1. 2013 PTC ASIA
2.
3.
4. 30%
5.
6. 2013
7.
8.
9. 2018
10.
11. CO2
12.
13.
14.
15.
16.
17.

22.

23. 18

24. 12%

25.

26. CIGS

27. 2014 ?

28.

29.

30.

1. 2013 36.7

2.

3. 2014

4. 2012 < > < >

5. 2012

6. 2013

7.

8. ( )

9. 2014 49GW

10. 2013

1. Interclima

2.

3.

4.

5. KSB

6.

7. 23XRV

8.

9.

10.

11.

12.

13. ·

14. V

15.

16.

17.

18.

19. Edwards

20.

21.

22.

23. · Edwards

24. Busch 50

25.

26. IDP-15

1. 2013

2. : ,

3. 2013

4. 2013

5. : , ---

6. : , ---

7. : ,

1 2013 PTC ASIA

PTC ASIA 2013 ComVac ASIA

70000

party

2011

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1

10-20%

17 13

4

10 30

17

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10

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EK

EK ,

EK

EK

14 315

67 6 2

29 23 8

60 1 10

15

,

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5%

2013 12

3

2013 6 8

25

HFCs

HFCs CFCs HCFCs

HFCs HFCs GWP

HFCs

UNEP CRAA 2013

GWP

HFCs R134a R410A R404A HCFC 2013

2013 8 HCFCs

HFCs

HFCs

‘ ’ ‘ ’ ‘ ’

ODSs 50

‘ ’ GWP HFCs CFCs HCFCs

CFCs HCFCs

ODP ≈ 0 GWP HCFC-123 '

, GWP

GWP

'

,

HFC HCFC R410a R134a '

, HFO R1234y

R290 R32 '

R1234y R1234ze

2013 26 R1234y R1234ze

R1234yf 3000

R1234yf 4000

, ' , '

, '

GWP HFCs

GWP R32

A2L R32 R22

13 GWP

GWP

2013 12

4 30%

8000 r22

8 r22 r290 1.4

r290

r290

2015

10% 2030

30%

r22

http://www.chinahvacr.com/News/Class1/201312/News_3101644.shtml

5

12 21

10 1000

/

90

6 -8%

MPPT

2012 1001.10

2013 887.59

15.03% 75.79 42.13% 85

2013

59% PM2.5

9200

……

9 9000

2500 2013 11 2800

8

/

2011

40% 65%

2011

2013

349.15 21.79% 35.63

44.79% 887.59

15.03% 75.79 42.13%

2012 2013

1200

http://news.ehvacr.com/news/2013/1223/89630.html

6 2013

2012 , ' 2013

, ' 2013

2013

, '

2013 , '

2012 11 1

, '

2013

2013 12

5000

1.5 1200

2013 3 12

2013 6 1

75%

85 20 2015 250

200

15 / 30 /

50 /

, ' 2015

3—5

9600 210

210

2015

2015 20%

2015 12 31

1000

2013 12 1

2737

, '

1000 100 10

2013

, '

, ' , 2014

, ,

,

, ,2015 ,

50%

2014

——

, '

1.3 500

15

——EMC

2010

2012 2015

, '

EMC

2013

300

2013 EMC

, ' 3.5

200-300 700-1050

2013 2012 , '

, ' 11

600

5.92 100 592

30% 20%

3 1

2.28

102 722

98 56 45

2013

,

2012

2013

100

TOP50

2013

,

，

http://news.ehvacr.com/news/2013/1226/89704.html

7

2004 48%

2005 2010 10% 20%

30RT-500RT

20% 40%

2006-2010 20% 25% 10%

20%

(

) ( )

24

2004 48%

2005

2010 10% 20%

30RT-500RT

20% 40%

2006-2010 20% 25% 10% 20%

( )

( )

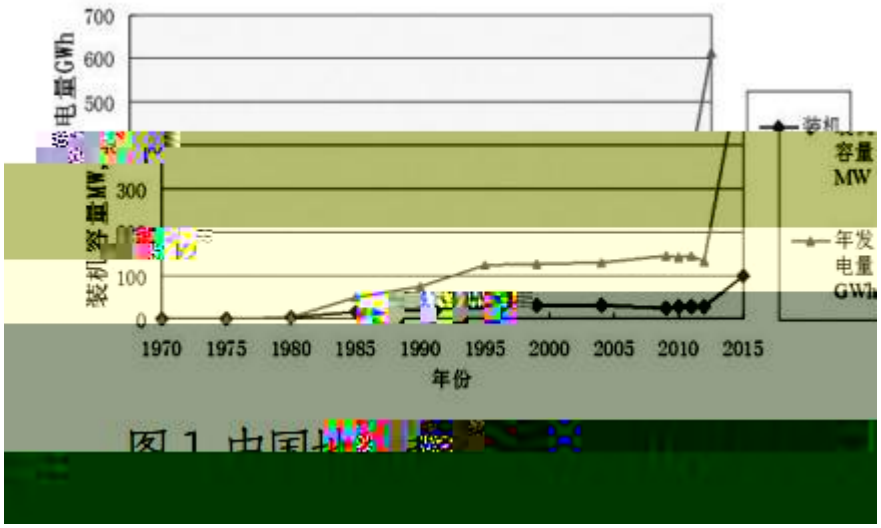
24

http://www.chinahvacr.com/News/Class1/201312/News_3101597.shtml

8

,

‘



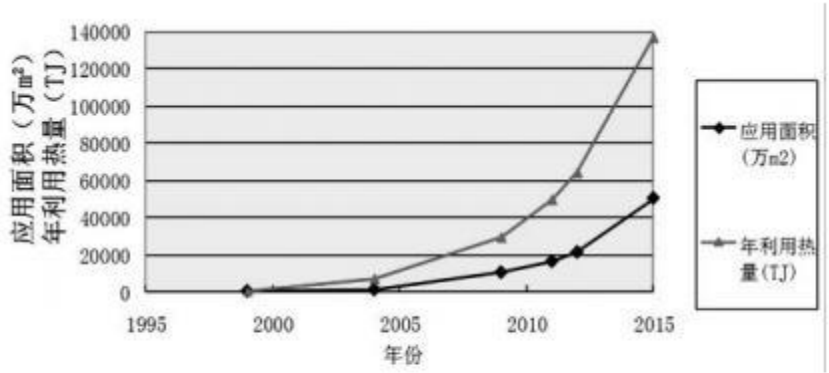


图 2 中国地源热泵应用面积和年利用热量

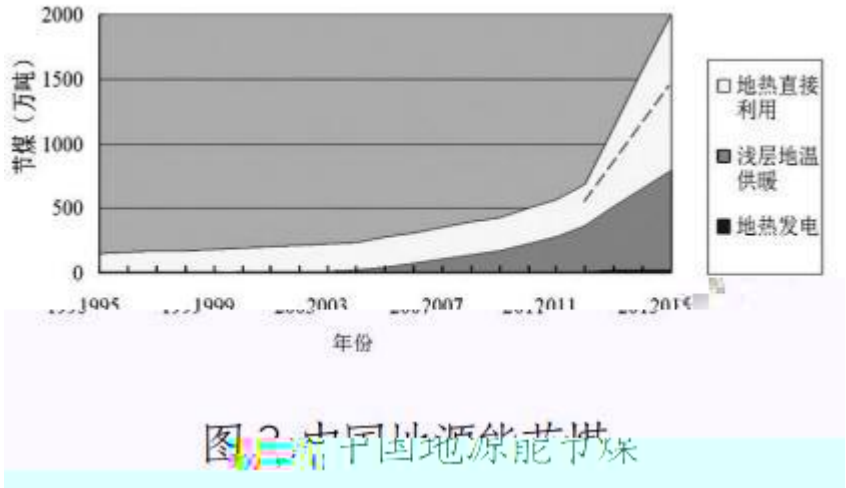


图 3 中国地源能节煤

,
'
,
'
3.5
700

2006

50

,

'

90

30%-60%

8% 2002

400

300

2010 30 30%-80%

5

700

http://news.ehvacr.com/news/2013/1203/89234.html

9 2018

2015

2898

2016 1 1

IGCC

珍 2018 1 1

http://news.ehvacr.com/news/2013/1204/89252.html

10

2007 3

2011

2011

2013 1—9

2013 1—9 18 2012 5.3%

2013 3

50%

2012

2010

ㄐㄚ

12

26.80% 21.64% 18.95% 8.05%

7.57% 3.42%

19% 85%

GDP

4

2012

2013

1 52 1

2014

4000

62.5% 25%

http://bao.hvacr.cn/201401_2043191.html

13

1

7

http://bao.hvacr.cn/201401_2043365.html

14

2014 1 1

2014 1 1

15

8 25 24 15

60

(7.53, -0.18, -2.33%)

/

/

/ 1/10

10%

31.1

7.37

6

http://bao.hvacr.cn/201401_2043217.html

17

UPS DHL

，

，

http://news.ehvacr.com/news/2013/1121/88971.html

19 500

240 / 500 /

2010

240 / 60 /

10000

350 300 /

200 /

http://news.ehvacr.com/news/2013/1205/89325.html

20 2014

8% 2010-2011

28%

2009 400 90%

60 40%; 10%

90 60%

2013

2014

http://www.compressor.cn/News/hykx/2013/1214/71316.html

21

, ' , PM2.5 ' , 3M ' , ' , ' , ' ,

2013

2013 52

13 , '

, '

,

2013 , , 2014

, 2013

15% 2015

4.5

: , , ,

, 2015

: 2014 , 2

, 1000 ,

:2015 30.72 / , 28%,

35% ,

2013 12 15 2014

, ,

, ,

;

;

;

21

4800

40%

400

;

60%

TRT

30

http://www.compressor.cn/News/hykx/2013/1218/71340.html

22

50HP

;

http://www.compressor.cn/News/hykx/2013/1120/70960.html

25

20 10

20%~30%

http://www.zhenkong.info/news/html/Market/10084.html

26 CIGS

2014 1 14

2014 46GW 2015

56GW

2013 12 18 2013

10GW 122%

1 13

20 80

CuInSe2 CIS Ga CIS In CuIn1-xGaxSe2

CIGS

25-30%

20.3% 15.7%

CIGS

BIPV

70% CIGS

CIGS

CIGS

CIGS

CIGS

CIGS Cu In Ga Se

CIGS

GIGS

http://www.semi.org.cn/pv/news_show.aspx?ID=13833&classid=12

27 2014 ?

¶

2013 7

53.3% 57% 2.3% 48.7% 2.4% 48.7%

2014 1 20 5

30% OCI 2.4%

Ÿ ţ ò 50% I Ǝ

2013 11 792 27.1%

10%

2013 11 2033

71%; 2365 98%

14.7 /

13.5 / 8.64% 20%

25%

6.5 12 2013

35%

http://www.semi.org.cn/pv/news_show.aspx?ID=13840&classid=12

28

1 13

100

, ' , '

—— 2010 5

http://www.chinaequip.gov.cn/2014-01/23/c_133067131.htm

29

2459 252

2403 239

56 13

2013 ，2013

' , ' ,

' 2013

,

'

http://news.ehvacr.com/news/2014/0109/89919.html

30

09 13

9 12

1 4000

1

4000~8000

30

18

30 5 300

2700

http://www.chinesevacuum.com/ShowArticle.aspx?id=42696&pid=39

1. 2013 36.7

2013 2013

2013

3000 48 17% 2012 40%

2013 36.7

77% 2012 32 14.7% 2013

8.2 17.1% 2012 7

17% 2013 2013 2.7 2012

1.5 80%

1000 2013

1000 63 56

5

8 2014

2013

1.2

2013 2014

8128 6790

http://bao.hvacr.cn/201401_2043452.html

2.

20 2009 19%

20 40%

2004 2009 2004 33

2009 43

1997 2005

1997 11 8

- ( )

1998 11 4

2002 4 23

2002 12 19

([2002]414)

2005 2 28 33 2006 1 1

2005 11 29

2006

2006 5 30 (

[2007]371)

2006 5 31

( )

2006 839 2006 7 1

( ) 35 / 50 /

2006 9 4

(2006 460)

2006 10 11

([2006] 20)

312.3

2007 1800 2010

6500

2006 12

2010

· (109)

([2002]222) 2006 12 28

([2006]315)

2007

2007 4 10

([2007]59)

/

2007 5 23 [2007]15

2007 7 10 (2007

71) 2007 8 1

2007 8 31

([2007]2174)

2010 400

2020 1200

2008 6 2

2008 ([2008]64)

( )

2008 10 15 ( )

([2008]531),

( ) 2009 1 1

2008 12 3 (

2008 249)

2009

2009 7 6

([2009]305) (

[2009]306) 5000 8000

2

2009 60 /

1800

2010

2010 4 2

(2010 25)

.

([2009]305)

([2009]306)

2010 5 7

2010 ([2010]34

)

2010 8 4

([2010]455)

2011

2011 3 8

[2011]61

2020

15%

2015 25

3000

2001 3 21 2011

([2011]38)

( )

/

2011 7 13 5

2011 11 29

2012 ([2011]167)

( )

2012

· 2011 4 -2012 3

2012 6 16 (2012 19) 15% 2015 4.5 2% 2015 10% 30% 30% 2015 20 50 10

2012 8 2015 1500 10 5 2013 1 1 [2013]2 ( )

2013

2013 1 1 2013 1

10 2015 20%

4 5000 1.2

10 3.5

.

http://bao.hvacr.cn/201401_2043561.html

3. 2014

2014

2013

1

2

COP

20%-100%

3

0.5kg

65 46% GDP 1500

15.6% 15% 40%

GDP

2015 312

5.2% 20%

34 9.1%

- 3000~15000r/min
-
-
-
-
-

3

80%

50%

200

IR AC( )

99%

1%

2008 4

2009 42.3% 2010-2011

15.18 25% 2012 4

14.15 6.8% 16

4

3

2015 181950

17

3

7

-
-
-
-
-
-
-

99%

2007-2012 CAGR 22.9% 2008

4 2009

42.9% 2010-2011

15 25% 2012

4

14 6.7% 3

CAGR 8.7% 2015 18

18 19

1

2

2007

2008-2010

GB19153-2009

3

2 2

1 2011

80%

2012 4

1500 16.7% 3

CAGR 8.7% 2015

18 20

3

LNG

CAGR9.1% 2015 2000 21

1

2

-

8

1

2

6

5

5 70%

1960

1

1

6

2970 2970r/min

2970*12=35640 2 5 5

2970 r/min 2970 *5=14850

35640

2

3

4

4 2

1/4~1/3

2

90% 10%

1

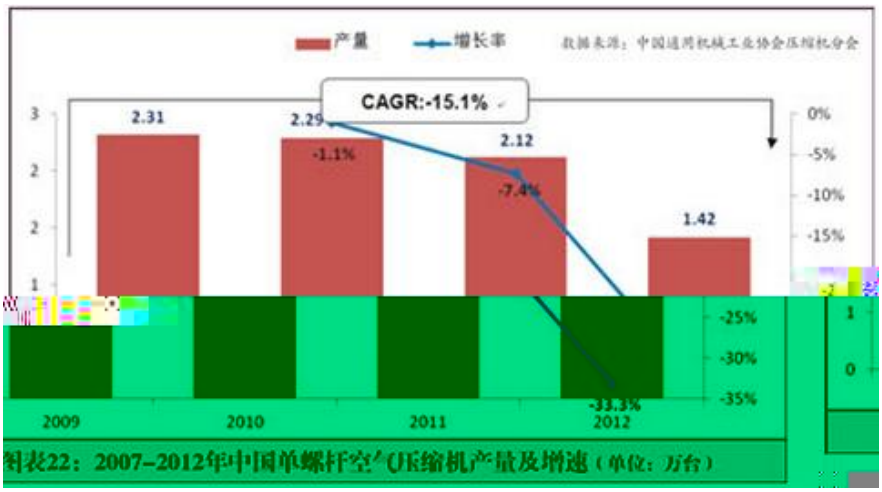
3

100

3000

2007-2012

2012 1.42 33.3% 22



3

1974

1976

1984

1986

0

3

2015 1.82 23

图表23：2013-2015年中国单螺杆空气压缩机产量及增速（单位：万台）

2 100HP

50kg/cm^2

3

4 100%

5

6

Surge

7

8

2

10000KW

4%

2008 4

2009-2011

1500 2012

1

2

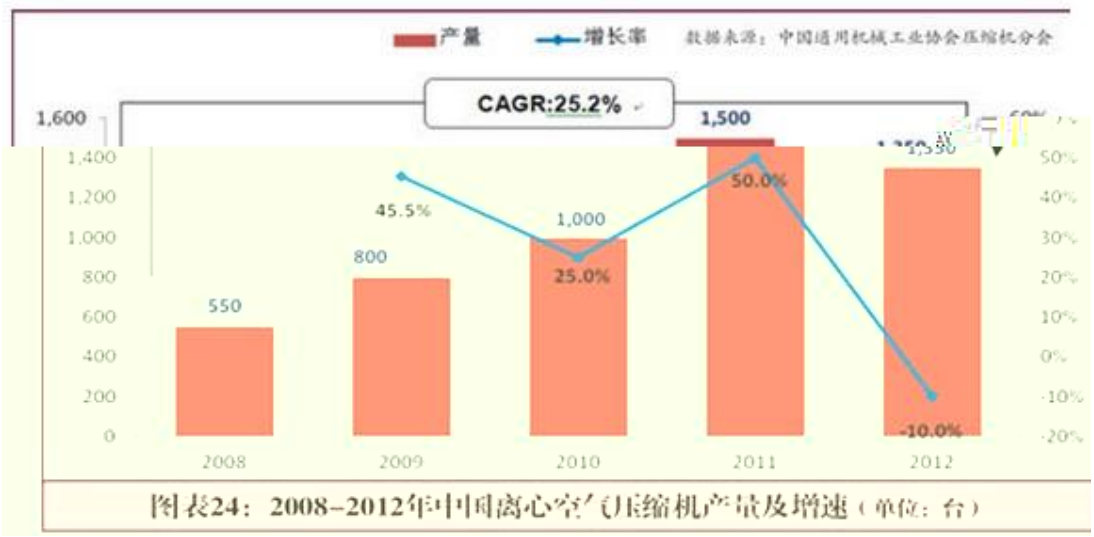
3

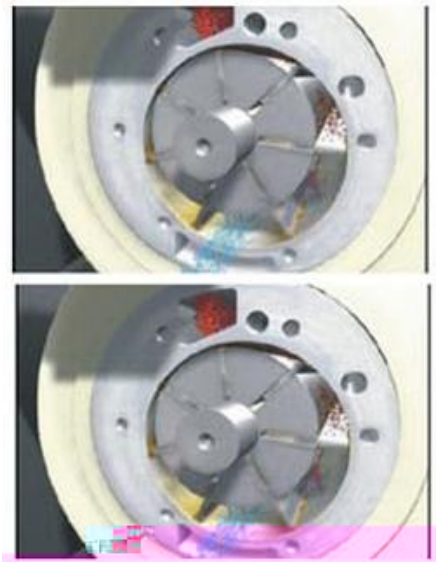
4

3

6.9% 2015

1650 24 25





+

<=300r · p · m

,

'

1

- 1905 Leon Creux

- 70

1972 Arthur D Little

- 80 81

83

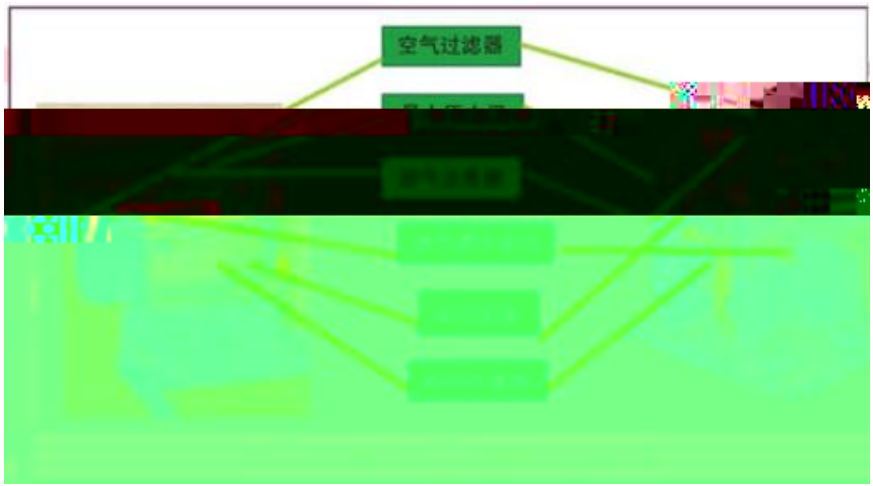
87

- 90

Carrier

2

- 90% 40%
15%
-
-
-
-
-
-
-
-



4

< >

2013 12

5. 2012

2012 1749 108

6%

1641

94% 1

2012 169581

10430 6% 1498

1%

157.653

93% 2 3

2012 8182 183

2% 9

7990 98% 4

2012 181204

11.951 7% 8.536

5%

160717

89% 5 6

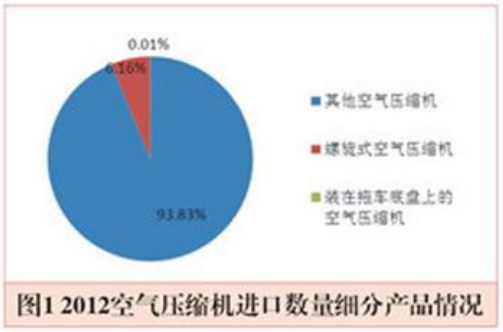


图1 2012空气压缩机进口数量细分产品情况

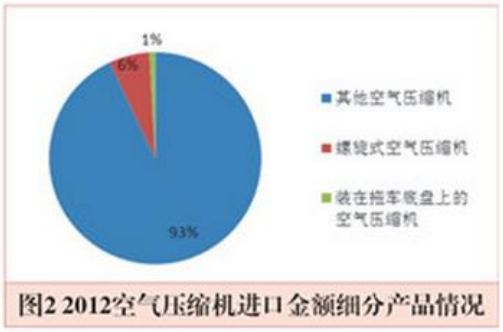


图2 2012空气压缩机进口金额细分产品情况

图3 2012空气压缩机进口情况 数据来源：中国海关总署

海关编码	商品名称	2012年进口数量（台）	2012年进口金额（万美元）	备注
84143019	螺旋式空气压缩机	1077295	10430	/
84144000	装在拖车底盘上的空气压缩机	1,752	1498	/
84148090	其它空气压缩机	16,409,091	157,653	含无油空气压缩机、螺杆式空气压缩机、离心式空气压缩机及其他空气压缩机

图4 2012空气压缩机出口数量细分产品情况

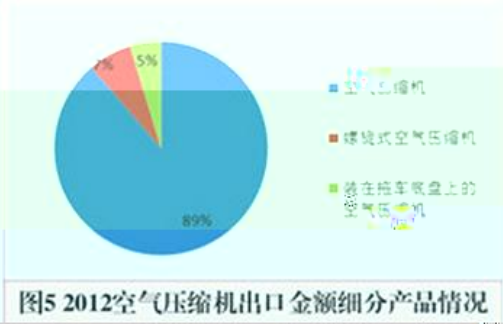


图5 2012空气压缩机出口金额细分产品情况

图6 2012空气压缩机出口情况 数据来源：中国海关总署

海关编码	商品名称	2012年进口数量（台）	2012年进口金额（万美元）	备注
84143019	螺旋式空气压缩机	1,828,296	11,951	/
84144000	装在拖车底盘上的空气压缩机	90,205	8,536	/
84148090	其它空气压缩机	79,896,397	160,717	含无油空气压缩机、螺杆式空气压缩机、离心式空气压缩机及其他空气压缩机

2013 12

6. 2013

2003-2009

2009

2012 113.4 8.9

2012

13,153 553 8.4 8.3

73,654 1.6

56 4.5

1

20 80

; 2 12

2016

78.5 159

http://www.compressor.cn/News/hykx/2014/0111/71621.html

7.

( ) 20%

15

30%~60%

;

, '

80%

10 ; 50%

2009 5% 2010

30% 5 15%

80%

—— , ' , '

100%~5%;

± 0.5%;

3kV~10kV

690V

50%;

V/f

, ' ,

' , ' '

30%~60%

, ' , ' , '

,

;

—— **30%**

80%

, ' 30%

8. ( )

, ' (2009 213)

( )

, '

( )

(　　)

(　)

(　　)

20%

(　)

(　　)　　10%

(　)　　(　　)　　30%

(　)

(　)

(　)

(　)　　(　　)

(　)　　(　　)

(　)　　(　　)

( )

( )

( )

( )

( )

( )

( )

http://www.compressor.cn/News/hykx/2013/1210/71210.html

9. 2014 49GW

NPD Solarbuzz PV 2014

2014 45GW 55GW

49GW

Finlay Colville ,

PV

2013 '

NPD Solarbuzz 12GW 2013

PV 36GW

2/3

2014 PV

2014 2013 10 2014

PV 22GW

NPD Solarbuzz 2005 2009

22GW 6 120MW PV 5MW

49GW 90%

Colville , 2011 2013 PV

2014

PV 30% '

NPD Solarbuzz

0.05

18

2014

50GW

IHS Mercom EnergyTrend 2014

40GW 43GW

NPD Solarbuzz

PV

http://news.ehvacr.com/news/2013/1231/89794.html

10.2013

2013 11 99.7% 2012 0.3%

2013 11 8 422.99

0.23% 1 2013 1-11 2012

9.8% 2012

0.3% 165.57 4.23% 2012 0.58%

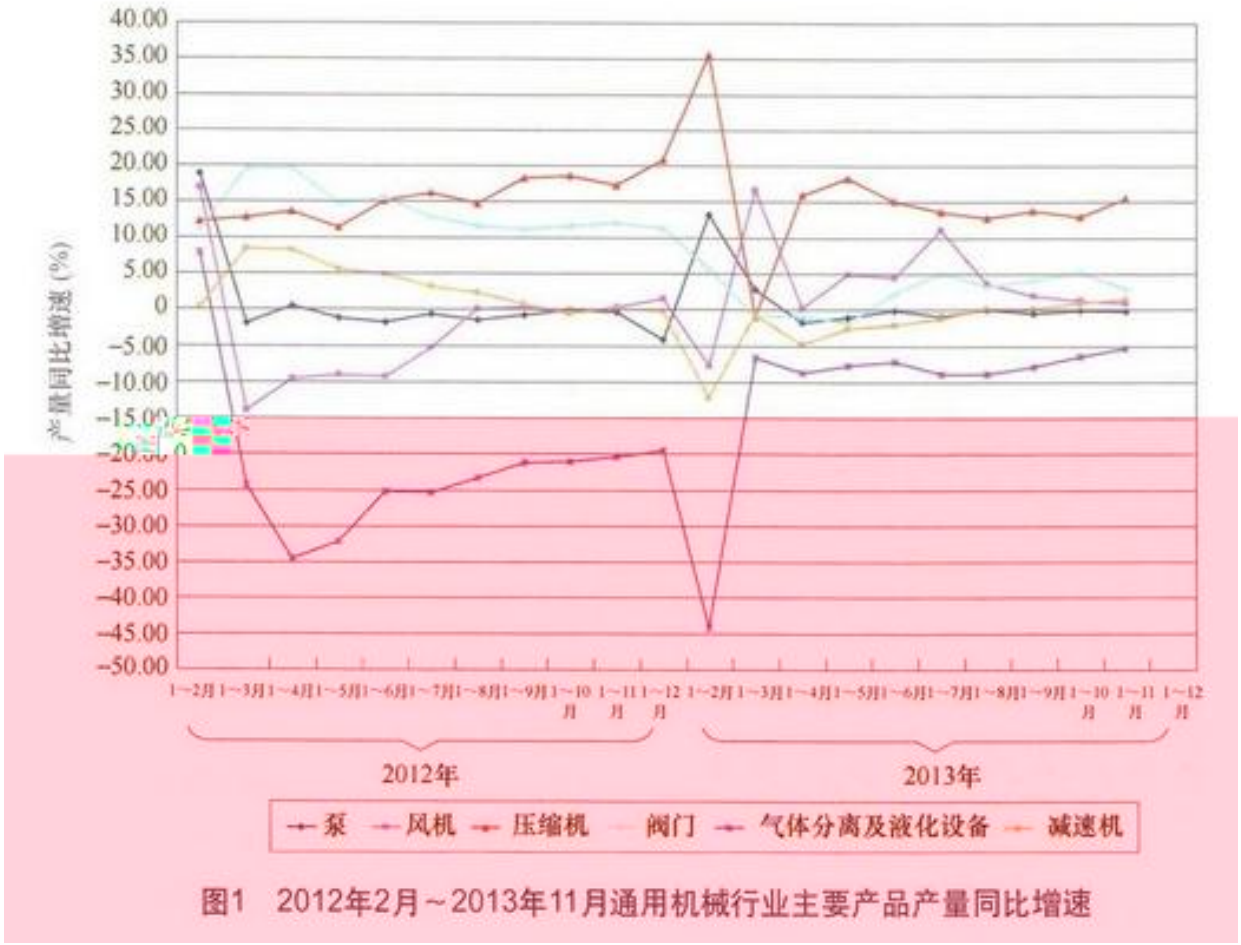


图1 2012年2月～2013年11月通用机械行业主要产品产量同比增速

2012

2012 (2)

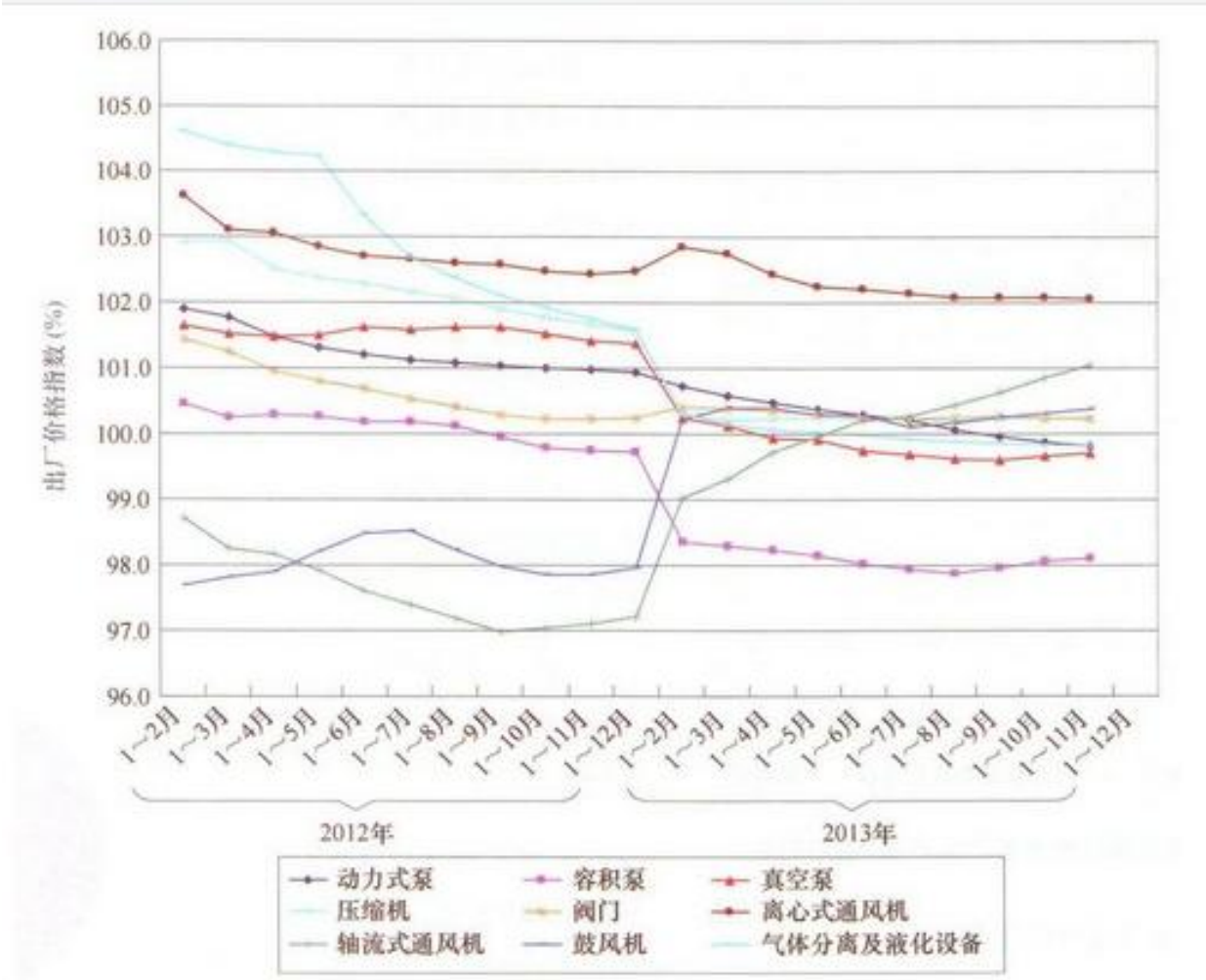


图2 2012年2月~2013年11月通用机械行业产要产品出厂价格指数

2013 4

2012 11 99.7% 2012 0.3%

2013 10

10% 2013 1-10 7270.81

12.38% 2012 1.44%

12% 468.85 11.02% 2012 0.58%

7% 11% 2012

19.82 0.71% 3

图3 2012年2月～2013年10月通用机械行业主营业务收入同比增速

1 577.27 10.82% 2012

3.61% 109.04 14.52% 2012 1.69%

2013 1-10 6.44% 2012 0.8%;

6.95% 2012 0.1%

2014

2014 GDP 7.5%

2013

2014 10%

http://www.chinesevacuum.com/ShowArticle.aspx?id=43152&pid=39

1. Interclima

2013 11 4 11 8 Interclima

90

3000

Jean-Pierre Baleydier 1994

2013 Interclima

177

3000 40

Interclima

ECOLINE ORBIT 6 ORBIT 8

ECOSTAR CSV

12%

ECOLINE

COP COP 12%

R134a R404A, R407A, R407C, R407F and R507A

R404A R22

ECOLINE :

ORBIT 6 50Hz 27 51Kw

20 38

R410A ORBIT 8

ECOSTAR

ECOSTAR

Modbus ECOSTAR

ECOSTAR

ECOLINE

ECOLINE

CSV

CSV

ESEER 5 CSV

http://bao.hvacr.cn/201311_2041699.html

2.

( )

CURTIS ELLIOTT

-65℃

30%

1953

http://www.etyjx.com/2013/12/03699907137.shtml

3.

2013 10 16 , ' , '

1,600 13,120

, ' ,

' 6,560

800 6,560

3,280

2013 11 20

2013-068

2013 12 19

, '

1 , Refcomp '

2

3

4

800 500

300

2013 12 27

http://money.163.com/13/1231/05/9HD9BJMI00253B0H.html

4. ，R32 '

60

，R32 '

2013 12 19 ，R32 '

R32 R22

/

/ R32 R22

2013 ICPF

, KSB ,

KSB

16

KSB D.-H. Hellmann

KSB ,

, KSB , KSB

KSB KSB

FGD

http://news.ehvacr.com/company/2013/1224/89654.html

6. , '

, '

400

—— , '

, '

1987

http://news.ehvacr.com/company/2013/1224/89649.html

7. 23XRV

2013 12 17 —— 23XRV 2013

——

23XRV 2010

2110

23XRV

23XRV COP 6.6 IPLV 11.7

HFC-134a

,

'

23XRV

2008 23XRV 2012

http://news.ehvacr.com/company/2013/1219/89591.html Top

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COP IPLV

2009

2012

2011 11

2625

2013 3

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UL

GB/T18430-2007 COP 7.11W/W 17%

ARI550/590-2011 IPLV 11.62

IPLV 6.7

50%

4,000 800RT

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http://news.ehvacr.com/company/2013/1216/89523.html

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60%

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150 700 100

IT

http://news.ehvacr.com/news/2013/1203/89244.html

10.

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(Trane) BSE

SMARDT

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R410A CGAM 17

(BSE)

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Turbocor

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HCFC

GWP R32 R410A

R32 OEM

R32 GWP

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http://news.ehvacr.com/company/2013/1202/89212.html

11.

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EVI

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20% -25 50

± 0.5 55

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DSH

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Dave Bersaglini

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http://news.ehvacr.com/company/2013/1212/89466.html

12.

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(11 1 10)

	kW/h	Kw/h	Kw/h	
KE185	40007	32065		
KE450	90825	72016	178004	684
KSGe469	87211	73923		

10 684

22.8 178004 360

2.24 : 5300

ORC

http://www.compressor.cn/News/scdt/2013/1205/71162.html

13. ·

2013 12 20 Wilrijk 4 ·

GA VSD+ 37kW 50%

13%

· 1994 VSD

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35% · GA VSD+

50% GA VSD+ 13%

GA VSD+

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. Sanjeev Sharma

8 VSD+ 18-37kW

GA VSD+ 37kW · 75%

37kW 50hp

7-15kW GA VSD+ 4

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GA VSD+ Elektronikon?

50%

http://news.21-sun.com/detail/2013/12/201312240821087.shtml

14. V

V

85% V

70oC

V

160kW

8000

http://www.etyjx.com/2013/12/23703641689.shtml

http://www.compressor.cn/News/hykx/2013/1220/71371.html

16.

TV15 EV18

EV45

2013

http://www.compressor.cn/News/qyzc/2013/1227/71448.html

17.

1998

2012 2013 5 23

45 2

2.5

2008

2013

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3000 GREATALL

HIBON

SAUER BOGE LMF

RIX

31

http://www.compressor.cn/News/qyzc/2013/1229/71452.html

18.

http://www.etyjx.com/2013/11/25697189873.shtml

19.Edwards

nXDS nXDS-R

nXDS

Edwards David Steele nXDS-R

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nXDS-R

52 (A)

20

http://www.chinesevacuum.com/ShowArticle.aspx?id=43136&pid=39

20.

NEWRI

NTU NEWRI Ng Wun Jern

Ng

Lux Research Ng 30

Rod Minett

NTU

NEWRI

(NTU) 33500

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(NEWRI) NTU (<A href="mailto:ERI@N">ERI@N</A>)

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NTU

www.ntu.edu.sg

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20600 100

2013

400 60 Edwards

3200

Edwards .

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Edwards

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Edwards 2012 5.95 64

EBITDA 19.1% 10.6%

4%

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16 28 4 Edwards

9.25 2013 1.25

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5.875 6.50 EBITDA 1.139 1.45

Edwards

1.25 / 2013

8 16 Edwards 30 8.33

11% 26%

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Edwards

Edwards Edwards

2014 Edwards

84% .

Edwards .

Busch

Busch 50

http://www.chinesevacuum.com/ShowArticle.aspx?id=42612&pid=39

25.

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KYKY

KYKY

http://www.chinesevacuum.com/ShowArticle.aspx?id=42460&pid=39

26. IDP-15

IDP-15 IDP-15

IDP-15 15.4 / 256 /

IDP-15

IDP-15 TriScroll 300

1. 2013

2013-11-08

2013

1994

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2007

2007

10

30%

LB RG LT

RE R134a

R134a

RE

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http://bao.hvacr.cn/201311_2041318.html

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2013-11-05

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http://sc.stock.cnfol.com/131105/123,1764,16309610,00.shtml

3. 2013

2013-11-06

2013

35

75p 125p

20

http://bao.hvacr.cn/201311_2041262.html

4. 2013

2013-11-07

2013

5

2013

http://www.shanghai.gov.cn/shanghai/node2314/node2315/node15343/u21ai808892.html

5. : , ---

2013-11-01

: 2013 , 6.21 , 17.65%, 1.12 , 33.08%, 2013 1.23 1.44 , 15% 35% 3.73 ,

6.21 , 17.65%, 1.12 , 33.08% 35.61%, 3.73 , 38.93%, , , , ,

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, ( ), , , , 20% 30% ,

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2013-2015 EPS 0.58 0.74 0.95 ,

25 20 16 ,

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http://sc.stock.cnfol.com/131101/123,1764,16286446,00.shtml

6. : , ---

2013-11-01

: 2013 , 6.21 , 17.65%,

1.12 , 33.08%, 2013

1.23 1.44 , 15% 35%

3.73

6.21 , 17.65%, 1.12 ,

33.08% 35.61%, 3.73 ,

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20% 30% ,

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2013-2015 EPS 0.58 0.74 0.95 ,

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http://sc.stock.cnfol.com/131101/123,1764,16286446,00.shtml

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2013~2015 0.58 0.73 0.89 ,

25%, PE 28 22 18 ,2013

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