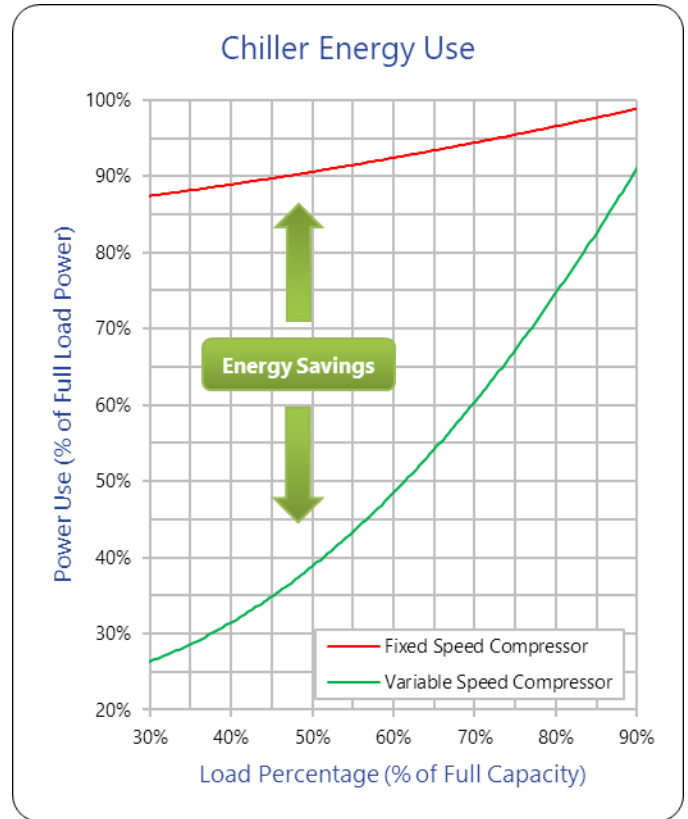


Energy Saving Technology Pays for Itself

Industrial portable chillers operate in a variety of applications with process heat loads frequently less than 100% of available capacity. With increasing emphasis on energy efficiency and reduced operating costs, we developed a variable-speed scroll compressor option to help improve the efficiency of our industrial portable chillers.

Most portable chillers use fixed-speed scroll compressors with hot gas bypass to provide capacity and temperature control. This valve bypasses a portion of the hot discharge refrigerant gas back into the compressor to give the compressor a simulated 100% load situation. This works well to keep the compressor running and ready for any fluctuations in the actual process load; however, it runs the compressor at full speed all the time.

Our variable-speed scroll compressor technology varies the compressor speed to match the process load. By automatically adjusting the compressor speed, the chiller works only as hard as necessary to provide optimum performance with significantly reduced power use.



10-Ton Variable-Speed Option Payback (Years)

Hours of Operation	Process Load (Percent of Full Capacity)								
	50%	55%	60%	65%	70%	75%	80%	85%	90%
4,000/year	1.1	1.2	1.3	1.4	1.6	1.8	2.3	3.0	4.7
6,000/year	0.7	0.8	0.8	0.9	1.0	1.2	1.5	2.0	3.2
8,400/year	0.5	0.5	0.6	0.7	0.7	0.9	1.1	1.4	2.3

15-Ton Variable-Speed Option Payback (Years)

Hours of Operation	Process Load (Percent of Full Capacity)								
	50%	55%	60%	65%	70%	75%	80%	85%	90%
4,000/year	0.9	1.0	1.1	1.2	1.4	1.8	2.4	3.7	9.4
6,000/year	0.6	0.7	0.7	0.8	1.0	1.2	1.6	2.4	6.3
8,400/year	0.4	0.5	0.5	0.6	0.7	0.8	1.1	1.7	4.5

20-Ton Variable-Speed Option Payback (Years)

Hours of Operation	Process Load (Percent of Full Capacity)								
	50%	55%	60%	65%	70%	75%	80%	85%	90%
4,000/year	1.1	1.1	1.1	1.1	1.1	1.3	1.6	2.2	3.7
6,000/year	0.7	0.7	0.7	0.7	0.7	0.9	1.1	1.4	2.4
8,400/year	0.5	0.5	0.5	0.5	0.5	0.6	0.8	1.0	1.7

Based on \$0.10/kWhr power cost