

# compressors

## LPG COMPRESSOR SELECTION GUIDE

### 100% Propane

Driver Size	3.7 kw 5 hp	5.5 kw 7.5 hp	7.5 kw 10 hp	11 kw 15 hp	15 kw 20 hp	18.5 kw 25 hp	22 kw 30 hp	30 kw 40 hp	30 kw 40 hp	37 kw 50 hp
Model	LB161 LB162	LB161 LB162	LB361 LB362	LB361 LB362	LB601 LB602	LB601 LB602	LB601 LB602	LB601 LB602	LB942	LB942
Compressor RPM	560	725	545	725	580	680	740	800	630	770
Capacity (M <sup>3</sup> /hr)	15.0	19.3	31	41	58	68	74	80	118	144
Time Factor	9.30	7.20	4.44	3.36	2.52	2.16	1.98	1.80	1.20	0.96
Vapor Line (mm)	25	32	32	38	50	50	50	65	75	100
Liquid Line (mm)	50	65	75	75	100	100	100	100	150	150

### 80% Propane / 20% Butane

Driver Size	3.7 kw 5 hp	5.5 kw 7.5 hp	7.5 kw 10 hp	11 kw 15 hp	15 kw 20 hp	18.5 kw 25 hp	22 kw 30 hp	22 kw 30 hp	30 kw 40 hp	37 kw 50 hp
Model	LB161 LB162	LB161 LB162	LB361 LB362	LB361 LB362	LB601 LB602	LB601 LB602	LB601 LB602	LB942	LB942	LB942
Compressor RPM	600	780	580	780	580	680	740	575	700	805
Capacity (M <sup>3</sup> /hr)	15.5	20.2	32	43	56	65	72	103	125	144
Time Factor	8.82	6.78	4.32	3.18	2.58	2.04	1.86	1.32	1.08	0.96
Vapor Line (mm)	25	32	32	38	50	65	65	75	100	100
Liquid Line (mm)	50	65	75	75	100	100	100	150	150	150

### 50% Propane / 50% Butane

Driver Size	3.7 kw 5 hp	5.5 kw 7.5 hp	5.5 kw 7.5 hp	7.5 kw 10 hp	11 kw 15 hp	11 kw 15 hp	15 kw 20 hp	18.5 kw 25 hp	22 kw 30 hp	30 kw 40 hp
Model	LB161 LB162	LB161 LB162	LB361 LB362	LB361 LB362	LB361 LB362	LB601 LB602	LB601 LB602	LB601 LB602	LB942	LB942
Compressor RPM	670	815	525	670	815	535	655	700	665	805
Capacity (M <sup>3</sup> /hr)	15.9	19.3	26.7	34	41	48	58	62	108	132
Time Factor	8.16	6.72	4.80	3.84	3.12	2.88	2.34	2.22	1.20	1.02
Vapor Line (mm)	25	32	32	32	38	38	50	65	75	100
Liquid Line (mm)	50	65	75	75	75	100	100	100	150	150

### 30% Propane / 70% Butane

Driver Size	3.7 kw 5 hp	5.5 kw 7.5 hp	5.5 kw 7.5 hp	7.5 kw 10 hp	11 kw 15 hp	11 kw 15 hp	15 kw 20 hp	18.5 kw 25 hp	22 kw 30 hp	30 kw 40 hp
Model	LB161 LB162	LB161 LB162	LB361 LB362	LB361 LB362	LB361 LB362	LB601 LB602	LB601 LB602	LB601 LB602	LB942	LB942
Compressor RPM	670	815	615	725	815	580	680	770	740	805
Capacity (M <sup>3</sup> /hr)	14.7	18.0	28.8	34	38	48	55	63	109	119
Time Factor	7.62	6.30	3.90	3.30	2.94	2.46	2.10	1.80	1.02	0.96
Vapor Line (mm)	25	32	32	32	38	38	50	50	75	100
Liquid Line (mm)	50	50	75	75	75	100	100	100	150	150

### 100% Butane

Driver Size	3.7 kw 5 hp	3.7 kw 5 hp	5.5 kw 7.5 hp	7.5 kw 10 hp	7.5 kw 10 hp	11 kw 15 hp	15 kw 20 hp	15 kw 20 hp	18.5 kw 25 hp	22 kw 30 hp
Model	LB161 LB162	LB361 LB362	LB361 LB362	LB361 LB362	LB601 LB602	LB601 LB602	LB601 LB602	LB942	LB942	LB942
Compressor RPM	780	510	630	815	510	655	770	630	740	805
Capacity (M <sup>3</sup> /hr)	13.0	18.0	23.7	28.8	31	40	46	67	78	84
Time Factor	6.36	4.56	3.48	2.88	2.64	2.10	1.80	1.20	1.02	0.96
Vapor Line (mm)	25	32	32	32	32	38	38	65	65	75
Liquid Line (mm)	50	50	75	75	75	75	75	100	150	150

See Notes on other side.....

## Notes:

Driver size and Model selection are based on 40° C maximum product temperature and the use of an adequate piping system.

Compressor speeds shown are standard selections for 1450 rpm drivers.

Available speeds for LB161 & LB361:

400 415 435 455 470 490 510 525 545 560 580 600 615 635 670 725 780 815

Available speeds for LB601:

405 420 435 450 465 480 495 510 535 580 625 655 680 700 740 770 800

Available speeds for LB942:

400 425 455 480 510 545 575 610 630 665 700 740 770 805

The charts assume a differential pressure of about 1.7 bar during the liquid transfer operation. Higher differential pressures will result in lower transfer rates and higher power requirements.

The 'Capacity' is the liquid transfer rate based on 20° C operation. Performance will vary depending on the piping design and temperature.

Multiply the 'Time Factor' value by the vessel size in M<sup>3</sup> to obtain the approximate total time to transfer the liquid and recover vapors. Example: an LB361 at 780 rpm transferring 80% Propane / 20% Butane has a Time Factor of 3.18. To empty a 50 M<sup>3</sup> vessel will require about:  $(3.18 \times 50) = 159$  minutes.

The 'Line Sizes' shown are the minimum that should be used. For distances over 35 meters, increase the line size.