



# WALWORTH®

Since 1842



## Ball Valves

## Class 150 to 1500

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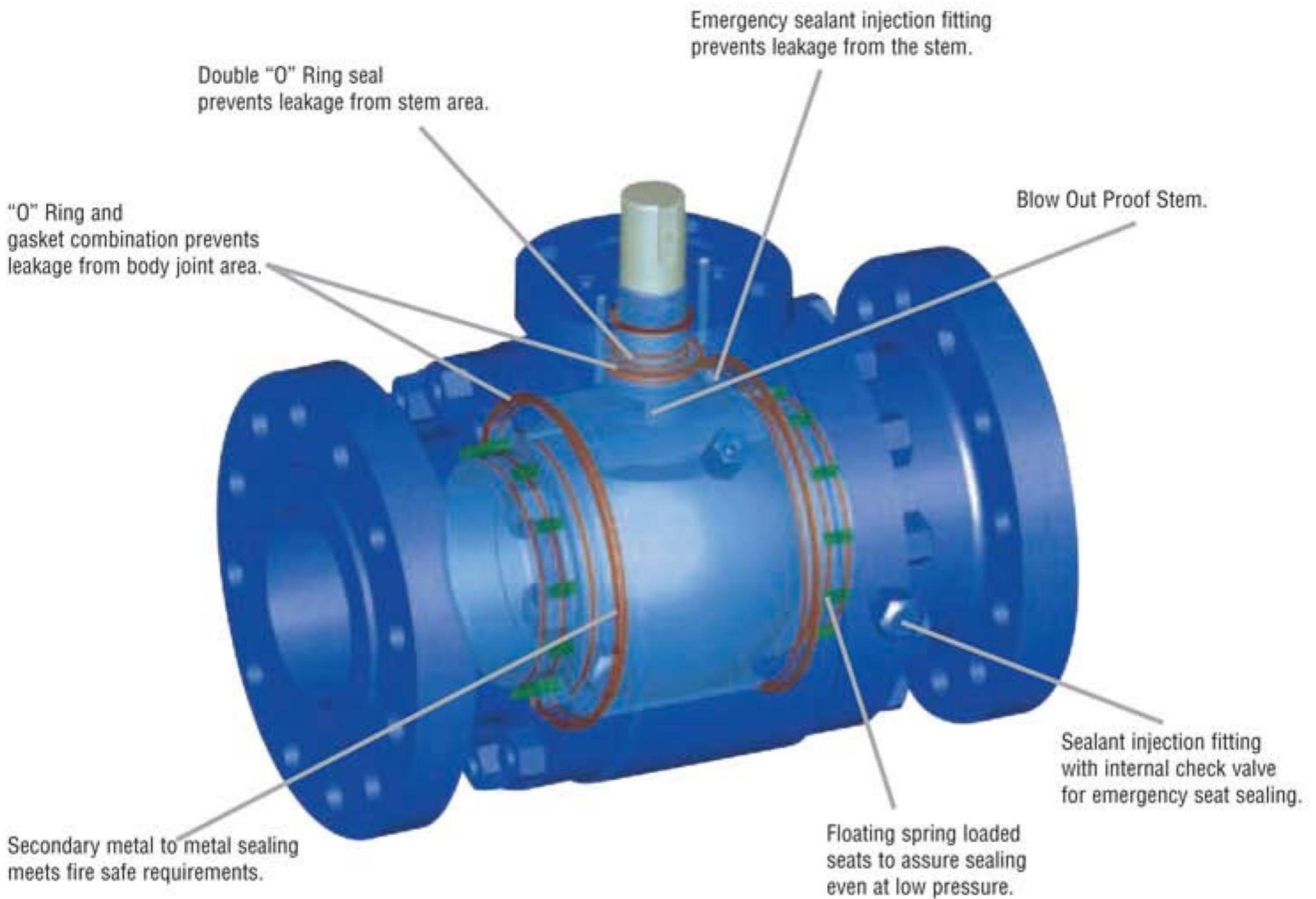
### Carbon Steel



# API 6D TRUNNION MOUNTED BALL VALVES

## DESIGN FEATURES

- Full Bore
- Reduced Bore (Optional)
- Forged Steel or Cast Steel Construction
- Bolted Body
- Integral Welded Body (Optional)
- Trunnion Mounted Design
- API-6FA/API-607 Fire-Tested

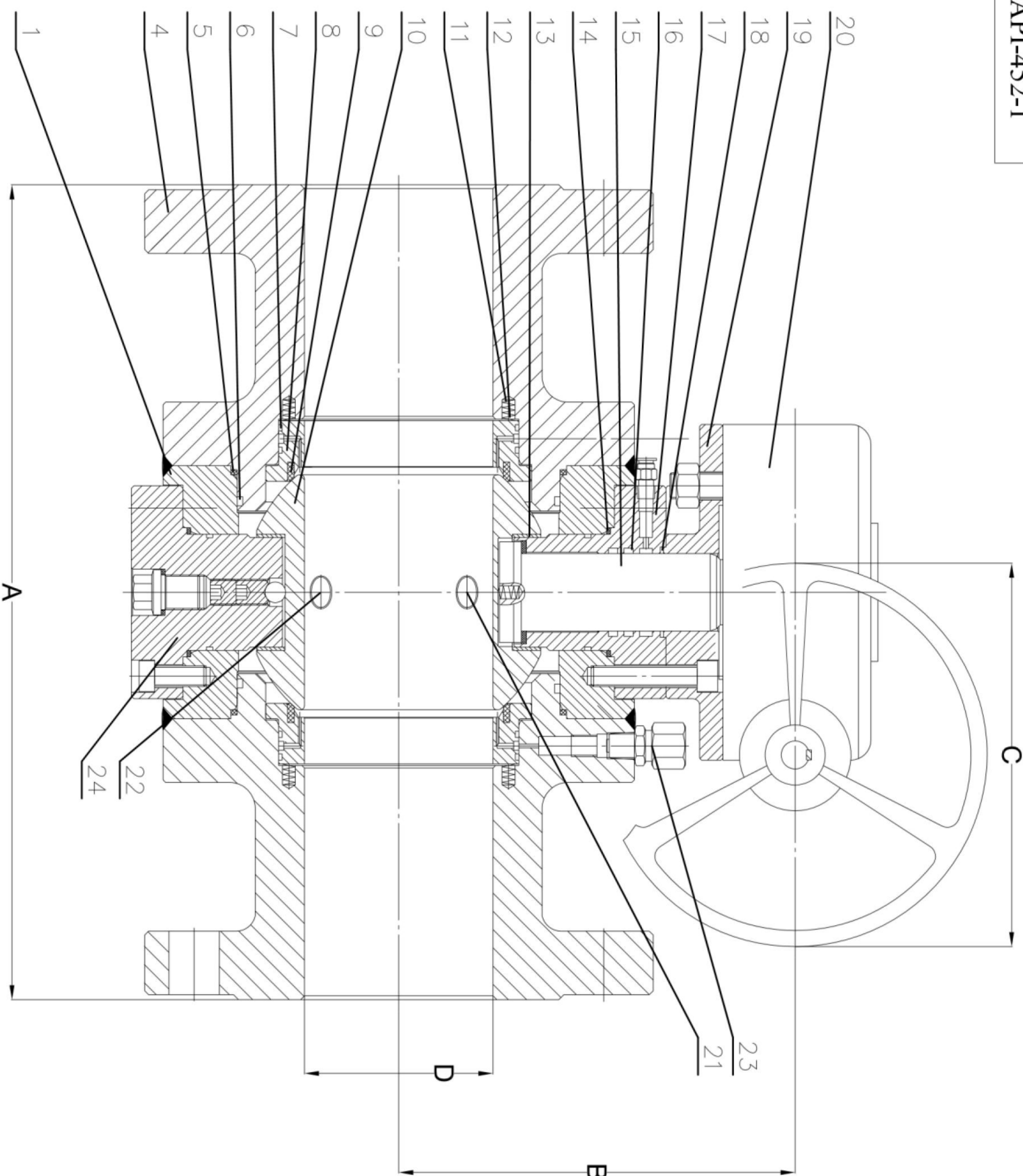


WALWORTH® Ball valve design with steel Trunnions and Teflon-Moly coated steel bearings to assure low torque operation.

The stem has an Anti-Static System to prevent sparks when opening and closing the valve.

The WALWORTH® Ball valve is designed with a Continuous Full Bore which allows passage of tools while avoiding turbulence and fluid pressure drop through the valve.

The valve does not need lubrication in normal operating conditions. However, a leak through the seat seal can be stopped by injecting light grease sealant through the seat sealant fittings in the valve body.



DIMENSIONS (inches) AND WEIGHTS (Kg)						
SIZE	END	A	B	C	D	WEIGHT (Approx.)
6"	RF	15.86	11.41	23.62	5.90	185.00
8"	RF	19.76	14.09	23.62	7.91	320.00
10"	RF	22.36	16.69	31.49	9.92	510.00


PARTS AND MATERIALS LIST

No.	DESCRIPTION	MATERIAL
1	BODY	ASTM A105
2*	ID PLATE	STAINLESS STEEL
3*	END PROTECTOR	PLASTIC OR WOOD
4	END	ASTM A105
5	END GASKET	GRAPHITE + SS304
6	O-RING	VITON
7	O-RING	VITON
8	SEAT	ASTM A182 Gr. F316 + ENP
9	SEAT RING	RPTFE
10	BALL	ASTM A182 Gr. F316 + ENP
11	SPRING	INCONEL X-750
12	SEAT GASKET	GRAPHITE
13	GLAND BEARING	STEEL LINED PTFE
14	GASKET	GRAPHITE + SS304
15	STEM	ASTM A182 Gr. F316 + ENP
16	O-RING	VITON
17	UPPER TRUNNION	ASTM A182 Gr. F316 + ENP
18	STEM PACKING	GRAPHITE
19	YOKE	CARBON STEEL
20	GEAR OPERATOR	CAST IRON
21	VENTING	AISI 1025
22	DRAIN PLUG	AISI 1025
23	INJECTION FITTING	AISI 1025
24	LOWER TRUNNION	ASTM A182 Gr. F316 + ENP

\* NOT SHOWN

STANDARDS	
DESIGN	API-6D
END TO END	ASME B16.10
END DIMENSIONS	ASME B16.5
FIRE	API-6FA
TEST	API-598 & API-6D
NACE	MR-0175

**MANUFACTURER:**



**WALWORTH**  
PRODUCT ENGINEERING

**EQUIPMENT:** CARBON STEEL TRUNNION BALL VALVE  
ASME CLASS 300  
FIG. 8322RF-F316-A105

**CUSTOMER:** UNITED POWER COMMERCIAL CORPORATION

QUOTE: UPC-11-05-31-1220

REVISION	DATE	DESCRIPTION	RELEASED BY

FOR "WALWORTH VALVULAS S.A. DE C.V." USE

INITIALS, SIGNATURE AND DATE

DWN: EPG JUNE 10, 2011

CHK: EPG JUNE 10, 2011

ENGR: JLH JUNE 10, 2011

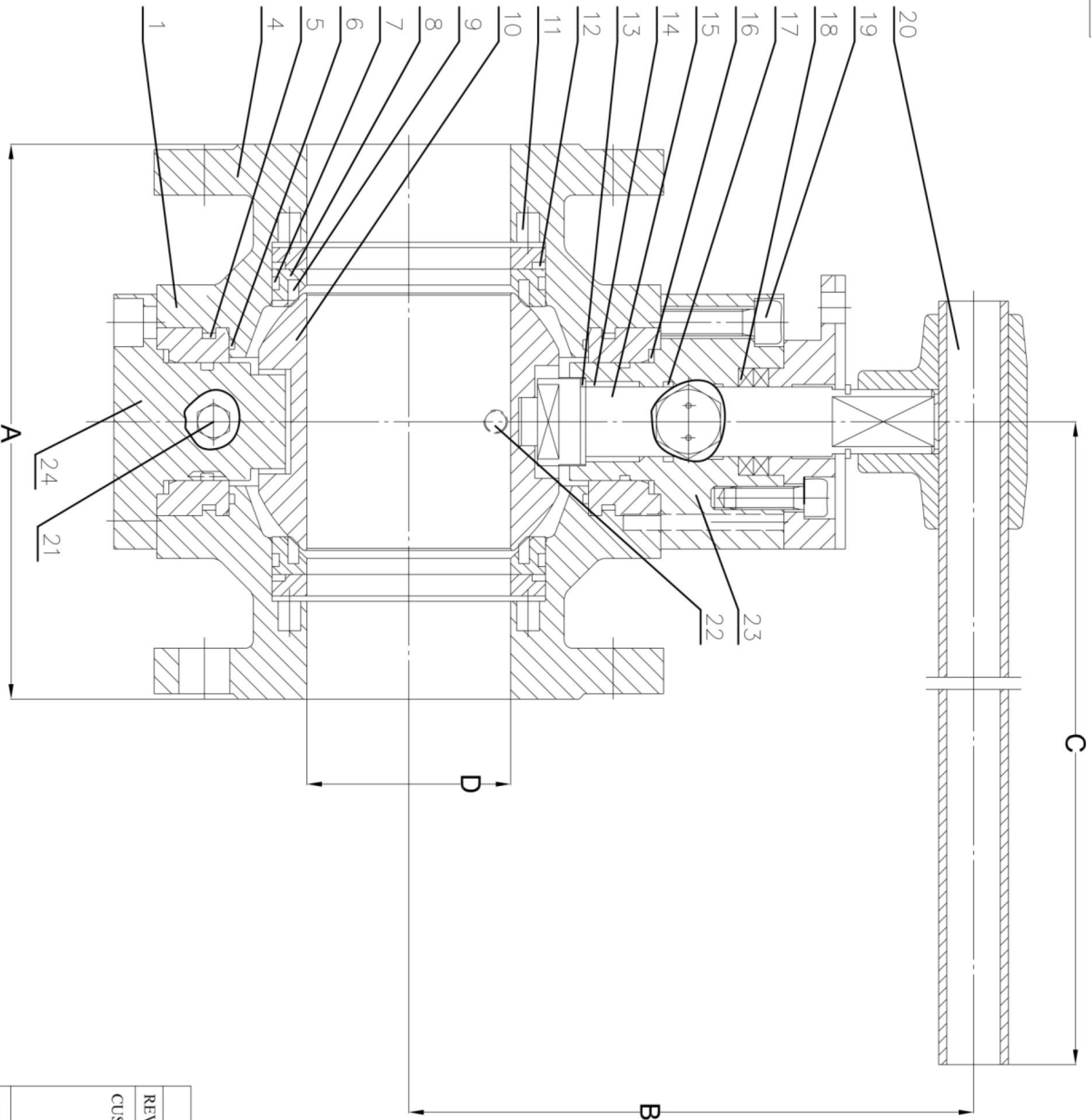
DRAWING NUMBER: **DAPI-452-1**

SCALE: NONE

ALL DIMENSIONS ARE IN INCHES

SHEET 1 OF 1

REV.



DIMENSIONS (inches) AND WEIGHTS (Kg)						
SIZE	END	A	B	C	D	WEIGHT (Approx.)
2"	RF	8.50	5.78	13.77	1.92	23.00
3"	RF	11.14	8.50	19.68	2.91	45.00

PARTS AND MATERIALS LIST

No.	DESCRIPTION	MATERIAL
1	BODY	ASTM A105
2*	ID PLATE	STAINLESS STEEL
3*	END PROTECTOR	PLASTIC OR WOOD
4	END	ASTM A105
5	END GASKET	GRAPHITE + SS304
6	O-RING	VITON
7	O-RING	VITON
8	SEAT	ASTM A182 Gr. F316 + ENP
9	SEAT RING	RPTFE
10	BALL	ASTM A182 Gr. F316 + ENP
11	SPRING	INCONEL X-750
12	SEAT GASKET	GRAPHITE
13	GASKET	RPTFE
14	GLAND BEARING	STEEL LINED PTFE
15	STEM	ASTM A182 Gr. F316 + ENP
16	GASKET	GRAPHITE + SS304
17	O-RING	VITON
18	STEM PACKING	GRAPHITE
19	SCREW	ASTM A193 Gr. B7M
20	HANDLE	CARBON STEEL
21	DRAIN PLUG	AISI 1025
22	VENTING	AISI 1025
23	UPPER TRUNNION	ASTM A182 Gr. F316 + ENP
24	LOWER TRUNNION	ASTM A182 Gr. F316 + ENP

\* NOT SHOWN

CUSTOMER: **UNITED POWER COMMERCIAL CORPORATION**

QUOTE: UPC-11-05-31-1220

MANUFACTURER: **WALWORTH**  
PRODUCT ENGINEERING

EQUIPMENT: CARBON STEEL TRUNNION BALL VALVE

ASME CLASS 300  
FIG. 8312RF-F316-A105

FOR "WALWORTH VALVULAS S.A. DE C.V." USE

DRAWING NUMBER:

STANDARDS	
DESIGN	API-6D
END TO END	ASME B16.10
END DIMENSIONS	ASME B16.5
FIRE	API-6FA
TEST	API-598 & API-6D
NACE	MR-0175

INITIALS, SIGNATURE AND DATE

SCALE: NONE  
ALL DIMENSIONS ARE IN INCHES

DAPI-452-2

REVISION	DATE	DESCRIPTION	RELEASED BY

ENGR: JLH      JUN 10, 2011

SHEET 1 OF 1  
REV.

# PRESSURE-TEMPERATURE RATING

## BODY, ENDS AND BALL MATERIALS

Forged Steel A-105  
Cast Steel A216 WCB

Temperature		MAXIMUM ALLOWABLE NON-SHOCK WORKING PRESSURE IN PSI BY CLASS				
°F	°C	150	300	600	900	1500
- 20 TO 100	-29 TO 38	285	740	1480	2220	3705
200	93	260	675	1350	2025	3375
300	149	230	655	1315	1970	3280
400	204	200	635	1270	1900	3170
500	260	170	600	1200	1795	2995
600	316	140	550	1095	1640	2735
650	343	125	535	1075	1610	2685
700	371	110	535	1065	1600	2665
750	399	95	505	1010	1510	2520
800	427	80	410	825	1235	2060
850	454	65	270	535	805	1340
900	482	50	170	345	515	860
950	510	35	105	205	310	515
1000	538	20	50	105	155	260

For prolonged usage at temperatures above 427°C (800°F), consideration should be given to the possibility of graphite formation in carbon steel.

Forged Steel A-182 Gr. F316  
Cast Steel A351 CF8M

Temperature		MAXIMUM ALLOWABLE NON-SHOCK WORKING PRESSURE IN PSI BY CLASS				
°F	°C	150	300	600	900	1500
- 20 TO 100	-29 TO 38	285	740	1480	2220	3705
200	93	260	675	1350	2025	3375
300	149	230	655	1315	1970	3280
400	204	200	635	1270	1900	3170
500	260	170	600	1200	1795	2995
600	316	140	550	1095	1640	2735
650	343	125	535	1075	1610	2685
700	371	110	535	1065	1600	2665
750	399	95	505	1010	1510	2520
800	427	80	410	825	1235	2060
850	454	65	270	535	805	1340
900	482	50	170	345	515	860
950	510	35	105	205	310	515
1000	538	20	50	105	155	260

Forged Steel A-350 Gr. LF2  
Cast Steel A352 LCB

Temperature		MAXIMUM ALLOWABLE WORKING PRESSURE IN PSI BY CLASS				
°F	°C	150	300	600	900	1500
- 20 TO 100	-29 TO 38	275	720	1440	2160	3600
200	93	235	620	1240	1860	3095
300	149	215	560	1120	1680	2795
400	204	195	515	1025	1540	2570
500	260	170	480	955	1435	2390
600	316	140	450	900	1355	2255
650	343	125	445	890	1330	2220
700	371	110	430	870	1305	2170
750	399	95	425	855	1280	2135
800	427	80	420	845	1265	2110
850	454	65	420	835	1255	2090
900	482	50	415	830	1245	2075
950	510	35	385	775	1160	1930
1000	538	20	350	700	1050	1750

## ACCESSORIES

The **WALWORTH®** standard cast steel product line includes a varied array of valves designed to meet a variety of applications.

Special adaptations can be made to meet specific customer requirements. Valves can be supplied with a choice of manual handle, gear operator or chain wheel operator as well as electric, pneumatic and hydraulic actuators.

### Manual Gear Operators

The manual gear operator design takes advantage of the high gear ratios of a worm gear to provide the mechanical advantage to transmit the required opening/closing torque with normal operator effort on the handwheel.

A square operating nut is also available. The gears are also available as waterproof units and can be used for underground installation.

Valves can also be supplied with a bypass, drain or vent connection, stem extension, position indicators, and floor stand mounting to provide controlled opening/closing from a remote installation. This enables **WALWORTH®** to furnish valves tailored to the customer's special needs.

### Actuators

Valves can be furnished with a choice of electric, pneumatic or hydraulic actuators. The actuators are also available as waterproof and/or explosion proof. In order to be assured of superior performance, the opening/closing speed, maximum differential pressure, service temperature, type of voltage-phase-frequency, air or gas pressure for pneumatic actuators and flow characteristics for hydraulic actuators need to be specified.

