

Product Specifications

Type 06850 and Type 06855



Type 06850
with gastight cap

Type 06855
with lifting device

HEROSE Safety Valve Type 06850 and Type 06855

Safety Valves, angle type, stainless steel
Type tested, TÜV-SV.1130. Steam / Gas / Liquid

Specification highlights

- Standard safety valve
- Metal to metal seated
- Various sealing options
- Cleaned and degreased for oxygen service
- Closed bonnet
- Gastight cap or lifting device
- Inlet: male thread type G (BSPP) acc. to ISO 228/1
- Outlet: female thread type G (BSPP) acc. to ISO 228/1

On request only

Flange-, NPT- or Tri-Clamp connection for in- and outlet

Applications & branches

#Gas Stations	#Pressure Vessels	#Gas Cylinders	#General Industry
#Food	#Medical	#Compressed Air	#Steam
#Pharma	#Chemical		

Working temperature

O-Ring valve seal: 0°C (273K / +32°F) to 70°C (343K / +158°F)
Soft valve seal: -270°C (3K / -454°F) to +300°C (573K / +572°F)
Metal to metal sealed: -270°C (3K / -454°F) to +400°C (673K / +752°F)

Also suitable for horizontal installation for safety valves
with set pressures between 20 to 250 bar.

Max. pressure | 06850 with gastight cap

Part No. 06850.X.000000M	(Pmax 20.0 bar) metal to metal
Part No. 06850.X.000000H	(Pmax 250.0 bar) metal to metal stellited version
Part No. 06850.X.000001L	(Pmax 150.0 bar) with Vespel soft seal
Part No. 06850.X.000002N	(Pmax 15.99 bar) ¹ with NBR O-Ring soft seal
Part No. 06850.X.000002F	(Pmax 250.0 bar) ² with FKM O-Ring soft seal

Max. pressure | 06855 with lifting device

Part No. 06855.X.000000M	(Pmax 20.0 bar) metal to metal
Part No. 06855.X.000000H	(Pmax 250.0 bar) metal to metal stellited version
Part No. 06855.X.000001L	(Pmax 150.0 bar) with Vespel soft seal
Part No. 06855.X.000002N	(Pmax 15.99 bar) ¹ with NBR O-Ring soft seal
Part No. 06855.X.000002F	(Pmax 250.0 bar) ² with FKM O-Ring soft seal

¹ Pmax 15.99 bar for d₀ 10. Pmax 14.99 bar for d₀ 14. Pmax 19.99 bar for d₀ 18.
² Pmax 250 bar for d₀ 10. Pmax 200 bar for d₀ 14. Pmax 110 bar for d₀ 18.

Certifications & Quality standards

- TÜV-SV.1130.
Type tested Steam / Gas / Liquid
- ISO 228/1
Inlet, male thread type G and outlet,
female thread type G (BSPP)
- **Discharge capacity**
Calculation of flow rate acc. to AD2000-Merkblatt /
DIN EN ISO 4126-1



- 2014/68/EU (PED)
Standard marking acc. to
Pressure Equipment Directive.

Product Specifications

Type 06850 and Type 06855



Type 06850
with gastight cap

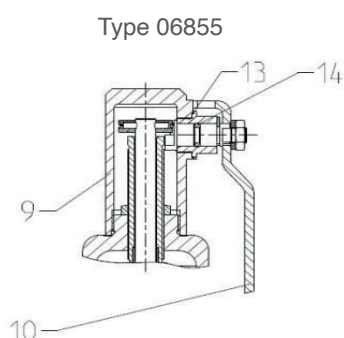
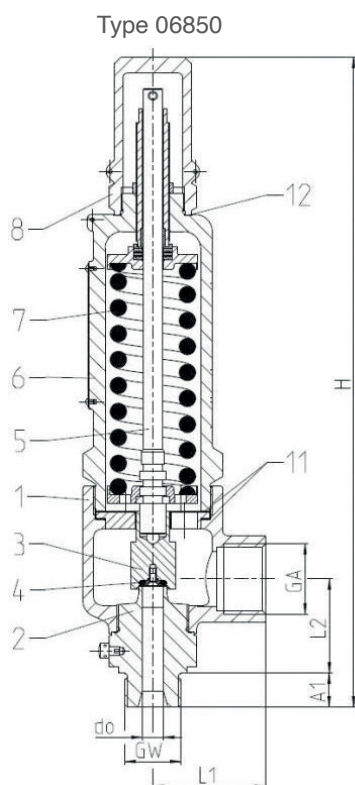
Type 06855
with lifting device

Materials and spare parts

Provided as safety device for protection against excessive pressure in gas cylinders and pressure vessels. Approved for gases, vapours and liquids.

Essentials

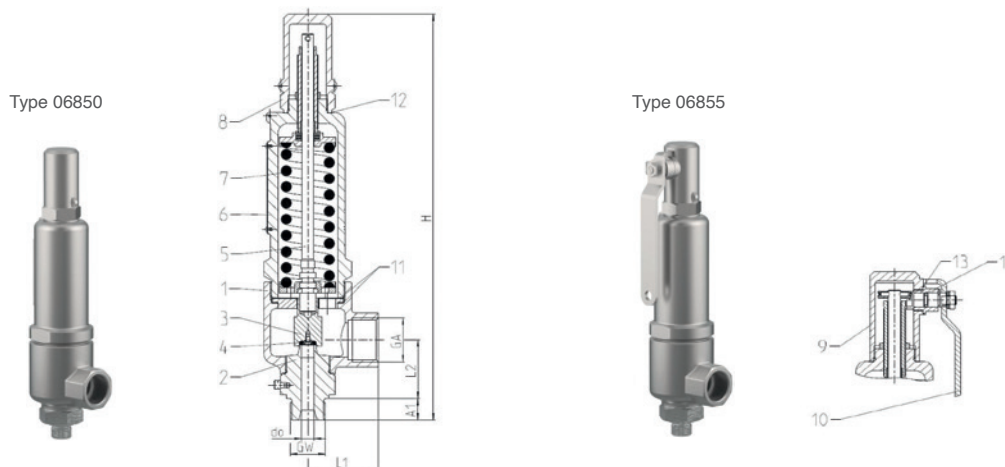
- ! Set pressure temperature must be observed. Also suitable for horizontal installation for safety valves with set pressures between 20 to 250 bar.
- ! Valves are delivered at a set pressure, therefore when ordering please confirm set pressure.



	Materials	DIN EN	ASME/ASTM
1	Outlet body	1.4408	A 351 CF8M
2	Inlet body	1.4571	A 276 Grade 316Ti
3	Disc (metal to metal seated)	1.4571	A 276 Grade 316Ti
4a	Soft sealing plate	VESPEL	
4b	Soft sealing O-ring	NBR	
4c	Soft sealing O-ring	FKM	
5	Stem	1.4404	A 276 Grade 316L
6	Bonnet	1.4408	A 351 CF8M
7	Spring	1.4571	A 313 Grade 316Ti
8	Cap	1.4408	A 351 CF8M
9	Lifting cap	1.4408	A 351 CF8M
10	Lever	1.4301	A 276 Grade 304
Spare parts		DIN EN	ASME/ASTM
2	Inlet body	1.4571	316Ti
3	Disc (metal to metal seated)	1.4571	316Ti
3.1	Split pin	1.4310	301
4a	Soft sealing plate	VESPEL	
4b	Soft sealing O-ring	NBR	
4c	Soft sealing O-ring	FKM	
11	Gasket	1.4404 Graphite	316L Graphite
12	Gasket	PTFE	
13	Gasket	PTFE	
14	O-ring	FPM (VITON)	

Product Specifications

Type 06850 and Type 06855



How to compose your order code?

Select from the table below: **Type number** ① + . (dot) + **Size number** ② + . (dot) + **Sealing Type number** ③
 (For example: 06850.0622.000000M)

*HEROSE made a preselection in material use, based on the Orifice and Nominal size of the inlet and outlet of the safety valves.

Type 06850 - 06855	Type number ①	Size number ②								
Dimension code	06850	1024	1034	1044	1434	1435	1436	1444	1445	1446
	06855									
Sealing Type ③	Sealing	Set pressure range - Bar								
Type X 000000M	metal	0.5-20	0.5-20	0.5-20	0.5-20	0.5-20	0.5-20	0.5-20	0.5-20	0.5-20
Type X 000000H	stellite	20.01-250	20.01-250	20.01-250	20.01-200	20.01-200	20.01-200	20.01-200	20.01-200	20.01-200
Type X 000001L	Vespel soft seal	0.5-150	0.5-150	0.5-150	0.5-120	0.5-120	0.5-120	0.5-120	0.5-120	0.5-120
Type X 000002N	NBR O-Ring	3-15.99	3-15.99	3-15.99	3-14.99	3-14.99	3-14.99	3-14.99	3-14.99	3-14.99
Type X 000002F	FKM O-Ring	16-250	16-250	16-250	15-200	15-200	15-200	15-200	15-200	15-200
Technical data										
Orifice	d ₀ in mm	10	10	10	14	14	14	14	14	14
Nominal size (inlet)	GW - BSPP fem.	1/2	3/4	1	3/4	3/4	3/4	1	1	1
Outlet	GA - BSPP male	1	1	1	1	1-1/4	1-1/2	1	1-1/4	1-1/2
Height	H in mm	305.0	307.0	309.0	310.5	310.5	310.5	312.5	312.5	312.5
Length	L ₁ in mm	53.0	53.0	53.0	55.0	55.0	55.0	55.0	55.0	55.0
Length	L ₂ in mm	44.5	44.5	44.5	48.2	48.2	48.2	48.2	48.2	48.2
Length	A ₁ in mm	14.0	16.0	18.0	16.0	16.0	16.0	18.0	18.0	18.0
Weight 06850	ca. kg	3.2	3.2	3.2	3.4	3.4	3.4	3.4	3.4	3.4
Weight 06855	ca. kg	3.4	3.4	3.4	3.6	3.6	3.6	3.6	3.6	3.6
Coeff. of discharge fluids	α	0.68	0.68	0.68	*	*	*	*	*	*
		0.61 ¹	0.61 ¹	0.61 ¹	0.54 ¹	0.54 ¹	0.54 ¹	0.54 ¹	0.54 ¹	0.54 ¹
Coeff. of discharge gases, vapours	α	0.84	0.84	0.84	0.7	0.7	0.7	0.7	0.7	0.7

* 0.20-11.50 bar=0.50 / 11.51-74.99 bar=0.49 / 75.00-200.00 bar=0.46

¹ Type X 000002N/F - NBR/FKM O-Ring

Product Specifications

Type 06850 and Type 06855

How to compose your order code?

Select from the table below: **Type number** ① + . (dot) + **Size number** ② + . (dot) + **Sealing Type number** ③
(For example: 06850.0622.000000M)

*HEROSE made a preselection in material use, based on the Orifice and Nominal size of the inlet and outlet of the safety valves.

Type 06850 - 06855		Type number ①		Size number ②			
Dimension code	06850	1846	1847	1856	1857	1866	1867
	06855						
Sealing Type ③	Sealing	Set pressure range - Bar					
Type X 000000M	metal	0.5-20	0.5-20	0.5-20	0.5-20	0.5-20	0.5-20
Type X 000000H	stellited	20.01-110	20.01-110	20.01-110	20.01-110	20.01-110	20.01-110
Type X 000001L	Vespel soft seal	0.5-110	0.5-110	0.5-110	0.5-110	0.5-110	0.5-110
Type X 000002N	NBR O-Ring	3-19.99	3-19.99	3-19.99	3-19.99	3-19.99	3-19.99
Type X 000002F	FKM O-Ring	20-110	20-110	20-110	20-110	20-110	20-110
Technical data							
Orifice	d ₀ in mm	18	18	18	18	18	18
Nominal size (inlet)	GW - BSPP fem.	1	1	1-1/4	1-1/4	1-1/2	1-1/2
Outlet	GA - BSPP male	1-1/2	2	1-1/2	2	1-1/2	2
Height	H in mm	304.0	304.0	304.0	304.0	306.0	306.0
Length	L ₁ in mm	60.0	63.0	60.0	63.0	60.0	63.0
Length	L ₂ in mm	49.0	53.0	49.0	53.0	49.0	53.0
Length	A ₁ in mm	18.0	18.0	20.0	20.0	22.0	22.0
Weight 06850	ca. kg	3.9	4.1	3.9	4.1	4.0	4.2
Weight 06855	ca. kg	4.1	4.3	4.1	4.3	4.2	4.4
Coeff. of discharge fluids	α	0.5	0.5	0.5	0.5	0.5	0.5
		0.51 ¹	0.51 ¹	0.51 ¹	0.51 ¹	0.51 ¹	0.51 ¹
Coeff. of discharge gases, vapours	α	0.76	0.76	0.76	0.76	0.76	0.76

¹ Type X 000002N/F - NBR/FKM O-Ring

Product Specifications

Type 06850 and Type 06855

Discharge capacities

! Calculation of flow rate acc. to AD2000-Merkblatt A2 / DIN EN ISO 4126-1

The capacity indicated below is for a fully opened valve.

Medium

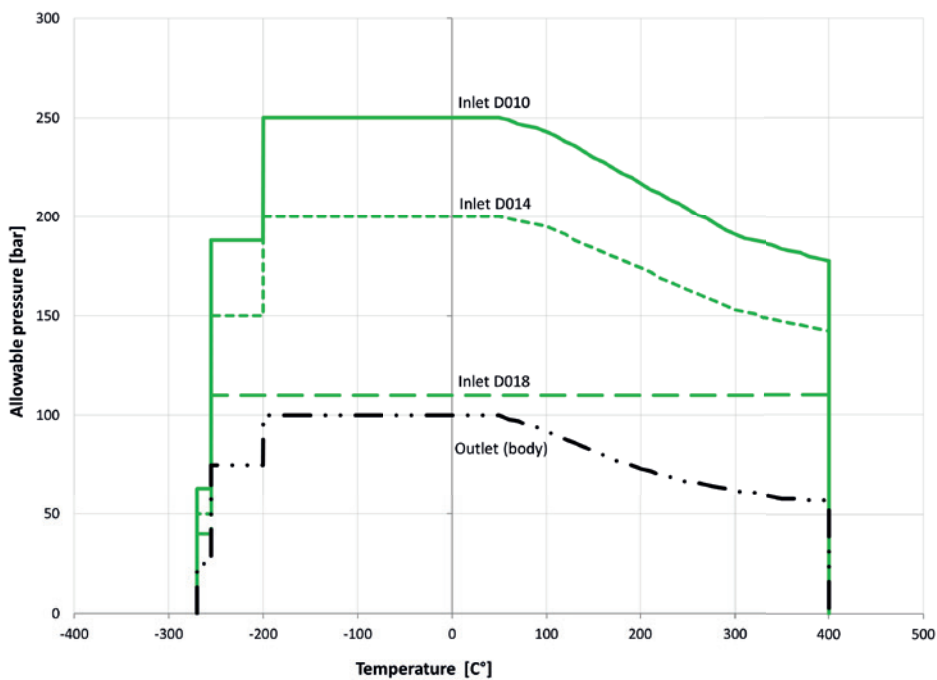
- Saturated steam in kg/h
- Air in m³/h at 0°C and 1013,25 mbar
- Water in kg/h at 20°C

Type 06850 + 06855 - metal to metal sealing

Set pressure in bar (g)	GW 1/2, 3/4 & 1			GW 3/4 & 1			GW 1, 1-1/4 & 1-1/2		
	d ₀ in mm 10.0			d ₀ in mm 14.0			d ₀ in mm 18.0		
	A ₀ in mm ² 78.5			A ₀ in mm ² 153.9			A ₀ in mm ² 254.0		
0.5	47	56	2075	81	96	3035	127	152	5018
1.0	70	88	2852	116	146	4110	191	242	6794
2.0	112	143	4033	185	236	5813	320	407	9608
3.0	152	194	4940	248	317	7119	444	570	11768
4.0	189	244	5704	309	398	8220	555	715	13588
5.0	227	294	6377	370	480	9190	665	862	15192
6.0	264	344	6986	431	561	10068	774	1007	16642
7.0	301	393	7545	492	642	10874	882	1153	17976
8.0	338	444	8066	552	726	11625	990	1302	19217
9.0	375	494	8556	612	807	12330	1098	1448	20383
10.0	411	545	9018	671	890	12997	1205	1598	21485
15.0	593	794	11045	968	1298	15600	1738	2329	26314
20.0	774	1054	12754	1264	1721	18013	2269	3089	30385
30.0	1140	1572	15620	1861	2568	22062	3341	4609	37213
40.0	1510	2099	18037	2466	3428	25475	4425	6152	42970
50.0	1882	2634	20166	3075	4302	28481	5518	7720	48042
60.0	2256	3175	22091	3685	5186	31200	6614	9308	52628
70.0	2631	3723	23861	4297	6081	33700	7712	10914	56845
80.0	3009	4277	25508	4914	6985	33821	8819	12537	60769
90.0	3394	4835	27055	5543	7898	35872	9949	14174	64456
100.0	3791	5397	28519	6191	8814	37813	11112	15820	67942
110.0	4202	5931	29911	6864	9688	39658	12319	17387	71258
120.0	4629	6513	31241	7561	10637	41422	-	-	-
140.0	5520	7642	33744	9016	12482	44741	-	-	-
160.0	6448	8758	36074	-	14305	47830	-	-	-
180.0	7575	9847	38262	-	16083	50731	-	-	-
200.0	-	10898	40332	-	17801	53475	-	-	-
220.0	-	11931	42300	-	-	-	-	-	-
240.0	-	12983	44181	-	-	-	-	-	-
250.0	-	13522	45092	-	-	-	-	-	-

Product Specifications
 Type 06850 and Type 06855

Maximum allowable set pressure safety valve type 0685X



Product Specifications

Type 06850 and Type 06855

Discharge capacities

! Calculation of flow rate acc. to AD2000-Merkblatt A2 / DIN EN ISO 4126-1

The capacity indicated below is for a fully opened valve.

Medium

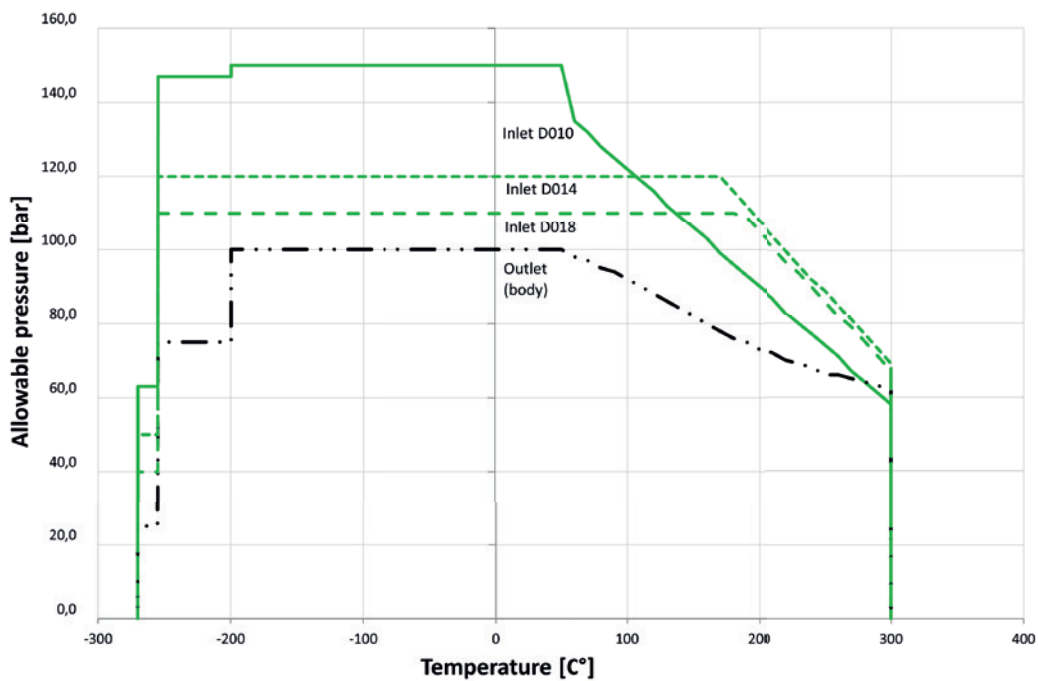
- Saturated steam in kg/h
- Air in m³/h at 0°C and 1013,25 mbar
- Water in kg/h at 20°C

Type 06850 + 06855 - VESPEL sealing plate

Set pressure in bar (g)	GW 1/2, 3/4 & 1			GW 3/4 & 1			GW 1, 1-1/4 & 1-1/2		
	d ₀ in mm 10.0			d ₀ in mm 14.0			d ₀ in mm 18.0		
	A ₀ in mm ² 78.5			A ₀ in mm ² 153.94			A ₀ in mm ² 254.0		
0.5	-	56	2075	-	96	3035	-	152	5017
1.0	-	88	2851	-	146	4110	-	241	6794
2.0	-	142	4033	-	235	5812	-	406	9608
3.0	-	194	4939	-	317	7118	-	569	11767
4.0	-	243	5703	-	398	8220	-	714	13588
5.0	-	293	6377	-	480	9190	-	861	15192
6.0	-	343	6985	-	561	10067	-	1007	16642
7.0	-	393	7545	-	642	10874	-	1152	17975
8.0	-	444	8066	-	725	11625	-	1302	19216
9.0	-	494	8555	-	806	12330	-	1448	20382
10.0	-	544	9018	-	890	12997	-	1597	21485
15.0	-	794	11045	-	1297	15590	-	2328	26298
20.0	-	1053	12754	-	1721	18013	-	3089	30384
30.0	-	1572	15620	-	2568	22061	-	4609	37213
40.0	-	2098	18036	-	3427	25747	-	6152	42970
45.0	-	2355	19131	-	3846	27019	-	6903	45577
50.0	-	2633	20165	-	4301	28481	-	7720	-
60.0	-	3175	22090	-	5186	-	-	9307	-
65.0	-	3435	22992	-	5611	-	-	10071	-
70.0	-	3723	-	-	6081	-	-	10913	-
80.0	-	4276	-	-	6985	-	-	12536	-
90.0	-	4835	-	-	7897	-	-	14174	-
100.0	-	5396	-	-	8814	-	-	15819	-
110.0	-	5931	-	-	9687	-	-	17387	-
120.0	-	6512	-	-	10637	-	-	-	-
140.0	-	7642	-	-	-	-	-	-	-
150.0	-	8184	-	-	-	-	-	-	-

Product Specifications
 Type 06850 and Type 06855

Maximum allowable set pressure safety valve type 0685X



Product Specifications

Type 06850 and Type 06855

Discharge capacities

! Calculation of flow rate acc. to AD2000-Merkblatt A2 / DIN EN ISO 4126-1

The capacity indicated below is for a fully opened valve.

Medium

Saturated steam in kg/h

Air in m³/h at 0°C and 1013,25 mbar

Water in kg/h at 20°C

Type 06850 + 06855 - O-ring sealing

Set pressure in bar (g)	GW 1/2, 3/4 & 1			GW 3/4 & 1			GW 1, 1-1/4 & 1-1/2		
	d ₀ in mm 10.0			d ₀ in mm 14.0			d ₀ in mm 18.0		
	A ₀ in mm ² 78.5			A ₀ in mm ² 153.9			A ₀ in mm ² 254.0		
3.0	-	194	4431	-	317	7688	-	570	12003
4.0	-	244	5117	-	398	8878	-	715	13860
5.0	-	294	5721	-	480	9926	-	862	15496
6.0	-	344	6267	-	561	10873	-	1007	16975
7.0	-	393	6769	-	642	11744	-	1153	18335
8.0	-	444	7236	-	726	12555	-	1302	19601
9.0	-	494	7675	-	807	13317	-	1448	20790
10.0	-	545	8090	-	890	14037	-	1598	21915
15.0	-	794	9908	-	1298	17192	-	2329	26840
20.0	-	1054	11441	-	1721	19851	-	3089	30992
30.0	-	1572	14012	-	2568	24313	-	4609	37958
40.0	-	2099	16180	-	3428	28074	-	6152	43830
50.0	-	2634	18090	-	4302	31388	-	7720	49003
60.0	-	3175	19817	-	5186	34384	-	9308	53680
70.0	-	3723	21404	-	6081	37138	-	10914	57981
80.0	-	4277	22882	-	6985	39703	-	12537	61985
90.0	-	4835	24270	-	7898	42111	-	14174	65745
100.0	-	5397	25583	-	8814	44389	-	15820	69301
110.0	-	5931	26832	-	9688	46555	-	17387	72684
120.0	-	6513	28025	-	10637	48626	-	-	-
140.0	-	7642	30270	-	12482	52522	-	-	-
150.0	-	8184	31333	-	13368	54365	-	-	-
160.0	-	8758	32360	-	14305	56148	-	-	-
180.0	-	9847	34323	-	16083	59554	-	-	-
200.0	-	10898	36180	-	17801	62775	-	-	-
220.0	-	11931	37946	-	-	-	-	-	-
240.0	-	12983	39633	-	-	-	-	-	-
250.0	-	13522	40451	-	-	-	-	-	-
240.0	-	12983	44181	-	-	-	-	-	-
250.0	-	13522	45092	-	-	-	-	-	-