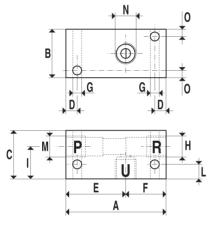
Generator	Max. vacuum	ator level pressure				Vacuum air tiow (NU/c) at dittoront vacuum lovoic (-KPa)							
Item No.	- KPa	bar (g)	0	10	20	30	40	50	60	70		80	90
15 01 10	80	6	0.638	0.605	0.534	0.396	0.300	0.193	0.117	0.08	36		
15 02 10	80	6	0.638	0.605	0.534	0.396	0.300	0.193	0.117	0.08			
15 03 10	85	6	1.388	1.316	1.163	0.864	0.656	0.423	0.257	0.19		0.019	
15 04 10	85	6	1.388	1.316	1.163	0.864	0.656	0.423	0.257	0.19		0.019	
PVP 1	87	5	0.277	0.264	0.232	0.175	0.129	0.084	0.054	0.03		0.004	
PVP 2	85	4	0.361	0.344	0.302	0.227	0.168	0.109	0.071	0.04		0.005	
PVP 2 M PVP 3	85 85	4 4	0.361 0.500	0.344 0.476	0.302 0.418	0.227 0.314	0.168 0.233	0.109 0.151	0.071 0.098	0.04 0.06).005).007	
PVP 7	85	6	2.277	2.159	1.908	1.417	1.076	0.694	0.090	0.00).007).031	
VI 7 VI 3	85	6	0.972	0.789	0.591	0.354	0.261	0.094	0.422	0.0).051	
л 3 Л 7	85	6	1.944	1.578	1.182	0.334	0.522	0.100	0.125	0.00).104	
л і Л 10	85	6	2.916	2.366	1.774	1.063	0.783	0.560	0.375	0.26		0.156	
VI 14	85	6	3.888	3.155	2.365	1.418	1.045	0.746	0.500	0.34).208	
NVG 3	85	6	0.972	0.789	0.591	0.354	0.261	0.186	0.125	0.08		0.052	
AVG 7	85	6	1.944	1.578	1.182	0.709	0.522	0.373	0.250	0.17		0.104	
/IVG 10	85	6	2.916	2.366	1.774	1.063	0.783	0.560	0.375	0.26	62 (0.156	
/IVG 14	85	6	3.888	3.155	2.365	1.418	1.045	0.746	0.500	0.34	19 ().208	
av 1	90	5	0.250	0.237	0.209	0.155	0.118	0.076	0.046	0.03	34 (0.003	
AV 2	90	5	0.250	0.237	0.209	0.155	0.118	0.076	0.046	0.03	34 (0.003	
iV 3	90	5	0.250	0.237	0.209	0.155	0.118	0.076	0.046	0.03	34 (0.003	
VP 12 M	90	6	4.16	2.95	1.93	0.97	0.69	0.55	0.41	0.2	7	0.16	
VP 25 M	90	6	6.94	5.25	3.40	1.61	1.15	0.92	0.69	0.4		0.27	
VP 40 M	90	6	11.11	7.93	5.29	2.64	1.89	1.51	1.13	0.7		0.45	
VP 70 M	90	6	18.88	13.49	8.99	4.49	3.21	2.57	1.93	1.3		0.77	
VP 100 M	90	6	27.22	19.44	12.96	6.48	4.63	3.70	2.78	1.9		1.11	
VP 140 M	90	6	41.66	29.76	19.84	9.92	7.08	5.67	4.26	2.9		1.70	
VP 170 M	90	6	47.22	33.73	22.48	11.24	8.03	6.42	4.83	3.3		1.93	
VP 200 M	90	6	55.00	39.28	26.19	13.09	9.35	7.48	5.62	3.9		2.25	
VP 250 M	90	6	69.44	49.60	33.06	16.53	11.80	9.44	7.10	4.9		2.84	
VP 300 M	90	6	83.33	59.52	39.68	19.84	14.17	11.33	8.52	5.9		3.40	
VP 25 MD	90	6	11.11	7.77	5.22	2.58	1.85	1.47	1.11	0.7		0.44	
PVP 35 MD PVP 50 MD	90	6 6	13.88	9.71	6.52	3.23	2.31 2.59	1.84	1.38	0.9		0.55	
PVP 50 MD PVP 60 MD	90 90	6	15.55 21.94	11.78 15.35	7.30 10.20	3.62 5.12	2.59	2.06 2.92	1.55 2.19	1.0 1.5		0.62 0.87	
VP 75 MD	90	6	24.72	17.30	11.49	5.77	4.11	3.30	2.15	1.5		0.07	
VP 150 MD	90	6	50.00	35.00	23.33	11.66	8.33	6.66	5.00	3.3		2.00	
VP 300 MD				68.05	45.36	22.68	16.19	12.96	9.72	6.4		3.88	
												0.00	
	90 90	6 6	97.22 141.66							94	4	5 66	
PVP 450 MD PVP 600 MD	90 90 90	6 6	97.22 141.66 183.33	99.16 128.33	66.11 85.55	22.00 33.05 42.77	23.61 30.55	18.88 24.44	14.16 18.33	9.4 12.2		5.66 7.33	
PVP 450 MD	90 90	6 6	141.66 183.33	99.16	66.11	33.05	23.61	18.88	14.16				
PVP 450 MD PVP 600 MD	90 90 Max. vacuum	6 6 Supply	141.66 183.33 Air	99.16 128.33	66.11 85.55	33.05	23.61 30.55	18.88 24.44	14.16 18.33	12.2	22	7.33	
OVP 450 MD OVP 600 MD Generator	90 90 Max. vacuum level	6 Supply pressure	141.66 183.33 Air consumption	99.16 128.33 Eva (66.11 85.55 cuation t	33.05 42.77 ime (ms/l	23.61 30.55 = S/CUM	18.88 24.44) at the d	14.16 18.33 I ifferent	12.2 vacuu	22 m leve	7.33 els (-Kl	 Pa)
PVP 450 MD PVP 600 MD	90 90 Max. vacuum	6 6 Supply	141.66 183.33 Air	99.16 128.33	66.11 85.55	33.05 42.77	23.61 30.55	18.88 24.44	14.16 18.33	12.2	22	7.33	
PVP 450 MD PVP 600 MD Generator Item No.	90 90 Max. vacuum level	6 6 Supply pressure bar (g) 6	141.66 183.33 Air consumption	99.16 128.33 Eva (66.11 85.55 cuation t	33.05 42.77 ime (ms/l	23.61 30.55 = S/CUM	18.88 24.44) at the d	14.16 18.33	12.2 vacuu	22 m leve	7.33 els (-Kl	 Pa)
PVP 450 MD PVP 600 MD Generator Item No. 5 01 10 5 02 10	90 90 Max. vacuum level - KPa 80 80	6 6 pressure bar (g) 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6	99.16 128.33 Evac 10 167 167	66.11 85.55 cuation t 20 334 334	33.05 42.77 ime (ms/l 30 568 568	23.61 30.55 = s/cum 40 874 874	18.88 24.44) at the d 50 1407 1407	14.16 18.33 Iifferent 60 1955 1955	12.2 vacuu 70 3270 3270	22 m leve 80 5918 5918	7.33 els (-Kl 85 	 Pa) 90
PVP 450 MD PVP 600 MD Generator Item No. 5 01 10 5 02 10	90 90 Max. vacuum level - KPa 80 80 85	6 6 Supply pressure bar (g) 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.6 1.8	99.16 128.33 Evac 10 167 167 77	66.11 85.55 cuation t 20 334 334 154	33.05 42.77 ime (ms/l 30 568 568 262	23.61 30.55 = s/cum 40 874 874 403	18.88 24.44) at the d 50 1407	14.16 18.33 Iifferent 60 1955 1955 903	12.2 vacuu 70 3270	22 m leve 80 5918	7.33 els (-Kl 85 	 Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 03 10 5 04 10	90 90 Max. vacuum level - KPa 80 80 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.6 1.8 1.8 1.8	99.16 128.33 Evac 10 167 167 77 77 77	66.11 85.55 cuation t 20 334 334 154 154	33.05 42.77 ime (ms/l 30 568 568 262 262 262	23.61 30.55 = s/cum 40 874 874 403 403	18.88 24.44) at the d 50 1407 1407 650 650	14.16 18.33 ifferent 60 1955 1955 903 903	12.2 vacuu 70 3270 3270 1510 1510	22 m leve 80 5918 5918 2737 2737	7.33 els (-Kl 85 3887 3887	 Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 03 10 5 03 10 5 04 10 VP 1	90 90 Max. vacuum level -KPa 80 80 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 5	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 1.8 0.6	99.16 128.33 Evac 10 167 167 77 77 379	66.11 85.55 cuation t 20 334 334 154 154 154 767	33.05 42.77 ime (ms/l 30 568 568 262 262 262 1304	23.61 30.55 = s/cum 40 874 874 403 403 1996	18.88 24.44) at the d 50 1407 1407 650 650 3213	14.16 18.33 ifferent 60 1955 1955 903 903 4467	12.2 vacuu 70 3270 3270 1510 1510 7460	22 m leve 80 5918 5918 2737 2737 13525	7.33 els (-Kl 85 3887 3887 19206	 Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 03 10 5 04 10 VP 1 VP 2	90 90 Max. vacuum level - KPa 80 80 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 5 4	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 1.8 0.6 0.9	99.16 128.33 Evac 10 167 167 77 77 379 296	66.11 85.55 cuation ti 20 334 334 154 154 154 767 599	33.05 42.77 ime (ms/l 30 568 568 262 262 1304 1018	23.61 30.55 = S/cum 40 874 874 403 403 1996 1559	18.88 24.44) at the d 50 1407 1407 650 650 3213 2510	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488	12.2 vacuu 70 3270 3270 1510 1510 7460 5826	22 m leve 80 5918 5918 2737 2737 13525 10563	7.33 els (-Kl 85 3887 3887 19206 15000	 Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 03 10 5 03 10 5 04 10 VP 1 VP 2 VP 2 VP 2 M	90 90 Max. vacuum level - KPa 80 80 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 5 4 4 4	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 1.8 0.6 0.9 0.9 0.9	99.16 128.33 Evac 10 167 167 77 77 379 296 296 296	66.11 85.55 cuation t 20 334 334 154 154 154 767 599 599	33.05 42.77 ime (ms/l 30 568 568 262 262 1304 1018 1018	23.61 30.55 = S/CUM 40 874 874 403 403 1996 1559 1559	18.88 24.44) at the d 50 1407 1407 650 650 650 3213 2510 2510	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 3488	12.2 vacuu 70 3270 3270 1510 1510 7460 5826 5826	22 m leve 80 5918 2737 2737 13525 10563 10563	7.33 els (-Kl 85 3887 3887 19206 15000 15000	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 03 10 5 04 10 VP 1 VP 2 VP 2 VP 2 VP 2 VP 3	90 90 Max. vacuum level - KPa 80 80 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 5 4 4 4 4	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 0.6 0.9 0.9 0.9 1.1	99.16 128.33 Evac 10 167 167 77 77 379 296 296 296 210	66.11 85.55 cuation t 20 334 334 154 154 767 599 599 425	33.05 42.77 ime (ms/l 30 568 568 568 262 262 262 1304 1018 1018 1018 723	23.61 30.55 = S/CUM 40 874 874 403 403 1996 1559 1559 1106	18.88 24.44) at the d 50 1407 1407 650 650 3213 22510 2510 2510 1780	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 3488 2475	12.2 vacuu 70 3270 3270 1510 1510 7460 5826 5826 4133	22 m leve 80 5918 5918 2737 2737 13525 10563 10563 7494	7.33 els (-Kl 85 3887 3887 19206 15000 15000 10642	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 03 10 5 04 10 VP 1 VP 2 VP 2 VP 2 VP 2 VP 3 VP 3 VP 7	90 90 Max. vacuum level - KPa 80 80 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 6 5 4 4 4 4 4 4 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 0.6 0.9 0.9 0.9 1.1 3.2	99.16 128.33 Evac 10 167 167 167 77 77 379 296 296 210 47	66.11 85.55 cuation t 20 334 334 154 154 767 599 599 425 95	33.05 42.77 ime (ms/l 30 568 568 262 262 262 1304 1018 723 161	23.61 30.55 = S/cum 40 874 874 874 403 1996 1559 11559 1106 247	18.88 24.44) at the d 50 1407 1407 650 650 3213 2510 2510 1780 397	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 3488 2475 552	12.2 vacuu 70 3270 3270 1510 1510 7460 5826 5826 4133 923	22 m leve 80 5918 5918 2737 2737 13525 10563 10563 7494 1673	7.33 els (-Kl 85 3887 3887 19206 15000 15000 15000 10642 2376	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 04 10 VP 1 VP 2 VP 2 VP 2 VP 2 VP 2 VP 3 VP 7 M 3	90 90 Max. vacuum level - KPa 80 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 6 5 4 4 4 4 4 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 0.6 0.9 0.9 0.9 1.1 3.2 0.9	99.16 128.33 Evac 10 167 167 167 77 77 379 296 296 210 47 110	66.11 85.55 cuation t 20 334 334 154 154 154 767 599 425 95 95 253	33.05 42.77 ime (ms/l 30 568 568 262 262 1304 1018 723 161 508	23.61 30.55 40 874 874 403 403 1996 1559 1559 1106 247 1001	18.88 24.44) at the d 50 1407 1407 650 650 3213 2510 2510 1780 397 1698	14.16 18.33 iifferent 60 1955 1955 903 4467 3488 3488 2475 552 2479	12.2 vacuu 70 3270 3270 1510 1510 7460 5826 5826 4133 923 4140	22 80 5918 5918 2737 2737 13525 10563 10563 7494 1673 7369	7.33 els (-Kl 85 3887 3887 19206 15000 15000 10642 2376 10464	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 03 10 5 04 10 VP 1 VP 2 VP 2 VP 2 VP 3 VP 7 A 3 A 7	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 6 5 4 4 4 4 4 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 0.6 0.9 0.9 0.9 1.1 3.2 0.9 1.1 3.2 0.9 1.8	99.16 128.33 Evac 10 167 77 77 379 296 296 210 47 110 55	66.11 85.55 20 334 334 154 154 767 599 425 95 253 126	33.05 42.77 ime (ms/l 30 568 568 262 262 1304 1018 1018 1018 1018 1018 1018 1018 10	23.61 30.55 = S/cum 40 874 403 403 1996 1559 1559 1559 1106 247 1001 500	18.88 24.44) at the d 50 1407 650 650 3213 2510 2510 2510 1780 397 1698 849	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 3488 2475 552 2479 1239	12.2 Vacuu 70 3270 3270 1510 1510 7460 5826 5826 4133 923 4140 2070	22 80 5918 5918 2737 2737 13525 10563 10563 7494 1673 7369 3684	7.33 els (-Kl 85 3887 3887 19206 15000 15000 10642 2376 10464 5232	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 03 10 90 5 04 10 90 VP 1 VP 2 VP 2 VP 3 VP 3 VP 3 A 3 A 7 A 10	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 5 4 4 4 4 4 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 1.8 1.8 0.6 0.9 0.9 1.1 3.2 0.9 1.1 3.2 0.9 1.8 2.4	99.16 128.33 Evac 10 167 77 77 379 296 296 296 210 47 110 55 36	66.11 85.55 20 334 154 154 154 767 599 599 425 95 253 126 83	33.05 42.77 ime (ms/l 30 568 262 262 1304 1018 1018 1018 1018 1018 1018 1018 10	23.61 30.55 = S/cum 40 874 403 403 1996 1559 1559 1559 1559 1106 247 1001 500 327	18.88 24.44) at the d 50 1407 1407 650 650 3213 2510 2510 2510 2510 1780 397 1698 849 555	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 3488 3488 2475 552 2479 1239 811	12.2 Vacuu 70 3270 3270 1510 1510 7460 5826 5826 4133 923 4140 2070 1355	22 m leve 80 5918 2737 2737 13525 10563 10563 7494 1673 7369 3684 2411	7.33 els (-Kl 85 3887 3887 19206 15000 15000 10642 2376 10464 5232 3424	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 03 10 5 04 10 VP 1 VP 2 VP 2 VP 2 VP 2 VP 3 VP 7 1 3 VP 7 1 1 7 1 1 7 1 1 1 1 1 1 1 1	90 90 Max. vacuum level - KPa 80 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 5 4 4 4 4 4 4 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 1.8 0.6 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2	99.16 128.33 Evac 10 167 167 77 77 379 296 296 296 210 47 110 55 36 27	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 154 599 599 425 95 253 126 83 62	33.05 42.77 ime (ms/l 30 568 568 262 262 262 262 262 1304 1018 1018 1018 1018 723 161 508 254 166 124	23.61 30.55 = \$/cum 40 874 874 403 403 1996 1559 11559 11559 1106 247 1001 500 327 245	18.88 24.44) at the d 50 1407 1407 650 650 650 650 2510 2510 2510 2510 1780 397 1698 849 555 416	14.16 18.33 iifferent 60 1955 1955 903 903 903 903 903 4467 3488 3488 24475 552 2479 1239 811 608	12.2 vacuu 70 3270 3270 1510 1510 7460 5826 5826 5826 4133 923 4140 2070 1355 1016	22 m leve 80 5918 5918 2737 2737 13525 10563 10563 7494 1673 7369 3684 2411 1808	7.33 els (-Kl 85 3887 3887 19206 15000 15000 10642 2376 10464 5232 3424 2568	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 03 10 5 04 10 VP 1 VP 2 VP 2 VP 2 VP 2 VP 3 VP 7 A 3 VP 7 A 3 VP 7 A 3 A 7 A 10 A 10 A 14 AVG 3	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 5 4 4 4 4 4 4 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 0.6 0.9 0.9 0.9 1.1 3.2 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9	99.16 128.33 Evac 10 167 167 77 77 379 296 296 210 47 110 55 36 27 110	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 154 99 599 425 95 95 95 253 126 83 62 253	33.05 42.77 ime (ms/l 30 568 568 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508	23.61 30.55 = S/Cum 40 874 874 403 403 1996 1559 1559 1559 1106 247 1001 500 327 245 1001	18.88 24.44) at the d 50 1407 1407 650 650 650 650 3213 2510 2510 2510 2510 1780 397 1698 849 555 416 1698	14.16 18.33 iifferent 60 1955 1955 903 903 903 4467 3488 3488 2475 552 2479 1239 811 608 2479	12.2 Vacuu 70 3270 1510 1510 7460 5826 5826 4133 923 4140 2070 1355 1016 4140	22 80 5918 5918 2737 2737 13525 10563 10563 10563 7494 1673 7369 3684 2411 1808 7369	7.33 els (-Kl 85 3887 3887 19206 15000 15000 10642 2376 10464 5232 3424 2568 10464	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 04 10 VP 1 VP 2 VP 2 VP 2 VP 2 VP 3 VP 7 A 3 A 7 A 10 A 14 NVG 3 NVG 7	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 5 4 4 4 4 4 4 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 0.6 0.9 0.9 0.9 1.1 3.2 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8	99.16 128.33 Evac 10 167 167 77 77 379 296 296 296 296 296 210 47 110 55 36 27 110 55	66.11 85.55 cuation t 20 334 334 154 154 154 154 767 599 599 425 95 253 126 83 62 253 126	33.05 42.77 ime (ms/l 30 568 568 262 262 262 1304 1018 1018 1018 723 161 508 254 166 124 508 254	23.61 30.55 40 874 874 403 403 1996 1559 1559 1559 1106 247 1001 500	18.88 24.44) at the d 50 1407 1407 650 650 650 650 3213 2510 1780 397 1698 849 555 416 1698 849	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239	12.2 Vacuu 70 3270 3270 1510 7460 5826 5826 4133 923 4140 2070 1355 1016 4140 2070	22 m leve 80 5918 5918 2737 2737 13525 10563 10563 10563 7494 1673 7369 3684 2411 1808 7369 3684	7.33 els (-Kl 85 3887 3887 19206 15000 15000 15000 10642 2376 10464 5232 3424 2568 10464 5232	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 04 10 VP 1 VP 2 VP 2 VP 2 VP 2 VP 3 VP 7 A 3 A 7 A 10 A 10 A 14 A 7 A 10 A 10 A 10 A 10 A 10 A 10 A 7 A 10 A 10 A 10 A 7 A 10 A 10 A 7 A 10 A 10 A 7 A 7 A 10 A 7 A 7 A 10 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7 A 7	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 5 4 4 4 4 4 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 0.6 0.9 0.9 0.9 1.1 3.2 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4	99.16 128.33 Evac 10 167 167 77 77 379 296 296 210 47 110 55 36 27 110	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 154 99 599 425 95 95 95 253 126 83 62 253	33.05 42.77 ime (ms/l 30 568 568 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508	23.61 30.55 = S/Cum 40 874 874 403 403 1996 1559 1559 1559 1106 247 1001 500 327 245 1001	18.88 24.44) at the d 50 1407 1407 650 650 3213 2510 2510 2510 1780 397 1698 849 555 416 1698 849 555	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 3488 3488 2475 552 2479 1239 811 608 2479 1239 811	12.2 Vacuut 70 3270 1510 1510 7460 5826 5826 5826 4133 923 4140 2070 1355 1016 4140 2070 1355	22 80 5918 5918 2737 2737 13525 10563 10563 10563 7494 1673 7369 3684 2411 1808 7369	7.33 els (-Kl 85 3887 3887 19206 15000 15000 10642 2376 10464 5232 3424 2568 10464	Pa) 90
PVP 450 MD VVP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 04 10 900 VVP 2 VVP 2 VVP 2 VVP 2 VVP 3 VVP 7 A 3 A 7 A 10 A 14 AVG 7 AVG 10 AVG 10 AVG 10	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 5 4 4 4 4 4 4 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 0.6 0.9 0.9 0.9 1.1 3.2 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8	99.16 128.33 Evac 10 167 167 77 77 379 296 299 299 210 47 110 55 36	66.11 85.55 cuation t 20 334 334 154 154 154 767 599 425 95 253 126 83 62 253 126 83 62 83	33.05 42.77 ime (ms/l 30 568 568 262 262 262 1304 1018 723 161 508 254 166 124 508 254 166	23.61 30.55 = S/cum 40 874 874 403 403 1996 1559 1559 1106 247 1001 500 327 245 1001 500 327	18.88 24.44) at the d 50 1407 1407 650 650 650 650 3213 2510 1780 397 1698 849 555 416 1698 849	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239	12.2 Vacuu 70 3270 3270 1510 7460 5826 5826 4133 923 4140 2070 1355 1016 4140 2070	22 80 5918 5918 2737 13525 10563 10563 7494 1673 7369 3684 2411 808 7369 3684 2411	7.33 85 -	Pa) 90
PVP 450 MD VVP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 04 10 90 VVP 2 VVP 2 VVP 2 VVP 3 VVP 7 A 3 AVP 10 A 10 A 7 A 10 A 10 AVG 3 AVG 1 AVG 1	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 6 bar (g) 6 6 6 6 6 6 6 5 4 4 4 4 4 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 1.8 0.6 0.9 0.9 1.1 3.2 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2	99.16 128.33 Evac 10 167 77 77 379 296 296 296 210 47 110 55 36 27 110 55 36 27	66.11 85.55 20 334 334 154 154 154 767 599 425 95 253 126 83 62 253 126 83 62 253 126 83 62	33.05 42.77 ime (ms/l 30 568 568 262 262 1304 1018 723 161 508 254 166 124 508 254 166 124	23.61 30.55 = S/cum 40 874 874 403 403 1996 1559 1106 247 1001 500 327 245 1001 500 327 245	18.88 24.44) at the d 50 1407 650 650 3213 2510 2510 2510 2510 2510 397 1698 849 555 416 1698 849 555 416	14.16 18.33 iifferent 60 1955 903 903 4467 3488 24467 3488 24467 552 2479 1239 811 608 2479 1239 811 608	12.2 vacuu 70 3270 1510 1510 7460 5826 5826 5826 4133 923 4140 2070 1355 1016	22 80 5918 5918 5918 2737 2737 13525 10563 10563 7494 1673 7369 3684 2411 1808	7.33 85 85 3887 19206 15000 10642 2376 10464 5232 3424 2568	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 04 10 5 04 10 VVP 2 VVP 2 VVP 2 VVP 3 VVP 7 A 3 A 10 A 1 A 1 A 1	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 5 4 4 4 4 4 4 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 1.8 0.6 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4	99.16 128.33 Evac 10 167 167 77 77 379 296 296 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 154 599 425 95 253 126 83 62 253 126 83 62 83 62 83 62 836	33.05 42.77 30 568 568 262 262 262 262 262 262 262 1304 1018 1018 1018 723 161 508 254 166 124 508 254 166 124 1455	23.61 30.55 40 874 874 403 403 1996 1559 11559 11559 1106 247 1001 500 327 245 1001 500 327 245 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 650 2510 2510 2510 2510 2510 2510 1780 397 1698 849 555 416 1698 849 555 416 3608	14.16 18.33 iifferent 60 1955 1955 903 903 903 4467 3488 3488 24475 552 2479 1239 811 608 2479 1239 811 608 5015	12.2 vacuu 70 3270 1510 1510 7460 5826 5826 5826 5826 4133 923 4140 2070 1355 1016 4140 2070 1355 1016 8375	22 80 5918 5918 2737 2737 13525 10563 10563 10563 7494 1673 7369 3684 2411 1808 7369 3684 2411 1808 15176	7.33 85 3887 19206 15000 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 	Pa) 90 555847
PVP 450 MD VP 600 MD Generator Item No. 501 10 502 10 502 10 503 10 504 10 504 10 VVP 2 VVP 2 VVP 2 VVP 3 VVP 7 A 3 A 7 A 10 A 14 AVG 7 A 10 A 14 AVG 1 AVG 1 SV 2 SV 3 AVG 1 SV 2 SV 3 VP 12	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 8 Supply pressure bar (g) 6 6 6 6 6 5 4 4 4 4 4 4 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 0.9 0.9 0.9 1.1 3.2 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9	99.16 128.33 Evac 10 167 167 77 77 379 296 210 47 110 55 36 27 110 55 36 27 428 428	66.11 85.55 cuation t 20 334 334 154 154 154 154 767 599 425 95 95 95 95 95 253 126 83 62 253 126 83 62 856 856	33.05 42.77 30 568 568 262 262 262 262 1304 1018 1018 1018 1018 723 161 508 254 166 124 508 254 166 124 1455 1455	23.61 30.55 = S/Cum 40 874 874 403 403 1996 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 3213 2510 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 3608 3608	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2015 5015 5015	12.2 vacuu 70 3270 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 8375 8375 8375 1425.9	22 80 5918 5918 5918 2737 2737 13525 10563 7494 1673 7369 3684 2411 1808 7369 3684 2411 1808 15076 15176	7.33 85 3887 19206 15000 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568	Pa) 90
PVP 450 MD VP 600 MD Generator Item No. 15 01 10 15 02 10 15 02 10 10 15 04 10 10 15 04 10 20 200 2 M 200 2 M 201 3 10 401 7 3 401 7 40 401 4 40 401 4 40 402 7 40 403 4 40 404 7 40 404 7 40 404 7 40 404 7 40 404 7 40 404 7 40 404 7 40 404 7 40 404 7 40 404 7 40 404 7 40 405 4 40 404 7 40 405 4 40 405 4 40 405 4 40 405 4	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 5 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 1.8 0.9 0.9 1.1 3.2 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.4 0.4 1.6 3.2 0.4 0.4 1.6 3.2 0.4 0.4 1.6 3.2 0.4 0.4 1.6 3.2 0.4 0.4 1.6 3.2 0.4 0.4 1.6 3.2 0.4 0.4 1.6 3.2 0.4 0.4 1.6 3.2 0.4 0.4 1.6 1.6 1.6 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8	99.16 128.33 Evac 10 167 167 77 77 379 296 299 299 299 210 47 110 55 36 27 110 55 36 27 428 428 428 428 21.3 12.0	66.11 85.55 cuation t 20 334 334 154 154 154 767 599 425 95 253 126 83 62 253 126 83 62 836 836 856 856 856 856 856 856 856 856 856 85	33.05 42.77 ime (ms/l 30 568 568 262 262 262 1304 1018 723 161 508 254 166 124 166 124 166 124 1455 1455 1455 1455	23.61 30.55 = S/Cum 40 874 874 403 403 1996 1559 1559 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 3213 2510 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 3608 3608 3608 3519.9 310.8	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 3488 3488 2475 552 2479 1239 811 608 2479 1239 811 608 5015 5015 5015 5015 804.8 478.2	12.2 vacuu 70 3270 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 8375 8375 8375 8375 1425.9 802.0	22 80 5918 5918 2737 2737 13525 10563 10573 10563 10563 10573 10563 10573 10563 10573 10563 10573 10563 10573 10563 10573 10563 10573 10563 10573 10563 10573 10563 10573 10563 10573 10563 10573 10573 10563 10575 10575 105	7.33 els (-KI 85 3887 3887 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 10464 5232 3424 2568	90 90 55847 55847 55847 55847 55847 55847 55847 55847
PVP 450 MD VVP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 04 10 90 VVP 2 VVP 2 VVP 2 VVP 3 VVP 7 A 3 AVF 7 A 10 A 7 A 10 A 10 A 10 A 12 AVG 1 AVG 1 AVG 1 AV 1 AVG 3 AVG 3 AVF 2 AV 1 AV 2 AV 1 AV 1 AV 2 AV 3 AVF 2 AV 3 <tr< td=""><td>90 90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85</td><td>6 6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6</td><td>141.66 183.33 Air consumption NI/s 1.6 1.8 0.6 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2</td><td>99.16 128.33 Evac 10 167 167 77 77 379 296 296 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 21.3 12.0 8.1</td><td>66.11 85.55 cuation t 20 334 334 154 154 154 767 599 425 95 253 126 83 62 253 126 83 62 253 126 83 62 83 62 83 62 83 62 83 62 856 856 856 856 856 856 856 856</td><td>33.05 42.77 30 568 568 262 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 1455 1455</td><td>23.61 30.55 40 874 874 403 403 1996 1559 11559 11559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241</td><td>18.88 24.44) at the d 50 1407 1407 650 650 650 2510 2510 2510 2510 2510 2510 2510 25</td><td>14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 3488 2475 552 2479 1239 811 608 2479 1239 811 608 5015 5015 5015 5015 5015 5015 5015 50</td><td>12.2 vacuu 70 3270 1510 1510 7460 5826 5826 5826 5826 15826 5826 1510 1510 7460 28270 1355 1016 8375 1025 8375 1425.9 802.0 487.5</td><td>22 80 5918 5918 2737 2737 13525 10563 10563 10563 7494 2411 1808 15176 15176 15176 15176 15176 2375.0 1407.4 843.4</td><td>7.33 85 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 -</td><td>90 90 55841 55847 8750 5584 3104</td></tr<>	90 90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 0.6 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2	99.16 128.33 Evac 10 167 167 77 77 379 296 296 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 21.3 12.0 8.1	66.11 85.55 cuation t 20 334 334 154 154 154 767 599 425 95 253 126 83 62 253 126 83 62 253 126 83 62 83 62 83 62 83 62 83 62 856 856 856 856 856 856 856 856	33.05 42.77 30 568 568 262 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 1455 1455	23.61 30.55 40 874 874 403 403 1996 1559 11559 11559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 2510 2510 2510 2510 2510 2510 2510 25	14.16 18.33 iifferent 60 1955 1955 903 903 4467 3488 3488 2475 552 2479 1239 811 608 2479 1239 811 608 5015 5015 5015 5015 5015 5015 5015 50	12.2 vacuu 70 3270 1510 1510 7460 5826 5826 5826 5826 15826 5826 1510 1510 7460 28270 1355 1016 8375 1025 8375 1425.9 802.0 487.5	22 80 5918 5918 2737 2737 13525 10563 10563 10563 7494 2411 1808 15176 15176 15176 15176 15176 2375.0 1407.4 843.4	7.33 85 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 -	90 90 55841 55847 8750 5584 3104
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 04 10 5 04 10 VP 2 VP 2 VP 2 VP 2 VP 3 VP 7 A 3 A 10 A 10 A 10 A 10 A 12 AVG 14 AVG 3 AVG 14 AVG 3 AVG 1 AV 2 SV 1 AV 2 AV 2 AV 2 AV 3 AVG 1 AV 2 AV 3 AVF 2 AV 2 <tr< td=""><td>90 90 Max. vacuum level - KPa 80 80 85 85 85 85 85 85 85 85 85 85</td><td>6 6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6</td><td>141.66 183.33 Air consumption NI/s 1.6 1.8 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 6.4</td><td>99.16 128.33 Evac 10 167 167 77 77 77 296 296 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 12.0 8.1 4.7</td><td>66.11 85.55 cuation t 20 334 334 154 154 154 154 154 154 259 95 95 95 95 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856</td><td>33.05 42.77 30 568 568 568 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 120.1 72.3 44.5 25.8</td><td>23.61 30.55 = S/Cum 874 874 403 403 1996 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241</td><td>18.88 24.44) at the d 50 1407 1407 650 650 650 650 2213 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 5416 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 840 855 1698 840 855 1698 840 855 1698 840 855 1698 840 855 1698 840 855 1698 840 855 840 855 840 830 840 830 830 830 830 830 8310 8310 8310 831</td><td>14.16 18.33 lifferent 60 1955 1955 903 903 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 5015 5015 5015 5015 5015 5015 804.8 478.2 292.8 169.9</td><td>12.2 vacuut 70 3270 3270 1510 1510 1510 5826 5826 4133 923 4140 2070 1355 1016 4140 2070 1355 1016 8375 8375 8375 8375 8375 8375 8375 8375 8375 8375 8325 835 835 835 835 835 835 835 83</td><td>22 80 5918 5918 5918 2737 2737 13525 10563 7494 1673 7369 3684 15176 15176 15176 15176 15176 15176</td><td>7.33 85 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 </td><td>90 90 55847 55847 8750 51844 3104 1801</td></tr<>	90 90 Max. vacuum level - KPa 80 80 85 85 85 85 85 85 85 85 85 85	6 6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2 6.4	99.16 128.33 Evac 10 167 167 77 77 77 296 296 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 12.0 8.1 4.7	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 154 259 95 95 95 95 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856	33.05 42.77 30 568 568 568 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 120.1 72.3 44.5 25.8	23.61 30.55 = S/Cum 874 874 403 403 1996 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 650 2213 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 5416 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 849 1698 840 855 1698 840 855 1698 840 855 1698 840 855 1698 840 855 1698 840 855 1698 840 855 840 855 840 830 840 830 830 830 830 830 8310 8310 8310 831	14.16 18.33 lifferent 60 1955 1955 903 903 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 5015 5015 5015 5015 5015 5015 804.8 478.2 292.8 169.9	12.2 vacuut 70 3270 3270 1510 1510 1510 5826 5826 4133 923 4140 2070 1355 1016 4140 2070 1355 1016 8375 8375 8375 8375 8375 8375 8375 8375 8375 8375 8325 835 835 835 835 835 835 835 83	22 80 5918 5918 5918 2737 2737 13525 10563 7494 1673 7369 3684 15176 15176 15176 15176 15176 15176	7.33 85 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 	90 90 55847 55847 8750 51844 3104 1801
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 04 10 VP VP 2 VP 2 VP 2 VP 3 VP 7 A 3 M 10 A 12 A 2 A 3 VP 12 M 12 VP 25 VP 40 VP 70	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 0.6 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.6	99.16 128.33 Evac 10 167 167 77 77 379 296 210 47 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 428	66.11 85.55 20 334 334 154 154 154 154 154 253 126 83 62 253 126 83 62 253 126 83 62 8356 856 856 856 856 856 856 856 856 856 8	33.05 42.77 30 568 568 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 1455 1455	23.61 30.55 = S/CUM 874 874 403 403 1996 1559 1106 247 1001 500 327 245 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 3213 2510 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 3608 3608 3608 3608 3608 310.8 310.9 310.3 111.0 77.9	14.16 18.33 iiifferent 60 1955 1955 903 903 903 4467 3488 3488 2475 552 2479 1239 811 608 2915 5015 5015 5015 5015 5015 5015 5015 5	12.2 vacuu 70 3270 3270 1510 1510 1510 5826 4133 923 4140 2070 1355 1016 4140 2070 1355 8375 8375 8375 8375 8375 8375 1425.9 802.0 487.5 282.8 198.6	22 80 5918 5918 5918 5918 5918 5918 2737 2737 13525 10563 7494 1653 7494 1653 7494 1653 7494 1653 7494 1653 7494 1653 7494 1653 7494 1653 7494 1653 7494 16563 7494 16563 7494 16563 7494 16563 7494 16563 7494 16563 7494 16563 7494 16563 7494 16563 7494 16563 7494 16563 7494 16563 7494 16563 7494 16563 7494 16575 16563 7494 16575 16563 7494 16575 15576 15576 1407, 443, 4 489, 4 343, 6 15575 165755 16575 16575 16575 1657	7.33 85 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 -	90 90 -
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VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 03 10 5 04 10 VP 1 VP 2 VP 2 VP 2 VP 2 VP 3 VP 7 1 3 VP 7 1 1 10 14 VV 2 VP 3 VP 7 1 1 10 14 VV 3 VP 7 1 1 10 14 VV 12 VV 3 VV 12 VV 3 VV 12 VV 2 VV 3 VV 7 VV 10 VV 10 VVV	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 1.6 3.2 6.4 9.6 12.8 16.0	99.16 128.33 Evac 10 167 167 77 77 379 296 2996 2996 2996 2996 2996 2996 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 428	66.11 85.55 cuation t 20 334 334 154 154 154 767 599 95 95 253 126 83 62 255 856 856 856 856 856 856 856 856 856 8	33.05 42.77 ime (ms/l 568 568 262 262 262 1304 1018 1018 1018 1018 723 161 508 254 166 124 508 254 166 124 508 254 166 124 508 254 166 124 508 254 166 124 508 254 1455 1455 1451 124 124 1455 1455	23.61 30.55 = S/CUM 874 874 403 403 1996 1559 1559 1559 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 3213 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 3608 3608 3608 3608 3608 519.9 310.8 191.3 111.0 77.9 51.9 44.8	14.16 18.33 lifferent 60 1955 1955 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2015 5015 5015 5015 804.8 478.2 292.8 169.2 199.5 68.8	12.2 vacuu 70 3270 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 8375 1016 8375 1016 8375 1425.9 802.0 487.5 282.8 198.6 132.4 1133.5 1132.4 1133.5 1133.5	22 80 5918 5918 2737 2737 13525 10563 7494 1673 7369 3684 2411 1808 15176 15176 15176 2375.0 1407.4 843.4 489.4 489.4 249.0 197.8	7.33 els (-KI 85 3887 19206 15000 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 -	Pa) 90 55847 55847 55847 55847 8750 5184 3104 1801 1264 843 3728
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 04 10 VP VP 2 VP 2 VP 2 VP 3 VP 7 A 3 NG 7 A 10 A 10 A 14 NVG 10 NUG 14 VV 2 VV 1 VV 2 VV 3 VV 1 VV 2 VV 1 VV 2 VV 1 VV 2 VV 1 VV 2 VV 2 VV 1 VV 2 VV 10	90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 1.6 3.2 0.4 0.4 1.6 3.2 0.4 0.4 1.6 3.2 3.2 3.2 3.4 1.6 3.2 3.2 3.4 9.6 12.8 16.0 19.2	99.16 128.33 Evac 10 167 167 77 77 379 296 2996 2996 2996 2996 2996 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 21.3 12.0 8.1 4.7 3.3 2.2 1.9 1.6	66.11 85.55 cuation t 20 334 334 154 154 767 599 425 95 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856	33.05 42.77 ime (ms/l 568 568 262 262 1304 1018 723 161 508 254 166 124 166 124 166 124 166 124 1455 1455 1455 1455 1455 1455 1455	23.61 30.55 = S/CUM 874 403 403 1996 1559 1559 1559 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 3213 2510 1780 397 1698 849 555 416 1698 849 555 519.9 310.8 17.9 51.9 44.8 37.3 3608 51.9 3608 51.9 3608 51.9 3608 51.9 3608 51.9 3608 51.9 3608 555 51.9 37.9 37.9 37.9 3608 555 51.9 37.9 3608 555 55.9 37.9 37.9 3608 555 55.9 37.9 37.9 37.9 37.9 37.9 37.9 37.9 37	14.16 18.33 lifferent 60 1955 1955 903 903 4467 3488 3488 2475 552 2479 1239 811 608 5015 5015 5015 5015 804.8 478.2 292.8 169.2 819.2 79.5 68.8 57.8	12.2 vacuu 70 3270 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 8375 1016 8375 8375 1425.9 802.0 487.5 282.8 198.6 132.4 1133.4 1134.4 1134.	22 80 5918 5918 2737 2737 13525 10563 10573 10563 10563 10573 10563 10563 10563 10573 10563 10573 10563 10573 10563 10573 10563 10573 10563 10573 10563 10573 10573 10563 10573 10563 10576 10576 10576 10576 105776 105776 105776 105775 10	7.33 is (-KI 85 3887 3887 19206 15000 15000 100642 2376 100642 2376 100642 2376 100642 2376 100642 2368 100642 2568 	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 501 10 502 10 502 10 503 10 504 10 YP YP 2 YP 2 YP 2 YP 3 YP 7 A 10 A 10 A 10 A 10 MG 14 MVG 14 WG 12 WVP 25 WP 12 WVP 12 WVP 12 WVP 25 WP 100	90 90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 1.8 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 0.4 1.6 3.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.5 0.2 0.4 0.5 0.6 12.8 16.0 19.2 </td <td>99.16 128.33 Evac 10 167 167 77 77 379 296 296 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 42.3 12.0 8.1 4.7 3.3 2.2 1.9 1.6 1.3</td> <td>66.11 85.55 cuation t 20 334 334 154 154 154 154 154 154 259 253 126 83 62 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856</td> <td>33.05 42.77 30 568 568 568 262 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 1455 1455</td> <td>23.61 30.55 = S/Cum 874 874 403 403 1996 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241</td> <td>18.88 24.44) at the d 50 1407 1407 650 650 650 2213 2510 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 54 416 1698 849 555 54 416 1698 849 555 54 416 1698 849 555 54 416 1698 849 555 54 416 1698 849 555 54 416 1698 849 555 54 416 1698 3608 3608 3608 3608 3608 3608 3608 360</td> <td>14.16 18.33 lifferent 60 1955 1955 903 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 5015 5018 68.8 57.8 46.6</td> <td>12.2 Vacuu 70 3270 1510 1510 7460 5826 5826 5826 5826 4133 923 4140 2070 1355 1016 8375 1016 8375 1016 8375 1026 8375 1425.9 802.0 487.5 282.8 198.6 132.4 114.3 96.3 77.4</td> <td>22 80 5918 5918 2737 2737 13525 10563 10563 10563 7494 2411 1808 15176</td> <td>7.33 Is (-KI 85 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 -</td> <td>90 90 90 </td>	99.16 128.33 Evac 10 167 167 77 77 379 296 296 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 42.3 12.0 8.1 4.7 3.3 2.2 1.9 1.6 1.3	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 154 259 253 126 83 62 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856	33.05 42.77 30 568 568 568 262 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 1455 1455	23.61 30.55 = S/Cum 874 874 403 403 1996 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 2213 2510 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 54 416 1698 849 555 54 416 1698 849 555 54 416 1698 849 555 54 416 1698 849 555 54 416 1698 849 555 54 416 1698 849 555 54 416 1698 3608 3608 3608 3608 3608 3608 3608 360	14.16 18.33 lifferent 60 1955 1955 903 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 5015 5018 68.8 57.8 46.6	12.2 Vacuu 70 3270 1510 1510 7460 5826 5826 5826 5826 4133 923 4140 2070 1355 1016 8375 1016 8375 1016 8375 1026 8375 1425.9 802.0 487.5 282.8 198.6 132.4 114.3 96.3 77.4	22 80 5918 5918 2737 2737 13525 10563 10563 10563 7494 2411 1808 15176	7.33 Is (-KI 85 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 -	90 90 90
VP 450 MD VP 600 MD Generator Item No. 501 10 502 10 502 10 503 10 504 10 504 10 VP 2 VP 2 VP 2 VP 3 VP 7 A 3 A 10 A	90 90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 0.9 0.9 0.11 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.2 2.4 3.2 0.4 0.2 0.2 0.4 0.2 <td>99.16 128.33 Evac 10 167 167 77 77 379 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 428</td> <td>66.11 85.55 cuation t 20 334 334 154 154 154 154 767 599 425 95 253 126 83 62 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856</td> <td>33.05 42.77 30 568 568 262 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 1455 1455</td> <td>23.61 30.55 = S/Cum 874 874 403 403 1996 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241</td> <td>18.88 24.44) at the d 50 1407 1407 650 650 650 3213 2510 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 8608 3608 3608 3608 3608 3608 3608 311.3 111.0 77.9 51.9 44.8 37.8 30.5 25.5</td> <td>14.16 18.33 lifferent 60 1955 1955 903 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 5015 5075 5078 4666 39.0</td> <td>12.2 vacuu 70 3270 3270 1510 1510 1510 1510 5826 4133 923 4140 2070 1355 1016 4140 2070 1355 8375</td> <td>22 80 5918 5918 5918 5918 2737 2737 13525 10563 7494 1673 7369 3684 2411 1808 15176</td> <td>7.33 els (-KI 85 3887 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 10464 5232 3424 2568 10464 5232 </td> <td>90 90 90 90 90 90 90 90 90 90 90 90 90 9</td>	99.16 128.33 Evac 10 167 167 77 77 379 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 428	66.11 85.55 cuation t 20 334 334 154 154 154 154 767 599 425 95 253 126 83 62 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856	33.05 42.77 30 568 568 262 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 1455 1455	23.61 30.55 = S/Cum 874 874 403 403 1996 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 3213 2510 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 8608 3608 3608 3608 3608 3608 3608 311.3 111.0 77.9 51.9 44.8 37.8 30.5 25.5	14.16 18.33 lifferent 60 1955 1955 903 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 5015 5075 5078 4666 39.0	12.2 vacuu 70 3270 3270 1510 1510 1510 1510 5826 4133 923 4140 2070 1355 1016 4140 2070 1355 8375	22 80 5918 5918 5918 5918 2737 2737 13525 10563 7494 1673 7369 3684 2411 1808 15176	7.33 els (-KI 85 3887 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 10464 5232 3424 2568 10464 5232 	90 90 90 90 90 90 90 90 90 90 90 90 90 9
VP 450 MD VP 600 MD Generator Item No. 5 01 10 5 02 10 5 02 10 5 03 10 5 04 10 VP VP 2 VP 2 VP 2 VP 3 VP 7 A 3 M 7 A 10 A 2 A 3 VP 2 A 10 VV 2 A 10 VV 2 VV 2 VV 2 VV 2 VV<	90 90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 0.6 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.2 2.4.0 2.8 16.0 19.2 24.0 28.8 3.2	99.16 128.33 Evac 10 167 167 77 77 379 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 428	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 253 126 83 62 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856	33.05 42.77 30 568 568 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 508 254 166 124 508 254 166 124 508 254 1455 1455 1455 120.1 72.3 44.5 25.8 18.1 12.1 10.4 8.8 7.1 5.9 45.1	23.61 30.55 = S/CUM 874 874 403 403 1996 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 650 3213 2510 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 3608 3608 3608 3608 3608 3608 3608 360	14.16 18.33 lifferent 60 1955 1955 903 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2475 5015 502 292.8 169.9 119.2 79.5 68.8 46.6 39.0 297.2	12.2 vacuu 70 3270 3270 1510 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 4140 2070 1355 1016 4140 2070 1355 8375 8375 8375 8375 8375 8375 1425.9 802.0 487.5 282.8 198.6 132.4 114.3 96.3 77.4 64.8 500.0	22 80 5918 5918 5918 5918 5918 5918 2737 2737 13525 10563 7369 3684 2411 1808 7369 3684 2411 1807 3757 1977 1977 1977 1977 1977 1978 1977 1977 1978 1977 1977 1977 1978 1977 1977 1977 1977 1977 1978 1977	7.33 els (-KI 85 3887 3887 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 10464 10464 10464 5232 10464 1	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 501 10 502 10 502 10 503 10 504 10 504 10 VP 2 VP 2 VP 2 VP 2 VP 2 VP 3 VP 7 A 3 M 10 A 14 AVG 1 AV 2 AV 3 AVF 7 AVG 1 AVE 2 AVE 1 AVE 1 <t< td=""><td>90 90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85</td><td>6 6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6</td><td>141.66 183.33 Air consumption NI/s 1.6 1.8 0.6 1.8 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.2 2.40 28.8 3.2 4.8 </td><td>99.16 128.33 Evac 10 167 167 77 77 379 296 296 210 47 110 55 36 27 110 110 110 110 110 110 110 110 110 11</td><td>66.11 85.55 cuation t 20 334 334 154 154 154 154 154 253 126 83 62 253 126 83 856 856 856 856 856 856 856 856 856 856</td><td>33.05 42.77 ime (ms/l 568 568 262 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 508 254 166 124 508 254 166 124 508 254 1455 1455 1455 1455 1455 1455 1455</td><td>23.61 30.55 = S/CUM 874 874 403 403 1996 247 1001 500 327 245 2241 2001 500 327 245 2241 2241 2241 2241 2241 2241 2241</td><td>18.88 24.44) at the d 50 1407 1407 650 650 650 3213 2510 2510 2510 2510 2510 2510 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 3608 3608 3608 3608 3608 3608 310.8 310.8 311.0 77.9 51.9 44.8 37.8 30.5 25.5 194.5 194.5</td><td>14.16 18.33 lifferent 60 1955 1955 903 903 4467 3488 3488 2475 552 2479 1239 811 608 297.5 68.8 57.8 46.6 39.0 297.2 239.1</td><td>12.2 Vacuu 70 3270 1510 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 4140 2070 1355 1016 4140 2070 1355 8375 8375 8375 8375 8375 8375 1425.9 802.0 487.5 822.8 138.6 132.4 114.3 96.3 77.4 64.8 500.0 396.9</td><td>22 80 5918 5918 2737 2737 13525 10563 7369 3684 2411 1808 7369 3684 2411 1808 15176 15176 15176 15176 15176 15176 15176 15176 15176 15176 15176 15176 15176 1407.4 843.4 849.4 343.6 229.0 197.8 166.6 134.0 112.1 863.6 690.9</td><td>7.33 els (-KI 85 3887 3887 19206 15000 15000 10642 2376 10464 5232 3424 2568 2368 -</td><td>Pa) 90 </td></t<>	90 90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 0.6 1.8 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.2 2.40 28.8 3.2 4.8	99.16 128.33 Evac 10 167 167 77 77 379 296 296 210 47 110 55 36 27 110 110 110 110 110 110 110 110 110 11	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 253 126 83 62 253 126 83 856 856 856 856 856 856 856 856 856 856	33.05 42.77 ime (ms/l 568 568 262 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 508 254 166 124 508 254 166 124 508 254 1455 1455 1455 1455 1455 1455 1455	23.61 30.55 = S/CUM 874 874 403 403 1996 247 1001 500 327 245 2241 2001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 3213 2510 2510 2510 2510 2510 2510 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 3608 3608 3608 3608 3608 3608 310.8 310.8 311.0 77.9 51.9 44.8 37.8 30.5 25.5 194.5 194.5	14.16 18.33 lifferent 60 1955 1955 903 903 4467 3488 3488 2475 552 2479 1239 811 608 297.5 68.8 57.8 46.6 39.0 297.2 239.1	12.2 Vacuu 70 3270 1510 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 4140 2070 1355 1016 4140 2070 1355 8375 8375 8375 8375 8375 8375 1425.9 802.0 487.5 822.8 138.6 132.4 114.3 96.3 77.4 64.8 500.0 396.9	22 80 5918 5918 2737 2737 13525 10563 7369 3684 2411 1808 7369 3684 2411 1808 15176 15176 15176 15176 15176 15176 15176 15176 15176 15176 15176 15176 15176 1407.4 843.4 849.4 343.6 229.0 197.8 166.6 134.0 112.1 863.6 690.9	7.33 els (-KI 85 3887 3887 19206 15000 15000 10642 2376 10464 5232 3424 2568 2368 -	Pa) 90
PVP 450 MD PVP 600 MD Generator Item No. Item No. 501 10 Is 01 10 502 10 Is 03 10 10 Is 04 10 9249 VP 2 M VP 2 M VP 2 M VP 3 9249 VV 7 3 M 7 M 10 MVG 14 MVG 14 MVG 12 MVG 14 MVG 10 MVF 22 SV 3 PVP 10 MVF 10 MVF 10 MVP 10 VP 10 VP <td>90 90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85</td> <td>6 6 6 bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6</td> <td>141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 0.6 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 1.6 3.2 0.4 0.4 0.4 0.4 0.4 1.6 3.2 2.4.0 2.8. 3.2<!--</td--><td>99.16 128.33 Evac 10 167 167 77 77 379 296 2996 2996 2996 2996 27 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 428</td><td>66.11 85.55 cuation t 20 334 334 154 154 154 767 599 95 253 126 83 62 253 126 856 856 856 856 856 856 856 856 856 85</td><td>33.05 42.77 ime (ms/l 568 568 262 262 262 1304 1018 1018 1018 1018 723 161 508 254 166 124 508 254 166 124 508 254 166 124 508 254 166 124 508 254 166 124 508 254 1455 1455 1455 1455 1455 1455 1455</td><td>23.61 30.55 = S/CUM 874 403 403 1996 1559 1559 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241</td><td>18.88 24.44) at the d 50 1407 1407 650 650 3213 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 3608 3608 3608 3608 3608 3608 3608 310.8 191.3 111.0 77.9 51.9 44.8 37.8 30.5 25.5 194.5 155.4 138.8</td><td>14.16 18.33 lifferent 60 1955 1955 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2015 5015 5015 5015 5015 804.8 478.2 292.8 169.2 199.2 79.5 68.8 57.8 46.6 39.0 297.2 239.1 212.9</td><td>12.2 Vacuu 70 3270 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 8375 1016 8375 1016 8375 1025 8375 1425.9 802.0 487.5 282.8 198.6 132.4 114.3 96.3 77.4 64.8 500.0 336.9 336.9 336.9</td><td>22 80 5918 5918 2737 2737 13525 10563 7494 1673 7369 3684 2411 1808 15176 15176 15176 15176 2375.0 1407.4 843.4 448.4 448.4 448.4 448.4 15176 15176 229.0 197.8 166.6 134.0 197.8 166.6 134.0 197.8 166.6 134.0 197.8 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 157.8</td><td>7.33 els (-KI 85 3887 19206 15000 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 -</td><td>Pa) 90 </td></td>	90 90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85	6 6 6 bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.6 1.8 0.6 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 1.6 3.2 0.4 0.4 0.4 0.4 0.4 1.6 3.2 2.4.0 2.8. 3.2 </td <td>99.16 128.33 Evac 10 167 167 77 77 379 296 2996 2996 2996 2996 27 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 428</td> <td>66.11 85.55 cuation t 20 334 334 154 154 154 767 599 95 253 126 83 62 253 126 856 856 856 856 856 856 856 856 856 85</td> <td>33.05 42.77 ime (ms/l 568 568 262 262 262 1304 1018 1018 1018 1018 723 161 508 254 166 124 508 254 166 124 508 254 166 124 508 254 166 124 508 254 166 124 508 254 1455 1455 1455 1455 1455 1455 1455</td> <td>23.61 30.55 = S/CUM 874 403 403 1996 1559 1559 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241</td> <td>18.88 24.44) at the d 50 1407 1407 650 650 3213 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 3608 3608 3608 3608 3608 3608 3608 310.8 191.3 111.0 77.9 51.9 44.8 37.8 30.5 25.5 194.5 155.4 138.8</td> <td>14.16 18.33 lifferent 60 1955 1955 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2015 5015 5015 5015 5015 804.8 478.2 292.8 169.2 199.2 79.5 68.8 57.8 46.6 39.0 297.2 239.1 212.9</td> <td>12.2 Vacuu 70 3270 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 8375 1016 8375 1016 8375 1025 8375 1425.9 802.0 487.5 282.8 198.6 132.4 114.3 96.3 77.4 64.8 500.0 336.9 336.9 336.9</td> <td>22 80 5918 5918 2737 2737 13525 10563 7494 1673 7369 3684 2411 1808 15176 15176 15176 15176 2375.0 1407.4 843.4 448.4 448.4 448.4 448.4 15176 15176 229.0 197.8 166.6 134.0 197.8 166.6 134.0 197.8 166.6 134.0 197.8 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 157.8</td> <td>7.33 els (-KI 85 3887 19206 15000 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 -</td> <td>Pa) 90 </td>	99.16 128.33 Evac 10 167 167 77 77 379 296 2996 2996 2996 2996 27 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 428	66.11 85.55 cuation t 20 334 334 154 154 154 767 599 95 253 126 83 62 253 126 856 856 856 856 856 856 856 856 856 85	33.05 42.77 ime (ms/l 568 568 262 262 262 1304 1018 1018 1018 1018 723 161 508 254 166 124 508 254 166 124 508 254 166 124 508 254 166 124 508 254 166 124 508 254 1455 1455 1455 1455 1455 1455 1455	23.61 30.55 = S/CUM 874 403 403 1996 1559 1559 1559 1106 247 1001 500 327 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 3213 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 3608 3608 3608 3608 3608 3608 3608 310.8 191.3 111.0 77.9 51.9 44.8 37.8 30.5 25.5 194.5 155.4 138.8	14.16 18.33 lifferent 60 1955 1955 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2015 5015 5015 5015 5015 804.8 478.2 292.8 169.2 199.2 79.5 68.8 57.8 46.6 39.0 297.2 239.1 212.9	12.2 Vacuu 70 3270 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 8375 1016 8375 1016 8375 1025 8375 1425.9 802.0 487.5 282.8 198.6 132.4 114.3 96.3 77.4 64.8 500.0 336.9 336.9 336.9	22 80 5918 5918 2737 2737 13525 10563 7494 1673 7369 3684 2411 1808 15176 15176 15176 15176 2375.0 1407.4 843.4 448.4 448.4 448.4 448.4 15176 15176 229.0 197.8 166.6 134.0 197.8 166.6 134.0 197.8 166.6 134.0 197.8 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 166.6 134.0 122.9 157.8	7.33 els (-KI 85 3887 19206 15000 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 -	Pa) 90
VP 450 MD VP 600 MD Generator Item No. 5 01 10 502 10 5 02 10 503 10 5 04 10 VP VP 2 VP 2 VP 2 VP 3 VP 7 A 7 A 7 A 10 A 7 A 10 A 7 A 3 A 7 A 10 A 12 VVG 14 VV 12 VVP 12 VVP 12 VVP 12 VVP<120	90 90 90 1evel - KPa 80 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 1.8 0.9 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.5 16.0 19.2 24.0 28.8 3.2 4.8 6.4 8.0	99.16 128.33 Evac 10 167 167 77 77 379 296 296 296 210 47 110 55 36 27 110 55 55 36 27 110 55 55 36 27 112.0 8.1 12.0 8.1 12.0 8.1 12.0 8.1 12.0 8.1 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 154 259 253 126 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 83 62 255 4.7 3.11 20.2 11.7 8.2 2.7 2.7 20.2 14.5 10.4 14.5 10.4 10.4 10.4 14.5 10.4	33.05 42.77 30 568 568 568 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 1455 1455	23.61 30.55 40 874 874 403 403 1996 1559 1106 247 1001 500 327 245 1001 500 327 245 245 245 241 2241 2241 2241 2241 224	18.88 24.44) at the d 50 1407 1407 650 650 650 22510 25510 25510 25510 25510 2555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 3608 3608 3608 3608 3608 3608 3608 360	14.16 18.33 lifferent 60 1955 1955 903 903 903 4467 3488 3488 2475 552 2479 1239 811 608 2479 1239 811 608 5015 5022 804.8 466.9 292.8 10.9 292.8 10.9 292.8 10.9 21.9 21.9 15.6 80.8 5	12.2 Vacuu 70 3270 1510 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 8375 1015 8375 1016 8375 8375 1425.9 802.0 487.5 282.8 198.6 132.4 114.3 96.3 77.4 64.8 500.0 396.9 251.6	22 80 5918 5918 2737 2737 13525 10563 10573 10563 10573 10563 10563 10563 10563 10573 10563 10563 10563 10563 10573 10563 10563 10563 10563 10573 10563 10573 10573 10563 10573 10573 10573 10573 10563 10576 10576 10576 10576 10576 10576 10576 10576 105776 105776 105776 105776 105776 105776 105776 105776 105776 105776 105776 105776 105776 105775 105776 1057777 105777 105777 1057777 1057777 1057777 1057777 1057777 1057777 1057777 1057777 105777777 10577777777 105777777777777777777777777777777777777	7.33 ils (-KI 85 3887 3887 3887 19206 15000 15000 15000 100642 2376 10464 5232 3424 2568	Pa) 90 90 -
VP 450 MD VP 600 MD Generator Item No. 501 10 502 10 502 10 503 10 504 10 504 10 VP 2 VP 2 VP 2 VP 2 VP 3 VP 7 A 3 A 7 A 10 A<	90 90 90 Max. vacuum level - KPa 80 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 0.6 0.9 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 0.4 1.6 3.2 0.4 0.4 0.4 0.4 0.4 0.4 0.2 2.4.0 2.8 3.2 4.8 6.4 8.0 9.6	99.16 128.33 Evac 10 167 167 77 77 379 296 296 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 110 55 36 27 110 55 36 27 120 8.1 4.2 8.1 4.2 8.1 4.7 3.3 2.2 1.9 1.6 1.3 1.1 8.1 4.7 3.3 2.2 5.4 4.1 3.7	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 259 95 95 253 126 83 62 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856	33.05 42.77 30 568 568 568 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 1455 1455 1455 1455 1455 1455 1455	23.61 30.55 = S/CUM 874 874 403 403 1996 1559 1106 247 1001 500 327 245 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 2213 2510 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 510 1780 300 808 519.3 111.0 77.9 51.9 44.8 37.8 30.5 25.5 194.5 155.4 83.0 80.0 83.0 83.0 83.0 83.0 83.0 83.0	14.16 18.33 lifferent 60 1955 1955 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 5015 5016 300 2072 2032 1050 1	12.2 vacuu 70 3270 3270 1510 1510 1510 7460 4133 923 4140 2070 1355 1016 415 2070 1355 1016 415 2070 1355 1016 415 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1355 1016 2070 1355 1	22 80 5918 5918 5918 5918 2737 2737 13525 10563 7494 1673 7369 3684 2411 1808 7369 3684 2411 1808 7369 3684 2411 15176 15178 15188 15188 15188 151888 151888 15188 151888 1518888	7.33 els (-KI 85 3887 3887 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 10464 5232	Pa) 90 90 -
PVP 450 MD PVP 600 MD Generator Item No. Item No. 501 10 Is 02 10 15 02 10 Is 03 10 504 10 Is 04 10 2022 VP 2 VP 2 VP 2 VP 2 VP 3 VP 7 M 3 WG 7 MVG 10 MVG 10 MVG 14 MVG 3 VP 2 MV 3 VP 2 MVG 10 MVG 10 MVF 2 MV 3 VP 2 MVG 10 MVF 10 MVP 10 MVP 10 VP 10 VP 10 VP <t< td=""><td>90 90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85</td><td>6 6 5 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6</td><td>141.66 183.33 Air consumption NI/s 1.6 1.8 0.6 1.8 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 1.6 3.2 6.4 9.6 16.0 9.6 16.0</td><td>99.16 128.33 Evac 10 167 167 77 77 379 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 428</td><td>66.11 85.55 cuation t 20 334 334 154 154 154 154 154 253 126 83 62 253 126 83 62 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856</td><td>33.05 42.77 30 568 568 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 1455 1455</td><td>23.61 30.55 = S/CUM 874 874 403 403 1996 245 1559 1106 247 1001 500 327 245 2247 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241</td><td>18.88 24.44) at the d 50 1407 1407 650 650 650 3213 2510 2551 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 3608 3608 3608 3608 3608 3608 3608 360</td><td>14.16 18.33 lifferent 60 1955 1955 903 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 25015 5015</td><td>12.2 Vacuut 70 3270 3270 1510 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 4140 2070 1355 8375 8375 8375 8375 8375 8375 8375 1425.9 802.0 487.5 282.8 198.6 132.4 114.3 96.3 95.5 125.5 90.1</td><td>22 80 5918 5918 5918 5918 2737 2737 13525 10563 7369 3684 2411 1808 7369 3684 2412 15176 15176 15176 15176 343.4 483.4 343.6 690.9 612.9 343.8 387.8 1340.8 387.8 1340.8 1340.8 1340.8 1340.8 1340.9 1340.8 1340</td><td>7.33 els (-KI 85 3887 3887 3887 19206 10642 2376 100642 2376 100642 2376 10464 5232 3424 2568 10464 5232 3424 2568 10464 5232 3424 2568 10464 5232 </td><td>Pa) 90 </td></t<>	90 90 90 Max. vacuum level - KPa 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 5 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 0.6 1.8 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 1.6 3.2 6.4 9.6 16.0 9.6 16.0	99.16 128.33 Evac 10 167 167 77 77 379 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 428 428 428 428 428 428 428 428 428 428	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 253 126 83 62 253 126 83 62 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856	33.05 42.77 30 568 568 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 508 254 166 124 508 254 166 124 1455 1455 1455 1455 1455 1455 1455	23.61 30.55 = S/CUM 874 874 403 403 1996 245 1559 1106 247 1001 500 327 245 2247 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 3213 2510 2551 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 3608 3608 3608 3608 3608 3608 3608 360	14.16 18.33 lifferent 60 1955 1955 903 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 25015 5015	12.2 Vacuut 70 3270 3270 1510 1510 1510 7460 5826 4133 923 4140 2070 1355 1016 4140 2070 1355 8375 8375 8375 8375 8375 8375 8375 1425.9 802.0 487.5 282.8 198.6 132.4 114.3 96.3 95.5 125.5 90.1	22 80 5918 5918 5918 5918 2737 2737 13525 10563 7369 3684 2411 1808 7369 3684 2412 15176 15176 15176 15176 343.4 483.4 343.6 690.9 612.9 343.8 387.8 1340.8 387.8 1340.8 1340.8 1340.8 1340.8 1340.9 1340.8 1340	7.33 els (-KI 85 3887 3887 3887 19206 10642 2376 100642 2376 100642 2376 10464 5232 3424 2568 10464 5232 3424 2568 10464 5232 3424 2568 10464 5232 	Pa) 90
PVP 450 MD PVP 600 MD Generator Item No. Item No. 10 15 02 10 15 03 10 15 04 10 10 15 04 10 20 2VP 2 2VP 2 2VP 2 2VP 3 2VP 7 M 3 2VP 7 M 7 MVG 14 MVG 14 MVG 14 SV 1 SV 2 SV 1 SV 1 SV 2 SV 100	90 90 90 Max. vacuum level - KPa 80 80 85 85 85 85 85 85 85 85 85 85 85 85 85	6 6 6 Supply pressure bar (g) 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	141.66 183.33 Air consumption NI/s 1.6 1.8 0.6 0.9 0.9 0.9 1.1 3.2 0.9 1.8 2.4 3.2 0.9 1.8 2.4 3.2 0.4 0.4 0.4 0.4 0.4 3.2 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 1.6.0 19.2 24.0 28.8 3.2 4.8 6.4 8.0 9.6	99.16 128.33 Evac 10 167 167 77 77 379 296 296 296 210 47 110 55 36 27 110 55 36 27 110 55 36 27 110 55 36 27 110 55 36 27 120 8.1 4.2 8.1 4.2 8.1 4.7 3.3 2.2 1.9 1.6 1.3 1.1 8.1 4.7 3.3 2.2 5.4 4.1 3.7	66.11 85.55 cuation t 20 334 334 154 154 154 154 154 259 95 95 253 126 83 62 253 126 83 62 253 126 83 62 253 126 83 62 856 856 856 856 856 856 856 856 856 856	33.05 42.77 30 568 568 568 262 262 262 262 262 1304 1018 1018 723 161 508 254 166 124 1455 1455 1455 1455 1455 1455 1455	23.61 30.55 = S/CUM 874 874 403 403 1996 1559 1106 247 1001 500 327 245 245 1001 500 327 245 2241 2241 2241 2241 2241 2241 2241	18.88 24.44) at the d 50 1407 1407 650 650 650 2213 2510 2510 1780 397 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 416 1698 849 555 510 1780 300 808 519.3 111.0 77.9 51.9 44.8 37.8 30.5 25.5 194.5 155.4 83.0 80.0 83.0 83.0 83.0 83.0 83.0 83.0	14.16 18.33 lifferent 60 1955 1955 903 903 4467 3488 2475 552 2479 1239 811 608 2479 1239 811 608 2479 1239 811 608 5015 5016 300 2072 2032 1050 1	12.2 vacuu 70 3270 3270 1510 1510 1510 7460 4133 923 4140 2070 1355 1016 415 2070 1355 1016 415 2070 1355 1016 415 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1016 2070 1355 1355 1016 2070 1355 1	22 80 5918 5918 5918 5918 2737 2737 13525 10563 7494 1673 7369 3684 2411 1808 7369 3684 2411 1808 7369 3684 2411 15176 15178 15188 15188 15188 151888 151888 15188 151888 1518888	7.33 els (-KI 85 3887 3887 3887 19206 15000 10642 2376 10464 5232 3424 2568 10464 5232 3424 2568 10464 5232	Pa) 90 90 -

Tables showing the quantity of evacuated air and the evacuation times of vacuum generators, at the different vacuum levels.



[Vacuum generators]



Vacuum generators operate using the Venturi principle.

When feeding the generator with compressed air in port P, a depression is produced at connection U and at point R the feeding air with the sucked air is released.

By interrupting to feed P, the vacuum effect in U stops.

The described vacuum generators are generally used for moving by means of cups non-porous objects or on equipment where the capacity and the vacuum degree requirements are very low.

Art.		15 01 10	15 03 10
Vacuum air flow	cum/h	2.3	5
Maximum vacuum level	-KPa	80	85
Final pressure	mbar (a).	200	150
Supply pressure	bar (g)	4÷6	4÷6
Max supply pressure	bar (g)	7	7
Air consumption at 6 bar	NI/s	1.6	1.8
Working temperature	°C	-20/+80	-20/+80
Weight	Kg	0.140	0.300
A		62	76
В		30	30
C		30	35
D		7	5
E		37	22.6
F		25	53.4
G	ø	5.5	5.5
н	ø gas	1/4"	1/2"
l		20	21.5
L		9	5
M	ø gas	1/4"	1/4"
N	ø gas	1/4"	3/8"
0		4.5	



Δ

R

D

т Q

F

H

G

С

М

G

Ρ

D

Ø

Ε



В

0

N

U

[Vacuum generators with ejector]

Also these vacuum generators operate using the Venturi principle.

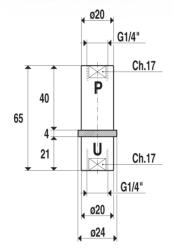
When feeding the generator with compressed air in port P, a depression is produced at connection U and at point R the feeding air with the sucked air is released and, at the same time a chamber contained in the generator is fed which, when the feeding in P stops, releases through the connection U the compressed air stored in it, thus rapidly re-establishing the atmospheric pressure at the using point.

If for example at the using point U a cup is connected, by means of this system it will get detached much more rapidly compared to the previously described vacuum generators.

Art.		15 02 10	15 04 10
Vacuum air flow	cum/h	2.3	5
Maximum vacuum level	-KPa	80	85
Final pressure	mbar (a)	200	150
Supply pressure	bar (g)	4÷6	4÷6
Max supply pressure	bar (g)	7	7
Air consumption at 6 bar	NI/s	1.6	1.8
Working temperature	°C	-20/+80	-20/+80
Weight	Kg	0.350	0.510
A		62	76
В		40	40
C		70	86
D		13	5
E		37	22.6
F		25	53.4
G	ø	6.5	5.5
H	ø gas	1/4"	1/2"
I		20	21.5
L		9	5
M	ø gas	1/4"	1/4"
N	ø gas	1/4"	3/8"



[Vacuum generators in line PVP1]



Art.		PVP 1
Vacuum air flow	cum/h	1
Maximum vacuum level	-KPa	87
Final pressure	mbar (a)	130
Supply pressure	bar (g)	5
Max supply pressure	bar (g)	6
Air consumption at 5 bar	NI/s	0.6
Working temperature	°C	-20/+80
Weight	Kg	0.044
		1

This new range of vacuum generator operates using the Venturi principle.

The feature that distinguishes these from the standard models, are the ports for connection to the supply air and vacuum. These are on the same axis whilst the exhaust port is perpendicular on the body of the unit.

This design offers the advantages of small dimensions, ease of assembly and simple maintenance.

They are equipped with a stainless steel mesh vacuum filter and with a special microfibre silencer on the exhaust, which makes them particularly quiet in operation.

They can be assembled directly on the cup support or holder.



[Vacuum generators PVP2 and PVP3]

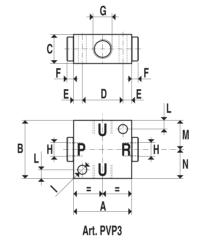
With particularly small dimensions, in relation to their performance, these vacuum generators operate using the Venturi principle.

When feeding the generator with compressed air in port P, a depression is produced at connection U and at point R the feeding air with the sucked air is released.

By interrupting to feed P, the vacuum effect in U stops.

The described vacuum generators are generally used for moving by means of cups non-porous objects or on equipment where the capacity and the vacuum degree requirements are very low.

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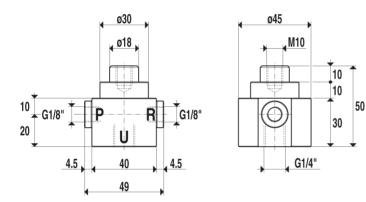


Art. PVP2

Art.		PVP 2	PVP 3	
Vacuum air flow	cum/h	2	3	
Maximum vacuum level	-KPa	85	85	
Final pressure	mbar (a)	150	150	
Supply pressure	bar (g)	4	4	
Max supply pressure	bar (g)	6	6	
Air consumption at 4 bar	NI/s	0.9	1.1	
Working temperature	°C	-20/+80	-20/+80	
Weight	Kg	0.070	0.100	
A		40	40	
В		30	40	
C		17	20	
D		28	27	
E		6	6.5	
F		4.5	4.5	
G	ø gas	1/4"	1/4"	
H	ø gas	1/8"	1/8"	
l	Ø	5.5	6	
L		6	6.5	
M		10	20	
N		20	20	



[Vacuum generators PVP2M]



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The vacuum generators shown on this page are based on the same Venturi principle of those previously described and offer the same performance. However they are designed in such a way as to offer the facility to directly mount the vacuum cup, which is ideal for small pick and place applications.

Being a complete vacuum pick and place assembly they can be mounted directly onto the machinery or level compensating units. These vacuum generators are suitable for machine loaders, handling of plates, glass slabs, plastic panels and other similar products.

Art.		PVP 2M
Vacuum air flow	cum/h	2
Maximum vacuum level	-KPa	85
Final pressure	mbar (a)	150
Supply pressure	bar (g)	4
Max supply pressure	bar (g)	6
Air consumption at 4 bar	NI/s	0.9
Working temperature	°C	-20/+80
Weight	Kg	0.162



В

P

U

C

E

F

R

Δ

D

G

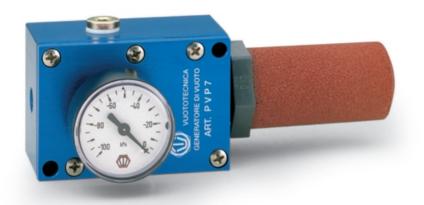
[Vacuum generators in line GV1, GV2 and GV3]

This new range of vacuum generator operates using the Venturi principle.

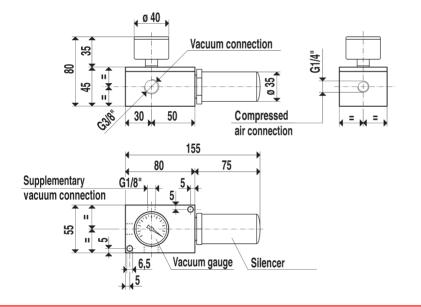
The feature that distinguishes these from the standard models, are the ports for connection to the supply air and vacuum. These are on the same axis whilst the exhaust port is perpendicular on the body of the unit.

This design offers the advantages of small dimensions, ease of assembly and simple maintenance. They can be assembled directly on the cup supports or holders.

Art.		GV1	GV2	GV3
Vacuum air flow	cum/h	0.9	0.9	0.9
Maximum vacuum level	-KPa	90	90	90
Final pressure	mbar (a)	100	100	100
Supply pressure	bar (g)	4÷5	4÷5	4÷5
Max supply pressure	bar (g)	6	6	6
Air consumption at 5 bar	NI/s	0.4	0.4	0.4
Working temperature	°C	-20/+80	-20/+80	-20/+80
Weight	Kg	0.019	0.020	0.021
A		30	35	38
В	ø	G1/4"	G1/4"	G1/4"
C	Ø	M5	G1/8"	G1/4"
D		18.5	18.5	18.5
E	Ch.	17	17	17
F		13	13	13
G	Ø	M5	M5	M5



[Vacuum generators PVP7]



Art.			PVP 7	
Vacuum air flow	cum/h	7.2	7.7	8.2
Maximum vacuum level	-КРа	60	73	85
Final pressure	mbar (a)	400	270	150
Supply pressure	bar (g)	4	5	6
Air consumption	NI/s	2.3	2.7	3.2
Working temperature	°C		-20/+80	
Weight	Kg		0.470	

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Vacuum generators PVP 7 operate using the Venturi principle previously described for the generators PVP 2 and PVP 3. They are different from these ones for their higher suction capacity, which is possible by the coupling, in parallel, of two ejectors.

Thanks to a special silencer installed on their outlet, they are particularly noiseless.

They are currently equipped with a vacuum gauge for the direct reading of the vacuum degree.

On the supplementary connection of the generator it is possible to install a small vacuum switch to signal the vacuum degree or, a pneumatic solenoid valve for a quicker air introduction at the using point. These vacuum generators can be used to interlock one or more cups or machines, where the capacity and vacuum degree requirement is rather restricted.

[Vacuum generators with multiple ejectors General description]

The vacuum generators with multiple ejectors are instruments able to produce a maximum depression of 90% equal to a final vacuum of 100 mbar (a), with different suction capacities. They work using compressed air at 4÷6 bar (g). They consist of multiple ejectors and their number changes according to the suction capacity.

WORKING PRINCIPLE

Every ejector is based on the application of the Venturi pipe: the feeding fluid (compressed air) is led at high speed by a convergent pipe into the fluid that has to be extracted (volume of the air to be sucked); the mixture formed, is led to another divergent pipe where its kinetic energy is transformed in pressure energy, suitable to let it enter into the ambient at a higher pressure (atmospheric pressure at the outlet).

TECHNICAL FEATURES

The advantage of the vacuum generators with multiple ejectors is the one of exploiting kinetic energy of the feeding compressed air through several ejectors, suitably sized, before releasing it into the atmosphere.

This system allows, with the same suction capacity, a lower compressed air consumption compared to the traditional ejectors.

The suction capacity is indirectly proportional to the differential of pressure existing between the pressure of the fluid to be sucked and the external one (atmospheric pressure).

The small size and weight make vacuum generators with multiple ejectors very compact

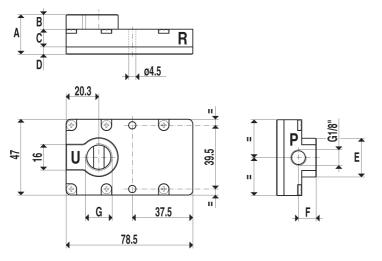
related to their high vacuum flow capacity. As there are no moving parts, these units can be continuously used without any heat development and this makes them particularly noiseless when operating.

As they have no electrical connections, they are explosion-proof and they can be used in working environments with temperatures ranging from -20° to $+80^{\circ}$ C.

They are completely made with stainless steel materials. Due to their design sufficient vacuum air filtration is required to maintain efficient operation and eliminate the need for servicing.



[Vacuum generators M3, M7, M10 and M14]



P= Compressed air connection, R= Air exhaust, U= Vacuum connection

Art.		M3	M7	M10	M14
Supply pressure	bar (g)	6	6	6	6
Maximum vacuum level	-KPa	85	85	85	85
Final pressure	mbar (a)	150	150	150	150
Air consumption at 6 bar	NI/s	0.9	1.8	2,4	3.2
Vacuum air flow	cum/h	3.5	7	10.5	14
Working temperature	°C	-10/+80	-10/+80	-10/+80	-10/+8
Weight	Kg	0.109	0.111	0.144	0.145
A		24.5	25.5	34.5	34.5
В		9	10	10	10
C		11	11	20	20
D		4.5	4.5	4.5	4.5
E		20	24	24	24
F		11	12	12	12
G	ø gas	1/4"	3/8"	3/8"	3/8"

B.: All the vacuum values shown in the table are valid at normal atmospheric pressure of 1013 mbar (a) and obtained with a constant supply pressure.

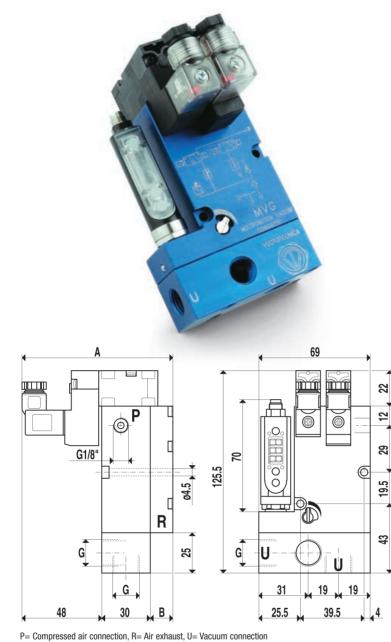
Comprising of a new multiple ejector design, assembled on compact modules, this range of vacuum generator is distinctive in regards to the high vacuum flow capacity in relation to their small size.

With a compressed air supply of $4 \div 6$ bar, they are able to produce a maximum depression equal to 85% and a vacuum flow capacity of $3,5 \div 14$ cum/h, according to the number of the modules they are composed of.

The filter-silencer is integral to the unit.

Manufactured completely in anodized aluminium, they can be installed in any position.

These multiple ejector vacuum generators are suitable for vacuum cup grip systems, particularly in the field of industrial robotics, where devices with a very good working performance, but with very small sizes and weights, are required.



Art.		MVG3	MVG7	MVG10	MVG14	
Supply pressure	bar (g)	6	6	6	6	
Maximum vacuum level	-KPa	85	85	85	85	
Final pressure	mbar (a)	150	150	150	150	
Air consumption at 6 bar	NI/s	0.9	1.8	2.4	3.2	
Vacuum air flow	cum/h	3.5	7	10.5	14	
Blow air capacity at 6 bar (g)	l/min	222	222	222	222	
Position of supply solenoid valve	NO/NC	NO	NO	NO	NO	
Position of ejecting solenoid valve	NO/NC	NC	NC	NC	NC	
Voltage	V	24DC	24DC	24DC	24DC	
Current input	W	1.4x2	1.4x2	1.4x2	1.4x2	
Vacuum switch output		PNP	PNP	PNP	PNP	
Class of protection	IP	65	65	65	65	
Working temperature	°C	-10/+60	-10/+60	-10/+60	-10/+60	
Weight	Kg	0.666	0.670	0.716	0.720	
Α		89	89	98	98	
В		11	11	20	20	
G	ø gas	1 /4"	3/8"	3/8"	3/8"	

N.B.: All the vacuum values shown in the table are valid at normal atmospheric pressure of 1013 mbar (a) and obtained with a constant supply pressure.

[Multi-function vacuum generators]

This new range of vacuum generators are complete stand alone units offering the user an entire vacuum control system.

They are distinct in their design and operation characteristics offering very strong vacuum and ejector performance in a very compact assembly.

Contained within an anodized aluminium base, they consist of:

- A modular and silenced multi stage vacuum generator.
- A micro solenoid valve to supply the compressed air to the generator.
- A micro solenoid valve for the compressed air ejector.
- An adjustable flow regulator for the compressed air ejector
- A unidirectional check valve on the vacuum port to enable a safe, secure grip during a power failure.
- A digital vacuum switch with electronic display and switching indicator for starting the compressed air and offering a signal to indicate a safe lift condition.
- An anodized aluminium manifold which contains the vacuum ports and integral filter designed for ease of inspection.

Once the compressed air micro solenoid valve has been switched, the vacuum generator makes vacuum at the application; when the maximum preset value is reached, the vacuum switch, acting on the electric coil of the micro solenoid valve, stops the supply of the compressed air and restores it when the vacuum falls below the minimum value.

This modulation, apart from keeping the vacuum level within the preset security values (hysteresis), allows a remarkable compressed air saving.

A second signal from the vacuum switch, adjustable and independent from the first, can be used to allow the start of the cycle, when the required vacuum level is reached and suitable for the application.

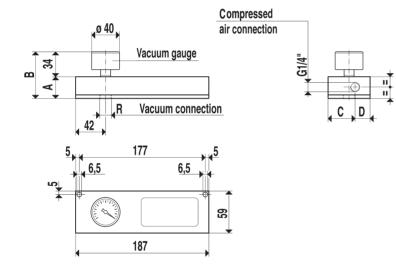
When the working cycle has finished, the micro solenoid valve for the supply of compressed air to the generator switches off and, at the same time, the ejecting micro solenoid valve switches on for the rapid restoration of the atmospheric pressure within the application.

These units may be installed in any position.

These multi-function vacuum generators are suitable for vacuum cup gripping systems, for the handling of plates, glass, marble, ceramic, plastics, cardboard, wood etc. and in particular for use in the field of the industrial robotics, where devices with very good operating performance, but also with compact sizes and low weights, are required.



[Vacuum generators PVP 12M and 25M]



These vacuum generators fed by compressed air at an optimum pressure of $4 \div 6$ bar, can produce a maximum depression of 90%, equal to a final vacuum of 100 mbar, with a suction capacity of $12 \div 25$ cum/h at the normal atmospheric pressure. Depending on the suction capacity, they are made up of one or two sets of ejectors based on the Venturi principle.

The innovation of these generators consists in the exploitation of the kinetic energy of the feeding compressed air through several ejectors on line, properly sized, before releasing it into the atmosphere.

With the same suction capacity, this system allows a lower compressed air consumption compared to the traditional ejectors.

They are completely made in anodized aluminium.

Art.		PVP 12M	PVP 25M		
Supply pressure bar (g)		4 5 6	4 5 6		
Maximum vacuum level	-KPa	65 85 90	65 85 90		
Final pressure	mbar (a)	350 150 100	350 150 100		
Air consumption	NI/s	1.2 1.4 1.6	2.4 2.8 3.2		
Vacuum air flow	cum/h	12 13.5 15	21 23 25		
Working temperature	°C	-20/+80	-20/+80		
Weight	Kg	0.600	0.880		
A	-	31	52		
В		65	86		
C		38	29.5		
D		21	29.5		
R	ø gas	3/8"	3/8"		



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acuum connection

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[Vacuum generators PVP 40M ÷ 100M]

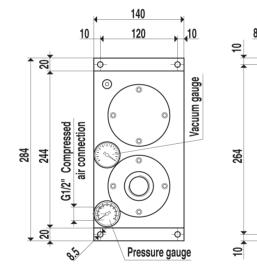
Designed specifically for incorporation in the Octopus lifting system, this new range of vacuum generators with multiple ejectors are very versatile in their applications and represent a real evolution in comparison with traditional vacuum pumps with rotating vanes.

Composed of a new design of ejectors, these generators have an exceptional ratio between the compressed air consumption vs. vacuum airflow offering a very efficient system. They also have the benefit of adjusting the vacuum level simply by changing the compressed air inlet pressure.

One of the particular concerns during the design of these new generators was the noise level and as such, due to the absence of moving parts, which would be subject to vibration and wear, they are very quiet in operation.

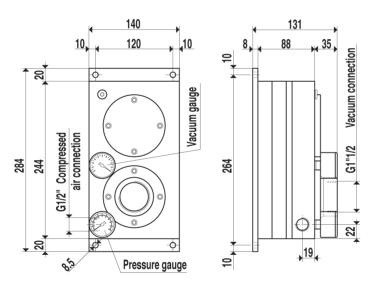
Moreover, as their working principle is by venturi, they do not emit heat and as they are constructed of light alloys their weight is very low.

A good filtration of both the compressed air supply and vacuum air intake offers an exhaust discharge free of oil vapour, water condensate or impurities into the working environment, with periodic cleaning of the filters as the only maintenance required.



Art.		PVP 40M	PVP 70M	PVP 100M		
Supply pressure	bar (g)	4 5 6	4 5 6	4 5 6		
Maximum vacuum level	-KPa	65 82 90	65 82 90	65 82 90		
Final pressure	mbar (a)	350 180 100	350 180 100	350 180 100		
Air consumption	NI/s	2.4 2.8 3.2	4.8 5.6 6.4	7.2 8.4 9.6		
Vacuum air flow	cum/h	32 36 40	56 62 68	80 89 98		
Working temperature	°C	-20/+80	- 20/+80	- 20/+80		
Weight	Kg	4.2	4.2	4.2		





Art.		PVP 140M	PVP 170M	PVP 200M		
Supply pressure	bar (g)	4 5 6	4 5 6	4 5 6		
Maximum vacuum level	-KPa	70 85 90	70 85 90	70 85 90		
Final pressure	mbar (a)	300 150 100	300 150 100	300 150 100		
Air consumption	NI/s	9.6 11.2 12.8	12.0 14.0 16.0	14.4 16.8 19.2		
Vacuum air flow	cum/h	125 140 150	140 155 170	170 188 198		
Working temperature	°C	-20/+80	-20/+80	-20/+80		
Weight	Kg	5.1	5.1	5.1		

[Vacuum generators PVP 140M ÷ 200M]

Designed specifically for incorporation in the Octopus lifting system, this new range of vacuum generators with multiple ejectors are very versatile in their applications and represent a real evolution in comparison with traditional vacuum pumps with rotating vanes.

Composed of a new design of ejectors, these generators have an exceptional ratio between the compressed air consumption vs. vacuum airflow offering a very efficient system. They also have the benefit of adjusting the vacuum level simply by changing the compressed air inlet pressure.

One of the particular concerns during the design of these new generators was the noise level and as such, due to the absence of moving parts, which would be subject to vibration and wear, they are very quiet in operation.

Moreover, as their working principle is by venturi, they do not emit heat and as they are constructed of light alloys their weight is very low.

A good filtration of both the compressed air supply and vacuum air intake offers an exhaust discharge free of oil vapour, water condensate or impurities into the working environment, with periodic cleaning of the filters as the only maintenance required.

N.B.: All the vacuum values shown in the table are valid at normal atmospheric pressure of 1013 mbar (a) and obtained with a constant supply pressure.



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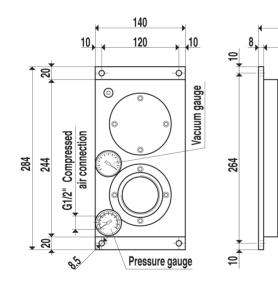
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Vacuum connection

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Art.		PVP 250M	PVP 300M				
Supply pressure	bar (g)	4 5 6	4 5 6				
Maximum vacuum level	-KPa	70 85 90	70 85 90				
Final pressure	mbar (a)	300 150 100	300 150 100				
Air consumption	NI/s	18.0 21.0 24.0	21.6 25.2 28.8				
Vacuum air flow	cum/h	200 225 250	225 250 300				
Working temperature	°C	-20/+80	-20/+80				
Weight	Kg	6	6				

[Vacuum generators PVP 250M and 300M]

Designed specifically for incorporation in the Octopus lifting system, this new range of vacuum generators with multiple ejectors are very versatile in their applications and represent a real evolution in comparison with traditional vacuum pumps with rotating vanes.

Composed of a new design of ejectors, these generators have an exceptional ratio between the compressed air consumption vs. vacuum airflow offering a very efficient system. They also have the benefit of adjusting the vacuum level simply by changing the compressed air inlet pressure.

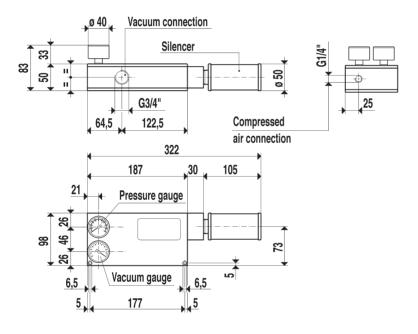
One of the particular concerns during the design of these new generators was the noise level and as such, due to the absence of moving parts, which would be subject to vibration and wear, they are very quiet in operation.

Moreover, as their working principle is by venturi, they do not emit heat and as they are constructed of light alloys their weight is very low.

A good filtration of both the compressed air supply and vacuum air intake offers an exhaust discharge free of oil vapour, water condensate or impurities into the working environment, with periodic cleaning of the filters as the only maintenance required.



[Vacuum generators PVP 25MD, 35MD and 50MD]



Art.		PVP 25M	ID	PVF	MD	PVI	PVP 50MD			
Supply pressure	bar (g)	4 5	6	4	5	6	4	5	6	
Maximum vacuum level	-KPa	67 85	90	67	85	90	67	85	90	
Final pressure	mbar (a)	330 150	100	330	150	100	330	150	100	
Air consumption	NI/s	2.4 2.8	3.2	3.6	4.2	4.8	4.8	5.6	6.4	
Vacuum air flow	cum/h	33 37	40	41	46	50	46	51	56	
Working temperature	°C	-20/+80)	-20/+80			-2	-20/+80		
Weight	Kg	1.710		1.730				1.750		

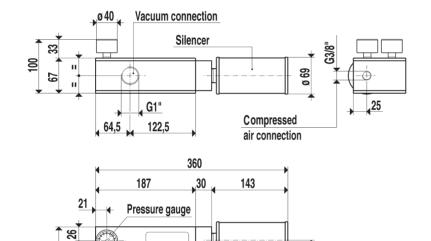
A line of ejectors of new design enabled us to develop this range of vacuum generators which have a very good ratio between the quantity of consumed air and the sucked one (volumetric efficiency) and for the possibility of the user to select the vacuum degree or the capacity depending on the pressure of the feeding air. Fed by compressed air at an optimum pressure of $4 \div 6$ bar, they are able to produce a maximum depression of 90%, equal to a final vacuum of 100 mbar, with suction capacities ranging from 33 to 56 cum/h, measured at the normal atmospheric pressure of 1013 mbar. Depending on the suction capacity, they consist of two, three or four sets of new ejectors based on the Venturi principle. The innovation of these generators consists in the exploitation of the kinetic energy of the feeding compressed air through several ejectors on line, properly sized, before releasing it into the atmosphere.

With the same suction capacity, this system allows a lower compressed air consumption compared to the traditional Venturi systems.

They are entirely manufactured in anodized aluminium, with lamellar valves and gaskets in special compounds, and they are all equipped, currently, with a silencer on the air outlet.



[Vacuum generators PVP 60MD and 75MD]



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Vacuum gauge

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A line of ejectors of new design enabled us to develop this range of vacuum generators which have a very good ratio between the quantity of consumed air and the sucked one (volumetric efficiency) and for the possibility of the user to select the vacuum degree or the capacity depending on the pressure of the feeding air.

Fed by compressed air at an optimum pressure of $4 \div 6$ bar, they are able to produce a maximum depression of 90%, equal to a final vacuum of 100 mbar, with suction capacities ranging from 65 to 89 cum/h, measured at the normal atmospheric pressure of 1013 mbar. Depending on the suction capacity, they consist of five or six sets of new ejectors based on the Venturi principle.

The innovation of these generators consists in the exploitation of the kinetic energy of the feeding compressed air through several ejectors on line, properly sized, before releasing it into the atmosphere.

With the same suction capacity, this system allows a lower compressed air consumption compared to the traditional Venturi systems.

They are entirely manufactured in anodized aluminium, with lamellar valves and gaskets in special compounds, and they are all equipped, currently, with a silencer on the air outlet.

Art.		PVP 60MD	PVP 75MD		
Supply pressure	bar (g)	4 5 6	4 5 6		
Maximum vacuum level	-KPa	67 85 90	67 85 90		
Final pressure	mbar (a)	330 150 100	330 150 100		
Air consumption	NI/s	6.0 7.0 8.0	7.2 8.4 9.6		
Vacuum air flow	cum/h	65 73 79	73 82 89		
Working temperature	°C	-20/+80	-20/+80		
Weight	Kg	2.160	2.180		

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[Modular vacuum generators PVP 150MD÷ 600MD]

The particular configuration of these new vacuum generators allowed us to reach high suction capacities with very small overall dimensions.

The ejectors used have the same features as those previously described, but they are assembled on modular frames instead of being fixed directly to the generator body.

The overlap of one or more modular frames determines the capacity of the generators.

Fed by compressed air filtered with an ideal pressure of 6 bar, they can create a 90% maximum vacuum, with suction capacities ranging from 180 to 660 cum/h, measured at the normal atmospheric pressure of 1013 mbar.

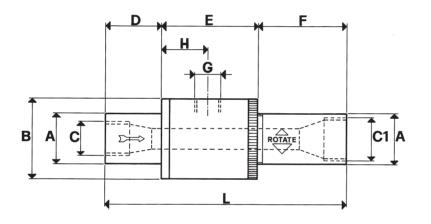
They are entirely manufactured in anodized aluminium, with lamellar valves and gaskets in special compounds. Designed with sound levels in mind these units are extremely quiet in their operation.

Pressure gauge	22 55.5 Vacuum gauge	12.5 ♦	A 37
53 54			
295 245 6		270	
25 ø ext. hose	Vacuum connection	•	
+ ~		12:5	<mark>, 29, ,, 35,</mark>
22.5	200	22.5	Compressed_ air connection

Art.		PVP 150MD	PVP 300MD	PVP 450MD	PVP 600MD
Supply pressure	bar (g)	6	6	6	6
Maximum vacuum level	-KPa	90	90	90	90
Final pressure	mbar (a)	100	100	100	100
Air consumption at 6 bar	NI/s	16	32	48	64
Vacuum air flow	cum/h	180	350	510	660
Working temperature	°C	-20/+80	-20/+80	-20/+80	-20/+80
Weight	Kg	7.8	8.8	9.9	11.1
Α		80	100	122	142
В		30	30	48	48
G	Ø	15	15	22	22
R	ø gas	1"1/2	2"	2"1/2	3"
L		125	145	167	187



[Adjustable vacuum generators Conveyor]



Conveyor	Art.	PVR 25	PVR 50	PVR 100	PVR 200
Supply pressure	bar (g)	6	6	6	6
Maximum vacuum level	-KPa	75	75	75	75
Final pressure	mbar (a)	250	250	250	250
Air consumption	NI/s	6.6	13.2	20.7	42.4
Vacuum air flow	cum/h	25	50	100	200
Working temperature	°C	-20/+80	-20/+80	-20/+80	-20/+80
Weight	Kg	0.150	0.280	0.430	0.550
A	ø	19	26	32	38
В	ø	32	38	50	57
C	ø gas	1/4"	3/8"	1/2"	3/4"
C1	ø gas	1/4"	1/2"	3/4"	1"
D		19	35	35	35
E		47	54	60	60
F		34	61	55	77
G	ø gas	1/8"	1/4"	3/8"	1/2"
н		22	25	28	28
L		100	150	150	172

N.B.: All the vacuum values shown in the table are valid at normal atmospheric pressure of 1013 mbar (a) and obtained with a constant supply pressure.

OPERATING PRINCIPLE

The operation of these vacuum generators is based on the Venturi principle.

Unlike those previously described, the ejector they are provided with, besides having a far higher flow diameter, is also adjustable.

This feature allows to modify capacity and vacuum degree of the device, without changing the pressure degree of the feeding air.

Also the compressed air consumptions are in relation with the actual performances of the vacuum generator.

FEATURES

The particular configuration of the adjustable vacuum generators and their operating principle with straight flow allow to suck and transfer products of different kind, without interferences, like the flow generators; however, unlike the latter ones, they can pass far bigger differences in height.

They are suitable for transferring powders, granulated products, sawdust, corn, metal chips, liquid or dry foodstuffs, etc.; for interlocking cups in the presence of powders or liquids; or for extracting fumes, refrigerating fogs, water or oil condensates, etc.

The absence of moving parts allows continuous use without heat development.

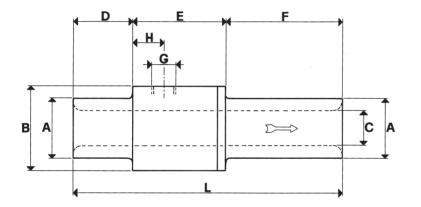
As no electric current is required, they can also be used in hazardous environments where an ignition source would be dangerous.

They are entirely manufactured in anodized anticorodal aluminium.

Due to their features, a good filtration of the feeding compressed air is sufficient, in order to avoid any kind of maintenance.



[Flow vacuum generators Vacuum Jet]



Art.		CX7	CX10	CX13	CX19	CX25	CX38	CX50
Supply pressure	bar (g)	3÷6	3÷6	3÷6	3÷6	3÷6	3÷6	3÷6
Maximum vacuum level	-KPa	10	10	10	10	10	10	5.0
Final pressure	mbar (a)	900	900	900	900	900	900	950
Air consumption	NI/s	0.9÷1.6	1.5÷2.6	4.1÷6.9	6.1÷10	9.4÷16.6	15.2÷27.7	15.2÷27.7
Vacuum air flow	cum/h	15	32	61	115	150	185	250
Working temperature	°C	-20/+80	-20/+80	-20/+80	-20/+80	-20/+80	-20/+80	-20/+80
Weight	Kg	0.110	0.104	0.280	0.500	0.560	0.800	1.090
Α	ø	19	19	25	32	38	51	64
В	ø	32	32	45	54	60	75	90
C	ø	7	10	13	19	25	38	50
D		15	15	30	43	42	42	42
E		42	42	55	65	66	66	66
F		33	33	55	82	82	82	82
G	ø gas	1/8"	1/8"	1/4"	3/8"	3/8"	3/8"	1/2"
Н		13	13	18	22	22	22	22
L		90	90	140	190	190	190	190
N.B.: All the vacuum values	shown in the	table are v	alid at norn	nal atmosp	heric press	ure of 1013	mbar (a) ar	nd obtained

OPERATING PRINCIPLE

The feeding compressed air, blown into a ring chamber concentric to the device, flows at a very high speed towards the centre of the main pipe, thus forming a cyclonic effect.

The latter has the property to create a vacuum inside the device and induce a large volume of air towards its exit. Consequently, by changing the feeding air pressure, the depression and the amount of air sucked will also change.

FEATURES

The particular configuration of the flow vacuum generators and their operating principle with straight flow allow to suck and transfer products of different kind, without interferences.

Actually, vacuum jets are suitable for transferring powders, granulated products, sawdust, corn, metal chips, liquid or dry foodstuffs, etc.; or for extracting fumes, refrigerating fogs, water or oil condensates, etc.

The absence of moving parts allows continuous use without heat development.

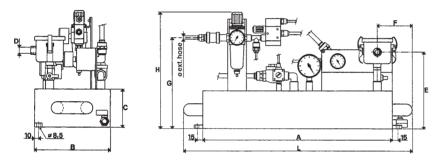
As no electric current is required, they can also be used in hazardous environments where an ignition source would be dangerous.

They are entirely manufactured in anodized anticorodal aluminium.

Due to their features, a good filtration of the feeding compressed air is sufficient, in order to avoid any kind of maintenance.



[Small Venturi pumpsets]



Art.	Tank Litres	Generator Mod.	A	В	C	D Ø	E	F	G	H	L	Hose ext. Ø
DOP 06	6	PVP 12M	500	200	60	3/8"	150	95	180	250	620	8
	6	PVP 25M	500	200	60	3/8"	150	95	180	250	620	8
DOP 10	10	PVP 12M	500	200	100	3/8"	210	95	240	310	620	8
	10	PVP 25M	500	200	100	3/8"	210	95	240	310	620	8
DOP 20	20	PVP 25MD	1000	200	100	1/2"	225	135	270	340	1110	8
	20	PVP 35MD	1000	200	100	1/2"	225	135	270	340	1110	8

The small Venturi pumpsets are little selfcontained units for the vacuum production, fed only by compressed air, with a peculiar feature being their limited size.

They consist of:

- A small welded steel plate tank.
- A vacuum generator operated by compressed air.
- A pneumatic vacuum switch for adjusting the vacuum degree.
- A vacuum gauge for direct reading of the vacuum degree.
- · A manual valve for intercepting vacuum.
- · A suction filter mod. FC
- A pressure regulator with filter.
- A pneumatically operated valve for feeding the vacuum generator.

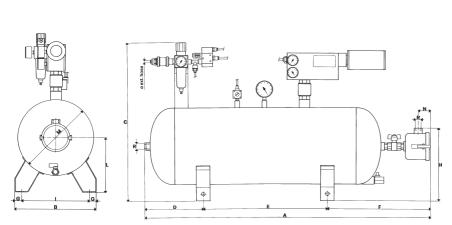
• A sleeve valve for intercepting compressed air. The holding of the vacuum degree in the tank, preset by means of the vacuum switch, is fully automatic.

The small Venturi pumpsets are suitable for equipping small stationary or mobile operating units which require vacuum, such as:

- Trolleys with cups for fixing and moving glasses and crystals.
- Stirrup systems with vacuum for the ski. maintenance, to drill or pantograph marbles, to polish pewter, copper or silver objects etc.
- Tackles with cups for lifting television sets, various electrical household appliances, to fix glasses into window and door frames, to feed plates into presses etc.

The small Venturi pumpsets do not require electric current, but just compressed air at a pressure of $4 \div 6$ bar; because of this feature, their use is recommended in hazardous environments where an ignition source would be dangerous.

[Venturi pumpsets]



Aut	Tank	Generator	Α	B	C	D	Ε	F	G	Η	Ι	L	М	Ν	R	Hose
Art.	Litres	Mod.											Ø		Ø	ext.ø
DOD 25	25	PVP 25MD	700	070	FEO	200	250	220	20	00E	010	105	040	40	1/2"	
DOP 25	25	PVP 35MD	780	270	550	200	250	330	30	225	210	100	240	40	1/2	8
	50	PVP 50MD														
DOP 50	50	PVP 60MD	1080	300	590	0 220	460	460 400	400 27.5	.5 245	245	205	280	40	1/2"	12
DOP 100	100	PVP 75MD	1340	355	670	290	570	480	30	300	295	255	350	45	1"	12
DOP 150	150	PVP 150MD	1460	410	800	270	735	455	30	360	350	280	400	45	1"	18
DOP 300	300	PVP 300MD	1930	510	910	320	980	630	30	440	450	340	500	80	1"1/2	18

The Venturi pumpsets are self-contained units for the vacuum production, fed only by compressed air. They consist of:

- A welded steel plate tank.
- A vacuum generator operated by compressed air.
- A pneumatic vacuum switch for the adjustment of the operative vacuum degree range.
- A vacuum gauge for direct reading of the vacuum degree in the tank.
- A manual valve for intercepting vacuum.
- A suction filter mod. FC
- A pressure regulator with filter.
- A pneumatically operated valve for feeding the vacuum generator.
- A sleeve valve for intercepting compressed air.
- A cock for draining condensate from the tank.

They are normally used for moving particularly heavy or valuable loads, because also in the event of sudden electric current failure, they allow the cups to hold the load for a certain time after failure (variable according to the tank capacity).

They are also recommended in multi-point applications, to centralize vacuum.

In both cases the use of the pumpset is particularly profitable under the point of view of the energy saving, because the generator starts working only when vacuum is required by the machines.

The Venturi pumpsets do not require electric current, but just compressed air at a pressure of $4 \div 6$ bar; because of this feature, their use is recommended in hazardous environments where an ignition source would be dangerous.