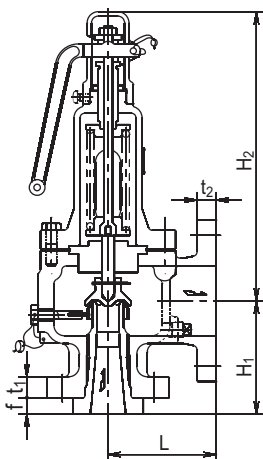
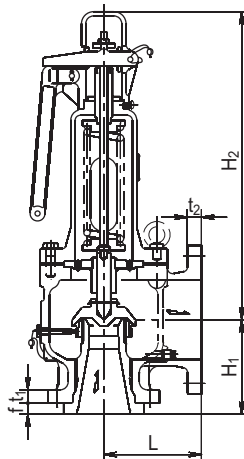
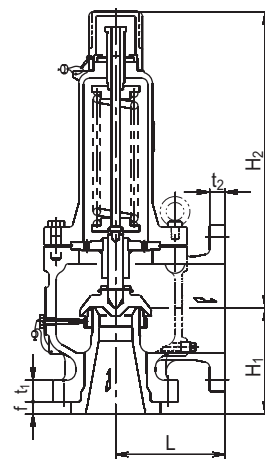


**Cast iron
10K**

Type RPN6B Full Bore Safety Valves & Safety Relief Valves

- Full bore type safety relief valve
- For large flow rate


 With lever opened
Size25-80

 With lever opened
Size100-200


Non-lever closed

4
Safety Valves & Safety Relief Valves

Specifications

Spring case form	With lever opened	Non-lever closed
Fluid	Steam and air	Steam, air, water, non-corrosive gas and liquid
Pressure	Set : 0.05 – 1.0 MPa (back pressure : atmospheric)	
Temperature	0 – 220℃	0 – 205℃
Material	Body	Cast iron
	Valve seat	Stainless cast steel stellited
	Valve disc	Stainless cast steel stellited
	Stem	Stainless steel
	Adjusting spring	Spring wire, piano wire
	Spring case	Cast iron
	Cover	Cast iron
	Lever	Cast iron
Adjusting ring	Bronze and stainless cast steel	

Dimensions and weights

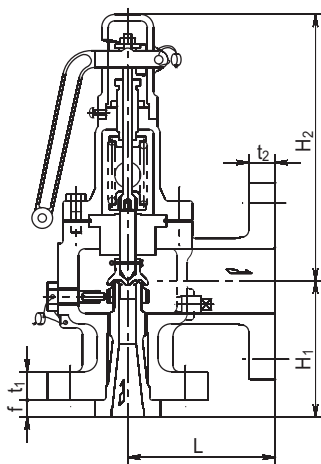
(mm, kg)

Size Inlet×Outlet	Orifice	L	H ₁	Height		Inlet flange			Outlet flange		Weight (Non-lever)	
				With lever H ₂	Non-lever H ₂	Thickness t ₁	f	Standard	Thickness t ₂	Standard		
25×50	E	114	105	206	178	22	13	JIS 10K	20	JIS10KFF	11	
40×50	F	121	124	251	223	24	19		20		15	
40×65	G	121	124	251	223	24	19		22		17	
40×80	H	124	130	332	295	24	19		22		23	
50×80	J	124	136	332	295	26	21		22		25	
80×100	K	165	156	427	378	32	21		24		39	
80×100	L	165	156	427	378	32	21		24		43	
100×150	M	184	178	580	500	36	21		26		81	
100×150	N	210	197	580	500	36	21		26		81	
100×150	P	229	181	660	580	36	21		26		99	
150×200	Q	241	240	857	743	42	21		26		187	
150×200	R	241	240	857	743	42	21		26		197	
200×250	T	279	276	1094	981	46	21		JIS 16K		30	357

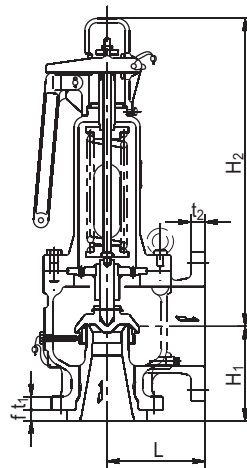
Cast steel,
 Stainless steel
 10K 20K

Type RPN6B Full Bore Safety Valves & Safety Relief Valves

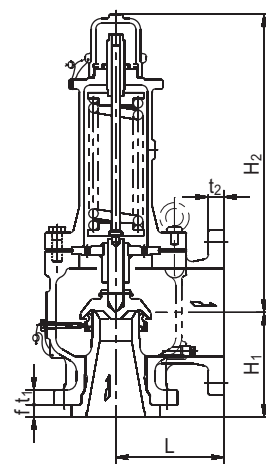
- Full bore type safety relief valve
- For large flow rate



With lever opened
 Size25-80



With lever opened
 Size100-200



Non-lever closed

4

Safety Valves & Safety Relief Valves

Specifications

Spring case form	With lever opened	Non-lever closed		
Fluid	Steam and air	Steam, air, water, non-corrosive gas and liquid		
Pressure	Set : 0.05-2.0 MPa (back pressure : atmospheric)			
Temperature	0-300°C	-5-205°C	-30-205°C	
Material	Body	Cast steel	Stainless cast steel	
	Valve seat	Stainless cast steel stellited		
	Valve disc	Stainless cast steel stellited		
	Stem	Stainless steel		
	Adjusting spring	Spring wire, piano wire		Stainless steel
	Spring case	Spherical graphite cast iron	Mild steel ,cast steel	Stainless steel
	Cover	Cast iron	Stainless steel, cast steel or mild steel	Stainless steel
	Lever	Stainless steel		
Adjusting ring	Stainless steel			

Dimensions and weights

(mm, kg)

Size Inlet×Outlet	Orifice	L	H ₁	Height		Inlet flange			Outlet flange		Weight (Non-lever)
				With lever H ₂	Non-lever H ₂	Thickness t ₁	f	Standard	Thickness t ₂	Standard	
25×50	E	114	105	206	178	22	13	JIS 10K JIS 20K	20.5	JIS10KFF	11
40×50	F	121	124	251	223	24	19		20.5		15
40×65	G	121	124	251	223	18.5	19		23.5		17
40×80	H	124	130	332	295	18.5	19		25		23
50×80	J	124	136	332	295	20.5	21		25		25
80×100	K	162	156	427	386	25	21		25		39
80×100	L	162	156	427	386	25	21		25		43
100×150	M	184	178	580	507	25	21		26.5		81
100×150	N	210	197	580	507	25	21		26.5		81
100×150	P	229	181	660	587	32	21		26.5		99
150×200	Q	241	240	857	753	36	21	JIS 10K	30	178	
150×200	R	241	240	857	753	36	21		30	178	
150×200	Q	241	240	857	753	42	21	JIS 20K	30	187	
150×250	R	267	240	1050	935	42	21		30	270	

Type RPN6B Full Bore Safety Valve & Safety Relief Valves

Capacity of RPN6B safety relief valve (Fluid : saturated steam)

(kg/h)

Size		25×50	40×50	40×65	40×80	50×80	80×100		100×150			150×200		150×250	200×250
Orifice		E	F	G	H	J	K	L	M	N	P	Q	R	R	T
Set pressure (MPa·G)	Throat area A (mm ²)	126.6	198.5	326.8	506.7	834.6	1188	1847	2324	2808	4116.8	7133	10330		16780
	coefficient C														
0.1	1.000	113	178	293	454	749	1066	1657	2085	2520	3694	6401	9270		15059
0.2	1.000	165	259	426	661	1089	1550	2411	3033	3665	5373	9311	13484		21904
0.3	1.000	222	348	573	888	1463	2083	3239	4076	4925	7221	12511	18119		29433
0.4	1.003	279	438	722	1119	1843	2624	4080	5134	6204	9095	15759	22823		37074
0.5	0.999	335	525	865	1342	2210	3146	4892	6156	7438	10904	18894	27362		44448
0.6	0.995	390	612	1008	1563	2574	3664	5697	7168	8662	12699	22003	31865		51762
0.7	0.991	445	698	1149	1782	2935	4178	6495	8173	9875	14478	25087	36331		59015
0.8	0.987	499	783	1289	1999	3293	4687	7287	9169	11079	16243	28144	40759		66209
0.9	0.985	554	869	1431	2219	3655	5203	8089	10178	12298	18030	31240	45242		73491
1.0	0.983	609	955	1572	2438	4016	5716	8887	11182	13511	19809	34323	49707		80744
1.1	0.980	663	1039	1711	2653	4370	6221	9672	12170	14705	21559	37355		54098	
1.2	0.978	717	1124	1851	2870	4728	6730	10463	13165	15907	23322	40409		58521	
1.3	0.976	771	1209	1990	3086	5083	7236	11251	14156	17104	25077	43450		62925	
1.4	0.975	825	1294	2131	3305	5443	7749	12047	15158	18315	26852	46527		67380	
1.5	0.974	880	1380	2272	3523	5803	8260	12842	16159	19524	28624	49596		71826	
1.6	0.973	934	1465	2412	3740	6161	8770	13635	17157	20730	30392	52660		76262	
1.7	0.972	988	1550	2552	3957	6519	9279	14427	18153	21933	32157	55717		80689	
1.8	0.971	1043	1635	2692	4174	6876	9787	15217	19147	23134	33917	58767		85107	
1.9	0.970	1097	1720	2831	4390	7232	10294	16005	20138	24333	35674	61811		89516	
2.0	0.970	1152	1806	2974	4611	7595	10811	16809	21150	25555	37466	64916		94012	

Capacity of RPN6B safety relief valve (Fluid : air 20°C)

(kg/h)

Size		25×50	40×50	40×65	40×80	50×80	80×100		100×150			150×200		150×250	200×250
Orifice		E	F	G	H	J	K	L	M	N	P	Q	R	R	T
Set pressure (MPa·G)	Throat area A (mm ²)	126.6	198.5	326.8	506.7	834.6	1188	1847	2324	2808	4116.8	7133	10330		16780
	coefficient C														
0.1		180	283	466	772	1190	1694	2634	3314	4004	5871	10173	14732		23932
0.2		262	411	677	1051	1731	2464	3831	4821	5825	8540	14797	21429		34810
0.3		352	553	910	1412	2326	3311	5148	6478	7827	11476	19884	28796		46776
0.4		443	694	1144	1773	2921	4158	6465	8135	9830	14411	24970	36162		58742
0.5		533	836	1377	2135	3516	5006	7783	9793	11832	17347	30057	43529		70708
0.6		623	978	1610	2496	4112	5853	9100	11450	13834	20283	35144	50895		82674
0.7		714	1119	1843	2857	4707	6700	10417	13107	15837	23219	40230	58262		94640
0.8		804	1261	2076	3219	5302	7547	11734	14764	17839	26154	45317	65628		106606
0.9		894	1402	2309	3580	5897	8394	13051	16422	19842	29090	50404	72995		118572
1.0		984	1544	2542	3941	6492	9241	14368	18079	21844	32026	55490	80361		130539
1.1		1075	1685	2775	4303	7087	10089	15685	19736	23847	34962	60577		87728	
1.2		1165	1827	3008	4664	7683	10936	17002	21393	25849	37897	65664		95094	
1.3		1255	1968	3241	5025	8278	11783	18320	23051	27851	40833	70750		102461	
1.4		1345	2110	3474	5387	8873	12630	19637	24708	29854	43769	75837		109827	
1.5		1436	2251	3707	5748	9468	13477	20954	26365	31856	46705	80924		117194	
1.6		1526	2393	3940	6109	10063	14325	22271	28023	33859	49640	86010		124560	
1.7		1616	2535	4173	6471	10658	15172	23588	29680	35861	52576	91097		131927	
1.8		1707	2676	4406	6832	11254	16019	24905	31337	37864	55512	96184		139293	
1.9		1797	2818	4639	7193	11849	16866	26222	32994	39866	58448	101270		146660	
2.0		1887	2959	4872	7555	12444	17713	27539	34652	41868	61383	106357		154026	

Type RPN6B Full Bore Safety Valves & Safety Relief Valves

Capacity of RPN6B safety relief valve (Fluid : water)

(kg/h)

Orifice Throat area A (mm ²) Set pressure (MPa·G)	Size		25×50	40×50	40×65	40×80	50×80	80×100		100×150			150×200		150×250	200×250
			E	F	G	H	J	K	L	M	N	P	Q	R	R	T
			126.6	198.5	326.8	506.7	834.6	1188	1847	2324	2808	4116.8	7133	10330		16780
0.1	4323	6779	11161	17305	28504	40574	63081	79372	95902	140602	243615	352803		573091		
0.2	6114	9587	15784	24473	40311	57380	89210	112249	135626	198841	344523	498939		810474		
0.3	7489	11742	19331	29973	49370	70276	109259	137476	166107	243530	421953	611072		992623		
0.4	8647	13558	22322	34610	57008	81148	126162	158744	191804	281204	487230	705606		1146183		
0.5	9668	15159	24957	38696	63737	90726	141053	177481	214444	314395	544740	788891		1281471		
0.6	10591	16606	27339	42389	69821	99385	154516	194421	234911	344403	596732	864187		1403782		
0.7	11439	17936	29529	45785	75415	107348	166896	209999	253733	371998	644545	933429		1516258		
0.8	12229	19175	31568	48947	80622	114760	178420	224498	271252	397862	689047	997878		1620948		
0.9	12971	20338	33483	51916	85512	121722	189243	238116	287707	421806	730845	1058409		1719274		
1.0	13673	21438	35295	54724	90138	128306	199479	250996	303269	444622	770378	1115661		1812274		
1.1	14340	22484	37017	57395	94538	134568	209216	263247	318072	466324	807980		1170115			
1.2	14978	23484	38663	59947	98741	140552	218519	274953	332215	487060	843907		1222145			
1.3	15589	24443	40242	62395	102773	146291	227442	286180	345780	506948	878367		1272049			
1.4	16178	25366	41761	64751	106653	151814	236027	296983	358833	526085	911524		1320068			
1.5	16746	26256	43227	67023	110396	157142	244311	307407	371428	544549	943517		1366400			
1.6	17295	27117	44645	69221	114017	162296	252324	317488	383609	562408	974460		1411212			
1.7	17827	27952	46019	71352	117526	167291	260089	327259	395415	579717	1004451		1454644			
1.8	18344	28762	47353	73420	120933	172141	267630	336747	406879	596524	1033571		1496817			
1.9	18847	29550	48650	75432	124247	176858	274963	345975	418028	612870	1061893		1537833			
2.0	19336	30318	49914	77392	127475	181452	282107	354963	428888	628791	1089480		1577783			

Remark : Except for G (sp.gr.) = 1, the flow rate should be multiplied by \sqrt{G} .