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(Energy Charter)

2001 12

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http://news.ehvacr.com/news/2015/0629/95824.html

2 8

8

2014-2015

1999 Top Runnet Program

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http://news.ehvacr.com/news/2015/0623/95747.html

3

6

25 2

40%

60% 2

2 3 10

2 1500

1000 4000

1+1 17 1

1

2

http://news.ehvacr.com/news/2015/0626/95808.html

4

80

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4

http://news.ehvacr.com/news/2015/0626/95800.html

5

0.78 1.28

(MPa) 0.12 0.25MPa

85% (

40%)

2006

4 20% 2 15%

2012 6000 2.2

2011 33%

10%

100 1000

?

75%

66.7% 50%

( )

2014 2015

?

?

100

1000

http://news.ehvacr.com/news/2015/0624/95766.html

7

6 30 3

2016 71

48 3 6

120.54

2012 11

2015 6 30

3 2015 12 31 2.4 2016

6 30 1.5 2016 12 31

1

http://news.ehvacr.com/news/2015/0619/95737.html

8

2013

2017

30%

50%

50%

3 /

4 / 6 /

500

8

40 /

800

900

http://news.ehvacr.com/news/2015/0721/96018.html

9

0.20

/KWh.

30 3 4

15 20

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2014

http://news.ehvacr.com/news/2015/0709/95897.html

11

(600066,)

3

http://news.ehvacr.com/news/2015/0625/95785.html

12

2015

5% 15% 23% 20% 30% 36%

15% 30% 40% 30% 50% 65%

100% 95%

15% 5%. 1/4 1/3

750

0.3%

500 3

4 5

5

2500 1000

5600 2000 850 1000

1000 1500 800

4120

1500

GDP2%

100% 95%

15% 5%. 1/4

1/3 750

0.3%

500

3 4

5

1

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3

http://www.chinalenglian.com.cn/info_zc.asp?id=329

13 10 50

200

2015-2020

" +"

[2014]790 2015 7

" +"

1-2 10

50 200

20% 20%

：

http://www.chinalenglian.com.cn/info_zc.asp?id=331

14 7 1

(GB 29753-2013) 2015 7 1

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http://news.ehvacr.com/news/2015/0626/95796.html

15

SOHO

7000

2012

1%

1%

?

1 3 1 2 ;

21cake

10% 30%

5%

100

http://news.ehvacr.com/news/2015/0624/95761.html

16

2015 6 12

Thomas Lonholdt

Thomas Lonholdt

2000 30~50bar

Niels P. Vestergaard

ENGINEERING
TOMORROW
Danfoss
氨亦可安，氨制冷系统的现在与未来
主办单位： 中国制冷学会，丹佛斯中国
北京 · 长春 · 济南 · 上海 · 合肥 · 郑州 · 成都 · 长沙 · 福州 · 广州
2015 年 6 月 1 日 ~ 2015 年 06 月 12 日
氨亦可安

http://news.ehvacr.com/company/2015/0616/95696.html

17

( )

47%

1

26.71% 165.04%

3

18.3%

6.3% 12% 27%

37.6% 58.3%

2012 14.02 42.75%;

65.9%

2015

16.5% 17% ; 30% ;

12% 13%

13% 12%

10.6GW

http://news.ehvacr.com/news/2015/0619/95740.html

18

2012

289

114

http://news.ehvacr.com/news/2015/0623/95750.html

19

http://www.compressor.cn/News/scdt/2015/0504/78687.html

20 3000

2015 2016 2017

3000

http://www.compressor.cn/News/scdt/2015/0624/79496.html

21

1/5 ONGC

1/5

3624.9 57

IEA

IEA 4 19%

22

5 30

6

90%

10

200 8-10

8-12 15

3-5

6S MRP

2

2025

http://www.compressor.cn/News/scdt/2015/0612/79331.html

23

11 1000 150G 1

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(

2015 5 16 1

500 690kW

“ ” “ ” “ ”

20 70

2003

20

8 2011

2

2015 5 2 7

2011

190kW

500 690kW

2013 12

500 2014 10

“ ” **60%**

2014

57%

690kW

60% 70%

2

400

2020 100

60%

100 2.4

40% 240kW 4

11.52 40000

46 46

2009

2015 4 400 4

100%

98%

http://www.compressor.cn/News/hykx/2015/0624/79539.html

24 2

5 31

2015 2

http://www.compressor.cn/News/hykx/2015/0604/79253.html

25 2015 5

6 11 2015

5 5 11

2015 5

2015

5 5

ysjbz@126.com 2015 8 10

		13705512483 ysjqianze@sohu.com
		13066865195 2803783928@qq.com

13961846132

tanmx2006@163.com

OCI HankookSilicon 2.4% 2.8%

2014 5

5

2081 51.7% 1~5

9983 52.0% 2.4%

5 2311

96.0% 1~5 8223 94.5% 5

2295 67.5% 1~5

8409 58.3%

6 6

121666 / 6 120750 / 0.75%

25.39%

8000

6

7

http://www.chinesevacuum.com/ShowArticle.aspx?id=50027

27 2016

3%

2016

3%

10% 6%

10% 4

2

16 16

20

http://www.chinesevacuum.com/ShowArticle.aspx?id=49974&pid=39

28

1954

10

2030

First

Solar First Solar

5

15 0.93

15 0.93

0.8-1.4 / 0.42

0.5 /

1

17MW

1900 20%

6200 ;

2010

2000 50 3.37

2012 13-19 0.88-1.28 25

Manz CIGS

2012 3 Q.cells SE

Solibro; Miasole Global Solar

Energy Alta Devices CIGS

GaAs

5

CIGS

http://www.chinesevacuum.com/ShowArticle.aspx?id=50024&pid=39

29

2000

Datamonitor 2010 2005-2015

2009

4% 2009

2014 3184 2009 58.5%

Datamonitor 2009

66.3%

IMS 2010 2009 8150

1300 15.9%

TNF

http://www.chinesevacuum.com/ShowArticle.aspx?id=49482&pid=39

30 2025

2025

" 2025" 2014 12 3 23

" 2025"

2025

" " " "

"21 " "

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" "

2014

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26

42 130

24 60

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5

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1 5

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200 50

" "

" "

iPhone6

168 4 460

IDC iPhone6 Plus

14.7% 13.7%

4 26

2011 43

2500

80%

80%

2010

30 (0.25)

-

2014 2652 13.6

2%

1780

500 2020 1

http://www.chinesevacuum.com/ShowArticle.aspx?id=49086&pid=39

32

6

RSD 7% 2500 Da

1PPM FWHM 0.5 Da 5Hz

10

2 2014

500 200 650

3000

3

40 30

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1

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70%

2002

3 6 9

1

0.3 3 m3/min

2.0

2015 6

2

+

3G 4G

2007 PPTX

2003 PPT

50-60% 2013 14 15

3-5%

/

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2015 9

9

2015 518

2015 3 20

2015 703

2015 4 7

2015

6 APP

[2015]9

2015 962

2015 5 5

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http://news.ehvacr.com/news/2015/0611/95635.html

4

0.78 1.28

(MPa) 0.12 0.25MPa

85% (

40%)

2006

4 20% 2 15%

2012 6000 2.2

22075 27.49%

19.25%

63% 2000

2011 33%

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http://news.ehvacr.com/news/2015/0625/95783.html

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1+1 2 3 5

http://news.ehvacr.com/news/2015/0701/95847.html

6

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137 400

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2002

25%

2020

90 90 10% 12%

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[2][3]

5 104 15000

GDP

1.5 2015 200

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2

85%~90%

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Atlas Copco

Ingersoll-Rand TurboMaster ManTurbo

Fs-Elliott - Cameron-Cooper

KobelCo IHI-Sullair

表1 石油化工装置中的部分专用压缩机

序号	装置名称	常用压缩机组	压缩机类型
1	催化裂化装置	主风机	轴流压缩机
		富气压缩机	离心压缩机+
2	催化重整装置	循环氢压缩机	离心压缩机
3	加氢装置	新氢压缩机	离心压缩机
4	焦化装置	焦化气压缩机	离心压缩机
		工艺空气压缩机	离心压缩机

表2 近年国产大型透平压缩机产量

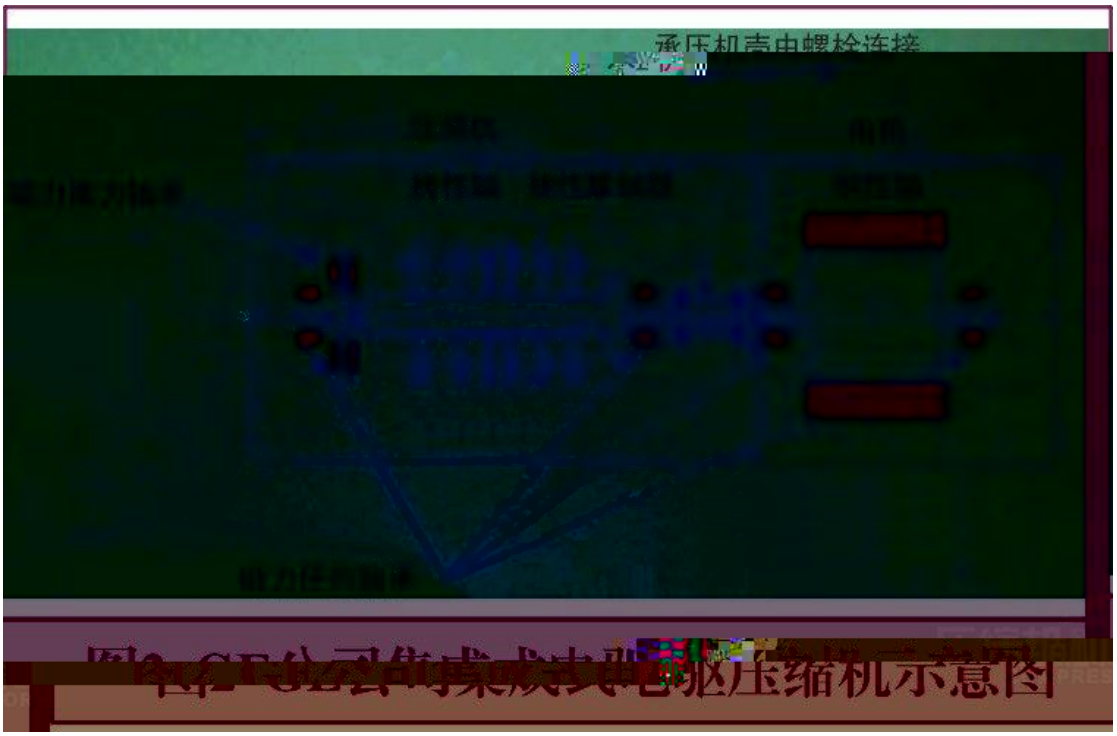
	2007年	2008年	2009年	2010年	2011年
离心压缩机（台）	204	243	261	195	438
轴流压缩机（台）	136	109	63	144	128

4

3

表3 我国压缩机产品差距国内外比较

序号	比较项	国外	国内
		三元流动理论研究进一步	



2.

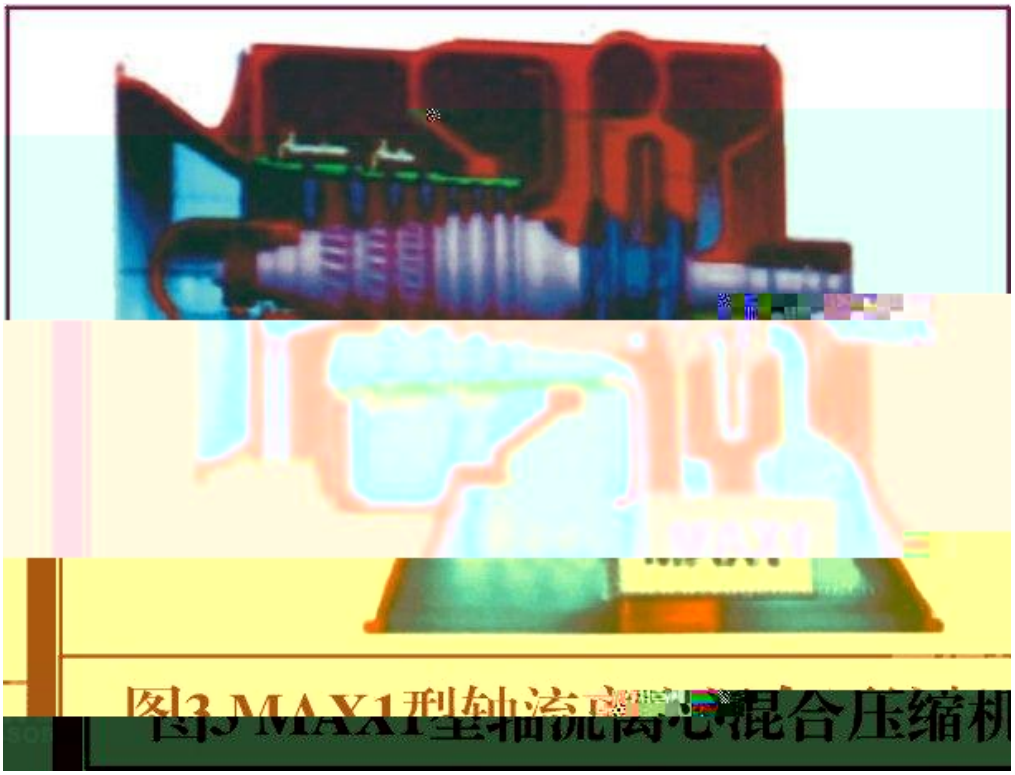


图3 MAX1型轴流离心混合压缩机

3 20 25

4

1

20

CO NO SO

2 GE

20MW

20MW

4800rpm 25MVA

4740rpm

2.

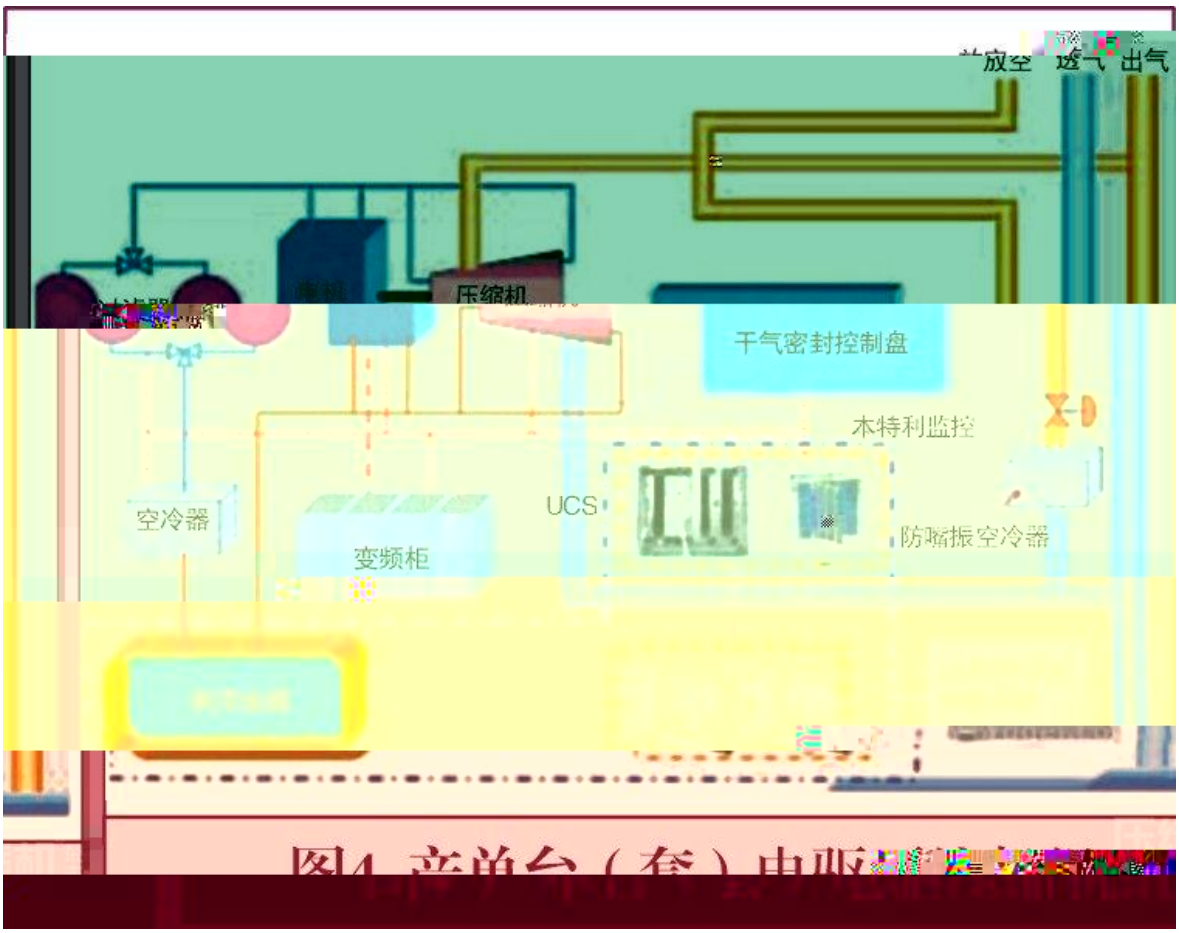
MAX1

0.8 0.9MPa 70 150 m3/h

3

5512t 16 m3/h MAX1

4



http://www.chinajnsb.cn/news/show-11599.html

7

http://www.chinesevacuum.com/ShowArticle.aspx?id=49356&pid=39

8 2015

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http://www.chinesevacuum.com/ShowArticle.aspx?id=49242&pid=39

1

BITZER

2015

SPEEDLITEELV

CHINABUSES.COM
Bitzer Refrigeration Technology (China) Co.
比泽尔制冷技术（中国）有限公

ELV

2016

1994

80%

8-18 8

GDP 2015

http://www.chinabuses.com/supply/2015/0526/article_15472.html

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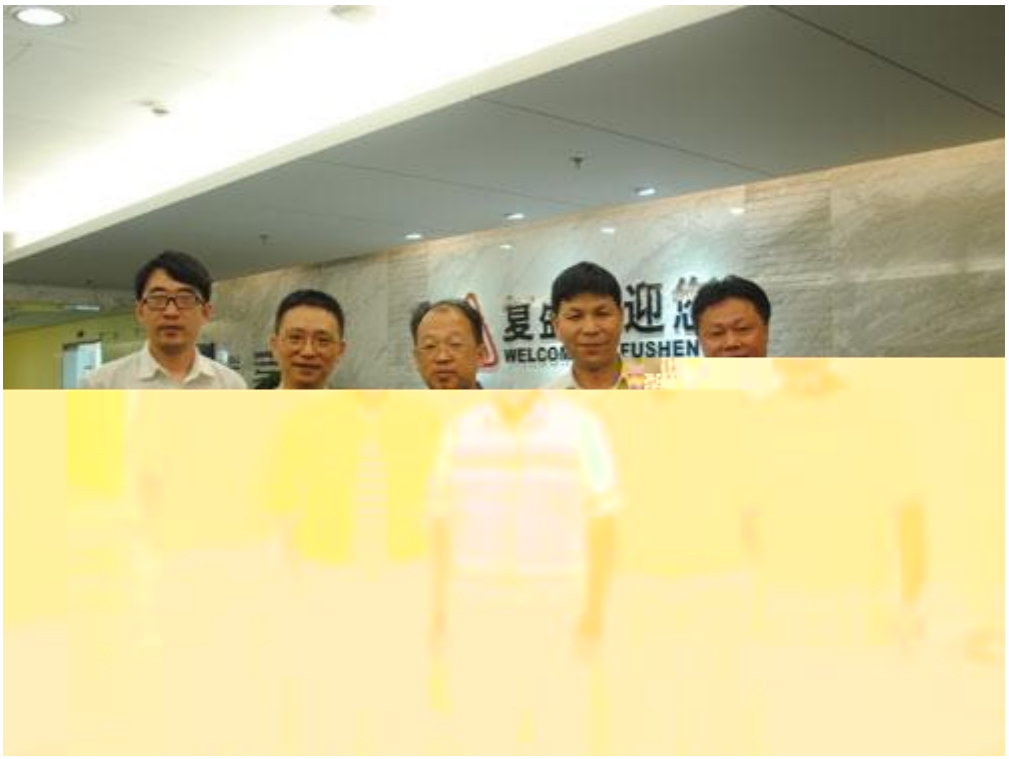
http://www.chinabuses.com/supply/2015/0626/article_15652.htmlCVEA



P

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P 50P 25P

50

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http://stock.sohu.com/20150526/n413783649.shtml

6 1750

6 4 LIGHTNING DOCK GEOTHERMAL

EPC 1750

2015 7 31 2016 2 28

http://finance.ifeng.com/a/20150604/13755591_0.shtml

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CCFA 2015

25 CCFA 2015

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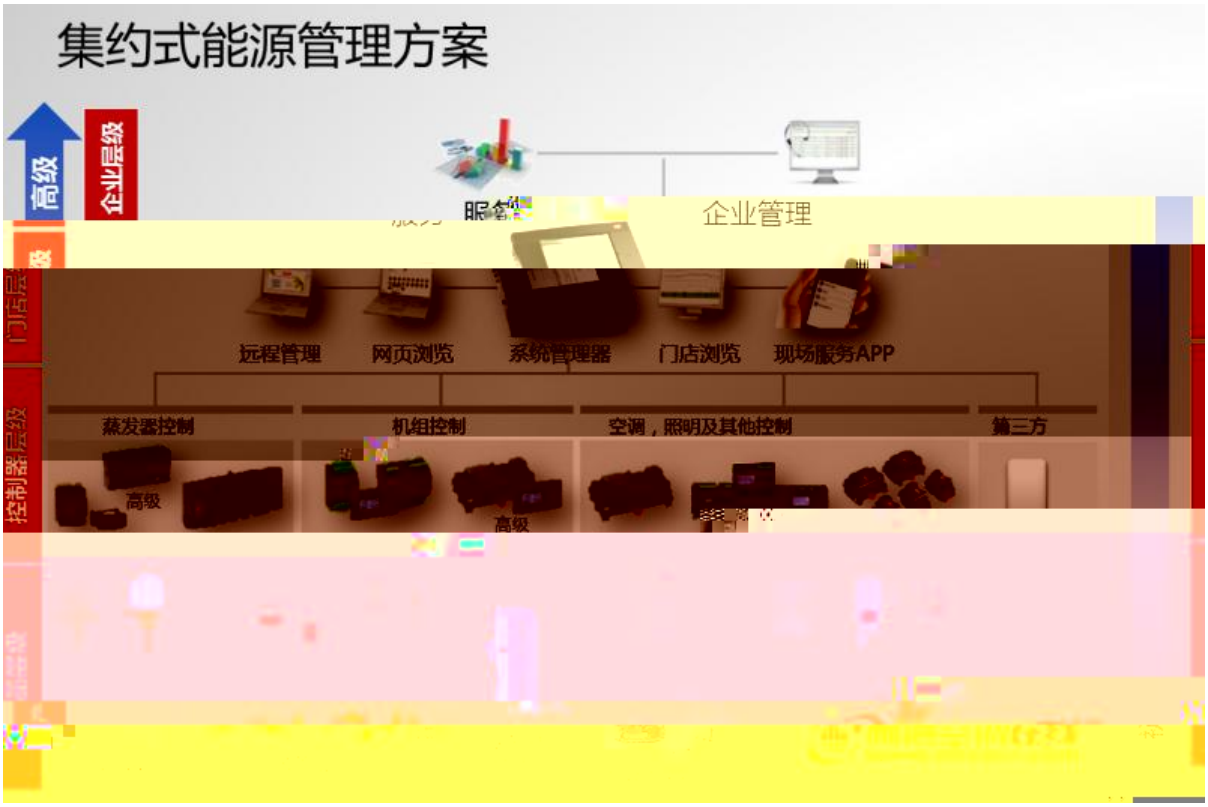
(FDS)

(EDS)

TM

2015 CCFA 连锁店节能


集约式能源管理方案
高级
企业层级
企业管理
远程管理
网页浏览
系统管理器
门店浏览
现场服务APP
蒸发器控制
机组控制
空调，照明及其他控制
第三方
高级
高级
控制器层级

AKV

Lotus 14

AKV

http://news.ehvacr.com/company/2015/0630/95835.html

8 150

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5 "

150

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AP1000

2011

K2/K3 5 6

2014 5 6

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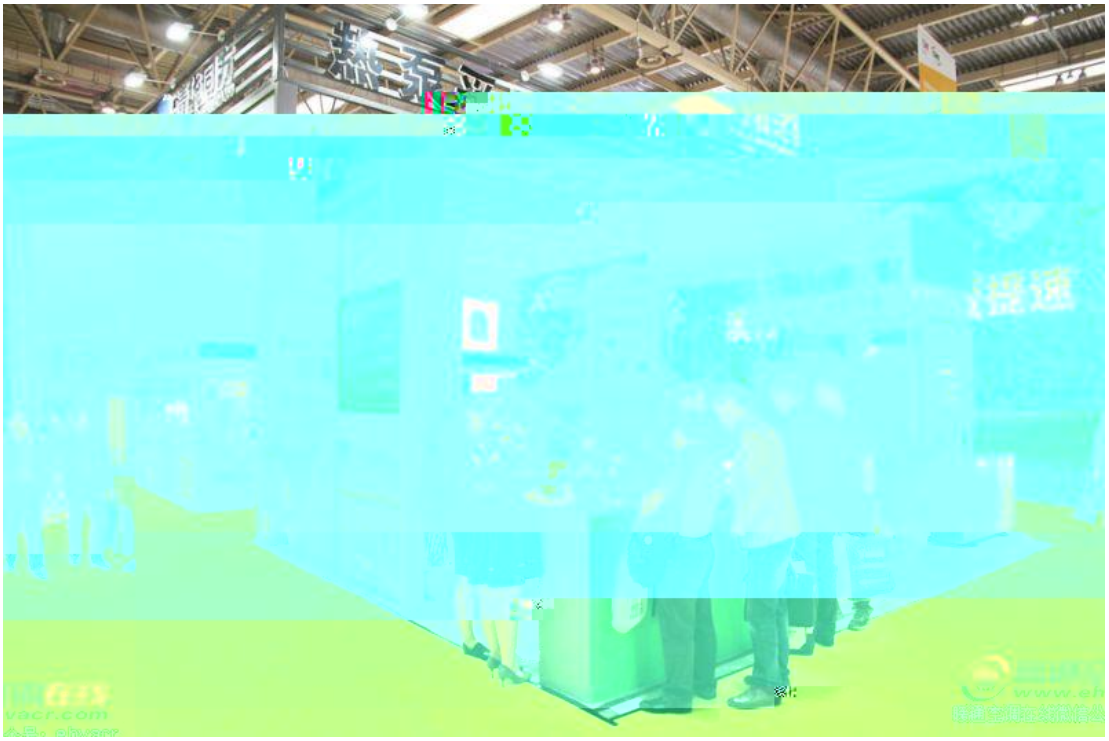
http://news.ehvacr.com/company/2015/0423/95129.html

9 2015

5 13 15 2015



65

2014

65

2014

65°C出水，接散热器
速

http://news.ehvacr.com/company/2015/0520/95394.html

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500

2015

2015 2000

385 500 501

100 2000

500

500

500

500

2014 501 2015

116

2010 608.07 2011 835.17

2012 1001.10

2013 1200.43

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200 2011

1000 1117 2012 300 706

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2015

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PM2.5 4

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2014 TOP25

151.4 10%

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2015

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http://news.ehvacr.com/company/2015/0528/95502.html

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220

2025 2025

SCR30M

1989 2

D1800IB - ABV

TURBO-AIR NX 12000

TURBO-DRI

TURBO-

TURBO-

TURBO-

TURBO-

TURBO-

RS RS 37 160 50 200

RS

RS Xe-145

TURBO-AIR NX 12000

TURBO-AIR NX 12000

http://www.compressor.cn/News/qyzc/2015/0616/79411.html

14 · Monier GHS

Brass Monier 36 100

GHS VSD+ · Monier

GHS VSD+

http://www.compressor.cn/News/qyzc/2015/0616/79413.html

15

5 30 ,

，

40%

http://www.compressor.cn/News/qyzc/2015/0615/79396.html

16

2015 4 1 3

2 +1

http://www.compressor.cn/News/qyzc/2015/0623/79522.html

17

，

http://www.compressor.cn/News/qyzc/2015/0617/79316.html

18

6 8

5050m3 TRT

5050m3

TRT

9

http://www.compressor.cn/News/qyzc/2015/0614/79360.html

19

50 KW/1000

, 2015 ( )

(10), 2000

http://www.compressor.cn/News/qyzc/2015/0610/79311.html

20

6 4

http://www.compressor.cn/News/qyzc/2015/0609/79306.html

21 /

2015 ComVac

- RS

- SFD XL D1800IB-ABV

- TURBO-AIR NX 12000

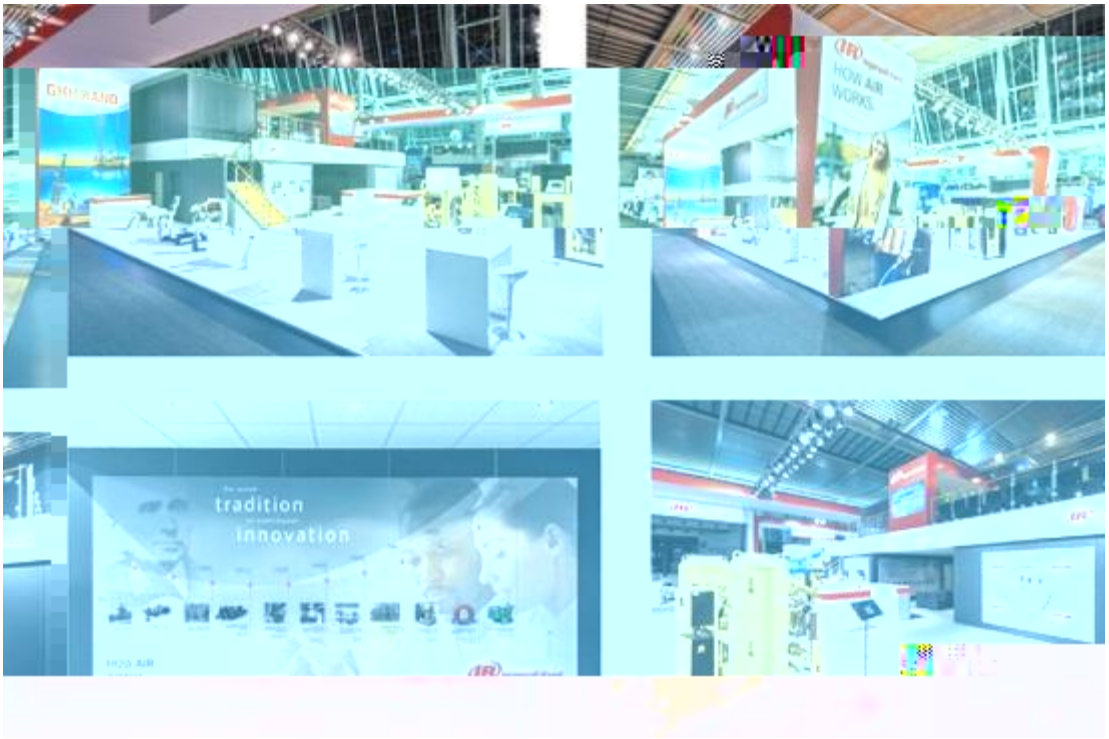
- TURB0-DRI

Manlio Valdes 2015

1

26 C14

C08



RS 37-160kW 50-200hp

RS 140

RS Xe-145 WiFi

V-Shield VSD RS

55%

2/3

SFD

SFD Class 3

XL 100-400m3/min, 50 Hz

XL

50%

D1800IB-ABV

40 °

TURBO-AIR NX 12000

TURBO-AIR NX 12000

TURBO-DRI 50-60Hz

TURBO-DRI

500-19000scfm TURBO-DRI

http://www.compressor.cn/magazinearticle/2015/0528/79125.html

22

40%

15

-

http://www.chinesevacuum.com/ShowArticle.aspx?id=49499&pid=39

23 Busch

Busch COBRA NX 450 A

COBRA NX

COBRA NX

COBRA NX

COBRA NX Busch 1000 0.1mbar

COBRA NX

IEC

COBRA NX

Panda Puma

http://www.chinesevacuum.com/ShowArticle.aspx?id=49708&pid=39

24 Edwards

SHR

http://www.chinesevacuum.com/ShowArticle.aspx?id=49932&pid=39

25

http://www.chinesevacuum.com/ShowArticle.aspx?id=49897&pid=39

26

2014

http://www.chinesevacuum.com/ShowArticle.aspx?id=49345&pid=39

27 Busch

1.Busch

Busch Busch

Busch

Busch 50

6 59

Busch

Busch

Busch 12 Busch

Busch

Busch

Busch

Busch

Busch Dr. Busch

Dr. Busch 87

slowly you go, as long as you don't stop - Confici

Busch

Busch Busch

Busch Busch

Dr. Busch Busch

Busch

3.Busch

Busch

Busch

Busch Busch

http://www.chinesevacuum.com/ShowArticle.aspx?id=49199&pid=39

28

4 23

http://www.chinesevacuum.com/ShowArticle.aspx?id=49129&pid=39

1 19

2015-05-20

4 25

8 20

2

( )

16 30

http://www.compressor.cn/News/qyzc/2015/0520/78946.html

2 25

2015-06-18

2015 5 15

25

HANBELL
Joint Research Centre of Tianjing University-Shanghai Hanbell
揭牌仪式

6 19

ORC

CO2

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http://www.edu777.com/gaoxiao/8721.html