Perar

TRIPLE OFFSET METAL SEATED BUTTERFLY VALVES

THAT'S **Perar QUALITY**

The Best Guarantee of Safety

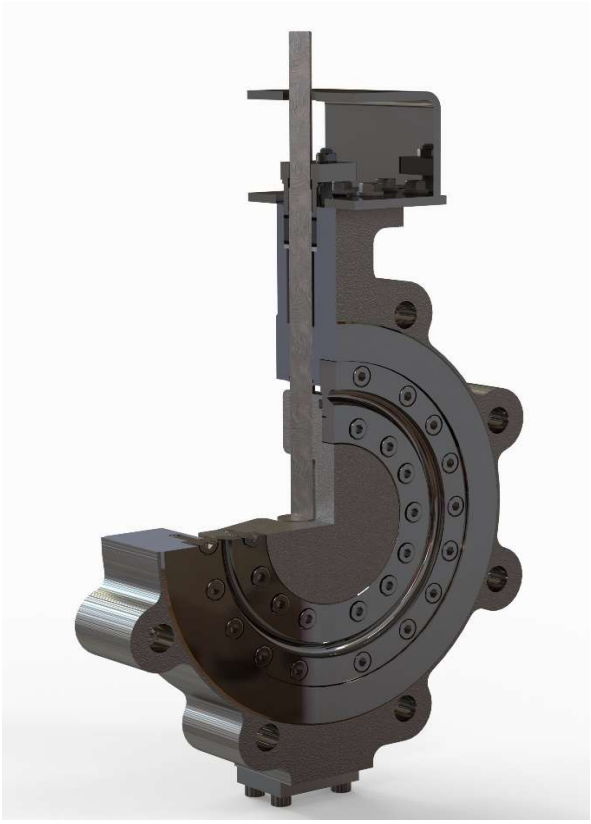
TRIPLE OFFSET METAL SEATED BUTTERFLY VALVES

VALVE DESCRIPTION

Perar's all new triple offset metal seated butterfly valve. Offers zero leakage in both directions, seats and seals are fully field serviceable allowing full on-site maintenance, no need to return the valve to the factory. For this reason, these valves can be welded to the pipeline without precluding possible repairing. These valves have low noise and sealing torque enabling the use of smaller actuators, while still maintaining a factor of safety on the shaft M.A.S.T of a minimum of two. They are manufactured in a wide range of sizes and pressure classes typically with cast body.

BASIC CHARACTERISTICS

- ASME B16.34, API 609
- Reduced Bore design
- Lugged, Wafer, Flanged or Welding Ends and Cryogenic
- Floating seats
- Bi-directional sealing, zero leakage
- Anti-blow out stem
- Anti-static by design
- Heavy duty self-aligning bearings
- Disc open position indicator
- Double Block & Bleed design
- Fire safe design
- NACE MR 01175, MR 0103, MSS SP 25 & 55



TRIPLE OFFSET METAL SEATED BUTTERFLY VALVES

PRODUCT RANGE

Model: **BTC**
Size: 3” to 72” (larger sizes on request)
Pressure Classes: ASME 150# to 1500# (2500# available on request)
Temperature Range: -196°C to + 538 °C (1000 °F)

DESIGN FEATURES

Features		Features	
Metal Seating Laminated	Standard	Manual operated or Actuated	Standard
Solid Metal Seats	On Request	Stem Extension	On Request
Floating Seats	Standard	Extended Bonnet	On Request
Soft Seating	On Request	Welded Pups	On Request
Anti-Cavitation Trim	On Request	Sealing Areas Overlay	On Request
Control Valve Trim	On Request	Wetted Areas Overlay	On Request
Lantern Rings and Bleed Port	On Request	Disc Open Indicator	Standard

MATERIAL SELECTION

BODY
- CS (A216), LTCS (A352), A350 LF2, WC6, WC9
- Austenitic SS (ASTM A351 CF3, CF3M, CF8, CF8M)
- Duplex SS 22% Cr (ASTM A890, A995)
- Super duplex SS 25% Cr (ASTM A890, A995)
- AB2 BS 1400, C333G, C95800, C63000 (CA104)
- Inconel 625
- Incoloy 825
- Monel
- 6Mo SS (ASTM A182 F44)

BDISC SEAT and SEALS
- Metal/Non-metal (316L, UNS S32760, Inconel 625 & 725)
- Spiral wound metal and graphite (to suit service)
- Graphite gaskets
- PTFE gaskets (virgin and glass filled)
- Graphite Packing
- PTFE packing
- Lantern rings with bleed port
- Anti-galvanic gaskets on Duplex and Super Duplex

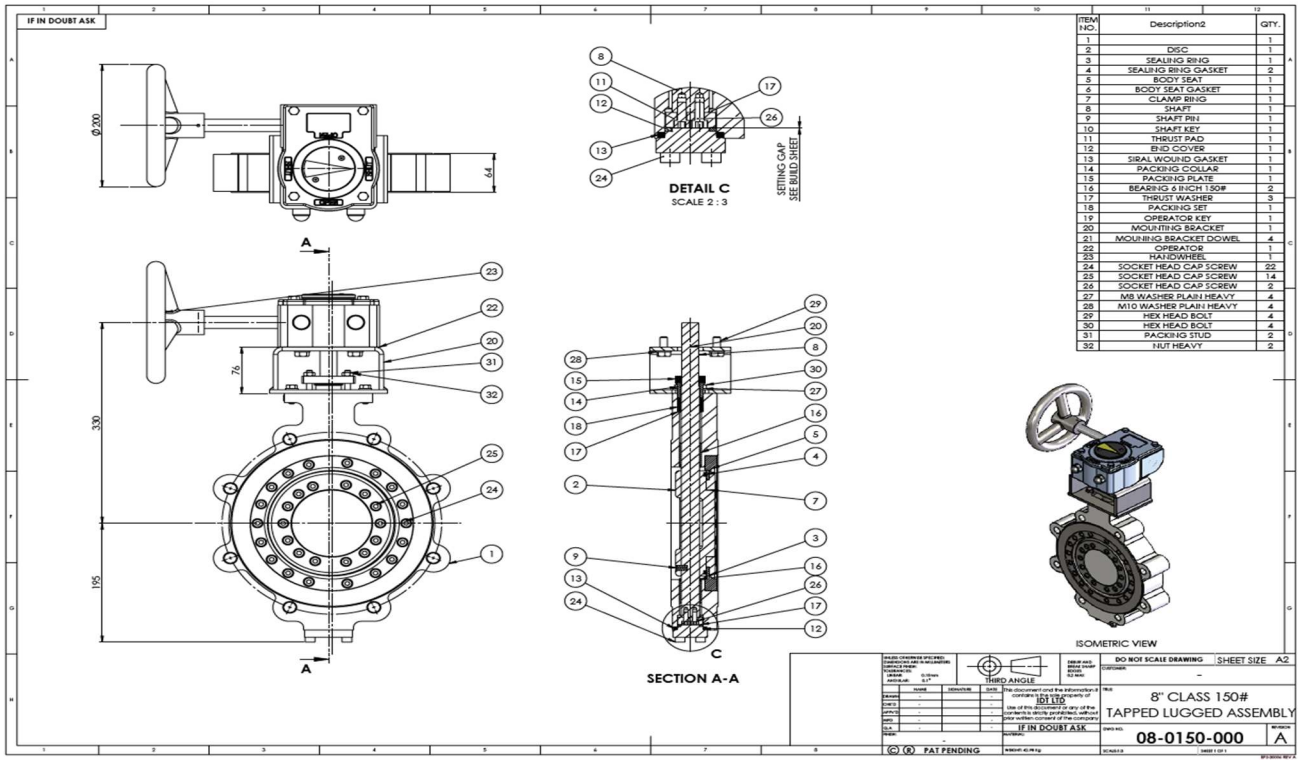
TRIM SEAT, STEM and BEARINGS (see notes on mail)
- High strength LTCS (A694-F52, F60, F65)
- 17-4 PH
- Austenitic SS (ASTM A182 F304, F316)
- Duplex SS 22% Cr (ASTM A182 F51)
- Super duplex SS 25% Cr (ASTM A182 F53/F55)
- 6Mo SS (ASTM A182 F44)
- Inconel 625
- Inconel 718
- Monel K500
- Bearings A240 316L nitride hard facing

BODY SEAT INSERT COATING
- METAL with either TUNGSTEN CARBIDE or CHROMIUM CARBIDE COATING (0.15 mm min. thk.)
- Stellite 6
- Stellite 21

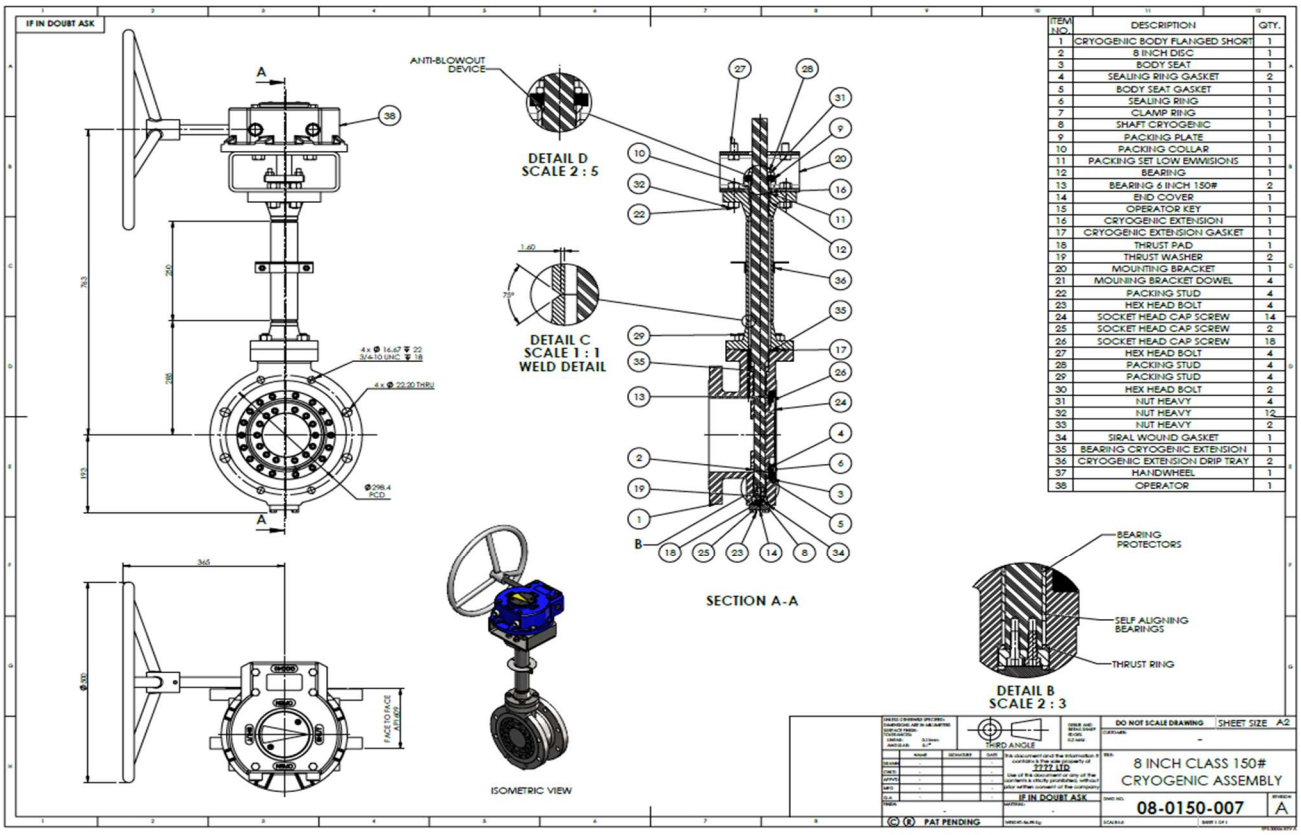
BOLTING
- ASTM A193 B7/B7M, ASTM A320 L7/L7M,
- A193/A320 B8/B8M, A4 GR 80, A4 GR 70
- UNS S31803, UNS S32760, ASTM A453-GR.660, Monel K500

TRIPLE OFFSET METAL SEATED BUTTERFLY VALVES

DRAWINGS SAMPLE



ITEM NO.	Description2	QTY.
1		1
2	DISC	1
3	SEALING RING	1
4	SEALING RING GASKET	2
5	BODY SEAT	1
6	BODY SEAT GASKET	1
7	CLAMP RING	1
8	SHAFT	1
9	SHAFT PIN	1
10	SHAFT KEY	1
11	THRUST PAD	1
12	END COVER	1
13	SIRAL WOUND GASKET	1
14	PACKING COLLAR	1
15	PACKING PLATE	1
16	BEARING 6 INCH 150#	2
17	THRUST WASHER	3
18	PACKING SET	1
19	OPERATOR KEY	1
20	MOUNTING BRACKET	1
21	MOUNING BRACKET DOWEL	4
22	OPERATOR	1
23	HANDWHEEL	1
24	SOCKET HEAD CAP SCREW	22
25	SOCKET HEAD CAP SCREW	14
26	SOCKET HEAD CAP SCREW	2
27	M8 WASHER PLAIN HEAVY	4
28	M10 WASHER PLAIN HEAVY	4
29	HEX HEAD BOLT	4
30	HEX HEAD BOLT	4
31	PACKING STUD	2
32	NUT HEAVY	2

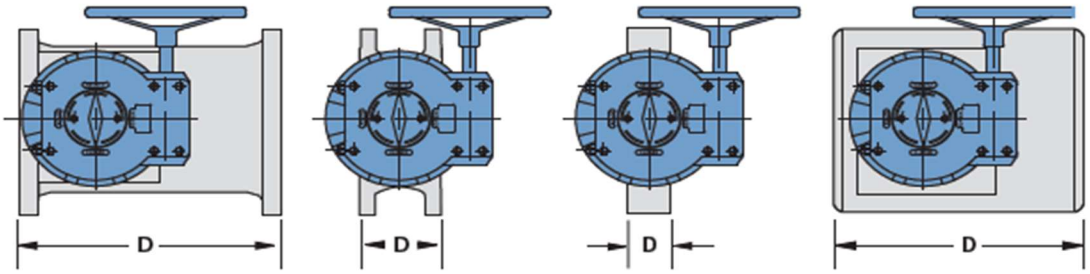


ITEM NO.	DESCRIPTION	QTY.
1	CRYOGENIC BODY FLANGED SHORT	1
2	8 INCH DISC	1
3	BODY SEAT	1
4	SEALING RING GASKET	2
5	BODY SEAT GASKET	1
6	SEALING RING	1
7	CLAMP RING	1
8	SHAFT CRYOGENIC	1
9	PACKING PLATE	1
10	PACKING COLLAR	1
11	PACKING SET LOW EMMISIONS	1
12	BEARING	1
13	BEARING 6 INCH 150#	2
14	END COVER	1
15	OPERATOR KEY	1
16	CRYOGENIC EXTENSION	1
17	CRYOGENIC EXTENSION GASKET	1
18	THRUST PAD	1
19	THRUST WASHER	2
20	MOUNTING BRACKET	1
21	MOUNING BRACKET DOWEL	4
22	PACKING STUD	4
23	HEX HEAD BOLT	4
24	SOCKET HEAD CAP SCREW	14
25	SOCKET HEAD CAP SCREW	2
26	SOCKET HEAD CAP SCREW	18
27	HEX HEAD BOLT	4
28	PACKING STUD	4
29	PACKING STUD	4
30	HEX HEAD BOLT	2
31	NUT HEAVY	4
32	NUT HEAVY	12
33	NUT HEAVY	2
34	SIRAL WOUND GASKET	1
35	BEARING CRYOGENIC EXTENSION	1
36	CRYOGENIC EXTENSION DRIP TRAY	2
37	HANDWHEEL	1
38	OPERATOR	1

TRIPLE OFFSET METAL SEATED BUTTERFLY VALVES

METAL SEATED TRIPLE OFFSET VALVES

(DIMENSIONS AND WEIGHT *)



Long pattern | Short pattern | Lug/wafer type | Butt weld type

DN	Dimensions (mm)									Weight (kg)					
	A	D					F	G	ØH	Bare Stem B16.5 / B16.47 Series A					Std. actuator + Top works
		Long	Short[1]	Lug	Wafer	Butt Weld				Long	Short	Lug	Wafer	Butt Weld	
ASME class 150, DN 80–1200															
80	136	203	114	48	48	–	125	240	200	20	18	15	10	–	7
100	158	229	127	54	54	191	147	287	200	30	27	22	17	24	9
150	152	267	140	57	57	225	165	307	200	46	39	28	25	50	9
200	225	292	152	64	64	252	215	361	300	70	61	41	36	81	14
250	248	330	165	71	71	305	239	387	500	120	89	66	50	132	16
300	291	356	178	81	81	348	283	434	500	159	136	95	79	172	23
350	317	381	191	92	92	384	303	517	600	202	175	127	104	283	34
400	348	406	216	102	102	406	338	556	600	259	227	177	139	411	59
450	391	432	222	114	114	437	381	599	500	341	295	263	258	514	75
500	423	457	229	127	127	475	409	634	500	422	363	327	309	646	77
600	525	508	267	154	154	527	495	735	600	692	613	520	481	1091	109
700	620	610	292	165	165	–	573	949	600	987	840	976	781	–	259
750	635	610	318	191	191	–	590	949	600	1135	997	915	885	–	259
900	750	711	330	203	203	–	700	1103	600	1730	1480	1412	1167	–	318
1000	768	813	409	229	229	–	762	1121	610	2315	2004	2122	1680	–	340
1050	775	813	409	246	246	–	806	1138	700	2838	2093	2281	1825	–	669
1200	834	914	470	276	276	–	890	1208	700	3632	3019	3387	2724	–	760
ASME class 300, DN 80–900															
80	136	282	114	48	48	–	125	240	200	25	20	15	13	–	7
100	158	305	127	54	54	191	147	287	200	41	34	20	16	24	9
150	201	403	140	59	59	225	192	337	300	77	59	35	26	50	14
200	243	419	152	73	73	252	238	386	500	118	91	59	45	81	23
250	274	457	165	83	83	305	261	474	600	179	134	98	75	132	34
300	307	502	178	92	92	348	297	514	600	241	182	136	120	172	59
350	341	762	191	117	117	384	330	548	500	372	250	209	150	283	75
400	375	838	216	133	133	406	361	587	500	497	338	293	195	411	98
450	421	914	222	149	149	437	407	633	600	636	429	386	341	514	109
500	470	991	229	159	159	475	441	682	600	815	538	484	372	646	204
600	553	1143	267	181	181	527	511	866	600	1180	763	722	504	1091	259
700	656	1346	292	229	229	–	612	1009	600	1680	1189	1317	953	–	318
750	670	1397	318	241	241	–	620	1023	600	2186	1582	1444	1158	–	318
900	747	1727	330	241	241	–	709	1110	600	3382	2315	1975	1453	–	363
ASME class 600, DN 100–600															
100	171	432	191	64	64	–	176	307	300	74	61	34	27	–	14
150	224	559	210	78	78	–	213	387	500	139	105	61	43	–	23
200	266	660	230	102	102	–	254	473	600	252	176	123	92	–	59
250	306	787	249	117	117	–	301	513	500	415	271	193	131	–	75
300	342	838	270	140	140	–	336	553	500	518	337	266	182	–	98
350	369	889	290	155	155	–	389	735	600	624	404	318	218	–	204
400	446	991	310	178	178	–	411	866	600	987	613	568	397	–	259
450	483	1092	330	200	200	–	446	861	600	1214	749	692	484	–	259
500	528	1194	350	216	216	–	488	907	610	1396	863	795	556	–	318
600	611	1397	390	232	232	–	564	975	700	2009	1249	1090	763	–	386

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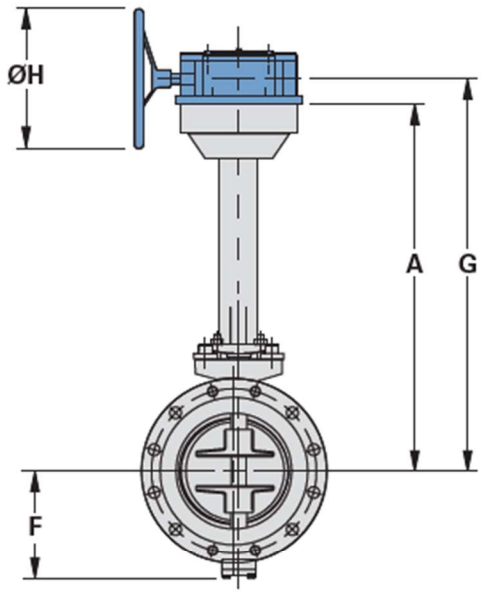
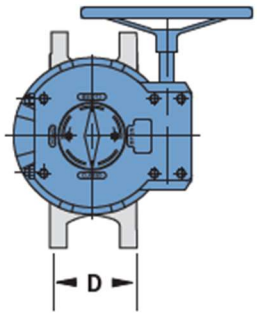
TRIPLE OFFSET METAL SEATED BUTTERFLY VALVES

METAL SEATED TRIPLE OFFSET CRYOGENIC VALVES

(DIMENSIONS AND WEIGHT *)

Short pattern





NPS	Dimensions (inch.)					Weight (lbs)	
	A	D	F	G	ØH	Valve	Valve and gear
ASME class 150, NPS 3–80							
3	21.65	4.49	4.92	23.39	5.91	62	80
4	22.44	5	5.79	24.17	5.91	82	100
6	23.23	5.51	6.54	24.96	7.87	108	127
8	25.28	5.98	7.83	26.97	11.81	152	171
10	26.77	6.5	9.41	28.5	19.69	232	250
12	28.68	7.01	10.06	30.47	19.69	331	362
14	29.92	7.48	11.93	31.89	23.62	456	505
16	31.5	8.5	13.31	33.46	27.56	584	633
18	34.65	8.74	15	37.13	19.69	761	860
20	37.4	9.02	16.1	39.88	19.69	942	1041
24	42.72	10.51	19.49	45.87	23.62	1541	1696
30	48.43	12.52	23.23	52.07	19.69	2485	2820
32	53.23	12.52	24.49	56.56	23.62	2999	3334
36	57.09	12.99	27.56	60.73	27.56	3786	4275
40	61.65	16.14	30.16	65.55	23.62	4902	5541
42	63.07	16.14	31.57	66.97	27.56	5497	6137
48	67.2	18.5	35.71	71.34	31.5	7532	8432
54	75.31	20.87	39.88	80.14	27.56	9958	11215
56	76.69	20.87	41.26	81.52	27.56	10860	12116
60	83.46	23.62	44.09	88.52	27.56	12802	15492
64	86.18	23.62	46.81	91.24	27.56	14943	17633
66	87.64	24.02	48.27	92.7	31.5	16090	18780
72	95.67	26.38	52.36	100.73	31.5	20948	23638
80	106.3	29.92	59.06	111.36	39.37	27563	30870
ASME class 300, NPS 3–36							
3	21.65	4.49	4.92	23.39	5.91	66	85
4	22.52	5	5.79	24.23	11.81	97	116
6	24.29	5.5	7.56	26	11.81	152	171
8	26.77	5.98	9.29	28.54	19.69	225	256
10	27.6	6.5	10.28	29.57	23.62	331	379
12	30.31	7.01	11.69	32.78	15.75	437	536
14	30.98	7.52	12.99	33.44	19.69	622	721
16	32.4	8.5	14.21	35.55	19.69	829	983
18	35.67	8.74	16.02	38.82	23.62	1056	1211
20	38.66	9.02	17.36	41.99	19.69	1327	1663
24	43.35	10.51	20.12	46.99	23.62	2073	2562
30	49.61	12.01	24.41	53.5	19.69	3779	4419
32	54.72	12.52	25.98	58.86	23.62	4406	5305
36	56.5	12.99	27.76	61.32	35.43	5627	6884
ASME class 600, NPS 4–24							
4	22.91	7.52	6.81	24.63	11.81	106	125
6	24.21	8.27	8.39	25.93	19.69	212	230
8	31.65	9.06	10	33.62	23.62	265	313
10	33.5	9.8	11.85	35.96	15.75	573	673
12	40.43	10.63	13.23	43.88	19.69	756	856
14	41.93	11.42	14.37	45.08	19.69	1036	1191
16	43.31	12.2	15.75	46.63	19.69	1544	1879
18	44.69	12.99	17.13	48.01	19.69	1874	2231
20	46.26	13.78	18.7	49.9	27.56	2403	2893
24	48.03	15.35	20.47	51.93	19.69	3098	3737
ASME class 900, NPS 6–24							
6	25.67	8.86	9.84	27.44	19.69	364	395
8	34.06	10.83	12.4	36.52	15.75	478	578
10	36.46	12.8	14.8	38.92	15.75	1025	1125
12	43.74	14.76	16.54	46.89	15.75	1429	1583
14	45.67	16.73	18.11	49	19.69	1921	2256
16	47.28	18.7	19.72	50.61	19.69	2765	3100
18	49.02	19.69	21.46	52.66	27.56	3565	4033
20	50.94	22.64	23.39	54.59	31.5	4507	4974
24	53.15	26.57	25.59	57.28	27.56	5980	6880

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