

Flange-Safety valve TYPE SF04



Description:

Flange-Safety valves are used to protect a closed system, pressure tanks etc. against overpressure.

Features:

- suitable for neutral and non-neutral, not adhesive **liquid & gaseous media.**
- TUV-type test approval letter L & D/G
- TUV SV 2094
- Safety valves are set and sealed at the factory
- Direct loaded with spring
- Installation in vertical position with spindle standing upwards

Connection:

DN15 – DN100

Temperature:

-60°C to +400°C –
depending on design

Set pressure:

0,2 bar – 40,0 bar–
depending on design

Design:

Safety valve with flange full lift D/G
Safety valve with flange normal lift F

Material body & bonnet:

Stainless steel 1.4408

Material inlet:

Stainless steel 1.4404

Pressure spring:

Stainless steel 1.4310

Bellows (optional):

Stainless steel 1.4571

Seal:

Metal -60°C to +400°C

EPDM -40°C to +170°C

FKM -20°C to +200°C

FFKM -10°C to +260°C

PTFE -60°C to +225°C

Flange :

DIN EN 1092-1

Nominal pressure:

Input PN40

Output PN16

Approvals:

AD 2000-A2

DGR 2014/68/EU

EN ISO 4126-1

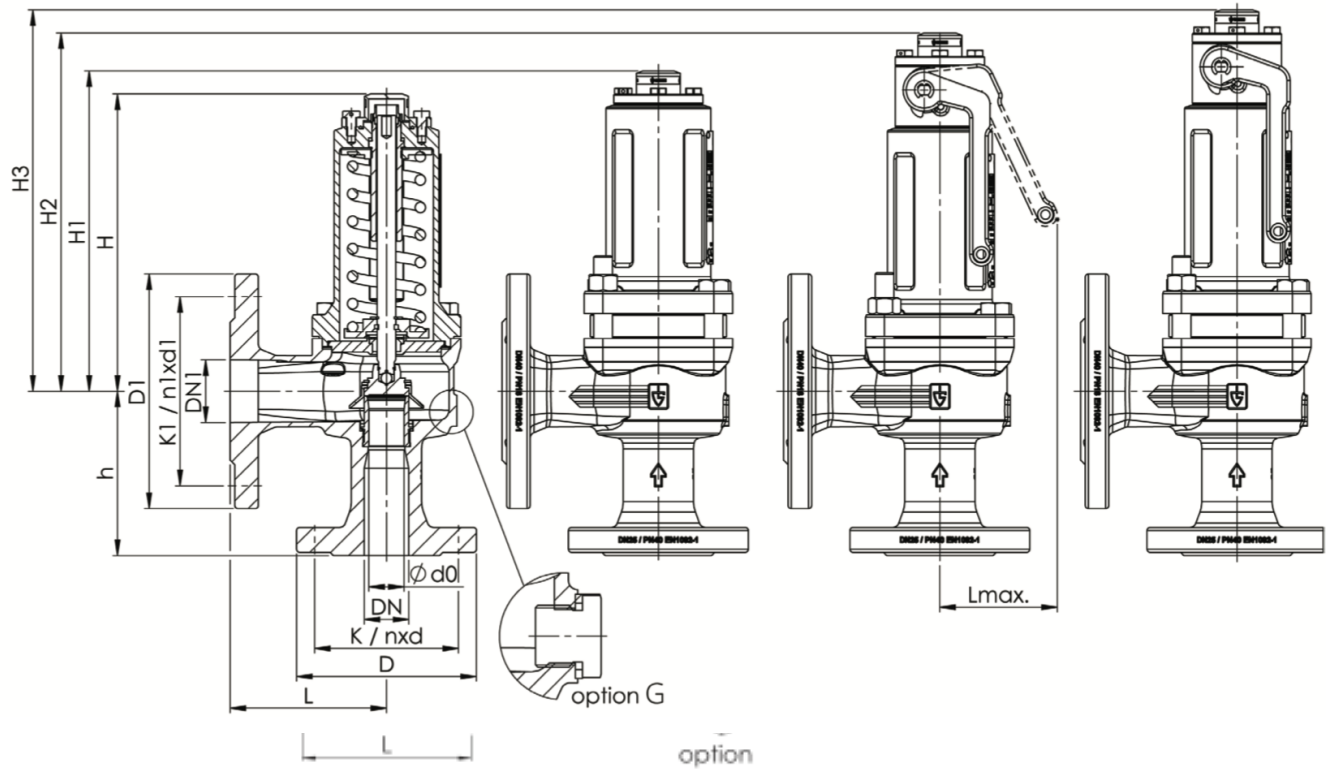
DIN EN 12952-7

TRD 421

VdTÜV-leaflet SV 100

DIN EN 12953-8

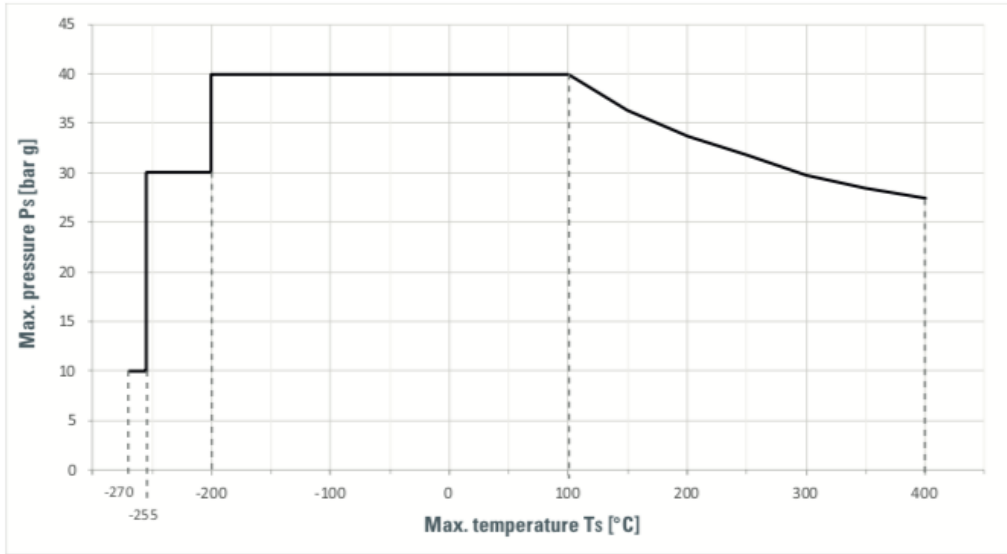
Dimensions:



DN	15	20	25	32	40	50	65	80	100
DN / PN	15 / 40	20 / 40	25 / 40	32 / 40	40 / 40	50 / 40	65 / 40	80 / 40	100 / 40
DN1 / PN	25 / 16	32 / 16	40 / 16	50 / 16	65 / 16	80 / 16	100 / 16	125 / 16	150 / 16
L	80	95	100	110	115	120	140	160	180
h	90	85	105	115	140	150	170	195	220
D	95	105	115	140	150	165	185	200	235
K / nxd	65 / 4x14	75 / 4x14	85 / 4x14	100 / 4x18	110 / 4x18	125 / 4x18	145 / 8x18	160 / 8x18	168 / 8x22
D1	115	140	150	165	185	200	220	250	285
K1 / n1xd1	85 / 4x14	100 / 4x18	110 / 4x18	125 / 4x18	145 / 8x18	160 / 8x18	180 / 8x18	210 / 8x18	218 / 8x22
H / H1	167 / 186	165 / 184	170 / 185	260 / 294	333 / 361	352 / 378	427 / 462	512 / 556	577 / 624
H2 / H3	206 / 225	204 / 223	229 / 244	321 / 355	363 / 391	413 / 439	497 / 532	556 / 600	647 / 694
Lmax	75	85	95	120	130	160	205	215	255
G	1/4"	1/4"	1/4"	1/4"	1/2"	1/2"	1/2"	1/2"	1/2"
$\alpha_w / Kdr (F)$	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54	0,54
$\alpha_w / Kdr (D/G)^*$	0,74	0,74	0,74	0,74	0,74	0,74	0,74	0,74	0,74
d0	14,0	18,0	22,5	29,3	36,0	45,0	59,0	72,0	90,0
Range of adjustment (bar)	0,2 – 40	0,2 – 40	0,2 – 40	0,2 – 40	0,2 – 40	0,2 – 40	0,2 – 40	0,2 – 40	0,2 – 40
Range of adjustment with bellows (bar)	1,2 – 40	0,8 – 40	0,5 – 40	1,0 – 40	0,9 – 40	3,0 – 40	0,3 – 40	0,2 – 40	0,2 – 40
Weight kg	5,0	6,0	8,0	16,0	18,5	25,0	45,0	57,5	91,5
Weight kg**	5,5	6,5	8,5	18,5	20,5	27,5	49,0	63,5	100,5
Weight kg***	5,5	6,5	8,5	18,0	20,5	27,0	48,5	61,0	95,0
Weight kg****	6,0	7,0	9,0	20,0	22,5	29,5	52,0	67,0	104,0

* Outflow-number for pressures > 3,0 bar. For lower pressures ask NieRuf GmbH
 ** Values for the version with bellows
 *** Values for the version with lifting lever
 **** Values for the version with bellows and lifting lever

**Pressure-/ temperature rating
PN 40 | Material: 1.4408**



Article number:

type	lifting device	design	Seal	Size
SF04	0 – without 1 – with lever	0 – gastight 2 – gastight bonnet & bellow***	00 – Metal 01 – EPDM 02 – FPM 03 – PTFE 06 – FFKM	03 – DN15 04 – DN20 05 – DN25 06 – DN32 07 – DN40 08 – DN50 09 – DN65 10 – DN80 11 – DN100

Example SF04020007:

SF04 | **0** | **2** | **00** | **07**

Article number. SF04020007
 Safety valve made of stainless steel
 Lifting device: without
 Design: with gastight bonnet & bellow (for applications with counterpressure up to 4,0 bar)
 Seal: metall
 Size: Inlet DN40 / Outlet DN65

*** Version with bellows only available from 1 bar

Capacity table:

Media 1 = air Nm³/h **Blowing-off rates at 5% above set pressure full lift safety vavle**
 2 = steam kg/h **Blowing-off rates at 5% above set pressure full lift safety vavle**
 3 = water m³/h **Blowing-off rates at 10% above set pressure**

DN	15			20			25			32		
	1	2	3	1	2	3	1	2	3	1	2	3
0,2	71.7	60.5	2.4	118.1	99.6	3.7	184.5	155.6	5.9	312.9	263.9	9.9
0,5	112.6	92.0	3.4	173.6	141.7	5.4	271.3	221.5	8.4	460.0	375.5	14.2
1,0	167.1	140.0	4.6	250.0	209.4	7.3	390.5	327.2	11.4	662.3	554.8	19.3
1,5	220.3	183.2	5.6	322.5	268.1	9.0	503.9	419.0	14.0	854.6	710.5	23.7
2,0	269.3	222.5	6.5	391.2	323.2	10.	611.2	505.0	16.2	1036.5	856.3	27.4
2,5	315.0	258.8	7.3	462.5	380.0	11.	722.7	593.8	18.1	1225.5	1006.9	30.7
3,0	360.7	295.0	8.0	533.9	436.5	12.	834.2	682.1	19.8	1414.7	1156.7	33.6
3,5	406.5	331.0	8.6	601.6	489.8	13.	940.1	765.4	21.4	1594.2	1297.9	36.3
4,0	452.3	366.9	9.2	669.4	543.0	14.	1046.0	848.4	22.9	1773.8	1438.8	38.9
4,5	498.2	402.7	9.8	737.3	596.0	15.	1152.0	931.2	24.3	1953.6	1579.2	41.2
5,0	544.0	438.4	10.3	805.2	648.9	16.	1258.1	1013.8	25.6	2133.5	1719.2	43.5
5,5	589.9	474.1	10.8	873.1	701.6	17.	1364.3	1096.3	26.9	2313.5	1859.0	45.6
6,0	635.9	509.6	11.3	941.1	754.2	18.	1470.5	1178.4	28.1	2493.6	1998.4	47.6
6,5	681.9	545.1	11.8	1009.2	806.8	18.	1576.8	1260.5	29.2	2673.9	2137.6	49.6
7,0	727.9	580.6	12.2	1077.2	859.3	19.	1683.2	1342.7	30.3	2854.3	2276.9	51.4
7,5	773.9	616.1	12.7	1145.4	911.8	20.	1789.6	1424.7	31.4	3034.8	2415.9	53.2
8,0	820.0	651.5	13.1	1213.5	964.2	20.	1896.2	1506.5	32.4	3215.5	2554.8	55.0
8,5	866.1	686.8	13.5	1281.8	1016.4	21.	2002.8	1588.2	33.4	3396.3	2693.2	56.7
9,0	912.2	722.1	13.9	1350.0	1068.7	22.	2109.5	1669.8	34.4	3577.2	2831.7	58.3
9,5	958.4	757.3	14.3	1418.4	1120.9	22.	2216.2	1751.4	35.3	3758.2	2969.9	59.9
10	1004.6	792.7	14.6	1486.7	1173.1	23.	2323.0	1833.0	36.3	3939.4	3108.4	61.5
11	1097.0	863.2	15.3	1623.6	1277.5	24.	2536.9	1996.1	38.0	4302.1	3384.9	64.5
12	1189.7	933.6	16.0	1760.7	1381.8	25.	2751.1	2159.0	39.7	4665.3	3661.2	67.4
13	1282.4	1003.8	16.7	1898.0	1485.7	26.	2965.6	2321.3	41.4	5029.1	3936.5	70.1
14	1375.3	1074.1	17.3	2035.5	1589.7	27.	3180.4	2483.9	42.9	5393.3	4212.2	72.8
15	1468.4	1144.6	17.9	2173.2	1694.0	28.	3395.6	2646.9	44.4	5758.1	4488.6	75.3
16	1561.5	1215.0	18.5	2311.0	1798.1	29.	3611.0	2809.6	45.9	6123.4	4764.5	77.8
17	1654.8	1285.0	19.1	2449.1	1901.7	30.	3826.7	2971.5	47.3	6489.3	5038.9	80.2
18	1748.2	1355.5	19.6	2587.4	2006.1	31.	4042.8	3134.5	48.7	6855.7	5315.5	82.5
19	1841.8	1425.9	20.2	2725.8	2110.3	32.	4259.1	3297.3	50.0	7222.5	5591.6	84.8
20	1935.5	1496.3	20.7	2864.5	2214.5	32.	4475.8	3460.2	51.3	7590.0	5867.7	87.0
21	2029.3	1566.7	21.2	3003.4	2318.7	33.	4692.8	3623.0	52.6	7957.9	6143.8	89.1
22	2123.3	1637.2	21.7	3142.5	2423.0	34.	4910.1	3786.0	53.8	8326.4	6420.2	91.2
23	2217.4	1707.7	22.2	3281.7	2527.4	35.	5127.7	3949.0	55.0	8695.5	6696.6	93.3
24	2311.6	1778.3	22.7	3421.2	2631.9	36.	5345.6	4112.3	56.2	9065.0	6973.5	95.3
25	2406.0	1849.0	23.1	3560.9	2736.5	36.	5563.9	4275.8	57.4	9435.2	7250.8	97.3
26	2500.5	1919.6	23.6	3700.8	2841.1	37.	5782.5	4439.2	58.5	9805.8	7527.9	99.2
27	2595.2	1990.4	24.0	3840.9	2945.8	38.	6001.4	4602.8	59.6	10177.0	7805.4	101.1
28	2690.0	2061.3	24.5	3981.2	3050.7	38.	6220.6	4766.7	60.7	10548.8	8083.2	102.9
29	2784.9	2132.2	24.9	4121.7	3155.7	39.	6440.1	4930.7	61.8	10921.0	8361.5	104.8
30	2880.0	2203.2	25.3	4262.3	3260.8	40.	6659.9	5095.0	62.8	11293.7	8640.0	106.6
32	3070.5	2345.5	26.2	4544.3	3471.3	41.	7100.5	5423.9	64.9	12041.0	9197.8	110.1
34	3261.6	2488.2	27.0	4827.2	3682.5	42.	7542.5	5754.0	66.9	12790.4	9757.5	113.4
36	3453.3	2631.3	27.8	5110.9	3894.3	44.	7985.8	6084.8	68.8	13542.1	10318.5	116.7
38	3645.5	2774.7	28.5	5395.4	4106.6	45.	8430.3	6416.6	70.7	14295.9	10881.1	119.9
40	3836.8	2918.6	29.3	5678.4	4319.5	46.	8872.5	6749.3	72.6	15045.8	11445.3	123.1

Media 1 = air Nm³/h Blowing-off rates at 5% above set pressure full lift safety valve
 2 = steam kg/h Blowing-off rates at 5% above set pressure full lift safety valve
 3 = water m³/h Blowing-off rates at 10% above set pressure

DN Set pressure in bar	40			50			65			80		
	1	2	3	1	2	3	1	2	3	1	2	3
0,2	472.4	398.4	15.0	738.1	622.5	23.4	1268.7	1070.0	40.3	1889.5	1593.5	60.0
0,5	694.4	566.9	21.5	1085.0	885.8	33.5	1865.2	1522.8	57.6	2777.7	2267.7	85.8
1,0	999.8	837.5	29.2	1562.2	1308.6	45.6	2685.4	2249.6	78.4	3999.2	3350.1	116.8
1,5	1290.1	1072.6	35.8	2015.8	1675.9	56.0	3465.2	2880.9	96.2	5160.4	4290.3	143.3
2,0	1564.7	1292.7	41.4	2444.8	2019.9	64.7	4202.6	3472.1	111.2	6258.6	5170.8	165.7
2,5	1850.1	1520.1	46.3	2890.8	2375.1	72.4	4969.3	4082.9	124.5	7400.5	6080.3	185.3
3,0	2135.6	1746.2	50.8	3336.9	2728.4	79.3	5736.1	4690.2	136.4	8542.4	6984.8	203.1
3,5	2406.6	1959.4	54.9	3760.3	3061.5	85.7	6464.0	5262.8	147.4	9626.4	7837.5	219.5
4,0	2677.8	2172.0	58.7	4184.1	3393.7	91.7	7192.4	5833.9	157.6	10711.2	8688.0	234.7
4,5	2949.2	2383.9	62.2	4608.1	3724.9	97.2	7921.4	6403.2	167.2	11796.8	9535.8	248.9
5,0	3220.8	2595.4	65.6	5032.4	4055.3	102.5	8650.8	6971.1	176.2	12883.0	10381.6	262.4
5,5	3492.5	2806.4	68.8	5457.0	4385.0	107.5	9380.7	7537.9	184.8	13970.0	11225.6	275.3
6,0	3764.5	3016.8	71.9	5882.0	4713.7	112.3	10111.2	8103.0	193.1	15057.8	12067.2	287.5
6,5	4036.6	3227.0	74.8	6307.2	5042.2	116.9	10842.1	8667.6	201.0	16146.4	12908.0	299.3
7,0	4308.9	3437.3	77.7	6732.7	5370.8	121.3	11573.6	9232.4	208.6	17235.8	13749.2	310.6
7,5	4581.5	3647.1	80.4	7158.5	5698.6	125.6	12305.6	9796.0	215.9	18325.9	14588.4	321.5
8,0	4854.2	3856.7	83.0	7584.6	6026.1	129.7	13038.1	10359.0	223.0	19416.7	15426.9	332.1
8,5	5127.1	4065.7	85.6	8011.1	6352.6	133.7	13771.1	10920.3	229.9	20508.3	16262.8	342.3
9,0	5400.2	4274.8	88.1	8437.8	6679.4	137.6	14504.7	11481.9	236.5	21600.8	17099.2	352.3
9,5	5673.5	4483.5	90.5	8864.9	7005.4	141.4	15238.9	12042.4	243.0	22694.1	17933.9	361.9
10	5947.0	4692.5	92.8	9292.1	7332.0	145.1	15973.3	12603.8	249.4	23787.9	18770.0	371.4
11	6494.5	5110.0	97.4	10147.7	7984.4	152.1	17444.0	13725.3	261.5	25978.1	20440.1	389.5
12	7042.9	5527.0	101.7	11004.5	8635.9	158.9	18917.0	14845.3	273.2	28171.6	22108.0	406.8
13	7592.0	5942.6	105.9	11862.5	9285.3	165.4	20391.8	15961.6	284.4	30368.0	23770.4	423.5
14	8141.9	6358.9	109.9	12721.7	9935.8	171.7	21868.8	17079.7	295.1	32567.6	25435.6	439.5
15	8692.6	6776.1	113.7	13582.3	10587.7	177.7	23348.1	18200.4	305.5	34770.6	27104.5	454.9
16	9244.1	7192.6	117.5	14443.9	11238.4	183.5	24829.2	19318.9	315.5	36976.3	28770.3	469.8
17	9796.4	7606.9	121.1	15306.9	11885.8	189.2	26312.7	20431.9	325.2	39185.6	30427.7	484.3
18	10349.5	8024.3	124.6	16171.1	12538.0	194.7	27798.3	21553.1	334.6	41397.9	32097.4	498.4
19	10903.3	8441.2	128.0	17036.4	13189.4	200.0	29285.8	22672.7	343.8	43613.2	33764.8	512.0
20	11458.1	8858.0	131.3	17903.2	13840.6	205.2	30775.9	23792.2	352.8	45832.2	35432.0	525.3
21	12013.5	9274.9	134.6	18771.1	14492.0	210.3	32267.7	24911.9	361.5	48053.9	37099.5	538.3
22	12569.8	9692.1	137.7	19640.3	15143.9	215.2	33762.0	26032.6	370.0	50279.3	38768.4	551.0
23	13127.0	10109.4	140.8	20510.9	15796.0	220.1	35258.4	27153.5	378.3	52507.8	40437.7	563.4
24	13684.7	10527.4	143.9	21382.4	16449.1	224.8	36756.6	28276.2	386.4	54739.0	42109.7	575.5
25	14243.6	10946.1	146.8	22255.7	17103.2	229.4	38257.8	29400.6	394.4	56974.6	43784.2	587.4
26	14803.1	11364.3	149.8	23129.9	17756.8	234.0	39760.5	30524.1	402.2	59212.5	45457.3	599.0
27	15363.5	11783.3	152.6	24005.5	18411.3	238.5	41265.7	31649.3	409.9	61454.1	47133.0	610.4
28	15924.7	12202.6	155.4	24882.4	19066.6	242.8	42773.1	32775.7	417.4	63698.9	48810.5	621.6
29	16486.6	12622.7	158.2	25760.4	19722.9	247.1	44282.4	33904.0	424.8	65946.5	50490.7	632.6
30	17049.3	13043.2	160.9	26639.6	20380.0	251.4	45793.8	35033.4	432.1	68197.3	52172.7	643.5
32	18177.4	13885.2	166.1	28402.2	21695.6	259.6	48823.7	37295.1	446.3	72709.6	55540.8	664.6
34	19308.8	14730.2	171.3	30170.0	23015.9	267.6	51862.6	39564.6	460.0	77235.1	58920.6	685.0
36	20443.6	15577.1	176.2	31943.1	24339.2	275.4	54910.5	41839.4	473.3	81774.2	62308.4	704.9
38	21581.4	16426.4	181.1	33721.0	25666.2	282.9	57966.8	44120.6	486.3	86325.8	65705.5	724.2
40	22713.6	17278.2	185.8	35490.0	26997.1	290.3	61007.7	46408.4	498.9	90854.4	69112.6	743.0

Media 1 = air Nm³/h Blowing-off rates at 5% above set pressure full lift safety valve
 2 = steam kg/h Blowing-off rates at 5% above set pressure full lift safety valve
 3 = water m³/h Blowing-off rates at 10% above set pressure

DN Set pressure in bar	100		
	1	2	3
0,2	2952.3	2489.9	93.7
0,5	4340.1	3543.3	134.1
1,0	6248.8	5234.6	182.5
1,5	8063.1	6703.6	224.0
2,0	9779.1	8079.4	258.9
2,5	11563.2	9500.5	289.6
3,0	13347.5	10913.7	317.4
3,5	15041.2	12246.1	342.9
4,0	16736.2	13575.0	366.6
4,5	18432.5	14899.6	389.0
5,0	20129.7	16221.3	410.0
5,5	21828.1	17540.0	430.1
6,0	23527.8	18854.9	449.3
6,5	25228.8	20168.8	467.7
7,0	26930.9	21483.1	485.3
7,5	28634.2	22794.4	502.4
8,0	30338.5	24104.5	518.9
8,5	32044.2	25410.6	534.9
9,0	33751.2	26717.5	550.4
9,5	35459.6	28021.7	565.5
10	37168.6	29328.1	580.2
11	40590.7	31937.6	608.6
12	44018.2	34543.8	635.7
13	47450.0	37141.3	661.7
14	50886.9	39743.1	686.7
15	54329.0	42350.8	710.8
16	57775.4	44953.6	734.1
17	61227.6	47543.3	756.7
18	64684.3	50152.2	778.7
19	68145.6	52757.4	800.0
20	71612.9	55362.5	820.8
21	75084.2	57968.0	841.1
22	78561.4	60575.7	860.9
23	82043.5	63183.9	880.3
24	85529.6	65796.4	899.2
25	89022.8	68412.8	917.8
26	92519.5	71027.0	936.0
27	96022.0	73645.3	953.8
28	99529.5	76266.4	971.3
29	103041.4	78891.8	988.5
30	106558.3	81519.8	1005.4
32	113608.7	86782.5	1038.4
34	120679.9	92063.5	1070.4
36	127772.2	97356.9	1101.4
38	134884.1	102664.9	1131.6
40	141960.0	107988.5	1161.0

Image similar. Change without notice.