

PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE

Inverted pressure balance lubricated plug valve according to ANSI is applicable to the cutting and connection of pipelines medium that are used in various industries such as petroleum, chemical, pharmacy, chemical fertilizer, electric power, etc. under nominal pressure of CLASS 150 – 2500 lbs and working temperature of -29°C -180°C.

- It has logical structure, reliable seal and excellent performance.
- It has the structure of flip-chip balance able pressure and light on/off operation
- An oil groove is set between valve body and seal surface, which may infuse the seal grease to increase the seal capability.
- The part material and flange dimension may be selected according to current operating condition and users requirement, so that it meets the requirements of various engineering.

STANDARDS

- DESIGN STD: API 6D / API 599 / bs 5353
- TESTING STANDARD: API 6D / API 598
- PRESSURE / TEMPERATURE CHART: ASME B16.34
- FACE TO FACE / END TO END DIMENSIONS: API 6D / ASME B16.10
- FLANGE DETAILS: ASME B16.5
- FIRE TESTING: MSS SP – 55
- ENDS: FLANGED, BUTT-WELD END, SCREWED END, SOCKET WELD END





UNITEK VALVES PVT LTD
MANUFACTURER OF INDUSTRIAL VALVES



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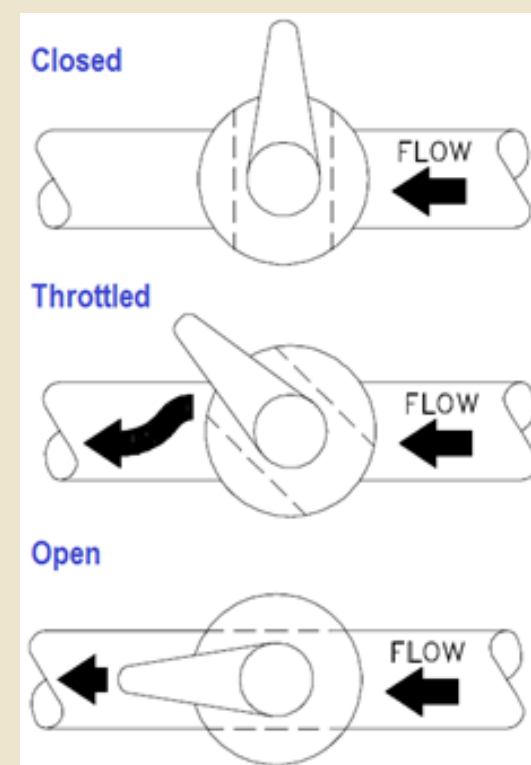
SUMMARIZATION OF PLUG VALVE

SUMMARY OF PLUG VALVES

Plug valve is a Quarter turn valve where its closure part as a plug, which turns 90° with its through bore connecting to or apart from the same of the body to realize opening or closing. The figure of the valve plug can be made as column or taper.

The plug valve is mostly suitable for cutting off, turning on and distributing the flow medium. Sometime it can also be used for throttling based upon suitable medium and the erosion resistance property of the sealing surfaces. Due to the friction action between the sealing surfaces of the plug valve, whereas contact with flow medium can be completely avoided as the valve is fully opened. In this respect, the plug valve can also be used for the medium with suspend grains.

One of the important characteristics of the plug valve is that it is prone to fitting multi-center structure, so that one single plug valve can be designed with two, three, and even four different flow bores. In this way, the design of the pipeline system can be simplified, and both valve quantity and piping fittings can be reduced. The plug valves are widely used in the applications of oil field exploitation, transportation, and refinery facility, while being extensively used for such general industries as petrochemical, chemistry, gas, nature gas, liquefied oil gas, and warming & traffics.



• CHARACTERISTICS OF PRESSURE BALANCE PLUG VALVE

The Inverted Pressure Balance Lubricated Plug Valves are suitable for use in pipelines for various kinds of working conditions with nominal pressure of CLASS 150-2500 and working temperature of -29°C ~ 180°C in such industries as petroleum, chemistry, pharmacy, chemical fertilizer, and power plant etc. to turn on or cut off the flow medium of the pipelines.

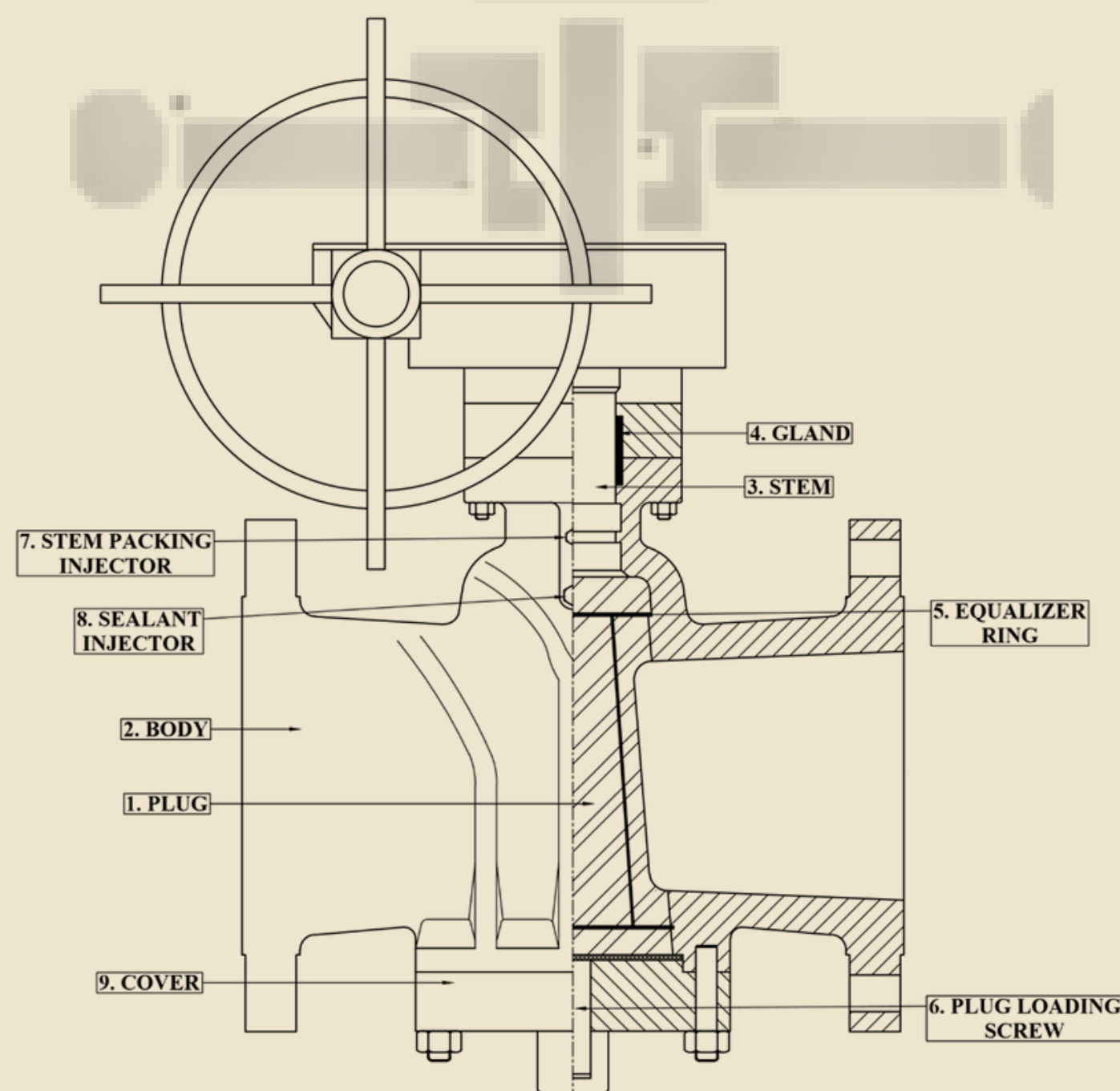
The main characteristics are as below:

1. It is with reason in product structure, reliable in tightness, excellent in property, and beautiful in sculpt.
2. It is easy to operate the plug valve due to the structure of inverted pressure balance.
3. There has designed oil groove between valve body and sealing surface, through which the sealing lubricant can be injected into valve seat at any time by the grease injector to enhance the sealing function.
4. The parts material and the flange sizes can be selected in reason according to actual working conditions or customers' requirement to meet various engineering demands.

• BENEFITS OF PRESSURE BALANCE PLUG VALVE

1. Certainty of zero leakage sealing down the line, even if metal seats are got damaged.
2. Certainty of operation with low and consistent torque which is stable over long periods of time.
3. Minimum maintenance is required.
4. Full-in-line maintainability even under full pressure and without any need of shut down.
5. Assured Sealing to Atmosphere

CROSS SECTION DRAWING

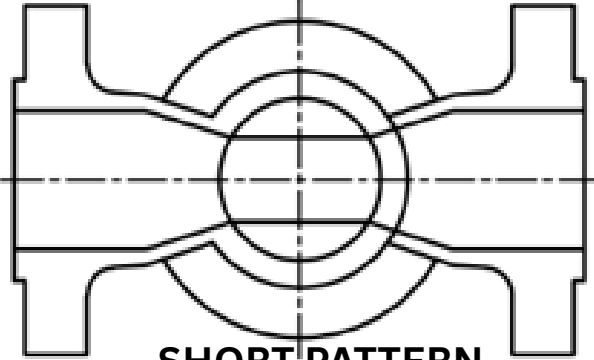
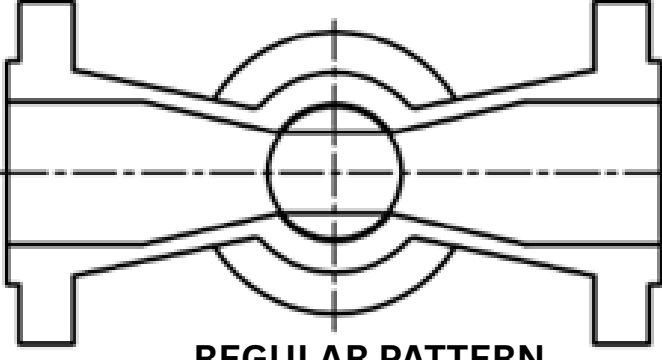
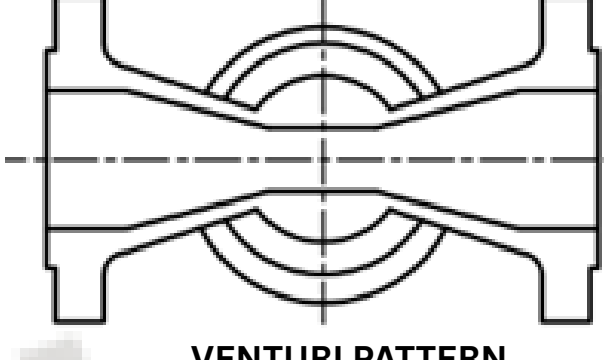


• KEY FEATURES:

1. Plug has Metal to metal wide seating area and It can easily work on low torque due special treatment of the metal surface that reduces coefficient of friction.
2. Body design is simple and robust. And there is zero chances of cavities.
3. Stem is blow out proof.
4. Gland is adjustable with fugitive emission proof graphite packing.
5. The function of Equalizer ring is to prevent side loads for efficient stem to plug connection.
6. The main function of Plug Loading Screw is to ensure seat tightness with low torque.
7. Stem Packing Injector used for renew stem packing and allow full in-line maintenance.
8. Sealant Injector maintains bubble tight shut off to increase the life of valves.
9. Cover seals metal for long life and increased fire safety.



PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE

PLUG VALVE PATTERN STYLES		
 SHORT PATTERN	 REGULAR PATTERN	 VENTURI PATTERN
Same face to face dimensions as gate valves.	Offers the largest port opening in a trapezoidal configuration close to full pipe port area.	Has a smaller port than the other two patterns. It is lower in cost and flow contours maximize the hydraulic efficiency.

• **SIZE RANGE:**

DN	15	20	25	40	50	80	100	150	200	250	300	350	400	450	500	600
NPS	½"	¾"	1"	1 ½"	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
ANSI 150	S/R	S/R	S/R	S/R	S/R	S/R	S/R	S/R	S/R	S/R	S/R/V	V	V	V	V	V
ANSI 300	S/R	S/R	S/R	S/R	S/R	S/R	S/R	R/V	R/V	R/V	R/V	V	V	V	V	V
ANSI 600	R	R	R	R	R	R	R	R/V	R/V	R/V	R/V	R/V	R/V	R/V	R/V	V
ANSI 900	R	R	R	R	R	R	R	R	R	R/V	R/V	V	V	V	V	V
ANSI 1500	R	R	R	R	R	R	R	R	R/V	R/V	R/V	V	V	V	V	V
ANSI 2500	R	R	R	R	R	R	R	R	R	R	R					

Colour Coding of Pattern				
R	V	R/V	S/R	S/R/V
Regular Pattern	Venturi Pattern	Regular Pattern & Venturi Pattern	Short Pattern & Regular Pattern	Short Pattern, Regular Pattern & Venturi Pattern



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SIZE RANGE ACCORDING TO DIFFERENT TYPES OF ENDS & OPERATION

	SHORT PATTERN	REGULAR PATTERN	VENTURI PATTERN
PN 20 / ANSI 150	· Flanged with RF (Raised Face) Wrench operated: DN 50 (2") to DN 150 (6"). · Flanged with RF (Raised Face) Gear operated: DN 150 (6") to DN 300 (12").	· Flanged with RF (Raised Face) Wrench operated: DN 50 (2") to DN 150 (6"). · Flanged 150 with RF (Raised Face) Gear operated: DN 150 (6") to DN 300 (12"). · Screwed End API / BSP Tpr, Wrench operated: DN 15 (½") to DN 50 (2"). · Socket Weld End, Wrench operated: DN 15 (½") to DN 50 (2").	· Flanged 150 Class RF (Raised Face) Gear operated: DN 250 (10") to DN 600 (24").
PN 50 / ANSI 300	· Flanged 300 Class RF (Raised Face) Wrench operated: DN 40 (½") to DN 150 (6"). · Screwed End API / BSP Tpr, Wrench operated: DN 15 (½") to DN 40 (1 ½"). · Socket Weld End, Wrench operated: DN 15 (½") to DN 40 (1 ½").	· Flanged 300 Class RF (Raised Face) Gear operated: DN 150 (6") to DN 300 (12").	· Flanged 300 Class RF (Raised Face) Wrench operated: DN 150 (6"). · Flanged 300 Class RF (Raised Face) Gear operated: DN 150 (6") to DN 600 (24").

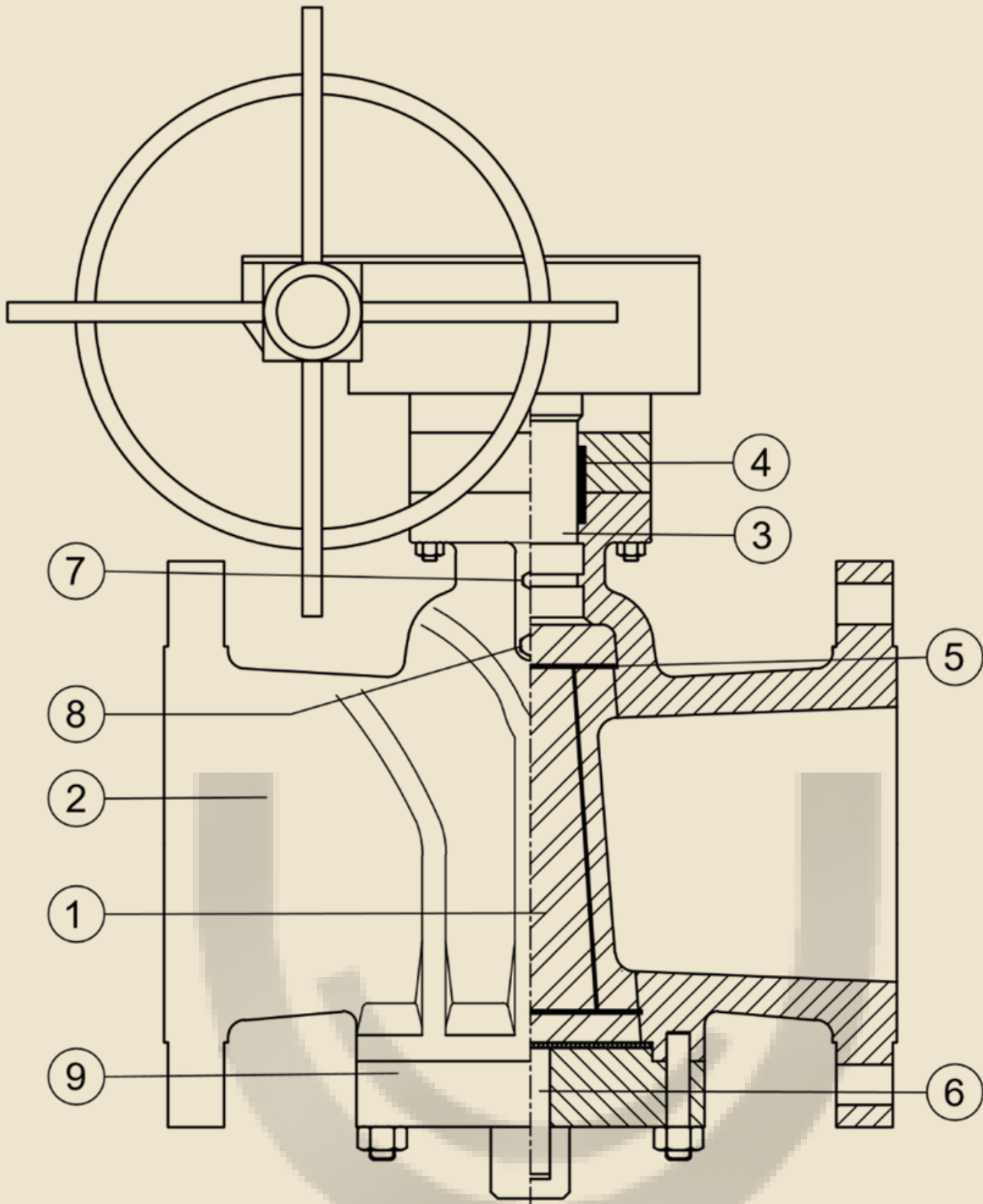
	REGULAR PATTERN	VENTURI PATTERN
PN 100 / ANSI 600	· Screwed End API / BSP Tpr, Wrench operated: DN 15 (½") to DN 50 (2"). · Socket Weld End, Wrench operated: DN 15 (½") to DN 50 (2"). · Flanged 600 Class RF (Raised Face) & RJ (Ring Joint), Wrench operated: DN 15 (½") to DN 100 (4"). · Flanged 600 Class RF (Raised Face) & RJ (Ring Joint), Gear operated: DN 150 (6") to DN 300 (12"). · Butt Weld End, Wrench operated: DN 50 (2") to DN 150 (6"). · Butt Weld End, Gear operated: DN 150 (6") to DN 300 (12").	· Flanged 600 Class RF (Raised Face) & (RJ) Ring Joint Gear operated: DN 150 (6") to DN 600 (24"). · Butt Weld End, Gear operated: DN 150 (6") to DN 600 (24").
PN 150 / ANSI 900	· Screwed End API / BSP Tpr, Wrench operated: DN 15 (½") to DN 50 (2"). · Socket Weld End, Wrench operated: DN 15 (½") to DN 50 (2"). · Flanged 900 Class RF (Raised Face) & RJ (Ring Joint), Wrench operated: DN 15 (½") to DN 100 (4"). · Flanged 900 Class RF (Raised Face) & RJ (Ring Joint), Gear operated: DN 150 (6") to DN 300 (12").	· Flanged 600 Class RF (Raised Face) & RJ (Ring Joint), Gear operated: DN 300 (12") to DN 600 (24").
PN 250 / ANSI 1500	· Screwed End API / BSP Tpr, Wrench operated: DN 15 (½") to DN 50 (2"). · Socket Weld End, Wrench operated: DN 15 (½") to DN 50 (2"). · Flanged 1500 Class RF (Raised Face) & RJ (Ring Joint), Wrench operated: DN 15 (½") to DN 80 (3"). · Flanged 1500 Class RF (Raised Face) & RJ (Ring Joint), Gear operated: DN 100 (4") & DN 150 (6").	· Flanged 1500 Class RF (Raised Face) & RJ (Ring Joint), Gear operated: DN 150 (6") to DN 600 (24").
PN 420 / ANSI 2500	· Screwed End API / BSP Tpr, Wrench operated: DN 15 (1/2") to DN 25 (1"). · Socket Weld End, Wrench operated: DN 15 (½") to DN 25 (1"). · Flanged 2500 Class RF (Raised Face) & RJ (Ring Joint), Wrench operated: DN 15 (½") to DN 40 (1 ½"). · Flanged 2500 Class RF (Raised Face) & RJ (Ring Joint), Gear operated: DN 50 (2") & DN 300 (12"). · Butt Weld End, Gear operated: DN 50 (2")	



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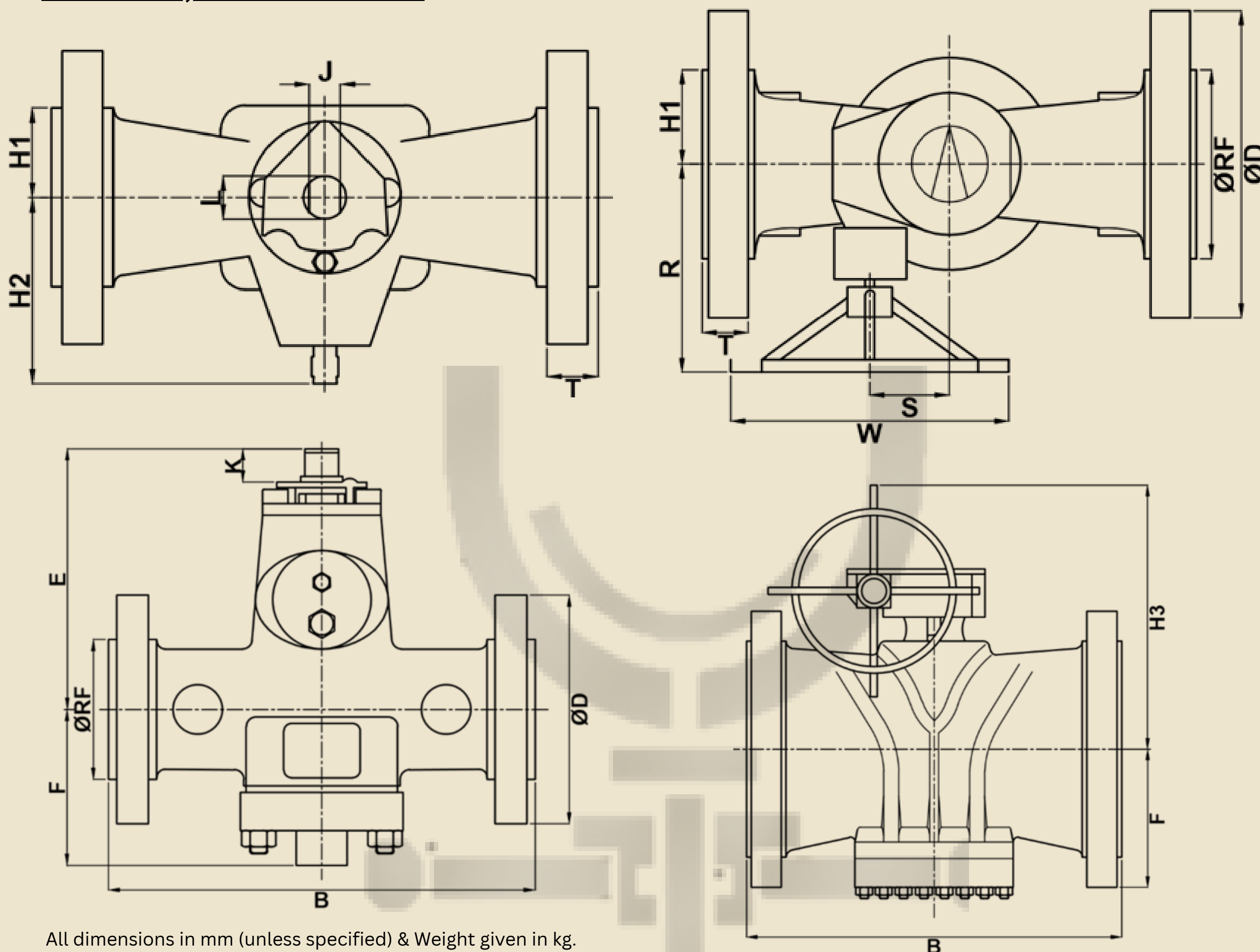
PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE



MATERIAL SPECIFICATION					
P. No.	PART DESCRIPTION	MATERIALS			
1	PLUG	ASTM A216 WCB/WCC + Case Hardening,	ASTM A216 WCB/WCC+ ENP	17-4PH Martensitic S.S. ASTM A747 Gr. Cb7Cu1	ASTM A352 LCB/LCC+ENP
		ASTM A351 CF3M / CF8M + ENP	ASTM A995 4A/5A+ENP	ASTM A216 WCB / WCC + Inconel 625 + ENP	ASTM A216 WCB / WCC + Stellite Hard Facing
2	BODY	Carbon Steel ASTM A216 WCB / WCC	60K Carbon Steel ASTM A487 Gr.4	Low Temp. Carbon Steel ASTM A352 LCB / LCC	Austenitic Stainless-Steel ASTM A351 CF3M / CF8M
		Duplex / Super Duplex S.S. ASTM A995 4A / 5A	ASTM A216 WCB / WCC + Inconel 625 Overlay	ASTM A216 WCB / WCC + Stellite Hard Facing	
3	STEM	Alloy Steel ASTM A322 4140		17-4PH Martensitic S.S. ASTM A564 Ty 630	
		ASTM A182 F51 / F55		Inconel 718	
4	Gland	Graphite			
5	EQUALIZER RING	Alloy Steel ASTM A322 4140		17-4PH Martensitic S.S. ASTM A564 Ty 630	
		ASTM A182 F51 / F55		Inconel 718	
6	Plug Loading Screw	A193 B7M			
7	Stem Packing Injector	Carbon Steel		Stainless Steel	
8	Sealant Injector	Carbon Steel		Stainless Steel	
9	COVER	Carbon Steel ASTM A216 WCB / WCC	60K Carbon Steel ASTM A487 Gr.4	Low Temp. Carbon Steel ASTM A352 LCB / LCC	Austenitic Stainless-Steel ASTM A351 CF3M / CF8M
		Duplex / Super Duplex S.S. ASTM A995 4A / 5A	ASTM A216 WCB / WCC + Inconel 625 Overlay	ASTM A216 WCB / WCC + Stellite Hard Facing	
10	COVER BOLTING	ASTM A193 B7 / B7M		ASTM A194 2H / 2HM	ASTM A320 L7 + ASTM A194 7
		ASTM A193 B8M + ASTM A194 8M		UNS S32760	
Other materials can be provided on request.					

Note: The above data is subject to change without any notice due to our continuing product improvement program.

PRESSURE BALANCE, INVERTED LUBRICATED PLUG VALVE, FLANGED WITH RAISED FACE
CLASS 150, SHORT PATTERN



All dimensions in mm (unless specified) & Weight given in kg.

DIMENSIONAL DATA							
DN	50	80	100	150	200	250	300
NPS	2"	3"	4"	6"	8"	10"	12"
B	178	203	229	267	292	330	356
ØD	153	191	229	280	343	407	483
T	16	19	24	25.4	28.5	30.5	32
E	159	196	205	250	390	458	420
F	120	160	180	210	225	255	282
W	-	-	-	-	600	700	600
H1	58	85	93	105	120	130	146
H2	110	120	135	135	-	-	-
J	19	25.3	25.3	28.5	-	-	-
K (With Stop plate)	25	26	26	34	-	-	-
K (Without Stop plate)	32	35	35	41	-	-	-
L	27	35	35	41	-	-	-
ØRF	92	127	157.2	216	270	324	381
R	-	-	-	-	390	460	390
S	-	-	-	-	105	148	105
H3	-	-	-	-	625	715	655
U	494	684	684	933	-	-	-
Wt. kg. Approx.	19	33	52	80	162	245	350
DN 50 (2") – DN 150 (6") Valves are wrench / lever operated. DN 150 (6") – DN 300 (12") Valves are gear operated.							

WHERE,

B = Face to face length (RAISED FACE)

ØD = Flange Diameter

T = Flange thickness RF (Raised Face)

E = Center Line to top of stem

F = Center Line to Bottom of body / cap

W = Handwheel Diameter

H1 = Body width from center line

H2 = Body width from center line

J = Stem across the flat

K = Depth of flats with stop plate

K = Depth of flats without stop plate

L = Stem Diameter

ØRF = Raised Face Diameter

R = Center line to face of Handwheel

S = Center line of valve to Center line of Operating spindle

H3 = Center line to top of Handwheel

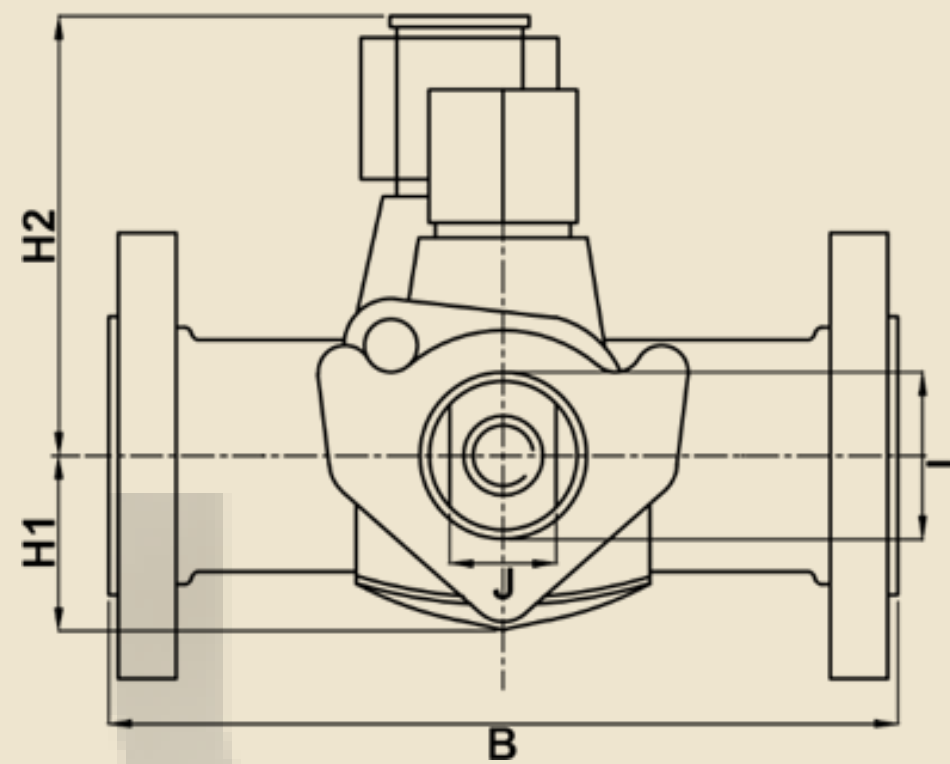
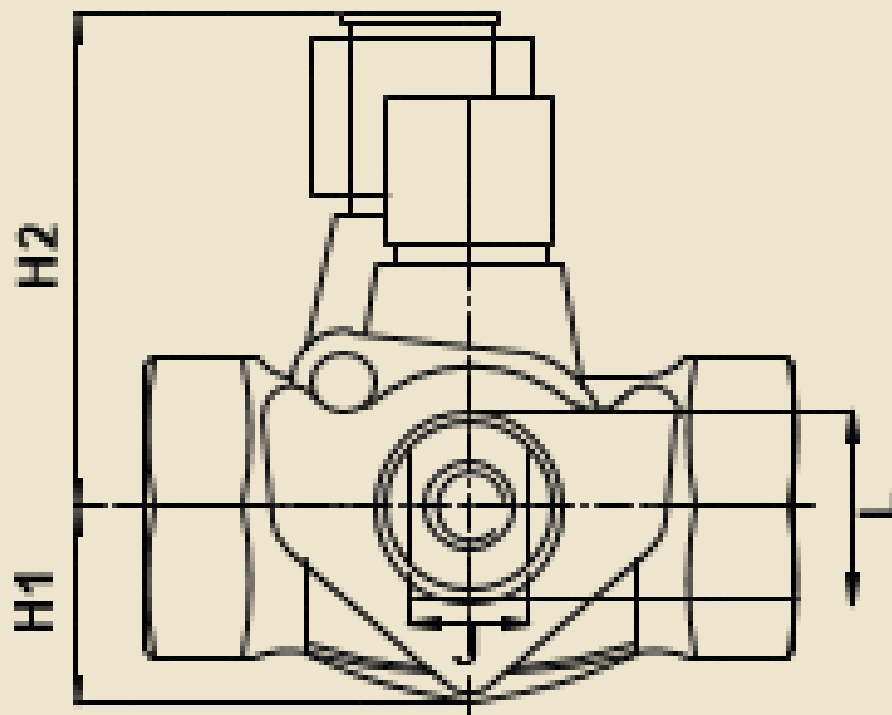
U = Center Line to End of Fitted Wrench

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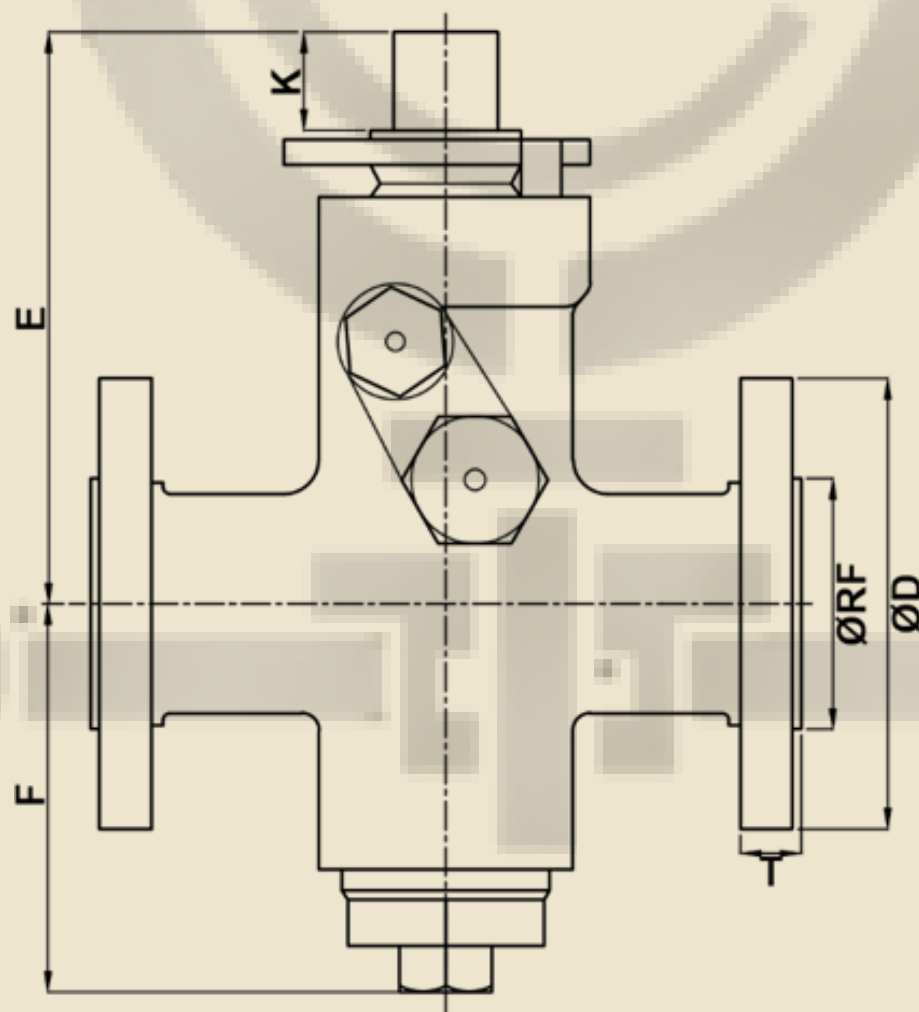
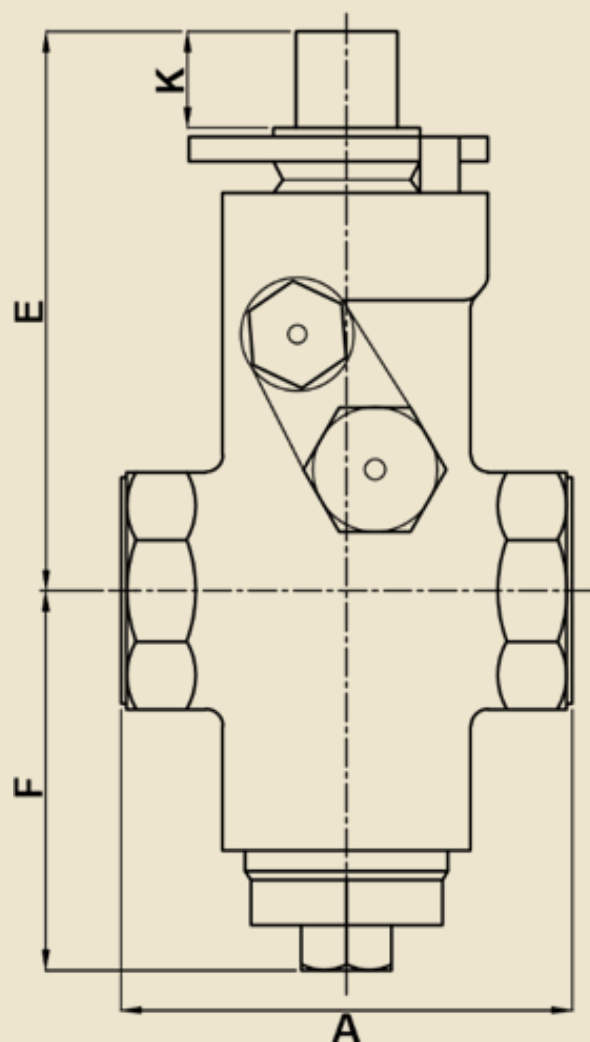
**PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE, FLANGED WITH R.F,
SCREWED END & SOCKET WELD END**

CLASS 300, SHORT PATTERN



Size Range:

- Flanged 300 Class RF (Raised Face)
Wrench operated: DN 40 (1 ½") to DN 100 (4").
- Screwed End API / BSP Tpr, Wrench operated: DN 15 (½") to DN 40 (1 ½").
- Socket Weld End, Wrench operated: DN 15 (½") to DN 40 (1 ½").



DIMENSIONAL DATA

DN	15	20	25	40	50	80	100
NPS	½"	¾"	1"	1 ½"	2"	3"	4"
A	89	133	133	228	-	-	-
B	139.7	152.4	158.8	190	216	283	305
ØD	95.5	117.5	124	156	165	210	254
T	14.2	15.8	17.5	20.6	22.2	28.6	31.8
E	105	127	127	150	160	194	210
F	75	97	97	105	125	154	110
H1	30	42	42	58	59	86	94
H2	70	80	80	100	110	120	135
J	13	17	17	19	19	25.3	25.3
K (With Stop plate)	19	24	24	25	25	26	26
K (Without Stop plate)	24	29	29	32	32	34	34
L	19	22.2	22.2	27	27	35	35
ØRF	35	42.9	50.8	73.2	92	127	157
U	230	318	318	494	494	684	684
Z	21.7	27.4	34.1	49	-	-	-
ZA	10	13	13	13	-	-	-
Wt. kg. Approx.	SC/SWE	2.5	6.8	6.8	22	24	45
	FL	5.3	9	10	19.5		

WHERE,

A = End to End SC (Screwed) & SWE (Socket Weld End)

B = Face to face length RF (RAISED FACE)

ØD = Flange Diameter

T = Flange thickness RF (Raised Face)

E = Center Line to top of stem

F = Center Line to Bottom of body / cap

H1 = Body width from center line

H2 = Body width from center line

J = Stem across the flat

K = Depth of flats with stop plate

K = Depth of flats without stop plate

L = Stem Diameter

ØRF = Raised Face Diameter

U = Center Line to End of Fitted Wrench

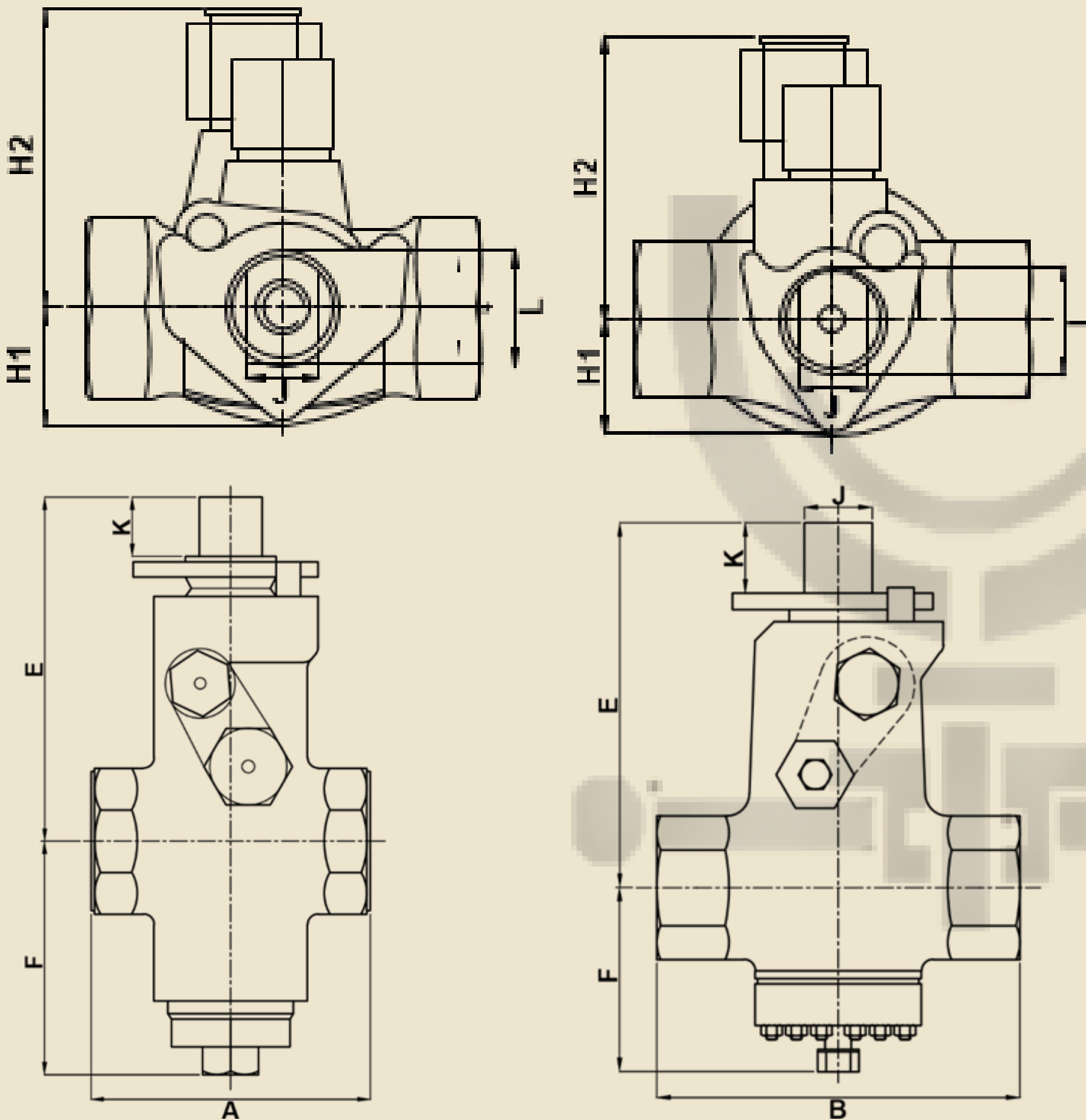
Z = ID (Internal Diameter of Socket Weld End)

ZA = Depth of Socket Weld End



PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE, SCREWED END & SOCKET WELD END

CLASS 150, REGULAR PATTERN



All dimensions in mm (unless specified) & Weight given in kg.

DIMENSIONAL DATA					
DN	15	20	25	40	50
NPS	½"	¾"	1"	1 ½"	2"
A	89	133	133	229	229
E	120	127	155	155	175
F	75	98	98	110	134
H1	30	35	42	57	72.5
H2	68	75	75	105	105
J	13	17	17	19	25.3
K (With Stop plate)	18	24	24	26	26
K (Without Stop plate)	25	30	30	35	35
L	19	22.2	22.2	35	35
U	230	318	318	685	685
Z	21.7	27.5	34.1	49	61.2
ZA	10	13	13	13	16
Wt. kg. Approx.	2.5	6.8	6.8	22	24.5

Size Range:

- Screwed End API / BSP Tpr, Wrench operated: DN 15 (½") to DN 50 (2").
- Socket Weld End, Wrench operated: DN 15 (½") to DN 50 (2").

WHERE,

A = End to End SC (Screwed) & SWE (Socket Weld End)

E = Center Line to top of stem

F = Center Line to Bottom of body / cap

H1 = Body width from center line

H2 = Body width from center line

J = Stem across the flat

K = Depth of flats with stop plate

K = Depth of flats without stop plate

L = Stem Diameter

U = Center Line to End of Fitted Wrench

Z = ID (Internal Diameter of Socket Weld End)

ZA = Depth of Socket Weld End

Note: The above data is subject to change without any notice due to our continuing product improvement program.

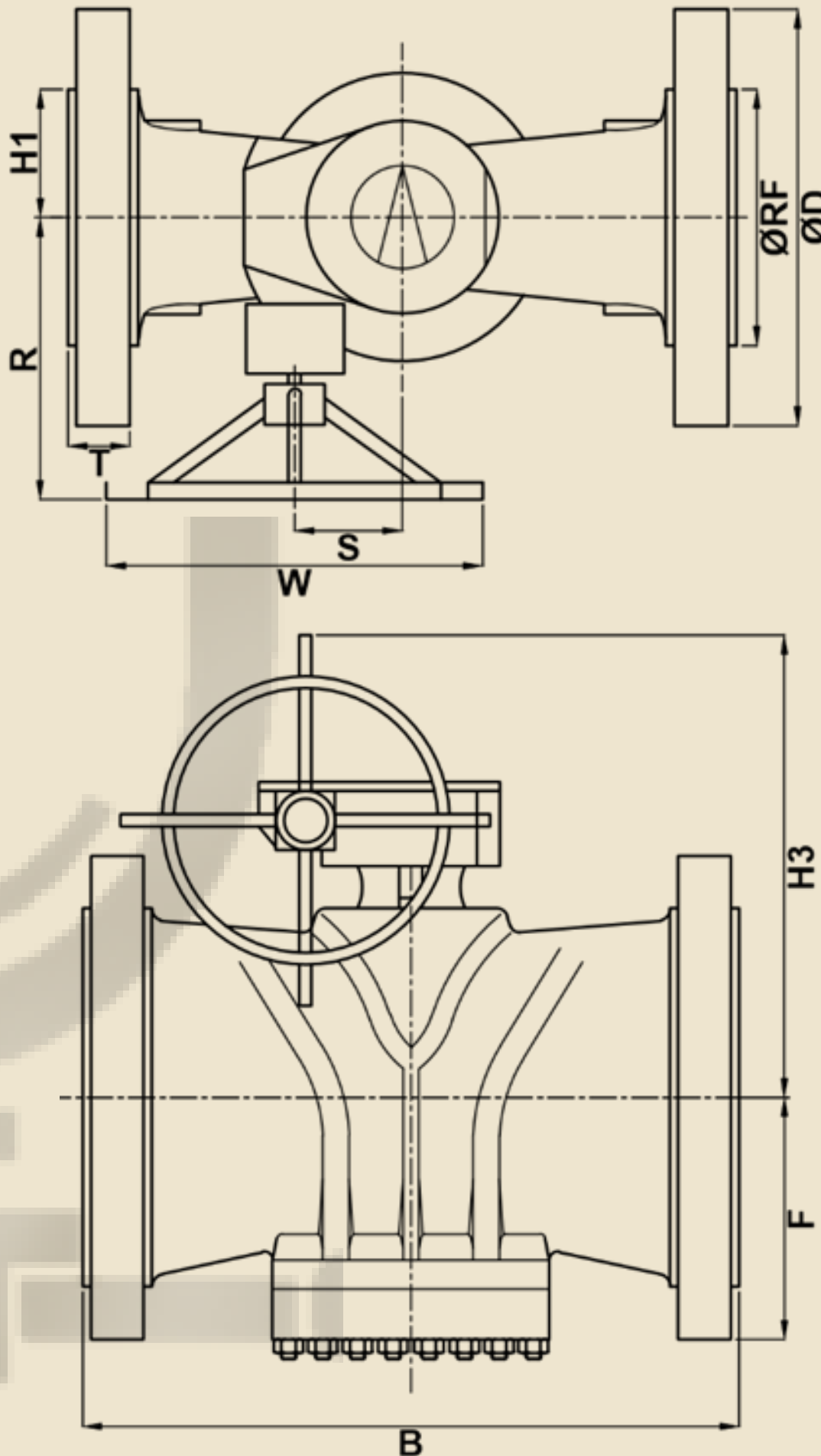
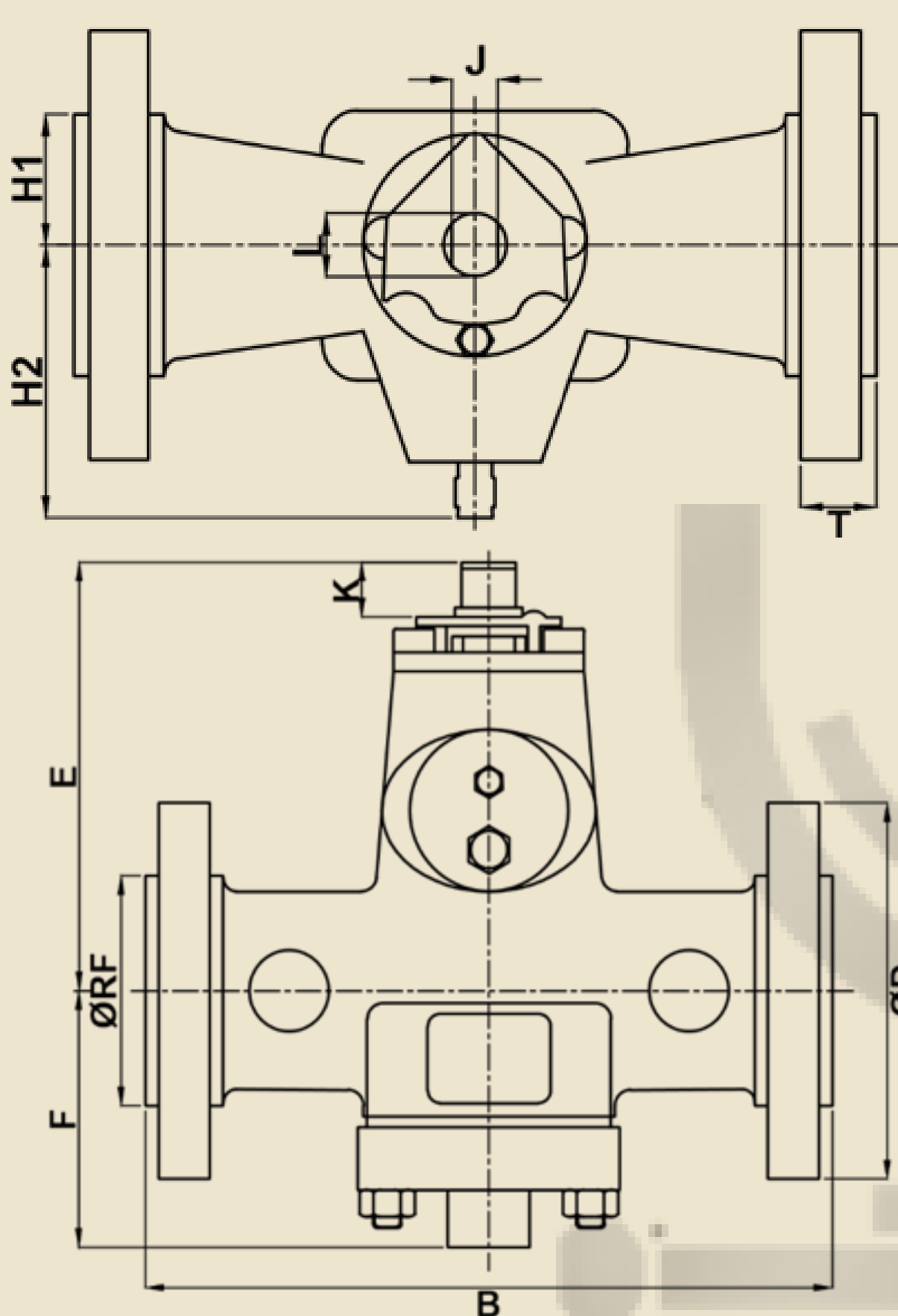


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MANUFACTURER OF INDUSTRIAL VALVES



RESSURE BALANCE INVERTED LUBRICATED PLUG VALVE, FLANGED WITH RAISED FACE

CLASS 150, REGULAR PATTERN



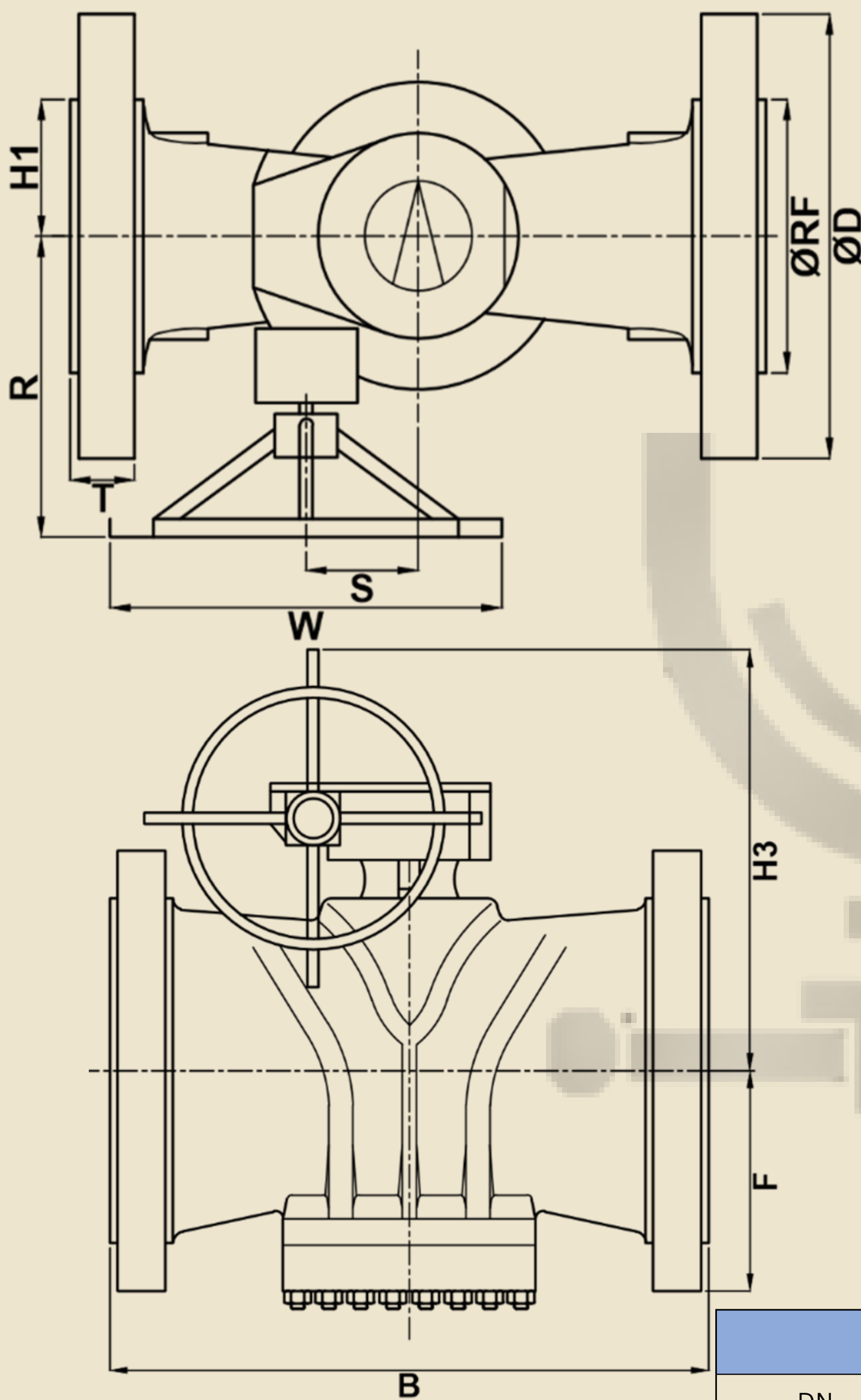
All dimensions in mm (unless specified) & Weight given in kg

DIMENSIONAL DATA							
DN	50	80	100	150	200	250	300
NPS	2"	3"	4"	6"	8"	10"	12"
B	203	241	305	394	457	533	610
ØD	153	191	229	280	343	407	483
T	16	19	24	25.4	28.5	30.5	32
E	158	195	205	258	365	485	545
F	120	165	185	192	295	285	405
W	-	-	-	-	600	700	700
H1	59	86	94	105	150	145	179
H2	100	120	134	134	-	-	-
J	19	25.3	25.3	28.6	-	-	-
K (With Stop plate)	25	26	26	34	-	-	-
K (Without Stop plate)	32	34	34	42	-	-	-
L	27	35	35	41	-	-	-
ØRF	92	127	157	216	270	324	381
R	-	-	-	-	390	462	462
S	-	-	-	-	105	148	148
H3	-	-	-	-	590	760	820
U	494	684	684	933	-	-	-
Wt. kg. Approx.	22	38	60	92	225	282	415

DN 50 (2") – DN 150 (6") Valves are wrench / lever operated.
DN 150 (6") – DN 300 (12") Valves are gear operated.

- WHERE,
- B = Face to face length (RAISED FACE)
 - ØD = Flange Diameter
 - T = Flange thickness from Raised Face
 - E = Center Line to top of stem
 - F = Center Line to Bottom of body / cap
 - W = Handwheel Diameter
 - H1 = Body width from center line
 - H2 = Body width from center line
 - J = Stem across the flat
 - K = Depth of flats with stop plate
 - K = Depth of flats without stop plate
 - L = Stem Diameter
 - ØRF = Raised Face Diameter
 - R = Center line to face of Handwheel
 - S = Center line of valve to Center line of Operating spindle
 - H3 = Center line to top of Handwheel
 - U = Center Line to End of Fitted Wrench

PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE, FLANGED WITH RAISED FACE
CLASS 300, REGULAR PATTERN



WHERE,

B = Face to face length (RAISED FACE)

ØD = Flange Diameter

T = Flange thickness from Raised Face

F = Center Line to Bottom of body / cap

W = Handwheel Diameter

H1 = Body width from center line

ØRF = Raised Face Diameter

R = Center line to face of Handwheel

S = Center line of valve to Center line of Operating spindle

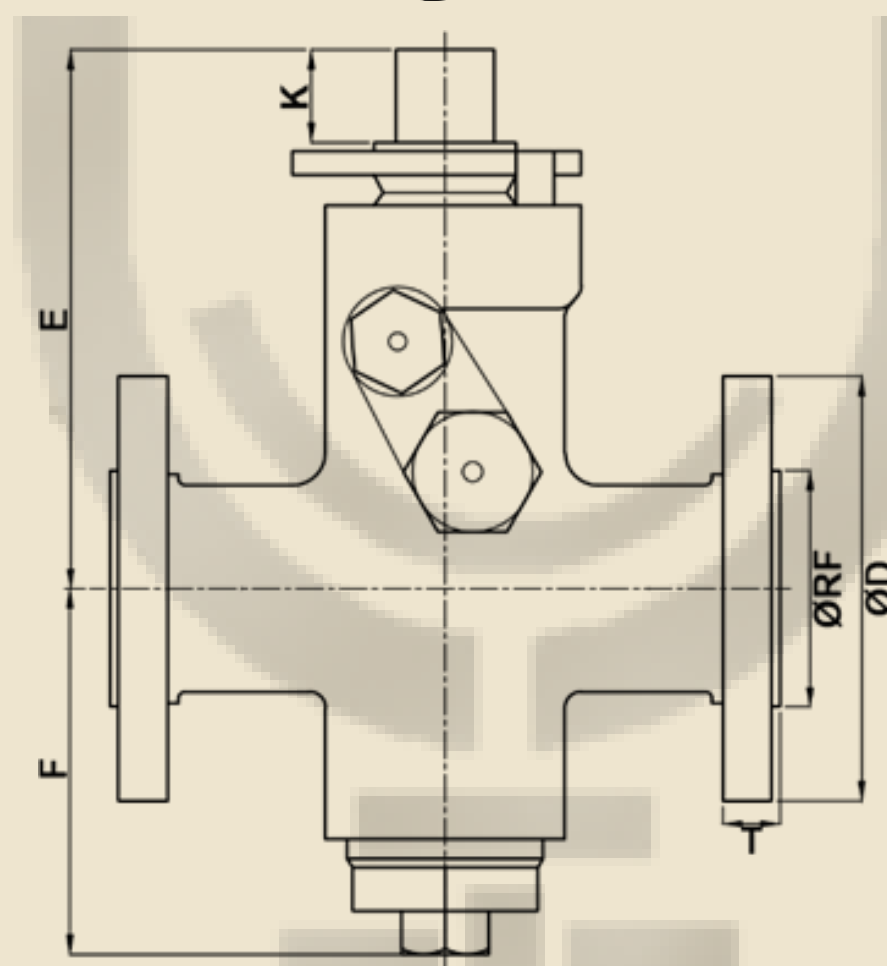
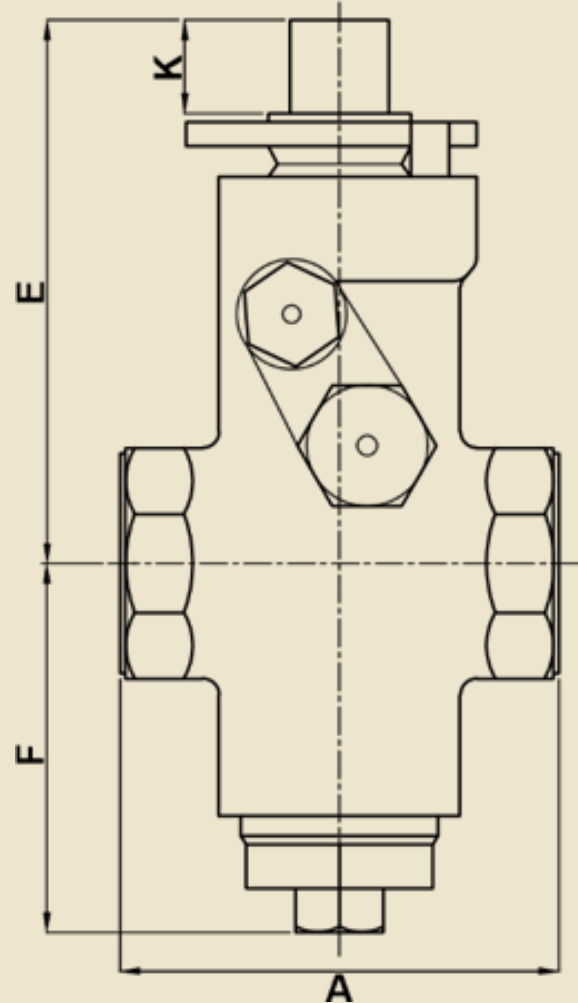
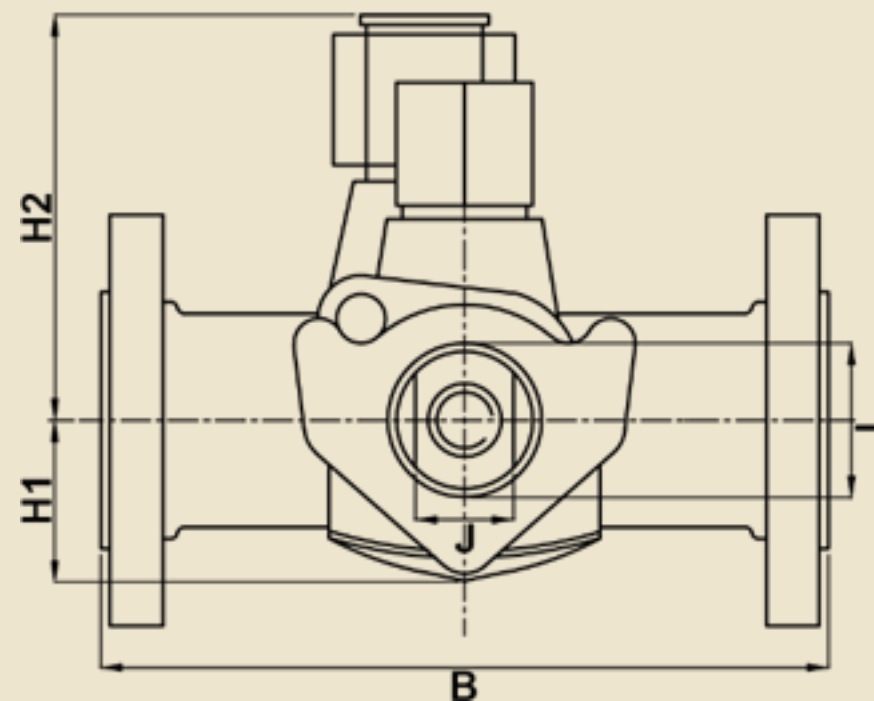
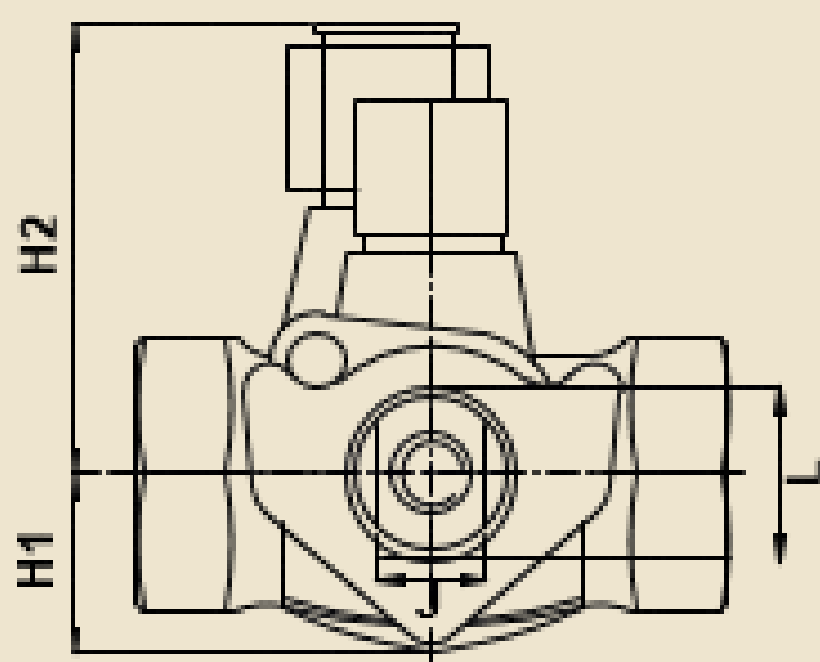
H3 = Center line to top of Handwheel

DIMENSIONAL DATA				
DN	150	200	250	300
NPS	6"	8"	10"	12"
B	403	502	568.5	711.2
ØD	318	381	445	521
T	36.5	41.1	47.8	50.8
F	240	260	340	370
W	600	600	700	787
H1	116	146	179	192
ØRF	216	270	324	381
R	390	423	462	575
S	105	148	148	195
H3	580	640	770	850
Wt. kg. Approx.	150	262	385	550
DN 150 (6") – DN 300 (12") Valves are gear operated.				



**PRESSURE BALANCE PLUG VALVE, FLANGED WITH RAISED FACE & RING JOINT,
SCREWED END, BUTT WELD END & SOCKET WELD END**

CLASS 600, REGULAR PATTERN



All dimensions in mm (unless specified) & Weight given in kg

Size Range:

- Flanged 600 Class RF (Raised Face) Wrench operated: DN 40 (½") to DN 50 (2").
- Flanged 600 Class RJ (Ring Joint) Wrench operated: DN 40 (½") to DN 50 (2").
- Screwed End API / BSP Tpr, Wrench operated: DN 15 (½") to DN 50 (2").
- Socket Weld End, Wrench operated: DN 15 (½") to DN 40 (2").
- Butt Weld End, Wrench operated: DN 50 (2").

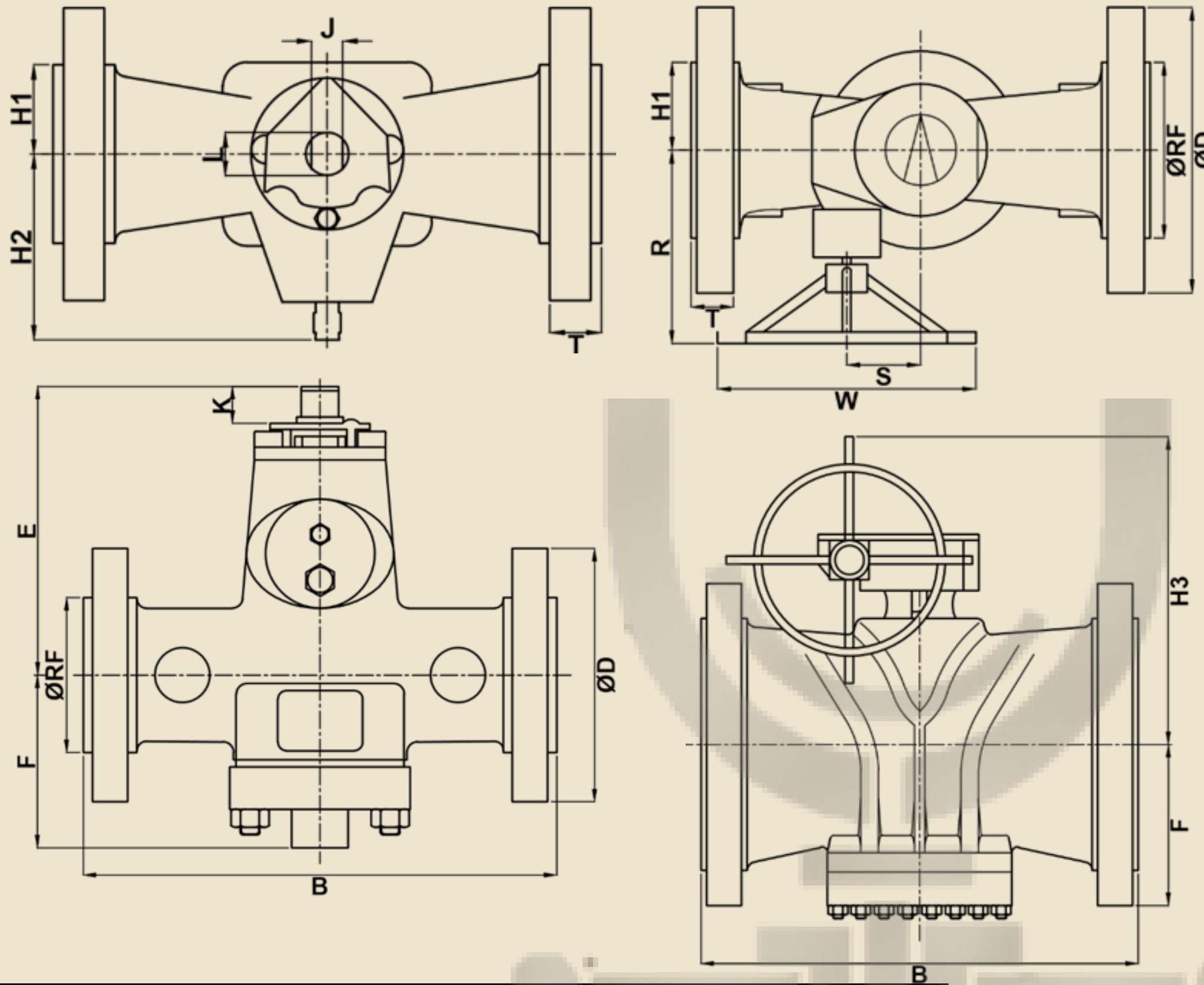
DIMENSIONAL DATA							
DN	15	20	25	40 (SC/SWE)	40 (Flanged)	50 (SC/BWE)	50 (Flanged)
NPS	½"	¾"	1"	1 ½"	1 ½"	2"	2"
A	89	133	133	228	-	229	-
B (BWE)	-	-	-	-	-	292	-
B (RF)	165.1	190.5	216	-	241.3	-	292
B (RJ)	163.5	190.5	216	-	241.3	-	295
ØD	95.5	117.5	124	-	156	-	165
T (RF)	20.7	22.2	23.9	-	29.4	-	31.8
T (RJ)	19.8	22.2	23.9	-	29.4	-	33.3
E	120	127	140	135	135	-	175
F	90	97	97	105	105	-	121.5
H1	30	42	42	58	58	56	86.5
H2	86	76	76	106	105	106	110
J	13	17	17	19	19	19	19
K (With Stop plate)	19	24	24	25	25	25	25
K (Without Stop plate)	24	29	29	32	32	32	32
L	19	22.2	22.2	27	27	27	27
ØRF	35	42.9	50.8	73.2	73.2	92	92
ØRF Of Ring Joint (RJ)	50.8	63.5	69.8	90.4	90.4	108	108
U	230	318	318	494	494	495	495
Z	21.7	27.4	34.1	49	-	61.2	-
ZA	10	13	13	13	-	16	-
Wt.kg. Approx.	SC/SW	2.5	6.8	6.8	22	-	24.5 (SC)
	FL	5.3	9	10	-	19.5	21 (BWE)

Note: The above data is subject to change without any notice due to our continuing product improvement program.



PRESSURE BALANCE PLUG VALVE, BUTT WELD END, FLANGED WITH RAISED FACE & RING JOINT, BUTT WELD END

CLASS 600, REGULAR PATTERN



Size Range:

- Flanged 600 Class RF (Raised Face) & RJ (Ring Joint) DN 80 (3") to DN 300 (12").
- Butt Weld End: 80 (3") to DN 300 (12").

DN 80 (3") – DN 150 (6")

Valves are wrench / lever operated.

DN 150 (6") – DN 300 (12") Valves are gear operated.

DIMENSIONAL DATA

DIMENSIONAL DATA							
DN		80	100	150	200	250	300
NPS		3"	4"	6"	8"	10"	12"
B (BWE)		356	432	559	660	787	838
B (RF)		356	432	559	660	787	838
B(RJ)		359	435	562	663.5	791	841
ØD		210	273	356	419	508	559
T (RF)		38.2	44.5	54	62	70	73
T (RJ)		39.7	46	55.7	63.6	71.4	74.4
E		210	233	-	-	-	-
F		149	165	202	264	314	386
W		-	-	600	700	775	700
H1		85	94	126	156	185	205
H2		100	112	-	-	-	-
J		25.3	25.3	-	-	-	-
K (With Stop plate)		26	26	-	-	-	-
K (Without Stop plate)		34	34	-	-	-	-
L		35	35	-	-	-	-
ØRF		127	157	216	270	324	381
ØRF Of Ring Joint (RJ)		146	175	241	302	356	413
R		-	-	383	421	520.5	514
S		-	-	150	150	63	25
H3		-	-	702	774	834	836
U		922	922	-	-	-	-
Wt.kg. Approx.	BWE	41	62	168	330	540	740
	FL	52	80	200	457	650	810

WHERE,

A = End to End SC (Screwed) & SWE (Socket Weld End)

B = End to End (Butt Weld End)

B = Face to face length (RAISED FACE)

B = Face to face length (RING JOINT)

ØD = Flange Diameter

T = Flange thickness RF (Raised Face)

T = Flange thickness RJ (Ring Joint)

E = Center Line to top of stem

F = Center Line to Bottom of body / cap

H1 = Body width from center line

H2 = Body width from center line

J = Stem across the flat

K = Depth of flats with stop plate

K = Depth of flats without stop plate

L = Stem Diameter

ØRF = Raised Face Diameter

ØRF = Raised Face Diameter Ring Joint (RJ)

U = Center Line to End of Fitted Wrench

Z = ID (Internal Diameter of Socket Weld End)

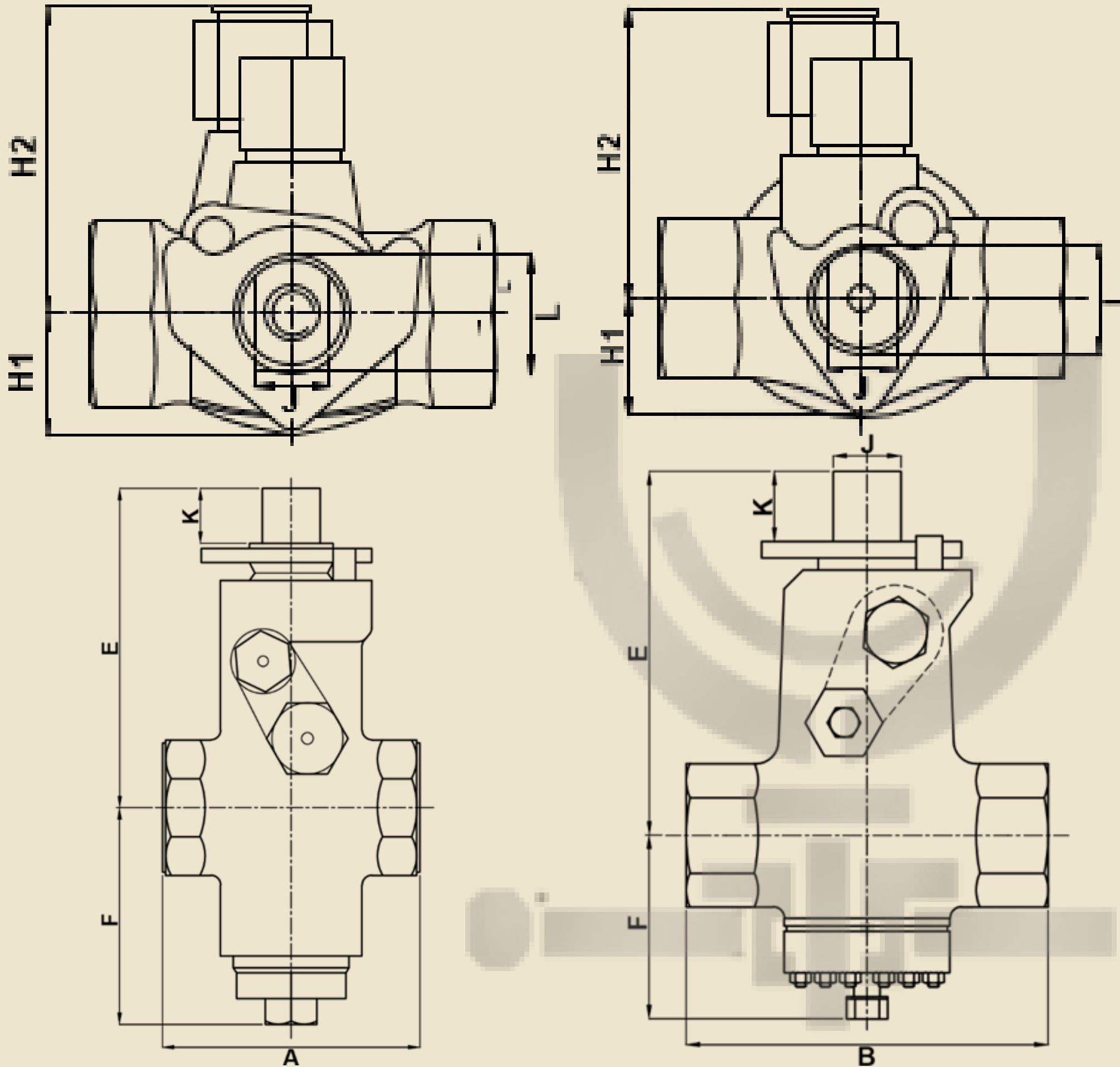
ZA = Depth of Socket Weld End

Note: The above data is subject to change without any notice due to our continuing product improvement program.



**PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE, SCREWED END
& SOCKET WELD END**

CLASS 800,900 & 1500 REGULAR



All dimensions in mm (unless specified) & Weight given in kg.

DIMENSIONAL DATA					
DN	15	20	25	40	50
NPS	½"	¾"	1"	1 ½"	2"
A	89	133	133	229	229
E	120	140	140	190	190
F	75	98	98	127	127
H1	30	42	42	64	64
H2	73	76	76	106	106
J	13	17	17	25.3	25.3
K (With Stop plate)	18	24	24	26	26
K (Without Stop plate)	25	30	30	35	35
L	19	22.2	22.2	35	35
U	230	318	318	685	685
Z	21.7	27.5	34.1	49	61.2
ZA	10	13	13	13	16
Wt. kg. Approx.	2.5	6.8	6.8	22	24.5

WHERE,

A = End to End SC (Screwed) & SWE (Socket Weld End)

B = End to End (Butt Weld End)

B = Face to face length (RAISED FACE)

B = Face to face length (RING JOINT)

ØD = Flange Diameter

T = Flange thickness RF (Raised Face)

T = Flange thickness RJ (Ring Joint)

E = Center Line to top of stem

F = Center Line to Bottom of body / cap

H1 = Body width from center line

H2 = Body width from center line

J = Stem across the flat

K = Depth of flats with stop plate

K = Depth of flats without stop plate

L = Stem Diameter

ØRF = Raised Face Diameter

ØRF = Raised Face Diameter Ring Joint (RJ)

U = Center Line to End of Fitted Wrench

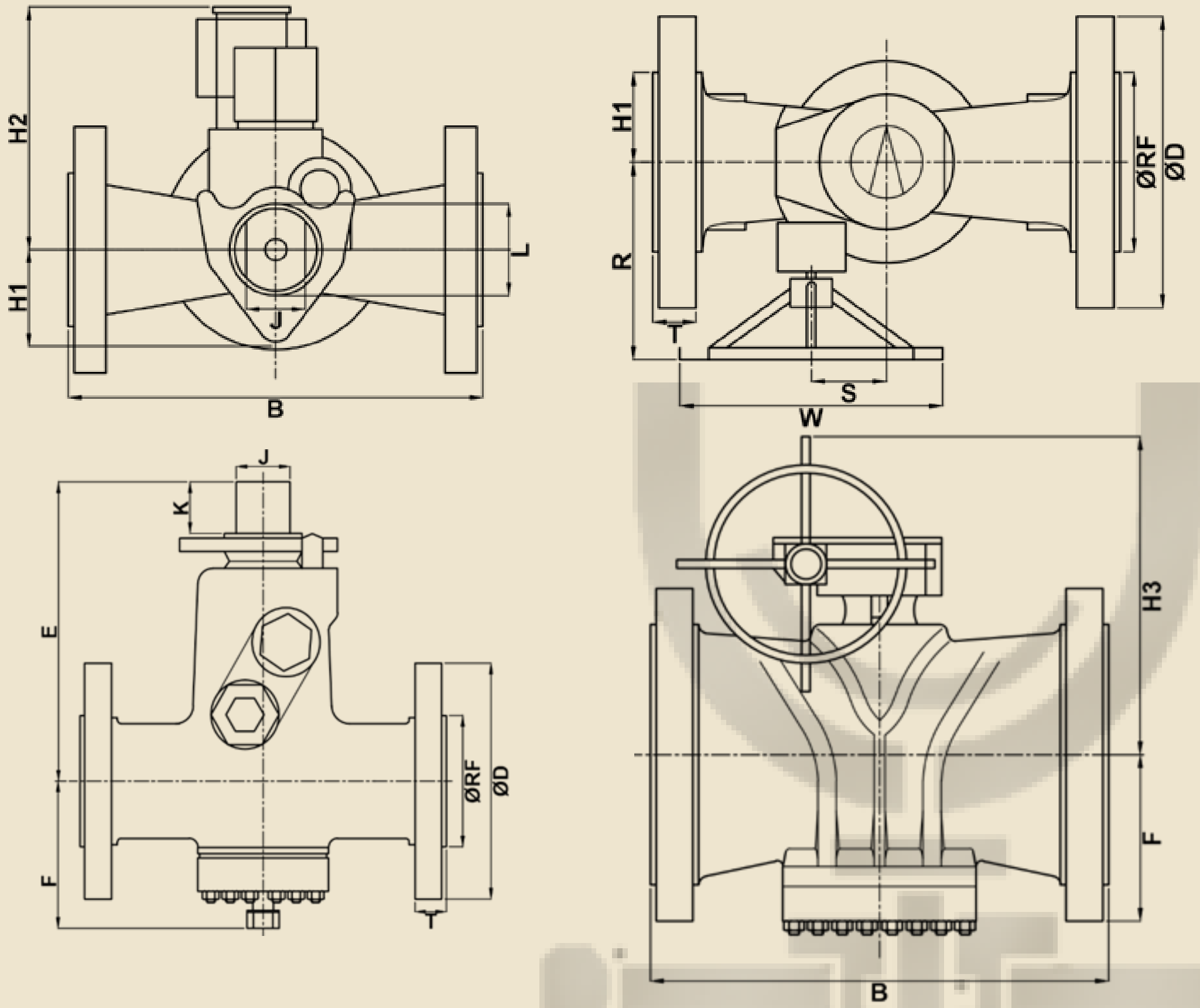
Z = ID (Internal Diameter of Socket Weld End)

ZA = Depth of Socket Weld End



PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE, FLANGED WITH RAISED FACE & RING JOINT

CLASS 900 & 1500 REGULAR



- DN 15 (½") – DN 150 (6") Valves are wrench / lever operated.
- DN 150 (6") – DN 300 (12") Valves are gear operated.

DIMENSIONAL DATA 900#

DN	15	20	25	40	50	80	100	150	200	250	300
NPS	½"	¾"	1"	1 ½"	2"	3"	4"	6"	8"	10"	12"
B (RF)	216	229	254	305	368	381	457	610	737	838	965
B(RJ)	216	229	254	305	371	384	460	613	740	841	968
ØD	121	130	149.5	178	216	242	293	381	470	546	610
T (RF)	28.8	31.8	34.9	38.2	44.5	44.5	50.9	62	69.9	76.4	85.7
T (RJ)	28.7	31.8	34.9	38.2	46	46	52.4	63.5	71.4	77.9	87.2
E	120	140	181	297	302	235	233	-	-	-	-
F	80	98	98	152	152	164	182	232	285	284	354
W	-	-	-	600	600	-	600	700	700	700	700
H1	30	42	45	105	105	90	100	130	318	180	220
H2	44	52	52	105	105	131	145	-	280	-	-
J	13	17	17	28.5	-	28.5	-	-	-	-	-
K (With Stop plate)	17.6	22.6	22.6	34	-	34	34	-	-	-	-
K (Without Stop plate)	25	30	30	42	-	42	42	-	-	-	-
L	19	22.2	22.2	41/45	45	41	41	-	-	-	-
ØRF	35	42.9	50.8	73.2	92	127	157.3	215.9	269.7	323.8	381
ØRF Of Ring Joint (RJ)	60.5	66.6	71.4	91.9	123.9	155	181	241	308	362	419
R	-	-	-	340	340	-	430	422	422	438	558
S	-	-	-	86	86	-	104.8	148	147.9	227	138
H3	-	-	-	528	528	-	720	256	775	766	766
U	230	318	318	-	-	933	913	-	-	-	-
Wt. kg. Approx.	4.5	8.5	13.5	40/60	85	78	125	274	470	860	1075

DIMENSIONAL DATA 1500#

DN	15 - 50	80	100	150
NPS	½" – 2"	3"	4"	6"
B (RF)	SAME AS CLASS 900	470	546	705
B(RJ)		483	549	711
ØD		267	311.5	394
T (RF)		54.2	60.2	88.9
T (RJ)		55.7	61.75	92
E		322	442	565
F		182	229	288
W		600	600	600
H1		114	111	152
H2		114	111	152
J		-	-	-
K (With Stop plate)		-	-	-
K (Without Stop plate)		-	-	-
L		45	45	70
ØRF		127	157.3	215.9
ØRF Of Ring Joint (RJ)		168.2	193.6	247.7
R		340	422	593
S		86	148	58
H3		554	588	627
U		-	-	-
Wt. kg. Approx.		140	170	-

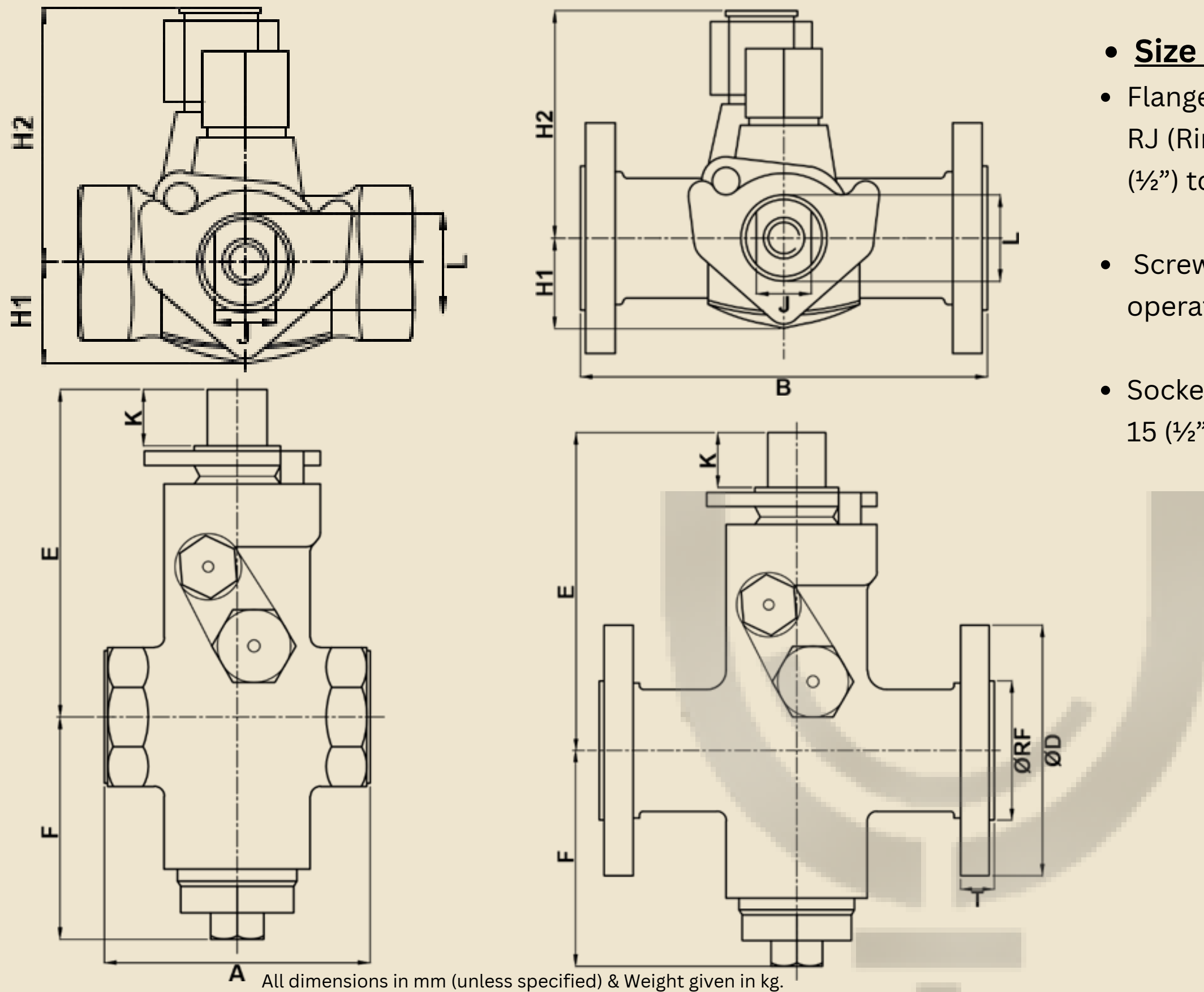
All dimensions in mm (unless specified) & Weight given in kg.

Note: The above data is subject to change without any notice due to our continuing product improvement program.



RESSURE BALANCE PLUG VALVE, FLANGED WITH RAISED FACE & RING JOINT, SCREWED END & SOCKET WELD END

CLASS 2500, REGULAR PATTERN



All dimensions in mm (unless specified) & Weight given in kg.

- **Size Range:**
- Flanged 2500 Class RF (Raised Face) & RJ (Ring Joint) Wrench operated: DN 15 (½") to DN 40 (1 ½").
- Screwed End API / BSP Tpr, Wrench operated: DN 15 (½") to DN 25 (1").
- Socket Weld End, Wrench operated: DN 15 (½") to DN 25 (1").

DIMENSIONAL DATA

DIMENSIONAL DATA					
DN		15	20	25	40
NPS		½”	¾”	1”	1 ½”
A		89	133	133	-
B (RF)		264	273	308	384
B(RJ)		264	273	308	387
ØD		133.5	139.7	160	203.5
T (RF)		36.6	38.2	41.4	50.9
T (RJ)		36.6	38.2	41.4	52.4
E		120	142	142	-
F		76	98	98	190
H1		35	46	46	-
H2		70	76	76	-
J		13	17	17	-
K (With Stop plate)		19	24	24	-
K (Without Stop plate)		25	30	30	-
L		19	22.2	22.2	-
ØRF		35	42.9	50.8	73.2
ØRF Of Ring Joint (RJ)		65	73.2	82.6	114.3
U		230	318	318	685
Wt.kg. Approx.	SC/SW	2.5	6.8	17	47
	FL	13	18	22	73

WHERE,

A = End to End SC (Screwed) & SWE (Socket Weld End)

B = Face to face length (RAISED FACE)

B = Face to face length (RING JOINT)

ØD = Flange Diameter

T = Flange thickness RF (Raised Face)

T = Flange thickness RJ (Ring Joint)

E = Center Line to top of stem

F = Center Line to Bottom of body / cap

H1 = Body width from center line

H2 = Body width from center line

J = Stem across the flat

K = Depth of flats with stop plate

K = Depth of flats without stop plate

L = Stem Diameter

ØRF = Raised Face Diameter

ØRF = Raised Face Diameter Ring Joint (RJ)

U = Center Line to End of Fitted Wrench

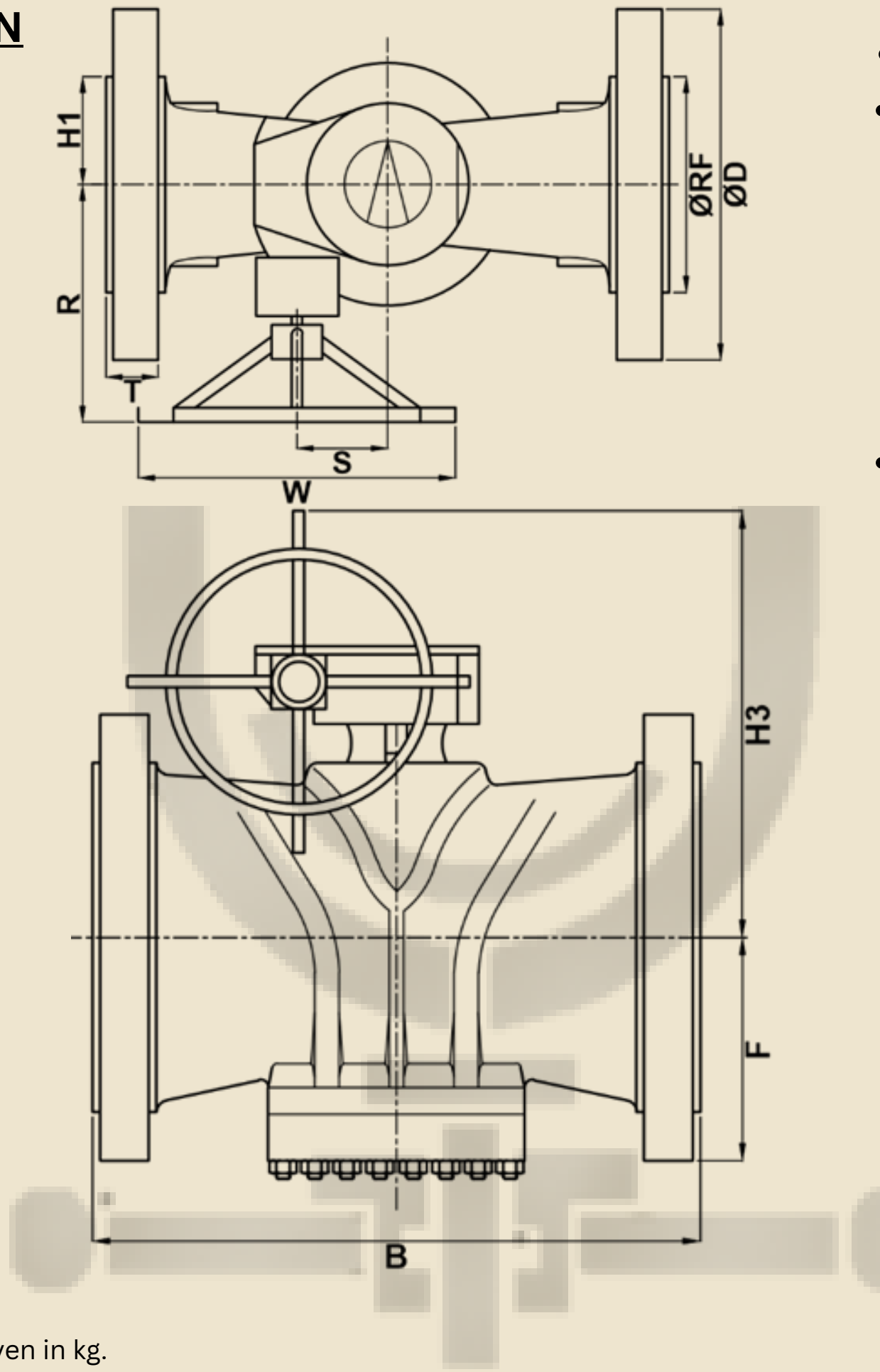
Note: The above data is subject to change without any notice due to our continuing product improvement program.



UNITEK VALVES PVT LTD
MANUFACTURER OF INDUSTRIAL VALVES



**PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE, BUTT WELD END, FLANGED
WITH RAISED FACE & RING JOINT**
CLASS 2500, REGULAR PATTERN



- **Size Range:**
- Flanged 2500 Class RF (Raised Face) & RJ (Ring Joint) Gear operated: DN 50 (2") to DN 300 (12")
- Butt Weld End, Gear operated: DN 50 (2")

All dimensions in mm (unless specified) & Weight given in kg.

DIMENSIONAL DATA							
DN	50	80	100	150	200	250	300
NPS	2"	3"	4"	6"	8"	10"	12"
B (RF)	451	578	673	914	1022	1270	1422
B(RJ)	454	584	683	927	1038	1292.2	1445
ØD	235	305	356	482.6	553	673.1	762
T (RF)	57.2	72.9	82.6	114.4	133.4	171.5	190.6
T (RJ)	58.7	76.02	87.3	120.7	141.3	182.6	201.7
F	189	251.4	240.7	322	387	387	530
W	600	600	600	800	700	700	700
H1	115	145	143	178	225	225	280
ØRF	92	127	157.2	215.9	269.8	323.85	381
ØRF Of Ring Joint (RJ)	133.3	168.3	203.2	279.4	339.9	425.45	495.3
R	350	352	352	530	639	639	-
S	105	148	148	138	215	215	-
H3	531	576	634	705	900	900	
Wt. kg. Approx.	131	240	665	740	1150	1800	-
NOTE: The Dimensions of DN 350 (14") to DN 600 (24") Valves will be agreed with customer on request.							
DN 50 (2") – DN 300 (12") Valves are gear operated.							

WHERE,

B = Face to face length (RAISED FACE)

B = Face to face length (RING JOINT)

ØD = Flange Diameter

T = Flange thickness RF (Raised Face)

T = Flange thickness RJ (Ring Joint)

F = Center Line to Bottom of body / cap

W = Handwheel Diameter

H1 = Body width from center line

ØRF = Raised Face Diameter

ØRF = Raised Face Diameter Ring Joint (RJ)

R = Center line to face of Handwheel

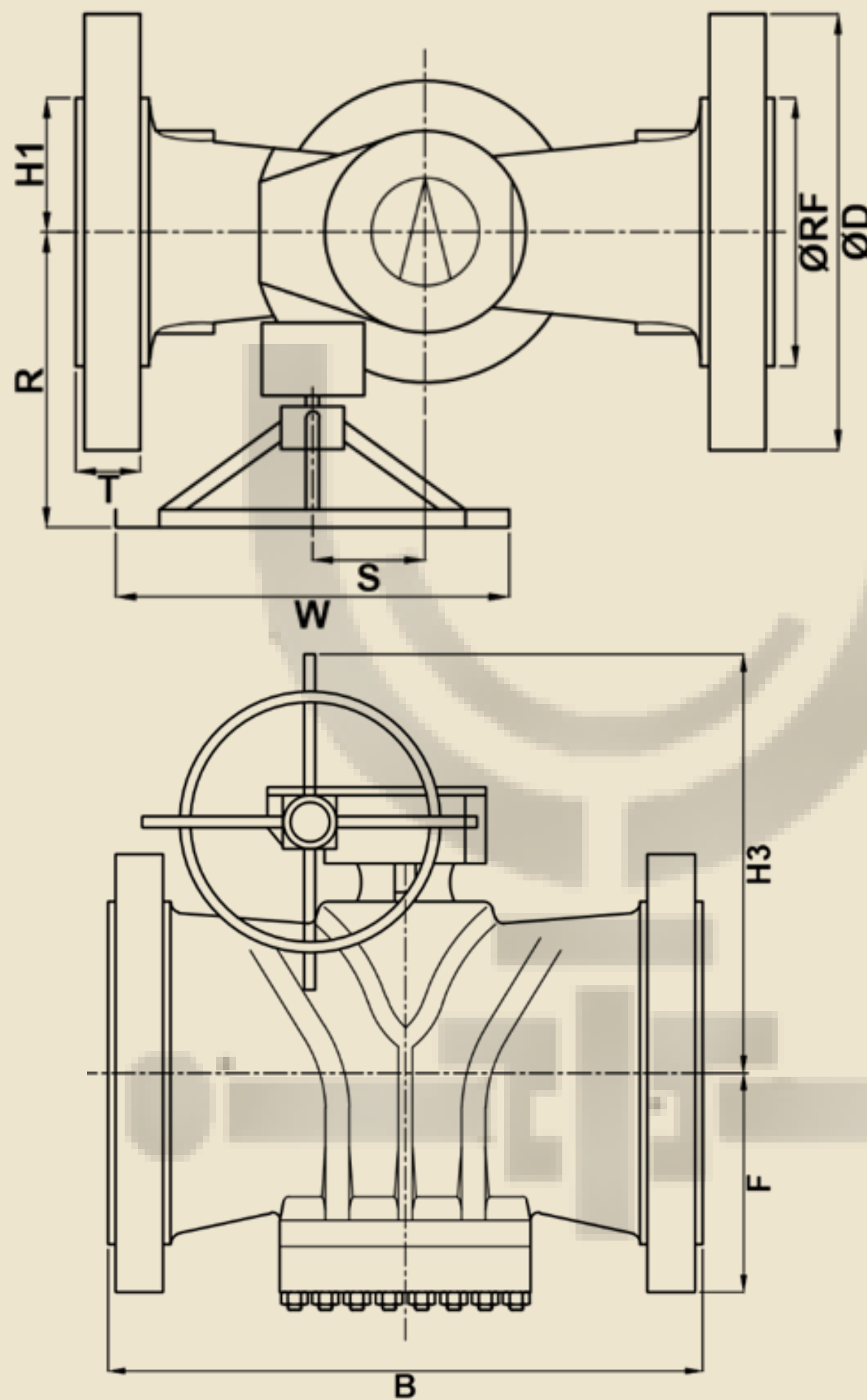
S = Center line of valve to Center line of Operating spindle

H3 = Center line to top of Handwheel



**PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE, VENTURI PATTERN, CLASS 150,
FLANGED WITH RAISED FACE, GEAR OPERATED**

TECHNICAL AND DIMENSIONAL DATA



All dimensions in mm (unless specified) & Weight given in kg.

DIMENSIONAL DATA							
DN	250	300	350	400	450	500	600
NPS	10"	12"	14"	16"	18"	20"	24"
B (RF)	533	610	686	762	864	914	1067
ØD	406	483	534	597	635	698.5	813
T (RF)	30.2	31.8	35.1	36.5	39.6	42.9	48
F	282	403	400	392	395	497.5	485.5
W	700	700	700	500	800	700	650
H1	149	179	215	215	240	271	264
ØRF	324	381	413	470	533	584	693
R	422	422	545	501	564	557	580
S	148	148	57.5	138	63	26	29
H3	738	837	800	672	833	898.5	868
Wt. kg. Approx.	280	415	560	630	900	1160	1270

WHERE,

B = Face to face length (RAISED FACE)

ØD = Flange Diameter

T = Flange thickness from Raised Face

F = Center Line to Bottom of body / cap

W = Handwheel Diameter

H1 = Body width from center line

ØRF = Raised Face Diameter

R = Center line to face of Handwheel

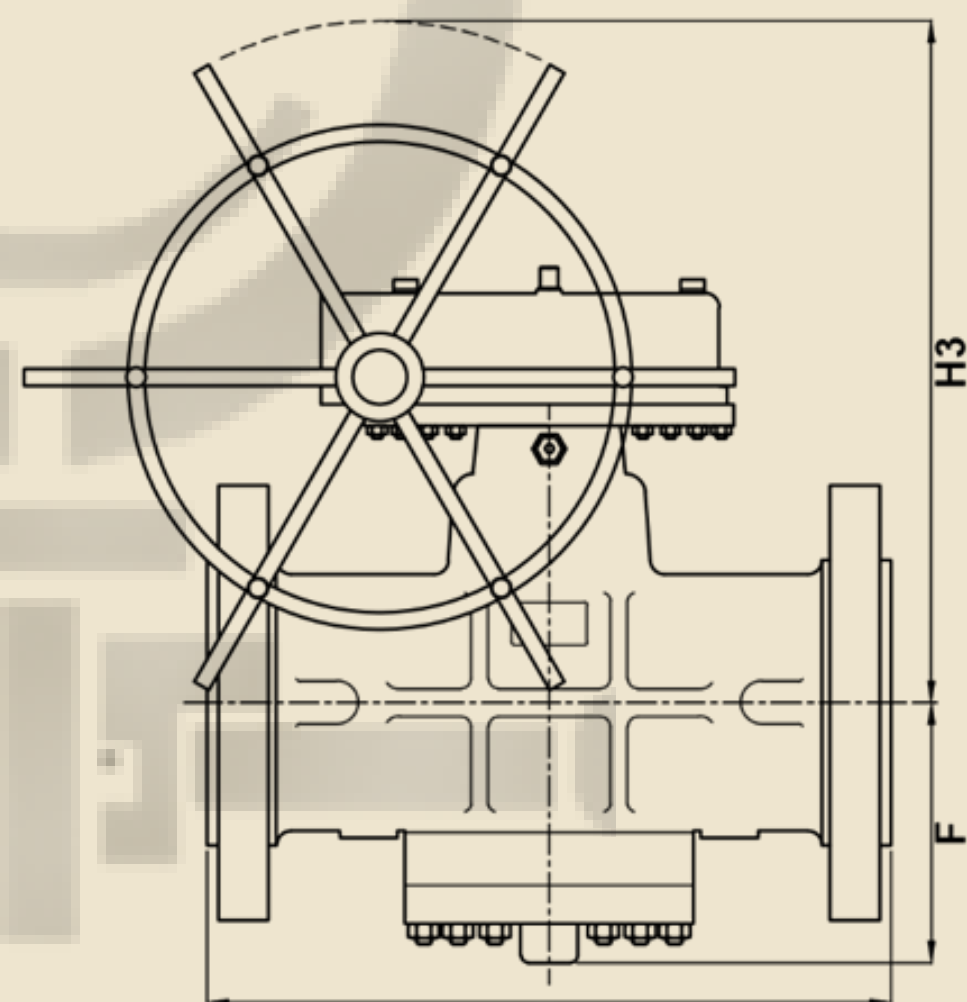
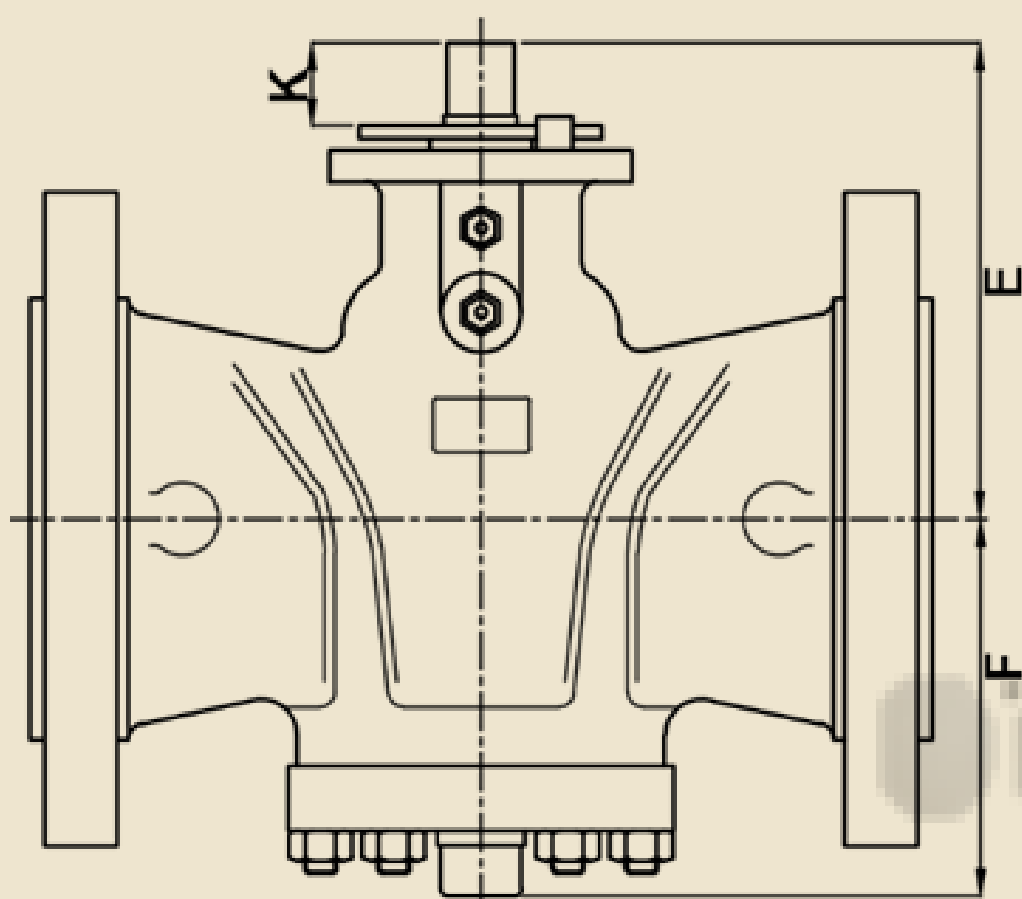
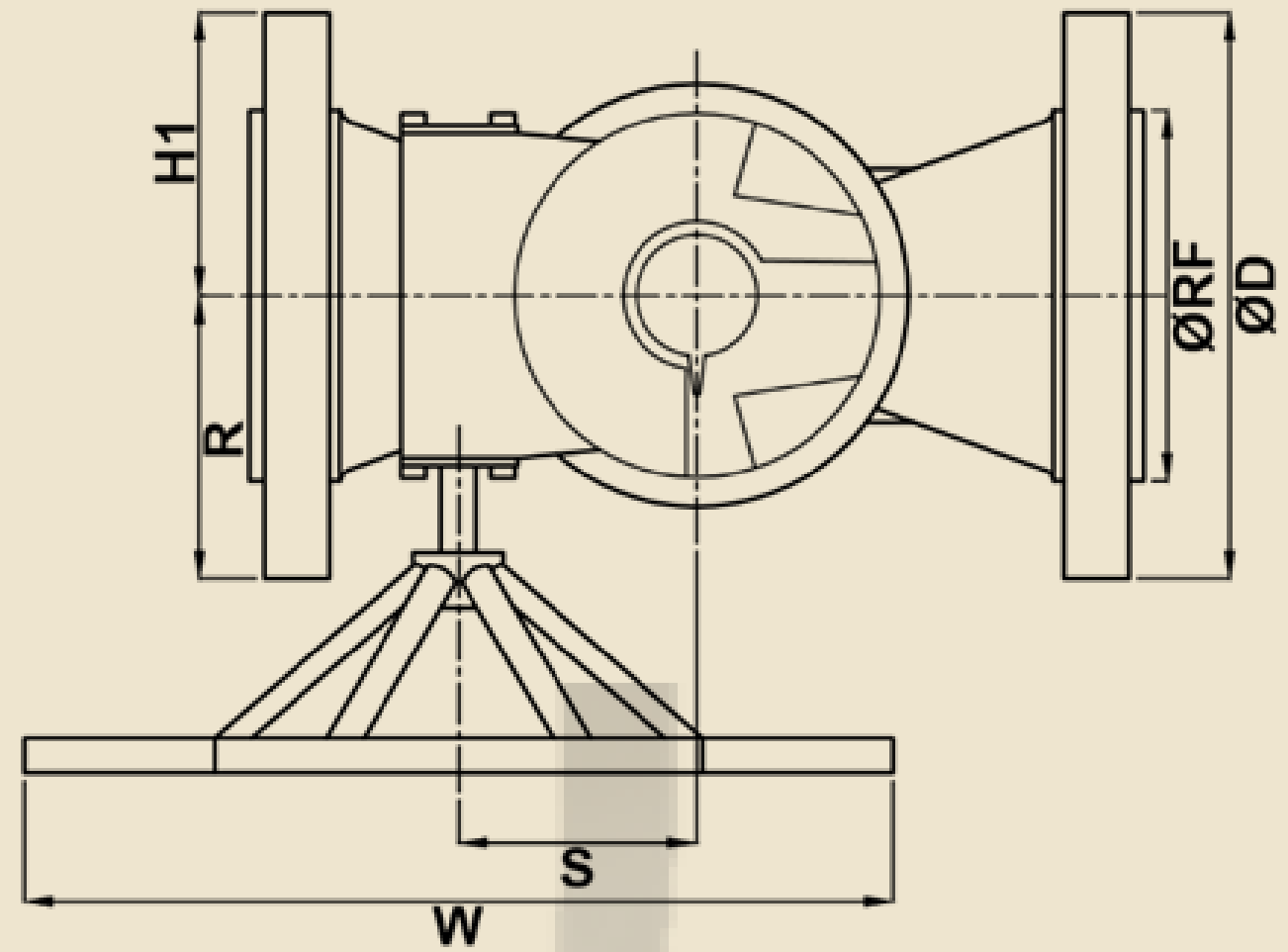
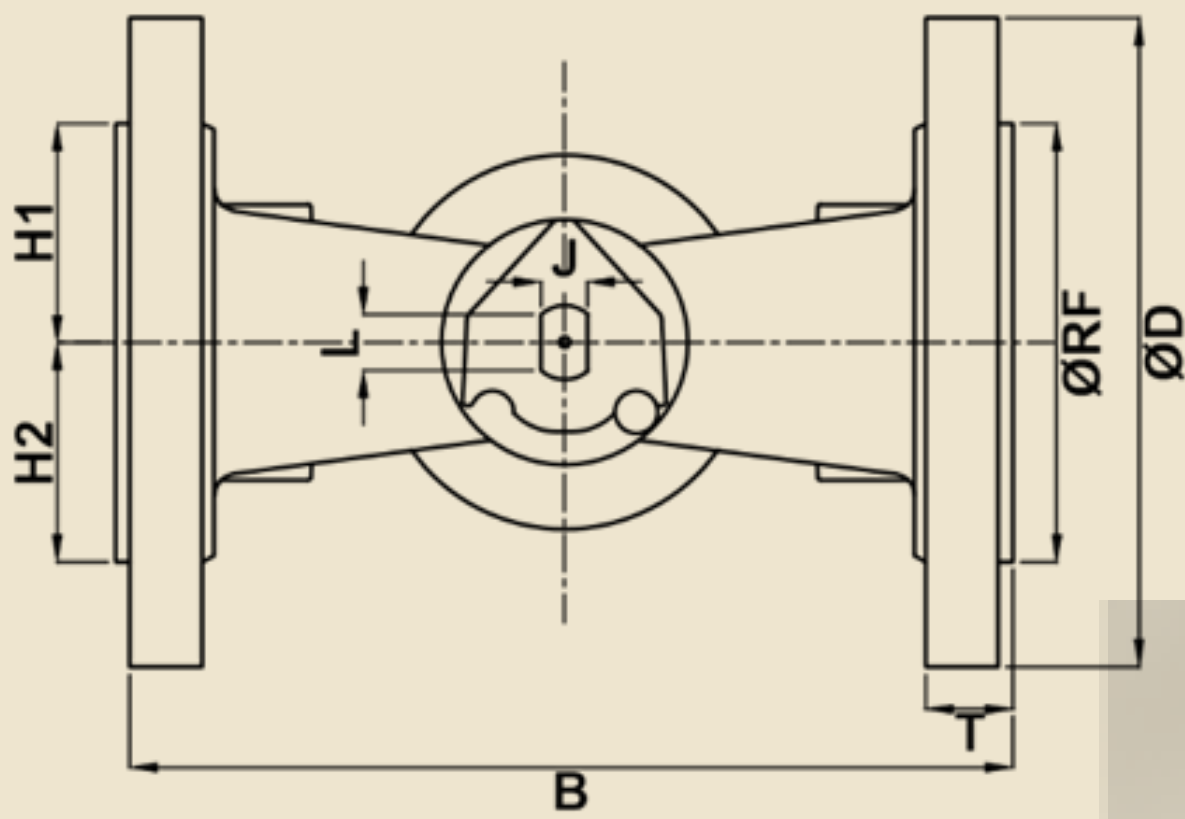
**S = Center line of valve to Center line of
Operating spindle**

H3 = Center line to top of Handwheel



**PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE, VENTURI PATTERN, CLASS 300,
FLANGED WITH RAISED FACE**

TECHNICAL AND DIMENSIONAL DATA



All dimensions in mm (unless specified) & Weight given in kg.

DIMENSIONAL DATA

DN	150 (WRENCH)	150 (GEAR)	200	250	300
NPS	6"	6"	8"	10"	12"
B (RF)	403	403	419.1	457	502
ØD	318	318	381	444	521
T (RF)	36.5	36.5	41.1	47.6	50.8
E	238	305	335	450	495
F	178	180	210	300	330
W	-	600	600	600	700
H1	85	85	115	145	190
H2	132	-	-	-	-
J	25.3	-	-	-	-
K (With Stop plate)	42	-	-	-	-
K (Without Stop plate)	34	-	-	-	-
L	41	-	-	-	-
ØRF	216	216	270	324	381
R	-	390	390	425	461
S	-	104.8	104.8	148	148
H3	-	540	570	680	770
U	933	-	-	-	-
Wt. kg. Approx.	101	121	192	305	508

DN 150 (6") – DN 300 (12") Valves are gear operated.
DN 150 (6") Valves are also available in Wrench / Lever operated.

WHERE, B

B = Face to face length (RAISED FACE)

ØD = Flange Diameter

T = Flange thickness from Raised Face

E = Center Line to top of stem

F = Center Line to Bottom of body / cap

W = Handwheel Diameter

H1 = Body width from center line

H2 = Body width from center line

J = Stem across the flat

K = Depth of flats with stop plate

K = Depth of flats without stop plate

L = Stem Diameter

ØRF = Raised Face Diameter

R = Center line to face of Handwheel

**S = Center line of valve to Center line of
Operating spindle**

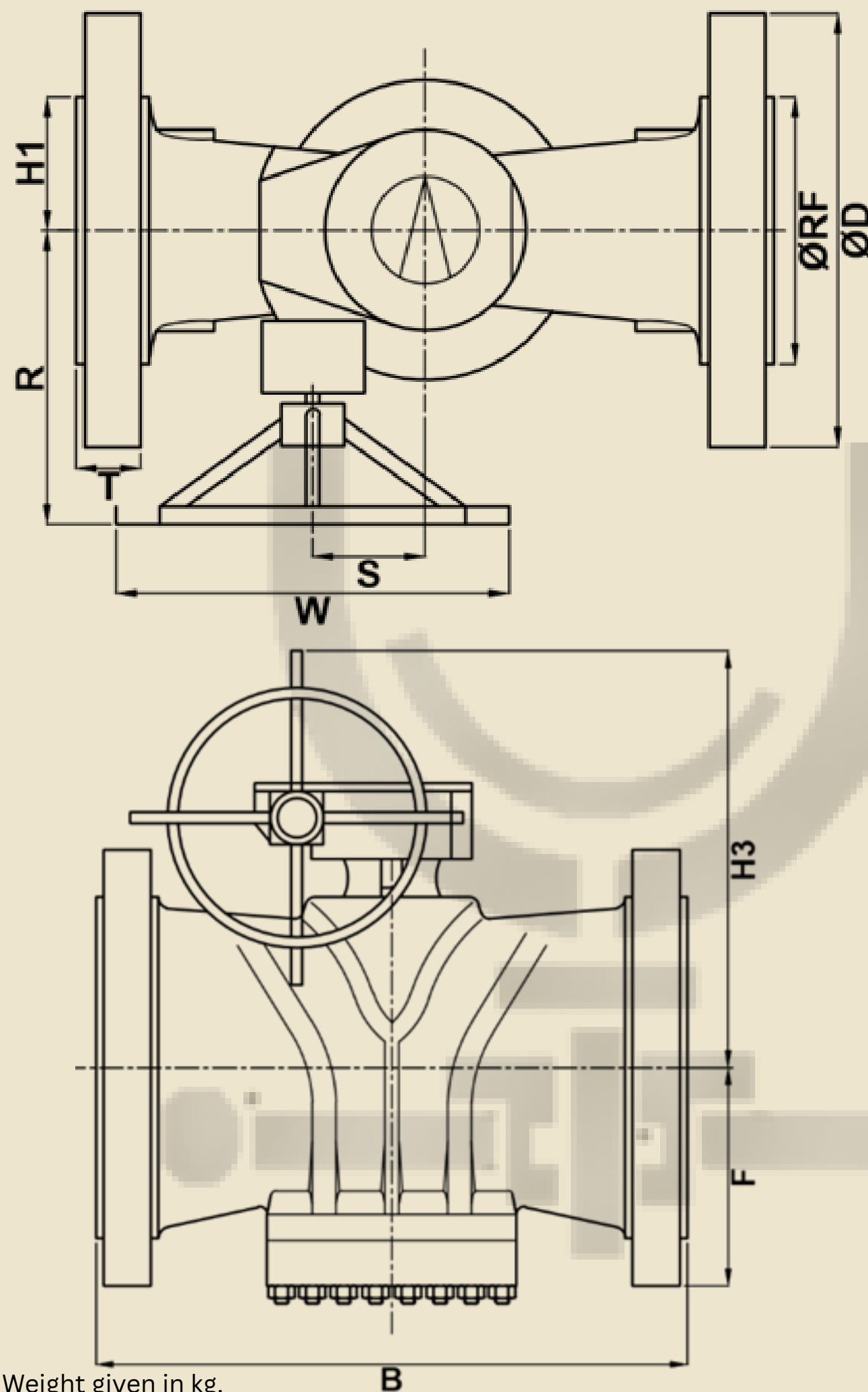
H3 = Center line to top of Handwheel

U = Center Line to End of Fitted Wrench



**PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE, VENTURI PATTERN, CLASS 300, FLANGED
WITH RAISED FACE, GEAR OPERATED**

TECHNICAL AND DIMENSIONAL DATA



All dimensions in mm (unless specified) & Weight given in kg.

DIMENSIONAL DATA					
DN	350	400	450	500	600
NPS	14"	16"	18"	20"	24"
B (RF)	762	838	914	991	1143
ØD	584	648	711	775	914
T (RF)	54.1	57.2	60.3	63.5	70
F	395	400	415	520	500
W	787	775	775	700	700
H1	230	215	243	270	265
ØRF	413	470	533	584	692
R	690	542	557	381	581
S	22.7	63	25.5	51	51
H3	835	825	900	915	895
Wt. kg. Approx.	750	902	1097	1525	2060

WHERE,

B = Face to face length (RAISED FACE)

ØD = Flange Diameter

T = Flange thickness from Raised Face

F = Center Line to Bottom of body / cap

W = Handwheel Diameter

H1 = Body width from center line

ØRF = Raised Face Diameter

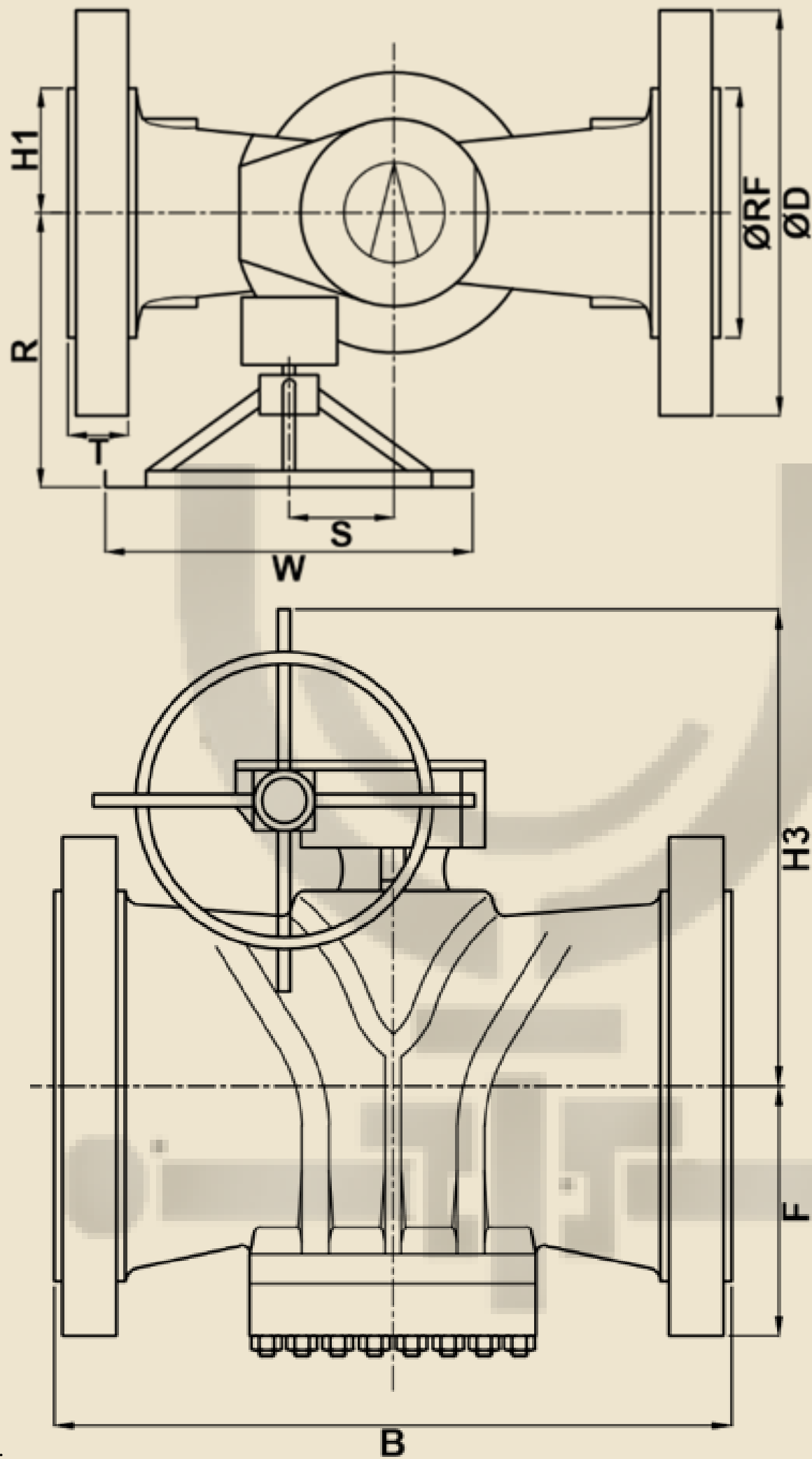
R = Center line to face of Handwheel

**S = Center line of valve to Center line of
Operating spindle**

H3 = Center line to top of Handwheel



**PRESSURE BALANCE PLUG VALVE, VENTURI PATTERN, CLASS 600, BUTT WELD END,
FLANGED WITH RAISED FACE & RING JOINT, GEAR OPERATED**
TECHNICAL AND DIMENSIONAL DATA



All dimensions in mm (unless specified) & Weight given in kg.

DIMENSIONAL DATA									
DN	150	200	250	300	350	400	450	500	600
NPS	6"	8"	10"	12"	14"	16"	18"	20"	24"
B (BWE)	559	660	787	838	889	990.6	1092	1194	1397
B (RF)	559	660	787	838	889	990.6	1092	1194	1397
B (RJ)	562	664	791	841	892	994	1095	1200	1407
ØD	356	419	508	559	603	686	743	813	940
T (RF)	54.2	62	70	73	76.5	82.6	89	95.4	108
T (RJ)	55.7	63.5	71.5	74.5	78	84.2	90.5	98.5	112.8
F	178	203	261	340	388	417	451	485	512
W	600	600	600	650	650	700	700	800	800
H1	96	150	159	195	207	221	305	325	365
ØRF	216	270	324	381	413	470	533.4	584.2	692.2
ØRF Of Ring Joint	241	301.8	356	413	457.2	508	574.5	635	749.3
R	350	382	382	583	583	512	630	610	610
S	105	148	148	58	57.5	25.5	215	230	230
H3	546	685	700	792	817	877	915	1076	1114
Wt. kg. Appro x.	BWE	127	180	-	455	-	-	-	-
	FL	160	244	452	633	880	1260	1673	3140

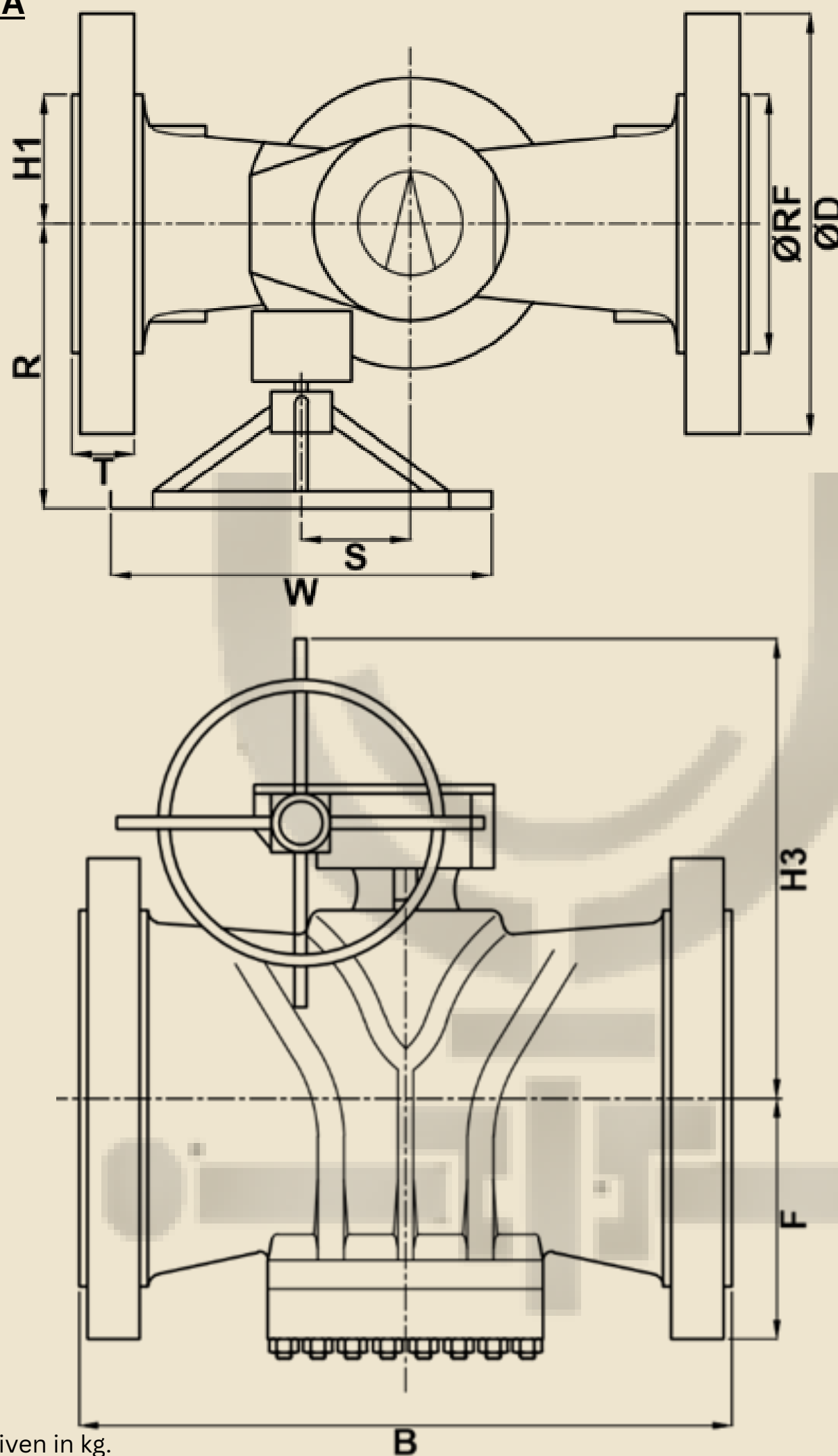
WHERE,
B = End to end BWE (Butt Weld End)
B = Face to face length (RAISED FACE)
B = Face to face length (Ring Joint)
ØD = Flange Diameter
T = Flange thickness RF (Raised Face)
T = Flange thickness RJ (Ring Joint)
F = Center Line to Bottom of body / cap
W = Handwheel Diameter
H1 = Body width from center line
ØRF = Raised Face Diameter
ØRF = Raised Face Diameter of Ring Joint
R = Center line to face of Handwheel
S = Center line of valve to Center line of
Operating spindle
H3 = Center line to top of Handwheel

Note: The above data is subject to change without any notice due to our continuing product improvement program.



**PRESSURE BALANCE PLUG VALVE, VENTURI PATTERN, CLASS 900, FLANGED WITH RAISED
FACE & RING JOINT, GEAR OPERATED**

TECHNICAL AND DIMENSIONAL DATA



All dimensions in mm (unless specified) & Weight given in kg.

DIMENSIONAL DATA						
DN	300	350	400	450	500	600
NPS	12"	14"	16"	18"	20"	24"
B (RF)	965	1029	1130	1219	1321	1549
B (RJ)	968.4	1038.6	1140	1231.8	1333.5	1568.5
ØD	610	641.4	705	787.4	857.25	1042
T (RF)	85.7	92.3	95.3	108	114.3	146.1
T (RJ)	87.2	97	100	114.3	120.6	155.6
F	355	485	490	522	555	664
W	700	700	700	800	800	900
H1	220	274	274	244	398	450
ØRF	381	412.8	469.9	534	584.2	692.5
ØRF Of Ring Joint	419	466.9	524	594	647.7	771.7
R	557	630	630	580	580	630
S	138	215	215	230	230	280.5
H3	766	1003	1037.5	1178	1181.7	1304
Wt. kg. Approx.	1075	1130	2050	2350	3400	5450

WHERE,

B = Face to face length (RAISED FACE)

B = Face to face length (Ring Joint)

ØD = Flange Diameter

T = Flange thickness RF (Raised Face)

T = Flange thickness RJ (Ring Joint)

F = Center Line to Bottom of body / cap

W = Handwheel Diameter

H1 = Body width from center line

ØRF = Raised Face Diameter

ØRF = Raised Face Diameter of Ring Joint

R = Center line to face of Handwheel

S = Center line of valve to Center line of Operating spindle

H3 = Center line to top of Handwheel

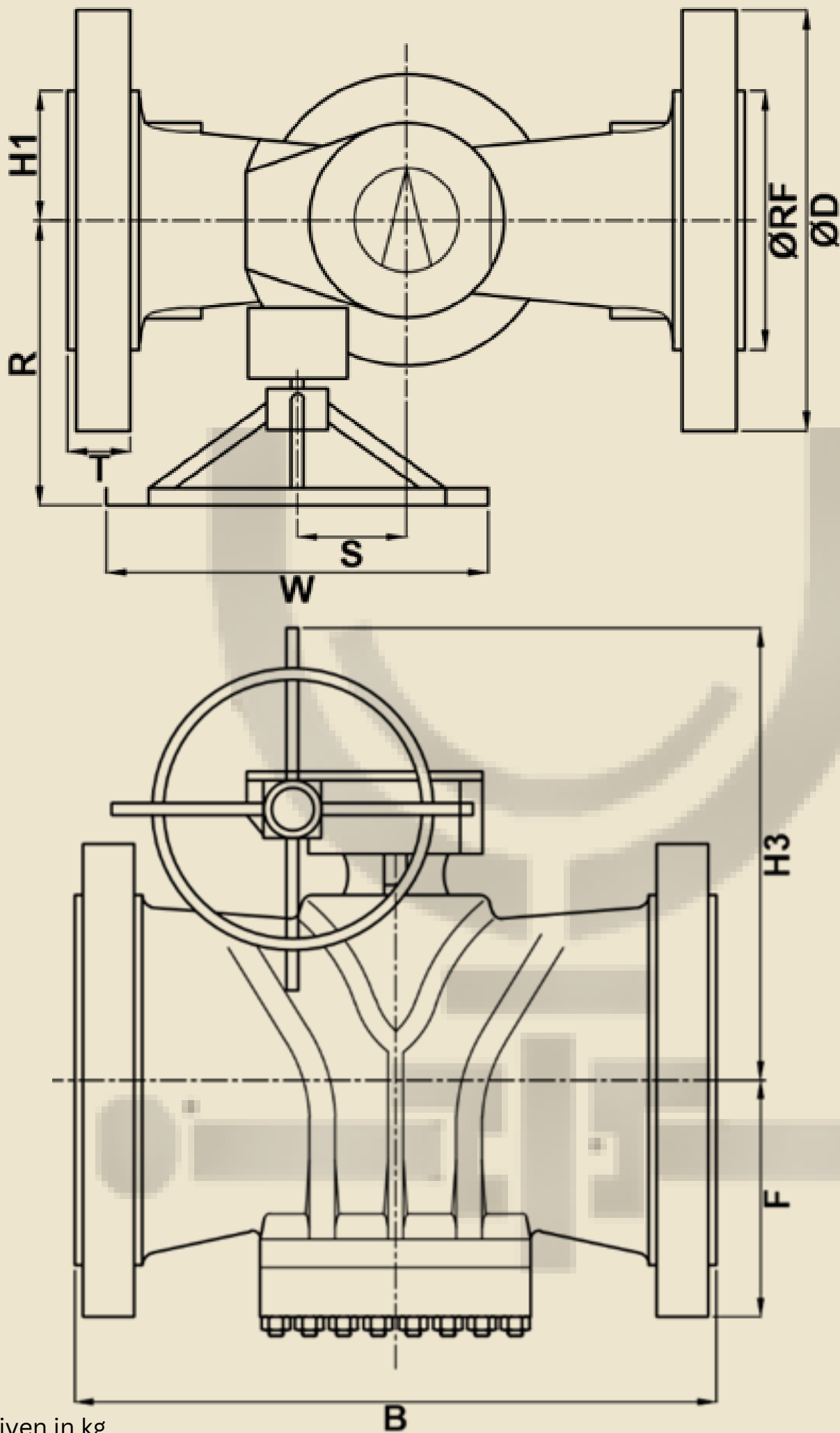
Note: The above data is subject to change without any notice due to our continuing product improvement program.



UNITEK VALVES PVT LTD
MANUFACTURER OF INDUSTRIAL VALVES



**PRESSURE BALANCE PLUG VALVE, VENTURI PATTERN, CLASS 1500, FLANGED
WITH RAISED FACE & RING JOINT, GEAR OPERATED**
TECHNICAL AND DIMENSIONAL DATA



All dimensions in mm (unless specified) & Weight given in kg.

DIMENSIONAL DATA									
DN	150	200	250	300	350	400	450	500	600
NPS	6"	8"	10"	12"	14"	16"	18"	20"	24"
B (RF)	705	832	991	1130	1257	1384	1537	1664	1944
B (RJ)	711	841.4	1000	1146.2	1276.4	1406.2	1559	1686	1972
ØD	394	483	584.2	673.1	750	826	915	985	1169
T (RF)	88.9	98.4	114.4	130.4	139.8	152.5	168.4	184.2	216
T (RJ)	92	103.1	119.1	138.3	149.3	163.6	179.5	195.3	223.8
F	253.5	337	393	394	394	552	608	797	737
W	700	700	700	700	700	800	800	800	800
H1	130	195	260	280	280	395	438	488	488
ØRF	216	270	324	381	413	470	533	584	692
ØRF Of Ring Joint	247.7	317.5	371.4	438.2	489	546.1	612.7	673	794
R	420	537	620	620	620	610	610	704	704
S	149	50.7	215	215	215	230	230	230	230
H3	746	845	1027	1108.6	1174	1406.1	1495.5	1051	1121
Wt. kg. Approx.	365	790	1420	1850	2610	3250	-	-	-

- WHERE,
- B = Face to face length (RAISED FACE)
- B = Face to face length (Ring Joint)
- ØD = Flange Diameter
- T = Flange thickness RF (Raised Face)
- T = Flange thickness RJ (Ring Joint)
- F = Center Line to Bottom of body / cap
- W = Handwheel Diameter
- H1 = Body width from center line
- ØRF = Raised Face Diameter
- ØRF = Raised Face Diameter of Ring Joint
- R = Center line to face of Handwheel
- S = Center line of valve to Center line of Operating spindle
- H3 = Center line to top of Handwheel

Note: The above data is subject to change without any notice due to our continuing product improvement program.



PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE

• **ADDITIONAL TECHNICAL INFORMATION**

1. PRESSURE TESTING

VALVE TESTING	MAXIMUM C.W.P		BODY TEST		SEAT TEST	
	Bar	Psi	Bar	Psi	Bar	Psi
PN20 – ANSI 150	19.5	285	29.3	427.5	21.5	313.5
PN50 – ANSI 300	51.1	740	76.7	1110	56.3	814
PN100 – ANSI	102.1	1480	153.2	2220	112.4	1628
ANSI 800	138	2000	207	3000	151.8	2200
PN150 – ANSI 900	153.2	2220	229.8	3330	168.6	2442
PN250 – ANSI 1500	255.3	3705	383	5558	280.9	4075.5
PN420 – ANSI 2500	425.5	6170	638.3	9255	468.1	6787
Class 800 pressure are taken as per BS 5353 & all other Pressures are taken as per ANSI 16.34.						

TEST DURATION		
VALVE SIZE	API 6D	
	SHELL TEST (min.)	SEAT TEST (min.)
≤ DN 50 (2")	2	2
DN 65 (2 ½") to DN 100 (4")	2	2
DN 150 (6")	5	5
DN 200 (8") to DN 250 (10")	5	5
DN 300 (12")	15	5
DN 350 (14") to DN 450 (18")	15	5
≥ DN 500 (20")	30	5

2. OPERATING TORQUE (Nm)

VALVE SIZE		150			300			600		900		1500		2500
DN	NPS	S	R	V	S	R	V	R	V	R	V	R	V	R
40	1 ½"	95	95	-	95	95	-	170	-	212	-	272	-	694
50	2"	95	95	-	95	95	-	190	-	367	-	462	-	694
80	3"	163	163	-	231	231	-	340	-	476	-	714	-	976
100	4"	238	238	-	340	340	-	680	-	707	-	748	-	2400
150	6"	299	612	-	-	612	424	1088	680	1265	-	1591	-	2598
200	8"	646	1000	-	-	1220	612	2040	1088	2149	-	3400	3400	5195
250	10"	1020	1900	-	-	1999	1224	2715	2040	3801	3801	4700	4700	5195
300	12"	1496	2448	2448	-	2448	1909	4080	2992	5501	3979	5698	5698	8990
350	14"	-	-	2584	-	-	3808	4420	4080	-	6800	-	5698	-
400	16"	-	-	2584	-	-	3808	7004	4420	-	6800	-	10159	-
450	18"	-	-	2720	-	-	4200	7602	6038	-	8622	-	-	-
500	20"	-	-	3951	-	-	5440	10200	7190	-	12039	-	11404	-
600	24"	-	-	4012	-	-	6000	-	9799	-	12702	-	18999	-

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PRESSURE BALANCE INVERTED LUBRICATED PLUG VALVE

• ADDITIONAL TECHNICAL INFORMATION

. SEALANTS

MULTI-PURPOSE SEALANTS					
SR. NO.	GRADE	COLOUR	TEMP. RANGE	SUITABLE FOR	DO NOT USE FOR
1	MIPL GR. 11	CREAM	-20°C to 250°C	Most Hydrocarbon services, Butane, Propane, Gasoline, Kerosene, oils, fuel oils, most hydrocarbon solvents, sweet and sour natural and manufactured gas with organic condensates, LPG systems, glycols.	Strong alkali and high aromatic and chlorinated solvents.
2	MIPL GR. 12	BLACK	-40°C to 325°C	Premium Multipurpose Sealant suitable for a range of fluids including hydrocarbon, water, amines and methanol Suitable for high / low temperature applications.	Neat petroleum products, Strong mineral acids, Chlorinated and aromatic acids.
3	MIPL GR. 13	CREAM	-15°C to 230°C -20°C to 230°C -25°C to 230°C	Most chemical plant services, compressed air, water, aqueous solutions, dilute acids, all alkaline solutions tars and bitumens.	Strong acid solutions, hydrocarbons, chlorinated and aromatic solvents.
SPECIALISED SEALANTS					
4	MIPL GR. 14	LIGHT BROWN	-10°C to 150°C	Sweet and sour natural and manufactured gas with water / organic condensates Preferred at elevated temperatures.	Strong alkali and high aromatic and chlorinated solvents.
5	MIPL GR. 15	WHITE	-7°C to 200°C	Domestic water services, foodstuffs and pharmaceuticals.	Strong acid solutions, hydrocarbons, chlorinated and aromatic solvents.
6	MIPL GR. 16	WHITE	-10°C to 70°C	Nitrating acids, sulphuric acids and other oxidising elements.	Hydrocarbon chlorinated and aromatic solvents.
7	MIPL GR. 17	YELLOW	-10°C to 150°C	Chlorinated and aromatic hydrocarbon solvents.	Strong acids, nitrating acids, water and water-based services and alcohols.
8	MIPL GR. 18	CREAM	0°C to 170°C	Water, high pressure hot water and steam.	Strong acid solutions, hydrocarbons, chlorinated and aromatic solvents.
9	MIPL GR. 19	CREAM	0°C to 300°C	Petroleum based heat transfer oils. Hot fuel oil to 120°C.	Strong alkali and high aromatic and chlorinated solvents.
10	MIPL GR. 20	OFF WHITE	0°C to 340°C	Hot hydrocarbon gases and vapour including high temperature cracking and reforming strong acids and alkalis to 150°C.	Aromatic and chlorinated solvents, Liquid hydrocarbons and nitrating acids
11	MIPL GR. 21	BROWN	-30°C to 150°C -46°C to 100°C	As of MIPL GR. 11, but particularly useful at lower temperatures and winter conditions	Strong alkali and high aromatic and chlorinated solvents.
12	MIPL GR. 22	BEIGE	-50°C to 50°C	Ammonia and brine	Strong acid solutions, hydrocarbons, chlorinated and aromatic solvents.
13	MIPL GR. 23	BLACK	-40°C to 325°C	Premium Multipurpose Sealant suitable for a range of fluids including hydrocarbon, water, amines and methanol Suitable for high / low temperature applications, also oil and water mixtures where water contains greater than 50% in the mixture.	Neat petroleum products, Strong mineral acids, Chlorinated and aromatic acids.

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