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KTN
Kara Technology News

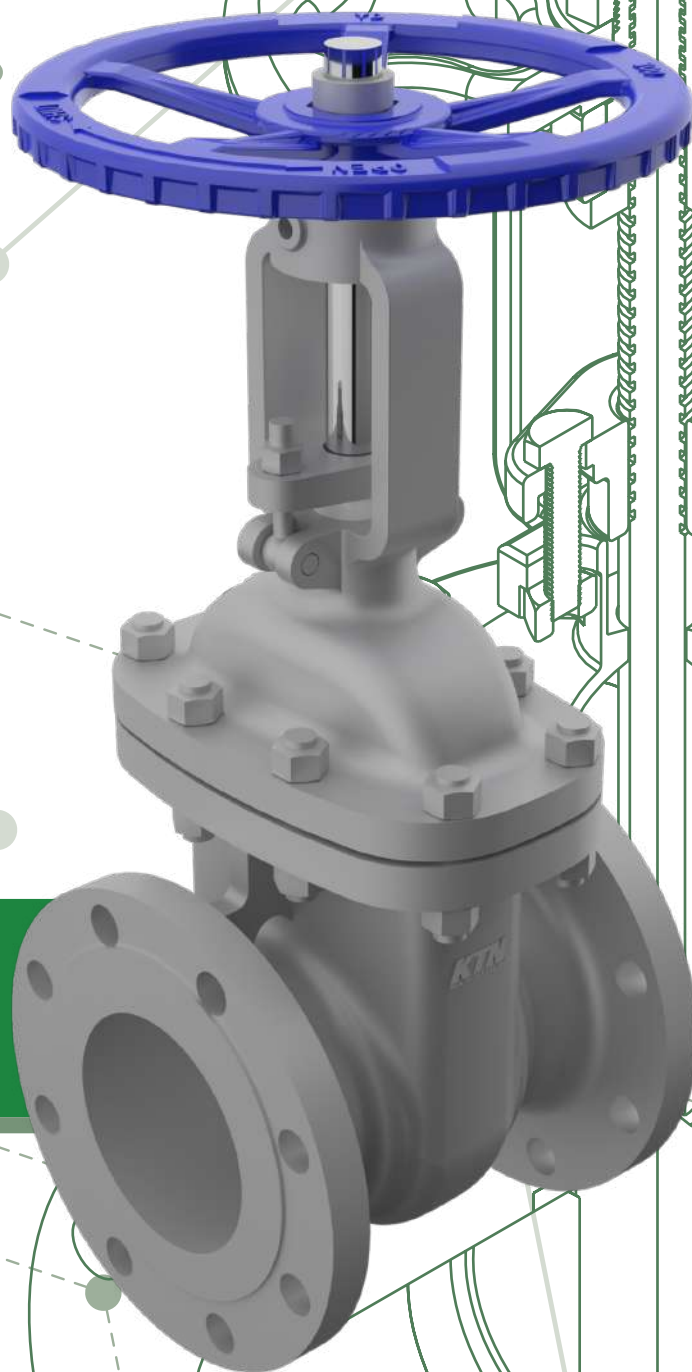


FIG. 333

CS ANSI FLANGED GATE VALVE

2" - 48" | 150~900LB

KTN FLANGED ANSI GATE VALVE:

The **KTN 333** is our class **150/300/600/900** gate valve with ANSI flanges. The body is made of **cast carbon steel A216 WCB and other materials (check material list)**. The range of dimensions is from **2" to 48"**. The range of pressure and temperature is according to **ASME B16.34**. Indicated to conduct and stop the passage of aqueous media, oil and gas.

The KTN 333 gate valve is **manufactured with state of art technology** in our most advanced workshop, quality meets the highest standard requirements. The final product surface is smooth and well mechanized thanks to the CNC turns.

Our design is far greater than the standard as it gives **unbeatable wear stroke records**, its also designed for severe conditions as it meets **API600 destruction tests**, in addition, the flange thickness and spot facer on the back flange hole ensures **safety under severe application conditions**.

1 Design:

Ultimate casting software to optimize manufacturing process parameters. The probability of casting defects, such as shrinkage, porosity and crack will be highly minimized.

2 Body & bonnet:

Manufacturing includes pouring riser to reduce internal defects of castings, and casting heat treatment to improve mechanical properties of materials, eliminate residual stress and improve machinability of metal. Our manufacturing process totally meet API standard, the average thickness exceeds the standard by 10%.

3 Stem nut, gland and backseat ring:

To ensure perfect stem isolation, API600 standard bronze or D2 stem nut, bronze stem nuts have high wear resistance and high corrosion resistance. Packing is reinforced by gland and backseat ring made in stainless steel. Renewable backseat API600 standard with better sealing performance.

4 Sealing parts:

Heat resistant graphite corrugated gasket for fast adaptability to dramatic temperature changes. Composite packing which means smaller torque and better sealing performance.

5 Stem:

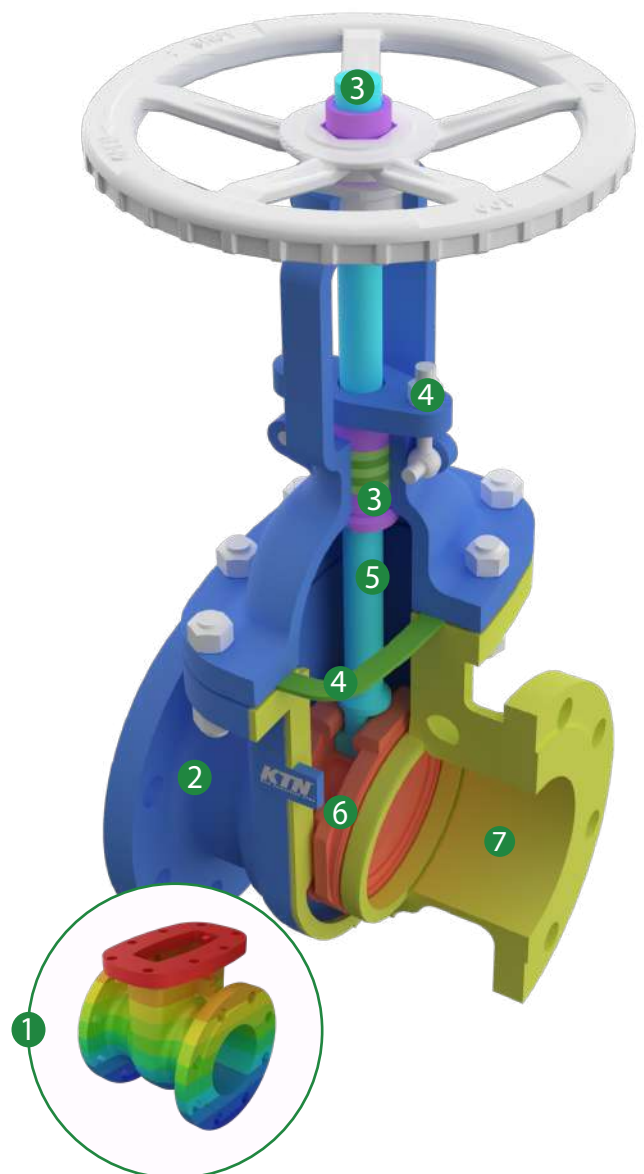
Strong and rigid stainless steel stem which meets API600 standard which makes it almost undestructable.

6 Disc:

Fully open/close disc which makes it great for improving flow performance and reducing fluid resistance. CA15+13Cr (size 2"-4") or WCB+13Cr (Above 5") to meet API600 destruction test requirements.

7 Backseat:

Renewable seats according to API600 standard, zero leakage after 2000 times opening and closing service.



KTN 333

CAST CARBON STEEL GATE VALVE WITH ANSI FLANGED ENDS

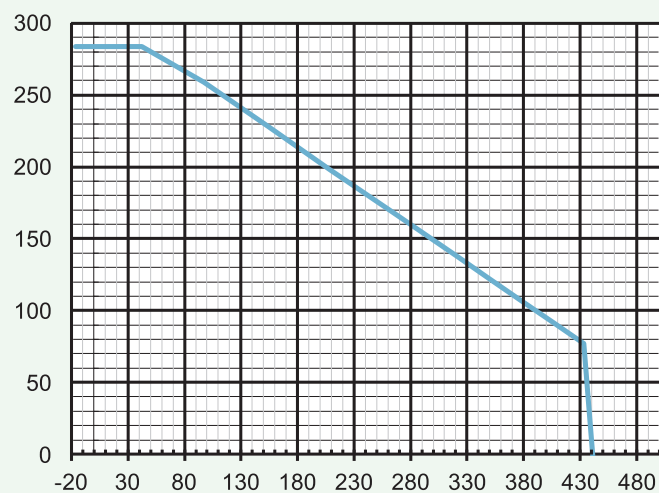
GENERAL SPECIFICATIONS

DESIGN	API 600
FACE TO FACE	ANSI B16.10
FLANGED ENDS	ANSI B16.5
TEST	API 598
WORKING TEMPERATURE	-29°C ~ 425°C
MEDIUM	Water, oil and gas

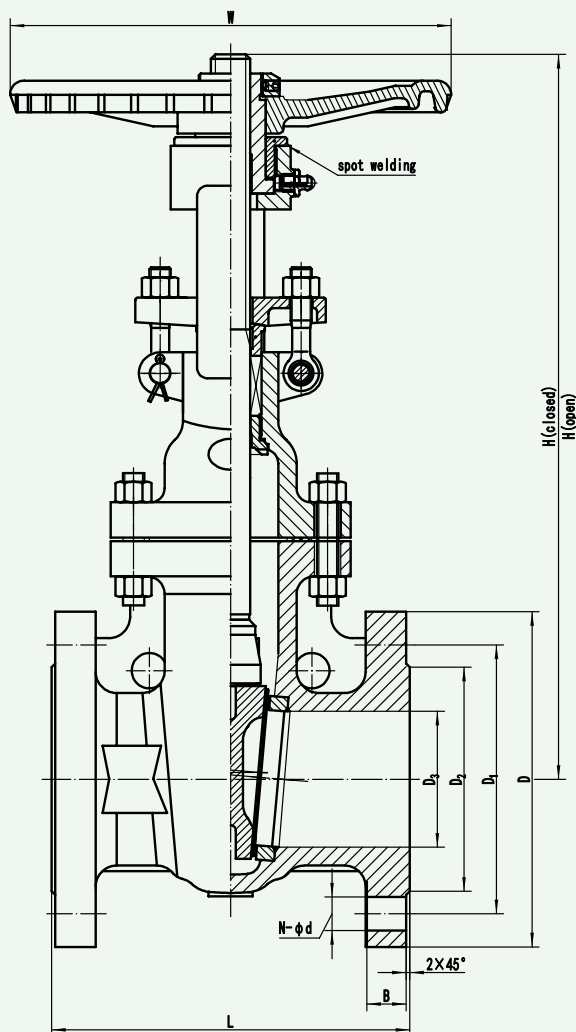
Torque (N.m)	Stem diameter	Pitch	Distance	Turns	Wall thickness	Weight (kg)	Size
50	Φ19.1	4.23	62	7.5	8.6	13.7	2"
63	Φ19.1	4.23	76	9	9.7	19.3	2 1/2"
77	Φ22.2	4.23	100	12	10.4	24	3"
92	Φ25.4	5.08	111	11	11.2	33.3	4"
119	Φ25.4	5.08	143	14	11.5	46	5"
139	Φ28.6	5.08	164	16	11.9	57	6"
220	Φ31.8	5.08	221	22	12.7	95	8"
270	Φ34.9	6.35	271	24.5	14.2	155	10"
295	Φ38.1	6.35	329	26	16	167	12"
420	Φ41.3	6.35	365	57.5	16.8	-	14"
490	Φ44.5	6.35	418	66	17.5	-	16"
510	Φ47.6	6.35	466	73.5	18.3	-	18"
520	Φ50.8	6.35	517	81.5	19.1	-	20"
710	Φ57.2	8.47	625	74	20.6	-	24"

Note: Torque tested under 2.2 MPa

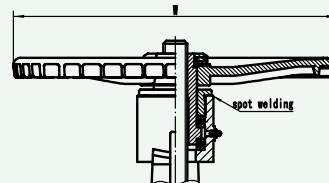
PRESSURE AND TEMPERATURE RATING



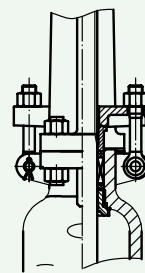
2" TO 12" STRUCTURE



14" TO 24" STRUCTURE



10" TO 24" STRUCTURE



OUTLINE DIMENSIONS

Inch	L	D_1^{+2}	$D_1 \pm 1.5$	D_2	D_3	N- Φd	B	H (Open)	H (Closed)	W
2"	178 $\pm$ 1.5	$\Phi 152$	$\Phi 120.6$	$\Phi 91.9$	$\Phi 51$	4- $\Phi 19.0$	17.5	388	324.5	$\Phi 200$
2 1/2"	190 $\pm$ 1.5	$\Phi 180$	$\Phi 139.7$	$\Phi 104.6$	$\Phi 64$	4- $\Phi 19.0$	20.7	434.5	357.5	$\Phi 200$
3"	203 $\pm$ 1.5	$\Phi 190$	$\Phi 152.4$	$\Phi 127.0$	$\Phi 77$	4- $\Phi 19.0$	22.4	509	414	$\Phi 240$
4"	229 $\pm$ 1.5	$\Phi 230$	$\Phi 190.5$	$\Phi 157.2$	$\Phi 102$	8- $\Phi 19.0$	22.4	578.5	465.5	$\Phi 280$
5"	254 $\pm$ 1.5	$\Phi 255$	$\Phi 215.9$	$\Phi 185.7$	$\Phi 127$	8- $\Phi 22.2$	22.4	666.5	522.5	$\Phi 280$
6"	267 $\pm$ 1.5	$\Phi 280$	$\Phi 241.3$	$\Phi 215.9$	$\Phi 153$	8- $\Phi 22.2$	23.9	773.5	604	$\Phi 320$
8"	292 $\pm$ 1.5	$\Phi 345$	$\Phi 298.4$	$\Phi 269.7$	$\Phi 204$	8- $\Phi 22.2$	27.0	959	739	$\Phi 360$
10"	330 $\pm$ 2	$\Phi 405$	$\Phi 362$	$\Phi 323.8$	$\Phi 254$	12- $\Phi 25.4$	28.6	1165	890	$\Phi 400$
12"	356 $\pm$ 3	$\Phi 485$	$\Phi 431.8$	$\Phi 381$	$\Phi 305$	12- $\Phi 25.4$	30.2	1367	1039	$\Phi 450$
14"	381 $\pm$ 3	$\Phi 535$	$\Phi 476.3$	$\Phi 412.8$	$\Phi 337$	12- $\Phi 28.5$	33.4	1546	1181	$\Phi 560$
16"	406 $\pm$ 3	$\Phi 595$	$\Phi 539.8$	$\Phi 469.9$	$\Phi 388$	16- $\Phi 28.5$	35	1744	1326	$\Phi 560$
18"	432 $\pm$ 3	$\Phi 635$	$\Phi 577.9$	$\Phi 533.4$	$\Phi 439$	16- $\Phi 31.8$	38.1	1930	1440	$\Phi 640$
20"	457 $\pm$ 3	$\Phi 700$	$\Phi 635$	$\Phi 584.2$	$\Phi 489$	20- $\Phi 31.8$	41.3	2135	1597	$\Phi 640$
24"	508 $\pm$ 3	$\Phi 815$	$\Phi 749.3$	$\Phi 692.2$	$\Phi 591$	20- $\Phi 35$	46.1	2531	1906.5	$\Phi 720$

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CAST CARBON STEEL GATE VALVE WITH ANSI FLANGED ENDS

22	Handwheel	ASTM A536 65-45-12
21	Bolt	AISI 1045
20	Lock nut	AISI 1020
19	Bearing gland	AISI 1020
18	Stem nut	ASTM A439 D-2
17	Nut	ASTM A194 2H
16	Eye bolt	ASTM A193 B7
15	Gland flange	ASTM A216 WCB



06	Bonnet	ASTM A216 WCB
05	Gasket	SS304+Graphite
04	Stem	ASTM A182 F6a Cl.2
03	2"-4" Wedge	ASTM A217 CA15+13CR
	5"-24" Wedge	ASTM A217 WCB+13CR
02	Seat	ASTM A105+STL
01	Body	ASTM A216 WCB

13	Cotter	Q235
12	Pin	AISI 1035
11	Packing II	Graphite ring
10	Packing I	Braided graphite
09	Nut	ASTM A194 2H
08	Bolt	ASTM A193 B7
07	Back seat	ASTM A276 410

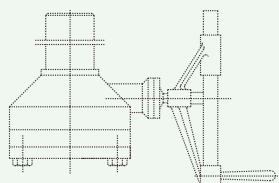
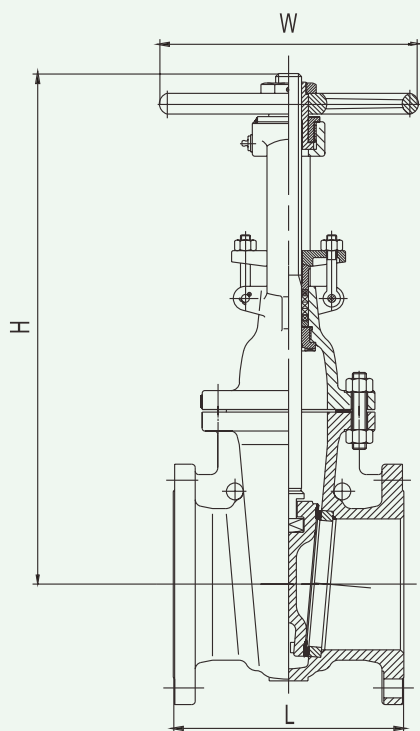
MATERIAL LIST

PART	STANDARD	LOW TEMPERATURE SERVICE	STAINLESS STEEL	HIGH TEMPERATURE SERVICE	SOUR SERVICE
BODY	ASTM A216-WCB	ASTM A352-LCC	ASTM A351-CF8M	ASTM A217-WC9	ASTM A216-WCB
BONNET	ASTM A216-WCB	ASTM A352-LCC	ASTM A351-CF8M	ASTM A217-WC9	ASTM A216-WCB
WEDGE	ASTM A216-WCB/CR13 OVERLAY ASTM A217-CA15(10" & smaller)	ASTM A352-LOC/316 OVERLAY	ASTM A351-CF8M	ASTM A217-WC9/STL. OVERLAY	ASTM A216-WCB/CR13 OVERLAY - NC ASTM A217- CA15(10" & smaller)-NC
STEM NUT	ASTM A439-D-2	ASTM A439 D-2	ASTM A439-D.2	ASTM A439-D.2	ASTM A439-D.2
GLAND FLANGE	ASTM A216-WCB	ASTM A352-LCB	ASTM A351-CF8	ASTM A216-WCB	ASTM A216-WCB
HANDWHEEL	DUCTILE IRON	DUCTILE IRON	DUCTILE IRON	DUCTILE IRON	DUCTILE IRON
SEAT RING	ASTM A105/STL.OVERLAY	ASTM A182-F316/STL. OVERLAY	ASTM A182-F316/STL. OVERLAY	ASTM A182-F22/STL. OVERLAY	ASTM A105/STL. OVERLAY
STEM	ASTM A182-F6a	ASTM A182-F316	ASTM A182-F316	ASTM A182-F6a	ASTM A182-F6a-NC
BACK SEAT	ASTM A276-420	ASTM A276-316	ASTM A276-316	ASTM A276-420	ASTM A276-420-NC
GLAND	ASTM A276-420	STAINLESS STEEL	ASTM A276-316	ASTM A276-420	ASTM A276-420-NC
GASKET	SPIRAL WOUND GRAPHITE	SPIRAL WOUND GRAPHITE	SPIRAL WOUND GRAPHITE	SPIRAL WOUND GRAPHITE	SPIRAL WOUND GRAPHITE
MIDDLE PACKING	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
TOP/BOTTOM PACKING	316+GRAPHITE	316+GRAPHITE	316+GRAPHITE	316+GRAPHITE	316+GRAPHITE
RETAINING NUT	CARBON STEEL	CARBON STEEL	STAINLESS STEEL	CARBON STEEL	CARBON STEEL
HANDWHEEL NUT	CARBON STEEL	CARBON STEEL	STAINLESS STEEL	CARBON STEEL	CARBON STEEL
BONNET STUD	ASTM A193-B7	ASTM A320-L7M	ASTM A193-B8	ASTM A193-B16	ASTM A193-B7M
BONNET NUT	ASTM A194-2H	ASTM A194-7M	ASTM A194-8	ASTM A194-4	ASTM A194-2HM
EYE BOLT	ASTM A193-B7	ASTM A320-L7M	ASTM A193-B8	ASTM A193-B16	ASTM A193-B7M
GLAND NUT	ASTM A194-2H	ASTM A194-7M	ASTM A194-8	ASTM A194-4	ASTM A194-2HM
GREASE FITTING	CARBON STEEL	CARBON STEEL	STAINLESS STEEL	CARBON STEEL	CARBON STEEL
EYE BOLT PIN	CARBON STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	CARBON STEEL
RIVET	CARBON STEEL	CARBON STEEL	STAINLESS STEEL	CARBON STEEL	CARBON STEEL
NAME PLATE	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL

KTN 333

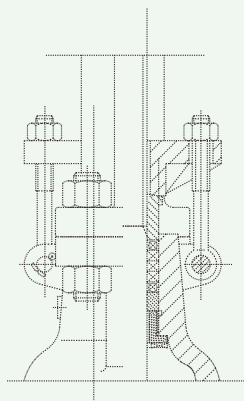
CAST CARBON STEEL GATE VALVE WITH ANSI FLANGED ENDS

**API 600 DESIGN,
Bolted Bonnet, OS&Y
Screwed-in Back Seat, Rising Stem,
Non-rising Handwheel,
Flexible Wedge**

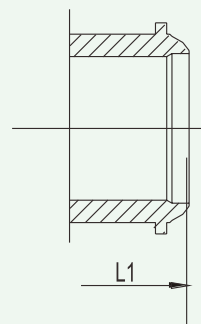


Gear Operation For

Optional	Standard
8" to 24"	26" & Larger



YOKE FOR 14"&Larger



BW End

Class 150

NPS	in	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	26"	28"	30"	32"	36"	40"	42"	48"
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	650	700	750	800	900	1000	1050	1200
L (RF)	mm	178	191	203	229	254	267	292	330	356	381	406	432	457	508	559	610	610	660	711	762	787	864
L1(BW)	mm	216	241	283	305	381	403	419	457	502	572	610	660	711	813	864	914	914	965	1016	1067	1092	1168
W	mm	200	200	250	300	300	300	350	400	450	500	550	600	680	760	610	610	610	610	610	610	610	610
H	mm	386.5	434.5	480.5	584.5	681	765	956	1149	1350.5	1508	1703	1892	2119	2500	2806	2960	3148	3281	3721	3980	4820	5920
WT(RF)	Kg	19	26	35	49	64	81	127	204	291	400	486	610	788	1144	1570	1900	2540	2958	3380	4815	5300	7110
WT(BW)	Kg	15	18	26	41	58	69	108	156	248	365	482	587	752	1178	1521	1838	2261	2490	3310	4840	5275	7050

Class 300

NPS	in	2"	2 ½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	26"	28"	30"	32"	36"	40"	42"	48"
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	650	700	750	800	900	1000	1050	1200
L-L1 (RF-BW)	mm	216	241	283	305	381	403	419	457	502	762	838	914	991	1143	1245	1346	1397	1524	1727	1930	1981	2235
W	mm	200	200	250	250	300	350	400	450	500	550	600	610	610	610	610	610	610	810	1000	1000	1000	1000
H	mm	410	453	509	612	670	805	1000	1209	1416	1582	1725	1959	2194	2598	2986	3120	3205	3692	4104	4547	4739	5373
WT(RF)	Kg	26	35	52	75	102	147	235	350	472	683	950	1145	1634	2660	3090	3312	3597	4850	6850	8460	9500	12400
WT(BW)	Kg	17	26	52	74	102	113	164	344	485	565	805	1058	1412	2304	2540	2725	3057	4122	4990	6160	6800	9000

Class 600

NPS	in	2"	2 ½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	26"	28"	30"	32"	36"	40"	42"	48"
DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	650	700	750	800	900	1000	1050	1200
L-L1 (RF-BW)	mm	292	330	356	432	508	559	660	787	838	889	991	1092	1194	1397	1448	1549	1651	1778	2082	2286	2438	2540
L2(RTJ)	mm	295	333	359	435	511	562	663	790	841	892	994	1095	1200	1407	1461	1562	1664	1794	2098	-	-	-
W	mm	200	250	250	300	400	450	500	600	680	610	610	610	610	610	810	1000	1000	1000	1000	1200	1200	1200
H	mm	418	476	518	646	770	839	1024	1229	1450	1574	1797	1931	2207	2582	3150	3362	3549	3811	4260	4670	4921	5876
WT(RF)	Kg	39	52	68	120	170	273	402	610	902	1245	1530	2030	2735	3620	5220	6050	6945	8312	10000	14300	16460	22900
WT(BW)	Kg	28	42	55	84	125	204	337	548	905	974	1345	1730	2415	3017	4295	4980	5710	6834	8220	11755	13530	18824

Class 900

NPS	in	2"	2 ½"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	26"	28"	30"	32"	36"
DN	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	800	900
L-L1 (RF-BW)	mm	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	1664	1778	1892	2004	2232
L2(RTJ)	mm	371	422	384	460	613	740	841	968	1038	1140	1232	1333	1568	-	-	-	-	-
W	mm	250	250	300	350	500	600	610	610	610	610	810	1000	1000	1000	1000	1200	1200	1200
H	mm	498	547	573	678	900	1103	1345	1520	1902	2051	2212	2417	2750	2833	2910	3000	3083	3250
WT(RF)	Kg	74	92	101	172	335	640	1100	1360	2250	2850	3870	4860	6100	7300	7600	9800	11950	15000
WT(BW)	Kg	54	65	70	110	258	498	810	1228	2009	2563	3300	4050	6120	5500	6900	9000	11000	13500