

Tecumseh Group presentation

COMPRESSORS



CO₂

A Global Company
serving our
customer's
needs worldwide



ENGINES



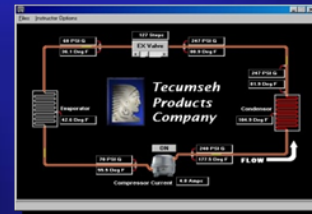
Snowplough



Lawn Mower



MOTORS AND COMPONENTS



Software



Hardware

Controls

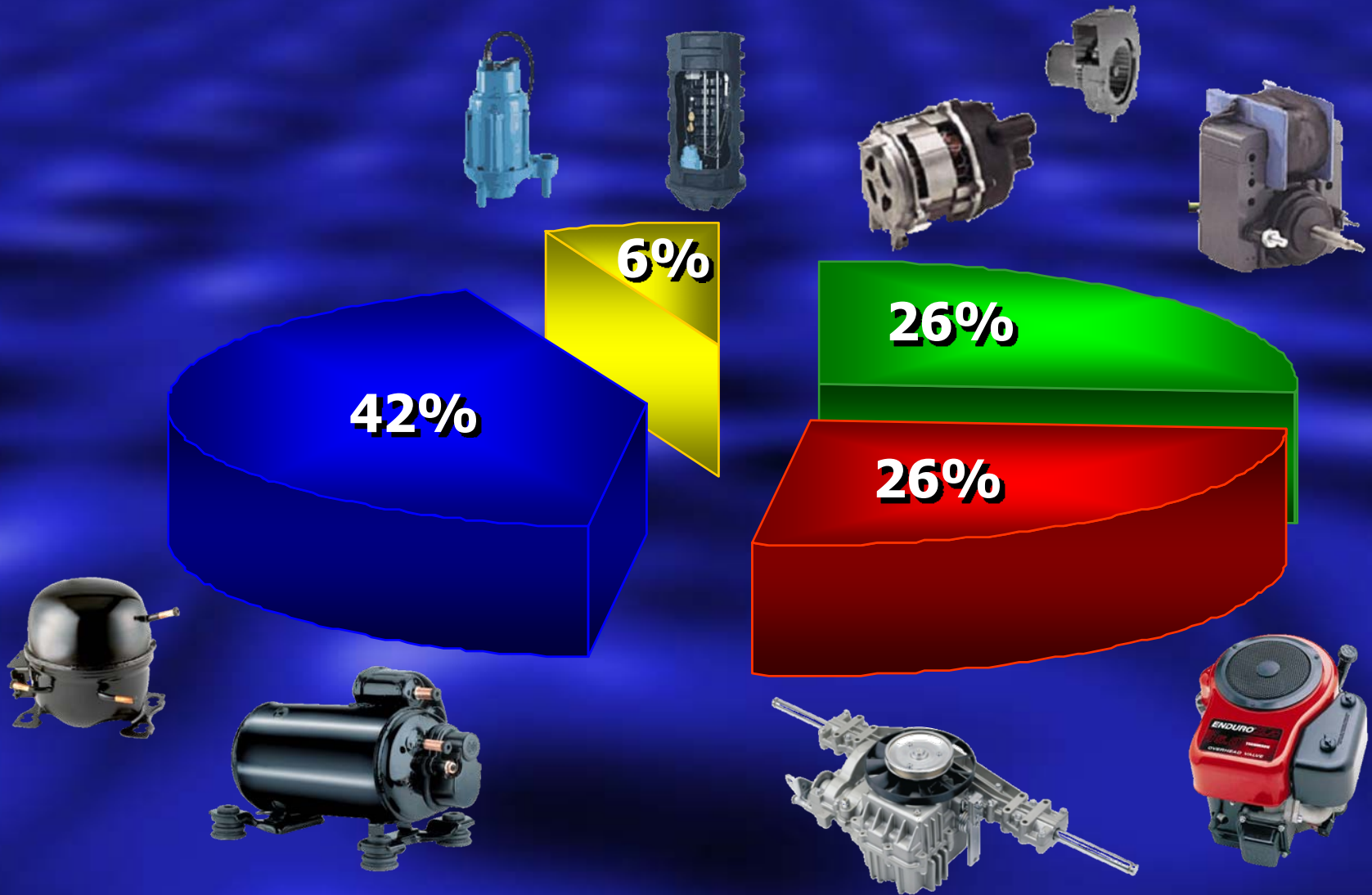
PUMPS



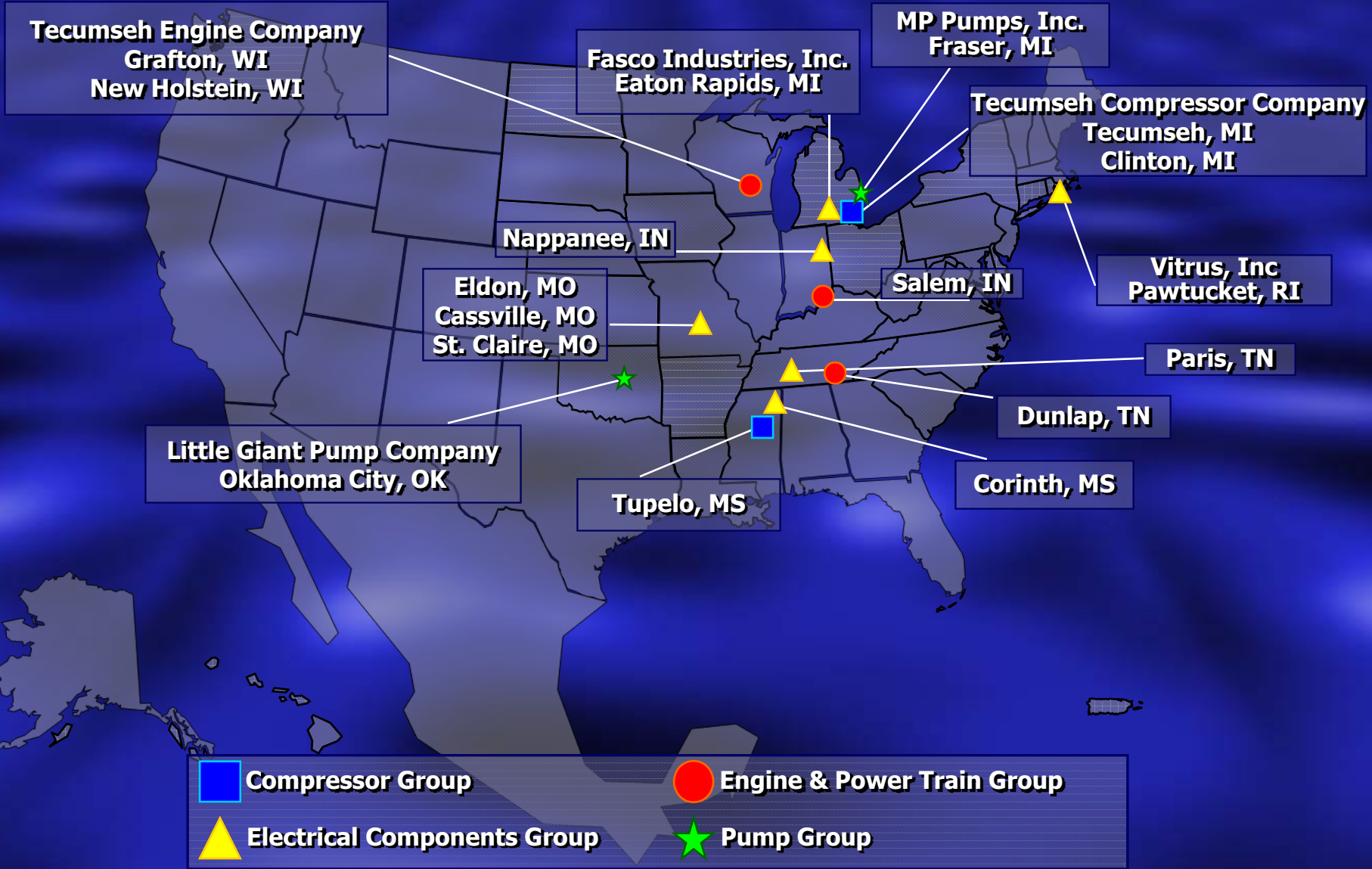
Little Giant
Your Solution Innovator



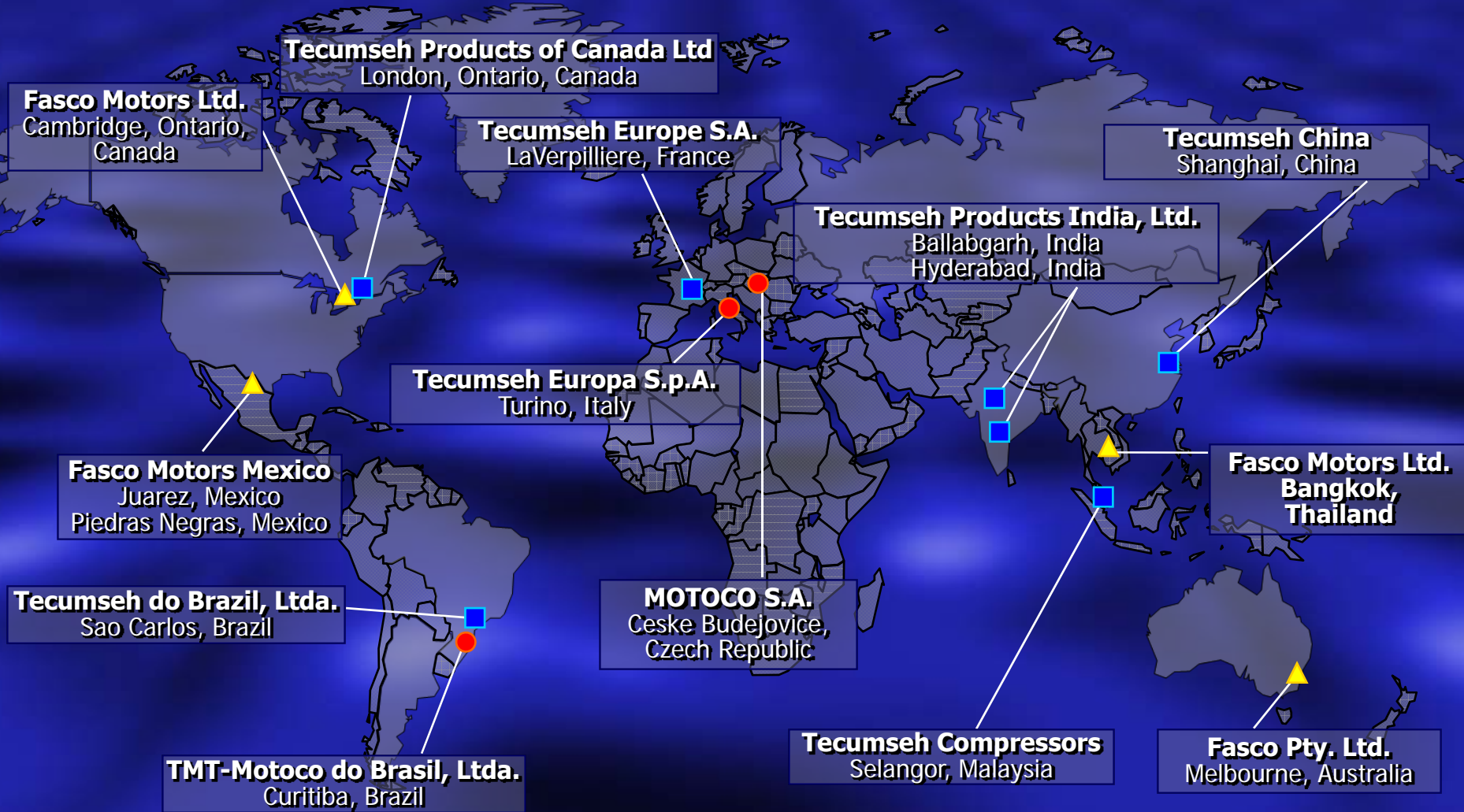
Sales by Market Segments



Tecumseh North America



Tecumseh Worldwide



35 Facilities Worldwide, employ 22,000 people
Serving customers in over 100 countries

TECUMSEH PRODUCTS COMPANY

☐ HEADCOUNT : 24 000 EMPLOYEES.

☐ NINE SUBSIDIARIES WORLD- WIDE.

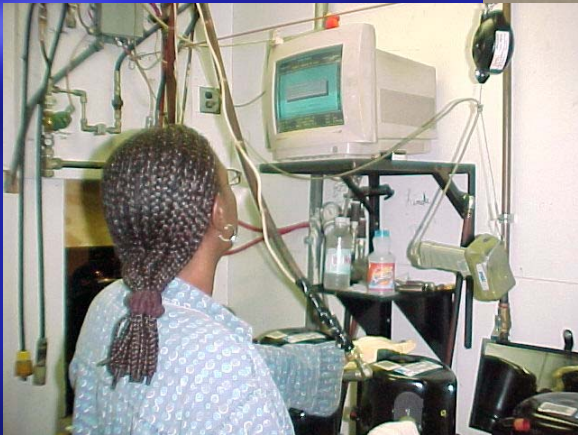
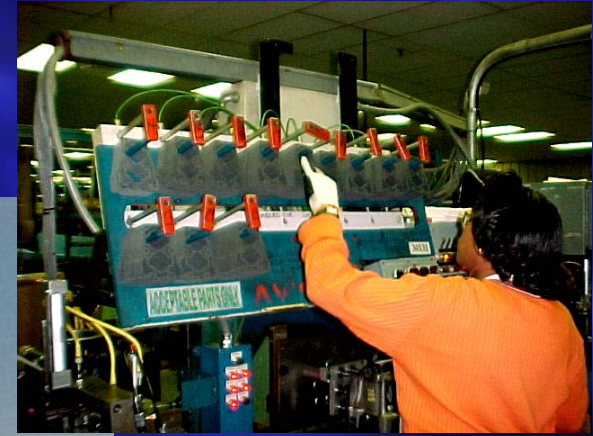
Tecumseh, MI



Group Headquarter

600 Employees

Tupelo, MS



700 Employees

North American Built Compressors

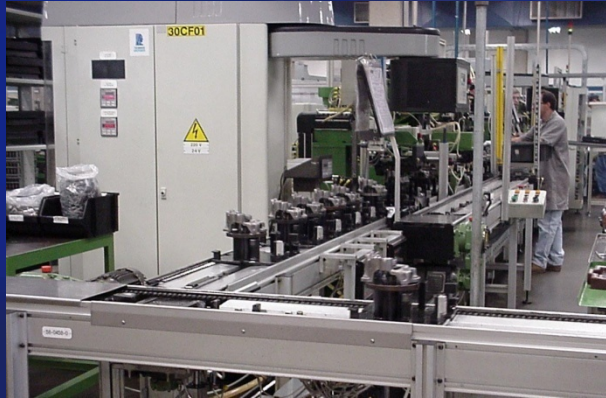


Families:

AK AW AV

CU CRS

Tecumseh do Brasil



6,000 Employees

Brazilian Built Compressors



Families:

AE **AZ**

TP **TH**

AK **RG/HG**

TW **RK**

Europe Facilities



La Verpilliere



Cessieu



La Mure



Barentin

1500 Employees

French Built Compressors



Families:

AZ/ THB AEZ

AE AJ

FH AG

RK RGH

CU CRS

Sylensis

India Facilities

Located in Ballabgarh &
Hyderabad



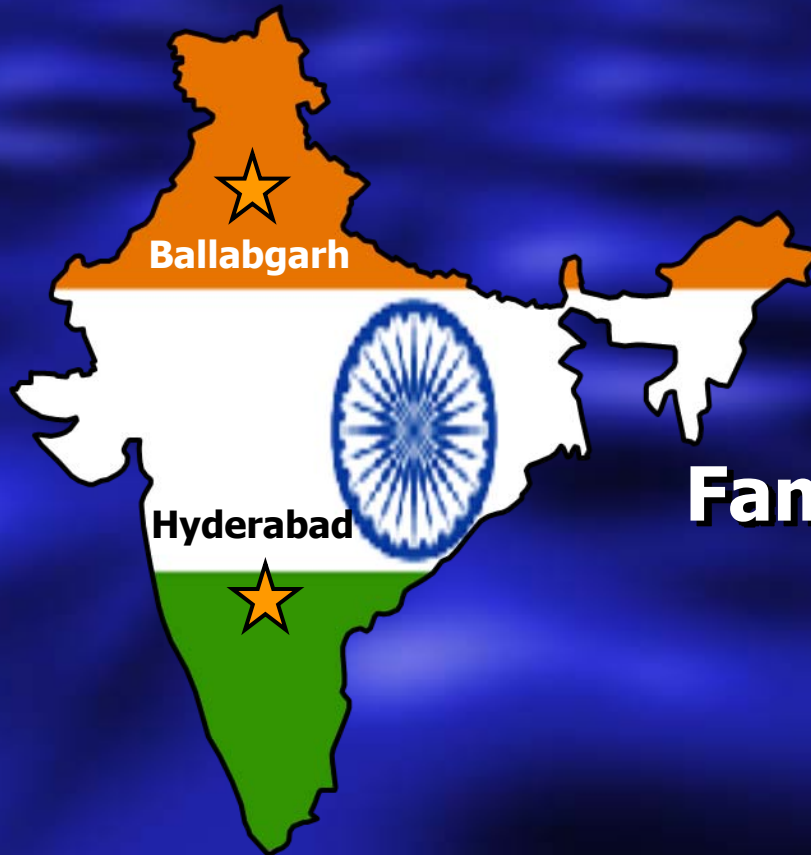
Ballabgarh



Hyderabad

1,800 Employees

Indian Built Compressors



Families:

AW

ML

THK

NK

Compressors SBU

**Research &
Development**

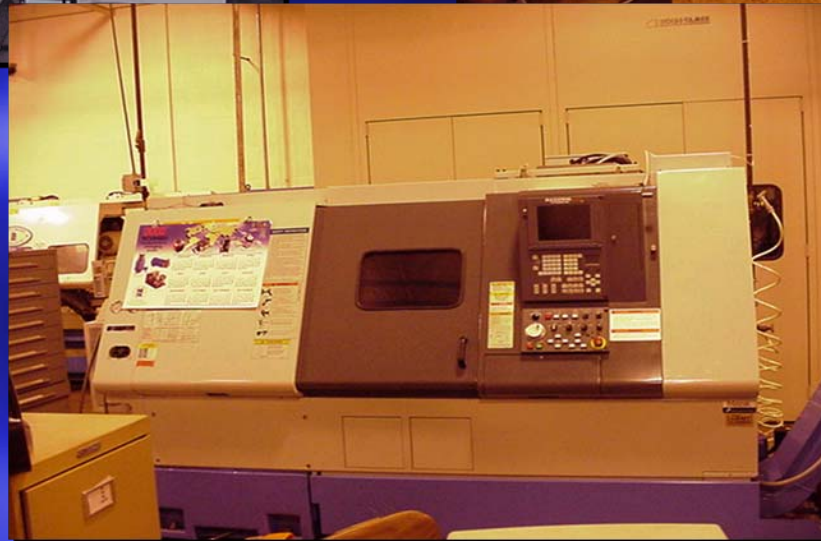
Ann Arbor Corporate Research Campus

**Support for advanced product
development**

Campus expansion in 2003



Dundee Corporate Process Development Center



Dundee Corporate Process Development Center

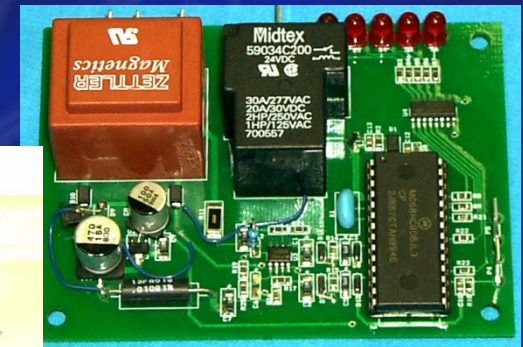
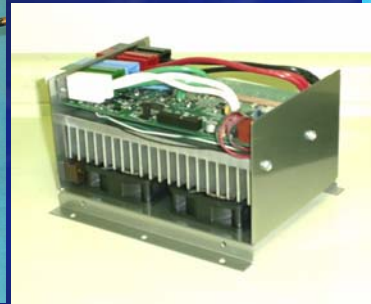
Rapid Prototype

Used for:

- ✓ Plastic or metal parts**
- ✓ Complex tooling inserts**
- ✓ Highly Durable Parts**
- ✓ Parts with small features**
- ✓ Short runs of plastic and metal parts**



Electronic Condensate Pumps & Controller
RAC & PTAC System Controllers
CFI Fault Interrupters
Commercial Refrigeration Controllers
BLDC Variable Speed Controllers
Voltage Stabilizers



Tecumseh Products Offerings

Compressors

Recip /Rotary

Scroll



HFC

HC

CO₂



Condensing

Units



HFC

HC

CO₂



Complete

Refrigeration

Systems



HFC

HC

CO₂

Next Step

CO₂



HFC Product Lineup

R134a / R404A

LBP /

MHBP

AZ, TH

450 - 1,400 Btu/hr

AE

1,165 - 2,750 Btu/hr

AJ / HG

2 550 - 20 160 Btu/hr

FH

8 947 - 36 593 Btu/hr

TAG

17 633 - 136 050 Btu/hr



HC Product Lineup

R290

TH

HP

1/5



AE

1/4, 1/3



AJ

1/2



Compressors SBU

Scroll

Program

Scroll Program Update

Commercial R404A

2-7.5 HP

Air Conditioning R410A

1.5-5 Ton

Scroll Program Update

*Key Dates

Commercial R404A
2-7.5 HP
Vertical/Horizontal

Aircon R410A
1.5-5Ton
Vertical

Level 1 Testing

Available

Available

Customer Samples

Available

Available

Level 2 Testing

Available

Available

Limited Production

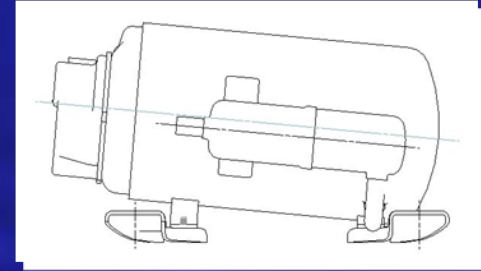
Available

Available

Compressors SBU

**Rotary
Program**

Rotary Product



Commercial and AC range

Horizontal and Vertical ranges

R134a, R404a commercial ranges

LBP and MHBP applications

New models up to 2,5 Hp

Features and benefits

- **Low height advantage,**
- **Lower weight than an equivalent reciprocating compressor**
- **Superior sound characteristics**
- **Improved efficiency**

Compressors SBU

CO₂

CO² Justification

Low cost refrigerant
Readily available
Environmentally benign
Non flammable and non explosive

Characteristics of Various Refrigerants

		R-12	R-22	R-134a	R-410a	R-744
Ozone Depletion Potential (ODP)		1	0.05	0	0	0
Global Warming Potential (GWP)	100 years integration time	7100	1500	1200	1730	1
	20 years integration time	7100	4100	3100	-	1
Last Production Date (Montreal Protocol, developed countries)		1995	2029	Open	Open	Open

Anticipated CO₂ Compressor Family Releases

YAA - 1 stage recip

✓ 1/5 to 1/2 HP

YHA - 2 stage rotary

✓ 1/3 to 1 HP

YJA - 1 stage recip

✓ 1/2 to 1 HP

YKA - 2 stage rotary

✓ 1.5 ton to 4.5 ton

YNA - 2 stage rotary

✓ 5 ton to 8 ton

Compressor Family Capacity Chart

YAA

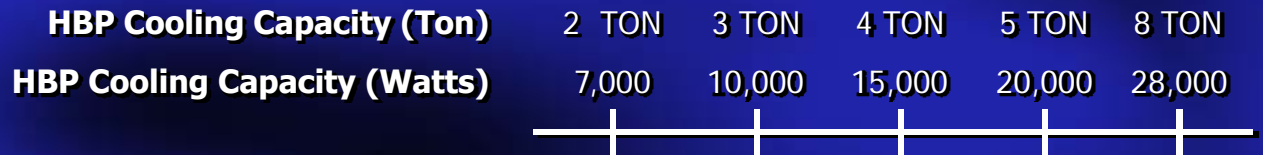
YHA

YJA

YRA / YNA



CO₂



Single Stage

Two Stage

Συμπιεστές Tecumseh Βραζιλίας

Tecumseh do Brazil Range

Models
THB 1318 YS
THB 1324 YS
THB 1335 YS
THB 1340 YS
THB 1350 YS
THB 1355 YS
TWA1368YS
TWA1390YS
AE2410YS
AE4430YS
AE4440YS