



Savings, Performance, 3 Technologies

NEW SILENSYS®

Silence to meet
your highest expectation



Tecumseh



Cooling for a Better Tomorrow™



SILENSYS®

The first condensing unit which combines **silence and performance**, available in **3 technologies**.

The only manufacturer to master the 3 compressor technologies.



PISTON

Tecumseh proven compressor technology. Reliability and robustness characterize these reciprocating compressors. Tecumseh continues to lead the way by designing energy efficiency, quiet operation and reliability into every new reciprocating compressor we produce.



ROTARY

Rotary technology ensures optimum performance especially for small cooling capacities. This compressor technology allows energy saving (due to reduced electrical input power on a large evaporation range) and a low acoustic level with a small footprint. Ideally suited for demanding applications, its design gives it great strength.



SCROLL

Scroll technology ensures high efficiency for medium and high cooling capacities regardless of the operating regime. This technology allows significant energy savings and is ideal for demanding applications. Its design gives it great resistance to liquid flooding.

SILENSYS®, a range of cutting edge products

With 50 years of experience in the refrigeration industry, world leader Tecumseh develops and devises high performance condensing unit solutions.

Tecumseh continues to innovate and launches in 2011 three new Silensys® condensing unit ranges.



SILENSYS®, an innovative idea, French designed and manufactured

MADE IN FRANCE

Tecumseh Europe's R&D department and accredited laboratory guarantee performance levels and validated improvements.

This level of excellence is recognized by the leading accreditation and certification bodies:

- Laboratory COFRAC accreditation
- Compressor performance ASERCOM certification.

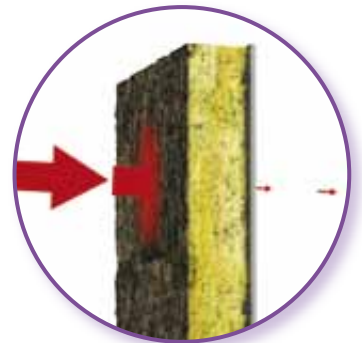


Silensys®'s benefits

Acoustics

Silensys®, the ultra silent range, remains the acoustic reference on the market.

Decrease in sound power is **at least 50% on S, M and L** [-3 dB(A)] and **75% on size XL** [-6 dB(A)].



Energy efficiency

The Reciprocating range has been supplemented by two "High Efficiency" (HE) ranges, which integrate the new Rotary and Scroll compressors. With the addition of EC fan (motors) on some models Tecumseh further meets the needs to reduce energy consumption.

Coefficient of Performance (COP) improvement

- **Reciprocating technology:** on average +5%
- **Scroll technology:** on average +15%
- **Rotary technology:** on average +20%



Robustness and reliability

French made Silensys® condensing units are manufactured with **high quality components**.

Silensys® is designed to operate in a wide range of environments, including those with high ambient temperatures.



Installation and maintenance

Contents and functions of the new condensing units have been upgraded **in order to ease installation and maintenance**. Safety aspects have also been improved.



SILENSYS® RANGE

ACOUSTICS

And the silence is

- 1 New fan blade design geometry
- 2 Added foam within the cover to encapsulate noise
- 3 Air flow optimization by adding a buffer around the fan
- 4 Noise transmission is further limited by the lateral double skin plastic door
- 5 Redesigned metal door frame for increased overall stiffness and reduced vibration
- 6 Discharge muffler line reduces the pulsations (depending on model)
- 7 Specific pipe-bending to reduce and absorb cooling circuit vibrations



ENERGY EFFICIENCY

Friendly power

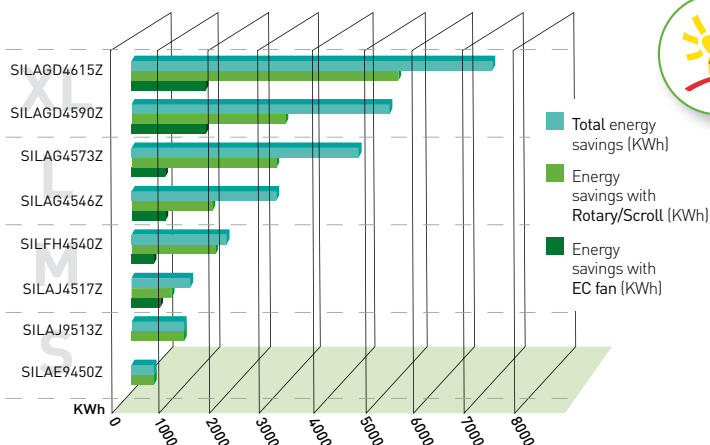
- 1 Reduced electrical input power with Rotary and Scroll technologies due to higher volumetric efficiency
- 2 Improved AC fan performance with permanent capacitor for S size
- 3 Fan speed regulator direct mounted on 3-way valve (or liquid receiver)



Rotary compressor



Scroll compressor



- In a condensing unit compressor power largely determines in the total power consumption
- Tecumseh has anticipated the Energy related Product (ErP) 2013/2015 directive requirements which sets minimum efficiency numbers for EC fans (permanent magnet motor)
- Digital controller on XL Scroll Silensys® for multiple evaporator capability
- Silensys®' condensers are devised to operate in High Ambient Temperature



What's new?

ROBUSTNESS & RELIABILITY

Built to last

- 1 Oil management: Silensys® ranges (Rotary, Reciprocating and Scroll) are equipped with an oil separator
- Check valve on cooling circuit for rotary compressors
- Oil equalization piping between 2 compressors (Silensys® DUO)
- IP44 Electrical Protection Class (resistant to water spray)
- Corrosion and UV-resistant condensing unit



REGULATIONS - CERTIFICATIONS

Silensys® has anticipated the Energy related Product European directive (ErP), applicable for electrical motors placed in effect 2013 and 2015.

The ErP European directive sets minimum efficiency numbers for fans: applicable for fan input power > 125 W.

All Tecumseh fans are CE marked.

INSTALLATION AND MAINTENANCE

It could not be simpler

- 1 Rail DIN length increased to ease integration of additional components
- 2 Floor or wall setting installation (on S and M sizes)
- 3 90° open door lock
- Electrical safety reinforcement:
 - Power circuit breaker
 - Additional circuit breaker on EC fan motor
 - Internal or external overload on compressor
- Valve on liquid receiver for refrigerant capture during maintenance
- Easy removable front panel for accessibility (M, L and XL sizes)

OPTIONS

- Fusible plug to protect over pressure
- Sightglass mount on liquid receiver
- HP/BP – HP pressure switch/ manual reset



SILENSYS®

A range that meets all your needs

MODEL S

MODEL M

MODEL L



Volume

From S to L: 1 m³ to 170 m³

Power

From S to L: 0,5 kW to 14 kW



Small business



Proximity stores/Bio medical



Petrol station



Whatever the volume to cool,
a Silensys® product meets your needs:

Applications:

- Cold rooms
- Fermentation chambers
- Refrigerated cabinets
- Wine cellars
- Ice makers

Segments:

- Proximity food stores (small supermarket, petrol station, bakery, butcher's, delicatessen, fish shop...)
- Supermarkets
- Non food proximity stores

Others:

- Wine merchant, beer and wine bar, restaurants, community kitchen, biomedical units, morgue



PISTON

VOL-TAGE CODE	Cooling capacity (Watts) EN13215 Return suction gas 20 °C										EN13215 Super heating 10K		Sound pressure 10 m	Sound pressure 5 m
	FZ TZ K	Ambient temperature	-20 °C	-15 °C	-10 °C	-5 °C	0 °C	5 °C	10 °C	15 °C	Cool. cap. (W) -10 °C	Power input (W)	Acoustic* [dB(A)]	
SILAG4546Z	TZ/KZ	25	4 501	5 714	7 063	8 522	10 060	11 642	13 228	14 778	6 350	3 094		
		32	3 757	4 875	6 108	7 434	8 826	10 257	11 692	13 101	5 431	3 082	37	43
		43	2 629	3 599	4 649	5 765	6 932	8 130	9 338	10 544	4 038	3 063		
SILAG4553Z	TZ/KZ	25	5 060	6 386	7 855	9 437	11 100	12 804	14 511	16 180	7 071	3 449		
		32	4 270	5 498	6 839	8 271	9 768	11 299	12 831	14 333	6 092	3 462	37	43
		43	3 019	4 107	5 261	6 471	7 720	8 990	10 262	11 526	4 590	3 482		
SILAG4561Z	TZ/KZ	25	5 829	7 268	8 854	10 555	12 335	14 153	15 965	17 727	7 939	3 904		
		32	4 989	6 329	7 783	9 328	10 934	12 568	14 194	15 778	6 900	3 927	37	43
		43	3 630	4 837	6 106	7 424	8 773	10 134	11 487	12 821	5 288	3 962		
SILAG4568Z	TZ/KZ	25	6 995	8 597	10 370	12 287	14 317	16 425	18 574	20 728	9 318	4 230		
		32	6 062	7 580	9 236	11 011	12 879	14 814	16 786	18 770	8 207	4 320	37	43
		43	4 590	5 972	7 442	8 992	10 608	12 278	13 988	15 741	6 463	4 461		
SILAG4573Z	TZ/KZ	25	7 581	9 302	11 201	13 243	15 388	17 592	19 807	21 983	10 048	4 740		
		32	6 646	8 244	9 982	11 834	13 768	15 748	17 735	19 691	8 853	4 802	37	43
		43	5 119	6 518	8 002	9 558	11 166	12 804	14 451	16 097	6 933	4 900		
SILAGD4590Z	TZ/KZ	25	8 682	11 106	13 812	16 755	19 883	23 134	26 441	29 733	12 386	6 100		
		32	7 223	9 425	11 849	14 458	17 205	20 036	22 892	25 716	10 501	6 087	44	50
		43	5 023	6 877	8 863	10 954	13 113	15 302	17 486	19 654	7 663	6 068		
SILAGD4610Z	TZ/KZ	25	9 588	12 170	15 007	18 039	21 197	24 400	27 559	30 588	13 413	6 955		
		32	8 178	10 568	13 156	15 890	18 710	21 545	24 321	26 967	11 635	6 923	44	50
		43	5 947	8 063	10 283	12 571	14 883	17 169	19 382	21 501	8 903	6 873		
SILAGD4612Z	TZ/KZ	25	10 739	13 341	16 154	19 110	22 135	25 152	28 083	30 863	14 382	7 770		
		32	9 142	11 529	14 057	16 664	19 285	21 855	24 311	26 616	12 362	7 799	44	50
		43	6 546	8 639	10 759	12 858	14 892	16 820	18 636	20 358	9 221	7 846		
SILAGD4614Z	TZ/KZ	25	12 925	15 632	18 572	21 685	24 914	28 215	31 560	34 948	16 492	8 647		
		32	11 017	13 536	16 220	19 019	21 894	24 819	27 790	30 857	14 209	8 780	44	50
		43	8 018	10 237	12 517	14 835	17 182	19 580	22 118	24 412	10 648	8 989		
SILAGD4615Z	TZ/KZ	25	13 718	16 609	19 702	22 922	26 196	29 459	32 654	35 758	17 466	9 583		
		32	11 977	14 572	17 282	20 037	22 773	25 435	27 992	30 469	15 123	9 658	44	50
		43	9 192	11 323	13 434	15 469	17 388	19 179	20 905	21 654	11 436	9 778		

Preliminary data.

* Sound level at maximum speed ventilation
 ** In: nominal current - Im: maximal current

Sound power	Technical data				FZ Voltage code			TZ Voltage code			KZ Voltage code			Weight	
	Air flow (m³/h)	Liquid receiver volume (L)	For tubing O.D.		220V - 240V 50 Hz 1~			400V 50 Hz / 440V 60 Hz 3~			220V 50 Hz / 220V 60 Hz 3~			Gross (kg)	Net (kg)
			Suction	Liquid line	Power input (W)	In (A)**	Im (A)	Power input (W)	In (A)	Im (A)	Power input (W)	In (A)	Im (A)		
68	5400	6	7/8	5/8	-	-	-	4467	8,5	12,5	4297	14,8	24,2	143	128
68	5400	6	7/8	5/8	-	-	-	4994	9,1	14,5	4802	16,1	28,4	149	134
68	5400	6	1 1/8	5/8	-	-	-	5771	9,7	15,1	5544	18,7	30,9	149	134
68	5400	6	1 1/8	5/8	-	-	-	6289	10,8	16,3	6323	21,5	36,6	153	138
68	5400	6	1 1/8	5/8	-	-	-	7072	12,5	19,1	7985	23,9	33,1	154	139
75	6600	9,5	1 1/8	5/8	-	-	-	8936	15,3	26,2	8556	30,8	46,6	301	274
75	6600	9,5	1 1/8	5/8	-	-	-	10251	17	29,2	9900	33,8	54,8	302	275
75	6600	11,5	1 3/8	7/8	-	-	-	11661	18,1	30,4	11206	36,8	59,8	304	277
75	6600	11,5	1 3/8	7/8	-	-	-	13145	20,6	32,8	12626	44,2	71,2	307	280
75	6600	11,5	1 3/8	7/8	-	-	-	14528	23,7	38,4	14044	48,8	64,2	307	280

Old letter code	New letter code	Designation
F	FZ	220-240V-50Hz
/	XC	220-240V-50Hz
K	KZ	220V 3-50Hz 220V 3-60Hz
T	TZ	400V 3-50Hz 440V 3-60Hz
/	XG	380-420V 3-50Hz 460V 3-60Hz

Cooling capacity according EN 13215 conditions: suction gas 20 °C, sub cooling 3K, Ambient T° 32 °C.

Cooling performances are listed for single phase groups.

For three-phase groups in some cases they may be different.

Presentation of acoustic values of maximum fan speed in a straight line and according EN 13215.

In a constant effort to reconcile reported and actual acoustic values,

Tecumseh Europe meets the acoustic standard EN ISO 3743-1.

Silensys® is designed to operate in high ambient temperatures (Ambient T° 46 °C).

Tecumseh Europe: a commercial refrigeration specialist

A market leader in refrigeration & comfort cooling, Tecumseh Europe is part of the multinational Tecumseh Product Company. Tecumseh Europe designs and manufactures innovative compressors and condensing units specifically for commercial refrigeration applications. Currently, almost 25% of consumable food worldwide is wasted due to non respect of the cold chain. Based on this fact, Tecumseh offers high value-added products and a full product range.

■ Our values

For more than 77 years, Tecumseh's success has been based on shared company values:

- employees are our greatest asset
- a true customer service orientation
- the highest product quality & services
- perpetual technological innovation.

■ Tecumseh: People

This value comes from the professionalism of each employee, with strong technology, sales and industrial competency. Continuous training programs and internal promotion of talented employees guarantees a high level of commitment.

■ Tecumseh: Innovative products

Since 1934, Tecumseh has developed highly innovative products targeting high efficiency & high reliability.

Tecumseh in Europe is the only hermetic compressors manufacturers to provide a wide range of compressors in all three primary hermetic compressor technologies: **Reciprocating, Scroll & Rotary.**

■ Tecumseh: Known worldwide

Several key brands names such as Unité Hermétique®, Silensys®, Masterflux®, Celseon®, and Vector® are supported by more than 1,000 sales representatives and authorized wholesale distributors.

■ Tecumseh: Full range of services

Tecumseh proposes full support from product selection, **unit design, training, sales administration and technical support** on site.

■ Tecumseh: Green technology

Conscious of the economic and ecological stakes of tomorrow, **Tecumseh is committed to sustainable energy and efficiency development.** Tecumseh follows **ISO 14001** (environmental management system) as well as **ISO 9001** (quality management process).

With more than 1,350 employees, Tecumseh Europe is delivering on the promise of innovation, product quality and value. Tecumseh is fully customer focused toward being the best global commercial refrigeration supplier today and into the future.

SALES AND MARKETING HEAD OFFICE

2, avenue Blaise Pascal
Site Prologis Bât. B
38090 Vaulx-Milieu
France
Tel. int +33 (0)4 74 82 24 00
Fax int +33 (0)4 74 82 24 99

GERMAN OFFICE

Ludwigstrasse 31
60327 Frankfurt am Main
Germany
Tel. int +49 (0)69 97 1454-0
Fax int +49 (0)69 72 41053

ITALIAN OFFICE

Via Parco Abbaziale, 6
10094 Giaveno (TO)
Italia
Tel. int +39 (0)11 937 98 61
Fax int +39 (0)11 937 83 88

SPANISH OFFICE

C/Corcega 301-303, 2º, 3a
08008 Barcelona
España
Tel. int +34 93 218 5708
Fax int +34 93 218 1691

BRITISH OFFICE

8 The Square, Stockley Park,
Uxbridge Middlesex UB11 1FW
United Kingdom
Tel. int +44 (0) 203 008 8565
Fax int +33 (0)4 74 82 24 94

MALAYSIAN OFFICE

N°18 Jalan Sultan Mohamed 4
Selat Klang Utara
42000 Port Klang
Selangor Darul Eshan
Malaysia
Tel. int +60 3 3176 3886
Fax int +60 3 3176 3890

