

COMPANY OVERVIEW

PT. FUSHENG COMPRESSOR INDONESIA

FS-CURTIS DIVISION

SOME COMPANIES ARE FOUNDED ON HARD
WORK. OTHER ARE FOUNDED ON IDEALS.

FS-CURTIS WAS FOUNDED ON BOTH.



INTRODUCTION



THREE BUSINESS DIVISION

Fusheng Group

Industrial (FSI)



- **Leading manufacturer of compressed air system solutions**
- **Products:**
 - Air compressors
 - Compressors for rail and road applications
 - Refrigerant compressors
 - Blowers
 - Generators
- **Revenues:** approximately 56%
- **Factories:** 13
- **Employees:** > 2,500

Precision Products (FSP)

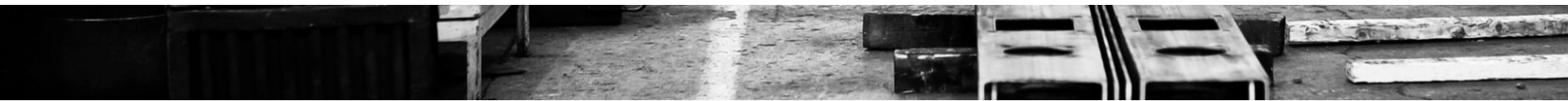


- **First-class supplier of precision casting**
- **Products:**
 - Golf clubs
 - Components for aviation
 - Components for automotive and commercial industry
- **Revenues:** approximately 37%
- **Factories:** 4
- **Employees:** 11,500

Electronics (FSE)



- **Leading supplier of IC and LED lead frames**
- **Products:**
 - IC lead frames
 - LED lead frames
- **Revenues:** approximately 7%
- **Factories:** 2
- **Employees:** 1,000



INDUSTRIAL BRAND FAMILY

Fusheng Industrial



 **FUSHENG**

 **FS CURTIS**

 **FS ELLIOTT**

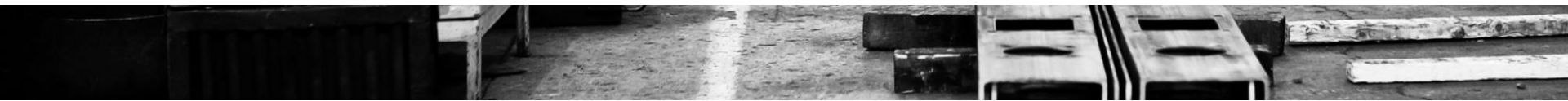
 **AIRMAN**

 **FUSHENG
PEDRO GIL**

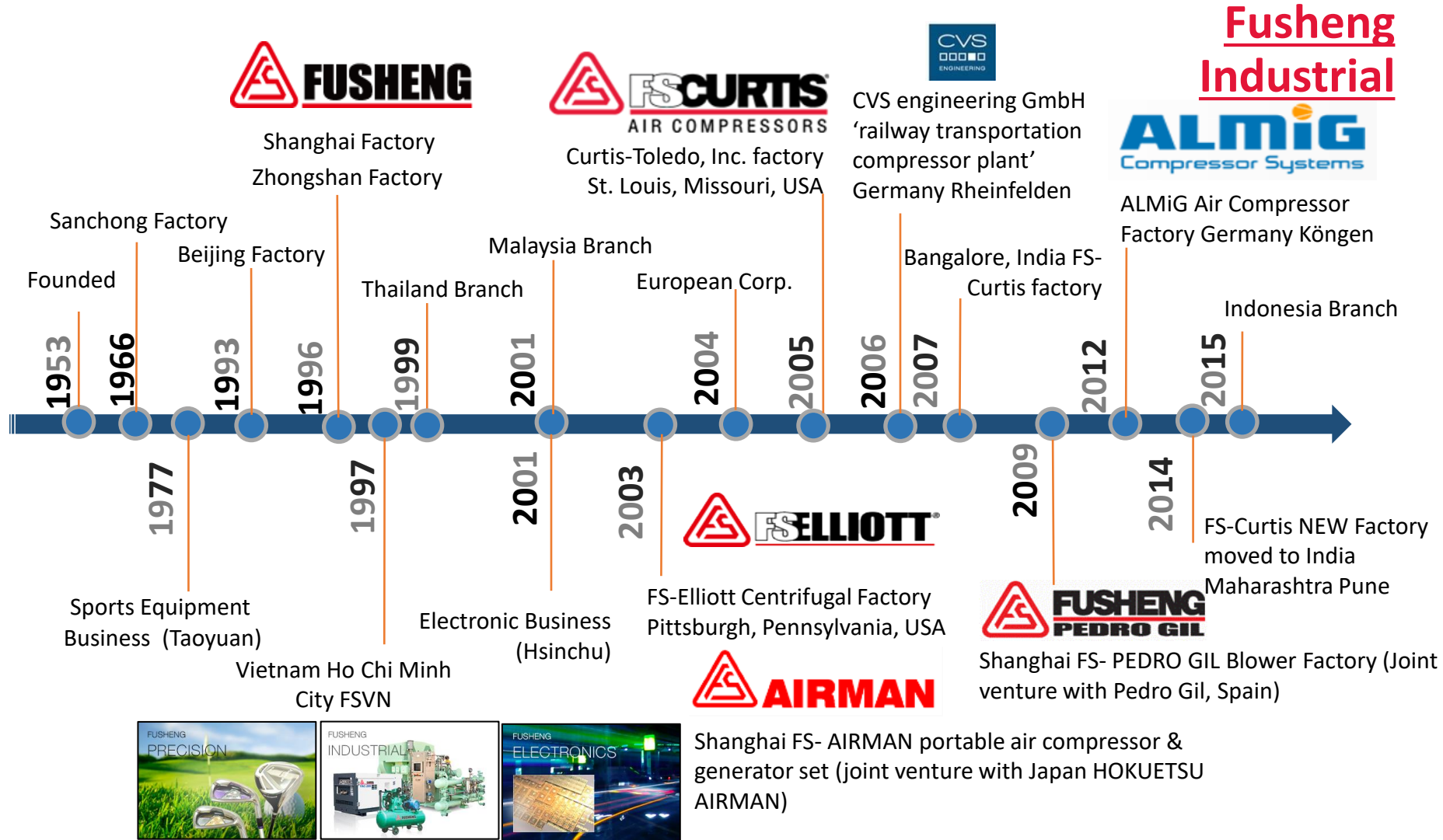
 **EU COMP**

ALMiG
since 1923

CVS
ENGINEERING



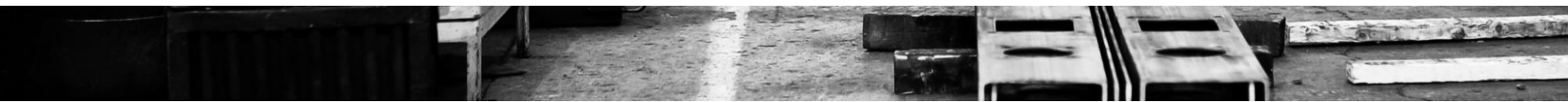
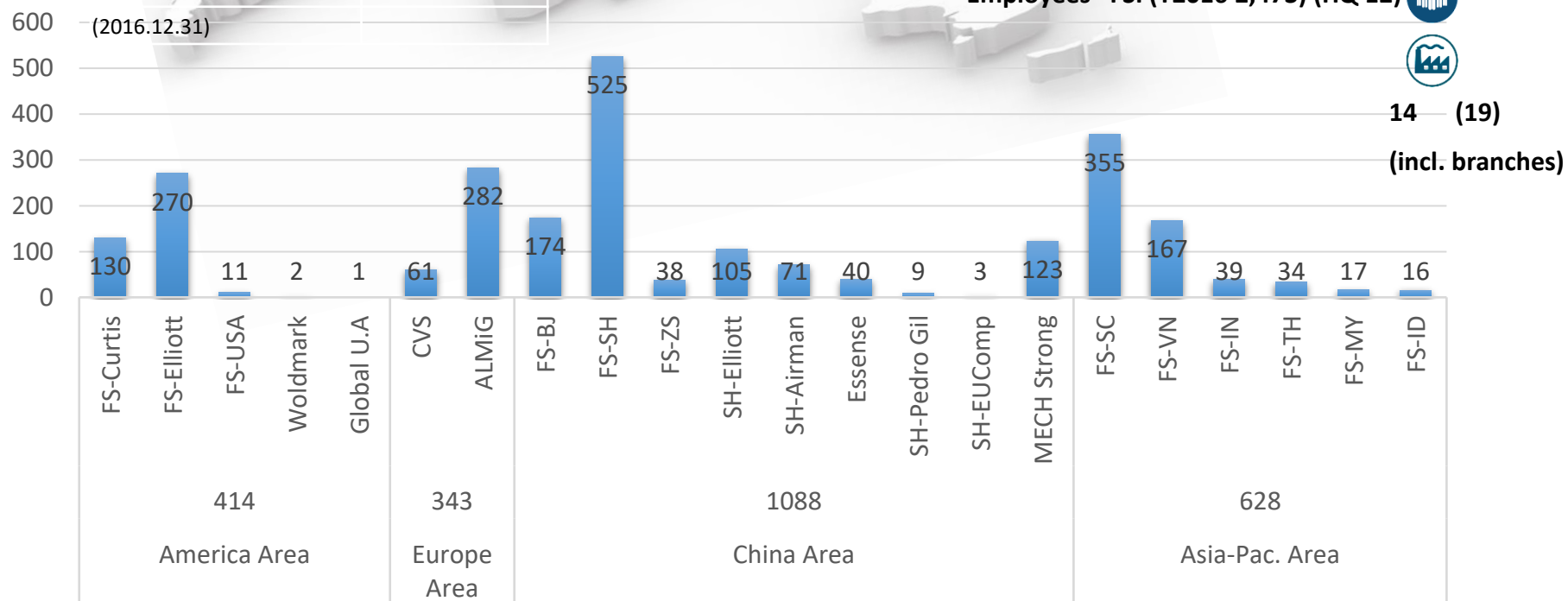
MILESTONE



EMPLOYEES

Business Division	Employees
FUSHENG INDUSTRIAL	2,473
FUSHENG PRECISION	9,103
FUSHENG ELECTRONICS	969
TOP INFORMATION	211
FUSHENG Group	12,756

Number of Employees FUSHENG Industrial



PRODUCTION BASE

Americas / Europe / China / Asia Pacific factories located

St. Louis

Pittsburgh



Pittsburgh, PA, USA



St. Louis, MO, USA



Köngen, Germany



Rheinfelden, Germany

Köngen, Germany
Rheinfelden, Germany

Pune, India



Pune, India



Shanghai, China

Beijing, China
Shanghai, China
5 Factories



Beijing, China



Zhongshan, China



Taipei, Taiwan

Ho Chi Minh City, Vietnam



Taipei, Taiwan



Ho Chi Minh City, Vietnam

PRODUCTION CENTRE

Air-end and Air-end Housing production



KAPP
Grinding machine



CNC
Machine center



HOLROYD
Rotor grinding machine



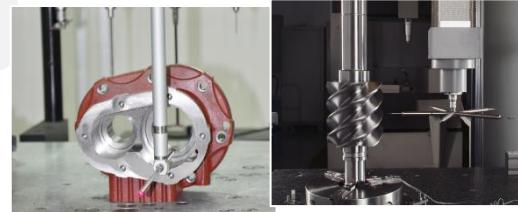
CNC
Cylinder grinding machine



Rotor grinding machines



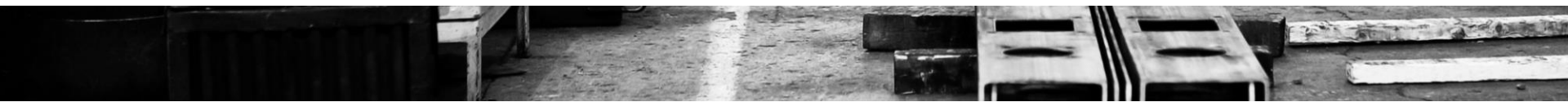
Germany LEITZ 3D
measuring equipment



Test benches for the measuring of components



ISO 9001:2008 / ISO14001:2004 / OHSAS / ISO 50001:2011



INDONESIA BRANCH

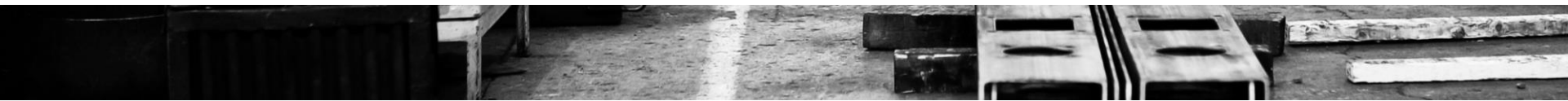


- ❑ PT Fusheng Compressor Indonesia, Head Office
- ❑ Location : Taman Tekno BSD Blok H9 No. 23 – 25
Bumi Serpong Damai Sektor XI
Serpong – Tangerang 15314
Indonesia

- ❑ Phone : +62-21-2275 6671
- ❑ Fax : +62-21-2275 6672



- ❑ PT Fusheng Compressor Indonesia, Jawa Timur Branch
- ❑ Location : Citraland Driyorejo CBD Blok N2 – 8 Driyorejo Gresik
Office and Workshop



FS-CURTIS OVERVIEW



HISTORY



1854

Curtis & Co. –
Empire Saw founded
in St. Louis, MO, USA

1857

Earned Agricultural
and Mechanical Fair
award for excellence
and quality

1876

Named Curtis
and Co.
Manufacturing

1897

Built first
reciprocating
air compressor
that later evolved
into the Master
Line Series

1914

Supported U.S.
Government efforts
by producing more
than 2 million Howitzer
shell forgings

1940

Designed and
developed
mobile oxygen
compressors to be
used in Aerospace
applications

1955

Merged with U.S.
Air Compressor
Company, Central
Petroleum Company,
Lewis Machine
Company



1976

Merged with Toledo
Tools as Curtis-
Toledo Inc.

1979

Introduction
of Challenge
Air Series
reciprocating
air compressors

1995

Began manufacturing
and assembling
Rotary Screw Air
compressors

2005

Expanded global
market reach by
joining forces
with Fusheng
Industrial

2006

U.S. Headquarters
certified as
ISO 9001:2000 and
ISO 14001:2004

2010

Introduced next
generation GSV
Variable Speed
Rotary Screw
compressors



APPLICATION



Oil & Gas



Power Plant



Automotive



F&B



Pharmaceuticals



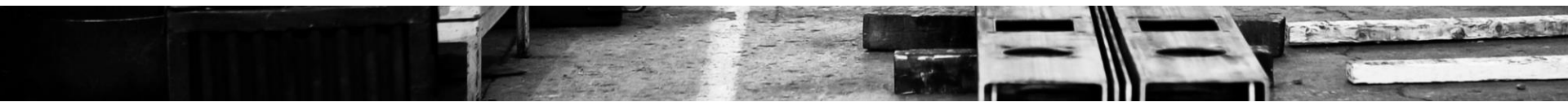
Transportation



Electronics



Healthcare



OUR GLOBAL CUSTOMER



ExxonMobil



SONY

FOXCONN®

CATCHER

GREEN
POINT
A JABIL COMPANY



TOYOTA



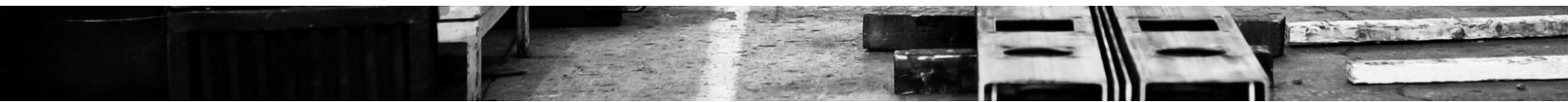
长安汽车



中国中车
CRRC



中国石油



OUR INDONESIA CUSTOMER



THE DOVECHEM GROUP
CHINA • INDONESIA • MALAYSIA • SINGAPORE



PT NIKOMAS GEMILANG

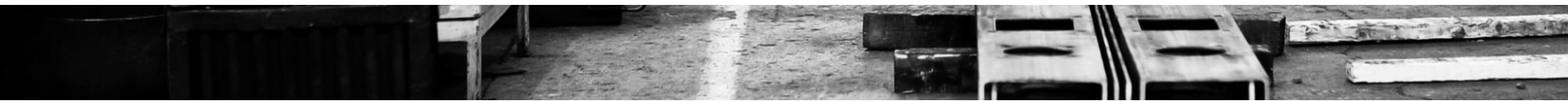


NHM
GOSOWONG GOLD MINE

HITACHI Astemo



AND MANY MORE...



PRODUCT ROADMAP



PRODUCT ROADMAP

Oil Lubricated Products

- **Nx Series**
 - Nx04 – 185 Kw
 - NxV08 – 185 Kw
- **NxHE Series**
 - NxHE90 – 250 Kw

Oil Free Products

- **ECO Scroll Series**
 - ES04 – 15 Kw
- **ECO Rotary Series**
 - ER15A – 37A(W) Kw
- **SWT II Series**
 - SWT75-400 kW
 - SWTV75-250 kW

Booster Product

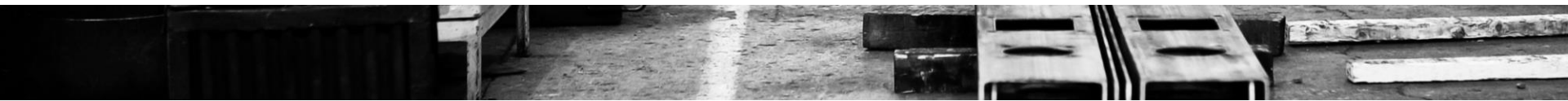
- **DBK Series**
 - DBK10 – 40 HP

Air Treatment

- **RDS Series Refrigerated Dryer**
 - 0.83 – 29.7 CMM
- **CF Series Filter**
 - 0.66 – 46.62 CMM

Go Service Product

Energy Saving Consultant



OIL LUBRICATED PRODUCT

Nx(V) Series 04 – 185KW



*Customer-Focused
Engineering*

Data trending keeps your finger on the pulse of your entire compressed air system.

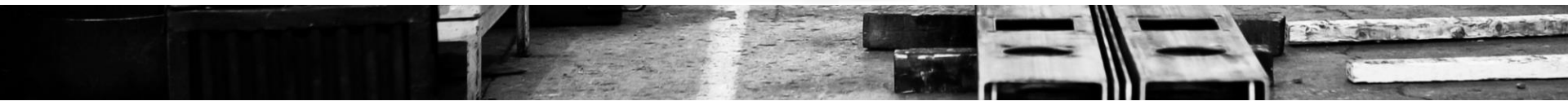


*dBA Shield
Noise Reduction*

Quality Components



DemandSmart
ENERGY MANAGEMENT SYSTEM



OIL LUBRICATED PRODUCT

TECHNICAL OVERVIEW 4-11 KW

- Kilowatt / Horsepower Range
 - 4kW/5HP, 6kW/7.5HP, 8kW/10HP, 11kW/15HP,
- Electrics
 - 380/50
 - 415/50
- Electronic iCommand - Basic Controller
 - Premium Controller (For VFD 8-11kW)
- Base Mounted
- Fixed Speed = Belt Driven
- Variable Speed = Belt Driven (8 – 11kW)
- PSI (100, 116, 150, 175)
- Air-Cooled
- Options
 - 60-Gallon tank (4-6kW)
 - 80-Gallon Tank (4–11 kW)

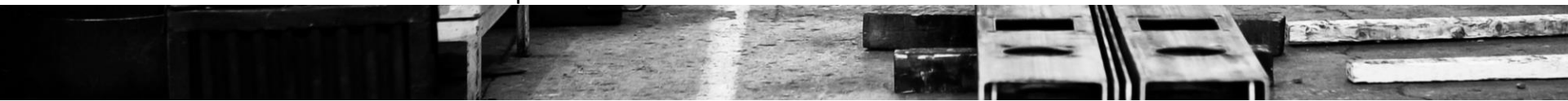


NxB – 11

kW Rating

Global Series

B = Fixed Speed
V = Variable Speed



OIL LUBRICATED PRODUCT

TECHNICAL OVERVIEW 15-90KW



NxD – 18

kW Rating

Global Series

D = Fixed Speed
V = Variable Speed

- Kilowatt / Horsepower Range
 - 15kW/20HP, 18kW/25HP, 22kW/30HP, 30kW/40HP, 37kW/50HP, 45kW / 60HP, 55kW / 75HP, 75kW / 100HP, 90kW / 125HP
- Electrics—Wye Delta
 - 380 / 50
 - 415 / 50
- Electronic iCommand - Basic Controller
 - Premium Controller (VFD)
 - Touch Controller (>45KW)
- Base Mounted
- Fixed Speed=Direct Drive
- Variable Speed=Direct Coupled
- PSI (100, 116, 150, 175)
- Air-Cooled / Water-Cooled

OIL LUBRICATED PRODUCT

TECHNICAL OVERVIEW 45-185 KW

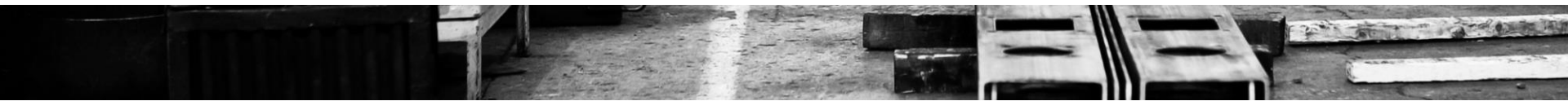


- Kilowatt / Horsepower
 - 110kW / 150HP
 - 132kW / 180HP
 - 160kW / 200HP
 - 185kW / 250HP
- Electrics--Wye Delta starter
 - 380 /50
 - 415 /50
- Electronic iCommand - Touch Controller
- Base Mounted
- Fixed Speed - Direct/Gear Drive
- PSI (100, 116, 150, 175)
- Air-Cooled / Water-Cooled

NxD – 110 ----- kW Rating

Global Series

D = Direct/Gear Drive - Fixed Speed



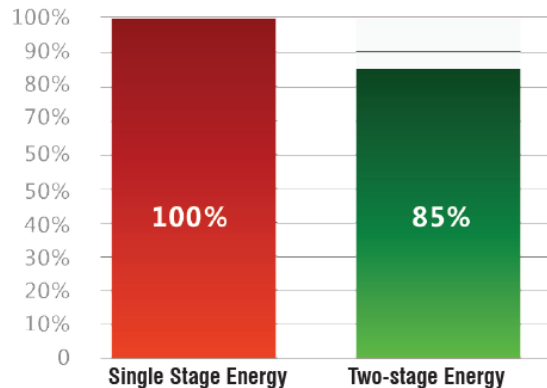
OIL LUBRICATED PRODUCT

FIT-S CONTROLLER

- **NxHE Series**
NxHE90 – 250 Kw



WHEN COMPARED TO SINGLE STAGE, TWO-STAGE COMPRESSORS CAN SAVE UP TO 15% IN ENERGY CONSUMPTION AND OFFERS 15% MORE FLOW.



TAKE CONTROL OF YOUR WORLD.

With the premium FIT-S, a color screen displays graphs which capture and track factual, Historical data can be retrieved at any time at the touch of the screen.

Data trending keeps your finger on the pulse of your entire compressed air system.



- **Simple Touchscreen Control**
- **Intuitive Navigation**
- **Capture Real-time and Historical Data Trending**

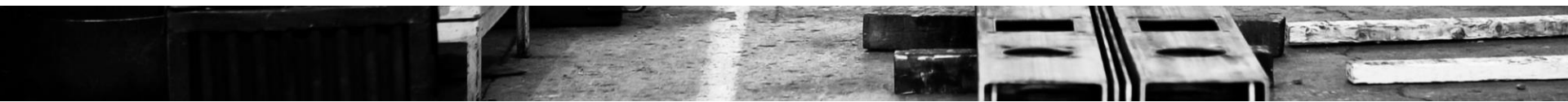
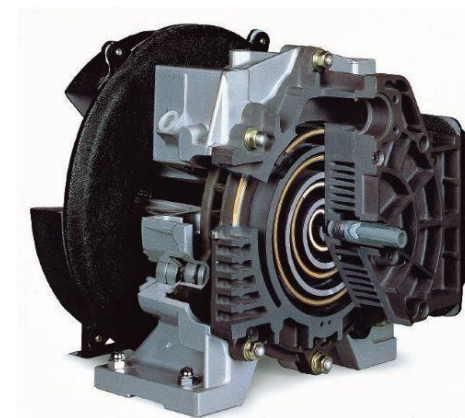


OIL FREE PRODUCT

- ECO Scroll Series
ES04 – 15 kW

TECHNICAL DATA

MODEL	CAPACITY (CFM)	MOTOR	SOUND LEVEL	DIMENSIONS (base mount)	WEIGHT (base mount)
	116 psi	Kw / HP	dBA	(L x W x H In.)	Lbs.
ES04	14.5	4 / 5	57	25 1/4 x 24 x 35 1/4	331
ES08	29.0	8 / 10	59	40 x 29 1/2 x 65	660
ES11	42.4	12 / 15	61	63 x 29 1/2 x 68 1/2	990
ES16	56.5	15 / 20	63		1210



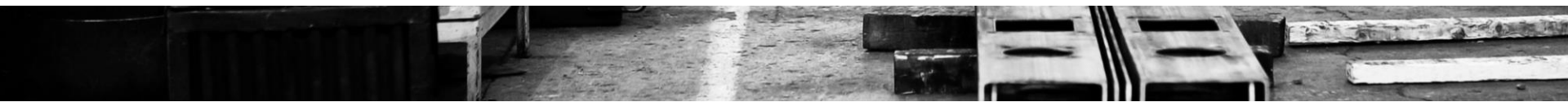
OIL FREE PRODUCT

- ECO Rotary Series

ER15A – 37A(W) kW

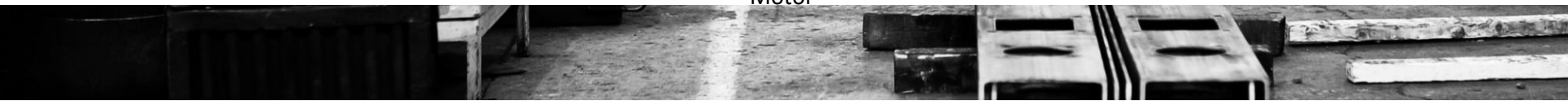
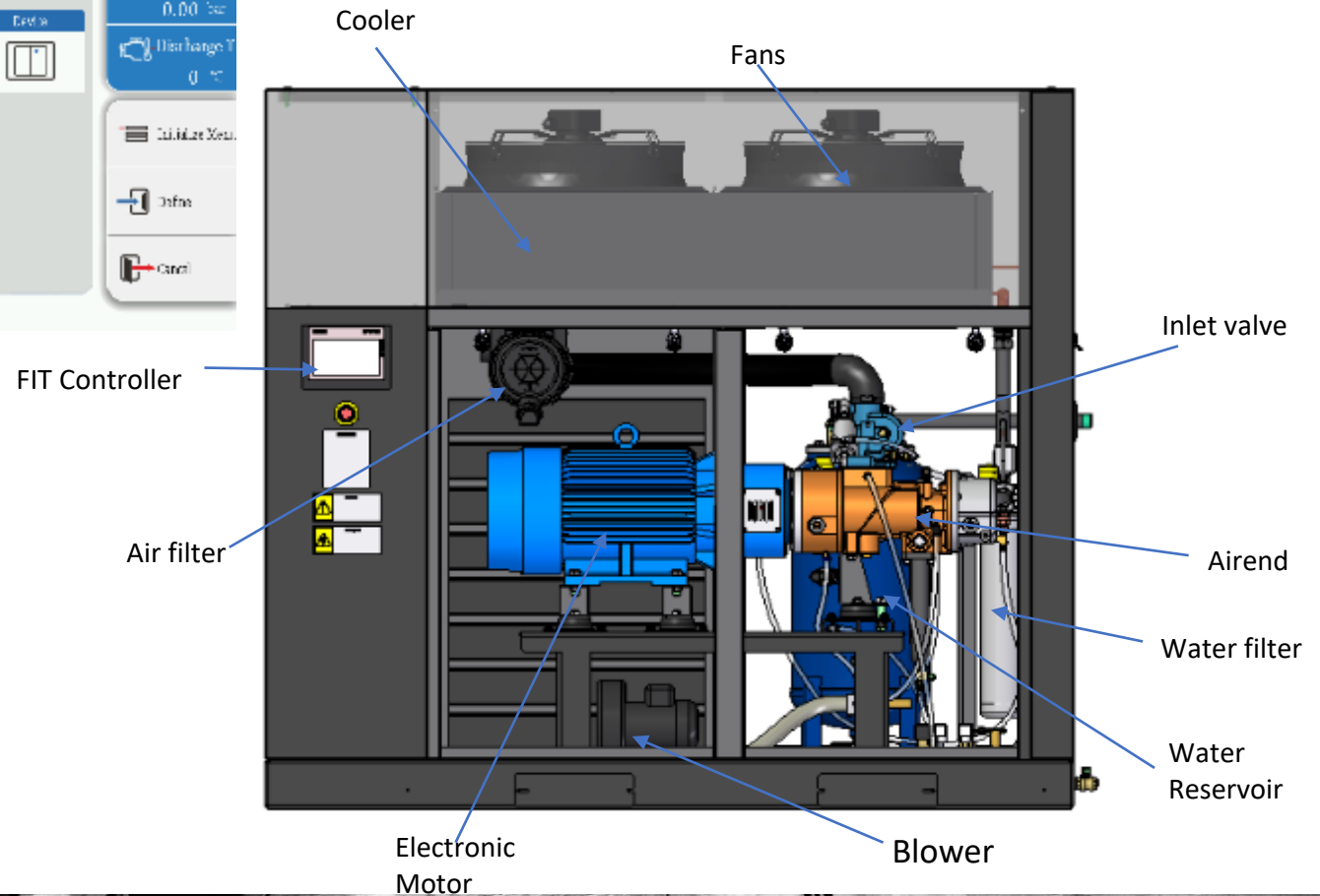
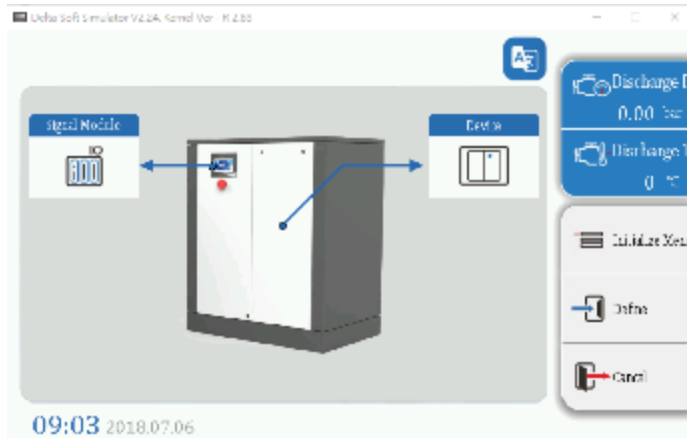
ER 15/37 Specification table

Type cooling method	Unit	ER15A	ER22A	ER30A	ER37A	ER37W
F.A.D. (m³/min) (ISO 1217 / Annex C)	7 bar(g)	2.2	3.4	4.7	5.8	5.8
	8 bar(g)	2.1	3.1	4.4	5.3	5.3
	9 bar(g)	2.0	3.0	4.3	5.0	5.0
Horsepower	kW (HP)	15(20)	22(30)	22(30)	37(50)	37(50)
Voltage	V	220 / 380 / 440				
Pressure control method	—	Inverter constant pressure control				
Intake pressure & temp.	—	2~40℃ at atmospheric pressure				
Drive method	—	Direct coupling				
Discharge temperature	℃	Air cooling:< ambient temp. +24℃				Water cooling: < cooling water temp. +14℃
Cooling water flow(32℃)	L/min	—				125
Outline dimension	mm	1900	1900	2100	2100	2100
	mm	1100	1100	1200	1200	1200
	mm	1750	1750	1850	1850	1850
Weight	kg	1000	1000	1400	1400	1400
Air outlet	inch	1	1	1 1/2	1 1/2	1 1/2



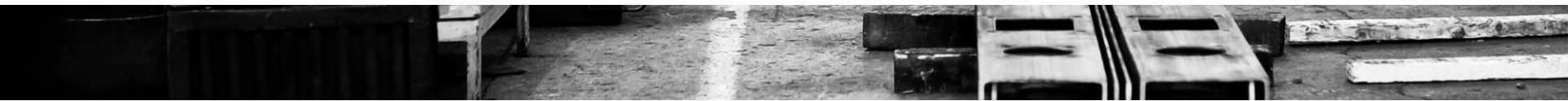
OIL FREE PRODUCT

- **ECO Rotary Series**
ER15A – 37A(W) kW



OIL FREE PRODUCT

- SWT II Series



OIL FREE PRODUCT

- **SWT II Series**

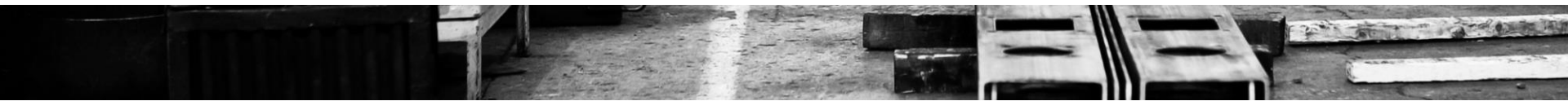
- Kw : 45 – 400 kW
- Operating Pressure : 7.5 – 10 bar
- FAD: 5.4 – 70 m³/min
- Ambient Temp. : 0 – 45 °C
- Cooling : Air / Water Cooled
- Motor : IP55 / F Grade
- Fixed Speed / VFD
- SWT 75-400 kW
SWTV 75-250 kW

Air Cooling

kW	45-75	75-100
Operating Pressure (bar)	3-8.8	3-8.8
FAD m ³ /min	5.4-11.8	12.8-17
Length (mm)	1830	2010
Width (mm)	1400	1500
Height (mm)	1783	2160

Water Cooling

kW	45-75	75-120	120-180	200-290	300-400
Operating Pressure (bar)	3-10	3-10	3-10	3-10	3-8.6
FAD m ³ /min	5.4-12	12.9-17.2	21.5-32.8	32.7-48	50-70
Length (mm)	1730	2150	2900	3250	3700
Width (mm)	1170	1335	1565	1565	2000
Height (mm)	1683	1891	1860	2143	2395



AIR TREATMENT

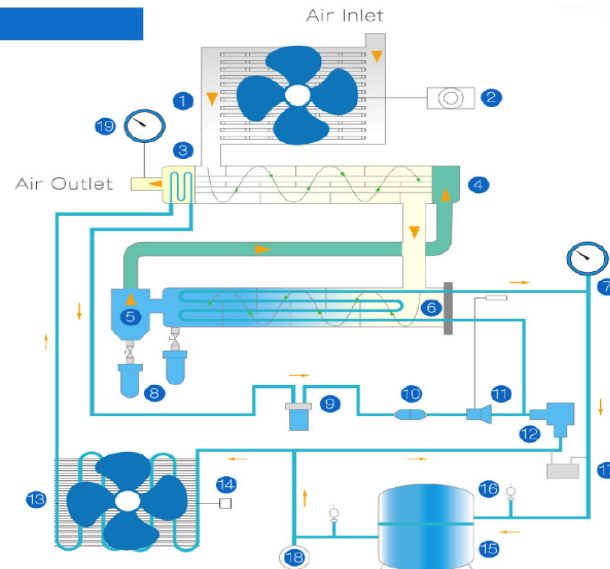
- RDS Series Refrigerated Dryer**

Specifications of plated air dryer

Model	Capacity		Refrigerant type	connection diameter	Dimension(mm)			Power Consumption	Power supply
	m ³ /min	CFM		Air pipe	length	Wide	Height	KW	
RDS005	0.83	29	R-134a	G $\frac{3}{4}$ "	600	390	665	0.4	1 ϕ 220V
RDS010	1.4	49		G $\frac{3}{4}$ "	650	380	715	0.5	
RDS020	2.7	95		G1 $\frac{1}{4}$ "	660	460	805	0.8	
RDS030	3.7	130	R-407C	G1 $\frac{1}{2}$ "	750	450	855	1.3	3 ϕ 380V
RDS050	7.2	254		G1 $\frac{1}{2}$ "	800	490	895	1.7	
RDS075	11.1	392		G2 $\frac{1}{2}$ "	900	550	1045	2.2	
RDS100	15.0	530		G2 $\frac{1}{2}$ "	1300	550	1045	3.0	
RDS150	22.3	787		G3"	1350	570	1180	4.5	
RDS200	29.7	1049		G3"	1480	570	1180	6.0	

System Flow Chart

- 1 Pre-cooler
- 2 "Economizer" switch
- 3 Secondary condenser
- 4 Air heat exchanger
- 5 Water separator
- 6 Evaporator
- 7 Pressure gauge (dew point)
- 8 Condensate drain valve
- 9 Refrigerant receiver
- 10 Line filter
- 11 Expansion valve
- 12 Hot gas bypass valve
- 13 Air-cooled condenser
- 14 Anti-freezing protection switch
- 15 Compressor
- 16 Service/inflow valve
- 17 High-low pressure protection switch
- 18 Pressure gauge (refrigerant)
- 19 Pressure gauge (air)



AIR TREATMENT

- CF Series Filters



CF SERIES COMPRESSED AIR FILTRATION

TECHNICAL DATA

PRODUCT SELECTION & TECHNICAL DATA

You can design a filter system that delivers the air quality you need with the efficient performance you desire.

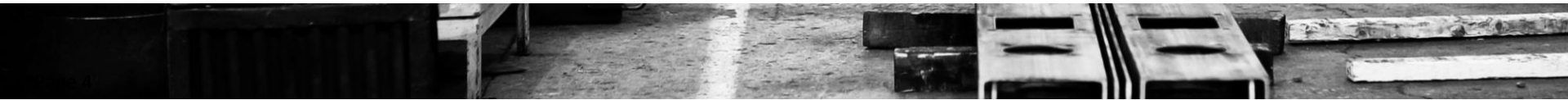
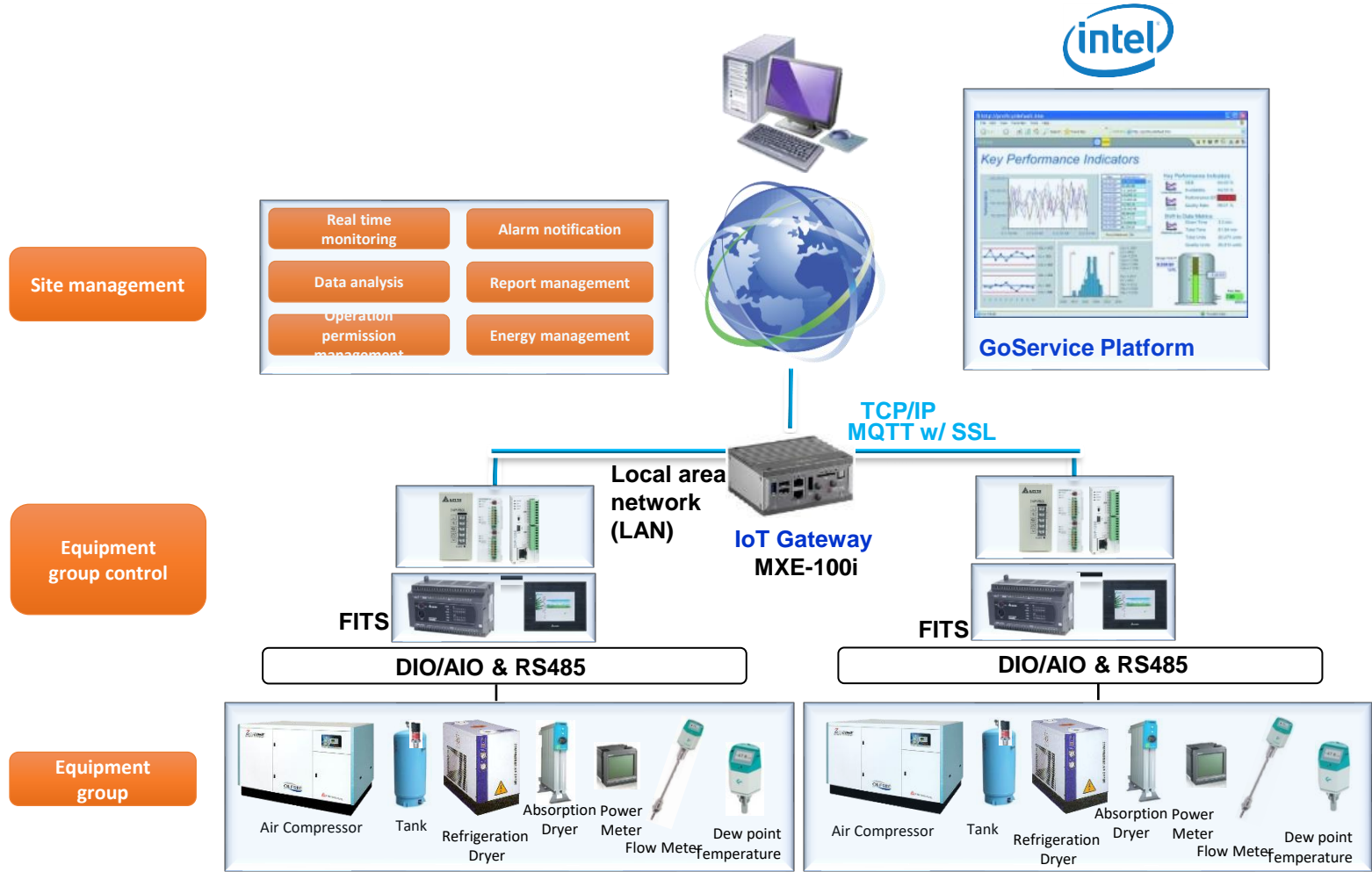
Filter Model	Pipe Size	Capacity at 7 bar g		Max Operating Pressure (bar g)	Approx. weight (kg)	Dimensions(mm)					Replacement Element Model
		m³/min	cfm			A	B	C	D	E	
CF05	G ½	0.66	23	16	1.34	85	154	24	60	41	FE(x)05
CF08	G ½	0.96	34		1.45	85	195	24	75	41	FE(x)08
CF10	G ½	1.32	47		1.46	85	195	24	90	41	FE(x)10
CF15	G ¾	1.98	70		1.72	85	255	24	90	41	FE(x)15
CF20	G1	3.30	116		4.1	132	285	43	135	41	FE(x)20
CF40	G1 ½	5.70	201		4.52	132	385	43	235	41	FE(x)40
CF60	G1 ½	9.00	318		5.01	132	485	43	335	41	FE(x)60
CF75	G1 ½	13.32	470		7.45	132	685	43	525	41	FE(x)75
CF125	G2	17.46	616		10.53	161	687	55	520	140	FE(x)125
CF175	G2 ½	26.16	923		12.58	161	930	55	770	140	FE(x)175
CF250	G3	37.50	1324		29.15	252	975	79	610	140	FE(x)250
CF300	G3	46.62	1645		32.29	252	1057	79	760	140	FE(x)300

HIGH PRESSURE FILTER

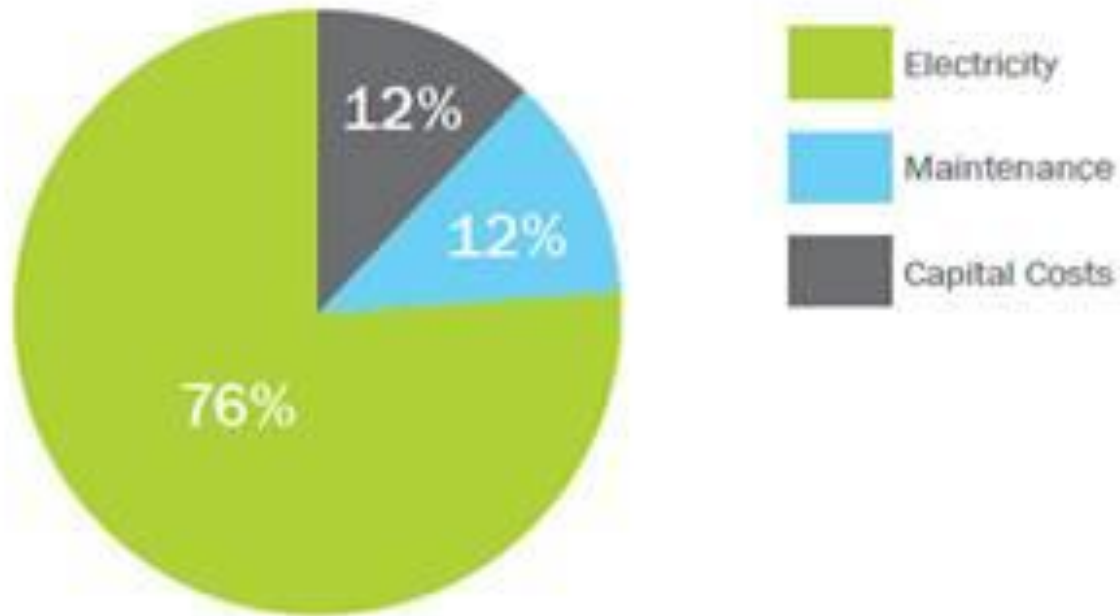
You can design a filter system that delivers the air quality you need with the efficient performance you desire.

Filter Model	Pipe Size	Capacity at 50 bar g		Max Operating Pressure (bar g)	Approx. weight (kg)	Dimensions(mm)					Replacement Element Model
		m³/min	cfm			A	B	C	D	E	
CF05-H5	G ½	1.49	52	50	1.34	85	151	24	60	108	FE(x)05-H5
CF08-H5	G ½	2.16	76		1.45	85	192	24	75		FE(x)08-H5
CF10-H5	G ½	2.77	105		1.46	85	192	24	90		FE(x)10-H5
CF15-H5	G ¾	4.46	157		1.72	85	263	24	90		FE(x)15-H5
CF20-H5	G1	7.43	262		4.1	132	385	43	135		FE(x)20-H5
CF40-H5	G1 ½	12.83	453		4.52	132	380	43	235		FE(x)40-H5
CF60-H5	G1 ½	20.25	715		5.01	132	482	43	335		FE(x)60-H5

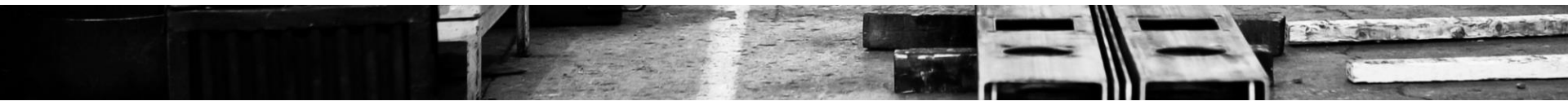
GO SERVICE PRODUCT



ENERGY SAVING CONSULTANT



*Figure 1. Compressor Lifecycle Costs over 10 years
(Source: US Dept of Energy, Compressed Air Tip Sheet #1, 2004)*

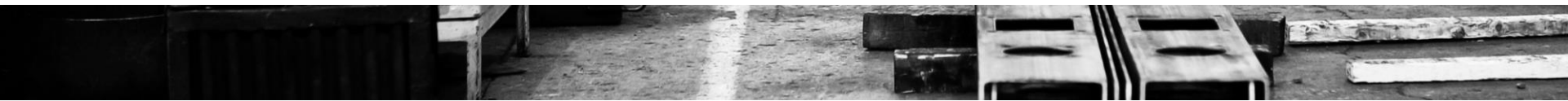


ENERGY SAVING CONSULTANT

- **ISO50001 : 2011 Energy Management Systems**

- Established year : 2011
- Modeled after ISO9001(Quality Management System) & ISO14001(Environment Management System).
- Aims to help organizations continually reduce their energy use , and therefore their costs and their greenhouse gas emissions.
- There are 14,299 organizations have been certified since 2011 to 2014
- Europe has 11,802 organizations been certified so far and which has the most regional share in the world.

Source: iso_survey



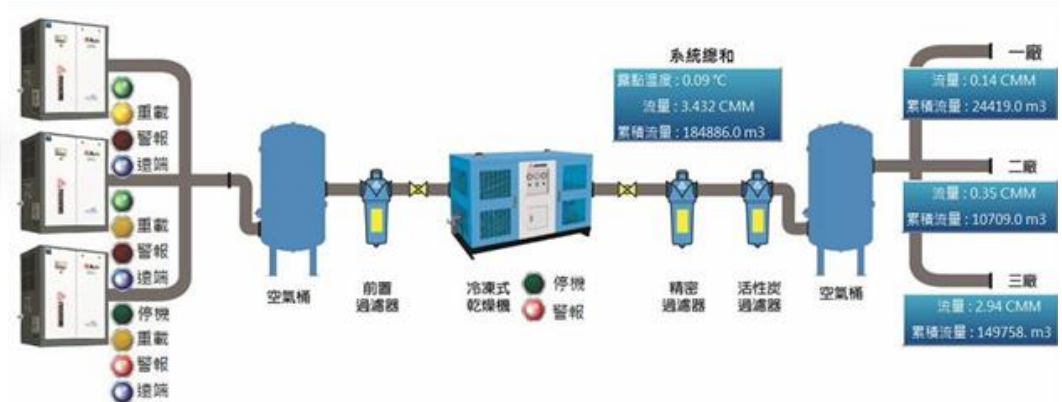
ENERGY SAVING CONSULTANT



Power analyzer



Thermal imager



In-line operation monitoring and recording system



Digital pressure gauge



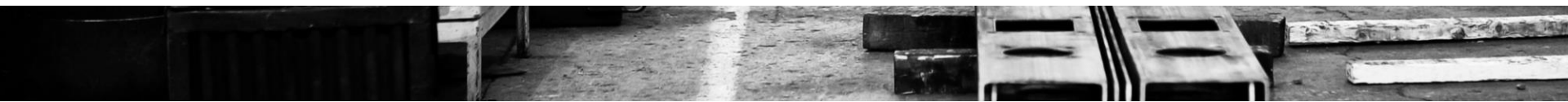
Thermal mass flow meter



Orifice flow meter



SDT ultrasonic leak detector



ENERGY SAVING CONSULTANT TEAM



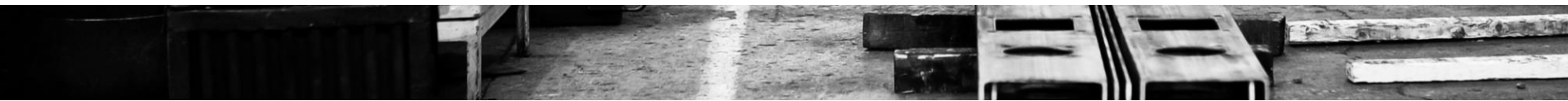
Arief Dwi Antoni
FS Sales Manager



Hariadi Baharuddin
Regional Service Manager



QUESTIONS?



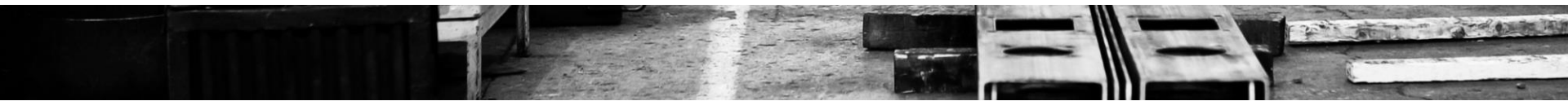
QUESTIONS?

For further questions or assistance regarding our product please contact:

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THANK YOU

