
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	Φ1	13.2	16.5	20.2	24.8	30.2	38.5	47.5	53.2	66	82	95.5	121.5
	L	14	18	18	23	25.5	28	33	35	40	52	56	68
	T	2.5	2.75	2.8	1.65	1.75	2	2.25	2.5	2.85	3.25	3.75	4.25
SP-114	Φ1	13.5	15.4	19.7	26.2	31.9	39.8	47.8	55.9	66.5	83.3	98.2	123
	L	20.6	20.6	23.6	28.5	33.3	38.1	44.5	49	57.1	68	77.6	96.8
	T	2.29	2.29	2.54	2.54	3.05	3.3	3.56	3.81	4.32	5.33	5.84	6.6
EN-10241	Φ1	17	21	25	29	35	43	52	58.8	71.7	86.2	98.6	121
	L	19	21	25	28	33	38	45	50	58	69	78	97
	T	5.0	5.0	5.3	4.15	4.55	4.75	5.2	5.0	6.1	5.75	6.15	6.25

➔ Y Type Tee (Y-TB)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144 SP114 EN-10241 ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



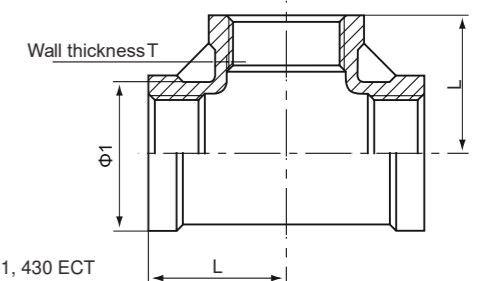
Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
ISO4144	Φ1	13	16	20	24.5	30	40.5	46.5	53	65.5	82	95.5	121.5
	L	17	19	23	27	32	40.9	45	48	57	69	78	96
	T	2.5	2.5	2.8	1.65	1.75	3.3	2.25	2.5	2.85	3.25	5.5	4.25
SP-114	Φ1	13.5	15.4	19.7	26.2	31.9	39.8	47.8	55.9	66.5	83.3	98.2	123
	L	20.6	20.6	23.6	28.5	33.3	38.1	44.5	49	57.1	68	77.6	96.8
	T	2.7	2.7	2.7	2.7	3.2	3.2	3.8	3.8	4	4.7	5.2	6
EN-10241	Φ1	15.2	19.7	23.3	28	34.8	43.6	53	58	71	87	100	126
	L	17	18.5	22.9	26.8	32	37.5	45.9	47.6	58	70	77	97
	T	3.6	4.35	4.85	3.4	4.15	5.05	5.5	5	5.6	5.75	6	6.5

➔ Tee (TB)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



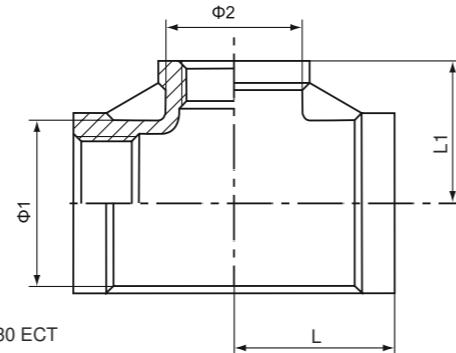
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	Φ1	12.6	16	19.5	23.4	29.1	36.4	45.3	51.5	64.1	80.7	93.7	120
	L	17	19	23	25	27.5	33	40	43	52	65	75	92
	T	2.3	2.5	2.55	1.1	1.2	1.35	1.5	1.6	2	2.4	2.6	3
ISO4144	Φ1	13	16.5	20	24.5	30	37.5	46.5	53	65.5	82	95.5	121.5
	L	17	19	23	27	32	38	45	48	57	69	78	96
	T	2.5	2.75	2.8	1.65	1.75	2	2.25	2.5	2.85	3.25	3.75	4.25
SP-114	Φ1	15	17.5	21.5	26.5	33	41	50.5	58	71.5	82.5	99	125.5
	L	19.5	19.5	22.5	27.2	32	36.5	43	47.2	55.5	66	75.5	95
	T	2.29	2.29	2.54	2.54	3.05	3.3	3.56	3.81	4.32	5.33	5.84	6.6
EN-10241	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
	T	1.85	2.2	2.25	2.35	2.35	2.9	2.9	2.9	3.25	3.25	3.65	4.15

➔ Red.Tee (RTB)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT), DIN 2999 & BS21, ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144
- Material conform to ASTM A351-CF8M/1.4408, ASTM A351-CF8/1.4401, ASTM A216-WCB, AISI 304, 304L, 316, 316L, 301, 430 ECT
- 150 LBS



Standard	SIZE	1/4		3/8		1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1	1	1
ISO4144	Φ1	16.5	20	24.5	24.5	30	30	37.5	37.5	46.5	46.5		
	Φ2	13	16.5	16.5	20	20	24.5	24.5	30	30	37.5		
	L	18	20	24	26	28	29	32	34	38	40		
	L1	18	22	24	25	28	30	33	35	40	42		
	T	2.75	2.8	1.65	1.75	1.75	1.75	2	2	2.25	2.25		
	T1	2.5	2.75	2.75	2.8	2.8	1.75	1.65	1.75	1.75	2		

Standard	SIZE	1 1/2		2		2 1/2		3		4	
		1	1 1/4	1 1/4	1 1/2	1 1/2	2	2	2 1/2	2 1/2	3
ISO4144	Φ1	53	53	65.5	65.5	82	82	95.5	95.5	121.5	121.5
	Φ2	37.5	46.5	46.5	53	53	65.5	65.5	82	82	95.5
	L	41	45	48	52	55	60	62	72	78	83
	L1	45	48	54	55	62	65	72	75	90	91
	T	2.5	2.5	2.85	2.85	3.25	3.25	3.75	3.75	4.25	4.25
	T1	2	2.25	2.25	2.5	2.5	2.85	2.85	3.25	3.25	3.75

Standard	SIZE	1/4		3/8		1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1	1	1
SP-114	Φ1	15.4	19.7	26.2	26.2	31.9	31.9	39.8	39.8	47.8	47.8		
	Φ2	13.5	15.4	15.4	19.7	19.7	26.2	26.2	31.9	31.9	39.8		
	L	20.6	23.6	28.5	28.5	33.3	33.3	38.1	38.1	44.5	44.5		
	L1	20.6	20.6	20.6	23.6	23.6	28.5	28.5	33.3	33.3	38.1		

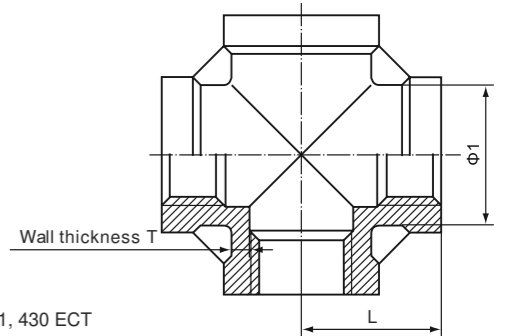
Standard	SIZE	1 1/2		2		2 1/2		3		4	
		1	1 1/4	1 1/4	1 1/2	1 1/2	2	2	2 1/2	2 1/2	3
EN-10241	Φ1	54	54	67	67	82.5	82.5	96.5	96.5	122	122
	Φ2	39.5	48.5	48.5	54	54	67	67	82.5	67	96.5
	L	44.3	49.4	52.4	56.4	60.5	67.5	73.5	79.5	83.5	95.5
	L1	52.4	52.4	64.4	64.4	76.5	76.5	89.5	89.5	115.5	115.5
	T	2.9	2.9	3.25	3.25	3.25	3.25	3.65	3.65	4.15	4.15
	T1	2.9	2.9	2.9	2.9	2.9	3.25	3.25	3.25	3.25	3.65

➔ Cross (+B)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT), DIN 2999 & BS21, ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114, EN-10241, ECO-TYPE
- Material conform to ASTM A351-CF8M/1.4408, ASTM A351-CF8/1.4401, ASTM A216-WCB, AISI 304, 304L, 316, 316L, 301, 430 ECT
- 150 LBS



Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	Φ1	12.6	16	19.5	23.4	29.1	36.4	45.3	51.5	64.1	80.7	93.7	120
	L	17	19	23	25	27.5	33	40	43	52	65	75	92
	T	2.3	2.5	2.55	1.1	1.2	1.35	1.5	1.6	2	2.4	2.6	3

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	Φ1	13	16.5	20	24.5	30	37.5	46.5	53	65.5	82	95.5	121.5
	L	17	19	23	27	32	38	45	48	57	69	78	96
	T	2.5	2.75	2.8	1.65	1.75	2	2.25	2.5	2.85	3.25	3.75	4.25

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	Φ1	15	17.5	21.5	26.5	33	41	50.5	58	71.5	82.5	99	125.5
	L	19.5	19.5	22.5	27.2	32	36.5	43	47.2	55.5	66	75.5	95
	T	2.29	2.29	2.54	2.54	3.05	3.3	3.56	3.81	4.32	5.33	5.84	6.6

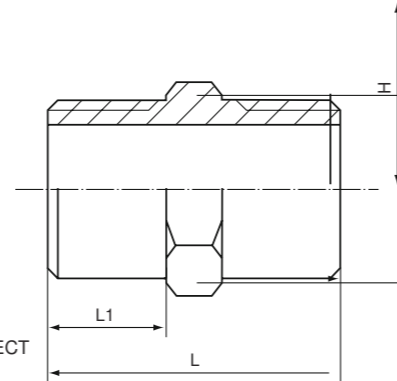
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN-10241	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	16	22	24	32	35	43	51	52	64	76	89	115
	T	1.85	2.2	2.25	2.35	2.35	2.9	2.9	2.9	3.25	3.25	3.65	4.15

➔ Hex. Nipple (HN)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	Φ1	7	9.5	13	16.5	21.5	27.5	36	41.5	52.5	67.5	80	104
	L	20	25	27	34	36.5	42	47.5	47.5	57	61	67.5	80
	L1	8	10.5	11	14.5	15.5	18	20.5	20.5	25	27	30	36
	H	11	15	18	22	28	35	43.5	49.5	62	77.5	90.5	117

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	Φ1	5.5	8	11.5	15	20.5	26	34.5	40	51	65.5	77.5	101.5
	L	20	25	27	34	36.5	42	47.5	47.5	57	61	67.5	80
	L1	8	10.5	11	14.5	15.5	18	20.5	20.5	25	27	30	36
	H	11	15	18	22	28	35	43.5	49.5	62	77.5	90.5	117

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	Φ1	6.86	9.14	12.45	15.75	20.83	26.67	35.05	40.89	52.32	62.74	77.72	102.11
	L	22.09	29.71	31.75	38.85	41.15	48.77	54.86	56.89	60.21	83.57	88.07	98.04
	L1	7.87	11.68	11.94	15.49	15.75	19.56	20.32	20.57	21.34	32.26	33.78	36.32
	H	12.7	16	18	22.5	28	35	44.5	51	64	77	91	118

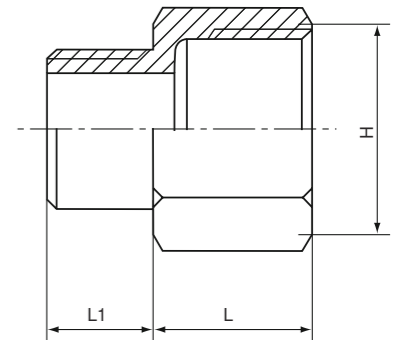
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN-10241	Φ1	5.5	7.5	10	12.5	20.5	25.5	31.5	38.5	50.5	65.5	77.5	101.5
	L	25	31	33	43	48	52	59	61	68	80	89	102
	L1	9.5	12.5	12.5	17.5	19	21	24	24	27	32	35	40
	H	12	14	17	22	27	36	46	50	65	78	90	115

➔ Red. Socket M/F (RS M/F)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Standard	SIZE	1/4	3/8	1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1
ISO4144	Φ1	5.5	8	8	11	11	15	15	20.5	20.5	26
	L	17	17.5	21	21	22.5	22.5	26	26	29	29
	L1	8	10.5	10.5	11	11	14.5	14.5	15.5	15.5	18
	H	17	20.5	25	25	31	31	38	38	47	47
Standard	SIZE	1 1/2		2		2 1/2		3		4	
		1	1 1/4	1 1/4	1 1/2	1 1/2	2	2	2 1/2	2 1/2	3
ISO4144	Φ1	26	34.5	34.5	40	40	51	51	65.5	65.5	77.5
	L	29	29	33.5	33.5	38.5	38.5	42	42	48.8	48.8
	L1	18	20.5	20.5	20.5	20.5	25	25	27	27	30
	H	53	53	66	66	82	82	95.5	95.5	121.5	121.5

Standard	SIZE	1/4	3/8	1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1
SP-114	L	15.5	18	23.5	23.5	24.6	24.6	29.9	29.9	30.6	30.6
	L1	12.9	12	12	12.8	12.8	15	15	17	17	19.6
	H	15.4	19.7	26.2	26.2	31.9	31.9	39.8	39.8	47.8	47.8
Standard	SIZE	1 1/2		2		2 1/2		3		4	
		1	1 1/4	1 1/4	1 1/2	1 1/2	2	2	2 1/2	2 1/2	3
SP-114	L	32.5	32.5	35.6	35.6	42.7	42.7	44.7	44.7	48	48
	L1	19.6	20.7	20.7	22.8	22.8	25.6	25.6	27.8	27.8	31
	H	55.9	55.9	66.5	66.5	83.3	83.3	98.2	98.2	123	123

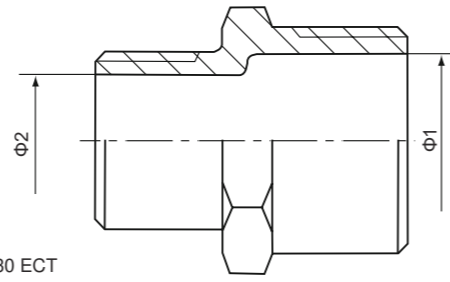
Standard	SIZE	1/4	3/8	1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1
EN-10241	L	17	19	20	20	24	24	25	25	28	28
	L1	8.9	11	11	12.2	12.2	14.9	14.9	16.5	16.5	19.5
	H	18	21	27	27	30	30	38	38	50	50
Standard	SIZE	1/4		1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1
EN-10241	L	28	28	34	34	40	40	45	45	50	50
	L1	19.5	21.5	21.5	22.2	22.2	24.4	24.4	28.5	28.5	31.7
	H	55	55	70	70	92	92	109	109	132	132

➔ Red. Hex. Nipple (RHN)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Diameter	SIZE	1/2*1/8	1/2*1/4	1/2*3/8	3/4*1/8	3/4*1/4	3/4*1/2	3/4*3/8	1*1/8	1*3/8	1*1/4	1*1/2	1*3/4
KH type	Φ1	16.5	16.5	16.5	21.5	21.5	21.5	21.5	27.5	27.5	27.5	27.5	27.5
	Φ2	7	9.5	13	7	9.5	16.5	13	7	13	9.5	16.5	21.5
	L	27	29.5	30.5	29	31.5	35.5	32	32	35	34.5	38.5	39.5
Diameter	SIZE	1 1/4*1/2	1 1/4*3/4	1 1/4*1	1 1/2*1/2	1 1/2*3/4	1 1/2*1	1 1/2*1 1/4	2*1/2	2*3/4	2*1	2*1 1/4	2*1 1/2
KH type	Φ1	36	36	36	41.5	41.5	41.5	41.5	52.5	52.5	52.5	52.5	52.5
	Φ2	16.5	21.5	27.5	16.5	21.5	27.5	36	16.5	21.5	27.5	41.5	41.5
	L	41.5	42.5	45	41.5	42.5	45	47.5	46.5	47.5	50	52.5	52.5
Diameter	SIZE	2 1/2*1 1/4	2 1/2*1 1/2	2 1/2*2	3*1	3*1 1/4	3*1 1/2	3*2	3*2 1/2	4*1 1/2	4*2	4*2 1/2	4*3
KH type	Φ1	67.5	67.5	67.5	80	80	80	80	104	104	104	104	104
	Φ2	36	41.5	52.5	27.5	36	41.5	52.5	67.5	41.5	52.5	67.5	80
	L	52	54.5	54.5	59	55.5	58	62.5	64.5	64.5	69	71	74

Standard	SIZE	1/4		3/8		1/2		3/4				1			
		1/8	1/8	1/4	1/8	1/4	3/8	1/8	1/4	3/8	1/2	1/4	3/8	1/2	3/4
ISO4144	Φ1	8	11.5	11.5	15	15	15	20.5	20.5	20.5	20.5	26	26	26	26
	Φ2	5.5	5.5	8	5.5	8	11.5	5.5	8	11.5	15	8	11.5	15	20.5
	L	22.5	24	26.5	27.5	30	30.5	29	31.5	32	35.5	34.5	35	38.5	39.5
Standard	SIZE	1 1/4			1 1/2			2							
		1/2	3/4	1	1/2	3/4	1	1 1/4	1/2	3/4	1	1 1/4	1 1/2		
ISO4144	Φ1	34.5	34.5	34.5	40	40	40	40	51	51	51	51	51		
	Φ2	15	20.5	26	15	20.5	26	34.5	15	20.5	26	34.5	40		
	L	41.5	42.5	45	41.5	42.5	45	47.5	46.5	47.5	50	52.5	52.5		
Standard	SIZE	2 1/2				3				4					
		1	1 1/4	1 1/2	2	1 1/4	1 1/2	2	2 1/2	1	1 1/4	1 1/2	2	2 1/2	3
ISO4144	Φ1	65.5	65.5	65.5	65.5	77.5	77.5	77.5	77.5	101.5	101.5	101.5	101.5	101.5	
	Φ2	26	34.5	40	51	34.5	40	51	65.5	26	34.5	40	51	65.5	
	L	52	54.5	54.5	59	58	58	62.5	64.5	62	64.5	64.5	69	71	

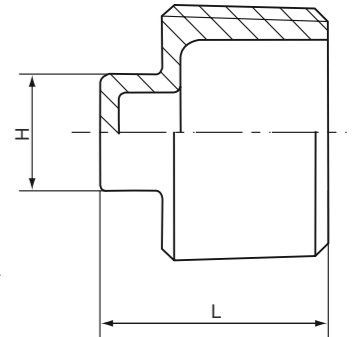
Standard	SIZE	1/4		3/8		1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1		
EN-10241	Φ1	7.5	10	12.5	12.5	20.5	20.5	25.5	25.5	31.5	31.5		
	Φ2	5.5	7.5	7.5	10	10	12.5	12.5	20.5	20.5	25.5		
	L	28	33	38.5	38.5	41.5	46.5	48.5	50	54	56		
Standard	SIZE	1 1/2			2			2 1/2			3		
		1	1 1/4	1 1/4	1 1/2	1 1/2	2	2	2 1/2	2 1/2	3		
EN-10241	Φ1	38.5	38.5	50.5	50.5	65.5	65.5	77.5	77.5	101.5	101.5		
	Φ2	25.5	31.5	31.5	38.5	38.5	50.5	50.5	65.5	65.5	77.5		
	L	58	61	65	65	72	75	81	86	94	97		

➔ Square Plug (SQ)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



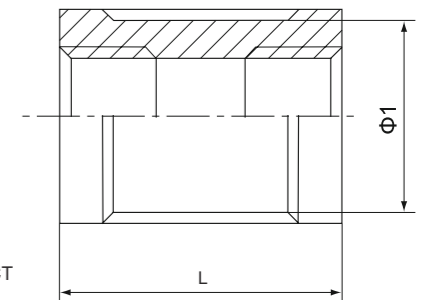
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	L	11	13.5	15	18.5	21	25.5	28	29	34.5	38.5	41.5	51.5
	H	6	7	8	10	12	14	16	20	22	28	32	40
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	L	15.9	18.6	20.37	24.25	27.6	32.15	34.92	37	39.95	47.3	50.3	57.7
	H	7	9.5	10.8	14	15.5	20.5	23.5	28	32.5	38	42	63.5
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN-10241	L	12.5	15.7	20.1	23.2	26.5	28.8	35.1	35.1	42.4	45.7	51.8	60.8
	H	6	9	11	13	14	17	22	27	32	37	37	46

➔ Socket Banded (SB)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



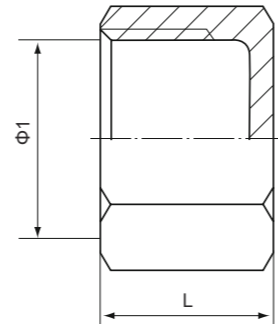
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	Φ1	13	16.5	20	24.5	30	37.5	46.5	53	65.5	82	95.5	121.5
	L	17	24	25	32	35	41	45	45	54	63	69	81
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	Φ1	15	17.5	21.5	26.5	33	41	50.5	58	71.5	82.5	99	125.5
	L	25.4	25.4	28.4	35	38	41	50.8	53.8	63.5	73	80.7	93.5
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN 10241	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	17	25	26	34	36	43	48	48	56	65	71	83

➔ Hex. Cap (HCB)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	H	13	17	20.5	25	30.5	37.5	46	52.5	64.5	80.5	93.5	119
	L	13	14	14.5	18.5	19	22	25	25	30	34.5	37.5	44

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	H	13.5	17	20.5	25	31	38	47	53	66	82	95.5	121.5
	L	13.5	17	17.5	21	22.5	26	29	29	33.5	38.5	42	48.5

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	H	13.5	15.4	19.7	26.2	31.9	39.8	47.8	55.9	66.5	83.3	98.2	123
	L	15.4	15.5	18	23.5	24.6	29.9	30.6	32.5	35.6	42.7	44.7	48

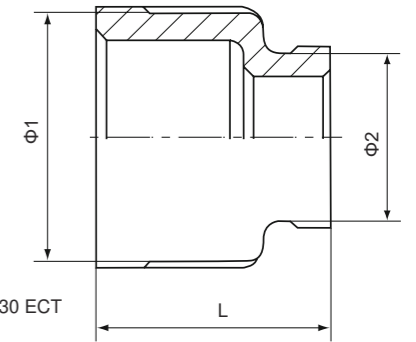
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN-10241	H	15	18.5	22	27	32.5	39.5	49	56	68	84	98	124
	L	19	24	27	37	38	44	51	54	60	67	73	86

➔ Red. Socket Banded (RSB)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Diameter	SIZE	3/8			1/2			3/4			
KH type	Φ1	16.0	19.5	19.5	23.4	23.4	23.4	29.1	29.1	29.1	29.1
	Φ2	12.6	12.6	16.0	12.6	16.0	19.5	12.6	16.0	19.5	23.4

Standard	SIZE	1 1/4"				1 1/2"				2"				
ISO4144	Φ1	16.5	20	20	25.7	25.7	25.7	31	31	31	31	38	38	38
	Φ2	13	13	16.5	13.2	16.5	20.2	13	16.5	20	24.5	16.5	20	24.7
	L	25	23	26	34	34	34	36	36	36	36	42	42	42

Standard	SIZE	1 1/4"				1 1/2"				2"			
ISO4144	Φ1	47	47	47	47	53	53	53	53	66	66	66	66
	Φ2	20	24.7	30	38	24.7	30	38	47	24.7	30	38	47
	L	48	48	48	48	52	52	52	52	58	58	58	58

Standard	SIZE	2 1/2"				3"				4"				
ISO4144	Φ1	82	82	82	82	82	96.5	96.5	96.5	96.5	96.5	123.5	123.5	123.5
	Φ2	30	38	47	53	66	38	47	53	66	82	38	47	53
	L	65	65	65	65	65	72	72	72	72	72	94	94	94

Standard	SIZE	1/4	3/8	1/2		3/4		1		1 1/4	
SP-114	Φ1	17.5	21.5	26.5	26.5	33	33	41	41	50.5	50.5
	Φ2	15	17.5	17.5	21.5	21.5	26.5	26.5	33	33	41
	L	25.4	28.4	35	35	38.1	38.1	41.1	41.1	50.8	50.8

Standard	SIZE	1 1/2"		2"		2 1/2"		3"		4"	
SP-114	Φ1	58	58	71.5	71.5	82.5	82.5	99	99	125.5	125.5
	Φ2	41	50.3	50.3	57.8	57.8	71	71	82.5	82.5	99
	L	53.8	53.8	63.5	63.5	82.5	82.5	93.5	93.5	111.2	111.2

Standard	SIZE	1/4	3/8	1/2		3/4		1		1 1/4	
EN-10241	Φ1	18.8	22.3	27.3	27.3	32.8	32.8	39.9	39.9	49.4	49.4
	Φ2	15.3	18.8	18.8	22.3	22.3	27.3	27.3	32.8	32.8	39.9
	L	25	29	40	38	43	41	51	49	57	56

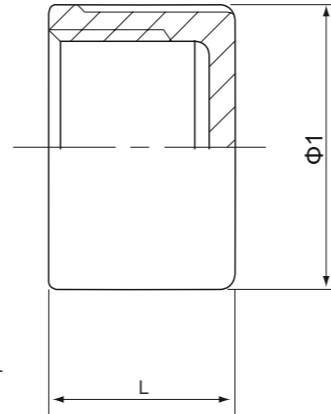
Standard	SIZE	1 1/2"		2"		2 1/2"		3"		4"	
EN-10241	Φ1	56.4	56.4	68.4	68.4	84.5	84.5	98.5	98.5	124.5	124.5
	Φ2	39.9	49.4	49.4	56.4	56.4	68.4	68.4	84.5	84.5	98.5
	L	62	60	65	64	73	71	81	79	100	98

➔ Round Cap (CB)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	Φ1	12.6	16	19.5	23.8	29.5	36.8	45.8	52.2	64.5	81.1	94.3	120.6
	L	12.5	16	16.5	19.5	19.5	22.5	25.5	26.5	32.5	38	41	48.5

Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
ISO4144	Φ1	13.7	17.2	20.7	25.2	30.7	38.2	47.5	54	66.5	83.5	97	123
	L	13.5	17	17.5	21	22.5	26	29	29	33.5	38.5	42	48.5

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	Φ1	15	17.5	21.5	26.5	33	41	50.5	58	71.5	82.5	99	125.5
	L	17.27	17.27	20.57	23.62	26.92	33.27	41.15	41.15	44.45	50.8	57.15	63.5

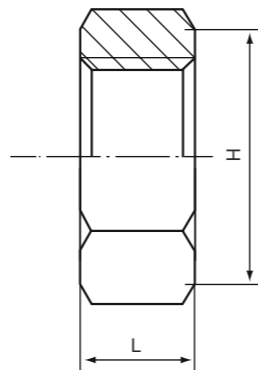
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN-10241	Φ1	12	15.5	19	26	31.5	39.5	48.5	54	67	82.5	96.5	122
	L	19	24	27	37	38	44	51	54	60	67	73	86

➔ Hex. Back Nut (LN)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	L	5	6	6	7	7	9	11	11	13	15	17	20
	H	15	18	22	27	32	40	48	55	68	85	100	125

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	L	5.2	6.55	7.35	8.2	9	9.7	11.4	12.2	14	15.4	17.8	21
	H	17.8	22	26	30.5	37	45	53.5	60	73.5	89.5	109.5	137

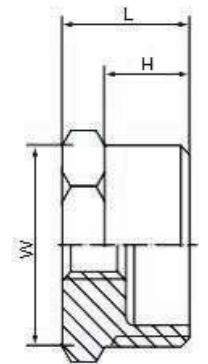
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN-10241	L	7	7	7.5	8.5	9.5	10	11.5	12.5	13.5	17.5	21.5	22.5
	H	17	19	24	30	36	41	50	60	70	90	100	130

➔ Hex. Bushing (HB)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Standard	SIZE	1/4	3/8	1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1
KH type	Φ1			16.5	16.5	21.5	21.5	27.5	27.5	36	36
	H			14.5	14.5	15.5	15.5	18	18	21	21
	L			19.5	19.5	21	21	24	24	27.5	27.5
	W			22	22	28	28	35	35	43.5	43.5

Standard	SIZE	1/4	3/8	1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1
ISO4144	Φ1	8.4	11.5	15	15	20.5	20.5	26	26	34.5	34.5
	H	11.5	11.5	14.5	14.5	15.5	15.5	18	18	20.5	20.5
	L	16	16.5	20	20	21	21	24.5	24.5	27.5	27.5
	W	14	18	22	22	27.5	27.5	34.5	34.5	43	43

Standard	SIZE	1/4	3/8	1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1
SP-114	Φ1	8.5	11.2	14	14.5	19	19	25	25	33.5	33.5
	H	11.18	12.7	14.22	14.22	15.75	15.75	19.05	19.05	20.57	20.57
	L	17	18	21	21	24	24	27	27	30	30
	W	16	20	24	24	30	30	36	36	45	45

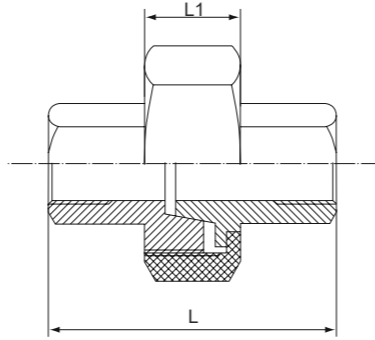
Standard	SIZE	1/4	3/8	1/2		3/4		1		1 1/4	
		1/8	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1
EN-10241	Φ1	7.5	10	12.5	12.5	20.5	20.5	25.5	25.5	31.5	31.5
	H	12.5	12.5	17.5	17.5	19	19	21	21	24	24
	L	18.5	20.5	25.5	25.5	29	29	31	31	35	35
	W	14	17	22	22	27	27	36	36	46	46

➔ Union Conical F/F (CU-Z-F/F)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



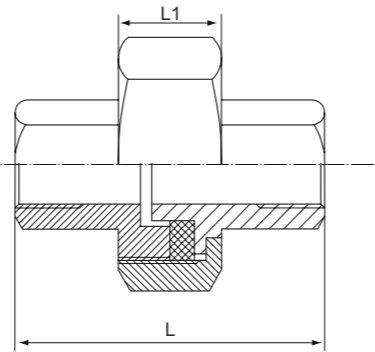
Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	L1	11.5	11.5	12.5	15	15	16.5	19.5	21.5	23.5	26.5	28	31
	L	30	30	32.5	39.5	40	46.5	50	56	60	68	77	83
	H	22	27	30	36	42	51	61	69	82	100	114	143
Standard ISO4144	L1	13	13.5	15.5	16.5	18	19	22	24	26	30	31	34
	L	26	31.5	36.5	39.5	42.5	49	54	57	65	75	80.5	96
	H	25	30.5	34	37	46	52	65	70	86	105	118	144
Standard SP-114	L1	13	13.5	15	16	17	20	22	24	27	29.5	31	34
	L	30	33.5	36.5	39.5	42.5	50	54	58	65	75	83	110
	H	22	27	30	36	43	51	61	69	83	104	120.5	147
Standard EN-10241	L1	14.5	14.5	15.5	17.5	19.5	21.5	23.5	24.5	26.5	29	30	33.5
	L	37	40	46	51	57	64	70	79	89	101.5	106.5	118
	H	29	34	39	44.5	49	59	72	79	94	109	124	160

➔ Union Teflon Flat F/F (CU-T-F/F)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



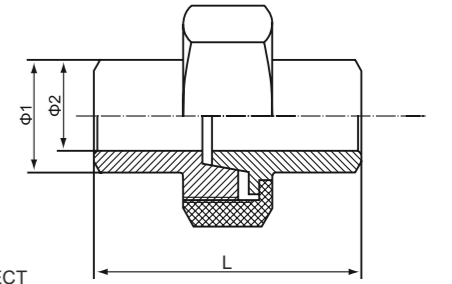
Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	L1	11.5	11.5	12.5	15	15	16.5	19.5	21.5	23.5	26.5	28	31
	L	30	30	32.5	39.5	40	46.5	50	56	60	68	77	83
	H	22	27	30	36	42	51	61	69	82	100	114	143
Standard ISO4144	L1	13	13.5	15.5	16.5	18	19	22	24	26	30	31	34
	L	24	31	33.5	38.5	43.5	48	52.5	55	65	75	80	94.5
	H	25	30.5	34	37	46	52	65	70	86	105	118	144
Standard SP-114	L1	13	13.5	15	16	17	20	22	24	27	29.5	31	34
	L	30	33.5	36.5	39.5	42.5	50	54	58	65	75	83	110
	H	22	27	30	36	43	51	61	69	83	104	120.5	147
Standard EN-10241	L1	14.5	14.5	15.5	17.5	19.5	21.5	23.5	24.5	26.5	29	30	33.5
	L	37	40	46	51	57	64	70	79	89	101.5	106.5	115
	H	29	34	39	44.5	49	59	72	79	94	109	124	160

➔ Union Conical BW/BW (CU-BW-Z)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



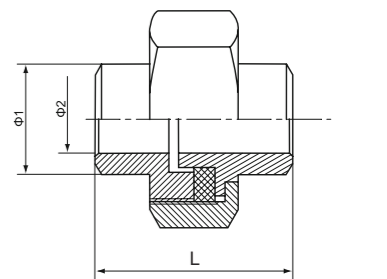
Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	L	24	27	28.5	35	35	42.5	45.5	51.5	53	62.5	65.5	67
	Phi1	10.4	13.7	17.4	21.5	27.1	34	42.7	48.6	60.6	76.1	88.9	114.3
	Phi2	6.2	8.8	12.5	16	21.6	27.2	35.9	41.8	53	68.8	80.8	105.3
	H	22	27	30	36	42	51	61	69	82	93	104	133.5
Standard ISO4144	L	26	35.5	39.5	44.5	46	51	54	57	76	65	79	93.5
	Phi1	10.2	13.5	17.2	21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3
	Phi2	6.2	8.8	12.5	16	21.6	27.2	35.9	41.8	53	68.8	80.8	105.3
	H	25	30.5	34	37	46	52	65	70	86	92	104	148.5
Standard SP-114	L	30	33.5	36.5	39.5	42.5	50	54	58	65	75	83	110
	Phi1	10.2	13.5	17.2	21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3
	Phi2	6.2	8.8	12.5	16	21.6	27.2	35.9	41.8	53	68.8	80.8	105.3
	H	22	27	30	36	43	51	61	69	83	104	105	

➔ Union Teflon Flat BW/BW (CU-BW-T)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



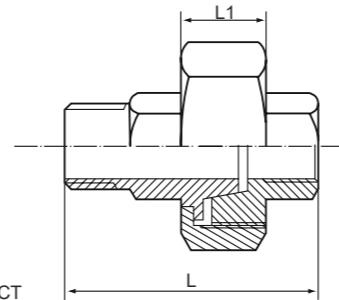
Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	L	24	25	28.5	35	35	42.5	45.5	51.5	53	62.5	65.5	67
	Phi1	10.4	13.7	17.4	21.5	27.1	34	42.7	48.6	60.6	76.1	88.9	114.5
	Phi2	6.2	8.8	12.5	16	21.6	27.2	35.9	41.8	53	68.8	80.8	105.3
	H	22	27	30	36	42	51	61	69	82	93	104	133.5
Standard ISO4144	L	26	35.5	39.5	44.5	46	51	54	57	76	65	79	93.5
	Phi1	10.2	13.5	17.2	21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3
	Phi2	6.2	8.8	12.5	16	21.6	27.2	35.9	41.8	53	68.8	80.8	105.3
	H	25	30.5	34	37	46	52	65	70	86	92	104	148.5
Standard SP-114	L	30	33.5	36.5	39.5	42.5	50	54	58	65	75	83	110
	Phi1	10.2	13.5	17.2	21.3	26.9	33.7	42.4	48.3	60.3	76.1	88.9	114.3
	Phi2	6.2	8.8	12.5	16	21.6	27.2	35.9	41.8	53	68.8	80.8	105.3
	H	22	27	30	36	43	51	61	69	83	104	105	

➔ Union Conical M/F (CU-Z-MF)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	L1	11.5	11.5	12.5	15	15	16.5	19.5	21.5	23.5	26.5	28	31
	L	34	36	40	48.5	49.5	57.5	64.5	68.5	79.5	94.95	100.5	110
	H	22	27	30	36	42	51	61	69	82	100	114	143

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	L1	13	13.5	15.5	16.5	18	19	22	24	26	30	31	34
	L	33.5	42	47.5	53.5	57.5	66.5	73.5	79.3	91	98.5	109	120
	H	25	30.5	34	37	46	52	65	70	86	105	118	144

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	L1	13	13.5	15	16	17	20	22	24	27	29.5	31	34
	L	38	44	47.5	54	58	68	74.5	78.5	90	102	113	146
	H	22	27	30	36	43	51	61	69	83	104	120.5	147

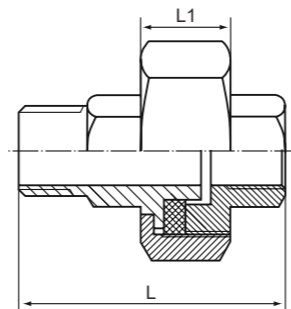
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN-10241	L1	14.5	14.5	15.5	17.5	19.5	21.5	23.5	24.5	26.5	29	30	33.5
	L	48	52	59	67	75	85	92	101	116	130.5	138.5	154
	H	29	34	39	44.5	49	59	72	79	94	109	124	160

➔ Union Teflon Flat M/F (CU-T-M/F)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	L1	11.5	11.5	12.5	15	15	16.5	19.5	21.5	23.5	26.5	28	31
	L	34	36	40	48.5	49.5	57.5	64.5	68.5	79.5	94.95	100.5	110
	H	22	27	30	36	42	51	61	69	82	100	114	143

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	L1	13	13.5	15.5	16.5	18	19	22	24	26	30	31	34
	L	33.2	42.6	46	53	58.5	66.5	72	79	91.5	99	109.5	120
	H	25	30.5	34	37	46	52	65	70	86	105	118	144

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	L1	13	13.5	15	16	17	20	22	24	27	29.5	31	34
	L	38	44	47.5	54	58	68	74	78	90	102	113	146
	H	22	27	30	36	43	51	61	69	83	104	120.5	147

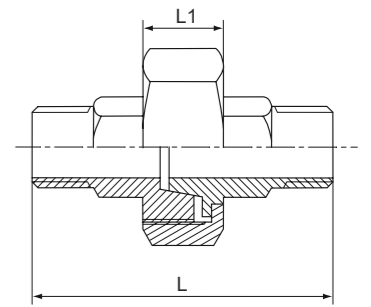
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN-10241	L1	14.5	14.5	15.5	17.5	19.5	21.5	23.5	24.5	26.5	29	30	33.5
	L	48	52	59	67	75	85	92	101	116	130.5	138.5	154
	H	29	34	39	44.5	49	59	72	79	94	109	124	160

➔ Union Conical M/M (CU-Z-MM)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	L1	11.5	11.5	12.5	15	15	16.5	19.5	21.5	23.5	26.5	28	31
	L	37.5	42.5	46.5	58	59	68.5	79.5	81.5	99.5	121.9	124	137
	H	22	27	30	36	42	51	61	69	82	100	114	143

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	L1	13	13.5	15.5	16.5	18	19	22	24	26	30	31	34
	L	41	51	56	65.5	72	82	92	101	117	117	131	141
	H	25	30.5	34	37	46	52	65	70	86	105	118	144

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	L1	13	13.5	15	16	17	20	22	24	27	29.5	31	34
	L	46	54.5	58.5	68.5	73.5	86	95	99	115	129	143	182
	H	22	27	30	36	43	51	61	69	83	104	120.5	147

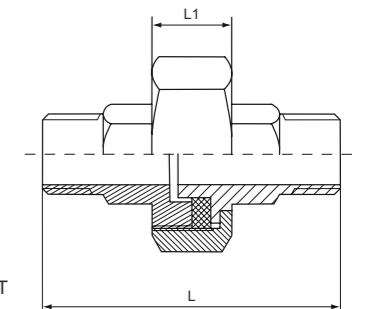
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN-10241	L1	14.5	14.5	15.5	17.5	19.5	21.5	23.5	24.5	26.5	29	30	33.5
	L	59	64	72	83	93	106	114	123	143	159.5	170.5	190
	H	29	34	39	44.5	49	59	72	79	94	109	124	160

➔ Union Teflon Flat M/M (CU-T-MM)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KH type	L1	11.5	11.5	12.5	15	15	16.5	19.5	21.5	23.5	26.5	28	31
	L	37.5	42.5	46.5	58	59	68.5	79.5	81.5	99.5	121.9	124	137

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	L1	13	13.5	15.5	16.5	18	19	22	24	26	30	31	34
	L	41	51	56	65.5	72	82	92	101	117	117	131	141

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	L1	13.5	13.5	14.5	15.5	16.5	18.5	21	23	25	27	29	32
	L	52	52	57	67	71	84	93	98	103	113	125	136

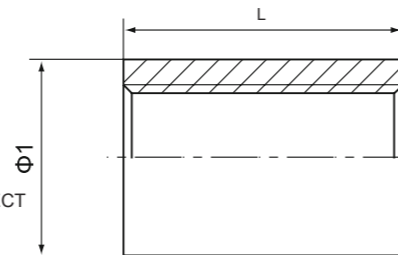
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN-10241	L1	14.5	14.5	15.5	17.5	19.5	21.5	23.5	24.5	26.5	29	30	33.5
	L	59	64	72	83	93	106	114	123	143	159.5	170.5	190

➔ Couplings (SPE & SPU) FOR NPT THREAD



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



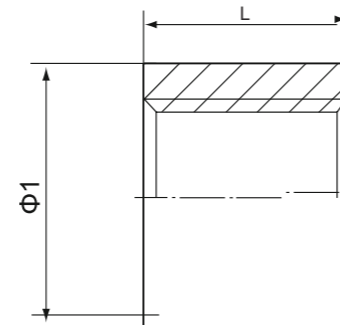
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	Φ1	13.8	17.8	21.1	25.8	31.3	38.8	47.8	53.8	65	80.6	93.3	119.3
	L	17	25	26	34	36	43	48	48	56	65	71	83
SP-114	Φ1	19.05	21.34	25.64	30.48	37.08	44.96	54.61	61.72	75.18	84.07	101.6	128.52
	L	25.4	25.4	28.45	35.05	38.1	41.15	50.8	53.85	63.5	72.9	80.77	93.47
EN-10241	Φ1	14	18.5	21.3	26.4	31.8	39.5	48.3	54.5	66.3	82	95	122
	L	17	25	26	34	36	43	48	48	56	65	71	83

➔ Half Couplings (1/2 SPE)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



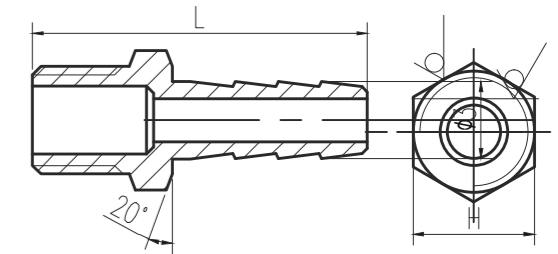
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Customization	Φ1	15	18.5	22	26.5	32	39	49	55	68	86	100	126
	L	8	11	12	15	17	20	22	22	26	31	33	40
ISO4144	Φ1	13.8	17.8	21.1	25.8	31.3	38.8	47.8	53.8	65	80.6	93.3	119.3
	L	8	11	12	15	17	20	22	22	26	31	33	40
SP-114	Φ1	19.05	21.34	25.64	30.48	37.08	44.96	54.61	61.72	75.18	84.07	101.6	128.52
	L	12.7	12.7	14.3	17.6	19.1	20.6	25.4	27	31.8	36.5	40.4	46.8
EN-10241	Φ1	15	18.5	21.3	26.4	31.8	39.5	49.3	55.5	69	87	103	126
	L	6.5	15	16.5	18	20.5	23.5	26.5	26.5	29.5	31	34.5	38

➔ Hex. Hose Nipple (HON)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING OR BAR



Diameter	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
KHtype	L	30	34.5	41	48.5	58	67	70	74	83	85	92.5	99
	L1	18	20	25	29	37	43	43	47	51	51	55	55
	Φ1	5	6	8.5	11	15	22	27.5	34	45	59	71	95
	Φ2	8	9	11.5	15	20	27	33	39.5	52	67	80	105
	H	11	15	18	22	28	35	43.5	49.5	62	77.5	90.5	117

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
ISO4144	L	38	42.5	49	57.5	66	76	79	83	92	99	107.5	117
	L1	26	28	33	38	45	52	52	56	60	65	70	73
	Φ1	4	5	7	10.5	15	22	27.5	34	45	59	71	95
	Φ2	8	9	11.5	15	20	27	33	39.5	52	67	80	105
	H	11	15	18	22	28	35	43.5	49.5	62	77.5	90.5	117

Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
SP-114	L	33	45.5	50.5	63.5	69.5	75	80	86	94	100	110	120
	L1	19	28	33	42	45	48	50	56	60	62.5	70	73
	Φ1	3.2	5.5	6.6	8	16	20	28	33	44	51.5	67	94
	Φ2	6	9	11	13	20	25	33	40	51.5	67	77	103
	H	11	17	19	22	29	36	44	50	62	77.5	90.5	117

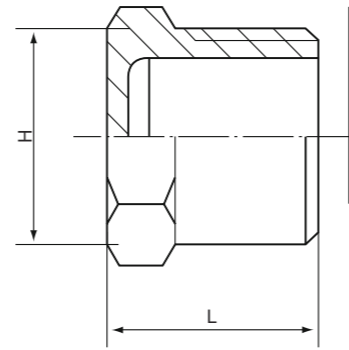
Standard	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
EN-10241	L	33	43.5	51.5	59.5	69.5	75	80	86	94	100	110	120
	L1	19	26	33	38	45	48	50	56	60	62.5	70	73
	Φ1	3.2	3.2	5	8	16	20	28	33	44	56	67	94
	Φ2	5.5	6.4	9.5	12.7	19.1	25.4	31.8	38.1	50.8	63.5	76.2	101.6
	H	11	17	19	22	29	36	44	50	62	77.5	90.5	117

➔ Hex. Plug (HP)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
ISO4144	H	11	15	18	22	28	35	43.5	49.5	62	77.5	90.5	117
	L	12	14.5	16.5	19.5	21	24	27	27	32	34	37.5	44
	L1	8	10.5	11	14.5	15.5	18	20.5	20.5	25	27	30	36
	Φ1		8	11.5	15	20.5	26	34.5	40	51	65.5	77.5	101.5

Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
SP-114	H	12.7	16	18	22.5	28	35	44.5	51	64	77	91	118
	L	12.96	15.36	16.25	19.05	21.59	25.4	27.43	28.95	30.99	36.58	38.86	43.69
	L1	9.4	11.18	12.19	14.22	16	19.05	20.32	21.08	22.35	27.18	28.7	30.99
	Φ1				11.2	15.5	20.9	28.7	34	45.1	54.6	69.7	91.7

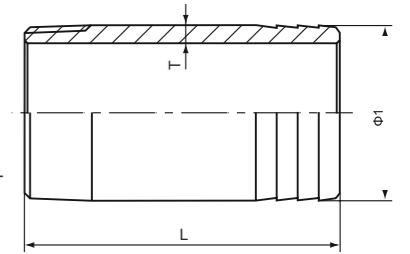
Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
EN-10241	H	12	14	17	22	27	36	46	50	65	78	90	115
	L	15.5	17.5	18.5	25.5	29	31	35	37	41	48	54	62
	L1	9.5	12.5	12.5	17.5	19	21	24	24	27	32	35	40
	Φ1		7.5	10	12.5	20.5	25.5	31.5	38.5	50.5	65.5	77.5	101.5

➔ Male Hose Nipple (MHON)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



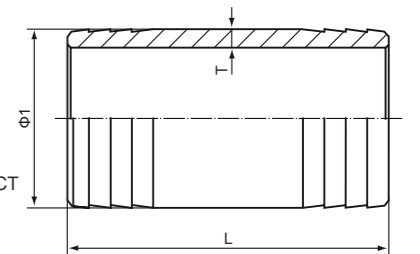
Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	
SCH20	T				2.5	2.5	3	3	3	3.5	4	4	4	
SCH40	T	1.73	2.24	2.31	2.77	2.87	3.38	3.56	3.68	3.91	5.16	5.49	6.02	
SCH80	T	2.41	3.02	3.2	3.73	3.91	4.55	4.85	5.08	5.54	7.01	7.62	8.56	
	Φ1	9.5	13	16.4	20.5	25.8	32.5	41.2	47.3	59	75	87.5	113	
	L	47	49	55	63	72	82	83	87	96	103	111	123	
	L(in)	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
		1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
		2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
		2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
		3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
		4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
		5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	
	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	

➔ Double Hose Nipple (DHON)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



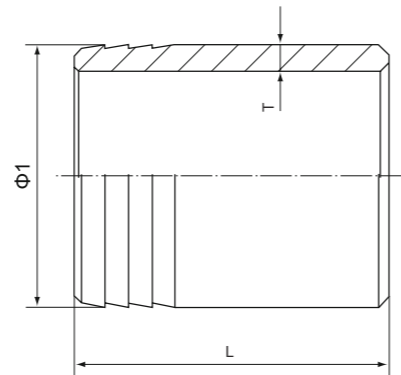
Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	
SCH20	T				2.5	2.5	3	3	3	3.5	4	4	4	
SCH40	T	1.73	2.24	2.31	2.77	2.87	3.38	3.56	3.68	3.91	5.16	5.49	6.02	
SCH80	T	2.41	3.02	3.2	3.73	3.91	4.55	4.85	5.08	5.54	7.01	7.62	8.56	
	Φ1	10.29	13.72	17.15	21.34	26.67	33.4	42.16	48.26	60.33	76.3	88.9	114.3	
	L	62	66	76	86	100	114	114	122	130	140	150	156	
	L(in)	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
		1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
		2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
		2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
		3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
		4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
		5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	
	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	

➔ Bw Hose Nipple (BWHON)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



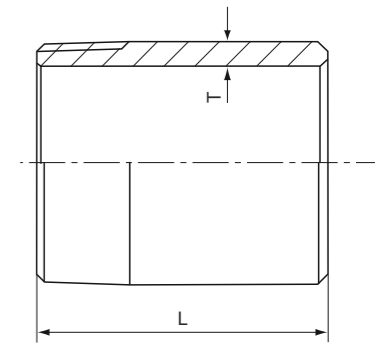
Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	
SCH20	T				2.5	2.5	3	3	3	3.5	4	4	4	
SCH40	T	1.73	2.24	2.31	2.77	2.87	3.38	3.56	3.68	3.91	5.16	5.49	6.02	
SCH80	T	2.41	3.02	3.2	3.73	3.91	4.55	4.85	5.08	5.54	7.01	7.62	8.56	
	Φ1	9.5	13	16.4	20.5	25.8	32.5	41.2	47.3	59	75	87.5	113	
	L	36	38	43	48	55	62	62	66	70	75	80	83	
	L(in)	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
		1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
		2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
		2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
		3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
		4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
		5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
		6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"
8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"		

➔ Welding Nipple (WN)



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	
SCH20	T				2.5	2.5	3	3	3	3.5	4	4	4	
SCH40	T	1.73	2.24	2.31	2.77	2.87	3.38	3.56	3.68	3.91	5.16	5.49	6.02	
SCH80	T	2.41	3.02	3.2	3.73	3.91	4.55	4.85	5.08	5.54	7.01	7.62	8.56	
	L	30	30	30	35	40	40	50	50	50	60	70	80	
		1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	
	L(in)	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
		2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
		2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
		3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
		4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
		5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
		6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"
		8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"

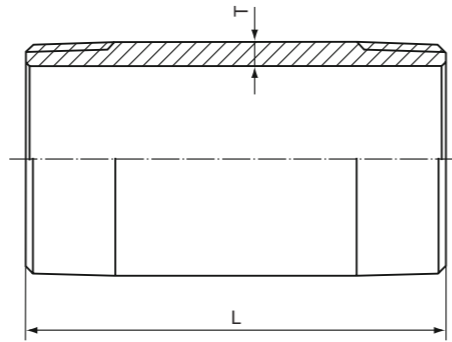
➔ Barrel Nipple (BN)



KH-1037

FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
SCH20	T				2.5	2.5	3	3	3	3.5	4	4	4
SCH40	T	1.73	2.24	2.31	2.77	2.87	3.38	3.56	3.68	3.91	5.16	5.49	6.02
SCH80	T	2.41	3.02	3.2	3.73	3.91	4.55	4.85	5.08	5.54	7.01	7.62	8.56
	L	40	40	40	60	60	60	80	80	100	100	120	150
		1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
	L(in)	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
		2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
		2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
		3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
		4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
		5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
		6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"
	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"

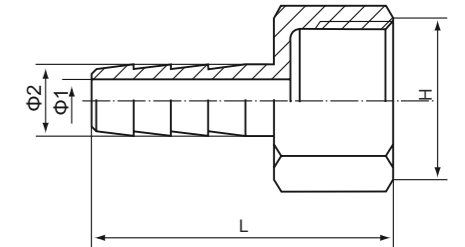
➔ Female Hex. Hose Nipple (FHON)



KH-1039

FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT



Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
ISO4144	Φ1	4	5	7	10.5	15	22	27.5	34	45	59	71	95
	Φ2	6	9	11.5	15	20	26.5	33	39.5	52	67	80	105
	L	39.5	45	50.5	59	67.5	78	81	85	93.5	103.5	112	121.5
	H	13.5	17	20.5	25	31	38	47	53	66	82	95.5	121.5
EN-10241	Φ1		3.5	6.5	9.5	17.1	22	27.8	33.9	46.5	58.5	68.2	87.6
	Φ2		6.4	9.5	12.7	19.1	25.4	31.8	38.1	51	63.5	76.2	101.6
	L		36	43	48.6	50.6	53	58.1	69.2	80.2	94.1	117	128
	H		16	18	26	30	35	45	52	65	81	95	118

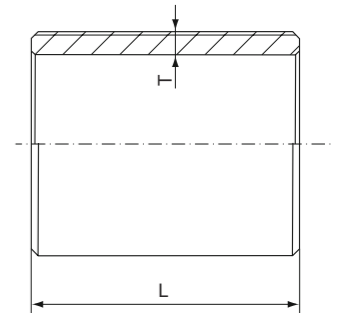
➔ Parrel Nipple (PN)



KH-1041

FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



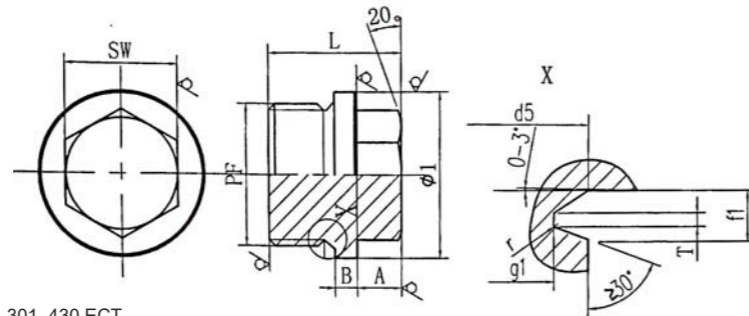
Standard	SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
SCH40	T	1.73	2.24	2.31	2.77	2.87	3.38	3.56	3.68	3.91	5.16	5.49	6.02
SCH80	T	2.41	3.02	3.2	3.73	3.91	4.55	4.85	5.08	5.54	7.01	7.62	8.56
	L	22	22	24	30	34	40	42	42	52	56	62	80
	L(in)	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
		1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
		2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
		2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
		3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
		4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
		5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"
	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	
	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"	8"

➔ HP DIN910



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



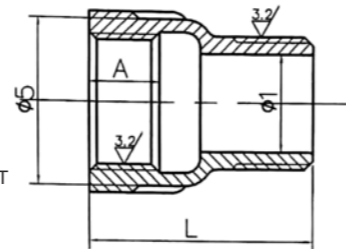
SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
PF	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
SW	10	13	17	19	24	27	30	30	36
φ1	14	18	22	26	32	39	48	50	65
φ2-0.2	8.5	11.4	14.9	18.5	24.0	30.2	38.8	44.8	56.5
A	6	6	6	8	10	11	12	12	15
B+0.5	3	3	3	4	4	5	5	5	5
f1+0.3	2	2	3	3	3	4	4	3	3
L	17	17	21	26	30	32	33	33	40
r±0.2	0.4	0.4	0.4	0.6	0.6	0.8	0.8	0.8	1.0
g1-0.2	8.1	11	14.5	18.3	23.8	29.8	38.2	44.0	55.8
d5-0.3	10.0	13.4	16.9	21.2	26.7	33.5	42.1	48.1	59.9
T	1.02	1.65	1.61	1.38	1.41	1.96	1.81	1.72	1.69

➔ SOCKET BANDED MF



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



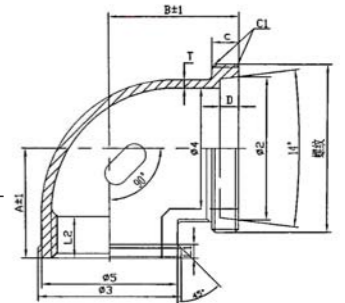
SIZE	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
φ1	8.0	11.5	15.0	20.5	26.0	34.5	40.0	51.0
φ5	16.5	20.0	26.5	32.0	39.5	46.5	53.0	65.5
A	11.0	12.0	11.0	12.0	14.0	15.0	15.0	18.0
L	35.0	38.0	40.0	45.0	48.0	50.0	50.0	54.0

➔ ELBOW UNION F/F



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



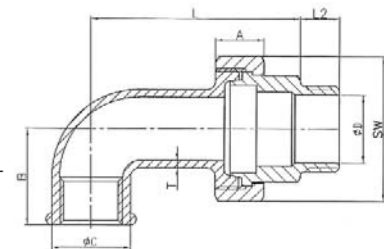
SIZE	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Thread	26-16	30-16	33-16	41.5-14	47-14	59-11	65-11	81-11
φ2-0.1	17.4	20.8	25.2	32.8	39.0	49.4	56.4	66.9
φ3	20.6	24.3	29.5	34.7	42.5	51.5	58.0	70.5
φ4	11.0	14.5	20.4	25.9	33.5	42.5	47.5	59.0
φ5	16.5	20.0	25.0	31.0	38.5	48.0	54.0	66.5
A	23.0	26.0	29.5	32.5	41.5	43.5	45.5	55.0
B	28.0	31.5	36.0	40.0	44.0	51.0	55.0	64.0
C	7.0	8.0	8.5	9.0	9.0	9.9	11.3	12.3
D	5.5	6.3	6.3	6.5	6.5	8.0	8.0	9.0
L1	5.4	5.4	5.0	5.0	6.4	6.4	6.4	6.6
L2	0	0	11.0	11.3	13.0	14.1	14.1	17.0
T	2.5	2.25	2.25	2.25	2.5	2.5	2.5	2.75
C1	1	1	1	2	2	2	2	2

➔ ELBOW UNION F/M



FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS21 ISO 228/1 & ISO 7/1
- Dimension conform to ISO 4144, SP114 EN-10241, ECO-TYPE
- 150 LBS
- Material conform to 1.4571 1.4541 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB AISI 304, 304L, 316, 316L, 301, 430 ECT
- MADE FROM CASTING, WELD PIPE OR SEAMLESS PIPE



SIZE	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
φ1	8.0	11.5	15.0	20.5	26.0	34.5	40.0	51.0
φ5	16.5	20.0	26.5	32.0	39.5	46.5	53.0	65.5
A	11.0	12.0	11.0	12.0	14.0	15.0	15.0	18.0
L	35.0	38.0	40.0	45.0	48.0	50.0	50.0	54.0

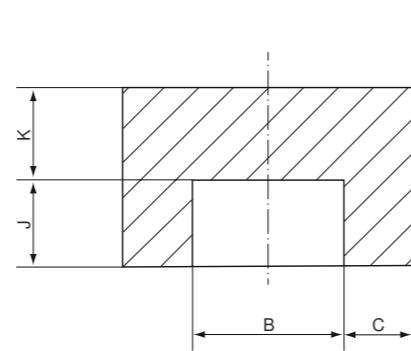
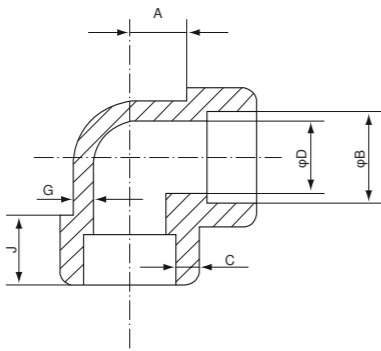
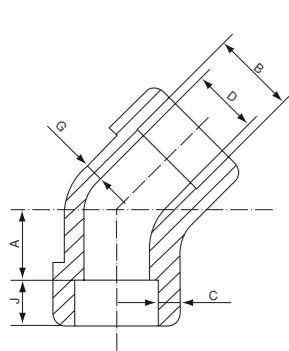
ELBOW 45°



ELBOW 90°



CAP



DN	Nom. Pipe Size	Socket bore Dia. (2)B	Bore Diameter of Fittings (2)D			Socket Wall Thickness (1) C						Body Wall G		
						Class Designation						Class Designation		
			Class Designation			3000		6000		9000		3000	6000	9000
			3000	6000	9000	Ave.	Min.	Ave.	Min.	Ave.	Min.	Ave.	Min.	Min.
6	1/8	11.2	7.6	4.8	3.18	3.18	3.96	3.43			2.41	3.15		
		10.8	6.1	3.2										
8	1/4	14.6	10.0	7.1	3.78	3.30	4.60	4.01			3.02	3.68		
		14.2	8.5	5.6										
10	3/8	18.0	13.3	9.9	4.01	3.50	5.03	4.37			3.20	4.01		
		17.6	11.8	8.4										
15	1/2	22.2	16.6	12.5	4.67	4.09	5.97	5.18	9.35	8.18	3.73	4.78	7.47	
		21.8	15.0	11.0										
20	3/4	27.6	21.7	16.3	4.90	4.27	6.96	6.04	9.78	8.56	3.91	5.56	7.82	
		27.2	20.2	14.8										
25	1	34.3	27.4	21.5	5.69	4.98	7.92	6.93	11.38	9.96	4.55	6.35	9.09	
		33.9	25.9	19.9										
32	1 1/4	43.1	35.8	30.2	6.07	5.28	7.92	6.93	12.14	10.62	4.85	6.35	9.70	
		42.7	34.3	28.7										
40	1 1/2	49.2	41.6	34.7	6.35	5.54	8.92	7.80	12.70	11.12	5.08	7.14	10.15	
		48.8	40.1	33.2										
50	2	61.7	53.3	43.6	6.93	6.04	10.92	9.50	13.84	12.12	5.54	8.74	11.07	
		61.2	51.7	42.1										
65	2 1/2	74.4	64.2		8.76	7.67					7.01			
		73.9	61.2											
80	3	90.3	79.4		9.52	8.30					7.62			
		89.8	76.4											
100	4	115.7	103.8		10.69	9.35					8.56			
		115.2	100.7											

HALF COUPLING



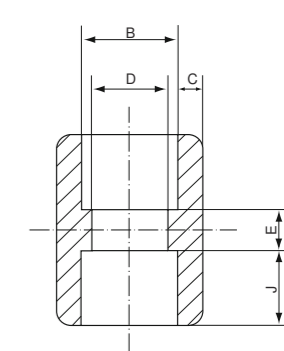
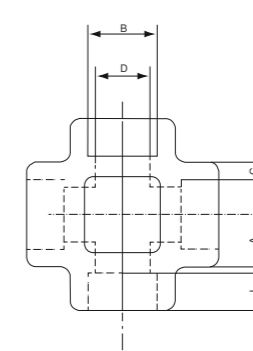
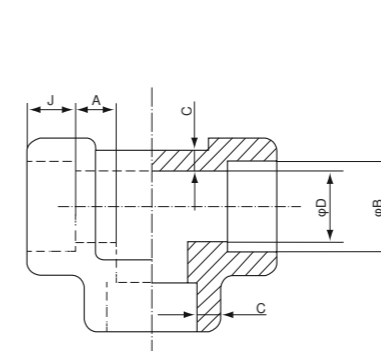
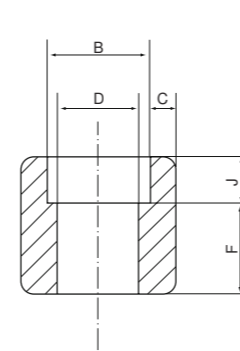
TEE



CROSS



COUPLING



Depth of Socket J	Center to Bottom of Socket-A						Laying Lengths		Tolerances			End Wall Thickness K		
	90° Elbows, Tee, and Crosses			45° Elbows			Couplings E	Half Couplings F						
	Class Designation								A	E	F	Class Designation		
	Min.	3000	6000	9000	3000	6000	9000	3000				6000	9000	
9.5	11.0	11.0		8.0	8.0		6.50	16.0	1.0	1.5	1.0	5.0	6.5	
9.5	11.0	13.5		8.0	8.0		6.50	16.0	1.0	1.5	1.0	5.0	6.5	
9.5	13.5	15.5		8.0	11.0		6.50	17.5	1.5	3.0	1.5	5.0	6.5	
9.5	15.5	19.0	25.5	11.0	12.5	15.5	9.50	22.5	1.5	3.0	1.5	6.5	8.0	11.0
12.5	19.0	22.5	28.5	13.0	14.0	19.0	9.50	24.0	1.5	3.0	1.5	7.0	9.0	13.0
12.5	22.5	27.0	32.0	14.0	17.5	20.5	12.50	28.5	2.0	4.0	2.0	10.0	11.0	14.0
12.5	27.0	32.0	35.0	17.5	20.5	22.5	12.50	30.0	2.0	4.0	2.0	10.0	12.0	14.0
12.5	32.0	38.0	38.0	20.5	25.5	25.5	12.50	32.0	2.0	4.0	2.0	11.0	13.5	16.0
16.0	38.0	41.0	54.0	25.5	28.5	28.5	19.0	41.0	2.0	4.0	2.0	13.0	16.5	19.0
16.0	41.0			28.5			19.0	43.0	2.5	5.0	2.5	16.0	19.5	
16.0	57.0			32.0			19.0	44.5	2.5	5.0	2.5	19.0	23.0	
19.0	66.5			41.0			19.0	48.0	2.5	5.0	2.5	20.0	28.5	

ELBOW 45°



KH-3001

ELBOW 90°



KH-3002

CAP

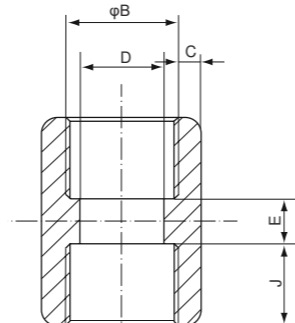
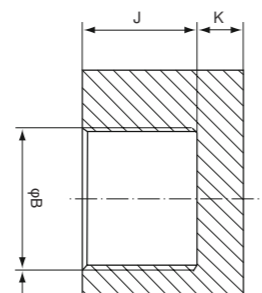
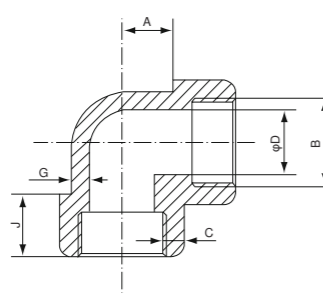
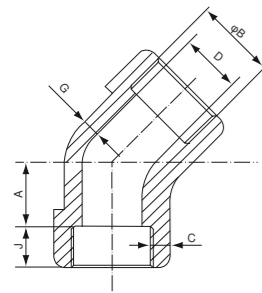


KH-3003

COPLING



KH-3004



DN	Nom. Pipe Size	Threaded BSPT NPT B	Bore Diameter of Fittings (2) D			Socket Wall Thickness (1) C						Body Wall G		
						Class Designation						Class Designation		
			Class Designation			3000		6000		9000		3000	6000	9000
			3000	6000	9000	Ave.	Min.	Ave.	Min.	Ave.	Min.	Ave.	Min.	Min.
6	1/8	1/8"	7.6	4.8		3.18	3.18	3.96	3.43			2.41	3.15	
			6.1	3.2										
8	1/4	1/4"	10.0	7.1		3.78	3.3	4.6	4.01			3.02	3.68	
			8.5	5.6										
10	3/8	3/8"	13.3	9.9		4.01	3.5	5.03	4.37			3.2	4.01	
			11.8	8.4										
15	1/2	1/2"	16.6	12.5	7.2	4.67	4.09	5.97	5.18	9.35	8.18	3.73	4.78	7.47
			15.0	11.0	5.6									
20	3/4	3/4"	21.7	16.3	11.8	4.9	4.27	6.96	6.04	9.78	8.56	3.91	5.56	7.82
			20.2	14.8	10.3									
25	1	1"	27.4	21.5	16.0	5.69	4.98	7.92	6.93	11.38	9.96	4.55	6.35	9.09
			25.9	19.9	14.4									
32	1 1/4	1 1/4"	35.8	30.2	23.5	6.07	5.28	7.92	6.93	12.14	10.62	4.85	6.35	9.7
			34.3	28.7	22.0									
40	1 1/2	1 1/2"	41.6	34.7	28.7	6.35	5.54	8.92	7.8	12.7	11.12	5.08	7.14	10.15
			40.1	33.2	27.2									
50	2	2"	53.3	43.6	38.9	6.93	6.04	10.92	9.5	13.84	12.12	5.054	8.74	11.07
			51.7	42.1	37.4									
65	2 1/2	2 1/2"	64.2			8.76	7.67					7.01		
			61.2											
80	3	3"	79.4			9.52	8.3					7.62		
			76.4											
100	4	4"	103.8			10.69	9.35					8.56		
			100.7											

CROSS



KH-3005

HALF COUPLING

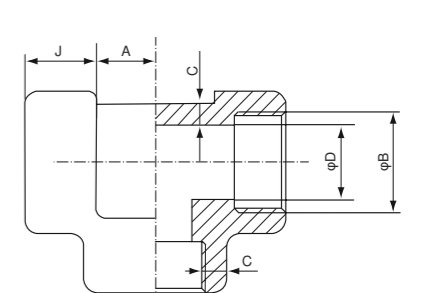
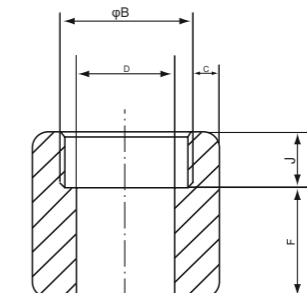
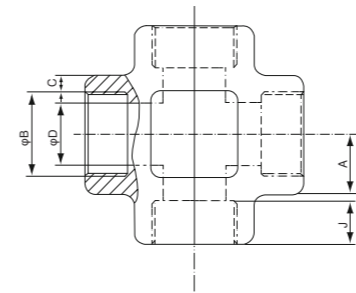


KH-3006

TEE



KH-3007

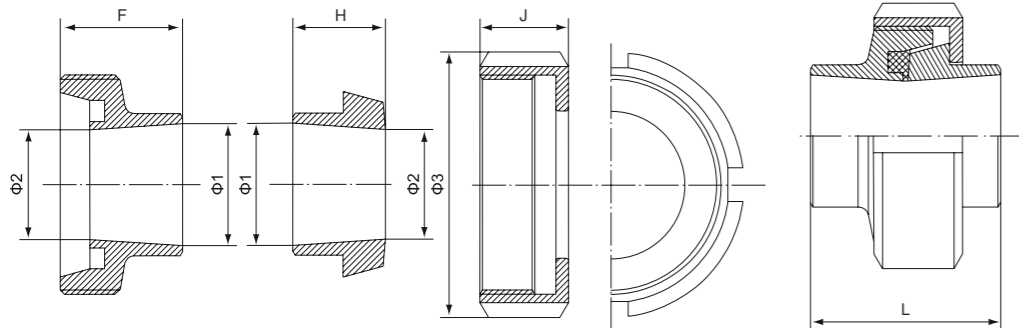


Depth of Socket J	Center to Bottom of Socket-A						Laying Lengths		Tolerances			End Wall Thickness K		
	90° Elbow, Tee, and Crosses			45° Elbows			Couplings E	Half Couplings F						
	Class Designation								A	E	F	Class Designation		
	Min.	3000	6000	9000	3000	6000	9000	3000				6000	9000	
9.5	11.0	11.0		8.0	8.0		6.5	16.0	1.0	1.5	1.0	5.0	6.5	
9.5	11.0	13.5		8.0	8.0		6.5	16.0	1.0	1.5	1.0	5.0	6.5	
9.5	13.5	15.5		8.0	11.0		6.5	17.5	1.5	3.0	1.5	5.0	6.5	
9.5	15.5	19.0	25.5	11.0	12.5	15.5	9.5	22.5	1.5	3.0	1.5	6.5	8.0	11.0
12.5	19.0	22.5	28.5	13.0	14.0	19.0	9.5	24.0	1.5	3.0	1.5	7.0	9.0	13.0
12.5	22.5	27.0	32.0	14.0	17.5	20.5	12.5	28.5	2.0	4.0	2.0	10.0	11.0	14.0
12.5	27.0	32.0	35.0	17.5	20.5	22.5	12.5	30.0	2.0	4.0	2.0	10.0	12.0	14.0
12.5	27.0	38.0	38.0	20.5	25.5	25.5	12.5	32.0	2.0	4.0	2.0	11.0	13.5	16.0
16.0	38.0	41.0	54.0	25.5	28.5	28.5	19.0	41.0	2.0	4.0	2.0	13.0	16.5	19.0
16.0	41.0			28.5			19.0	43.0	2.5	5.0	2.5	16.0	19.5	
16.0	57.0			32.0			19.0	44.5	2.5	5.0	2.5	19.0	23.0	
19.0	66.5			41.0			19.0	48	2.5	5.0	2.5	20.0	28.5	

➔ DIN11851



□ Material conform to
 ASTM A351-CF8M/1.4408
 ASTM A351-CF8/1.4401
 ASTM A216-WCB
 AISI 304, 304L, 316, 316L,
 301, 430 ECT

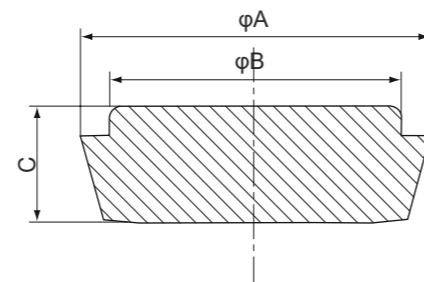


Standard	SIZE	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ3	38	44	54	63	70	78	92	112	127	148
	J	18	18	21	21	21	21	22	25	30	31
	L	38	38	41	48	54	56	58	70	80	94
DIN-TURKISH	Φ1	14	16	22	29	37	43	55	71	84	109
	Φ2	10	16	20	26	32	38	50	66	81	100
	F	21	21	24	29	32	33	35	40	45	54
DIN-ISO	H	17	17	18	22	25	26	28	32	37	44
	Φ1	14	16	22	29	37	43	55	71	84	109
	Φ2	10	16	20	26	32	38	50	66	81	100
	F	21	21	24	29	32	33	35	40	45	54
	H	17	17	18	22	25	26	28	32	37	44

➔ DIN11851 Blank Liner



□ Material conform to
 ASTM A351-CF8M/1.4408
 ASTM A351-CF8/1.4401
 ASTM A216-WCB
 AISI 304, 304L, 316, 316L,
 301, 430 ECT

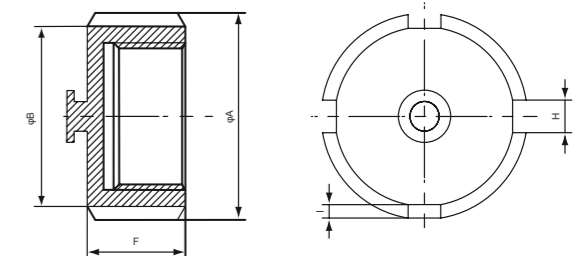


SIZE	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6
A	22	28	36	44	50	56	68	86	100	170	149	175
B	18	24	30	35	41	48	61	79	93	114	137	163
C	9	9	11	13	13	13	14	16	16	20	22	24

➔ DIN11851 Blank Nut with Chain and Clip

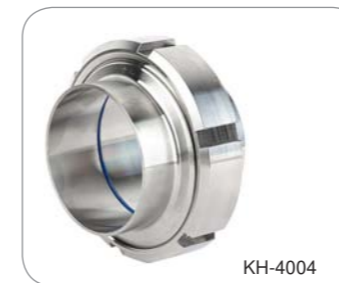


□ Material conform to
 ASTM A351-CF8M/1.4408
 ASTM A351-CF8/1.4401
 ASTM A216-WCB
 AISI 304, 304L, 316, 316L,
 301, 430 ECT

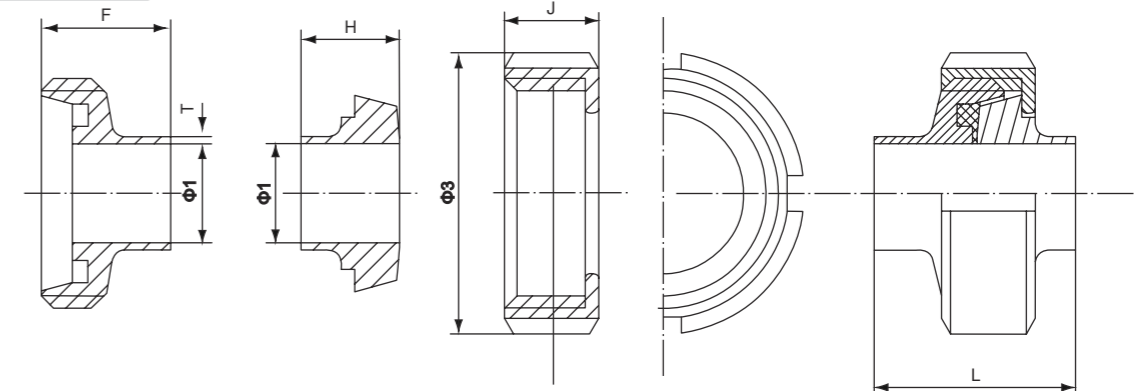


SIZE	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6
A	38	44	54	63	70	78	92	112	127	148	178	210
B	33	38	48	56	62	70	84	102	117	138	168	200
I	3	3	3	3.5	4	4	4	5	5	5	5	5
H	6	7	7	8	8	10	10	10	10	12	12	12
F	18	18	21	21	21	21	22	25	30	31	35	40

➔ DIN11850



□ Material conform to
 ASTM A351-CF8M/1.4408
 ASTM A351-CF8/1.4401
 ASTM A216-WCB
 AISI 304, 304L, 316, 316L,
 301, 430 ECT

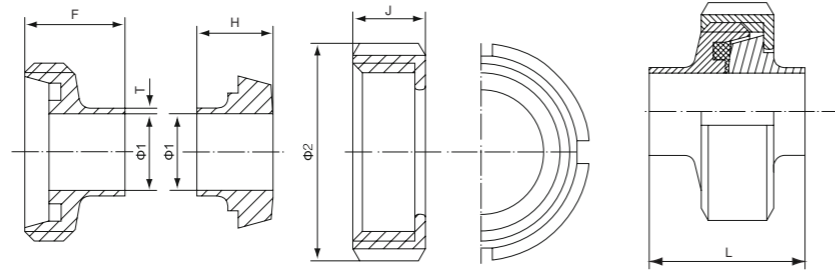


Standard	SIZE	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6
DIN11850 (Irish)	T	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2	2	2	2	2
	φ 1	10	16	20	26	32	38	50	66	81	100	125	150
	φ 3	38	44	54	63	70	78	92	112	127	148	178	210
	F	21	21	24	29	32	33	35	40	45	54	46	50
	H	17	17	18	22	25	26	28	32	37	44	34	37
	J	18	18	21	21	21	21	22	25	29	31	34	40
DIN11850 (Turkish)	L	34	34	36	51	51	53	57	65	65	89	70	76
	T	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3	3	3	3.5	3.5
	φ 1	10	16	20	26	32	38	50	66	81	100	125	150
	φ 3	38	44	54	63	70	78	92	112	127	148	178	210
	F	21	21	24	29	32	33	35	40	45	54	46	50
	H	17	17	18	22	25	26	28	32	37	44	34	37
	J	18	18	21	21	21	21	22	25	29	31	34	40
	L	34	34	36	45	51	53	57	65	65	89	70	76

➔ DIN



Material conform to
 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB
 AISI 304, 304L, 316, 316L, 301, 430 ECT

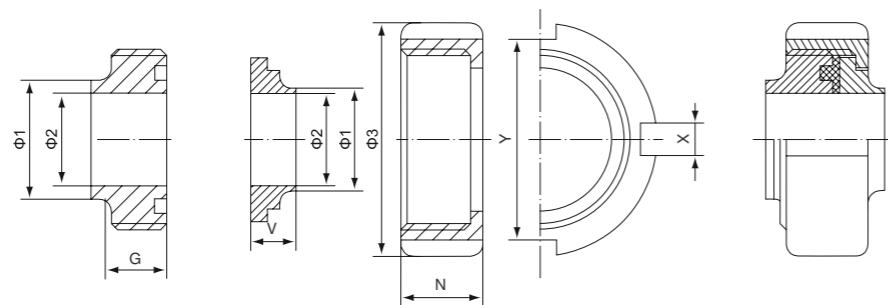


Standard	SIZE	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	Φ 2				78	92	112	127	148	178	210
	J				21	22	25	30	31	35	40
	L				45	51	53	57	65	75	89
DIN	T				1.6	1.6	1.6	1.6	1.6	1.6	2
	Φ 1				25.4	31.8	38.1	50.8	63.5	76.2	101.6
	F				29	32	33	35	40	45	54
DIN-INCH	H				22	25	26	28	32	37	44
	T				2.5		2.45	2.6	2.5	2.4	3.2
	Φ 1				22.9		35.1	47.8	60.5	73.2	97.6
DIN-DIN	F				29		33	35	40	40	54
	H				22		26	28	32	32	44
	T	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3	3	3
DIN-IRISH	Φ 1	10	16	20	26	32	38	50	66	81	100
	F	21	21	24	29	32	33	35	40	45	54
	H	17	17	18	22	25	26	28	32	37	44

➔ DS



Material conform to
 ASTM A351-CF8M/1.4408 ASTM A351-CF8/1.4401 ASTM A216-WCB
 AISI 304, 304L, 316, 316L, 301, 430 ECT



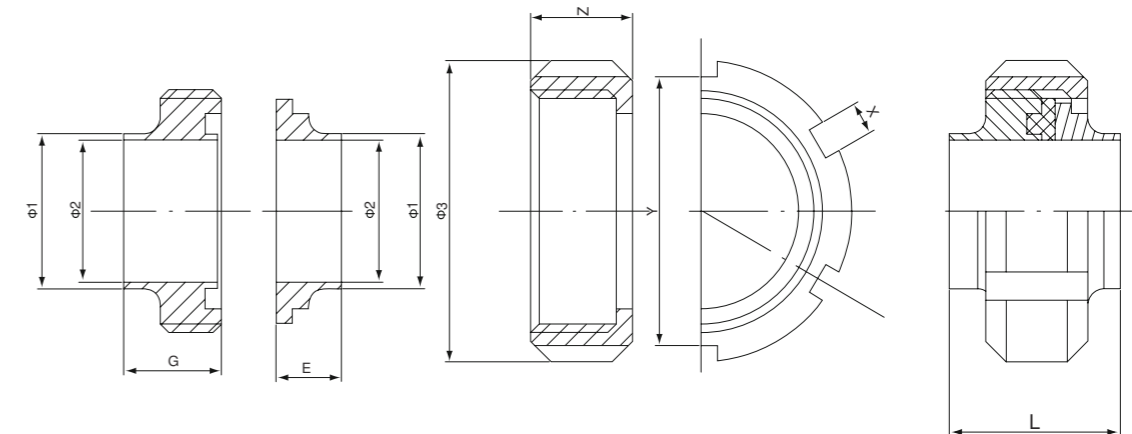
SIZE	1	1 1/2	2	2 1/2	3	4
φ1	25	38	51	63.5	76.1	101.6
φ2	22.6	35.6	48.6	60.5	72	97.6
φ3	57	71	86	103	115	150
G	18.5	20	20	24	24	24
V	11	11	11	12	12	12
N	20	20	22	24	25	28
Y	49	63	78	95	107	139
X	8	8	8	8	8	10
L	31	32.5	32.5	37.5	37.5	37.5

➔ SMS Standard Pattern



Material conform to
 ASTM A351-CF8M/1.4408
 ASTM A351-CF8/1.4401
 ASTM A216-WCB
 AISI 304, 304L, 316, 316L,
 301, 430 ECT

SIZE	1	1 1/2	2	2 1/2	3	4
φ1	25.4	38.1	50.8	63.5	76.2	101.6
φ2	22.2	34.9	47.6	60.3	72.9	97.53
φ3	42	64	74	90	104	142
G	19	23	23	27	27	30
E	15.5	16	17	17	19	19
N	20	25	26	30	32	32
X	6	8	8	10	10	10
Y	45	66	76	90	104	141
L	36	40.5	41.5	45.5	47.5	50.5

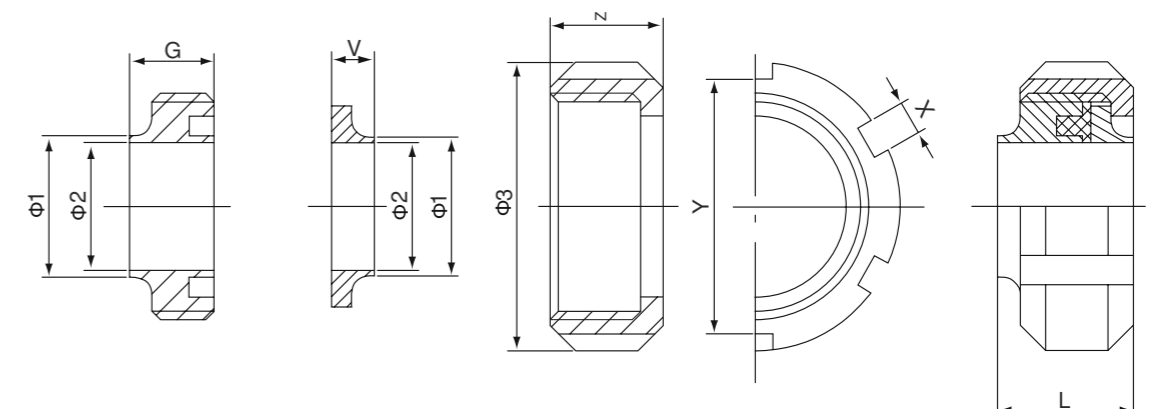


➔ SMS Short Pattern



Material conform to
 ASTM A351-CF8M/1.4408
 ASTM A351-CF8/1.4401
 ASTM A216-WCB
 AISI 304, 304L, 316, 316L,
 301, 430 ECT

SIZE	1	1 1/2	2	2 1/2	3	4
φ1	25	38	51	63.5	76.1	101.6
φ2	22.6	35.6	48.6	60.3	72.9	97.6
φ3	42	64	74	90	104	142
G	15	20	20	24	24	25
V	7.5	9	9	9	10	12
N	20	25	26	30	32	32
X	6	8	8	10	10	10
Y	45	66	76	90	104	141
L	24	30.5	30.5	34.5	35.5	38.5

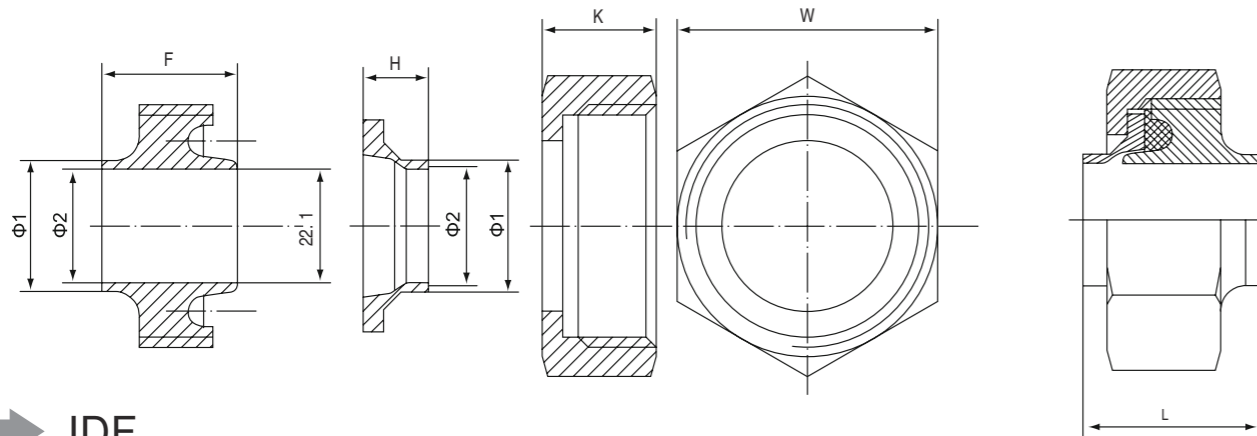


➔ RJT



□ Material conform to
 ASTM A351-CF8M/1.4408
 ASTM A351-CF8/1.4401
 ASTM A216-WCB
 AISI 304, 304L, 316, 316L,
 301, 430 ECT

SIZE	1	1 1/2	2	2 1/2	3	4
Φ1	25.6	38.3	51	63.7	76.4	101.7
Φ2	22.14	34.8	47.5	60.2	72.9	97.5
F	21.6	21.6	21.6	21.6	21.6	21.6
H	12.7	12.7	12.7	12.7	12.7	25.4
K	22.2	22.2	22.2	22.2	22.2	22.2
W	50.8	65	79.4	92.1	104.8	130.2
L	33.4	33.4	33.4	33.4	33.4	33.4

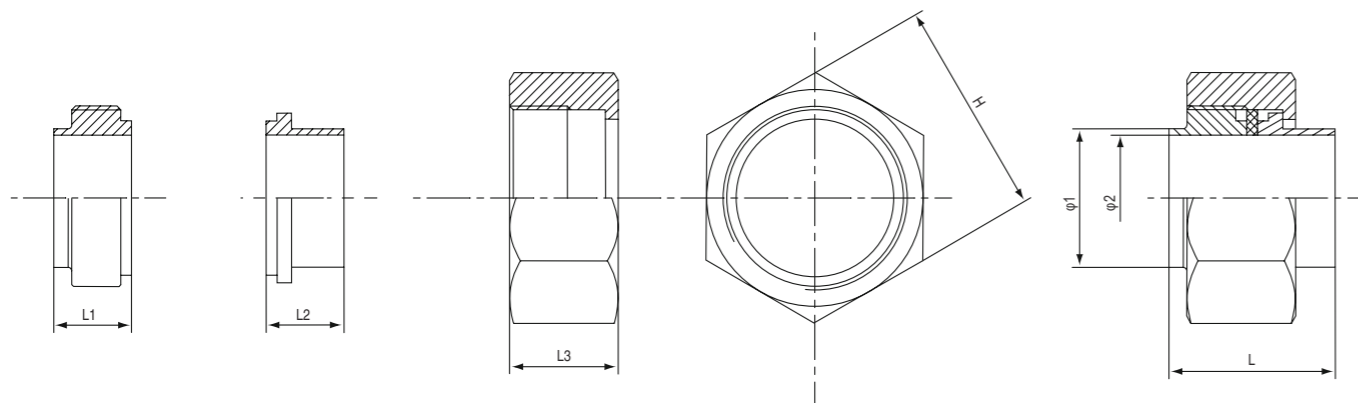


➔ IDF



□ Material conform to
 ASTM A351-CF8M/1.4408
 ASTM A351-CF8/1.4401
 ASTM A216-WCB
 AISI 304, 304L, 316, 316L,
 301, 430 ECT

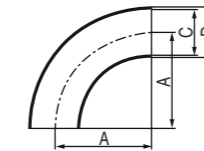
SIZE	1	1 1/2	2	2 1/2	3	4
Φ1	25.65	38.35	51.05	63.75	76.45	101.85
Φ2	22.14	34.82	47.52	60.2	72.9	97.49
L1	21.5	21.5	21.5	21.5	21.5	30
L2	21.5	21.5	21.5	21.5	21.5	30
L3	30	30	30	30	30	35
H	45.5	59.4	74.4	89.3	104.3	132.2
L	49.5	49.5	49.5	49.5	49.5	67.85



Elbow 90°(LONG)

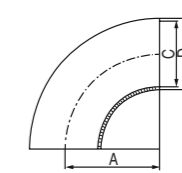


(1.4301/AISI 304L)
 (1.4404/AISI 316L)

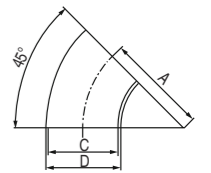


Norm 5:r=2.5xd, 90°

DN	A	B	C	D	
				1	2
15	50		15	18	19
20	60		19	22	23
25	65		25	28	29
32	75		31	34	35
40	95		37	40	41
50	122		49	52	53
65	160		66		70
80	200		81		85
100	250		100		104
125	312.5		125		129
150	375		150		154



KH-6004-1



KH-6004-2

Elbow 90° (Short) DIN 11852

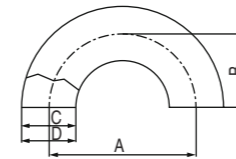
DN	A	C	D	
			1	2
10	26	10	12	13
15	35	16	18	19
20	40	20	22	23
25	50	26	28	29
32	55	32	34	35
40	60	38	40	41
50	70	50	52	53
65	80	66		70
80	90	81		85
100	100	100		104
125	187.5	125		129
150	225	150		154
200	300	200		204

Elbow 45° (Short)

Elbow 180°(LONG)



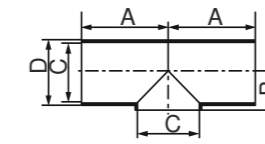
KH-6002



TEE

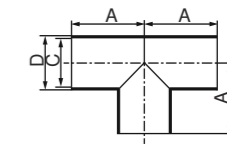


KH-6006



KH-6006-1

TEE (Straight) S-S-S



KH-6006-2

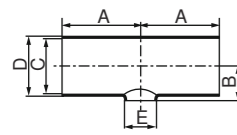
TEE S-S-S

(1.4301/AISI 304L), (1.4404/AISI 316L)

DN	A	B	C	D	
				1	2
15	35	11	16	18	19
20	40	13	20	22	23
25	50	16	26	28	29
32	55	19.5	32	34	35
40	60	23	38	40	41
50	70	30	50	52	53
65	80	40	66		70
80	90	47.5	81		85
100	100	58	100		104
125	187.5	74	125		129
150	225	90	150		154
200	300	115	200		204

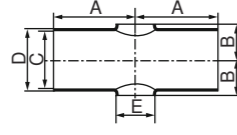
DN	A	B	C	D	
				1	2
10	35		10	12	13
15	35		16	18	19
20	40		20	22	23
25	50		26	28	29
32	55		32	34	35
40	60		38	40	41
50	70		50	52	53
65	80		66		70
80	90		81		85
100	100		100		104
125	187.5		125		129
150	225		150		154
200	300		200		204

→ Cross



KH-6006-3

Red. Tee

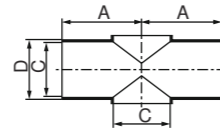


KH-6031-1

Red. Cross



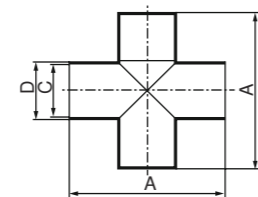
KH-6031



KH-6031-2

Cross (Short)

DN	A	B	C	D	E
10	26	-	10	13	
15	35	-	16	19	
20	40	-	20	23	
25	50	15.5	26	29	
32	55	19.5	32	35	
40	60	23	38	41	
50	70	29.5	50	53	
65	80	39.5	66	70	
80	90	47.5	81	85	
100	100	59	100	104	
125	187.5		125	129	
150	225		150	154	
200	300		200	204	



KH-6031-3

Cross

DN	A	B	C	D	E
10	52		10	13	
15	70		16	19	
20	80		20	23	
25	100		26	29	
32	110		32	35	
40	120		38	41	
50	140		50	53	
65	160		66	70	
80	180		81	85	
100	200		100	104	
125	375		125	129	
150	450		150	154	
200	600		200	204	

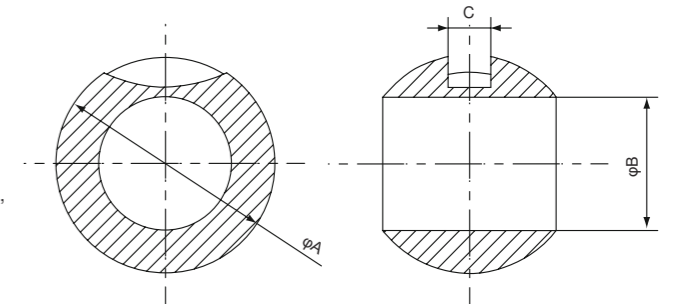
DN	A	B	C	D	E
20/15	40	12	20	23	16
25/15	50	16	26	29	16
25/20	50	16	32	29	20
32/15	55	20	32	35	16
32/20	55	20	32	35	20
32/25	55	20	32	35	26
40/15	60	23	38	41	16
40/20	60	23	38	41	20
40/25	60	23	38	41	26
40/32	60	23	38	41	32
50/15	70	29	50	53	16
50/20	70	29	50	53	20
50/25	70	29	50	53	26
50/32	70	29	50	53	32
50/40	70	29	50	53	38
65/15	80	39	66	70	16
65/20	80	39	66	70	20
65/25	80	39	66	70	26
65/32	80	39	66	70	32
65/40	80	39	66	70	38
65/50	80	39	66	70	50
80/20	90	47	81	85	20
80/25	90	47	81	85	26
80/32	90	47	81	85	32
80/40	90	47	81	85	38
80/50	90	47	81	85	50
80/65	90	47	81	85	66
100/25	100	57	100	104	26
100/32	100	57	100	104	32
100/40	100	57	100	104	38
100/50	100	57	100	104	50
100/65	100	58	100	104	66
100/80	100	58	100	104	81
125/25	187.5	71.5	125	129	26
125/32	187.5	71.5	125	129	32
125/40	187.5	71.5	125	129	38
125/50	187.5	71.5	125	129	50
125/65	187.5	71.5	125	129	66
125/80	187.5	71.5	125	129	81
125/100	187.5	71.5	125	129	100
150/40	225	87	150	154	38
150/50	225	87	150	154	50
150/65	225	87	150	154	66
150/80	225	87	150	154	81
150/100	225	87	150	154	100
150/125	225	87	150	154	125

→ NORMAL BALL



KH-7001

- Material conform to
ASTM A351-CF8M/1.4408
ASTM A351-CF8/1.4401
ASTM A216-WCB
AISI 304, 304L, 316, 316L, 301, 430 ECT
- Special dimensions on request



DN	8	10	15	20	25	32	40	50	65	80
A	20.5	20.5	25.5	32	39	50	58.5	76.5	97	115
B	12.5	12.5	15	20	25	32	38	50	65	76
C	4	4	5	5	8	8	8	9.5	12	12

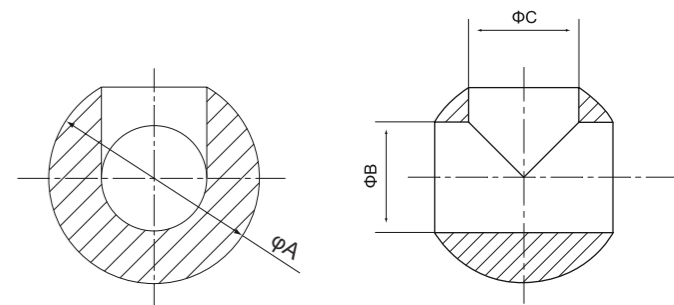
NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
A	0.81	0.81	1	1.26	1.54	1.97	2.3	3	3.82	4.53
B	0.49	0.49	0.59	0.79	0.98	1.26	1.5	1.97	2.56	3
C	0.16	0.16	0.2	0.2	0.32	0.32	0.32	0.37	0.47	0.47

→ T TYPE BALL



KH-7002

- Material conform to
ASTM A351-CF8M/1.4408
ASTM A351-CF8/1.4401
ASTM A216-WCB
AISI 304, 304L, 316, 316L, 301, 430 ECT
- Special dimensions on request



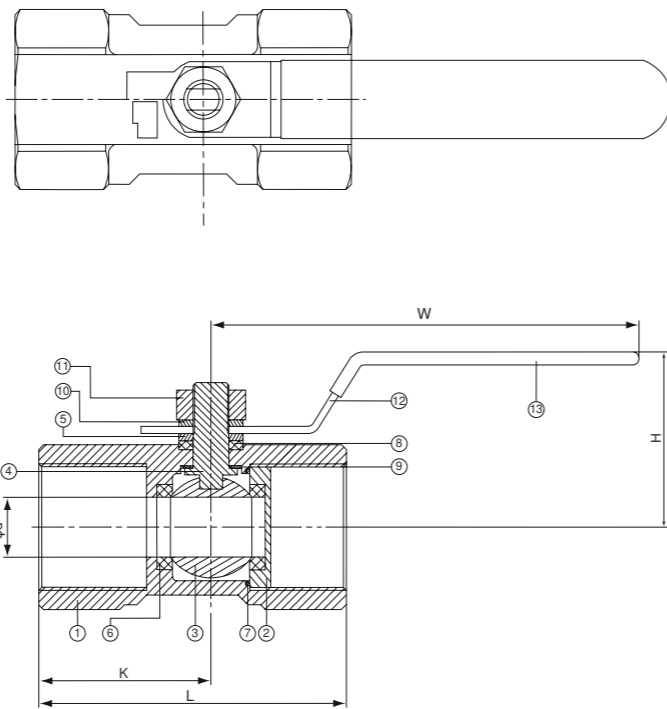
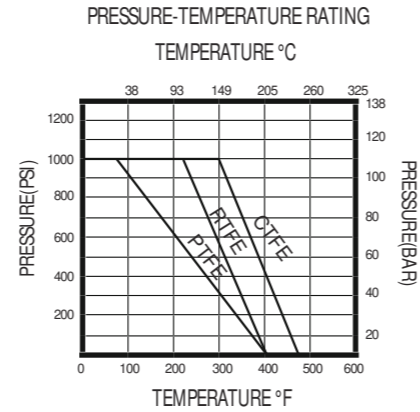
DN	15	20	25	32	40	50
A	27.5	34	42.5	54	63	80.5
B	12.7	16	20	25	32	38
C	12.7	16	20	25	32	38

NPS	1/2	3/4	1	1 1/4	1 1/2	2
A	1.08	1.34	1.67	2.13	2.48	3.17
B	0.50	0.63	0.79	0.98	1.26	1.50
C	0.50	0.63	0.79	0.98	1.26	1.50

➔ 1000 WOG/PN63 1-PIECE REDUCE PORT (1PC)



- FEATURES**
- The thread ends conform to ASME B1.20.1.(NPT) DIN 2999 & BS 21 ISO 228/1 & ISO 7/1
 - Investment casting
 - Blow-out proof stem
 - Reduce Port
 - 1000 W.O.G./PN 63
 - W.T. : -20°C-180°C (-4°F-356°F)
 - PTFE seal & packing
 - 800 W.O.G. /PN 50(option)
 - Latch Lock Handle(option)



Applicable Standard	
Test and Inspection	API 598

ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M
2	RETAINER	ASTM A351-CF8M
3	BALL	ASTM A351-CF8M
4	STEM	ASTM A276-316
5	GLAND RING	AISI 304
6	BALL SEAT	RTFE / PTFE
7	BODY SEAL	PTFE
8	PACKING	
9	THRUST WASHER	AISI 304
10	SPRING WASHER	
11	STEM NUT	AISI 304
12	HANDLE	AISI 304
13	HANDLE SLEEVE	PVC

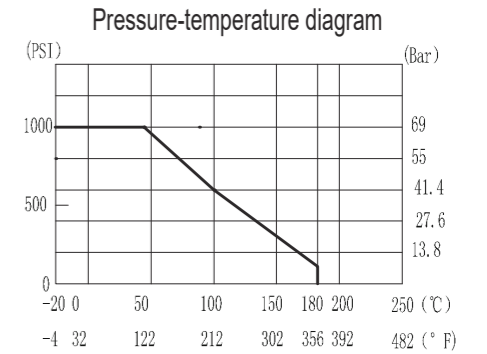
*RTFE=15% GLASS FIBER+TFE

DN	8	10	15	20	25	32	40	50
d	5	7	9.2	12.5	15	20	25	32
L	40	44	56	59	71	78	83	100
H	30.7	34.7	40.7	43.2	49.2	52.8	66.4	72.2
W	62.5	74.5	86.5	88.5	107	107	132	132

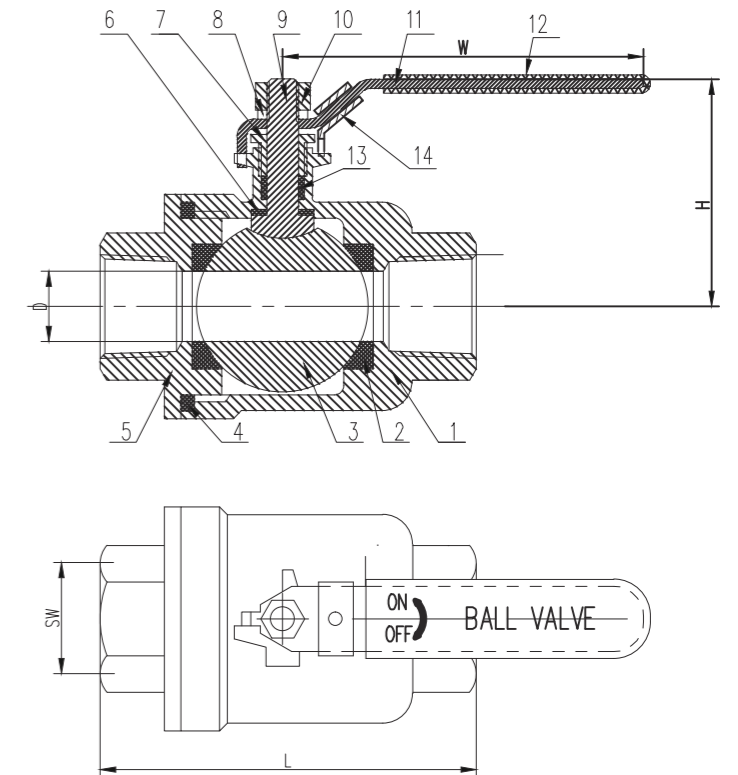
➔ 1000 WOG/PN63 2-PIECE FULL PORT (2PC-Heavy type)



- PERFORMANCE SPECIFICATION**
1. NOMINAL PRESSURE: 1000PSI(6.895MPa)
 2. SHELL TEST: 9MPa
 3. SEAT TEST: 0.6MPa
 4. SUITABLE ME DIM: WATER, OIL, GAS ETC
 5. W.T. : -20°C-180°C (-4°F-356°F)
 6. Dimension conform to BIN3202/4-m3



ITEM	PARTS NAME	MATERIAL	NO.
1	BODY	316/304	1
2	BALL SEAT	PTFE	2
3	BALL	316/304	1
4	BODY SEAL	PTFE	1
5	CAP	316/304	1
6	THRUST WASHER	PTFE	1
7	GLAND RING	304	1
8	SPRING WASHER	304	1
9	STEM	316/304	1
10	NUT	304	1
11	HANDLE	304	1
12	HANDLE SLEEVE	PVC	1
13	PACKING	PTFE	1
14	LOCK	304	1



DN	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
D	11.5	12.5	15.0	20.0	25.0	32.0	40.0	50.0	65.0	76.0	94.0
SW	17.0	21.0	26.0	31.0	38.0	48.0	54.0	67.0	85.0	100.0	130.0
L	55.0	60.0	75.0	80.0	90.0	110.0	120.0	140.0	185.0	205	240
H	44.0	44.0	47.5	54.0	58.0	72	76.0	97.0	130.0	138.0	160.0
W	85.0	85.0	95.0	120	120	135.0	170.0	170.0	235	235	335

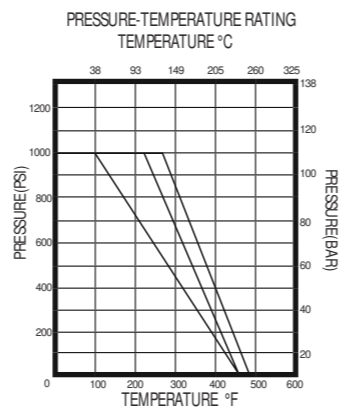
➔ 1000 WOG/PN63 2-PIECE FULL PORT (2PC)



KH-7005

FEATURES

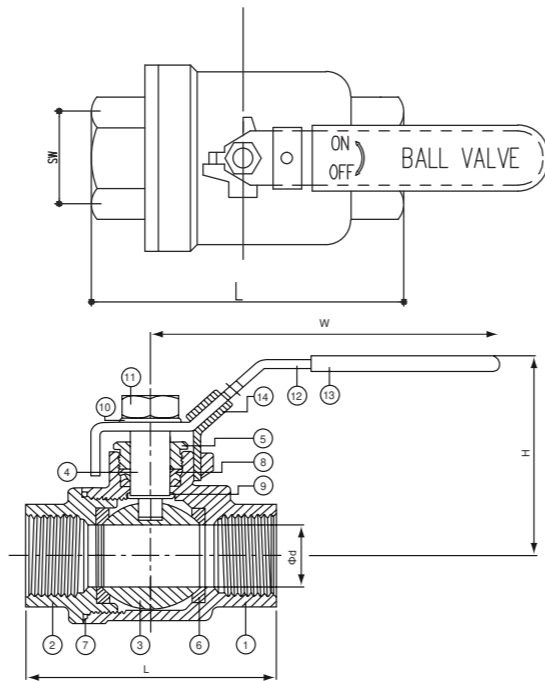
- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS 21 ISO 228/1 & ISO 7/1
- Investment casting
- Blow-out proof stem
- Full Port
- 1000 W.O.G./PN 63
- W.T. : -20°C-180°C (-4°F-356°F)
- PTFE seal & packing
- Latch lock handle (option)
- Mounting pad Tapping(option)
- 1/4"-1"2000 W.O.G.(option)
- 1/4"-2"1500 W.O.G.(option)



Applicable Standard	
Test and Inspection	AP1 598

ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M 1.4408
2	CAP	
3	BALL	
4	STEM	ASTM A276-316
5	GLAND RING	AISI 304
6	BALL SEAT	PTFE/RTFE
7	BODY SEAL	PTFE
8	PACKING	
9	THRUST WASHER	
10	SPRING WASHER	AISI 304
11	NUT	
12	HANDLE	
13	HANDLE SLEEVE	PVC
14	LOCK DEVICE	AISI304

*RTFE=15%GLASS FIBER+TFE



DN	8	10	15	20	25	32	40	50	65	80	100
d	11.5	12.5	15	20	25	32	38	50	65	76	94
L	49	50	59	65	78	88	100	120.5	146.5	168	213
H	44	44	46	53	57	71	75	96	128	135	160
W	85	85	95	120	120	135	170	170	235	235	335

	NPS	d	L	H	W	N	P	M	Torque IN-LB		Weight LB
									Breakaway	Action	
1000 WOG	1/4"	0.39	2.00	2.52	3.86	0.5	1.12	M5	26.55	22.13	0.57
	3/8"	0.47	2.00	2.52	3.86	0.5	1.12	M5	26.55	22.13	0.55
	1/2"	0.59	2.28	2.6	3.86	0.5	1.12	M5	35.40	26.55	0.68
	3/4"	0.79	2.58	2.6	4.92	0.5	1.12	M5	61.95	44.25	1.01
	1"	0.98	3.10	3.15	5.63	0.88	1.38	M5	79.66	61.95	1.7
	1-1/4"	1.26	3.54	3.39	5.63	1	1.5	M6	106.21	88.51	2.47
	1-1/2"	1.50	4.13	3.82	7.87	1	1.5	M6	168.16	132.76	3.84
	2"	1.97	4.88	4.13	7.87	1	1.5	M6	230.12	177.01	5.84
	2-1/2"	2.48	5.76	5.75	9.84	1.14	1.97	M6	336.33	247.82	11.84
	3"	2.99	6.44	6.10	9.84	1.38	2.2	M6	486.79	354.03	16.38

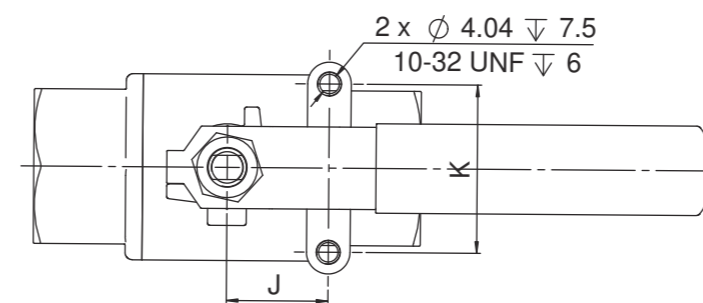
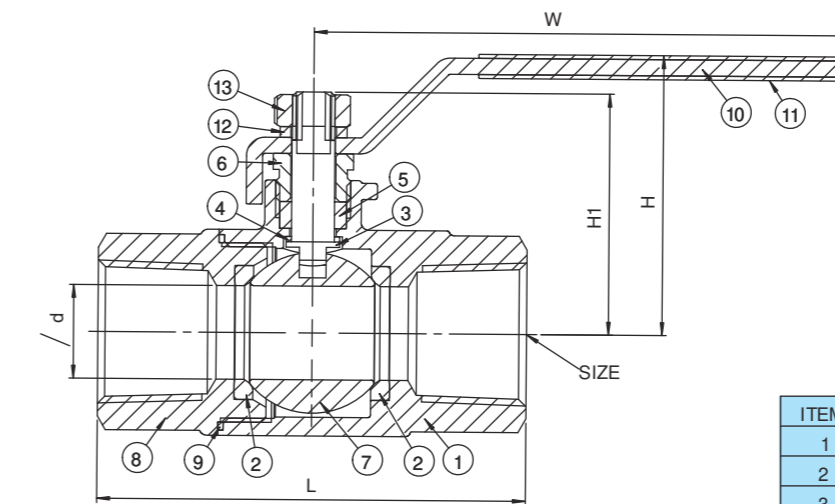
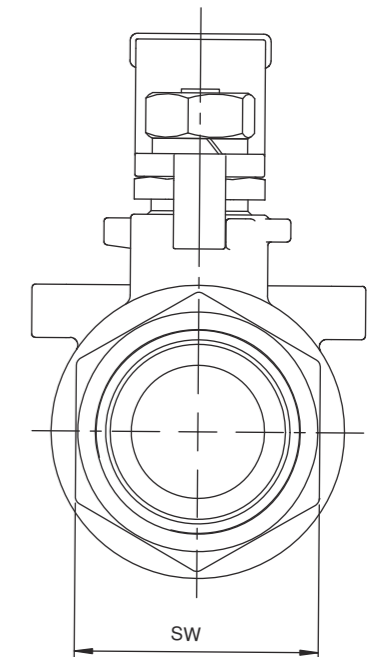
➔ 2PC 2000 WOG



KH-7006

FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS 21 ISO 228/1 & ISO 7/1
- Investment casting
- Blow-out proof stem
- Full Port 1/2"-1-1/2"
- Standard Port 2"
- PTFE seal & packing
- Latch lock handle (option)
- ISO 5211 Mounting Pad (option)
- NYLON,PEEK,TFM Seats(option)
- W.T. : -20°C-180°C (-4°F-356°F)



ITEM	PARTS	MATERIAL	NO.
1	2PC BODY	CFB/CF8M	1
2	BALL SEAT	PTFE	2
3	STEM	304/316	1
4	THRUST WASHER	PTFE	1
5	PACKING	PTFE	1
6	GLAND NUT	AISI 304	1
7	BALL	CFB/CF8M	1
8	2PC 2000WOG CAP	CFB/CF8M	1
9	BODY SEAL	PTFE	1
10	2PC HANDLE	AISI 304	1
11	HANDLE COVER	PVC 0.007	1
12	SPRING WASHER	304	1
13	NUT	304	1

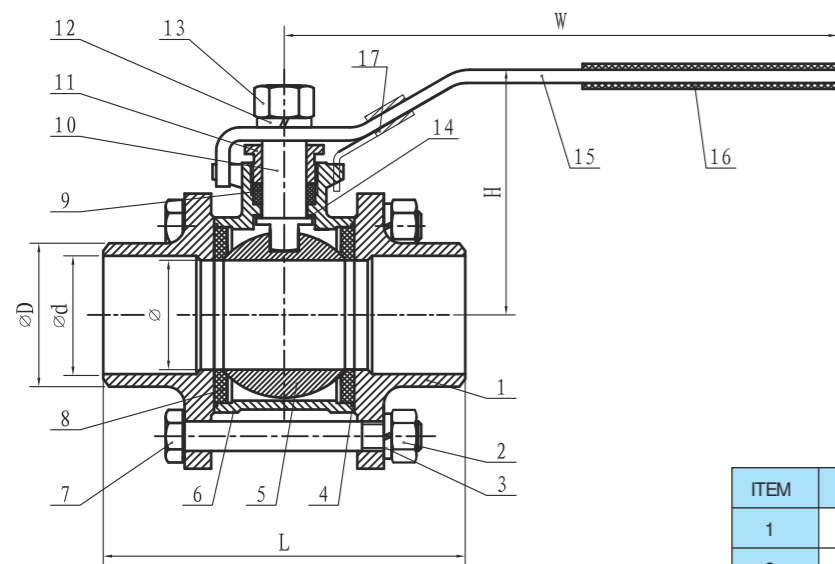
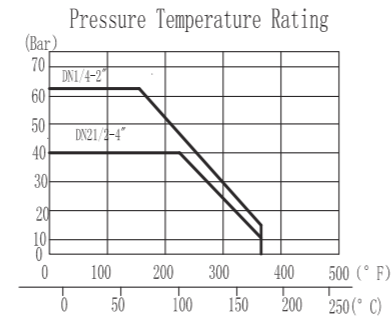
SIZE	Q	L	H	H1	W	SW	J	K	GOWICHT
1/4"	11	58	45	37	87	26.5	12.5	27.5	0.314
3/8"	12.5	58	45	37	87	26.5	12.5	27.5	0.294
1/2"	12.5	58	45	37	87	26.5	12.5	27.5	0.269
3/4"	17.5	80	52.5	45	101	32	21	34.8	0.491
1"	22	86	59	51.5	122	41	22.5	34.8	0.823
1 1/4"	25	103	62.5	55	122	50	23.5	34.8	1.213
1 1/2"	32	111	69	63	135	55	23.5	34.8	1.592
2"	38	137	92.5	76.5	172	70	23.5	34.8	3.168

➔ 1000 WOG/PN 63 3-PIECE FULL PORT (3PC BW)



PERFORMANCE SPECIFICATION

1. NOMINAL PRESSURE : 1000PSI(6.8Mpa)
2. SHELL TEST : 10.2Mpa
3. SEAT TEST : 0.6Mpa
4. SUITABLE ME DIM : WATER, OIL, GAS ETC
5. W.T. : -20°C-180°C (-4°F-356°F)



SIZE	L	W	H	Φ	Φd	ΦD
1/4"	65	95	48	11	10	14
3/8"	65	95	48	12.5	12.5	17.5
1/2"	65	95	50.5	15	15	21.5
3/4"	75	110	59	20	20	27
1"	85	135	70	25	26	33.5
1 1/4"	100	135	75	32	35	42.5
1 1/2"	140	165	94.5	38	40	48.5
2"	150	165	102	50	52	61
2 1/2"	170	220	135	65	65	76.3
3"	180	220	144	76	78	90
4"	190	320	173	94	102	115

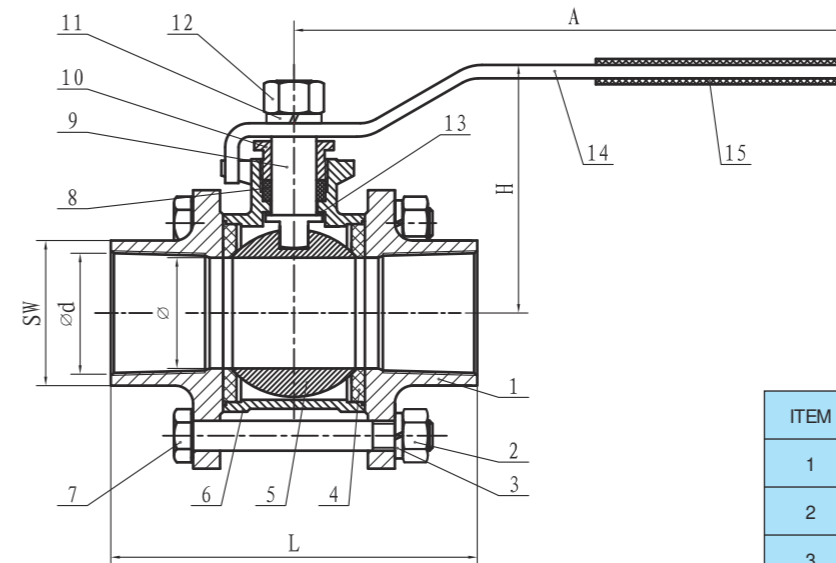
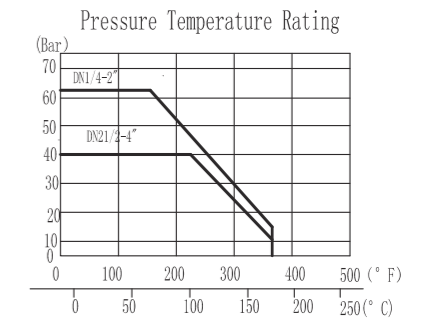
ITEM	PARTS NAME	MATERIAL	NO.
1	COVER	316/304	1
2	STEM NUT	304	4
3	SPRING WASHER	304	4
4	BADY SEAL	PTFE	2
5	BALL	316/304	1
6	BODY	316/304	1
7	BOLT	304	4
8	BALL SEAT	R PTFE	2
9	PACKING	PTFE	1
10	STEM	304	1
11	GLAND RING	304	1
12	SPRING WASHER	304	1
13	STEM NUT	304	1
14	THRUST WASHER	PTFE	1
15	HANDLE	430	1
16	HANDLE SLEEVE	PLASTICS	1
17	LOCK	430	1

➔ 1000 WOG/PN 63 3-PIECE FULL BORE (3PC SW/Thread)



FEATURES

- The thread ends conform to ASME B1.20.1 (NPT) DIN 2999 & ISO 7/1
- Investment casting
- Blow-out proof stem
- Full Port
- 1000W.O.G./PN 63
- W.T. : -20°C-180°C (-4°F-356°F)
- PTFE seal & packing
- Latch lock handle(option)



SIZE	L	A	H	Φ	Φd	SW
1/4"	60	95	48	12.5	1/4"	21
3/8"	60	95	48	12.5	3/8"	21
1/2"	75.1	95	50.5	15	1/2"	26
3/4"	80	110	59	20	3/4"	31.5
1"	90.1	135	70	25	1"	38.5
1 1/4"	110	135	75	32	1 1/4"	48
1 1/2"	120	165	94.5	38	1 1/2"	54.5
2"	140.1	165	102	50	2"	67
2 1/2"	185	220	135	65	2 1/2"	85
3"	205	220	144	76	3"	98
4"	240	320	173	94	4"	126

ITEM	PARTS NAME	MATERIAL	NO.
1	COVER	1.4301	1
2	NUT	SUS 304	4
3	SPRING WASHER	SUS 304	4
4	GASKET	R PTFE	2
5	BALL	SUS 304	1
6	BODY	1.4301	1
7	BOLT	SUS 304	4
8	GASKET	PTFE	1
9	STEM	SUS 304	1
10	GLAND	SUS 304	1
11	SPRING WASHER	SUS 304	1
12	NUT	SUS 304	1
13	SMALL FLAKES	PTFE	1
14	HANDLE	SUS 304	1
15	HANDLE SLEEVE	PLASTICS	1

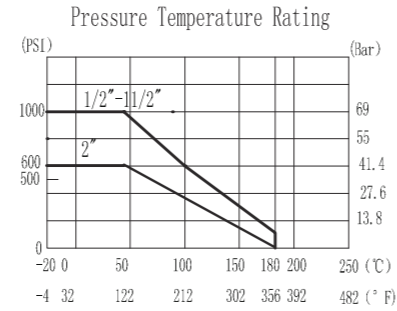
➔ 1000 WOG/PN 63 3-PIECE FULL BORE (3PCQ SW/Thread)



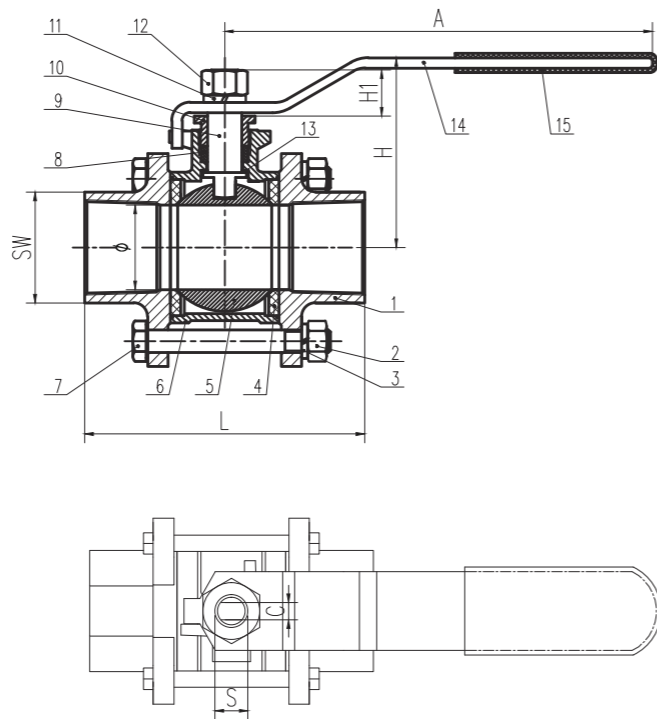
KH-7008-1

FEATURES

- The thread ends conform to ASME B1.20.1 (NPT) DIN 2999 & ISO 7/1
- Investment casting
- Blow-out proof stem
- Full Port
- 1000W.O.G./PN 63
- W.T. : -20°C-180°C (-4°F-356°F)
- PTFE seal & packing
- Latch lock handle(option)



ITEM	CODE	PARTS NAME	NO.	MATERIAL
1	Q-3PC-01	COVER	2	316/304
2	GB/T6170-1986	STEM NUT	4	304
3	GB/T93-1986	SPRING WASHER	4	304
4	Q-3PC-02	BALL SEAT	2	PTFE
5	Q-3PC-03	BALL	1	316/304
6	Q-3PC-04	BODY	1	316/304
7	Q-3PC-05	BOLT	4	304
8	Q-3PC-06	PACKING	1	PTFE
9	Q-3PC-07	STEM	1	316/304
10	Q-3PC-08	GLAND RING	1	304
11	Q-3PC-09	SPRING WASHER	1	304
12	GB/T93-1987	STEM NUT	1	304
13	GB/T6170-1986	THRUST WASHER	1	PTFE
14	Q-3PC-10	HANDLE	1	304
15	Q-3PC-11	HANDLE SLEEVE	1	PLASTIC



SIZE	L	A	H	φ	SW	H1	C	S
1/4 3/8	42	75	44	12.5	16	10.2	5.0	M8
1/2	58.5	85	46.0	15	25	16.5	5.0	M8
3/4	65.5	100	53.0	20	30.5	18.0	5.8	M8
1	78.5	105	57.0	25	38.0	17.5	5.8	M8
1 1/4	85	120	71.0	32	46.0	22.3	7.0	M10
1 1/2	98.0	120	75.0	38	53.5	22.0	7.0	M10
2	120	165	96.0	50	66.0	25.5	8.0	M12

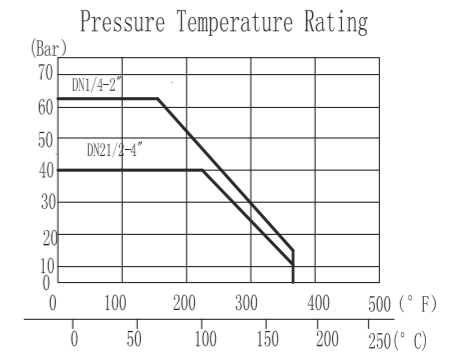
➔ 3PC BALL VALVE WITH MOUNT PAD THREADED (3PC THREAD)



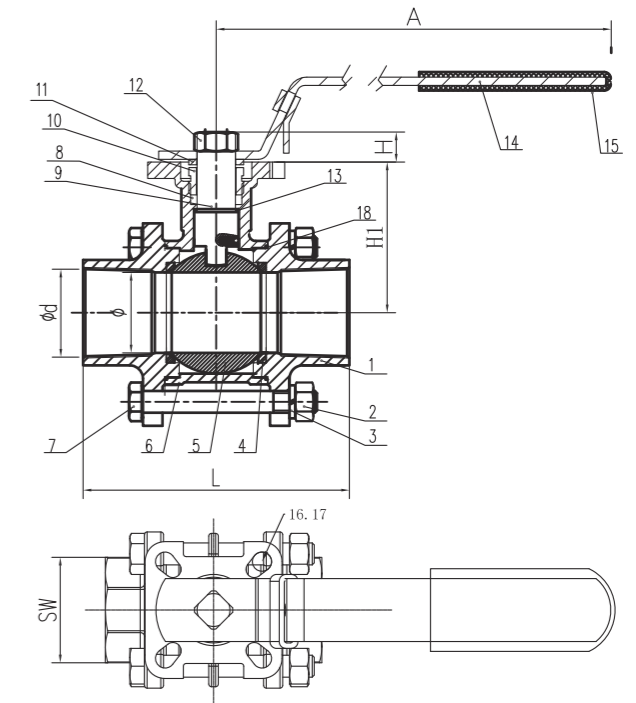
KH-7009

FEATURES

- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS 21 ISO 228/1 & ISO 7/1
- Dimension conform to DIN 3202/4-M3
- Spring system on stem
- Fixed spring load
- Blow-out-proof stem
- Full Port
- 1000W.O.G./PN 63
- W.T. : -20°C-180°C (-4°F-356°F)
- Anti-Static Device
- ISO 5211 Direct mounting pad(option)
- D-Butt weld ends available
- D-Socket weld ends available



ITEM	PARTS NAME	MATERIAL	NO.
1	COVER	CF8M	2
2	NUT	SUS304	4
3	SPRING WASHER	SUS304	4
4	GASKET	RTFE	2
5	BALL	316	1
6	BODY	CF8M	1
7	BOLT	304	4
8	GASKET	PTFE	1
9	STEM	316	1
10	GLAND	SUS304	1
11	GASKET	SUS304	1
12	NUT	SUS304	1
13	GASKET	PTFE	1
14	HANDLE	SUS304	1
15	HANDLE SLEEVE	PLASTICS	1
16	LIMIT SHAFT	SUS304	1
17	NUT	SUS304	1
18	GASKET	PTFE	2



DN	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
L	57	57	61	69	79	96	102	124	158	179	210
A	142	142	142	142	162	162	188	188	235	235	328
H1	42	42	42	48	55	60	75	85	105	114	128
H	9	9	9	9	11	11	15	15	18.5	18.5	18.5
Φ	12.5	12.5	15	20	25	32	38	50	65	76	100
Φd	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
SW	17.5	20.0	24.5	30.5	38.5	47	53.5	66	85	96.5	122.5
ISO5211	F03/F04	F03/F04	F03/F04	F03/F04	F04/F05	F04/F05	F05/F07	F05/F07	F07/F10	F07/F10	F07/F10

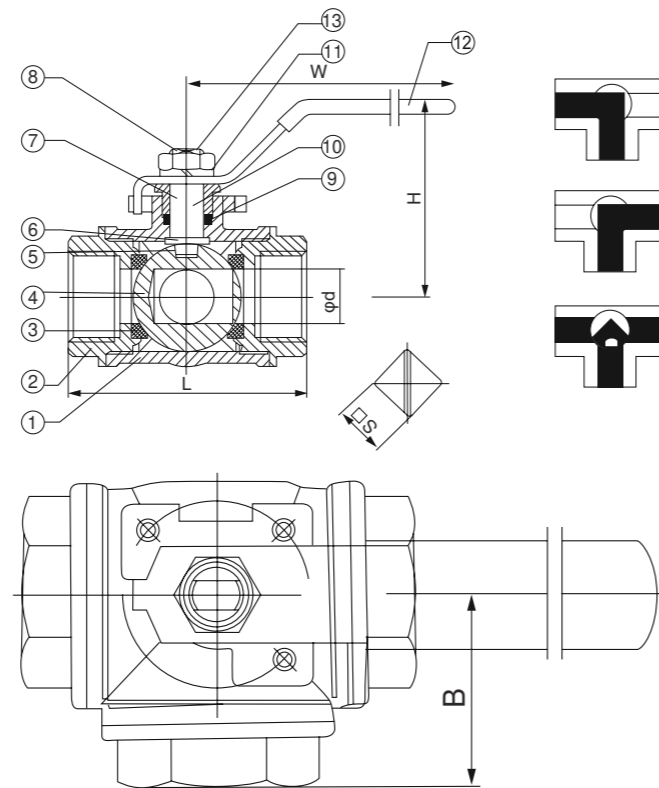
➔ T/L TYPE THREE WAY BALL VALVE (1000PSI)



FEATURES

- "L" type or "T" type
- Reduce bore
- Size: 1/4"-2"
- Working pressure: 1000PSI
- Threaded end: BSPT, NPT, ISO 228/1
- ISO 5211 top-mount pad
- Optional locked device handle
- Materials: CF8M (SS316), CF8 (SS304)

NO.	PART NAME	MATERIAL
1	BODY	CF8M
2	CAP	CF8M
3	SEAT	PTFE
4	BALL	SS 316
5	SEAL RING	PTFE
6	STEM SEAL	PTFE
7	STEM	SS 316
8	ANTI-STATIC DEVICE	SS 304
9	STEM PACKING	PTFE
10	PACKING GLAND	SS 304
11	SPRING WASHER	SS 304
12	HANDLE	SS 304
13	STEM NUT	SS 304



SIZE	Φd	L	H	W	B	ISO5211	□S
1/4"	9	75	66.5	131.5	37.5	F03/F04	9
3/8"	11	75	66.5	131.5	37.5	F03/F04	9
1/2"	12.7	75	66.5	131.5	37.5	F03/F04	9
3/4"	16	90	74.5	161.5	45	F04/F05	11
1"	20	100	79.5	161.5	50	F04/F05	11
1-1/4"	25	115	91	170.5	57.5	F05/F07	14
1-1/2"	32	130	94.5	170.5	65	F05/F07	14
2"	38	155	103.5	170.5	77.5	F05/F07	14

NOTE: () FOR OPTIONAL DIMENSION

➔ GLOBAL VALVE (200 W.O.G.)

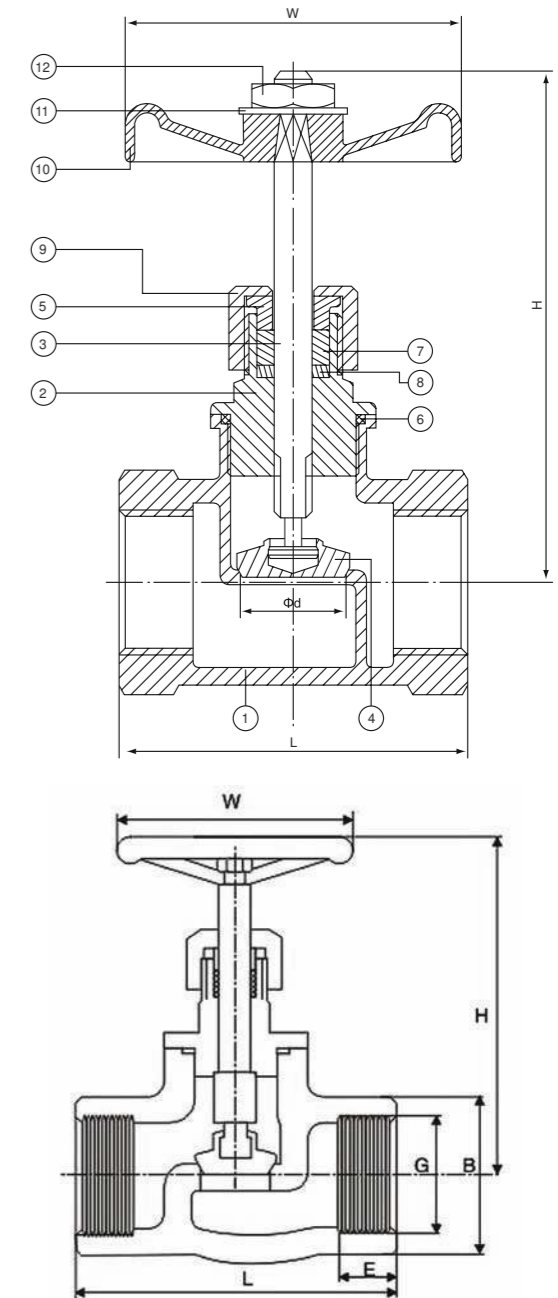


FEATURES

1. The thread ends conform to ASME B1.20.1 (NPT), DIN 2999 & BS 21, ISO 228/1 & ISO 7/1 Investment casting, Rising stem, 200 W.O.G
2. NOMINAL PRESSURE: (1.6, 2.5, 4.0, 6.4) Mpa
3. STRENGTH TEST PRESSURE: (2.4, 3.8, 6.0, 9.6) Mpa
4. SUITABLE TEMPERATURE: -20°C-180°C (-4°F-356°F)
5. SUITABLE Me DIM: water, oil, gas, etc

Applicable Standard		
Test and Inspection	API 598	
ITEM	PARTS	MATERIAL
1	BODY	ASTM A 351-CF8M
2	BONNET	1.4408
3	STEM	AISI 316
4	DISC	AISI 316
5	GLAND RING	AISI 316
6	GASKET	PTFE
7	PACKING	PTFE
8	WASHER	AISI 316
9	GLAND NUT	ASTM A351-CF8M/1.4408
10	HANDLE WHEEL	SS 400
11	HAME PLATE	ALUMINUM
12	NUT	AISI 304

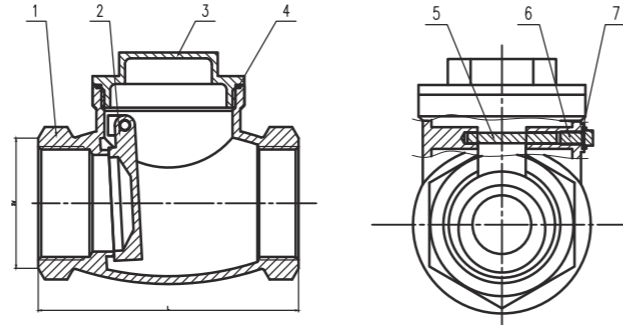
DN	G	L	E	B	H	W	d
6	1/4"	68	15	23	80	70	13
10	3/8"	68	15	26	80	70	19
15	1/2"	63	16	31	88	70	25
20	3/4"	82	18	38	95	70	31
25	1"	90	20	46	110	80	38
32	1 1/4"	103	21.5	56	123	100	50
40	1 1/2"	122	23	63	135	100	63
50	2"	140	24.5	76	150	100	76



➔ SWING CHECK VALVE



- FEATURES**
- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS 21 ISO 228/1 & ISO 7/1
 - Investment casting
 - 200 W.O.G.
 - W.T. : -20°C-180°C (-4°F-356°F)
 - Socket weld end(option)
 - Y pattern (option)

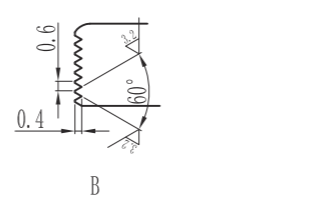
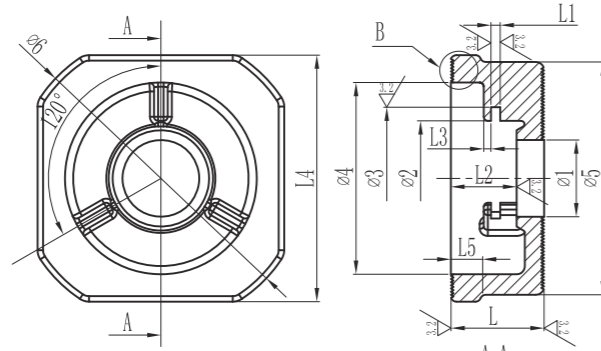


ITEM	PARTS NAME	MATERIAL	NO.
1	BODY	316	1
2	DISC	316	1
3	CAP	316	1
4	GASKET	PTFE	1
5	PIN	304	1
6	PLUG	304	1
7	PLUG SEAL	PTFE	

DN	d	L	H	Weight
				KG
15	15	63.5	13	0.3
20	19.5	77	15.75	0.5
25	25	87	19.5	0.8
32	32	101	24.5	1.2
40	37	120	28	1.5
50	49	131	33.5	2.5
65	60	159	90	3.8
80	80	190	104	5.9

NPS	d	L	H	Weight
				LB
1/2"	0.59	2.50	0.51	0.01
3/4"	0.77	3.03	0.62	0.02
1"	0.98	3.43	0.77	0.03
1 1/4"	1.26	3.98	0.96	0.05
1 1/2"	1.46	4.72	1.10	0.06
2"	1.93	5.16	1.32	0.10
2 1/2"	2.36	6.26	3.54	0.15
3"	3.15	7.48	4.09	0.23

➔ DISC CHECK VALVE (PN 40)



- FEATURES**
- The face to face conform to DIN 3202 part 3-K4
 - Investment casting
 - Max working temperature 480°F
 - Pressure Rating PN 40
 - W.T. : -20°C-180°C (-4°F-356°F)

DN	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
Φ1	14	18.5	23.8	30.5	38.4	48.4	62	74.5	94
Φ4	35	45	55	68	79	88	106	120	138
Φ5	42.5	53	63	76	87	97	116.8	130	150
L	16	19	22	28	32	40	46	50	60

➔ GATE VALVE (200 W.O.G.)

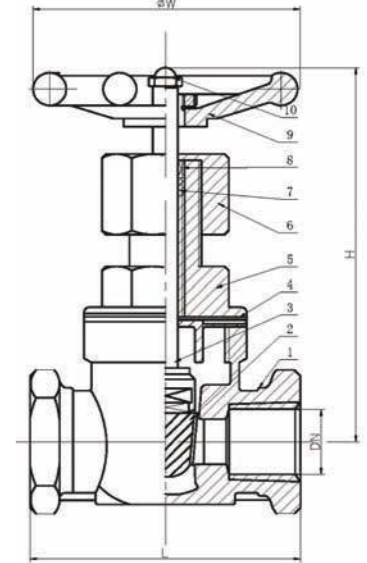


NO.	PART NAME	MATERIAL
1	Boby	316/304
2	Disc	316/304
3	Stem	316/304
4	Gasket	PTFE
5	Bonnet	316/304
6	Stop cap	316/304
7	Stem packing	PTFE
8	Gland	316/304
9	handle	Aluminum
10	Nut	316/304

- TECHNICAL SPECIFICATION**
1. NOMINAL PRESSURE:(1.6,2.5,4.0,6.4)Mpa
 2. STRENGRH TEST PRESSURE:(2.4,3.8,6.0,9.6)Mpa
 3. Face-to-face:ASME B16.10
 4. Pressure-Temperature class:200WOG
 5. Inspection and test: API 598
 6. End Standard: DIN 2999/BSP;SO228-1/BS2/2779
 7. W.T. : -20°C-180°C (-4°F-356°F)
 8. SUITABLE Me DIM: water,oil,gas,etc

NPS	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
d	0.63	0.80	1.02	1.25	1.57	1.98	2.44	2.99			
L	1.65	1.89	2.05	2.24	2.40	2.83	2.91	3.27	4.13	4.53	4.92
H	3.82	3.82	3.82	4.13	4.53	4.92	5.51	6.34	7.87	8.46	8.66
W	2.87	2.87	2.87	2.87	2.87	3.07	3.82	4.25	4.92	4.92	4.92

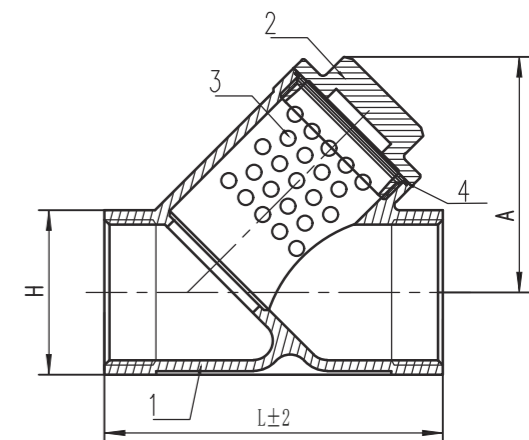
Performance Specification		
Nominal Pressure	200WOG	
Test Pressure	Intensity test	2.0
	Back seal test	1.3
	Seal test	1.3
	Gas test	0.6
Working Temperature	<200	C
Medium : water oil&gos		



➔ Y TYPE STRAINER (600/800 W.O.G.)



- FEATURES**
- The thread ends conform to ASME B1.20.1(NPT) DIN 2999 & BS 21 ISO 228/1 & ISO 7/1
 - Investment casting
 - Max working temperature 445°F
 - 600 W.O.G.
 - 800 W.O.G.(Option)
 - W.T. : -20°C-180°C (-4°F-356°F)

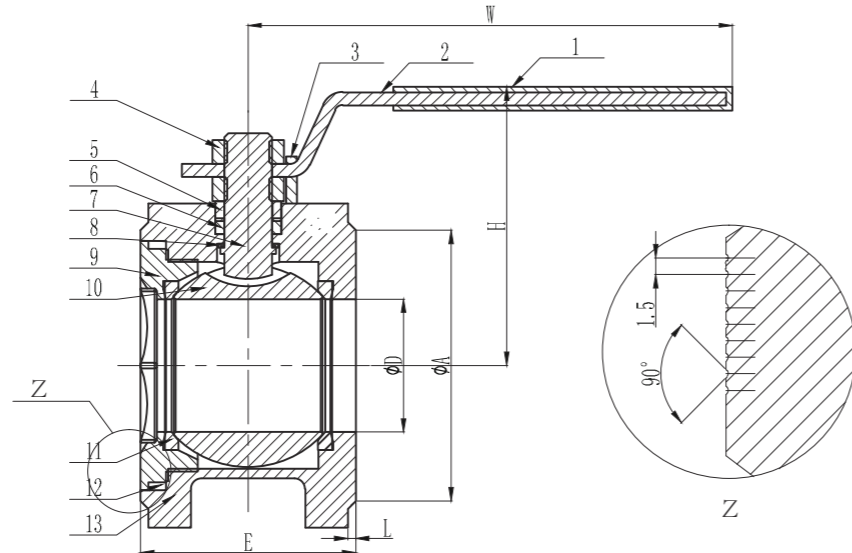


ITEM	PARTS NAME	MATERIAL	NO.
1	BODY	1.4308	1
2	CAP	1.4308	1
3	SCREEN	304	1
4	GASKET	PTFE	1

DN	L	H	D	d	W
8	62	20	13	1.2	2.2
10	62	26	13	1.2	2.2
15	62	26	16	1.2	2.2
20	78	33.5	21	1.2	2.2
25	91	40	25.5	1.2	2.2
32	105	48	32	1.2	2.2
40	120	58	40	1.2	2.2
50	140	68	50	1.2	2.2

NPS	L	H	D	d	W
1/4"					
3/8"					
1/2"	2.44	1.02	0.63	0.05	0.09
3/4"	3.07	1.32	0.83	0.05	0.09
1"	3.58	1.57	1.00	0.05	0.09
1 1/4"	4.13	1.89	1.26	0.05	0.09
1 1/2"	4.72	2.28	1.57	0.05	0.09
2"	5.51	2.68	1.97	0.05	0.09

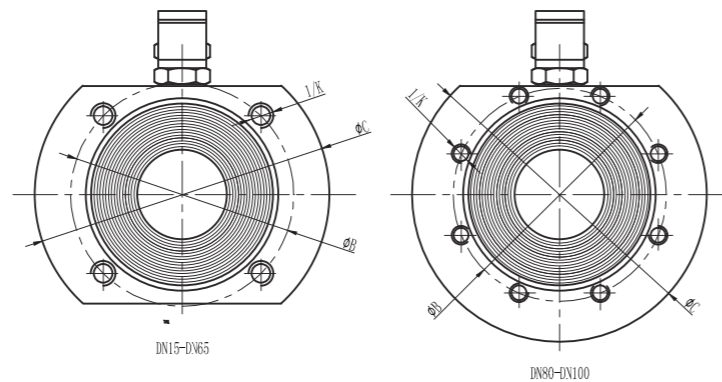
➔ 1PC FLANGE BALL VALVE



PERFORMANCE SPECIFICATION

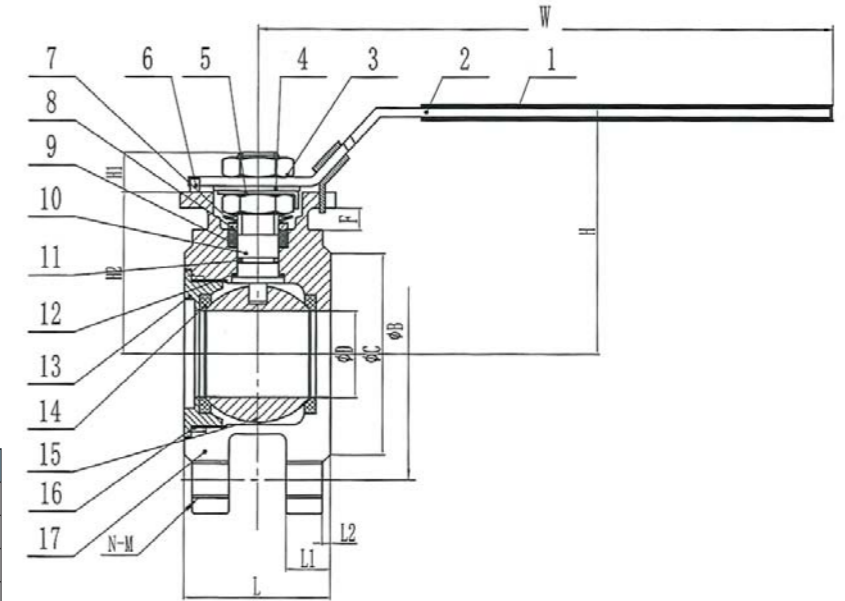
- Nominal pressure: DN15-DN50 580PSI, DN65-DN100 232PSI
- Shell test: DN15-DN50 6.0MPa, DN65-DN100 2.4MPa
- Seat test: 0.6MPa
- Suitable temperature: -20~220°C
- Suitable medium: WATER, OIL, GAS ETC

ITEM	PARTS	MATERIAL	NO.
1	BODY	CF8M/CF8	1
2	BODY SEAL	PTFE	1
3	BALL SEAT	PTFE	2
4	BALL	CF8M/CF8	1
5	CAP	CF8M/CF8	1
6	THRUST WASHER	316/304	1
7	STEM	PTFE	1
8	STEM PACKING	PTFE	2
9	STEM RING	304	1
10	STEM NUT	304	2
11	STOP BLOCK	304	1
12	HANDLE	304	1
13	HANDLE COVER	PLASTIC	1



SPEC	φA	φB	φC	φD	E	L	1/K	ISO5211	PRESSURE CINS
DN15	45	65	90	15	37	2	4-M12	F03	PN40
DN20	58	75	105	20	40	2	4-M12	F03	
DN25	68	85	115	25	43	2	4-M12	F04	
DN32	78	100	140	32	51	3	4-M16	F04	
DN40	88	110	150	38	63	3	4-M16	F05	
DN50	102	125	165	50	81	3	4-M16	F05	
DN65	122	145	185	65	101	3	4-M16	F07	
DN80	138	160	200	76	118	3	8-M16	F07	
DN100	158	180	220	94	150	3	8-M16	F10	

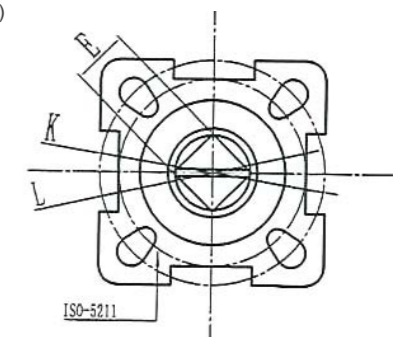
➔ 1PC WAFER VALVE WITH MOUNT PAD



ITEM	PARTS	MATERIAL	NO.
1	HANDLE	PVC	1
2	HANDLE	SUS304	1
3	NUT	SUS304	2
4	SQUARE	SUS304	1
5	LOCK	SUS304	1
6	SOCKET	SUS304	1
7	BELLEVILLE	SUS301	2
8	MH PACKING	SUS304	1
9	PACKING	PTFE	1
10	STEM	SUS316/SUS3	1
11	O-RING	VITON	1
12	THRUST	PTFE	1
13	CAP	CF8M/CF8	1
14	BALL SEAT	PTFE	2
15	BALL	CF8M/CF8	1
16	BODY SEAL	PTFE	1
17	BODY	CF8M/CF8	1

DESIGN FEATURES

- DIN2543. Flange connection hole conforms to din 2543.
- EN10226-1. Tests & inspect conform to EN12266-1.
- ISO5211. The platform size conform to 5211.
- Anti static device.
- Blow-out proof stem.
- W.T.: -20°C-180°C (-4°F-356°F)



SPEC	φ D	φ C	φ B	L	H	H2	H1	W	L1	L2	N-M	ISO5211	Lx K	F
DN15	15	45	65	36.8	77	49	10	132	11	2	8-M12	F03/F04	36x 42	12.5
DN20	20	58	75	39.8	84	55	10	132	11	2	8-M12	F03/F04	36x 42	14.5
DN25	25	68	85	43	91	62	10.5	162	15	2	8-M12	F04/F05	42x 50	15
DN32	32	78	100	53	106	72	14	170	16	2	8-M16	F05/F07	50x 70	16
DN40	40	88	110	63	112	78	14	170	15	3	8-M16	F05/F07	50x 70	18
DN50	50	102	125	81	119	86	14	170	15	3	8-M16	F05/F07	50x 70	18
DN65	65	122	145	101	142	100	17.5	260	15	3	8-M16	F07/F10	70x 102	22
DN80	76	138	160	118	158	116	17.5	260	17	3	16-M16	F07/F10	70x 102	20
DN100	94	158	180	150	168	128	18	260	17	3	16-M16	F07/F10	70x 102	20

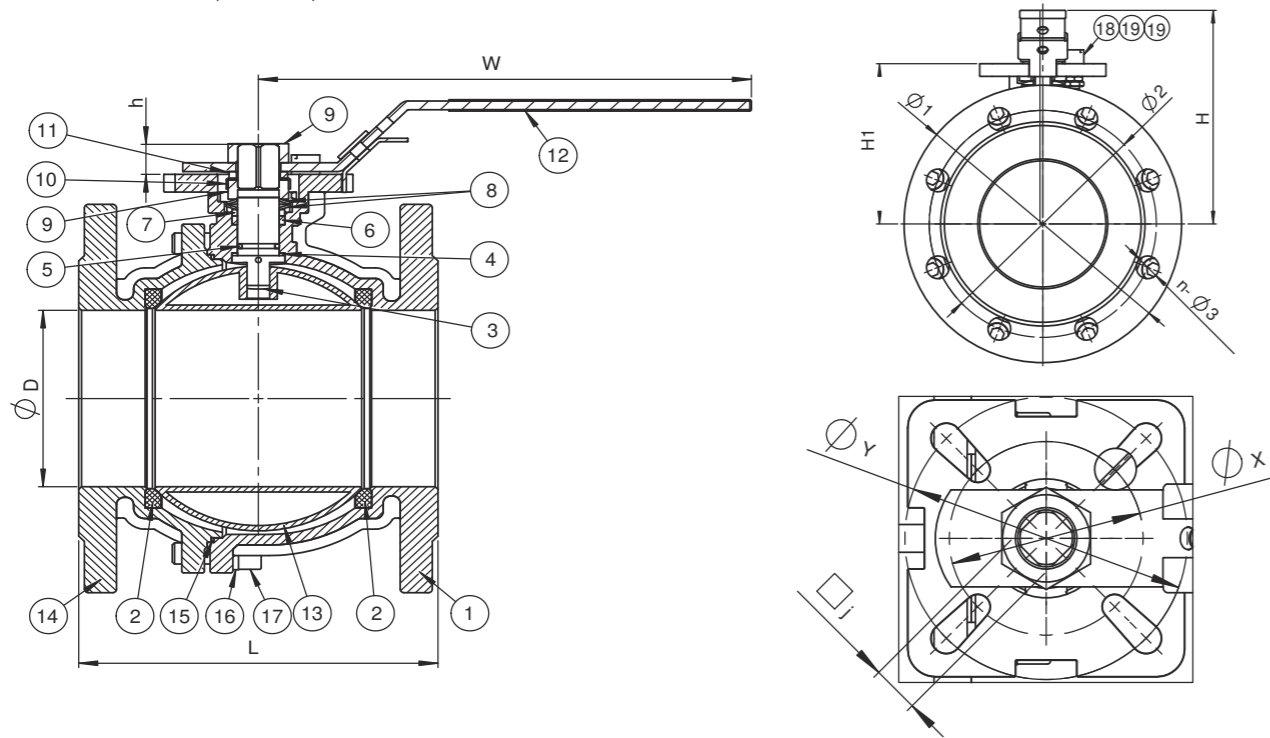
➔ 2PC FLANGE VALVE WITH MOUNT PAD



PERFORMANCE CERTIFICATION

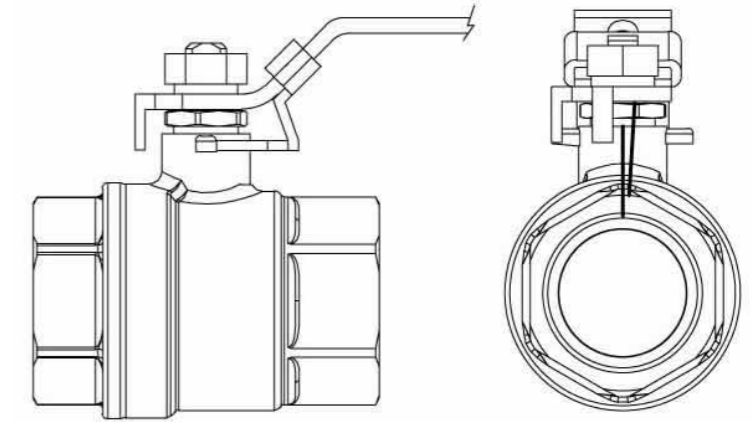
1. Design & manufacture conform to DIN3357
2. Test & inspect conform to EN12266
3. Flange dimension conforms to DIN 2543
4. The platform size conforms to ISO 5211
5. W.T. : -20°C-180°C (-4°F-356°F)

ITEM	PARTS	MATERIAL	NO.
1	2PC MH FLANGE BALL	CF6/CF9M	1
2	BALL SEAT	PTFE	2
3	2PC FLANGE MH STEM	304	1
4	THRUST WASHER	PTFE	1
5	O-RING	VITON	1
6	PACKING	PTFE	1
7	MH PACKING RING	304	1
8	BELLEVILLE WASHER	304	2
9	THIN NUT-FINE PITCH	304	2
10	LOCK WASHER	304	1
11	SQUARE WASHER	304	1
12	MH HANDLE W/LOCK	304	1
13	BALL	CF8/CF8M	1
14	2PC MH FLANGE BALL	CF8/CF8M	1
15	BODY SEAL	PTFE	1
16	SPRING WASHER	304	8
17	Socket Head Cap Screws	304	8
16	MH STOP PIN	304	1
19	NUT	304	2



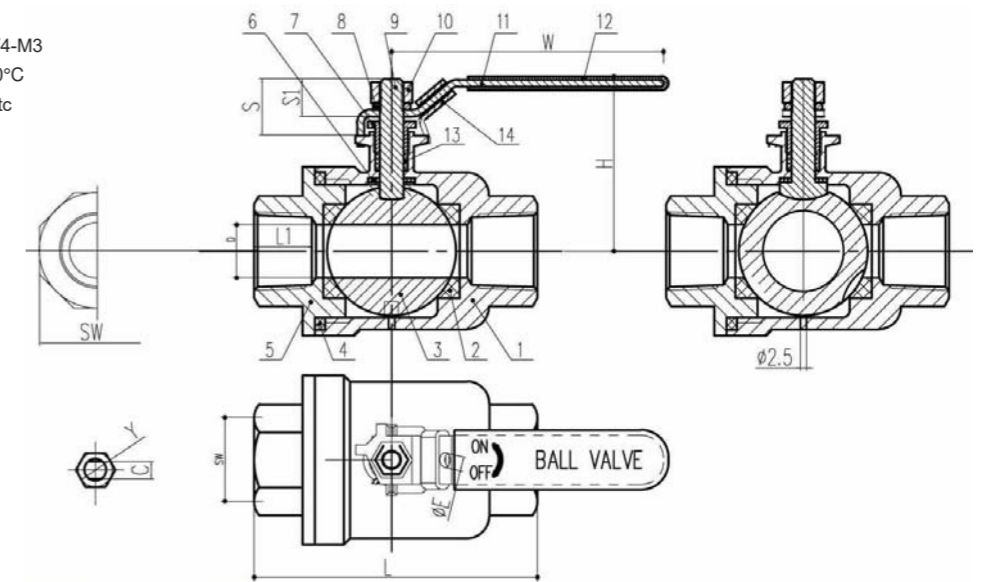
SIZE	D	L	1	2	3	n	H	HI	W	h	j	ISO 5211	X×Y	GEWICH
1/2	15	115	95	65	14	4	77.5	48	131.5	9	9	F03/F04	36×42	1.819
3/4	20	120	105	75	14	4	89	56	161.5	11	11	F04/F05	42×50	2.455
1	25	125	115	85	14	4	95	62	161.5	11	11	F04/F05	42×50	3.11
1 1/4	32	130	140	100	18	4	106.5	72	170.5	14	14	F05/F07	50×70	4.815
1 1/2	38	140	150	110	18	4	112.5	78	170.5	14	14	F05/F07	50×70	5.79
2	50	150	165	125	18	4	119.5	85	170.5	14	14	F05/F07	50×70	7.495
2 1/2	65	170	185	145	18	4	142.5	100	261	17	17	F07/F10	70×102	10.779
3	80	180	200	160	18	4	154.5	112	261	17	17	F07/F10	70×102	13.718
4	100	190	220	180	18	8	169.5	127	261	17	17	F07/F10	70×102	17

➔ 2PC EXHAUST VALVE



PERFORMANCE CERTIFICATION

1. Gas Tightness: 0.6Mpa
2. Dimension conform to: DIN3202/4-M3
3. Suitable Temperature: -20°C-180°C
4. Suitable Me DIM: water,oil,gas,etc



ITEM	CODE	PARTS	MATERIAL	NO.
1	2PC -A -01	BODY	304/316	1
2	2PC -A -02	BALL SEAT	PTFE+15%	2
3	2PC -A -03	BALL	304/316	1
4	2PC -A -04	BODY SEAL	PTFE	1
5	2PC -A -05	CAP	304/316	1
6	2PC -A -06	THRUST	PTFE	1
7	2PC -A -07	GLAND RING	SUS 304	1
8	2PC -A -08	SPRING	SUS 304	1
9	2PC -A -09	STEM	304/316	1
10	2PC -A -10	NUT	SUS 304	1
11	2PC -A -11	HANDLE WHIT	SUS 304	1
12	2PC -A -12	HANDLE	PVC	1
13	2PC -A -13	PACKING	PTFE	1
14	2PC -A -14	LOCK	SUS 304	1

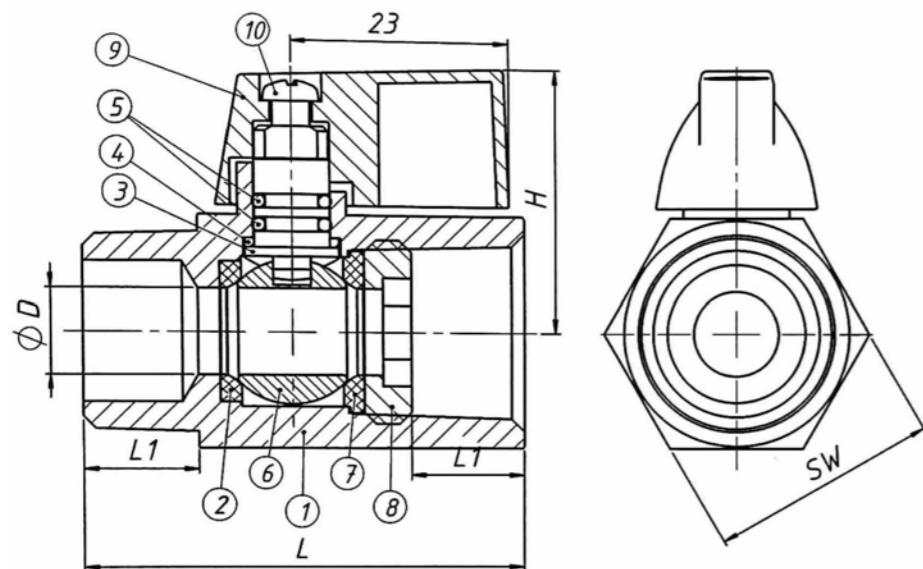
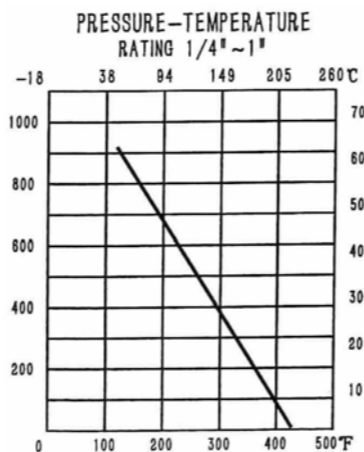
SIZE	1/4"	3/8"	1/2"	3/4"	1"
D	11.5	12.5	15	20	25
L	40.0	41.0	50.0	56.0	68
H	44	44	46	53	57
W	85	85	95	120	120
SW	16.5	20.0	24.0	30.0	36.5
S	15.3	16.0	16.5	18.0	17.5
S1	10.2	10.5	11.5	11.5	11.3
L1	8.0	9.5	11.5	12.0	15.0
C	5	5	5	5.8	5.8

➔ MINI VALVE MF



FEATURES

- Reduced port, 1/8"-3/4"(DN6-DN20)
- W.P.:1000 WOG(PN63)
- W.T.: -20°C-200°C(-4°F-392°F)
- Investment casting
- Blow-out proof stem
- Connection type:
Female X Male
Female X Female
Male X Male
- Thread type: ASME B1.20.1(NPT)
DIN2999 & BS21
ISO7/1 & EN10226



SIZE	1/4"	3/8"	1/2"	3/4"	1"
D	7	7	9.2	12.5	15
L	40	40	46.5	53.5	65.5
L1	11	10	12	14	17
H	26.5	26.5	28	31.5	35
SW	21	21	25	31	38
GEWICHT	0.086	0.083	0.128	0.205	0.369

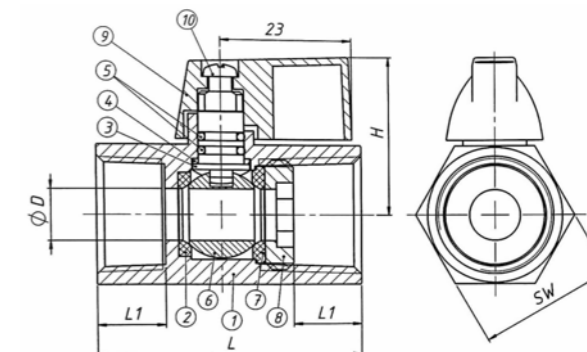
ITEM	PARTS	MATERIAL	NO.
1	MINI BODY MF	CF8/CF8M	1
2	BALL SEAT	PTFE	1
3	MINI STEM	316/304	1
4	THRUST WASHER	PTFE	1
5	O-RING	NBR	2
6	BALL	CF8/CF8M	1
7	BALL SEAT	PTFE	1
8	MINI SET F	316/304	1
9	LEVER	AL ALLOY	1
10	Cross recessed pan head Screw	304	1

➔ MINI VALVE FF



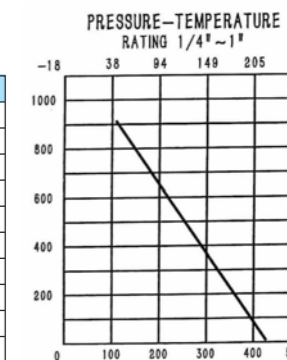
FEATURES

- Reduced port, 1/8"-3/4"(DN6-DN20)
- W.P.:1000 WOG(PN63)
- W.T.: -20°C-200°C(-4°F-392°F)
- Investment casting
- Blow-out proof stem
- Connection type:
Female X Male
Female X Female
Male X Male
- Thread type: ASME B1.20.1(NPT)
DIN2999 & BS21
ISO7/1 & EN10226



SIZE	1/4"	3/8"	1/2"	3/4"	1"
D	7	7	9.2	12.5	15
L	40	40	46.5	53.5	65.5
L1	11	10	12	14	17
H	26.5	26.5	28	31.5	35
SW	21	21	25	31	38
GEWICHT	0.103	0.091	0.137	0.219	0.389

ITEM	PARTS	MATERIAL	NO.
1	MN BODY FF	CF8/CF8M	1
2	BALL SEAT	PTFE	1
3	MINI STEM	316/304	1
4	THRUST	PTFE	1
5	O-RNG	NBR	2
6	BALL	CF8/CF8M	1
7	BALL SEAT	PTFE	1
8	MINI SET F	316/304	1
9	LEVER	AL ALLOY	1
10	Cross Recessed	304	1

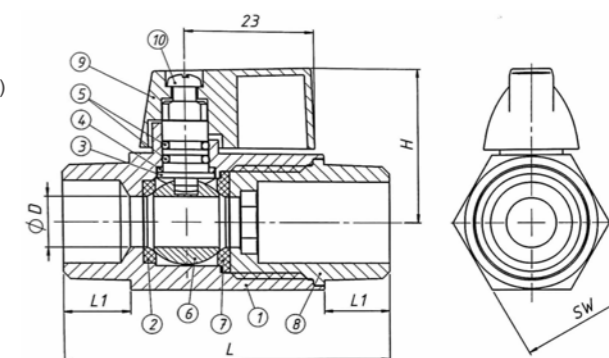


➔ MINI VALVE MM



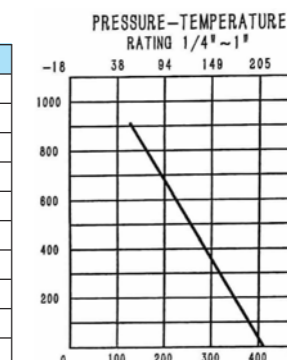
FEATURES

- Reduced port, 1/8"-3/4"(DN6-DN20)
- W.P.:1000 WOG(PN63)
- W.T.: -20°C-200°C(-4°F-392°F)
- Investment casting
- Blow-out proof stem
- Connection type:
Female X Male
Female X Female
Male X Male
- Thread type: ASME B1.20.1(NPT)
DIN2999 & BS21
ISO7/1 & EN10226



SIZE	1/4"	3/8"	1/2"	3/4"	1"
D	7	7	9.2	12.5	15
L1	51	50	58.5	67.5	82.5
L1	11	10	12	14	17
H	26.5	26.5	28	31.5	35
SW	21	21	25	31	38
GEWICHT	0.095	0.096	0.156	0.251	0.46

ITEM	PARTS	MATERIAL	NO.
1	MINI BODY MM	CF8/CF8M	1
2	BALL SEAT	PTFE	1
3	MINI STEM	316/304	1
4	THRUST WASHER	PTFE	1
5	O-RING	NBR	2
6	BALL	CF8/CF8M	1
7	BALL SEAT	PTFE	1
8	MINI SET F	316/304	1
9	LEVER	AL ALLOY	1
10	Cross recessed pan head Screw	304	1



➔ 2PC BALL VALVE WITH MOUNT PAD

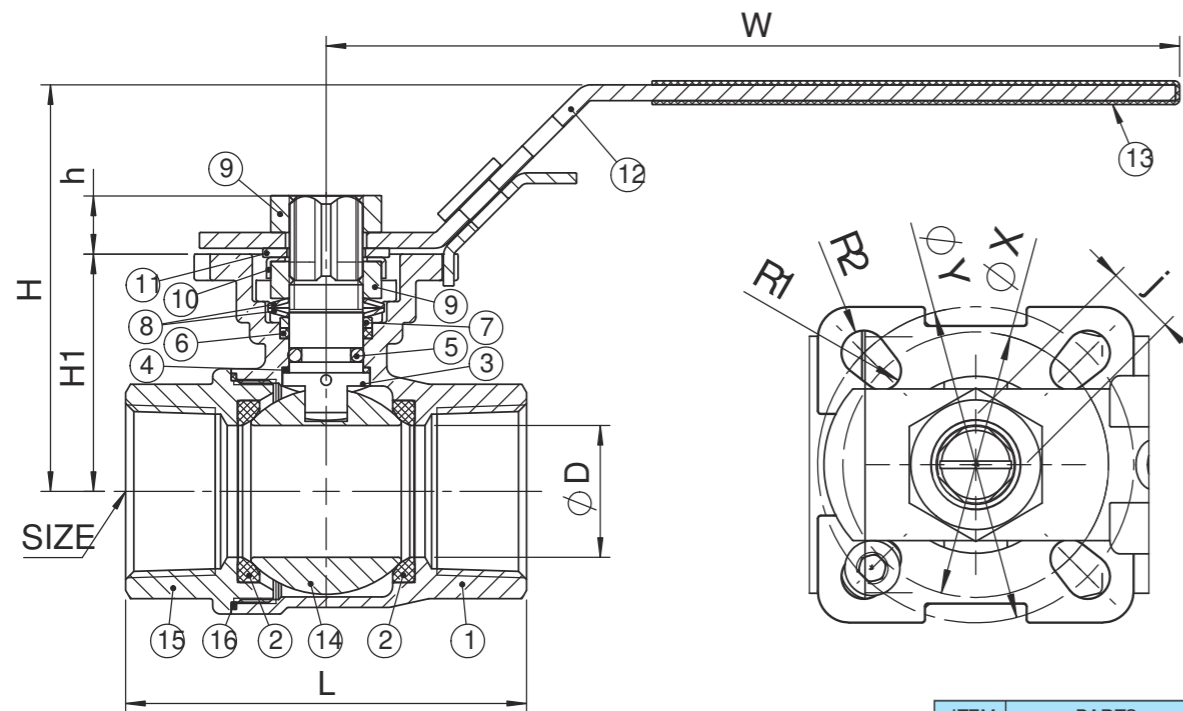
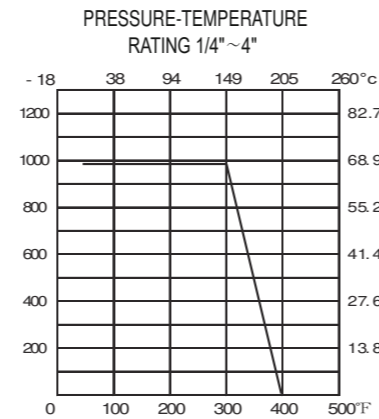


FEATURES

- 2PC Ball Valve F/F With Mounting Pad
- Material:CF8/CF8M
- Maximum working pressure:PN63
- W.T. : -20°C-180°C (-4°F-356°F)
- Device locking system
- Direct mounting for actuators ISO5211(option)
- Female threads ends according to EN 10226-1/ISO7-1/PT/NPT

GENERAL APPLICATIONS

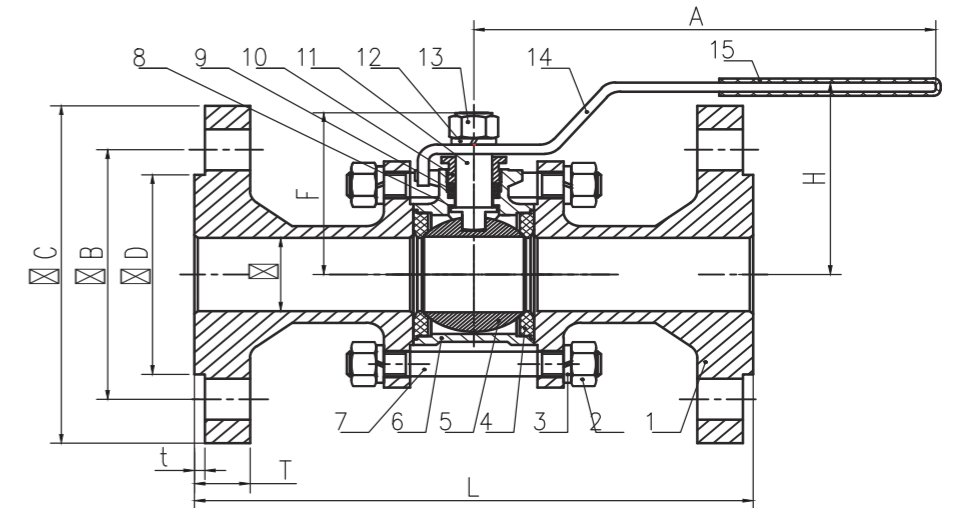
- chemical ,food, thermal and pharmaceutical industries
- water lines, gas, steam, condensates and oils



ITEM	PARTS	MATERIAL	NO.
1	2PC MH BODY	CF8/CF8M	1
2	BALL SEAT	PTFE	2
3	VALVE MH STEM	304	1
4	THRUST WASHER	PTFE	1
5	O-RING	VITON	1
6	PACKING	PTFE	1
7	MH PACKING RING	304	1
8	BELLEVILLE WASHER	304	2
9	THIN NUT-FINE	304	2
10	LOCK WASHER	304	1
11	SQUARE WASHER	304	1
12	MH HANDLE W/LOCK	304	1
13	HANDLE COVER	PVC	1
14	BALL	CF8/CF8M	1
15	2PC MH CAP	CF8/CF8M	1
16	BODY SEAL	PTFE	1
17	Socket Head Cap	304	1
18	FLAT WASHER	304	1
19	NUT	304	1

SIZE	D	L	H	H1	W	h	j	ISO	XxY	Gewicht
1/4"	9	48	60.5	32.5	131.5	9	9	F03/F04	36x42	0.277
3/8"	12.5	48	60.5	32.5	131.5	9	9	F03/F04	36x42	0.281
1/2"	15	56	63	35	131.5	9	9	F03/F04	36x42	0.352
3/4"	20	64	68	30.5	131.5	9	9	F03/F04	36x42	0.443
1"	25	76	77	45	161.5	11	11	F04/F05	42x50	0.707
1 1/4"	32	87	83	50.5	170.5	11	11	F04/F05	42x50	1.035
1 1/2"	38	98	91	57.5	170.5	14	14	F05/F07	50x70	1.635
2"	50	118	100	66.5	170.5	14	14	F05/F07	50x70	2.256
2 1/2"	65	146	131	89.5	260	17	17	F07/F10	70x102	4.656
3"	76	168	140	98.5	260	17	17	F07/F10	70x102	6.517
4"	94	220	157	115	260	17	17	F07/F10	70x102	10.989

➔ 3PC FLANGE BALL VALVE



FEATURES

- Full port, 1/2"-4"(DN15-DN100)
- Body W.P.: 1000 WOG(PN63)
- Flange End W.P.:PN40
- W.T.: -20°C-200°C(-4°F-392°F)
- Investment casting
- Blow-out proof stem
- Anti-static device (option)
- Locking device
- ISO 5211 Direct mounting pad -2010D(option)
- Flange dimension: DIN 2501-PN40
- Face to face: DIN 3202-F1

SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
Φ	15	20	25	32	38	50	64	76	94
ΦB	65	75	85	100	110	125	145	160	190
ΦC	95	105	115	140	150	165	185	200	235
ΦD	45	58	68	78	88	102	122	138	162
A	95	110	135	135	165	165	220	220	320
H	50.5	59	70	75	94.5	102	135	144	173
T	16	18	18	18	18	20	22	24	24
t	2	3	3	3	3	3	3	3	3
L	130	150	160	180	200	230	290	310	350
F	42.6	50.9	58.9	67.9	79.8	87.6	110.1	119.1	160.8

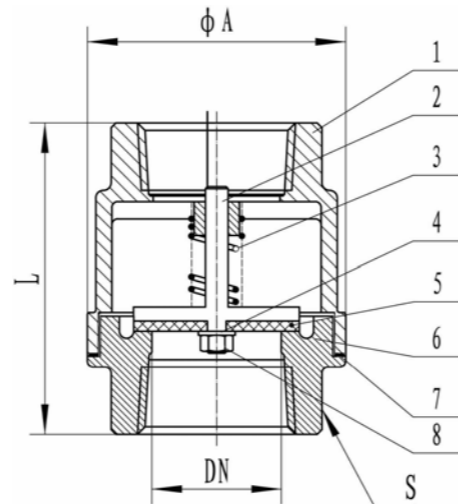
ITEM	CODE	PARTS	MATERIAL	NO.
1	Q-3PC-01	FLANGE COVER	1.4301	1
2	Q-3PC-02	NUT	SUS 304	4
3	Q-3PC-03	SPRING PAD	SUS 304	4
4	Q-3PC-04	BALLPAD	RPTFE	2
5	Q-3PC-05	SPHERE	SUS 304	1
6	Q-3PC-06	VALVEBODY	1.4301	1
7	Q-3PC-07	BOLT	SUS 304	4
8	Q-3PC-08	SMALL FLAKE	PTFE	1
9	Q-3PC-09	PACKING	PTFE	1
10	Q-3PC-10	GRAN	SUS 304	1
11	GB/T93-1987	CENTRALAXIS	SUS 304	1
12	GB/T6170-1986	SPRING PAD	SUS 304	1
13	GB/T6170-1986	NUT	SUS 304	1
14	Q-3PC-10	HANDLE	SUS 304	1
15	Q-3PC-11	HANDLE GRIP	PLASTICS	1

➔ 2PC VERTICLE CHECK VALVE



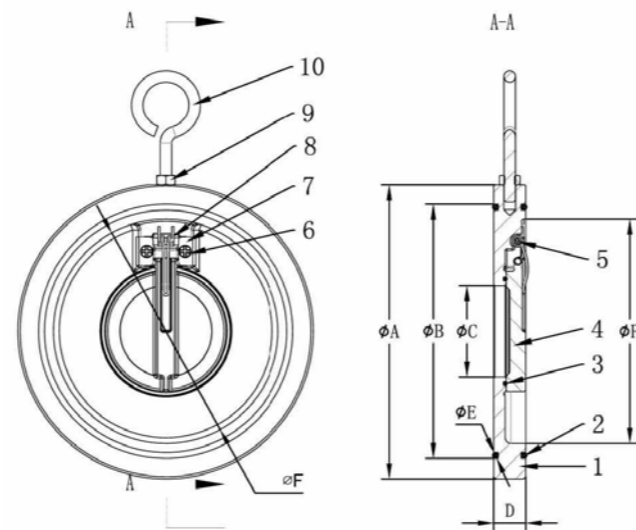
- FEATURES:**
- 1000PSI/PN63
 - Investment Casting
 - PED 2014/68/EU
 - Temperature range: -20-150°C
 - W.T. : -20°C-180°C (-4°F-356°F)
 - Thread: ASME B1.20.1 BS21.DIN2999/259 ISO228-1,JS B 0203,ISO7/1
 - Inspection Testing:API5 98,EN12266

ITEM	PARTS	MATERIAL
1	BODY	CF8/CF8M
2	STEM	CF8M/CF8
3	SPRING	SUS 304/SUS
4	PACK RING	304
5	SEAT	PTFE
6	CAP	CF8/CF8M
7	BODY PACKING	PTFE
8	NUT	304



SIZE	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
DN	8	10	15	20	25	32	38	50
ΦA	26.7	26.7	32	38.7	46	58	67.5	87
L	51	51	56	58	67	81	88	97
S	20	20	24	30	36.5	46	53	65.5

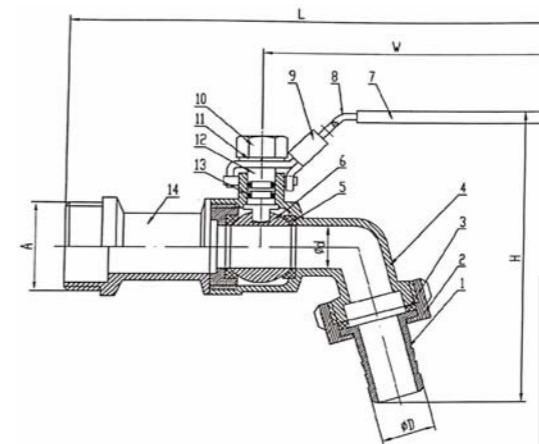
➔ CHECK VALVE



ITEM	PARTS	MATERIAL	NO.
1	Black valve body	304/316	1
2	Valve body sealing	EPDM black	2
3	Valve plate sealing	EPDM black	1
4	Valve plate	304/316	1
5	Spring fixed shaft	304/316	1
6	Pressing plate bolt	304/316	2
7	Pressing plate	304/316	2
8	Valve plate	304/316	1
9	Lock nut	304	1
10	Rings	304	1

SPEC	ΦA	ΦB	ΦC	D	ΦE	ΦF
DN32	85	72	18	14	2.40	62.5
DN40	94	80	22	14	2.40	70
DN50	109	90	32	14	2.40	80
DN65	129	111.5	40	14	2.65	98
DN80	144	120	54	14	3.10	106
DN100	164	148	70	18	3.55	134
DN125	194	172	92	18	3.55	158
DN150	220	200	112	20	4.00	184

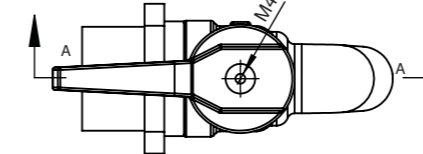
➔ BIBCOCK VALVE



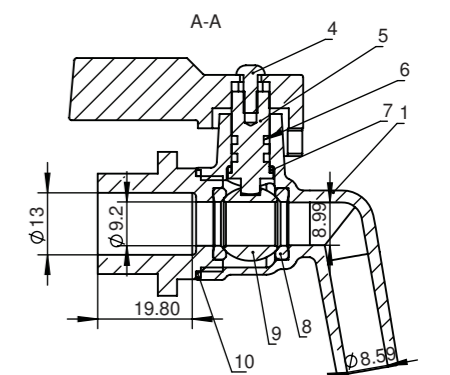
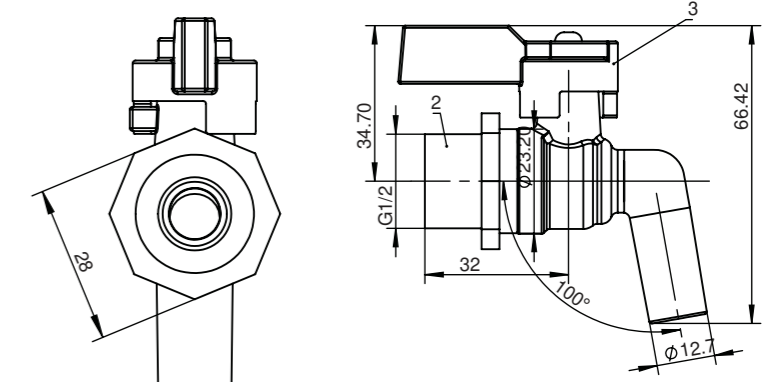
SPEC	A	d	D	W	L	H
1"	G1	15	27.5	100	168	115
3/4"	G3/4	12.5	16	100	155	87
1/2"	G1/2	9.2	13	100	155	85

ITEM	PARTS	MATERIAL	NO.
1	HOSE	CF8/CF8M	1
2	NUT	CF8/CF8M	1
3	RING	NBR	1
4	BODY	CF8/CF8M	1
5	BALL SEAT	PTFE	2
6	BALL	CF8/CF8M	1
7	HANDLE COVER	PLASTIC	1
8	HANDLE	304	1
9	LOCKING	304	1
10	STEMNUT	304	1
11	WASHER	304	1
12	STEM	304/316	1
13	O-RING	NBR	2
14	CAP	304/316	1

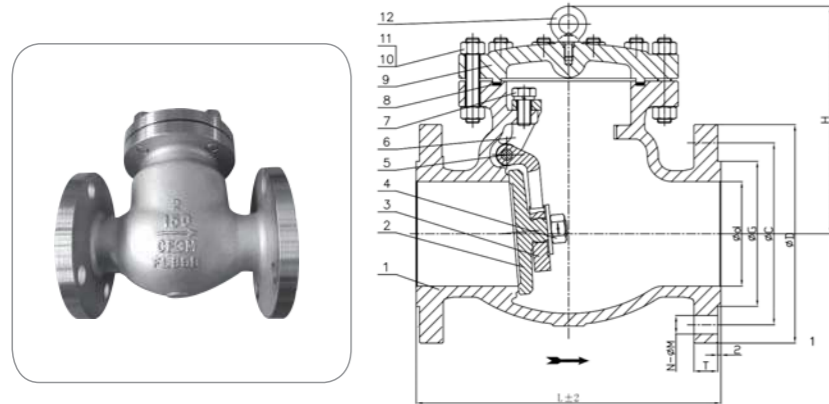
➔ POLISHED BIBCOCK TAP



ITEM	PARTS	MATERIAL	NO.	SPEC
1	VALVE BOD	CF8/CF8M	1	
2	VALVE CAP	CF8/CF8M	1	
3	HANDLE	CF8/CF8M	1	
4	BOLT	304	1	Round head cross M4 x10
5	STEM	304/316	1	
6	O-RING	NBR	2	Same as KFE
7	PACKING	PTFE	1	
8	BALL SEAT	PTFE	2	Same as 1PC1/2 ball pad
9	BALL	304/316	1	Same as 1PC1/2
10	WASHER	PTFE	1	



➔ CHECK VALVE CL150 FLANGED END

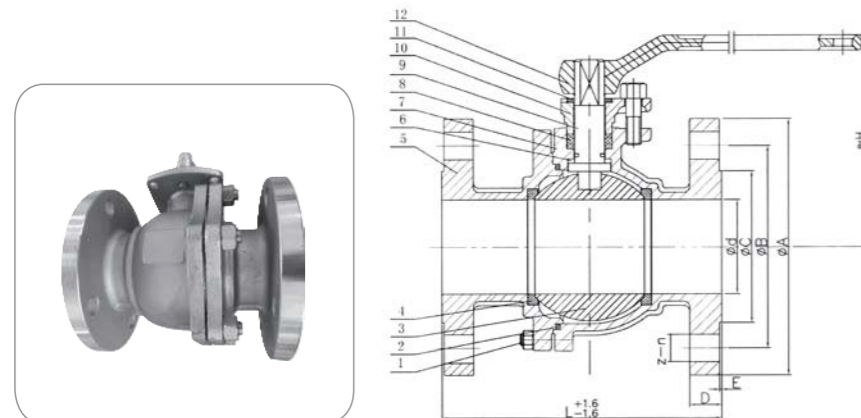


Main Technical Parameter			
Normal pressure	150	Lb	
Test pressure	Shell test	3.0	MPa
	Tightness test	2.2	
	Have and seal	/	
	Gas-Tightness	0.6	
Max working temperature	-29~425	°C	
Applicable medium: water, gas, oil, acid			

No.	Parts name	Material
1	Body	316
2	disc	316
3	Arm	316
4	Nuts	ASTMA194-2H
5	Pin	316
6	Yoke	316
7	Bolt	ASTM
8	Gasket	Graphite + 304
9	Bonnet	316
10	Stud	ASTMA193-B7
11	Nuts	ASTMA194-2H
12	Eye Bolt	ASTMA193-B7

SIZE	Φd	L	ΦD	ΦC	ΦG	T	N-ΦM	H
2	50	203	150	120.7	92	17.5	4-19	132
2 1/2	65	216	180	139.7	105	20.7	4-19	145
3	80	241	190	152.4	127	22.3	4-19	176
4	100	292	230	190.5	157	22.3	8-19	200
5	125	330	255	215.9	186	22.3	8-22	255
6	150	356	280	241.3	216	23.9	8-22	320
8	200	495	345	298.5	270	27	8-22	380

➔ FLANGED END FOR 2PC BALL VALVES

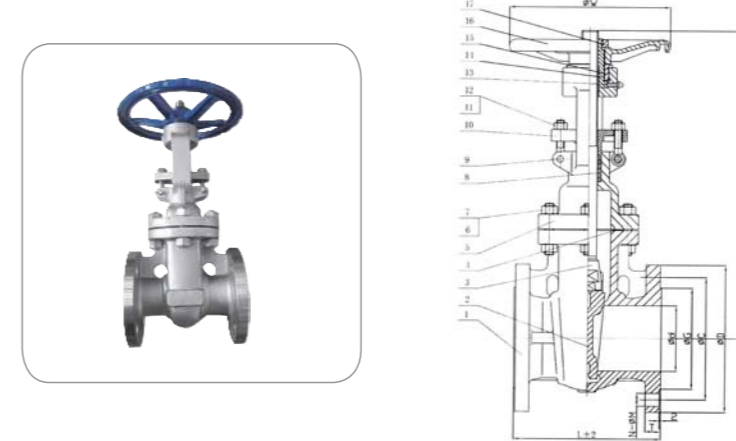


No.	Parts name	Material
1	Bolt	ASTMA320 B8
2	Gasket	PTFE
3	Ball	316
4	Seal	PTFE/R-PTFE
5	Cap	316
6	Gasket	PTFE/R-PTFE
7	Boby	316
8	V-Packing	FTFE
9	Stem	316
10	Packing Gland	301
11	Stop Plate	304
12	Handle	CS

Performance Specification			
Nominal Pressure	150	LB	
Test pressure	Intensity test	3.1	MPa
	Bock seol test	/	
	Seal test	2.3	
	Gas test	0.6	
Working Temperature	≤150	°C	
Medium: water oil & gas			

SIZE	d	A	B	C	D	E	L	Z-Φn	H
1/2	15	89	60.5	35	11	2	108	4-16	92
1	25	108	79	51	14	2	127	4-16	97
1 1/2	38	127	98.5	73	17.5	2	165	4-16	120
2	49	152	120.5	92	19	2	178	4-19	135
2 1/2	65	178	139.5	105	22	2	190	4-19	163
3	78	190.5	152.5	127	24	2	203	4-19	178
4	98	229	190.5	157	24	2	229	8-19	207
6	150	279	241.5	216	26	3	279	8-22	264

➔ GATE VALVE CL150 FLANGED END

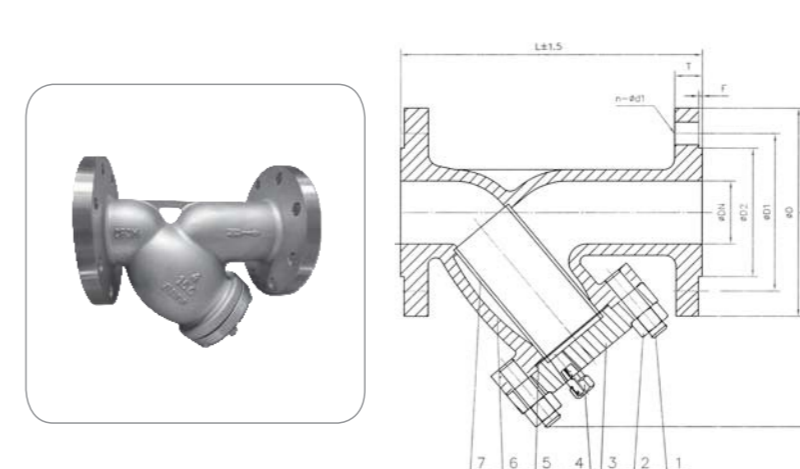


Main Technical Parameter			
Normal pressure	150	Lb	
Test pressure	Shell test	3.0	MPa
	Tightness test	2.2	
	Have and seal testing	2.2	
	Gas-Tightness test	0.6	
Max working temperature	-29~425	°C	
Applicable medium: water, gas, oil, acid			

No.	Parts name	Material
1	Body	316
2	Gate disc	316
3	Stem	ASTMA182 316
4	Gasket	ASTMA182 316
5	Bonnet	316
6	Stud	ASTMA193-B7
7	Nuts	ASTMA194-2H
8	Packing	Graphite
9	Pin	ASTMA 276 410
10	Packing gland	316
11	Nuts	ASTMA194-2H
12	Eyebolt Bolt	ASTMA193-B7
13	Nipple	Copper Alloy
14	Stem	Ductile Iron
15	Bearing Gland	ASTM 1035
16	Handle	Ductile Iron
17	Handle nut	ASTM 1035

SIZE	ΦD	L	ΦD	ΦC	ΦG	T	N-ΦM	H	W
2	50	178	150	120.7	92	17.5	4-19	315	200
2 1/2	65	190	180	139.7	105	20.7	4-19	340	200
3	80	203	190	152.4	127	22.3	4-19	371	250
4	100	229	230	190.5	157	22.3	8-19	465	250
5	125	254	255	215.9	186	22.3	8-22	500	300
6	150	267	280	241.3	216	23.9	8-22	585	300
8	200	292	345	298.5	270	27	8-22	630	350

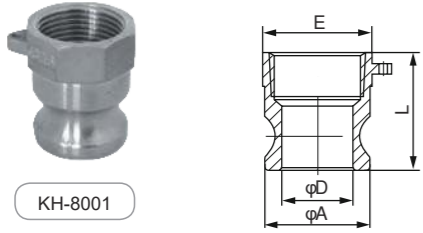
➔ Y STRAINER CL150 FLANGED END



No.	Parts name	Material
1	Bolt	304
2	Nut	304
3	Cap	316
4	Blow-off	304
5	Gasket	316+Graphite
6	Boby	316
7	Filter	316

Perform once Specification			
Nominal Pressure	150	LB	
Test pressure	Intensity test	3.1	MPa
	Bock seol test	/	
	Seal test	2.3	
	Gas test	0.6	
Working Temperature	≤150	°C	
Medium: water oil & gas			

SIZE	d	L	D2	D1	D	C	f	n-d1	H
2	50	220	92	120.5	152	16	2	4-19	180
2 1/2	65	290	105	139.5	178	18	2	4-19	250
3	80	310	127	152.5	191	19	2	4-19	280
4	100	350	157	190.5	229	24	2	8-19	320



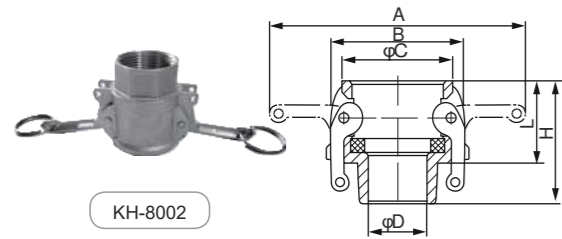
KH-8001

TYPE:A

DIMENSIONS UNIT:mm

SIZE	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
	mm	15	20	25	32	40	50	65	80	100
D		15.8	23.2	24.5	31	39.5	48.5	60.4	76	103
A		24	31.7	36	45.2	52.5	62.7	76	91	118.9
E		25	32.7	38	46.5	54.5	64	80	96	122
L		34	36.5	41	48.6	50.6	55.3	71	63.8	65

Dimension: ANSI B16.3
 Ends Type: ASME B1.20.1(NPT); DIN2999; BS2111, ISO228/1; ISO7/1; BSP
 Material: ASTM A351-CF8M/1.4408; ASTM A351-CF8/1.4401;
 ASTM A216 WCB; AISI 304,304L,316,316L,316Ti.



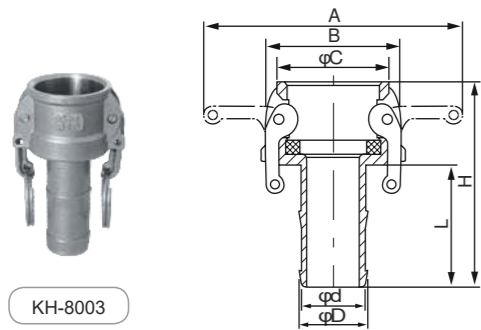
KH-8002

TYPE:B

DIMENSIONS UNIT:mm

SIZE	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
	mm	15	20	25	32	40	50	65	80	100
D		15	20.5	26	34	40	50	65	77.5	102
A		106	114.5	126.5	176.5	184.5	193	206	230	258
B		43.16	49.52	58.54	70.52	77.61	87.77	101.02	121.01	154.53
C		32.5	40.7	46.5	57.2	63	73.5	87	103.5	132.5
L		29.00	31.00	38.10	44.90	45.60	51.80	53.90	58.20	59.00
H		43.5	46	54	64.9	65.2	76.4	80	87	93.7

Dimension: ANSI B16.3
 Ends Type: ASME B1.20.1(NPT); DIN2999; BS2111, ISO228/1; ISO7/1; BSP
 Material: ASTM A351-CF8M/1.4408; ASTM A351-CF8/1.4401;
 ASTM A216 WCB; AISI 304,304L,316,316L,316Ti.



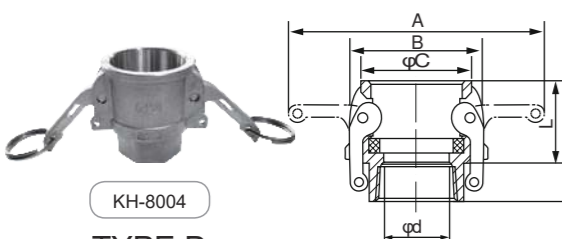
KH-8003

TYPE:C

DIMENSIONS UNIT:mm

SIZE	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
	mm	15	20	25	32	40	50	65	80	100
d		13.5	18.7	25.4	31	37.8	50.5	61	74.5	101
D		15.32	20.00		33.00	39.50	52.60	62.50	76.50	105.00
A		106	114.5	126.5	176.5	184.5	193	206	230	258
B		43.2	50.31		70.52	77.61	88	100.7	121.01	150.03
C		32.5	40.7	46.5	57.2	63	73.5	87	103.5	132.5
L		45	56	68.5	69	70	78	85	90.5	95
H		73.5	86.5	104.3	113.4	115	129.1	138	147.8	153

Dimension: ANSI B16.3
 Ends Type: ASME B1.20.1(NPT); DIN2999; BS2111, ISO228/1; ISO7/1; BSP
 Material: ASTM A351-CF8M/1.4408; ASTM A351-CF8/1.4401;
 ASTM A216 WCB; AISI 304,304L,316,316L,316Ti.



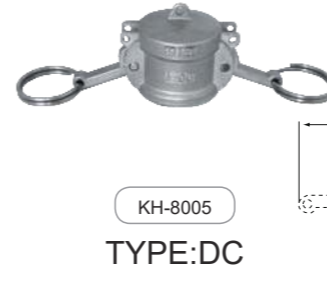
KH-8004

TYPE:D

DIMENSIONS UNIT:mm

SIZE	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
	mm	15	20	25	32	40	50	65	80	100
d		27	34.5	38.5	47.7	56	66.4	78.5	94.5	122.9
A		106	114.5	126.5	176.5	184.5	193	206	230	258
B		43.2	50.5	58.39	70.52	77.61	88.5	101.02	121.01	150.03
C		32.5	40.7	46.5	57.2	63	73.5	87	103.5	132.5
L		29	31	38.1	44.9	45.6	51.8	53.9	58.2	59
H		42.9	45	54.2	64.2	64.8	73.3	81	87	90

Dimension: ANSI B16.3
 Ends Type: ASME B1.20.1(NPT); DIN2999; BS2111, ISO228/1; ISO7/1; BSP
 Material: ASTM A351-CF8M/1.4408; ASTM A351-CF8/1.4401;
 ASTM A216 WCB; AISI 304,304L,316,316L,316Ti.



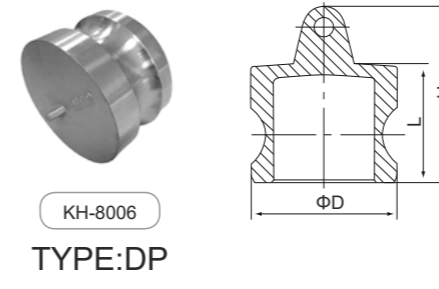
KH-8005

TYPE:DC

DIMENSIONS UNIT:mm

SIZE	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
	mm	15	20	25	32	40	50	65	80	100
A		106	114.5	126.5	176.5	184.5	193	206	230	258
B		43.2	50.5	58.54	70.52	77.61	88.49	100.95	120.86	150
C		32.5	40.7	46.5	57.2	63	73.5	87	103.5	132.5
L		31.48	32.49	40.96	47.08	48.09	54.18	58.87	63.18	63.98

Dimension: ANSI B16.3
 Ends Type: ASME B1.20.1(NPT); DIN2999; BS2111, ISO228/1; ISO7/1; BSP
 Material: ASTM A351-CF8M/1.4408; ASTM A351-CF8/1.4401;
 ASTM A216 WCB; AISI 304,304L,316,316L,316Ti.



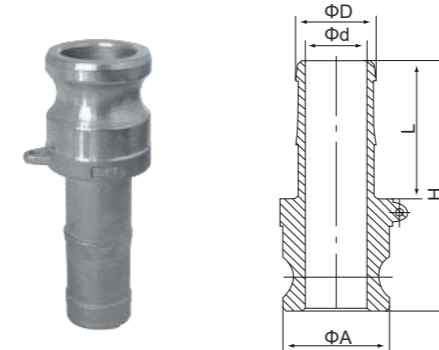
KH-8006

TYPE:DP

DIMENSIONS UNIT:mm

SIZE	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
	mm	15	20	25	32	40	50	65	80	100
D		24	31.7	36	45.2	52.5	62.7	76	91	118.9
L		30.38	32.57	37.09	41.68	43.43	48.27	54.37	58.27	57.98
H		36.62	38.80	45.64	49.95	51.95	58.80	62.90	70.80	72.00

Dimension: ANSI B16.3
 Ends Type: ASME B1.20.1(NPT); DIN2999; BS2111, ISO228/1; ISO7/1; BSP
 Material: ASTM A351-CF8M/1.4408; ASTM A351-CF8/1.4401;
 ASTM A216 WCB; AISI 304,304L,316,316L,316Ti.



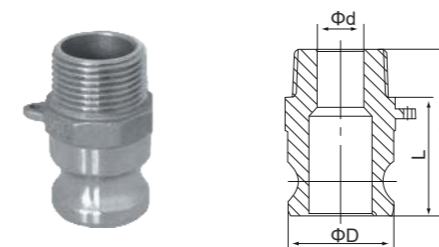
KH-8007

TYPE:E

DIMENSIONS UNIT:mm

SIZE	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
	mm	15	20	25	32	40	50	65	80	100
d		8.5	15.9	21.5	26.8	33	44.2	57	69.5	94
D		14.78	20	27	33	39.5	52.6	62.5	76.5	104
A		15.8	23.2	24.5	31	39.5	48.5	60.4	76	103
L		45	56	67.5	69	70	78	85	90.5	95
H		78	91	106.5	116.5	118	130	143	150	157

Dimension: ANSI B16.3
 Ends Type: ASME B1.20.1(NPT); DIN2999; BS2111, ISO228/1; ISO7/1; BSP
 Material: ASTM A351-CF8M/1.4408; ASTM A351-CF8/1.4401;
 ASTM A216 WCB; AISI 304,304L,316,316L,316Ti.



KH-8008

TYPE:F

DIMENSIONS UNIT:mm

SIZE	inch	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
	mm	15	20	25	32	40	50	65	80	100
d		15.8	20.5	26	34.5	40.8	51.5	65.5	78	102.0
D		24	31.7	36	45.2	52.5	62.7	76	91	118.9
L		33.55	37.1	41.6	49.4	51.45	56.8	61.9	64.3	66
H		47.5	52.3	59.3	71.9	73.9	80.1	98.3	93.5	102

Dimension: ANSI B16.3
 Ends Type: ASME B1.20.1(NPT); DIN2999; BS2111, ISO228/1; ISO7/1; BSP
 Material: ASTM A351-CF8M/1.4408; ASTM A351-CF8/1.4401;
 ASTM A216 WCB; AISI 304,304L,316,316L,316Ti.

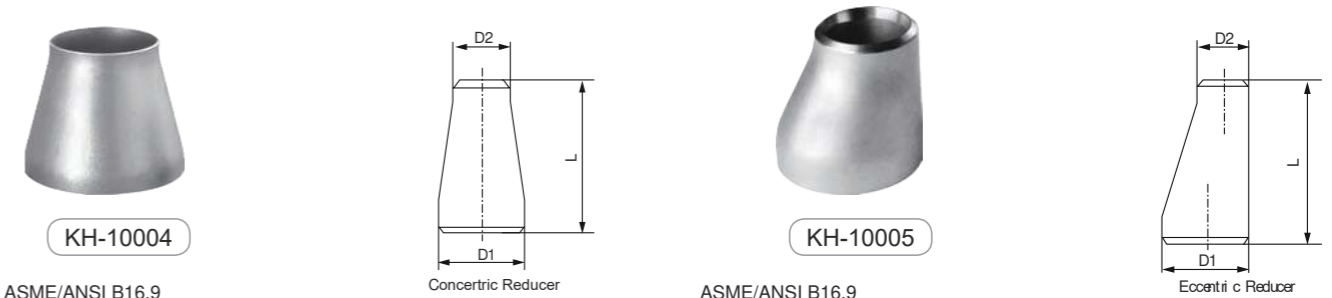
➔ ANSI BUTT WELD FITTINGS



ASME/AHNSI B16.9, B16.28
Dimensions of Elbows and Returns

Nominal Pipe Size DN	Outside Diameter Bevel D	Center to End			Center to Center		Back to Faces	
		45° Elbows	90° Elbows		180° Elbows			
			B	A		P		K
		Long Radius	Long Radius	Short Radius	Long Radius	Short Radius	Long Radius	Short Radius
1/2	21.3	15.7	38.1	--	76.2	--	47.8	--
3/4	26.7	19.1	38.1	--	76.2	--	50.8	--
1	33.4	22.4	38.1	25.4	76.2	50.8	55.6	41.4
1 1/4	42.2	25.4	47.8	31.8	95.3	63.6	69.9	52.3
1 1/2	48.3	28.4	57.2	38.1	114.3	76.2	82.6	62.0
2	60.3	35.1	76.2	50.8	152.4	101.6	106.4	81.0
2 1/2	73.0	44.5	95.3	63.5	190.5	127.0	131.8	100.1
3	88.9	50.8	114.3	76.2	228.6	152.4	158.8	120.7
3 1/2	101.6	57.2	133.4	88.9	266.7	177.8	184.2	139.7
4	114.3	63.5	152.4	101.6	304.8	203.2	209.6	158.8
5	141.3	79.2	190.5	127.0	381.0	254.0	261.9	196.9
6	168.3	95.3	228.6	152.4	457.2	304.8	312.7	236.5
8	219.1	127.0	304.8	203.2	609.6	406.4	414.3	312.7
10	273.1	158.8	381.0	254.0	762.0	508.0	517.7	390.7
12	323.9	190.5	457.2	304.8	914.4	609.6	619.3	466.9
14	355.6	222.3	533.4	355.6	1066.8	711.2	711.2	533.4
16	406.4	254.0	609.6	406.4	1219.2	812.8	812.8	609.6
18	457.2	285.8	685.8	457.2	1371.6	914.4	914.4	685.8
20	508.0	317.5	762.0	508.0	1524.0	1016.0	1046.0	762.0
22	558.8	342.9	838.2	558.8	1676.4	1117.6	1117.6	838.2
24	609.6	381.0	914.4	609.6	1828.8	1219.2	1219.2	914.4
26	660.4	406.0	990.6	--	--	--	--	--
28	711.2	438.2	1066.8	--	--	--	--	--
30	762.0	469.9	1143.0	--	--	--	--	--
32	812.8	501.7	1219.2	--	--	--	--	--
34	863.6	533.4	1295.4	--	--	--	--	--
36	914.4	565.2	1371.6	--	--	--	--	--
38	965.2	599.9	1447.8	--	--	--	--	--
40	1016.0	632.0	1524.0	--	--	--	--	--
42	1066.8	660.4	1600.2	--	--	--	--	--
44	1117.6	695.5	1676.4	--	--	--	--	--
46	1168.4	726.9	1752.6	--	--	--	--	--
48	1219.2	758.9	1828.8	--	--	--	--	--

➔ ANSI BUTT WELD FITTINGS



ASME/ANSI B16.9
Dimensions of Concentric & Eccentric Reducers

Nominal Pipe Size DN	Outside Diameter at Bevel	End to end	Nominal Pipe Size DN	Outside Diameter at Bevel	End to end	Normal Pipe Size DN(in)	Outside Diameter at Bevel	End to end	Normal Pipe Size DN(in)	Outside Diameter at Bevel	End to end
3/4 × 1/2 3/4 × 3/8	26.7 × 21.3 26.7 × 17.1	3.81	4 × 2-1/2 4 × 2 4 × 1-1/2	114.3 × 73.0 114.3 × 60.3 114.3 × 48.3	101.6	16 × 12 16 × 10 16 × 8	406.4 × 323.9 406.4 × 273.1 406.4 × 219.1	355.6	34 × 26 34 × 24	863.6 × 660.4 863.6 × 609.6	609.6
1 × 3/4 1 × 1/2	33.4 × 26.7 33.4 × 21.3	50.8	5 × 4 5 × 3-1/2 5 × 3 5 × 2-1/2 5 × 2	141.3 × 114.3 141.3 × 101.6 141.3 × 88.9 141.3 × 73.0 141.3 × 60.3	127.0	18 × 16 18 × 14 18 × 12 18 × 10	457.2 × 406.4 457.2 × 255.6 457.2 × 232.9 457.2 × 273.1	381.0	36 × 34 36 × 32 36 × 30 36 × 36 36 × 24	914.4 × 863.6 914.4 × 812.8 914.4 × 762.0 914.4 × 660.4 914.4 × 609.6	609.6
1-1/4 × 1 1-1/4 × 3/4 1-1/4 × 1/2	42.2 × 33.4 42.2 × 26.7 42.2 × 21.3	50.8	6 × 5 6 × 4 6 × 3-1/2 6 × 3 6 × 2-1/2	168.3 × 141.3 168.3 × 114.3 168.3 × 101.6 168.3 × 88.9 168.3 × 73.0	139.7	20 × 18 20 × 16 20 × 14 20 × 12	508.0 × 457.2 508.0 × 406.4 508.0 × 355.6 508.0 × 323.9	508.0	38 × 36 38 × 24 38 × 32 38 × 30 38 × 28 38 × 26	965.2 × 914.4 965.2 × 863.6 965.2 × 812.8 965.2 × 762.0 965.2 × 711.2 965.2 × 660.4	609.6
1-1/2 × 1-1/4 1-1/2 × 1 1-1/2 × 3/4 1-1/2 × 1/2	48.3 × 42.2 48.3 × 33.4 48.3 × 26.7 48.3 × 21.3	63.5	8 × 6 8 × 5 8 × 4 8 × 3-1/2	219.1 × 168.3 219.1 × 141.3 219.1 × 114.3 219.1 × 101.6	152.4	22 × 20 22 × 18 22 × 16 22 × 14	558.8 × 508.0 558.8 × 457.2 558.8 × 406.4 558.8 × 355.6	508.0	40 × 38 40 × 36 40 × 34 40 × 32 40 × 30	1016.0 × 965.2 1016.0 × 914.4 1016.0 × 863.6 1016.0 × 812.8 1016.0 × 762.0	609.6
2 × 1-1/2 2-1/2 × 1-1/4 2 × 1 2 × 3/4	60.3 × 48.3 60.3 × 42.2 60.3 × 33.4 60.3 × 26.7	76.2	10 × 8 10 × 6 10 × 5 10 × 4	273.1 × 219.1 273.1 × 168.3 273.1 × 141.3 273.1 × 114.3	177.8	24 × 22 24 × 20 24 × 18 24 × 16	609.6 × 558.8 609.6 × 508.0 609.6 × 457.2 609.6 × 406.4	508.0	42 × 40 40 × 38 42 × 36 42 × 34 42 × 32 42 × 30	1066.8 × 1016.0 1066.8 × 965.2 1066.8 × 914.4 1066.8 × 863.6 1066.8 × 812.8 1066.8 × 762.0	609.6
2-1/2 × 2 2-1/2 × 1-1/2 2-1/2 × 1-1/4 2-1/2 × 1	73.0 × 60.3 73.0 × 48.3 73.0 × 42.2 73.0 × 33.4	88.9	12 × 10 12 × 8 12 × 6 12 × 5	323.9 × 273.1 323.9 × 219.1 323.9 × 168.3 323.9 × 141.3	203.2	26 × 24 26 × 22 26 × 20 26 × 18	660.4 × 609.6 660.4 × 558.8 660.4 × 508.8 660.4 × 457.2	609.6	44 × 42 44 × 40 44 × 38 44 × 36	1117.6 × 1066.8 1117.6 × 1016.0 1117.6 × 965.2 1117.6 × 914.4	609.6
3 × 2-1/2 3 × 2 3 × 1-1/2 3 × 1-1/4	88.9 × 73.0 88.9 × 60.3 88.9 × 48.3 88.9 × 42.2	88.9	14 × 12 14 × 10 14 × 8 14 × 6	355.6 × 323.9 355.6 × 273.1 355.6 × 219.1 355.6 × 168.3	330.2	28 × 26 28 × 24 28 × 20 28 × 18	711.2 × 660.4 711.2 × 609.6 711.2 × 508.0 711.2 × 457.2	609.6	46 × 44 46 × 42 46 × 40	1168.4 × 1117.6 1168.4 × 1066.8 1168.4 × 1016.0 1168.4 × 965.2	711.2
3-1/2 × 3 3-1/2 × 2-1/2 3-1/2 × 2 3-1/2 × 1-1/2 3-1/2 × 1-1/4	101.6 × 88.9 101.6 × 73.0 101.6 × 60.3 101.6 × 48.3 101.6 × 42.2	101.6	16 × 14	406.4 × 355.6	355.6	30 × 28 30 × 26 30 × 24 30 × 20	762.0 × 711.2 762.0 × 660.4 762.0 × 609.6 762.0 × 508.0	609.6	48 × 46 48 × 44 48 × 42 48 × 40	1219.2 × 1168.4 1219.2 × 1117.6 1219.2 × 1066.8 1219.2 × 1016.0	711.2
4 × 3-1/2 4 × 3	114.3 × 101.6 114.3 × 88.9	101.6	16 × 14	406.4 × 355.6	355.6	34 × 32 34 × 30	863.6 × 812.8 863.6 × 762.0	609.6			

ANSI BUTT WELD FITTINGS

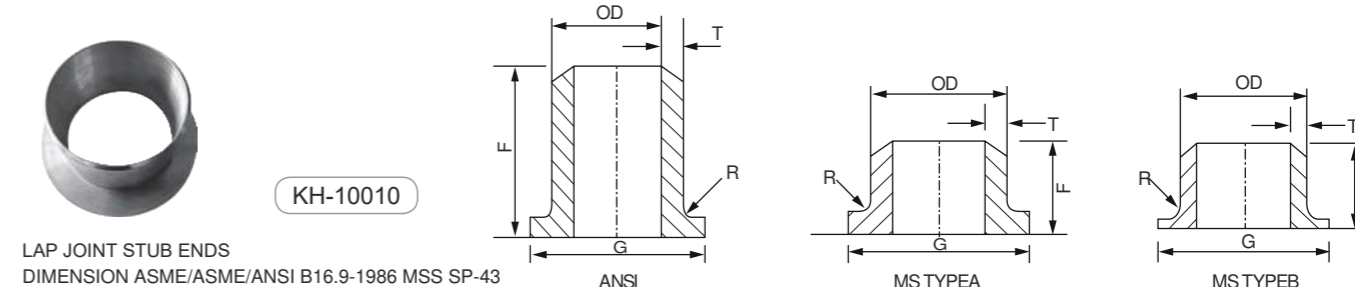


ASME/AHNSI B16.9
Dimensions of Reducing outlet Tees and Reducing outlet Crosses

Nominal Pipe Size DN(in)	Outside Diameter at Bevel D ₁ × D ₂	Conter to End	
		C	M
1/2 × 1/2	21.3 × 21.3	25.4	95.3
1/2 × 3/8	21.3 × 17.1		
1/2 × 1/4	21.3 × 13.7		
3/4 × 3/4	26.7 × 26.7	28.4	88.9
3/4 × 1/2	26.7 × 21.3		
3/4 × 3/8	26.7 × 17.1		
1 × 1	33.4 × 33.4	38.1	82.6
1 × 3/4	33.4 × 26.7		
1 × 1/2	33.4 × 21.3		
1-1/4 × 1-1/4	42.2 × 42.2	47.8	79.2
1-1/4 × 1	42.2 × 33.4		
1-1/4 × 3/4	42.2 × 26.7		
1-1/4 × 1/2	42.2 × 21.3	57.2	72.9
1-1/2 × 1-1/2	48.3 × 48.3		
1-1/2 × 1-1/4	48.3 × 42.2		
1-1/2 × 1	48.3 × 33.4	63.5	66.5
1-1/2 × 3/4	48.3 × 26.7		
1-1/2 × 1/2	48.3 × 21.3		
2 × 2	60.3 × 60.3	63.5	60.3
2 × 1-1/2	60.3 × 48.3		
2 × 1-1/4	60.3 × 42.2		
2 × 1	60.3 × 33.4	76.2	57.2
2 × 3/4	60.3 × 26.7		
2-1/2 × 2-1/2	73.0 × 73.0		
2-1/2 × 2	73.0 × 60.3	76.2	52.1
2-1/2 × 1-1/2	73.0 × 48.3		
2-1/2 × 1-1/4	73.0 × 42.2		
2-1/2 × 1	73.0 × 33.4	85.2	48.8
3 × 3	88.9 × 88.9		
3 × 3-1/2	88.9 × 73.0		
3 × 2	88.9 × 60.3	85.2	44.5
3 × 1-1/2	88.9 × 48.3		
3 × 1-1/4	88.9 × 42.2		

Nominal Pipe Size DN(in)	Outside Diameter at Bevel D ₁ × D ₂	Conter to End	
		C	M
3-1/2 × 3-1/2	101.6 × 101.6	95.3	95.3
3-1/2 × 3	101.6 × 88.9		
3-1/2 × 2-1/2	101.6 × 73.0		
3-1/2 × 2	101.6 × 60.3	104.6	88.9
3-1/2 × 1-1/2	101.6 × 48.3		
4 × 4	114.3 × 114.3		
4 × 3-1/2	114.3 × 101.6	104.6	82.6
4 × 3	114.3 × 88.9		
4 × 2-1/2	114.3 × 73.0		
4 × 2	114.3 × 60.3	124.0	79.2
4 × 1-1/2	114.3 × 48.3		
5 × 5	141.3 × 141.3		
5 × 4	141.3 × 114.3	124.0	72.9
5 × 3-1/2	141.3 × 101.6		
5 × 3	141.3 × 88.9		
5 × 2-1/2	141.3 × 73.0	142.7	66.5
5 × 2	141.3 × 60.3		
6 × 6	168.3 × 168.3		
6 × 5	168.3 × 141.3	142.7	60.3
6 × 4	168.3 × 114.3		
6 × 3-1/2	168.3 × 101.6		
6 × 3	168.3 × 88.9	177.8	57.2
6 × 2-1/2	168.3 × 73.0		
8 × 8	219.1 × 219.1		
8 × 6	219.1 × 168.3	177.8	52.1
8 × 5	219.1 × 141.3		
8 × 4	219.1 × 114.3		
8 × 3-1/2	219.1 × 101.6	215.9	48.8
10 × 10	273.1 × 273.1		
10 × 8	273.1 × 219.1		
10 × 6	273.1 × 168.3	215.9	44.5
10 × 5	273.1 × 141.3		
10 × 4	273.1 × 114.3		

ANSI BUTT WELD FITTINGS



LAP JOINT STUB ENDS
DIMENSION ASME/ASME/ANSI B16.9-1986 MSS SP-43

NOMINAL PIPE SIZE INCH	OUTSIDE DIAMETER O.D.	G	STUB END				NOMINAL PIPE SIZE INCH	
			ANSI		MSS			
			F	R	TYPE A R	TYPE B R		
1/2	21.3	35	76	3	51	3	0.8	1/2
3/4	26.7	43	76	3	51	3	0.8	3/4
1	33.4	51	102	3	51	3	0.8	1
1-1/4	42.2	64	102	5	51	5	0.8	1 1/4
1-1/2	48.3	73	102	6	51	6	0.8	1 1/2
2	60.3	92	152	8	64	8	0.8	2
2-1/2	73.0	105	152	8	64	8	0.8	2 1/2
3	88.9	127	152	10	64	10	0.8	3
3-1/2	101.6	140	152	10	76	10	0.8	3 1/2
4	114.3	157	152	11	76	11	1.6	4
5	141.3	186	203	11	76	11	1.6	5
6	168.3	216	203	13	89	13	1.6	6
8	219.1	270	203	13	102	13	1.6	8
10	273	324	254	13	127	13	1.6	10
12	323.9	381	254	13	152	13	1.6	12
14	355.6	413	254	13	152	13	1.6	14
16	406.4	470	254	13	152	13	1.6	16
18	457.2	533.5	254	13	152	13	1.6	18
20	508	584	254	13	152	13	1.6	20
24	609.1	692	254	13	152	13	1.6	24

CAP

ASME/ANSI B16.9
Dimensions of Caps



Nominal Pipe Size DN(in)	Outside Diameter at Bevel D	Length		Limiting Wall Thickness for Length E
		E	E ₁	
1/2	21.3	25.4	25.4	3.73
3/4	26.7	25.4	25.4	3.91
1	33.4	38.1	38.1	4.55
1-1/4	42.2	38.1	38.1	4.85
1-1/2	48.3	38.1	38.1	5.08
2	60.3	38.1	44.5	4.54
2-1/2	73.0	38.1	50.8	7.01
3	88.9	50.8	63.5	7.62
3-1/2	101.6	63.5	76.2	8.08
4	114.3	63.5	76.2	8.56
5	141.3	76.2	88.9	9.53
6	168.3	88.9	101.6	10.97
8	219.1	101.6	127.0	12.70
10	273.1	127.0	152.4	12.70
12	323.9	152.4	177.8	12.70
14	355.6	165.1	190.5	12.70
16	406.4	177.8	203.2	12.70

Nominal Pipe Size DN(in)	Outside Diameter at Bevel D	Length		Limiting Wall Thickness for Length E
		E	E ₁	
18	457.2	203.2	228.6	12.70
20	508.0	228.6	254.0	12.70
22	558.8	254.0	254.0	12.70
24	609.6	266.7	304.8	12.70
26	660.4	266.7	--	--
28	711.2	266.7	--	--
30	762.0	266.7	--	--
32	812.8	266.7	--	--
34	863.6	266.7	--	--
36	914.4	266.7	--	--
38	965.2	266.7	--	--
40	1016.0	304.8	--	--
42	1066.8	304.8	--	--
44	1117.6	304.8	--	--
46	1168.4	342.9	--	--
48	1219.2	342.9	--	--

About 100 kinds of standard materials are available in our company. Other alloyed materials can also be made according to requirements

Steel Materials

Type		Equivalent SPEC		Chemical composition(%)						
		JIS	AISI ASTM	C	Si	Mn	P	S	Ni	
Mechanical Structure Steel	Carbon steel	S15C	1015	0.13-0.18	0.15-0.35	0.30-0.60	<0.030	<0.035		
		S25C	1025	0.22-0.28	0.15-0.35	0.30-0.60	<0.030	<0.035		
		S45C	1045	0.42-0.48	0.15-0.35	0.60-0.90	<0.030	<0.035		
	Low alloy steel	SNC415		0.12-0.18	0.15-0.35	0.35-0.65	<0.030	<0.030	2.00-2.50	
		SCM415		0.13-0.18	0.15-0.35	0.60-0.85	<0.030	<0.030		
		SCM440	4140	0.38-0.43	0.15-0.35	0.60-0.85	<0.030	<0.030		
Stainless and heat-resisting steel	Stainless steel	SNCM420	4320	0.17-0.23	0.15-0.35	0.40-0.70	<0.030	<0.040	1.60-2.00	
		SCS1	CA15	<0.15	<1.5	<1.00	<0.040	<0.040		
		SCS2	CA40	0.16-0.24	<1.5	<1.00	<0.040	<0.040		
		SCS2A	CA40	0.25-0.40	<1.5	<1.00	<0.040	<0.040		
		SCS13		<0.08	<2.00	<2.00	<0.040	<0.040	8.00-11.00	
		SCS13A	CF8	<0.08	<2.00	<1.50	<0.040	<0.040	8.00-11.00	
		SCS14		<0.08	<2.00	<2.00	<0.040	<0.040	10.00-14.00	
		SCS14A	CF8M	<0.08	<1.50	<1.50	<0.040	<0.040	9.00-12.00	
		SCS16		<0.03	<1.50	<2.00	<0.040	<0.040	12.00-16.00	
		SCS16A	CF3M	<0.03	<1.50	<1.50	<0.040	<0.040	9.00-13.00	
		SCS19A	CF3	<0.03	<2.00	<1.50	<0.040	<0.040	8.00-12.00	
		SCS21	CF8C	<0.08	<2.00	<2.00	<0.040	<0.040	9.00-12.00	
		SCS24	CB7Cu-1	<0.07	<1.00	<1.00	<0.040	<0.030	3.00-5.00	
	Heat-resisting steel	SCH2	HC	<0.40	<2.00	<1.00	<0.040	<0.040	<1.00	
		SCH13	HH	0.20-0.50	<2.00	<2.00	<0.040	<0.040	11.00-14.00	
		SCH22	HK40	0.35-0.45	<1.75	<1.50	<0.040	<0.040	19.00-22.00	
	Special alloy	Tool steel	SK105	W1-10	1.00-1.10	0.10-0.35	0.10-0.50	<0.030	<0.030	
			SKD1	D3	1.90-2.20	0.10-0.60	0.20-0.60	<0.030	<0.030	
			SKD11	D2	1.40-1.60	<0.40	<0.60	<0.030	<0.030	
		Bearing steel	SUJ2	52100	0.95-1.10	0.15-0.35	<0.50	<0.025	<0.025	
Free cutting			SUM22	1213	<0.13		0.70-1.00	0.07-0.12	0.24-0.33	
Spring steel		SUP6		0.56-0.64	1.50-1.80	0.70-1.00	<0.035	<0.035		
High pressure		SCPH2	WCB	<0.30	<0.60	<1.00	<0.040	<0.040	<0.50	
Hastalloy		C276	CW12MW	<0.03	<1.00	<1.00	<0.040	<0.03	Min50.05	

Stainless Steel [DIN]

Type		Chemical composition								
		C	Si	Mn	P	S	Cr	Mo	Ni	Others
Designation	Material									
G-X8CrNi 13	1.4008	0.06-0.12	≤1.0	≤1.0	≤0.045	≤0.030	12.0-13.5	≤0.50	1.0-2.0	
G-X20Cr 14	1.4027	0.16-0.23	≤1.0	≤1.0	≤0.045	≤0.030	12.0-14.5	--	≤1.0	
G-X22CrNi 17	1.4059	0.20-0.27	≤1.0	≤1.0	≤0.045	≤0.030	16.0-18.0	--	1.0-2.0	
G-X5CrNi 13 4	1.4313	≤0.07	≤1.0	≤1.5	≤0.035	≤0.025	12.0-13.5	≤0.70	3.5-5.0	
G-X6CrNi 18 9	1.4308	≤0.07	≤2.0	≤1.5	≤0.045	≤0.030	18.0-20.0	--	9.0-11.0	
G-X5CrNiNb 18 9	1.4552	≤0.06	≤1.5	≤1.5	≤0.045	≤0.030	18.0-20.0	--	9.0-11.0	%Nb≥8xC%
G-X5CrNiMoNb 18 10	1.4581	≤0.06	≤1.5	≤1.5	≤0.045	≤0.030	18.0-20.0	2.0-2.5	10.5-12.5	%Nb≥8xC%
G-X6CrNiMo 18 10	1.4408	≤0.07	≤1.5	≤1.5	≤0.045	≤0.030	18.0-20.0	2.0-3.0	10.0-12.0	--
G-X3CrNiMoN 17 13 5	1.4439	≤0.04	≤1.0	≤1.5	≤0.045	≤0.030	16.5-18.5	4.0-4.5	12.5-14.5	N 0.12-0.22%

Chemical composition(%)				Mechanical properties				
Cr	Mo	Nb	Others	Heat treatment	Tensile strength(N/mm ²)	Elongation(%)	Contraction(%)	Hardness
				Normalizing				<HRB90
				Normalizing				<HRB90
				Anneal				<HRB100
0.20-0.50				Normalizing				<HRB90
0.90-1.20				Normalizing				<HRB90
0.90-1.20	0.15-0.30			Cardurizing anneal				<HRB100
0.40-0.65	0.15-0.630			Normalizing				<HRB90
11.50-14.00	0.15-0.30			Anneal				<HRB100
11.50-14.00				Anneal				<HRB100
11.50-14.00				Anneal				<HRB100
18.00-21.00				Solution treatment	≥440	≥30		<HB183
18.00-21.00				Solution treatment	≥480	≥33		<HB183
17.00-20.00	2.00-3.00			Solution treatment	≥440	≥28		<HB183
18.00-21.00	2.00-3.00			Solution treatment	≥480	≥33		<HB183
17.00-20.00	2.00-3.00			Solution treatment	≥390	≥33		<HB183
17.00-21.00	2.00-3.00			Solution treatment	≥480	≥33		<HB183
17.00-21.00				Solution treatment	≥480	≥33		<HB183
18.00-21.00		10%C-1.35		Solution treatment	≥480	≥28		<HB183
15.00-17.50		0.15-0.45	Cu:2.50-4.00	Precipitation hardening	≥980	≥9		<HB311
25.00-28.00				As cast	≥340			<HRB100
24.00-28.00				As cast	≥490	≥8		<HRB100
23.00-27.00				As cast	≥440	≥8		<HRB100
				Cardurizing anneal				<HRB100
11.00-13.00				Cardurizing anneal				<HRB100
11.00-13.00	0.80-1.20		V:0.20-0.50	Cardurizing anneal				<HRB100
1.30-1.60				Cardurizing anneal				<HRB100
				Cardurizing anneal				<HRB100
				Cardurizing anneal				<HRB100
<0.25	<0.25	Cu:<0.50 CuNiCrMo<1.00		Anneal	≥480	≥90	≥35	<HRB90
14.2-16.5	15.0-17.0	Fe:4-7W3-4.5 Co:25 V:<0.35		Solution treatment	≥480	≥90		<HRB100

Mechanical properties							
Heat treatment	Hardness (HBS)	Yield strength 0.2%(MPa)	Yield strength 0.1%(MPa)	Tensile strength(MPa)	Elongation (L ₀ =5d ₀)(%)	Toughness(average)	
						ISO-V(J)	DVM(J)
Quenching and tempering	170-240	≥440	--	590-790	≥15	≥27	≥27
Quenching and tempering	170-240	≥440	--	590-790	≥12	--	≥13
Quenching and tempering	230-300	≥590	--	780-980	≥4	--	--
Quenching and tempering	240-300	≥550	--	760-960	≥15	≥50	≥55
Quenching	130-200	≥175	≥200	440-640	≥20	≥60	≥70
	130-200	≥175	≥200	440-640	≥20	≥35	≥41
	130-200	≥185	≥210	440-640	≥20	≥35	≥41
	130-200	≥185	≥210	440-640	≥20	≥60	≥70
	130-200	≥210	≥230	490-690	≥20	≥50	≥60