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LEDE[®]

SHANDONG LEDE MACHINERY CO., LTD.



International certificates UL.FM

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Company Name	Category Name	Link to File
SHANDONG LEDE MACHINERY CO LTD	Butterfly Valves	HLXS.EX26457
SHANDONG LEDE MACHINERY CO LTD	Butterfly Valves Certified for Canada	HLXS7.EX26457
SHANDONG LEDE MACHINERY CO LTD	Check Valves	HMER.EX27050
SHANDONG LEDE MACHINERY CO LTD	Check Valves Certified for Canada	HMER7.EX27050
SHANDONG LEDE MACHINERY CO LTD	Fittings, Grooved and Plain End	VIZA.EX15229
SHANDONG LEDE MACHINERY CO LTD	Fittings, Rubber Gasketed	VIZM.EX15228
SHANDONG LEDE MACHINERY CO LTD	Fittings, Welded Outlet	VIZU.EX26961
SHANDONG LEDE MACHINERY CO LTD	Fittings, Welded Outlet Certified for Canada	VIZU7.EX26961
SHANDONG LEDE MACHINERY CO LTD	Gate Valves	HMRZ.EX26407
SHANDONG LEDE MACHINERY CO LTD	Gate Valves Certified for Canada	HMRZ7.EX26407
Page: 1		

Model number information is not published for all product categories. If you require information about a specific model number, please contact [Customer Service](#) for further assistance.

**Search results**

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Company Name	Category Name	Link to File
SHANDONG LEDE MACHINERY CO LTD	Strainers, Pipeline	HLCV.EX27282
SHANDONG LEDE MACHINERY CO LTD	Strainers, Pipeline Certified for Canada	HLCV7.EX27282
Page: 2		

Model number information is not published for all product categories. If you require information about a specific model number, please contact [Customer Service](#) for further assistance.



HMRZ.EX26407 Gate Valves

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Gate Valves

[See General Information for Gate Valves](#)

SHANDONG LEDE MACHINERY CO LTD

EX26407

No 3998

West Waihuan N Rd

Weicheng District

Weifang, Shandong 261057 CHINA

Pattern	Model	Size, in.	End Configuration	Rated Pressure, psig
OS&Y	Z41X-01-2.5	2, 2.5, 3, 4, 5, 6, 8, 10, 12	F By F	362
	Z41X-02-2.5			
	Z41X-01-1.6	2, 2.5, 3, 4, 5, 6, 8, 10, 12		232
	Z41X-02-1.6			
	Z41X-03-175	2, 2.5, 3, 4, 5, 6, 8, 10, 12		175
	Z41X-03-300	2, 2.5, 3, 4, 5, 6, 8, 10, 12		300
	1210	2, 2.5, 3, 4, 5, 6, 8, 10, 12		300
	Z81X-2.5	2, 2.5, 2.5 (76.1 mm), 3, 4, 5 (139.7 mm), 5, 6 (165.1 mm), 6, 8	G by G	362
	1211	2, 2.5, 3, 4, 5, 6, 8, 10, 12		362
NRS	Z45X-01-2.5	2.5, 3, 4, 5, 6, 8, 10, 12	F By F	362
	Z45X-02-2.5			
	Z45X-01-1.6	2.5, 3, 4, 5, 6, 8, 10, 12		232
	Z45X-02-1.6			
	Z45X-03-175	2.5, 3, 4, 5, 6, 8, 10, 12		175
	Z45X-04-175	4, 5, 6, 8, 10, 12		
	Z45X-03-300	2.5, 3, 4, 5, 6, 8, 10, 12		300
	Z45X-04-300	4, 5, 6, 8, 10, 12		
	1110	2.5, 3, 4, 5, 6, 8, 10, 12	G by G	
	Z85X-2.5	2.5, 2.5 (76.1 mm), 3, 4, 5 (139.7 mm), 5, 6 (165.1 mm), 6, 8		362
	1111	2.5, 3, 4, 5, 6, 8, 10, 12	MJ by MJ	362
	1112	3, 4, 6, 8, 10, 12		362
	1113	4, 6, 8, 10, 12		362

[Last Updated](#) on 2016-10-04

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2/15/2017

HMRZ.EX26407 - Gate Valves

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**HMER.EX27050
Check Valves**[Page Bottom](#)

Check Valves[See General Information for Check Valves](#)**SHANDONG LEDE MACHINERY CO LTD**

EX27050

No 3998

West Waihuan N Rd

Weicheng District

Weifang, Shandong 261057 CHINA

Swing-type check valve, Model H44X, sizes 2, 2.5, 3, 4, 5, 6, 8, 10, and 12 in., 9 sizes, flange by flange end configuration, with resilient seat size for rated pressure of 300 psig horizontal and vertical positions.

Model H84X, sizes 2, 2.5, 2.5(76.1mm), 3, 4, 5, 5(139.7mm), 6, 6(165.1mm), 8, 10, and 12 in., 12 sizes, groove by groove end configuration, with resilient seat size for rated pressure of 365 psig horizontal and vertical positions.

Model H44X-01, sizes 2, 2.5, 3, 4, 5, 6, 8, 10, and 12 in., 9 sizes, flange by flange end configuration, with resilient seat size for rated pressure of 300 psig horizontal and vertical positions.

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**HLXS.EX26457
Butterfly Valves**[Page Bottom](#)**Butterfly Valves**[See General Information for Butterfly Valves](#)**SHANDONG LEDE MACHINERY CO LTD**

EX26457

No 3998

West Waihuan N Rd

Weicheng District

Weifang, Shandong 261057 CHINA

Model	Size, NPS	Body Type	Pressure Rating, psig (Bar)	Indicator Post	Supervisory Switch*
Butterfly valve					
XD381X	2, 2.5, 3, 4, 5, 5 (139.7 mm), 6, 6 (165.1 mm)	Groove	362	—	I, O
	8		232	—	I, O
XD371X	2, 2.5, 3, 4, 5, 6	Wafer	362	—	I, O
	8, 10, 12		232	—	I, O

* I = Indoor installation; O = Outdoor installation

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**HLCV.EX27282
Strainers, Pipeline**[Page Bottom](#)**Strainers, Pipeline**[See General Information for Strainers, Pipeline](#)**SHANDONG LEDE MACHINERY CO LTD**

EX27282

No 3998

West Waihuan N Rd

Weicheng District

Weifang, Shandong 261057 CHINA

Strainers, Y type, Model(s) Model 6101, in sizes 2, 2.5, 3, 4, 5, 6 and 8 with rated pressure of 300 psi utilize an ASME/ANSI B16.1 Class 125 Flange. Loss of head will approximate 2.96 psi (20.43 kPa) for the 2 in. size at 156.9 GPM (594 LPM), 2.91 psi (20.08 kPa) for the 2.5 in. size at 223.8 GPM (847 LPM), 2.76 psi (19.01 kPa) for the 3 in. size at 345.6 GPM (1308 LPM), 2.28 psi (15.69 kPa) for the 4 in. size at 595.2 GPM (2253 LPM), 1.81 psi (12.45 kPa) for the 5 in. size at 935.3 GPM (3541 LPM), 1.70 psi (11.74 kPa) for the 6 in. size at 1350.7 GPM (5113 LPM), 2.37 psi (16.32 kPa) for the 8 in. size at 2338.9 GPM (8854 LPM).

Strainers, Y type, Model(s) Model 6102, in sizes 2, 2.5(76.1mm), 3, 4, 5, 5(139.7mm), 6, 6(165.1mm) and 8 with rated pressure of 362 psi utilize an AWWA C606 Groove. Loss of head will approximate 2.96 psi (20.43 kPa) for the 2 in. size at 156.9 GPM (594 LPM), 2.91 psi (20.08 kPa) for the 2.5 in. size at 223.8 GPM (847 LPM), 2.76 psi (19.01 kPa) for the 3 in. size at 345.6 GPM (1308 LPM), 2.28 psi (15.69 kPa) for the 4 in. size at 595.2 GPM (2253 LPM), 1.81 psi (12.45 kPa) for the 5 in. size at 935.3 GPM (3541 LPM), 1.70 psi (11.74 kPa) for the 6 in. size at 1350.7 GPM (5113 LPM), 2.37 psi (16.32 kPa) for the 8 in. size at 2338.9 GPM (8854 LPM).

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CERTIFICATE OF COMPLIANCE

Certificate Number 20150709-EX26457
Report Reference EX26457-20150408
Issue Date 2015-JULY-09

Issued to: SHANDONG LEDE MACHINERY CO LTD
No 3998
West Waihuan N Rd
Weicheng District
Weifang
Shandong 261057 CHINA

This is to certify that BUTTERFLY VALVES
representative samples of See addendum page

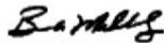
Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 1091 - Standard for Butterfly Valves for Fire-Protection
Service
ULC/ORD C1091 - Preliminary Standard for Butterfly valves
for fire-protection service
UL 38 - Standard for Manual Signaling Boxes for Fire Alarm
Systems
UL 753 - Standard for Alarm Accessories for Automatic
Water-Supply Control Valves for Fire Protection Service

Additional Information: See the UL Online Certifications Directory at
www.ul.com/database for additional information

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Bruce Mahrenholz, Director North American Certification Program
UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20150709-EX26457
Report Reference EX26457-20150408
Issue Date 2015-JULY-09

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

PRODUCT SUBMITTED:

UL

Model	Size, in.	Body Type	Pressure Rating, psig	Indicator Post	Supervisory Switch*
XD381X	2,2.5,3,4,5, 5(139.7mm)6,6(165.1mm)	Groove	362	-	I, O
	8		232		I, O
XD371X	2,2.5,3,4,5,6	Wafer	362		I, O
	8,10,12		232		I, O

CUL

Model	Size, in.	Body Type	Pressure Rating, psig.	Indicator Post	Supervisory Switch
XD381X	2.5,3,4,5,5(139.7mm)6,6(165.1mm)	Groove	300	-	I, O
	8		232		I, O
XD371X	2.5,3,4,5,6	Wafer	300		I, O
	8,10,12		232		I, O

Note:

For the valve sizes 6 in. and smaller, configured with operator CDT-24, for the valve sizes 8 in. and larger, configured with operator CDT-30.

The shaft material designation is SS431

B. Mahlen

Bruce Mahlenholz, Director North American Certification Program
UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20150709-EX26457
Report Reference EX26457-20150408
Issue Date 2015-JULY-09

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

PRODUCT SUBMITTED:

UL

Model	Size, in.	Body Type	Pressure Rating, psig	Indicator Post	Supervisory Switch*
XD381X	2,2.5,3,4,5, 5(139.7mm)6,6(165.1mm)	Groove	362	-	I, O
	8		232		I, O
XD371X	2,2.5,3,4,5,6	Wafer	362		I, O
	8,10,12		232		I, O

CUL

Model	Size, in.	Body Type	Pressure Rating, psig	Indicator Post	Supervisory Switch
XD381X	2.5,3,4,5,5(139.7mm)6,6(165.1mm)	Groove	300	-	I, O
	8		232		I, O
XD371X	2.5,3,4,5,6	Wafer	300		I, O
	8,10,12		232		I, O

Note:

For the valve sizes 6 in. and smaller, configured with operator CDT-24, for the valve sizes 8 in. and larger, configured with operator CDT-30.

The shaft material designation is SS431

B. Mahholz

Bruce Mahholz, Director North American Certification Program
UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20160226- EX27050
Report Reference EX27050-20160224
Issue Date 2016-FEBRUARY-26

Issued to: SHANDONG LEDE MACHINERY CO LTD
No 3998
West Waihuan N Rd
Weicheng District
Weifang
Shandong 261057 CHINA

This is to certify that
representative samples of CHECK VALVES
Models- H44X, H84X, H44X-01

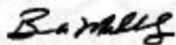
Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 312 and ULC/ORD-C312 Check Valves for Fire-
Protection Service

Additional Information: See the UL Online Certifications Directory at
www.ul.com/database for additional information

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Look for the UL Certification Mark on the product.



Bruce Mahewitz, Director North American Certification Program
UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number 20150306- EX26407
Report Reference EX26407 -20150306
Issue Date 2015-MARCH-06

Issued to: SHANDONG LEDE MACHINERY CO LTD
No 3998, West Waihuan N Rd
Weicheng District, Weifang, Shandong 261057 CHINA

This is to certify that
representative samples of

GATE VALVES

USL – Gate Valve

Type OS&Y: Z41X-01-2.5, Z41X-02-2.5, Z41X-01-1.6,
Z41X-02-1.6, Z41X-03-175, Z41X-03-300, Z81X-2.5

USL, CNL – Gate Valve

Type OS&Y: Z41X-01-2.5, Z41X-02-2.5, Z41X-01-1.6,
Z41X-02-1.6, Z41X-03-175, Z41X-03-300, Z81X-2.5

Type NRS: Z45X-01-2.5, Z45X-02-2.5, Z45X-01-1.6,
Z45X-02-1.6, Z45X-03-175, Z45X-04-175, Z45X-03-300,
Z45X-04-300, Z85X-2.5

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 262 - Gate Valves for Fire-Protection Service
ULC/ORD-C262 - Gate Valves for Fire-Protection Service
UL746A - Polymeric Materials - Short Term Property
Evaluations

Additional Information: See the UL Online Certifications Directory at
www.ul.com/database for additional information

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Look for the UL Certification Mark on the product.

B. Mahesh

Bruce Mahesh, Assistant Chief Engineer, Global Inspection and Field Services
UL LLC

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Certificate of Compliance

This certificate is issued for the following:

Fire Service Water Control Valves (OS&Y and NRS Type Gate Valves)

**Model Z41X, Z81X, 1210 and 1211 - OS&Y type
Model Z45X, Z85X, 1110, 1112 and 1113 - NRS type**

Sizes 2, 2-1/2, 3, 4, 5, 6, 8, 10 and 12 inch NPS

Prepared For:

Shandong Lede Machinery Co., Ltd.
No. 3998 West Weinuan N Road
Weicheng District
Weifang City, Shandong 261057
China

Manufactured at:

Shandong Lede Machinery Co., Ltd.
No. 3998 West Weinuan N Road
Weicheng District
Weifang City, Shandong 261057
China

FM Approvals Class: 1120/1130, dated April 1997

Approval Identification: PR454628

Approval Granted: November 22, 2019

To verify the availability of the Approved product, please refer to www.approvalguide.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.



Member of the FM Global Group

David B. Fuller
VP – Manager, Fire Protection
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062 USA

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APPROVAL REPORT

Project No: PR454628
Class: 1120/1130
Product Type: Fire Service Water Control Valves
Product Name: Model Z41X, Z81X, 1210 and 1211 OS&Y gate valves and Model Z45X, Z85X, 1110, 1112 and 1113 NRS gate valves
Name of Report Holder: Shandong Lede Machinery Co., Ltd.
Address of Report Holder: No. 3998 West Weihuan N Rd
Weicheng Dist, Weifang City
Shandong 261057, China
Customer ID: 113572
Customer Website: <http://wflede.com>

Prepared by

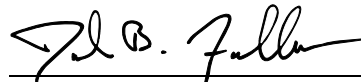


Daniel T. Desautel
Engineer

Reviewed by



Stanley M. Ziobro
AVP, Technical Team Manager



David B. Fuller
VP, Manager of Fire Protection

November 22, 2019

Date of Approval

1 INTRODUCTION

1.1 Shandong Lede Machinery Co., Ltd. requested FM Approval of their Model Z41X, Z81X, 1210 and 1211 OS&Y gate valves and Model Z45X, Z85X, 1110, 1112 and 1113 NRS gate valves in sizes 2 through 12 inch NPS for compliance with the standard listed in Section 1.3.

1.2 This Report may be freely reproduced only in its entirety and without modification.

1.3 Standards

FM Approvals Standards

Title	Number	Issue Date
Fire Service Water Control Valves (OS&Y and NRS Type Gate Valves)	1120/1130	April 1997

1.4 Listing

The OS&Y and NRS type gate valves, discussed in this report, will be updated in the Approval Guide, an on-line resource of FM Approvals, as detailed in an attachment at the end of this Report. Deletions from any current product listing are shown with strikethroughs and additions to the current Approval listing are shown in red text.

2 DESCRIPTION

2.1 This Approval examination was opened to certify Model Z41X, Z81X, 1210 and 1211 OS&Y gate valves and Model Z45X, Z85X, 1110, 1112 and 1113 NRS gate valves in sizes 2 through 12 inch NPS.

2.2 The NRS and OS&Y gate valves discussed in this report are identical to those previously FM Approved under Project ID 3051487 dated April 3, 2015 and Project ID 3060255 dated March 28, 2017.

2.3 The rated working pressure of the Model 1210 outside screw and yoke type and Model 1110 inside screw type gate valves with Flange x Flange end connections discussed in this Report is 300 psi (2070 kPa).

2.4 The rated working pressure of the Model 1211 outside screw and yoke type gate valves with Groove x Groove end connections discussed in this Report is 362 psi (2500 kPa).

2.5 The rated working pressure of the Model 1112 and 1113 inside screw type gate valves with mechanical joint end connections discussed in this Report is 362 psi (2500 kPa). The two models are identical. The Model 1113 has an indicator post flange.

2.6 The maximum rated working pressure of the Model Z41X outside screw and yoke type gate valves is 365 psi (2500 kPa). However, alternate pressure ratings of 175 psi (1205 kPa), 232 psi (1600 kPa) and 300 psi (2070 kPa) are listed. All listed Model Z41X gate valves are identical in physical construction, with the exception of the pressure rating suffix in the model number and associated valve markings.

- 2.7** The maximum rated working pressure of the Model Z45X inside screw type gate valves is 365 psi (2500 kPa). However, alternate pressure ratings of 175 psi (1205 kPa), 232 psi (1600 kPa) and 300 psi (2070 kPa) are listed. All listed Model Z45X gate valves are identical in physical construction, with the exception of the pressure rating suffix in the model number and associated valve markings.
- 2.8** The rated working pressure of the Model Z81X outside screw and yoke type and Z85X inside screw type gate valves discussed in this Report is 365 psi (2500 kPa).
- 2.9** Major components of the Model 1210 and 1211 OS&Y type and Model 1110, 1112 and 1113 NRS type gate valves discussed in this Report are made of the following materials:

<u>Component</u>	<u>Material</u>
Body, Bonnet	Cast Ductile Iron
Disc	Cast Ductile Iron and EPDM
Sealing Ring	EPDM
Stem	Stainless Steel, 304
Handwheel, Operating Nut	Cast Ductile Iron
Packing	PTFE

These gate valves are manufactured to conform with the requirements of AWWA C515.

- 2.10** Major components of the Z41X and Z81X Series OS&Y type and Model Z45X and Z85X Series NRS type gate valves discussed in this Report are made of the following materials:

<u>Component</u>	<u>Material</u>
Body, Bonnet	Cast Ductile Iron, QT500-7
Disc	Cast Ductile Iron and EPDM
Sealing Ring	EPDM
Stem	Steel, 1Cr17Ni2
Handwheel, Operating Nut	Cast Ductile Iron, QT500-7
Packing	PTFE

These gate valves are manufactured to conform with the requirements of BS5163.

- 2.11** All wetted ductile iron components of the gate valves discussed in this Report are coated with red fusion bonded epoxy powder coating manufactured by Azko Nobel Powder Coating GmbH.

3 EXAMINATIONS AND TESTS

- 3.1** Samples were submitted for examination and testing. The samples were considered to be representative of the product line and were examined, tested, and compared to the manufacturer's drawings. All data is on file at FM Approvals along with other documents and correspondence applicable to this program.

- 3.2 All testing and analysis considered appropriate was conducted and verified to be in compliance with the standard defined in Section 1.3.

4 MARKING

- 4.1 The following information appears on all valves identified within this Report and meets standard requirements:

- Manufacturer's name or trademark
- Date of manufacturer or code traceable to date of manufacture or lot identification
- Model (designation, stock number, etc.)
- Valve Size
- Rated Working Pressure
- The FM Mark of Approval

5 REMARKS

- 5.1 The FM Global Property Loss Prevention Data Sheets should be strictly adhered to when installing this product.

- 5.2 Installations shall comply with the latest edition of the manufacturer's instruction manual.

6 SURVEILLANCE AUDIT

The design and manufacturing facilities at the following locations are subject to follow-up audit inspections. The facilities and quality control procedures in place have been found to be satisfactory to manufacture product identical to that examined and tested as described in this Report. An FM Approved Product Revision Request Form shall be submitted to FM Approvals for requesting any additional manufacturing facilities which are not listed below. The products discussed in this Report are FM Approved only when designed and manufactured in the following facilities:

Design

Shandong Lede Machinery Co., Ltd.
No. 3998 West Weihuan N Rd
Weicheng Dist, Weifang City
Shandong 261057
China

Manufacturing

Shandong Lede Machinery Co., Ltd.
No. 3998 West Weihuan N Rd
Weicheng Dist, Weifang City
Shandong 261057
China

7 MANUFACTURER'S RESPONSIBILITIES

- 7.1 Documentation considered critical to this Approval is on file at FM Approvals and is listed in the Documentation File, Section 8, of this Report. No changes of any nature shall be made unless notice of the proposed change has been given and written authorization obtained from FM Approvals. The FM Approved Product Revision Request Form shall be forwarded to FM Approvals as notice of proposed changes.

7.2 The manufacturer is responsible for control of the product marking and installation instructions for the product.

7.3 The manufacturer shall provide installation, operating, and maintenance manual(s) with each system.

7.4 In accordance with the Master Agreement, the manufacturer shall make full and immediate disclosure to FM Approvals of all information concerning any defect in, or potential hazard of, the product or service manufactured or provided by the Customer which is Approved by, or being examined by, FM Approvals. The manufacturer shall make all necessary arrangements for the investigation of complaints / anomalies applicable to this approval and shall keep records of all complaints / anomalies including actions taken.

7.5 Test Requirement No. 1 – Seat Leakage

The manufacturer shall test 100 percent of production valves for seat leakage to the rated working pressure. Seating torque shall not exceed the requirements of Section 4.9, “Resilient Seat Leakage,” in compliance with the standard(s) defined in Section 1.3. The pressure shall be held for a minimum of 15 seconds with seat leakage not to exceed 0.075 in³ (1.25 cm³) for metal-seated valves and zero leakage for resilient-seated valves. Following the seat leakage test, all valves shall be opened through their full travel range with no evidence of sticking or binding.

7.6 Test Requirement No. 2 – Body Leakage

The manufacturer shall test 100 percent of production valves for body leakage to twice the rated working pressure. The pressure shall be held for a minimum of 1 minute with no evidence of body leakage or distortion.

8 **DOCUMENTATION FILE**

All pertinent Report documents are outlined in the ATTACHMENTS list below.

9 **CONCLUSION**

The Model Z41X, Z81X, 1210 and 1211 OS&Y gate valves and Model Z45X, Z85X, 1110, 1112 and 1113 NRS gate valves in sizes 2 through 12 inch NPS meet FM Approvals requirements. Since a duly signed Master Agreement is on file for this manufacturer, Approval is effective the date of this Report.

PROJECT DATA RECORD: PR454628

ATTACHMENTS: Listing Sheet for Model Z41X, Z81X, 1210 and 1211
Listing Sheet for Model Z45X, Z85X, 1110, 1112 and 1113
CDL Control Drawing Blueprint Report

Listing Sheet for Model Z41X, Z81X, 1210 and 1211Automatic Sprinkler Systems  Valves  Gate Valves  Outside Screw and Yoke Gate Valves**Model Z41X-150**

Resilient Seated Gate Valves. 2 through 12 inch NPS. Available with the following end connections and rated working pressure:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
Z41X-150	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 (50, 65, 80, 100, 125, 150, 200, 250, 300)	175 psi (1205 kPa)	Flange x Flange (ANSI)

Model Z41X-300

Resilient Seated Gate Valves. 2 through 12 inch NPS. Available with the following end connections and rated working pressure:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
Z41X-300	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 (50, 65, 80, 100, 125, 150, 200, 250, 300)	300 psi (2070 kPa)	Flange x Flange (ANSI)

Model Z41X-1.6

Resilient Seated Gate Valves. 2 through 12 inch NPS. Available with the following end connections and rated working pressure:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
Z41X-1.6	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 (50, 65, 80, 100, 125, 150, 200, 250, 300)	232 psi (1600 kPa)	Flange x Flange (EN, BS, ISO)

Model Z41X-2.5

Resilient Seated Gate Valves. 2 through 12 inch NPS. Available with the following end connections and rated working pressure:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
Z41X-2.5	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 (50, 65, 80, 100, 125, 150, 200, 250, 300)	365 psi (2500 kPa)	Flange x Flange (EN, BS, ISO)

Model Z81X-2.5

Resilient Seated Gate Valves. 2 through 8 inch NPS. Available with the following end connections and rated working pressure:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
Z81X-2.5	2, 2-1/2, 3, 4, 5, 6, 8 (50, 65, 80, 100, 125, 150, 200)	365 psi (2500 kPa)	Groove x Groove (GB, AWWA)

Model 1210

Resilient Seated Gate Valves. 2 through 12 inch NPS. Available with the following end connections and rated working pressures:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
1210	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 (50, 65, 80, 100, 125, 150, 200, 250, 300)	300 psi (2070 kPa)	Flange x Flange (ANSI)

Model 1211

Resilient Seated Gate Valves. 3 through 12 inch NPS. Available with the following end connections and rated working pressures:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
1211	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 (50, 65, 80, 100, 125, 150, 200, 250, 300)	362 psi (2500 kPa)	Groove x Groove (AWWA)

Listing Sheet for Model Z45X, Z85X, 1110, 1112 and 1113Automatic Sprinkler Systems  Valves  Gate Valves  Inside Screw Gate Valves**Model Z45X-150**

Resilient Seated Gate Valves. 2 through 12 inch NPS. Available with the following end connections and rated working pressure:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
Z45X-150	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 (50, 65, 80, 100, 125, 150, 200, 250, 300)	175 psi (1205 kPa)	Flange x Flange (ANSI)

Model Z45X-300

Resilient Seated Gate Valves. 2 through 12 inch NPS. Available with the following end connections and rated working pressure:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
Z45X-300	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 (50, 65, 80, 100, 125, 150, 200, 250, 300)	300 psi (2070 kPa)	Flange x Flange (ANSI)

Model Z45X-1.6

Resilient Seated Gate Valves. 2 through 12 inch NPS. Available with the following end connections and rated working pressure:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
Z45X-1.6	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 (50, 65, 80, 100, 125, 150, 200, 250, 300)	232 psi (1600 kPa)	Flange x Flange (EN, BS, ISO)

Model Z45X-2.5

Resilient Seated Gate Valves. 2 through 12 inch NPS. Available with the following end connections and rated working pressure:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
Z45X-2.5	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 (50, 65, 80, 100, 125, 150, 200, 250, 300)	365 psi (2500 kPa)	Flange x Flange (EN, BS, ISO)

Model Z85X-2.5

Resilient Seated Gate Valves. 2 through 8 inch NPS. Available with the following end connections and rated working pressure:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
Z85X-2.5	2, 2-1/2, 3, 4, 5, 6, 8 (50, 65, 80, 100, 125, 150, 200)	365 psi (2500 kPa)	Groove x Groove (GB, AWWA)

Model 1110

Resilient Seated Gate Valves. 2 through 12 inch NPS. Available with the following end connections and rated working pressures:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
1110	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 (50, 65, 80, 100, 125, 150, 200, 250, 300)	300 psi (2070 kPa)	Flange x Flange (ANSI)

Model 1112

Resilient Seated Gate Valves. 3 through 12 inch NPS. Available with the following end connections and rated working pressures:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
1112	3, 4, 6, 8, 10, 12 (80, 100, 150, 200, 250, 300)	362 psi (2500 kPa)	MJ

Model 1113

Resilient Seated Gate Valves. 4 through 12 inch NPS with Indicator Post Flange. Available with the following end connections and rated working pressures:

Model Name	Size, in. (mm)	Rated Working Pressure	End Connection
1113	4, 6, 8, 10, 12 (100, 150, 200, 250, 300)	362 psi (2500 kPa)	MJ

CDL Control Drawing Blueprint Report

Blueprint Report**Shandong Lede Machinery Co Ltd (113572)****Class No 1120****Original Project I.D. 3060255**

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>	<u>Electronic Drawing</u>
11-2000025-100-150-22	-	Wrench Nut DN100-DN150	3060255	Yes (pdf)
11-2000025-200-22	-	Wrench Nut DN200	3060255	Yes (pdf)
11-2000025-250-23	-	Indicator Post Flange DN250	3060255	Yes (pdf)
11-2000025-250-300-22	-	Wrench Nut DN250-DN300	3060255	Yes (pdf)
11-2000025-300-23	-	Indicator Post Flange DN300	3060255	Yes (pdf)
1110-Mark	-	1110-Mark	3060255	Yes (pdf)
1112-Mark	-	1112-Mark	3060255	Yes (pdf)
1113-Mark	-	1113-Mark	3060255	Yes (pdf)
1210-Mark	-	1210-Mark	3060255	Yes (pdf)
1211-Mark	-	1211-Mark	3060255	Yes (pdf)
17(MJ)-20000362-10"-00	-	Assembly AWWA 10" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-10"-01	-	Body AWWA 10" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-12"-00	-	Assembly AWWA 12" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-12"-01	-	Body AWWA 12" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-3"-00	-	Assembly AWWA 3" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-3"-01	-	Body AWWA 3" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-4"-00I	-	Assembly AWWA 4"362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-4"-00	-	Assembly AWWA 4" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-4"-01	-	Body AWWA 4" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-6"-00I	-	Assembly AWWA 6" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-6"-00	-	Assembly AWWA 6" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-6"-01	-	Body AWWA 6" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-8"-00	-	Assembly AWWA 8" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20000362-8"-01	-	Body AWWA 8" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20003362-10"-00I	-	Assembly AWWA 10" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20003362-12"-00I	-	Assembly AWWA 12" 362PSI MJ	3060255	Yes (pdf)
17(MJ)-20003362-8"-00I	-	Assembly AWWA 8" 362PSI MJ	3060255	Yes (pdf)
17-20003300-10"-00	-	Assembly AWWA 10" 300PSI	3060255	Yes (pdf)
17-20003300-10"-01	-	Body AWWA 10" 300PSI	3060255	Yes (pdf)
17-20003300-10"-21	-	Handwheel AWWA OD406	3060255	Yes (pdf)
17-20003300-12"-00	-	Assembly AWWA 12" 300PSI	3060255	Yes (pdf)
17-20003300-12"-01	-	Body AWWA 12" 300PSI	3060255	Yes (pdf)
17-20003300-2"-00	-	Assembly AWWA 2" 300PSI	3060255	Yes (pdf)
17-20003300-2"-01	-	Body AWWA 2" 300PSI	3060255	Yes (pdf)
17-20003300-2.5"-00	-	Assembly AWWA 2.5" 300PSI	3060255	Yes (pdf)
17-20003300-2.5"-01	-	Body AWWA 2.5" 300PSI	3060255	Yes (pdf)
17-20003300-2.5"-21	-	Handwheel AWWA OD178	3060255	Yes (pdf)
17-20003300-3"-00	-	Assembly AWWA 3" 300PSI	3060255	Yes (pdf)
17-20003300-3"-01	-	Body AWWA 3" 300PSI	3060255	Yes (pdf)
17-20003300-3"-06	-	Bonnet AWWA 3" 300PSI	3060255	Yes (pdf)
17-20003300-3"-09	-	Upper Cover AWWA 3" 300PSI	3060255	Yes (pdf)
17-20003300-3"-21	-	Handwheel AWWA OD178	3060255	Yes (pdf)

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17-20003300-4"-00	-	Assembly AWWA 4" 300PSI	3060255	Yes (pdf)
17-20003300-4"-01	-	Body AWWA 4" 300PSI	3060255	Yes (pdf)
17-20003300-4"-06	-	Bonnet AWWA 4" 300PSI	3060255	Yes (pdf)
17-20003300-4"-09	-	Upper Cover AWWA 4" 300PSI	3060255	Yes (pdf)
17-20003300-4"-21	-	Handwheel AWWA OD254	3060255	Yes (pdf)
17-20003300-5"-00	-	Assembly AWWA 5" 300PSI	3060255	Yes (pdf)
17-20003300-5"-01	-	Body AWWA 5" 300PSI	3060255	Yes (pdf)
17-20003300-5"-06	-	Bonnet AWWA 5" 300PSI	3060255	Yes (pdf)
17-20003300-6"-00	-	Assembly AWWA 6" 300PSI	3060255	Yes (pdf)
17-20003300-6"-01	-	Body AWWA 6" 300PSI	3060255	Yes (pdf)
17-20003300-6"-06	-	Bonnet AWWA 6" 300PSI	3060255	Yes (pdf)
17-20003300-6"-09	-	Upper Cover AWWA 6" 300PSI	3060255	Yes (pdf)
17-20003300-6"-21	-	Handwheel AWWA OD305	3060255	Yes (pdf)
17-20003300-8"-00	-	Assembly AWWA 8" 300PSI	3060255	Yes (pdf)
17-20003300-8"-01	-	Body AWWA 8" 300PSI	3060255	Yes (pdf)
17-20003300-8"-09	-	Upper Cover AWWA 8" 300PSI	3060255	Yes (pdf)
17-20003300-8"-21	-	Handwheel AWWA OD356	3060255	Yes (pdf)
17-20003362-4"-23	-	Indicator Post Flange 4"	3060255	Yes (pdf)
17-20003362-6"-22	-	Wrench Nut 6"	3060255	Yes (pdf)
17-20003362-6"-23	-	Indicator Post Flange 6"	3060255	Yes (pdf)
17-20003362-8"-23	-	Indicator Post Flange 8"	3060255	Yes (pdf)
17-60003300-10"-04	-	Stem AWWA 10" 300PSI	3060255	Yes (pdf)
17-60003300-12"-04	-	Stem AWWA 12" 300PSI	3060255	Yes (pdf)
17-60003300-2.5"-04	-	Stem AWWA 2.5" 300PSI	3060255	Yes (pdf)
17-60003300-3"-04	-	Stem AWWA 3" 300PSI	3060255	Yes (pdf)
17-60003300-4"-04	-	Stem AWWA 4" 300PSI	3060255	Yes (pdf)
17-60003300-5"-04	-	Stem AWWA 5" 300PSI	3060255	Yes (pdf)
17-60003300-6"-04	-	Stem AWWA 6" 300PSI	3060255	Yes (pdf)
17-60003300-8"-04	-	Stem AWWA 8" 300PSI	3060255	Yes (pdf)
17-70003300-10"-03	-	Stem nut AWWA 10" 300PSI	3060255	Yes (pdf)
17-70003300-12"-03	-	Stem nut AWWA 12" 300PSI	3060255	Yes (pdf)
17-70003300-2.5"-03	-	Stem nut AWWA 2.5" 300PSI	3060255	Yes (pdf)
17-70003300-3"-03	-	Stem nut AWWA 3" 300PSI	3060255	Yes (pdf)
17-70003300-4"-03	-	Stem nut AWWA 4" 300PSI	3060255	Yes (pdf)
17-70003300-4"-08	-	Sliding disc AWWA 4" 300PSI	3060255	Yes (pdf)
17-70003300-5"-03	-	Stem nut AWWA 5" 300PSI	3060255	Yes (pdf)
17-70003300-6"-03	-	Stem nut AWWA 6" 300PSI	3060255	Yes (pdf)
17-70003300-6"-08	-	Sliding disc AWWA 6" 300PSI	3060255	Yes (pdf)
17-70003300-8"-03	-	Stem nut AWWA 8" 300PSI	3060255	Yes (pdf)
17-80003300-3"-02	-	Wedge AWWA 3" 300PSI	3060255	Yes (pdf)
17-80003300-4"-02	-	Wedge AWWA 4" 300PSI	3060255	Yes (pdf)
17-80003300-4"-07	-	Sealing ring AWWA 4" 300PSI	3060255	Yes (pdf)
17-80003300-6"-02	-	Wedge AWWA 6" 300PSI	3060255	Yes (pdf)
17-80003300-6"-07	-	Sealing ring AWWA 6" 300PSI	3060255	Yes (pdf)
17-80003300-8"-07	-	Sealing ring AWWA 8" 300PSI	3060255	Yes (pdf)
17G-20003362-10"(273)-01	-	Body AWWA 10"-273 362PSI	3060255	Yes (pdf)
17G-20003362-12"(323.9)-01	-	Body AWWA 12"-323.9 362PSI	3060255	Yes (pdf)
17G-20003362-2"(60)-01	-	Body AWWA 2"-60 362PSI	3060255	Yes (pdf)
17G-20003362-2.5"(73)-01	-	Body AWWA 2.5"-73 362PSI	3060255	Yes (pdf)
17G-20003362-3"(88.9)-01	-	Body AWWA 3"-88.9 362PSI	3060255	Yes (pdf)
17G-20003362-4"(114)-01	-	Body AWWA 4"-114 362PSI	3060255	Yes (pdf)
17G-20003362-5"(141)-01	-	Body AWWA 5"-141 362PSI	3060255	Yes (pdf)

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17G-20003362-6"(168)-01	-	Body AWWA 6"-168 362PSI	3060255	Yes (pdf)
17G-20003362-8"(219)-01	-	Body AWWA 8"-219 362PSI	3060255	Yes (pdf)
18-20003300-10"-00	-	Assembly AWWA 10" 300PSI	3060255	Yes (pdf)
18-20003300-10"-06	-	Bonnet AWWA 10" 300PSI	3060255	Yes (pdf)
18-20003300-10"-10	-	Gland AWWA 10" 300PSI	3060255	Yes (pdf)
18-20003300-10"-21	-	Handwheel AWWA OD406	3060255	Yes (pdf)
18-20003300-12"-00	-	Assembly AWWA 12" 300PSI	3060255	Yes (pdf)
18-20003300-12"-06	-	Bonnet AWWA 12" 300PSI	3060255	Yes (pdf)
18-20003300-2"-00	-	Assembly AWWA 2" 300PSI	3060255	Yes (pdf)
18-20003300-2.5"-00	-	Assembly AWWA 2.5" 300PSI	3060255	Yes (pdf)
18-20003300-2.5"-06	-	Bonnet AWWA 2.5" 300PSI	3060255	Yes (pdf)
18-20003300-2.5"-10	-	Gland AWWA 2.5" 300PSI	3060255	Yes (pdf)
18-20003300-2.5"-21	-	Handwheel AWWA OD178	3060255	Yes (pdf)
18-20003300-3"-00	-	Assembly AWWA 3" 300PSI	3060255	Yes (pdf)
18-20003300-3"-06	-	Bonnet AWWA 3" 300PSI	3060255	Yes (pdf)
18-20003300-3"-10	-	Gland AWWA 3" 300PSI	3060255	Yes (pdf)
18-20003300-3"-21	-	Handwheel AWWA OD178	3060255	Yes (pdf)
18-20003300-4"-00	-	Assembly AWWA 4" 300PSI	3060255	Yes (pdf)
18-20003300-4"-06	-	Bonnet AWWA 4" 300PSI	3060255	Yes (pdf)
18-20003300-4"-10	-	Gland AWWA 4" 300PSI	3060255	Yes (pdf)
18-20003300-4"-21	-	Handwheel AWWA OD254	3060255	Yes (pdf)
18-20003300-5"-00	-	Assembly AWWA 5" 300PSI	3060255	Yes (pdf)
18-20003300-5"-06	-	Bonnet AWWA 5" 300PSI	3060255	Yes (pdf)
18-20003300-6"-00	-	Assembly AWWA 6" 300PSI	3060255	Yes (pdf)
18-20003300-6"-06	-	Bonnet AWWA 6" 300PSI	3060255	Yes (pdf)
18-20003300-6"-10	-	Gland AWWA 6" 300PSI	3060255	Yes (pdf)
18-20003300-6"-21	-	Handwheel AWWA OD305	3060255	Yes (pdf)
18-20003300-8"-00	-	Assembly AWWA 8" 300PSI	3060255	Yes (pdf)
18-20003300-8"-06	-	Bonnet AWWA 8" 300PSI	3060255	Yes (pdf)
18-20003300-8"-10	-	Gland AWWA 8" 300PSI	3060255	Yes (pdf)
18-20003300-8"-21	-	Handwheel AWWA OD356	3060255	Yes (pdf)
18-60003300-10"-04	-	Stem AWWA 10" 300PSI	3060255	Yes (pdf)
18-60003300-12"-04	-	Stem AWWA 12" 300PSI	3060255	Yes (pdf)
18-60003300-2.5"-04	-	Stem AWWA 2.5" 300PSI	3060255	Yes (pdf)
18-60003300-3"-04	-	Stem AWWA 3" 300PSI	3060255	Yes (pdf)
18-60003300-4"-04	-	Stem AWWA 4" 300PSI	3060255	Yes (pdf)
18-60003300-5"-04	-	Stem AWWA 5" 300PSI	3060255	Yes (pdf)
18-60003300-6"-04	-	Stem AWWA 6" 300PSI	3060255	Yes (pdf)
18-60003300-8"-04	-	Stem AWWA 8" 300PSI	3060255	Yes (pdf)
18-70003300-10"-03	-	Stem Nut AWWA 10" 300PSI	3060255	Yes (pdf)
18-70003300-10"-07	-	Handwheel Nut AWWA 10" 300PSI	3060255	Yes (pdf)
18-70003300-10"-08	-	Upside Sliding disc AWWA 10" 300PSI	3060255	Yes (pdf)
18-70003300-10"-09	-	Underside Sliding disc AWWA 10" 300PSI	3060255	Yes (pdf)
18-70003300-2.5"-03	-	Stem Nut AWWA 2.5" 300PSI	3060255	Yes (pdf)
18-70003300-2.5"-07	-	Handwheel Nut AWWA 2.5" 300PSI	3060255	Yes (pdf)
18-70003300-2.5"-08	-	Upside Sliding disc AWWA 2.5" 300PSI	3060255	Yes (pdf)
18-70003300-2.5"-09	-	Underside Sliding disc AWWA 2.5" 300PSI	3060255	Yes (pdf)
18-70003300-3"-03	-	Stem Nut AWWA 3" 300PSI	3060255	Yes (pdf)
18-70003300-3"-07	-	Handwheel Nut AWWA 3" 300PSI	3060255	Yes (pdf)
18-70003300-3"-08	-	Upside Sliding disc AWWA 3" 300PSI	3060255	Yes (pdf)
18-70003300-3"-09	-	Underside Sliding disc AWWA 3" 300PSI	3060255	Yes (pdf)
18-70003300-4"-03	-	Stem Nut AWWA 4" 300PSI	3060255	Yes (pdf)

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18-70003300-4"-07	-	Handwheel Nut AWWA 4" 300PSI	3060255	Yes (pdf)
18-70003300-4"-08	-	Upside Sliding disc AWWA 4" 300PSI	3060255	Yes (pdf)
18-70003300-4"-09	-	Underside Sliding disc AWWA AWWA 4" 300PSI	3060255	Yes (pdf)
18-70003300-6"-03	-	Stem Nut AWWA 6" 300PSI	3060255	Yes (pdf)
18-70003300-6"-07	-	Handwheel Nut AWWA 6" 300PSI	3060255	Yes (pdf)
18-80003300-10"-07	-	Sealing ring AWWA 10" 300PSI	3060255	Yes (pdf)
18-80003300-2.5"-07	-	Sealing ring AWWA 2.5" 300PSI	3060255	Yes (pdf)
18-80003300-3"-07	-	Sealing ring AWWA 3" 300PSI	3060255	Yes (pdf)
18-80003300-4"-07	-	Sealing ring AWWA 4" 300PSI	3060255	Yes (pdf)
18-80003300-6"-07	-	Sealing ring AWWA 6" 300PSI	3060255	Yes (pdf)
18-80003300-8"-07	-	Sealing ring AWWA 8" 300PSI	3060255	Yes (pdf)
18G-20003362-10"(273)-00	-	Assembly AWWA 10"-273 362PSI	3060255	Yes (pdf)
18G-20003362-12"(323.9)-00	-	Assembly AWWA 12"-323.9 362PSI	3060255	Yes (pdf)
18G-20003362-2"(60)-00	-	Assembly AWWA 2"-60 362PSI	3060255	Yes (pdf)
18G-20003362-2.5"(73)-00	-	Assembly AWWA 2.5"-73 362PSI	3060255	Yes (pdf)
18G-20003362-3"(88.9)-00	-	Assembly AWWA 3"-88.9 362PSI	3060255	Yes (pdf)
18G-20003362-4"(114)-00	-	Assembly AWWA 4"-114 362PSI	3060255	Yes (pdf)
18G-20003362-5"(141)-00	-	Assembly AWWA 5"-141 362PSI	3060255	Yes (pdf)
18G-20003362-6"(168)-00	-	Assembly AWWA 6"-168 362PSI	3060255	Yes (pdf)
18G-20003362-8"(219)-00	-	Assembly AWWA 8"-219 362PSI	3060255	Yes (pdf)

Blueprint Report

Shandong Lede Machinery Co Ltd (113572)

Class No 1120**Original Project I.D. 3051487**

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>	<u>Electronic Drawing</u>
11-2000025-100-150-22	-	Wrench Nut DN100-DN150	3051487	Yes (pdf)
11-2000025-100-23	-	Indicator Post Flange	3051487	Yes (pdf)
11-2000025-125-150-23	-	Indicator Post Flange	3051487	Yes (pdf)
11-2000025-200-22	-	Wrench Nut DN200	3051487	Yes (pdf)
11-2000025-200-23	-	Indicator Post Flange	3051487	Yes (pdf)
11-2000025-250-23	-	Indicator Post Flange	3051487	Yes (pdf)
11-2000025-250-300-22	-	Wrench Nut DN250-DN300	3051487	Yes (pdf)
11-2000025-300-23	-	Indicator Post Flange	3051487	Yes (pdf)
11-2000025-50-80-22	-	Wrench Nut DN50-DN80	3051487	Yes (pdf)
11-20003150-100-00I	-	Assembly DN100	3051487	Yes (pdf)
11-20003150-100-00	-	Assembly DN100	3051487	Yes (pdf)
11-20003150-100-01	-	Body AWWA DN100 Class150	3051487	Yes (pdf)
11-20003150-100-300-00IM	-	Z45X-04-175 Marking	3051487	Yes (pdf)
11-20003150-125-00I	-	Assembly DN125	3051487	Yes (pdf)
11-20003150-125-00	-	Assembly DN125	3051487	Yes (pdf)
11-20003150-125-01	-	Body AWWA DN125 Class150	3051487	Yes (pdf)
11-20003150-150-00I	-	Assembly DN150	3051487	Yes (pdf)
11-20003150-150-00	-	Assembly DN150	3051487	Yes (pdf)
11-20003150-150-01	-	Body AWWA DN150 Class150	3051487	Yes (pdf)
11-20003150-200-00I	-	Assembly DN200	3051487	Yes (pdf)
11-20003150-200-00	-	Assembly DN200	3051487	Yes (pdf)
11-20003150-200-01	-	Body AWWA DN200 Class150	3051487	Yes (pdf)
11-20003150-250-00I	-	Assembly DN250	3051487	Yes (pdf)
11-20003150-250-00	-	Assembly DN250	3051487	Yes (pdf)
11-20003150-250-01	-	Body AWWA DN250 Class150	3051487	Yes (pdf)
11-20003150-300-00I	-	Assembly DN300	3051487	Yes (pdf)
11-20003150-300-00	-	Assembly DN300	3051487	Yes (pdf)
11-20003150-300-01	-	Body AWWA DN300 Class150	3051487	Yes (pdf)
11-20003150-50-00	-	Assembly DN50	3051487	Yes (pdf)
11-20003150-50-01	-	Body DN50 Class150	3051487	Yes (pdf)
11-20003150-50-300-00M	-	Z45X-03-175 Marking	3051487	Yes (pdf)
11-20003150-65-00	-	Assembly DN65	3051487	Yes (pdf)
11-20003150-65-01	-	Body AWWA DN65 Class150	3051487	Yes (pdf)
11-20003150-80-00	-	Assembly DN80	3051487	Yes (pdf)
11-20003150-80-01	-	Body AWWA DN80 Class150	3051487	Yes (pdf)
11-2000316-100-00	-	Assembly DN100	3051487	Yes (pdf)
11-2000316-100-01	-	Body DN100	3051487	Yes (pdf)
11-2000316-125-00	-	Assembly DN125	3051487	Yes (pdf)
11-2000316-125-01	-	Body DN125	3051487	Yes (pdf)
11-2000316-150-00	-	Assembly DN150	3051487	Yes (pdf)
11-2000316-150-01	-	Body DN150	3051487	Yes (pdf)
11-2000316-200-00	-	Assembly DN200	3051487	Yes (pdf)
11-2000316-200-01	-	Body DN200	3051487	Yes (pdf)
11-2000316-250-00	-	Assembly DN250	3051487	Yes (pdf)

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11-2000316-250-01	-	Body DN250	3051487	Yes (pdf)
11-2000316-300-00	-	Assembly DN300	3051487	Yes (pdf)
11-2000316-300-01	-	Body DN300	3051487	Yes (pdf)
11-2000316-50-00	-	Assembly DN50	3051487	Yes (pdf)
11-2000316-50-01	-	Body DN50	3051487	Yes (pdf)
11-2000316-50-300-00M	-	Z45X-02-1.6 Marking	3051487	Yes (pdf)
11-2000316-65-00	-	Assembly DN65	3051487	Yes (pdf)
11-2000316-65-01	-	Body DN65	3051487	Yes (pdf)
11-2000316-80-00	-	Assembly DN80	3051487	Yes (pdf)
11-2000316-80-01	-	Body DN80	3051487	Yes (pdf)
11-20003300-100-00I	-	Assembly DN100	3051487	Yes (pdf)
11-20003300-100-00	-	Assembly DN100	3051487	Yes (pdf)
11-20003300-100-01	-	Body AWWA DN100 Class300	3051487	Yes (pdf)
11-20003300-100-300-00IM	-	Z45X-04-300 Marking	3051487	Yes (pdf)
11-20003300-125-00I	-	Assembly DN125	3051487	Yes (pdf)
11-20003300-125-00	-	Assembly DN125	3051487	Yes (pdf)
11-20003300-125-01	-	Body AWWA DN125 Class300	3051487	Yes (pdf)
11-20003300-150-00I	-	Assembly DN150	3051487	Yes (pdf)
11-20003300-150-00	-	Assembly DN150	3051487	Yes (pdf)
11-20003300-150-01	-	Body AWWA DN150 Class300	3051487	Yes (pdf)
11-20003300-200-00I	-	Assembly DN200	3051487	Yes (pdf)
11-20003300-200-00	-	Assembly DN200	3051487	Yes (pdf)
11-20003300-200-01	-	Body AWWA DN200 Class300	3051487	Yes (pdf)
11-20003300-250-00I	-	Assembly DN250	3051487	Yes (pdf)
11-20003300-250-00	-	Assembly DN250	3051487	Yes (pdf)
11-20003300-250-01	-	Body AWWA DN250 Class300	3051487	Yes (pdf)
11-20003300-300-00I	-	Assembly DN300	3051487	Yes (pdf)
11-20003300-300-00	-	Assembly DN300	3051487	Yes (pdf)
11-20003300-300-01	-	Body AWWA DN300 Class300	3051487	Yes (pdf)
11-20003300-50-00	-	Assembly DN50	3051487	Yes (pdf)
11-20003300-50-01	-	Body DN50 Class300	3051487	Yes (pdf)
11-20003300-50-300-00M	-	Z45X-03-300 Marking	3051487	Yes (pdf)
11-20003300-65-00	-	Assembly DN65	3051487	Yes (pdf)
11-20003300-65-01	-	Body AWWA DN65 Class300	3051487	Yes (pdf)
11-20003300-80-00	-	Assembly DN80	3051487	Yes (pdf)
11-20003300-80-01	-	Body AWWA DN80 Class300	3051487	Yes (pdf)
11-2001416-100-00	-	Assembly DN100	3051487	Yes (pdf)
11-2001416-100-01	-	Body DN100	3051487	Yes (pdf)
11-2001416-100-02.1	-	Wedge casting DN100	3051487	Yes (pdf)
11-2001416-100-06I	-	Bonnet DN100	3051487	Yes (pdf)
11-2001416-100-06	-	Bonnet DN100	3051487	Yes (pdf)
11-2001416-100-09	-	Upper cover DN100	3051487	Yes (pdf)
11-2001416-125-00	-	Assembly DN125	3051487	Yes (pdf)
11-2001416-125-01	-	Body DN125	3051487	Yes (pdf)
11-2001416-125-02.1	-	Wedge casting DN125	3051487	Yes (pdf)
11-2001416-125-06	-	Bonnet DN125	3051487	Yes (pdf)
11-2001416-150-00	-	Assembly DN150	3051487	Yes (pdf)
11-2001416-150-01	-	Body DN150	3051487	Yes (pdf)
11-2001416-150-02.1	-	Wedge casting DN150	3051487	Yes (pdf)
11-2001416-150-06	-	Bonnet DN150	3051487	Yes (pdf)
11-2001416-150-09	-	Upper cover DN150	3051487	Yes (pdf)
11-2001416-200-00	-	Assembly DN200	3051487	Yes (pdf)

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11-2001416-200-01	-	Body DN200	3051487	Yes (pdf)
11-2001416-200-02.1	-	Wedge casting DN200	3051487	Yes (pdf)
11-2001416-200-06	-	Bonnet DN200	3051487	Yes (pdf)
11-2001416-200-09	-	Upper cover DN200	3051487	Yes (pdf)
11-2001416-250-00	-	Assembly DN250	3051487	Yes (pdf)
11-2001416-250-01	-	Body DN250	3051487	Yes (pdf)
11-2001416-250-02.1	-	Wedge casting DN250	3051487	Yes (pdf)
11-2001416-250-06	-	Bonnet DN250	3051487	Yes (pdf)
11-2001416-250-09	-	Upper cover DN250	3051487	Yes (pdf)
11-2001416-300-00	-	Assembly DN300	3051487	Yes (pdf)
11-2001416-300-01	-	Body DN300	3051487	Yes (pdf)
11-2001416-300-02.1	-	Wedge casting DN300	3051487	Yes (pdf)
11-2001416-300-06	-	Bonnet DN300	3051487	Yes (pdf)
11-2001416-300-09	-	Upper cover DN300	3051487	Yes (pdf)
11-2001416-50-00	-	Assembly DN50	3051487	Yes (pdf)
11-2001416-50-02.1	-	Wedge casting DN50	3051487	Yes (pdf)
11-2001416-50-300-00M	-	Z45X-01-1.6 Marking	3051487	Yes (pdf)
11-2001416-65-00	-	Assembly DN65	3051487	Yes (pdf)
11-2001416-65-01	-	Body DN65	3051487	Yes (pdf)
11-2001416-65-02.1	-	Wedge casting DN65	3051487	Yes (pdf)
11-2001416-65-06	-	Bonnet DN65	3051487	Yes (pdf)
11-2001416-80-00	-	Assembly DN80	3051487	Yes (pdf)
11-2001416-80-02.1	-	Wedge casting DN80	3051487	Yes (pdf)
11-2001416-80-06	-	Bonnet DN80	3051487	Yes (pdf)
11-2001416-80-09	-	Upper cover DN80	3051487	Yes (pdf)
11-2001425-100-00	-	Assembly DN100	3051487	Yes (pdf)
11-2001425-100-01	-	Body DN100	3051487	Yes (pdf)
11-2001425-125-00	-	Assembly DN125	3051487	Yes (pdf)
11-2001425-125-01	-	Body DN125	3051487	Yes (pdf)
11-2001425-150-00	-	Assembly DN150	3051487	Yes (pdf)
11-2001425-150-01	-	Body DN150	3051487	Yes (pdf)
11-2001425-200-00	-	Assembly DN200	3051487	Yes (pdf)
11-2001425-200-01	-	Body DN200	3051487	Yes (pdf)
11-2001425-250-00	-	Assembly DN250	3051487	Yes (pdf)
11-2001425-250-01	-	Body DN250	3051487	Yes (pdf)
11-2001425-300-00	-	Assembly DN300	3051487	Yes (pdf)
11-2001425-300-01	-	Body DN300	3051487	Yes (pdf)
11-2001425-50-00	-	Assembly DN50	3051487	Yes (pdf)
11-2001425-50-01	-	Body DN50	3051487	Yes (pdf)
11-2001425-50-300-00M	-	Z45X-01-2.5 Marking	3051487	Yes (pdf)
11-2001425-65-00	-	Assembly DN65	3051487	Yes (pdf)
11-2001425-65-01	-	Body DN65	3051487	Yes (pdf)
11-2001425-80-00	-	Assembly DN80	3051487	Yes (pdf)
11-2001425-80-01	-	Body DN80	3051487	Yes (pdf)
11-2001925-100-00	-	Assembly DN100	3051487	Yes (pdf)
11-2001925-100-01	-	Body DN100	3051487	Yes (pdf)
11-2001925-125-00	-	Assembly DN125	3051487	Yes (pdf)
11-2001925-125-01	-	Body DN125	3051487	Yes (pdf)
11-2001925-150-00	-	Assembly DN150	3051487	Yes (pdf)
11-2001925-150-01	-	Body DN150	3051487	Yes (pdf)
11-2001925-200-00	-	Assembly DN200	3051487	Yes (pdf)
11-2001925-200-01	-	Body DN200	3051487	Yes (pdf)

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11-2001925-250-00	-	Assembly DN250	3051487	Yes (pdf)
11-2001925-250-01	-	Body DN250	3051487	Yes (pdf)
11-2001925-300-00	-	Assembly DN300	3051487	Yes (pdf)
11-2001925-300-01	-	Body DN300	3051487	Yes (pdf)
11-2001925-50-00 Assembly DN50	-	Assembly DN50	3051487	Yes (pdf)
11-2001925-50-01 Body DN50	-	Wedge casting DN50	3051487	Yes (pdf)
11-2001925-50-300-00M	-	Z45X-02-2.5 Marking	3051487	Yes (pdf)
11-2001925-65-00 Assembly DN65	-	Assembly DN65	3051487	Yes (pdf)
11-2001925-65-01 Body DN65	-	Body DN65	3051487	Yes (pdf)
11-2001925-80-00 Assembly DN80	-	Assembly DN80	3051487	Yes (pdf)
11-2001925-80-01 Body DN80	-	Body DN80	3051487	Yes (pdf)
11-6001416-100-04	-	Stem DN100	3051487	Yes (pdf)
11-6001416-125-04	-	Stem DN125	3051487	Yes (pdf)
11-6001416-150-04	-	Stem DN150	3051487	Yes (pdf)
11-6001416-200-04	-	Stem DN200	3051487	Yes (pdf)
11-6001416-250-04	-	Stem DN250	3051487	Yes (pdf)
11-6001416-300-04	-	Stem DN300	3051487	Yes (pdf)
11-6001416-65-04	-	Stem DN65	3051487	Yes (pdf)
11-6001416-80-04	-	Stem DN80	3051487	Yes (pdf)
11-7001416-100-03	-	Stem nut DN100	3051487	Yes (pdf)
11-7001416-100-08	-	Sliding disc DN100	3051487	Yes (pdf)
11-7001416-150-03	-	Stem nut DN150	3051487	Yes (pdf)
11-7001416-150-08	-	Sliding disc DN150	3051487	Yes (pdf)
11-7001416-200-03	-	Stem nut DN200	3051487	Yes (pdf)
11-7001416-200-08	-	Sliding disc DN200	3051487	Yes (pdf)
11-7001416-250-03	-	Stem nut DN250	3051487	Yes (pdf)
11-7001416-250-08	-	Sliding disc DN250	3051487	Yes (pdf)
11-7001416-300-03	-	Stem nut DN300	3051487	Yes (pdf)
11-7001416-300-08	-	Sliding disc DN300	3051487	Yes (pdf)
11-7001416-80-03	-	Stem nut DN80	3051487	Yes (pdf)
11-7001416-80-08	-	Sliding disc DN80	3051487	Yes (pdf)
11-8001416-100-02	-	Wedge DN100	3051487	Yes (pdf)
11-8001416-100-05	-	Protector DN100	3051487	Yes (pdf)
11-8001416-100-07	-	Sealing ring DN100	3051487	Yes (pdf)
11-8001416-100-10	-	Bonnet gasket DN100	3051487	Yes (pdf)
11-8001416-125-02	-	Wedge DN125	3051487	Yes (pdf)
11-8001416-125-05	-	Protector DN125	3051487	Yes (pdf)
11-8001416-125-10	-	Bonnet gasket DN125	3051487	Yes (pdf)
11-8001416-150-02	-	Wedge DN150	3051487	Yes (pdf)
11-8001416-150-05	-	Protector DN150	3051487	Yes (pdf)
11-8001416-150-07	-	Sealing ring DN150	3051487	Yes (pdf)
11-8001416-150-10	-	Bonnet gasket DN150	3051487	Yes (pdf)
11-8001416-200-02	-	Wedge DN200	3051487	Yes (pdf)
11-8001416-200-05	-	Protector DN200	3051487	Yes (pdf)
11-8001416-200-07	-	sealing ring DN200	3051487	Yes (pdf)
11-8001416-200-10	-	Bonnet gasket DN200	3051487	Yes (pdf)
11-8001416-250-02	-	Wedge DN250	3051487	Yes (pdf)
11-8001416-250-05	-	Protector DN250	3051487	Yes (pdf)
11-8001416-250-07	-	Sealing ring DN250	3051487	Yes (pdf)
11-8001416-250-10	-	Bonnet gasket DN250	3051487	Yes (pdf)
11-8001416-300-02	-	Wedge DN300	3051487	Yes (pdf)
11-8001416-300-05	-	Protector DN300	3051487	Yes (pdf)

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11-8001416-300-07	-	Sealing ring DN300	3051487	Yes (pdf)
11-8001416-300-10	-	Bonnet gasket DN300	3051487	Yes (pdf)
11-8001416-50-02	-	Wedge DN50	3051487	Yes (pdf)
11-8001416-65-02	-	Wedge DN65	3051487	Yes (pdf)
11-8001416-65-05	-	Protector DN65	3051487	Yes (pdf)
11-8001416-65-10	-	Bonnet gasket DN65	3051487	Yes (pdf)
11-8001416-80-02	-	Wedge DN80	3051487	Yes (pdf)
11-8001416-80-05	-	Protector DN80	3051487	Yes (pdf)
11-8001416-80-07	-	Sealing ring DN80	3051487	Yes (pdf)
11-8001416-80-10	-	Bonnet gasket DN80	3051487	Yes (pdf)
11G-2000325-100(114)-00	-	Assembly DN100-114	3051487	Yes (pdf)
11G-2000325-100(114)-01	-	Body DN100-114	3051487	Yes (pdf)
11G-2000325-125(140)-00	-	Assembly DN125-140	3051487	Yes (pdf)
11G-2000325-125(140)-01	-	Body DN125-140	3051487	Yes (pdf)
11G-2000325-125(141)-00	-	Assembly DN125-141	3051487	Yes (pdf)
11G-2000325-125(141)-01	-	Body DN125-141	3051487	Yes (pdf)
11G-2000325-150(165)-00	-	Assembly DN150-165	3051487	Yes (pdf)
11G-2000325-150(165)-01	-	Body DN150-165	3051487	Yes (pdf)
11G-2000325-150(168)-00	-	Assembly DN150-168	3051487	Yes (pdf)
11G-2000325-150(168)-01	-	Body DN150-168	3051487	Yes (pdf)
11G-2000325-200-00	-	Assembly DN200	3051487	Yes (pdf)
11G-2000325-200-01	-	Body DN200	3051487	Yes (pdf)
11G-2000325-50(60)-00	-	Assembly DN50-60	3051487	Yes (pdf)
11G-2000325-50(60)-01	-	Body DN50-60	3051487	Yes (pdf)
11G-2000325-50-300-00M	-	Z85X-2.5 Marking	3051487	Yes (pdf)
11G-2000325-65(73)-00	-	Assembly DN65-73	3051487	Yes (pdf)
11G-2000325-65(73)-01	-	Body DN65-73	3051487	Yes (pdf)
11G-2000325-65(76)-00	-	Assembly DN65-76	3051487	Yes (pdf)
11G-2000325-65(76)-01	-	body DN65-76	3051487	Yes (pdf)
11G-2000325-80-00	-	Assembly DN80	3051487	Yes (pdf)
11G-2000325-80-01	-	Body DN80	3051487	Yes (pdf)
12-2000025-125-150-21	-	Handwheel OD300	3051487	Yes (pdf)
12-2000025-200-21	-	Handwheel OD330	3051487	Yes (pdf)
12-2000025-250-300-21	-	Handwheel OD406	3051487	Yes (pdf)
12-2000025-50-100-21	-	Handwheel OD203	3051487	Yes (pdf)
12-20003150-100-00	-	Assembly DN100	3051487	Yes (pdf)
12-20003150-125-00	-	Assembly DN125	3051487	Yes (pdf)
12-20003150-150-00	-	Assembly DN150	3051487	Yes (pdf)
12-20003150-200-00	-	Assembly DN200	3051487	Yes (pdf)
12-20003150-250-00	-	Assembly DN250	3051487	Yes (pdf)
12-20003150-300-00	-	Assembly DN300	3051487	Yes (pdf)
12-20003150-50-00	-	Assembly DN50	3051487	Yes (pdf)
12-20003150-50-300-00M	-	Z41X-03-175 Marking	3051487	Yes (pdf)
12-20003150-65-00	-	Assembly DN65	3051487	Yes (pdf)
12-20003150-80-00	-	Assembly DN80	3051487	Yes (pdf)
12-2000316-100-00	-	Assembly DN100	3051487	Yes (pdf)
12-2000316-125-00	-	Assembly DN125	3051487	Yes (pdf)
12-2000316-150-00	-	Assembly DN150	3051487	Yes (pdf)
12-2000316-200-00	-	Assembly DN200	3051487	Yes (pdf)
12-2000316-250-00	-	Assembly DN250	3051487	Yes (pdf)
12-2000316-300-00	-	Assembly DN300	3051487	Yes (pdf)
12-2000316-50-00	-	Assembly DN50	3051487	Yes (pdf)

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12-2000316-50-300-00M	-	Z41X-02-1.6 Marking	3051487	Yes (pdf)
12-2000316-65-00	-	Assembly DN65	3051487	Yes (pdf)
12-2000316-80-00	-	Assembly DN80	3051487	Yes (pdf)
12-20003300-100-00	-	Assembly DN100	3051487	Yes (pdf)
12-20003300-125-00	-	Assembly DN125	3051487	Yes (pdf)
12-20003300-150-00	-	Assembly DN150	3051487	Yes (pdf)
12-20003300-200-00	-	Assembly DN200	3051487	Yes (pdf)
12-20003300-250-00	-	Assembly DN250	3051487	Yes (pdf)
12-20003300-300-00	-	Assembly DN300	3051487	Yes (pdf)
12-20003300-50-00	-	Assembly DN50	3051487	Yes (pdf)
12-20003300-50-300-00M	-	Z41X-03-300 Marking	3051487	Yes (pdf)
12-20003300-65-00	-	Assembly DN65	3051487	Yes (pdf)
12-20003300-80-00	-	Assembly DN80	3051487	Yes (pdf)
12-2001416-100-00	-	Assembly DN100	3051487	Yes (pdf)
12-2001416-100-06	-	Yoke DN100	3051487	Yes (pdf)
12-2001416-100-10	-	Gland DN100	3051487	Yes (pdf)
12-2001416-125-00	-	Assembly DN125	3051487	Yes (pdf)
12-2001416-125-06	-	Yoke DN125	3051487	Yes (pdf)
12-2001416-125-10	-	Gland DN125	3051487	Yes (pdf)
12-2001416-150-00	-	Assembly DN150	3051487	Yes (pdf)
12-2001416-200-00	-	Assembly DN200	3051487	Yes (pdf)
12-2001416-200-06	-	Yoke DN200	3051487	Yes (pdf)
12-2001416-200-10	-	Gland DN200	3051487	Yes (pdf)
12-2001416-250-00	-	Assembly DN250	3051487	Yes (pdf)
12-2001416-250-06	-	Yoke DN250	3051487	Yes (pdf)
12-2001416-250-10	-	Gland DN250	3051487	Yes (pdf)
12-2001416-300-00	-	Assembly DN300	3051487	Yes (pdf)
12-2001416-300-06	-	Yoke DN300	3051487	Yes (pdf)
12-2001416-300-10	-	Gland DN300	3051487	Yes (pdf)
12-2001416-50-00	-	Assembly DN50	3051487	Yes (pdf)
12-2001416-50-300-00M	-	Z41X-01-1.6 Marking	3051487	Yes (pdf)
12-2001416-65-00	-	Assembly DN65	3051487	Yes (pdf)
12-2001416-80-00	-	Assembly DN80	3051487	Yes (pdf)
12-2001416-80-06	-	Yoke DN80	3051487	Yes (pdf)
12-2001416-80-10	-	Gland DN80	3051487	Yes (pdf)
12-2001425-100-00	-	Assembly DN100	3051487	Yes (pdf)
12-2001425-125-00	-	Assembly DN125	3051487	Yes (pdf)
12-2001425-150-00	-	Assembly DN150	3051487	Yes (pdf)
12-2001425-200-00	-	Assembly DN200	3051487	Yes (pdf)
12-2001425-250-00	-	Assembly DN250	3051487	Yes (pdf)
12-2001425-300-00	-	Assembly DN300	3051487	Yes (pdf)
12-2001425-50-00	-	Assembly DN50	3051487	Yes (pdf)
12-2001425-50-300-00M	-	Z41X-01-2.5 Marking	3051487	Yes (pdf)
12-2001425-65-00	-	Assembly DN65	3051487	Yes (pdf)
12-2001425-80-00	-	Assembly DN80	3051487	Yes (pdf)
12-2001925-100-00	-	Assembly DN100	3051487	Yes (pdf)
12-2001925-125-00	-	Assembly DN125	3051487	Yes (pdf)
12-2001925-150-00	-	Assembly DN150	3051487	Yes (pdf)
12-2001925-200-00	-	Assembly DN200	3051487	Yes (pdf)
12-2001925-250-00	-	Assembly DN250	3051487	Yes (pdf)
12-2001925-300-00	-	Assembly DN300	3051487	Yes (pdf)
12-2001925-50-00	-	Assembly DN50	3051487	Yes (pdf)

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12-2001925-50-300-00M	-	Z41X-02-2.5 Marking	3051487	Yes (pdf)
12-2001925-65-00	-	Assembly DN65	3051487	Yes (pdf)
12-2001925-80-00	-	Assembly DN80	3051487	Yes (pdf)
12-4000025-100-05	-	Nut 55x2 DN100	3051487	Yes (pdf)
12-4000025-100-07	-	Compaction nut M34x1.5 DN100	3051487	Yes (pdf)
12-4000025-125-05	-	Nut M55x1.5 DN125	3051487	Yes (pdf)
12-4000025-200-05	-	Nut M60x2 DN200	3051487	Yes (pdf)
12-4000025-200-07	-	Compaction nut M40x1.5 DN200	3051487	Yes (pdf)
12-4000025-250-05	-	Nut M68x2 DN250	3051487	Yes (pdf)
12-4000025-250-07	-	Compaction nut M46x1.5 DN250	3051487	Yes (pdf)
12-6001416-100-04.1	-	Nut DN100	3051487	Yes (pdf)
12-6001416-100-04.2	-	Stem Shaft DN100	3051487	Yes (pdf)
12-6001416-100-04	-	Stem DN100	3051487	Yes (pdf)
12-6001416-125-04.2	-	Stem Shaft DN125	3051487	Yes (pdf)
12-6001416-125-04	-	Stem DN125	3051487	Yes (pdf)
12-6001416-125-150-04.1	-	Nut DN125-150	3051487	Yes (pdf)
12-6001416-150-04.2	-	Stem Shaft DN150	3051487	Yes (pdf)
12-6001416-150-04	-	Stem DN150	3051487	Yes (pdf)
12-6001416-200-04.1	-	Nut DN200	3051487	Yes (pdf)
12-6001416-200-04.2	-	Stem Shaft DN200	3051487	Yes (pdf)
12-6001416-200-04	-	Stem DN200	3051487	Yes (pdf)
12-6001416-250-04.1	-	Nut DN250	3051487	Yes (pdf)
12-6001416-250-04.2	-	Stem Shaft DN250	3051487	Yes (pdf)
12-6001416-250-04	-	Stem DN250	3051487	Yes (pdf)
12-6001416-300-04.1	-	Nut DN300	3051487	Yes (pdf)
12-6001416-300-04.2	-	Stem Shaft DN300	3051487	Yes (pdf)
12-6001416-300-04	-	Stem DN300	3051487	Yes (pdf)
12-6001416-50-04.2	-	Stem Shaft DN50	3051487	Yes (pdf)
12-6001416-50-04	-	Stem DN50	3051487	Yes (pdf)
12-6001416-50-80-04.1	-	Nut DN50-80	3051487	Yes (pdf)
12-6001416-65-04.2	-	Stem Shaft DN65	3051487	Yes (pdf)
12-6001416-65-04	-	Stem DN65	3051487	Yes (pdf)
12-6001416-80-04.2	-	Stem Shaft DN80	3051487	Yes (pdf)
12-6001416-80-04	-	Stem DN80	3051487	Yes (pdf)
12-7001416-100-03	-	Stem nut DN100	3051487	Yes (pdf)
12-7001416-100-08	-	Upside sliding disc DN100	3051487	Yes (pdf)
12-7001416-100-09	-	Underside sliding disc DN100	3051487	Yes (pdf)
12-7001416-125-03	-	Stem nut DN125	3051487	Yes (pdf)
12-7001416-125-08	-	Upside sliding disc DN125	3051487	Yes (pdf)
12-7001416-125-09	-	Underside sliding disc DN125	3051487	Yes (pdf)
12-7001416-200-03	-	Stem nut DN200	3051487	Yes (pdf)
12-7001416-200-08	-	Upside sliding disc DN200	3051487	Yes (pdf)
12-7001416-200-09	-	Underside sliding disc DN200	3051487	Yes (pdf)
12-7001416-250-03	-	Stem nut DN250	3051487	Yes (pdf)
12-7001416-250-08	-	Upside sliding disc DN250	3051487	Yes (pdf)
12-7001416-250-09	-	Underside sliding disc DN250	3051487	Yes (pdf)
12-7001416-300-03	-	Stem nut DN300	3051487	Yes (pdf)
12-7001416-80-03	-	Stem nut DN80	3051487	Yes (pdf)
12G-2000325-100(114)-00	-	Assembly DN100-114	3051487	Yes (pdf)
12G-2000325-125(140)-00	-	Assembly DN125-140	3051487	Yes (pdf)
12G-2000325-125(141)-00	-	Assembly DN125-141	3051487	Yes (pdf)
12G-2000325-150(165)-00	-	Assembly DN150-165	3051487	Yes (pdf)

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12G-2000325-150(168)-00	-	Assembly DN150-168	3051487	Yes (pdf)
12G-2000325-200-00	-	Assembly DN200	3051487	Yes (pdf)
12G-2000325-50(60)-00	-	Assembly DN50-60	3051487	Yes (pdf)
12G-2000325-50-300-00M	-	Z81X-2.5 Marking	3051487	Yes (pdf)
12G-2000325-65(73)-00	-	Assembly DN65-73	3051487	Yes (pdf)
12G-2000325-65(76)-00	-	Assembly DN65-76	3051487	Yes (pdf)
12G-2000325-80-00	-	Assembly DN80	3051487	Yes (pdf)
FM Gate Valve 1101 ONTOR Mark	-	FM Gate Valve 1101 ONTOR Mark	3060201	Yes (pdf)
FM Gate Valve 1102 ONTOR Mark	-	FM Gate Valve 1102 ONTOR Mark	3060201	Yes (pdf)
FM Gate Valve 1105 ONTOR Mark	-	FM Gate Valve 1105 ONTOR Mark	3060201	Yes (pdf)
FM Gate Valve 1106 ONTOR Mark	-	FM Gate Valve 1106 ONTOR Mark	3060201	Yes (pdf)
FM Gate Valve 1107 ONTOR Mark	-	FM Gate Valve 1107 ONTOR Mark	3060201	Yes (pdf)
FM Gate Valve 1201 ONTOR Mark	-	FM Gate Valve 1201 ONTOR Mark	3060201	Yes (pdf)
FM Gate Valve 1202 ONTOR Mark	-	FM Gate Valve 1202 ONTOR Mark	3060201	Yes (pdf)
FM Gate Valve 1205 ONTOR Mark	-	FM Gate Valve 1205 ONTOR Mark	3060201	Yes (pdf)
FM Gate Valve 1206 ONTOR Mark	-	FM Gate Valve 1206 ONTOR Mark	3060201	Yes (pdf)
FM Gate Valve 1207 ONTOR Mark	-	FM Gate Valve 1207 ONTOR Mark	3060201	Yes (pdf)



Certificate of Compliance

This certificate is issued for the following:

Single Check Valves

Model H84X Grooved End

Sizes 2, 2-1/2, 3, 4, 5, 6, 8, 10 and 12 inch NPS

Sizes 76.1, 139.7 and 165.1 mm

Models H44X and H44X-01 Flanged End

Sizes 2, 2-1/2, 3, 4, 5, 6, 8, 10 and 12 inch NPS

Prepared For:

Shandong Lede Machinery Co., Ltd.
No. 3998 West Weinhuan N Road
Weicheng District
Weifang City, Shandong 261057
China

Manufactured at:

Shandong Lede Machinery Co., Ltd.
No. 3998 West Weinhuan N Road
Weicheng District
Weifang City, Shandong 261057
China

FM Approvals Class: 1210, dated June 2004

Approval Identification: PR454783

Approval Granted: November 26, 2019

To verify the availability of the Approved product, please refer to www.approvalguide.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.



Member of the FM Global Group

David B. Fuller
VP – Manager, Fire Protection
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1151 Boston-Providence Turnpike
Norwood, MA 02062 USA

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APPROVAL REPORT

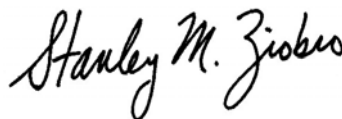
Project No: PR454783
Class: 1210
Product Type: Single Check Valves
Product Name: Model H84X, H44X and H44X-01 Single Check Valves
Sizes 2 through 12 inch NPS
Name of Report Holder: Shandong Lede Machinery Co Ltd
Address of Report Holder: No. 3998 West Weihuan N Rd.
Weicheng Dist. Weifang City
Shandong 261057, China
Customer ID: 113572
Customer Website: <http://wflede.com>

Prepared by

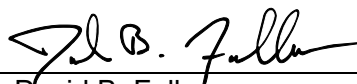


Daniel T. Desautel
Engineer – Fire Protection

Reviewed by



Stanley M. Ziobro
AVP, Technical Team Manager



David B. Fuller
VP, Manager of Fire Protection

November 26, 2019

Date of Approval

1 INTRODUCTION

1.1 Shandong Lede Machinery Co., Ltd. requested Approval of the Model H44X, H44X-01 and H84X check valves listed in Section 1.4 for compliance with the standard listed in Section 1.3.

1.2 This Report may be freely reproduced only in its entirety and without modification.

1.3 Standards

FM Approvals Standards

Title	Number	Issue Date
Approval Standard for Swing Check Valves	1210	June 2004

1.4 Listing

The Model H44X, H44X-01 and H84X check valves discussed in this report will be updated in the Approval Guide, an on-line resource of FM Approvals, as detailed in an attachment at the end of this Report. Deletions from any current product listing are shown with strikethroughs and additions to the current Approval listing are shown in red text.

2 DESCRIPTION

2.1 The check valves discussed in this Report are identical in physical construction to those previously FM Approved under Project ID 3057546 dated July 5, 2016.

2.2 The Model H44X and H44X-01 swing check valves discussed in this Report have flanged end connections to ASME/ANSI B16.1 Class 125 and ASME/ANSI B16.42 Class 150 with a rated working pressure of 300 psi (2070 kPa).

2.3 The Model H84X swing check valves discussed in this Report have grooved end connections with a rated working pressure of 365 psi (2515 kPa).

2.4 Model H44X check valves incorporate an access hand hole cover in the body design to accommodate maintenance and inspection. Model H44X-01 and H84X check valves utilize identical internal components, differing only in body end connections.

2.5 The check valves discussed in this Report are for use in horizontal and vertical installations and are manufactured to comply with AWWC508.

3 EXAMINATIONS AND TESTS

3.1 Samples were submitted for examination and testing. The samples were considered to be representative of the product line and were examined, tested, and compared to the manufacturer's drawings. All data is on file at FM Approvals along with other documents and correspondence applicable to this program.

- 3.2 All testing and analysis considered appropriate was conducted and verified to be in compliance with the standard defined in Section 1.3.

4 MARKING

- 4.1 The following information appears on all valves identified within this Report and meets standard requirements:

- Manufacturer's name or trademark
- Date of manufacturer or code traceable to date of manufacture or lot identification
- Model (designation, stock number, etc.)
- Valve Size
- Rate Working Pressure
- The FM Mark of Approval

5 REMARKS

- 5.1 The FM Global Property Loss Prevention Data Sheets should be strictly adhered to when installing this product.
- 5.2 Installations shall comply with the latest edition of the manufacturer's instruction manual.

6 SURVEILLANCE AUDIT

The design and manufacturing facilities at the following locations are subject to follow-up audit inspections. The facilities and quality control procedures in place have been found to be satisfactory to manufacture product identical to that examined and tested as described in this Report. An FM Approved Product Revision Request Form shall be submitted to FM Approvals for requesting any additional manufacturing facilities which are not listed below. The products discussed in this Report are FM Approved only when designed and manufactured in the following facilities:

Design

Shandong Lede Machinery Co., Ltd.
No. 3998 West Weihuan N Rd
Weicheng Dist, Weifang City
Shandong 261057
China

Manufacturing

Shandong Lede Machinery Co., Ltd.
No. 3998 West Weihuan N Rd
Weicheng Dist, Weifang City
Shandong 261057
China

7 MANUFACTURER'S RESPONSIBILITIES

- 7.1 Documentation considered critical to this Approval is on file at FM Approvals and is listed in the Documentation File, Section 8, of this Report. No changes of any nature shall be made unless notice of the proposed change has been given and written authorization obtained from FM Approvals. The FM Approved Product Revision Request Form shall be forwarded to FM Approvals as notice of proposed changes.
- 7.2 The manufacturer is responsible for control of the product marking and installation instructions for the product.

7.3 The manufacturer shall provide installation, operating, and maintenance manual(s) with each system.

7.4 In accordance with the Master Agreement, the manufacturer shall make full and immediate disclosure to FM Approvals of all information concerning any defect in, or potential hazard of, the product or service manufactured or provided by the Customer which is Approved by, or being examined by, FM Approvals. The manufacturer shall make all necessary arrangements for the investigation of complaints / anomalies applicable to this approval and shall keep records of all complaints / anomalies including actions taken.

7.5 Test Requirement No. 1 – Seat Leakage

The manufacturer shall test 100 percent of production valves for seat leakage to the rated working pressure. The pressure shall be held for a minimum of 15 seconds. If there is no visible leakage after 15 seconds, then the test may be considered acceptable. For metal seated valve, only, if there is leakage visible during the 15 second test, then the test duration shall be extended to a minimum of 1 minute so that the leakage rate can be determined. If the metal seated valve is observed to have leakage in excess of 1 fluid ounce/hr (30 ml/hr) the valve is considered to have failed the test. Resilient-seated valves of any size shall exhibit no visible leakage.

Following the seat leakage test, all valves shall be opened through their full range with no evidence of sticking or binding.

7.6 Test Requirement No. 2 – Body Leakage

The manufacturer shall test 100 percent of production valves for body leakage to twice the rated working pressure. The pressure shall be held for a minimum of 1 minute with no evidence of body leakage or distortion.

8 **DOCUMENTATION FILE**

All pertinent Report documents are outlined in the ATTACHMENTS list below.

9 **CONCLUSION**

The Model H84X grooved end and Model H44X and H44X-01 flanged end swing check valves described in Section 1.4 meet FM Approvals requirements. Since a duly signed Master Agreement is on file for this manufacturer, Approval is effective the date of this Report.

PROJECT DATA RECORD: PR454783

ATTACHMENTS: Listing Sheet for Model H84X, H44X and H44X-01
CDL Control Drawing Blueprint Report

Listing Sheet for Model H84X, H44X and H44X-01

☐ Automatic Sprinkler Systems
 ☐ Valves
 ☐ Check Valves
 ☐ Single Check Valves

Models H84X, H44X and H44X-01

<i>Product Designation</i>	<i>Description</i>	<i>Nominal Pipe Size, in.</i>	<i>Max Working Pressure, psi (kPa)</i>	<i>Remarks</i>
Model H84X	Swing Check Valve, Grooved Ends	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12 76.1, 139.7 and 165.1 mm	365 (2515)	a, b
Model H44X	Swing Check Valve, Flanged Ends	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12	300 (2070)	a, b
Model H44X-01	Swing Check Valve, Flanged Ends	2, 2-1/2, 3, 4, 5, 6, 8, 10, 12	300 (2070)	a, b

- a. For use in horizontal and vertical installations.
- b. Resilient seat.

CDL Control Drawing Blueprint Report

Blueprint Report**Shandong Lede Machinery Co Ltd (113572)****Class No 1210****Original Project I.D. 3057546**

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>	<u>Electronic Drawing</u>
31-20000300-100 -05	-	Disc DN100 300PSI	3057546	No
31-20000300-100 -08	-	Clapper Arm DN100 300PSI	3057546	No
31-20000300-100 -17	-	Bonnet DN100 300PSI	3057546	No
31-20000300-100-00	-	Assembly DN100 300PSI	3057546	No
31-20000300-100-01	-	Body DN100 300PSI	3057546	No
31-20000300-125 -05	-	Disc DN125 300PSI	3057546	No
31-20000300-125 -08	-	Clapper Arm DN125 300PSI	3057546	No
31-20000300-125 -17	-	Bonnet DN125 300PSI	3057546	No
31-20000300-125-00	-	Assembly DN125 300PSI	3057546	No
31-20000300-125-01	-	Body DN125 300PSI	3057546	No
31-20000300-150 -05	-	Disc DN150 300PSI	3057546	No
31-20000300-150 -08	-	Clapper Arm DN150 300PSI	3057546	No
31-20000300-150 -17	-	Bonnet DN150 300PSI	3057546	No
31-20000300-150-00	-	Assembly DN150 300PSI	3057546	No
31-20000300-150-01	-	Body DN150 300PSI	3057546	No
31-20000300-200 -05	-	Disc DN200 300PSI	3057546	No
31-20000300-200 -08	-	Clapper Arm DN200 300PSI	3057546	No
31-20000300-200 -17	-	Bonnet DN200 300PSI	3057546	No
31-20000300-200-00	-	Assembly DN200 300PSI	3057546	No
31-20000300-200-01	-	Body DN200 300PSI	3057546	No
31-20000300-250 -05	-	Disc DN250 300PSI	3057546	No
31-20000300-250 -08	-	Clapper Arm DN250 300PSI	3057546	No
31-20000300-250 -17	-	Bonnet DN250 300PSI	3057546	No
31-20000300-250-00	-	Assembly DN250 300PSI	3057546	No
31-20000300-250-01	-	Body DN250 300PSI	3057546	No
31-20000300-300 -05	-	Disc DN300 300PSI	3057546	No
31-20000300-300 -08	-	Clapper Arm DN300 300PSI	3057546	No
31-20000300-300 -17	-	Bonnet DN300 300PSI	3057546	No
31-20000300-300-00	-	Assembly DN300 300PSI	3057546	No
31-20000300-300-01	-	Body DN300 300PSI	3057546	No
31-20000300-50 -05	-	Disc DN50 300PSI	3057546	No
31-20000300-50 -08	-	Clapper Arm DN50 300PSI	3057546	No
31-20000300-50 -17	-	Bonnet DN50 300PSI	3057546	No
31-20000300-50-00	-	Assembly DN50 300PSI	3057546	No
31-20000300-50-01	-	Body DN50 300PSI	3057546	No
31-20000300-65 -05	-	Disc DN65 300PSI	3057546	No
31-20000300-65 -08	-	Clapper Arm DN65 300PSI	3057546	No
31-20000300-65 -17	-	Bonnet DN65 300PSI	3057546	No
31-20000300-65-00	-	Assembly DN65 300PSI	3057546	No
31-20000300-65-01	-	Body DN65 300PSI	3057546	No
31-20000300-80 -05	-	Disc DN80 300PSI	3057546	No
31-20000300-80 -08	-	Clapper Arm DN80 300PSI	3057546	No

FM APPROVALS PROJECT NO: PR454783

31-20000300-80 -17	-	Bonnet DN80 300PSI	3057546	No
31-20000300-80-00	-	Assembly DN80 300PSI	3057546	No
31-20000300-80-01	-	Body DN80 300PSI	3057546	No
31-60000300-100 -02	-	Seat Ring DN100 300PSI	3057546	No
31-60000300-100-04	-	Nut DN100 300PSI	3057546	No
31-60000300-100-13	-	Hinge Pin DN100 300PSI	3057546	No
31-60000300-100-14	-	Hinge Plug DN100 300PSI	3057546	No
31-60000300-125 -02	-	Seat Ring DN125 300PSI	3057546	No
31-60000300-125-04	-	Disc Plate DN125 300PSI	3057546	No
31-60000300-125-13	-	Hinge Pin DN125 300PSI	3057546	No
31-60000300-150 -02	-	Seat Ring DN150 300PSI	3057546	No
31-60000300-150-04	-	Disc Plate DN150 300PSI	3057546	No
31-60000300-150-13	-	Hinge Pin DN150 300PSI	3057546	No
31-60000300-150-14	-	Hinge Plug DN150 300PSI	3057546	No
31-60000300-200 -02	-	Seat Ring DN200 300PSI	3057546	No
31-60000300-200-04	-	Disc Plate DN200 300PSI	3057546	No
31-60000300-200-13	-	Hinge Pin DN200 300PSI	3057546	No
31-60000300-200-14	-	Hinge Plug DN200 300PSI	3057546	No
31-60000300-250 -02	-	Seat Ring DN250 300PSI	3057546	No
31-60000300-250-04	-	Disc Plate DN250 300PSI	3057546	No
31-60000300-250-13	-	Hinge Pin DN250 300PSI	3057546	No
31-60000300-250-14	-	Hinge Plug DN250 300PSI	3057546	No
31-60000300-300 -02	-	Seat Ring DN300 300PSI	3057546	No
31-60000300-300-04	-	Disc Plate DN300 300PSI	3057546	No
31-60000300-300-13	-	Hinge Pin DN300 300PSI	3057546	No
31-60000300-300-14	-	Hinge Plug DN300 300PSI	3057546	No
31-60000300-50 -02	-	Seat Ring DN50 300PSI	3057546	No
31-60000300-50-04	-	Nut DN50 300PSI	3057546	No
31-60000300-50-13	-	Hinge Pin DN50 300PSI	3057546	No
31-60000300-50-14	-	Hinge Plug DN50 300PSI	3057546	No
31-60000300-65 -02	-	Seat Ring DN65 300PSI	3057546	No
31-60000300-65-13	-	Hinge Pin DN65 300PSI	3057546	No
31-60000300-80 -02	-	Seat Ring DN80 300PSI	3057546	No
31-60000300-80-04	-	Nut DN80 300PSI	3057546	No
31-60000300-80-13	-	Hinge Pin DN80 300PSI	3057546	No
31-60000300-80-14	-	Hinge Plug DN80 300PSI	3057546	No
31-70000300-100-12	-	Hinge Bushing DN100 300PSI	3057546	No
31-70000300-150-12	-	Hinge Bushing DN150 300PSI	3057546	No
31-70000300-200-12	-	Hinge Bushing DN200 300PSI	3057546	No
31-70000300-250-12	-	Hinge Bushing DN250 300PSI	3057546	No
31-70000300-300-12	-	Hinge Bushing DN300 300PSI	3057546	No
31-70000300-50-12	-	Hinge Bushing DN50 300PSI	3057546	No
31-70000300-80-12	-	Hinge Bushing DN80 300PSI	3057546	No
31-80000300-100 -03	-	Sealing Ring DN100 300PSI	3057546	No
31-80000300-100 -06	-	Disc Sealing Ring DN100 300PSI	3057546	No
31-80000300-100 -15	-	Hinge Sealing Ring DN100 300PSI	3057546	No
31-80000300-100 -16	-	Bonnet Gasket DN100 300PSI	3057546	No
31-80000300-125 -03	-	Sealing Ring DN125 300PSI	3057546	No
31-80000300-125 -06	-	Disc Sealing Ring DN125 300PSI	3057546	No
31-80000300-125 -16	-	Bonnet Gasket DN125 300PSI	3057546	No
31-80000300-150 -03	-	Sealing Ring DN150 300PSI	3057546	No
31-80000300-150 -06	-	Disc Sealing Ring DN150 300PSI	3057546	No

FM APPROVALS PROJECT NO: PR454783

31-80000300-150 -15	-	Hinge Sealing Ring DN150 300PSI	3057546	No
31-80000300-150 -16	-	Bonnet Gasket DN150 300PSI	3057546	No
31-80000300-200 -03	-	Sealing Ring DN200 300PSI	3057546	No
31-80000300-200 -06	-	Disc Sealing Ring DN200 300PSI	3057546	No
31-80000300-200 -15	-	Hinge Sealing Ring DN200 300PSI	3057546	No
31-80000300-200 -16	-	Bonnet Gasket DN200 300PSI	3057546	No
31-80000300-250 -03	-	Sealing Ring DN250 300PSI	3057546	No
31-80000300-250 -06	-	Disc Sealing Ring DN250 300PSI	3057546	No
31-80000300-250 -15	-	Hinge Sealing Ring DN250 300PSI	3057546	No
31-80000300-250 -16	-	Bonnet Gasket DN250 300PSI	3057546	No
31-80000300-300 -03	-	Sealing Ring DN300 300PSI	3057546	No
31-80000300-300 -06	-	Disc Sealing Ring DN300 300PSI	3057546	No
31-80000300-300 -15	-	Hinge Sealing Ring DN300 300PSI	3057546	No
31-80000300-300 -16	-	Bonnet Gasket DN300 300PSI	3057546	No
31-80000300-50 -03	-	Sealing Ring DN50 300PSI	3057546	No
31-80000300-50 -06	-	Disc Sealing Ring DN50 300PSI	3057546	No
31-80000300-50 -15	-	Hinge Sealing Ring DN50 300PSI	3057546	No
31-80000300-50 -16	-	Bonnet Gasket DN50 300PSI	3057546	No
31-80000300-65 -03	-	Sealing Ring DN65 300PSI	3057546	No
31-80000300-65 -06	-	Disc Sealing Ring DN65 300PSI	3057546	No
31-80000300-65 -16	-	Bonnet Gasket DN65 300PSI	3057546	No
31-80000300-80 -03	-	Sealing Ring DN80 300PSI	3057546	No
31-80000300-80 -06	-	Disc Sealing Ring DN80 300PSI	3057546	No
31-80000300-80 -15	-	Hinge Sealing Ring DN80 300PSI	3057546	No
31-80000300-80 -16	-	Bonnet Gasket DN80 300PSI	3057546	No
31F-20000300-100-00	-	Assemble DN100	3057546	No
31F-20000300-100-01	-	Body DN100	3057546	No
31F-20000300-125-00	-	Assemble DN125	3057546	No
31F-20000300-125-01	-	Body DN125	3057546	No
31F-20000300-150-00	-	Assemble DN150	3057546	No
31F-20000300-150-01	-	Body DN150	3057546	No
31F-20000300-200-00	-	Assemble DN200	3057546	No
31F-20000300-200-01	-	Body DN200	3057546	No
31F-20000300-250-00	-	Assemble DN250	3057546	No
31F-20000300-250-01	-	Body DN250	3057546	No
31F-20000300-300-00	-	Assemble DN300	3057546	No
31F-20000300-300-01	-	Body DN300	3057546	No
31F-20000300-50-00	-	Assemble DN50	3057546	No
31F-20000300-50-01	-	Body DN50	3057546	No
31F-20000300-65-00	-	Assemble DN65	3057546	No
31F-20000300-65-01	-	Body DN65	3057546	No
31F-20000300-80-00	-	Assemble DN80	3057546	No
31F-20000300-80-01	-	Body DN80	3057546	No
31G-2000025-100 -02.1	-	Disc core DN100	3057546	No
31G-2000025-100-00	-	Assemble DN100	3057546	No
31G-2000025-100-01	-	Body DN100	3057546	No
31G-2000025-125 -00	-	Assemble DN125	3057546	No
31G-2000025-125 -01	-	Body DN125	3057546	No
31G-2000025-125 -02.1	-	Disc core DN125	3057546	No
31G-2000025-125(140) -00	-	Assemble DN125(140)	3057546	No
31G-2000025-125(140) -01	-	Body DN125(140)	3057546	No
31G-2000025-150 -00	-	Assemble DN150	3057546	No

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31G-2000025-150 -01	-	Body DN150	3057546	No
31G-2000025-150 -02.1	-	Disc core DN150	3057546	No
31G-2000025-150(165) -00	-	Assemble DN150(165)	3057546	No
31G-2000025-150(165) -01	-	Body DN150 (165)	3057546	No
31G-2000025-200 -00	-	Assemble DN200	3057546	No
31G-2000025-200 -01	-	Body DN200	3057546	No
31G-2000025-200 -02.1	-	Disc core DN200	3057546	No
31G-2000025-250 -00	-	Assemble DN250	3057546	No
31G-2000025-250 -01	-	Body DN250	3057546	No
31G-2000025-250 -02.1	-	Disc core DN250	3057546	No
31G-2000025-300 -00	-	Assemble DN300	3057546	No
31G-2000025-300 -01	-	Body DN300	3057546	No
31G-2000025-300 -02.1	-	Disc core DN300	3057546	No
31G-2000025-50 -00	-	Assemble DN50	3057546	No
31G-2000025-50 -01	-	Body DN50	3057546	No
31G-2000025-50 -02.1	-	Disc core DN50	3057546	No
31G-2000025-65 -00	-	Assemble DN65	3057546	No
31G-2000025-65 -01	-	Body DN65	3057546	No
31G-2000025-65 -02.1	-	Disc core DN65	3057546	No
31G-2000025-65(76) -00	-	Assemble DN65(76)	3057546	No
31G-2000025-65(76) -01	-	Body DN65(76)	3057546	No
31G-2000025-80 -00	-	Assemble DN80	3057546	No
31G-2000025-80 -01	-	Body DN80	3057546	No
31G-2000025-80 -02.1	-	Disc core DN80	3057546	No
31G-5000025-100-05	-	Clapper Arm DN100	3057546	No
31G-5000025-125-05	-	Clapper Arm DN125	3057546	No
31G-5000025-150-05	-	Clapper Arm DN150	3057546	No
31G-5000025-200-05	-	Clapper Arm DN200	3057546	No
31G-5000025-250-05	-	Clapper Arm DN250	3057546	No
31G-5000025-300-05	-	Clapper Arm DN300	3057546	No
31G-5000025-50-05	-	Clapper Arm DN50	3057546	No
31G-5000025-65-05	-	Clapper Arm DN65	3057546	No
31G-5000025-80-05	-	Clapper Arm DN80	3057546	No
31G-6000025-100 -04	-	Hinge Pin DN100	3057546	No
31G-6000025-100-02.2	-	Bolt M8 DN100	3057546	No
31G-6000025-125 -04	-	Hinge Pin DN125	3057546	No
31G-6000025-125-02.2	-	Bolt M10 DN125	3057546	No
31G-6000025-200 -04	-	Hinge Pin DN200	3057546	No
31G-6000025-200-02.2	-	Bolt M14 DN200	3057546	No
31G-6000025-250 -04	-	Hinge Pin DN250	3057546	No
31G-6000025-250-02.2	-	Bolt M16 DN250	3057546	No
31G-6000025-300 -04	-	Hinge Pin DN300	3057546	No
31G-6000025-300-02.2	-	Bolt M20 DN300	3057546	No
31G-6000025-50-02.2	-	Bolt M6 DN50	3057546	No
31G-6000025-50-04	-	Hinge Pin DN50	3057546	No
31G-7000025-100 -07	-	Hinge Bushing DN100	3057546	No
31G-7000025-100-10	-	Seat Ring DN100	3057546	No
31G-7000025-125 -07	-	Hinge Bushing DN125	3057546	No
31G-7000025-125-10	-	Seat Ring DN125	3057546	No
31G-7000025-150-10	-	Seat Ring DN150	3057546	No
31G-7000025-200 -07	-	Hinge Bushing DN200	3057546	No
31G-7000025-200-10	-	Seat Ring DN200	3057546	No

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31G-7000025-250 -07	-	Hinge Bushing DN250	3057546	No
31G-7000025-250-10	-	Seat Ring DN250	3057546	No
31G-7000025-300 -07	-	Hinge Bushing DN300	3057546	No
31G-7000025-300-10	-	Seat Ring DN300	3057546	No
31G-7000025-50 -07	-	Hinge Bushing DN50	3057546	No
31G-7000025-50-10	-	Seat Ring DN50	3057546	No
31G-7000025-65-10	-	Seat Ring DN65	3057546	No
31G-7000025-80-10	-	Seat Ring DN80	3057546	No
31G-8000025-100 -02	-	Disc DN100	3057546	No
31G-8000025-100 -50	-	Stoper DN100	3057546	No
31G-8000025-125 -02	-	Disc DN125	3057546	No
31G-8000025-125 -50	-	Stoper DN125	3057546	No
31G-8000025-150 -02	-	Disc DN150	3057546	No
31G-8000025-200 -02	-	Disc DN200	3057546	No
31G-8000025-200 -50	-	Stoper DN200	3057546	No
31G-8000025-250 -02	-	Disc DN300	3057546	No
31G-8000025-250 -50	-	Stoper DN250	3057546	No
31G-8000025-300 -02	-	Disc DN250	3057546	No
31G-8000025-300 -50	-	Stoper DN300	3057546	No
31G-8000025-50 -02	-	Disc DN50	3057546	No
31G-8000025-50 -50	-	Stoper DN50	3057546	No
31G-8000025-65 -02	-	Disc DN65	3057546	No
31G-8000025-80 -02	-	Disc DN80	3057546	No
H44X-01	-	Mark-H44X-01	3057546	No
H44X	-	Mark-H44X	3057546	No
H84X	-	Mark-H84X	3057546	No
Mark	-	GSC-365 Resilient Swing Check Valve	3060175	Yes (pdf)