

- 1.
- 2.
3. 7 14.3%
- 4.
- 5.
6. 2018-2019
- 7.
8. “ ”
- 9.
- 10.
- 11.
12. “ ”
- 13.
- 14.







1

8

(Oxford Economics) • (Ben May) :“

2017

”

• (Donald Trump) “ ”

500

2019

8

“ , 3

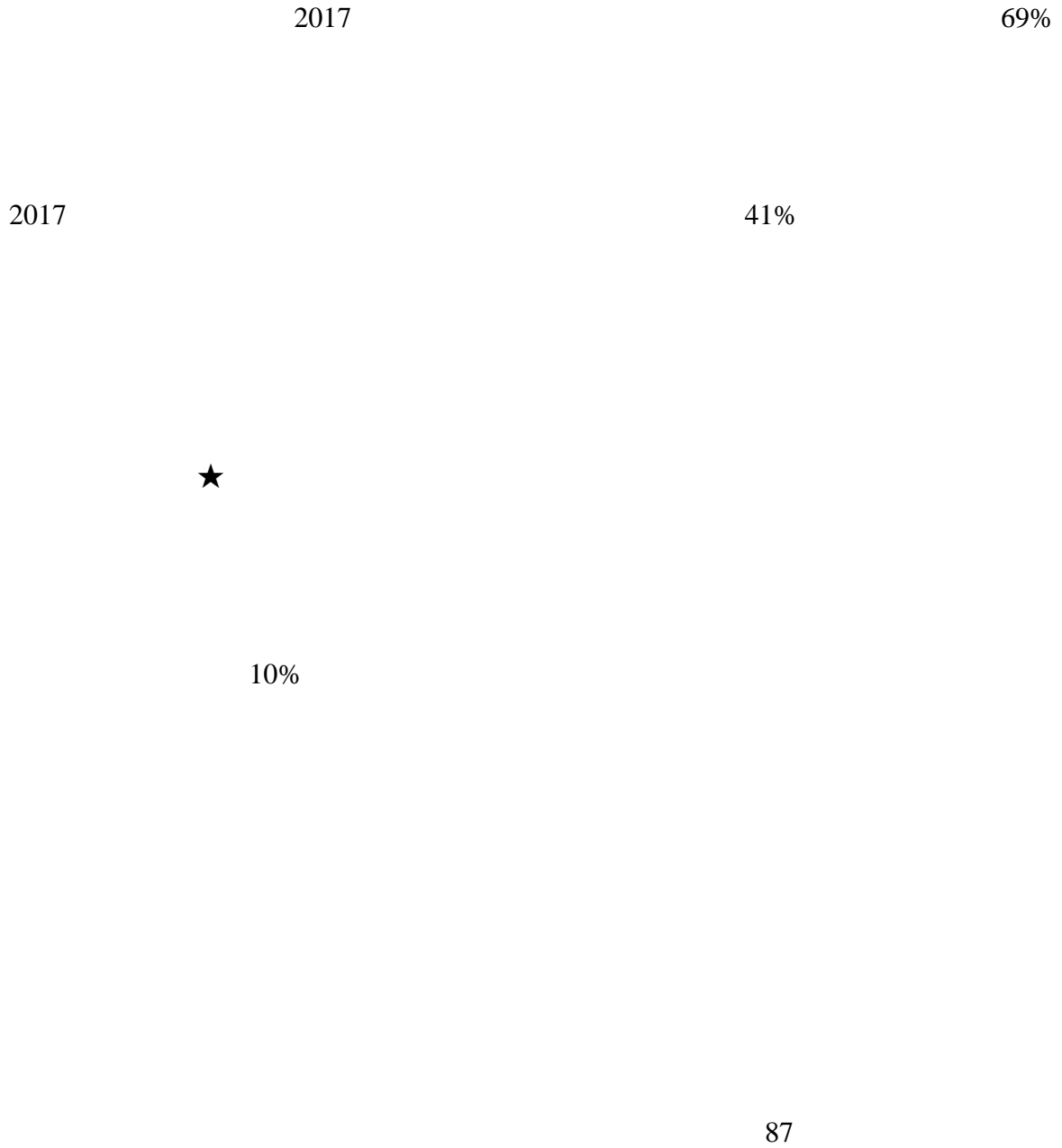
” (Capital Economics) Andrew wishard

7

6

8

---



2017

4%

8

30





1-6	0.1				
1-7				11913.2	30.5%
		125.2	4.1%		27801
21.3%				9422.4	7.5%
10215.1		10.3%			
1-7				3366.7	53.4%
33084.4		14.3%			2587
	17.8%				
1-7	41		32		9
				18%	4.5
		1.4%	0.2%		36.1%
			29.2%		45.2%
	97.8%		9%		23.1%
1.6%			1%		0.9%
		19.6%			9.8%
1-7				60.5	9.9%
	51.1		9.5%		6.46%

0.3%

6

713.0

3.6%

2079.8

12.1%

538.5

3.9%

2018

1-6

97.4%

0.8%

2029.3

7.1%

6

97.5%

0.2%

353.5

3.9%

<http://news.ehvacr.com/news/2018/0822/104959.html>

Top

## 5

2018

478.55

12.44%

2018 3

?

?

?

7

PMI 51.2%

0.3

5

51.0%

21

14

PMI

PMI

15

60.0%

8

;

15

7 27

“

”

“

”

“

”

7 31

“

”

10.6%

;

“ ”

<http://news.ehvacr.com/news/2018/0822/104963.html> Top

6

2018-2019

2018-2019

2018 ;2018 10 1 2019 3 31  
(PM2.5) 5% 5%

“2+26”

)

“ ”

(VOCs)

( )

1. “ ”

2018 12

	2018	1000	225
355	150	48	294
		4.3	

( )

2018

10 35 50 /

10 50

150 / ;

;

“ ”

4. 2018 12

2018 10

( )

5. 2020

;

;

( )

“2+26” ;

“ ” ;

2018 10

“2+26”

392



2018 12

；  
；  
； 10% ；

8.

2020

80%

80% ”

2018 10 1

；

;

“ ”;

2018 12 90% 70%  
(2018 11 15 -2019 3 15 )

10.

;

;

11.

“ ”

2018 9

( )

12.

2018 12 ( ) ( ) 100%  
( ) 80%;

2018 12

2019 6







VOCs 640

VOCs 79 ;

VOCs

364 ; VOCs

144

20. VOCs

( ) VOCs 2019

1 1 VOCs

580 600 550 550 / ( )

;"2+26" 2019 1 1 VOCs

2019 1 1 VOCs 540

/ 420 /

21. VOCs VOCs

2018

9 VOCs 2018 12 VOCs

VOCs

;

VOCs ;

(LDAR)

2018 12 3‰

LDAR

76.6kPa

;

5.2kPa

76.6kPa

10% 15% 20%

10% 20% 30% VOCs

;

;

“ ”

( )

---

;

20

32.

2018 10

VOCs

45

90%

VOCs

2018 10

“ ”

2018 12

10

2

( )

- -

33.

2018 9

PM2.5

“ ”

“

”

34.

“

”

( )

( ) ;

2018 9

” “

( )

“ ”

;

“ ”

;

VOCs

;

“ ”

;

;

“ ”

( )

“2+26”

(PPP)

“ ”

( )

( )

2018 10

;

“ ”

“ ”

“ ”“ ”

“ ”

“ ”

( )

“ ”“ ”

“ ”

5

;

;



23

2018 8 27 —2018 8 31

010-68552977

2018 8 27

<http://news.ehvacr.com/news/2018/0828/105007.html> Top

8

“ ”

“

”

“ ”

<http://news.ehvacr.com/news/2018/0807/104869.html> Top

9

“

”

20%

2020

4700

“

”

“ ”

40



10

( ) (

)

;

<http://news.ehvacr.com/news/2018/0831/105043.html>      Top

11

1

“ ” “ ”

“

”

“ ”

30%

80%

“ ”

3000

3

<http://ww>

3

R22

“HFC R134a R507A -10

R507A

(R1270) (R290)

API619

SH/T 3157

MR

<http://www.chinaiol.com/cold/s/0827/15200591.html>      Top

13

DOE

TBT

WTO/TBT

8

2018    6

WTO/TBT

76

“                    ”

“ ”

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=106&id=8136> Top

14

“ ”

3

PM2.5

2020

2015

15%

PM2.5

2015

18%

80%

2015

25%

“ ”

“ ”



50

19

2018

50

12

247.77

40% 12

9

636.68%

10

PLUS50

7

“ ”

50

5%

19.8%

30%

50

PLUS50

2018

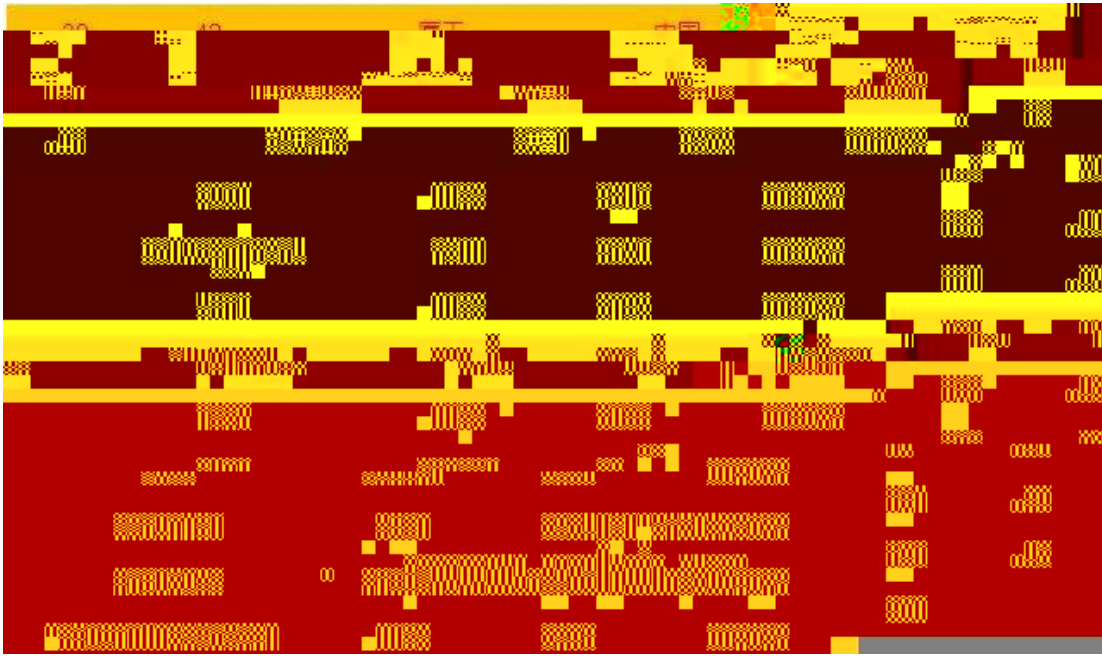
50

/PLUS50

2018年营业收入



13	14	中联重科	中国	3796	2.30%		
14	16	维特根集团	德国	3690	2.30%		
15	17	家上科-拜尔杰	美国	3155	2.00%	17	13
		神钢建机	日本	3115	1.90%	18	18
		凯斯纽荷兰工业集团	意大利	2626	1.60%	19	24
		现代重工	韩国	2400	1.50%	20	20
		大森组	日本	2085	1.40%	22	24
		克诺森	德国	1883	1.20%	23	25
		曼尼通	法国	1800	1.10%	24	27
		尔菲格	奥地利	1791	1.10%	25	31
		柳工	中国	1709	1.00%	26	23
		马尼托瓦克	美国	1581	1.00%	27	20
		科普柯	瑞典	1400	0.90%	28	26
		普甲	法国	1417	0.90%	29	20



<https://www.yshw.cn/news/show-2807.html>      Top

16

47

---

2018 10 1 2019 3 31

“2+26”

10 3  
“ ”

50%

30%

2018 9

“ ”

“ ”

2018 10 1

.....

2018

6

72192

585030.78

---

		6	12	12		2
8		4	40		1	

<https://www.yshw.cn/news/show-2819.html> Top

20 )

IHSMarkit      JosefinBerg      30

EPC

LCOE

EnergyTrend

MIPS

Berg

2019

40

6 IHSMarkit

“

”

MIP

9

2018

12

2019

17

MIP

<https://solar.ofweek.com/2018-09/ART-260008-8420-30264805.html>

Top

21      531

“      ”

531

2018

24 3GW      2017

GTM

research

2018

48 2GW

28 8GW

40

4 5GW

19GW

8

0 25

1 72

4

2 4

2 5

2 4

4

“ ”

“ ”

531

“

”

“ ”

<https://solar.ofweek.com/2018-09/ART-260009-8420-30268229.html>

Top

22

| 20

1

30

WTO

2	77000MW			2022	38 5
	77 000			2022	10
		2018 7		23 120	
3 7		14 24		64 95	
7		320 19		12 23 19	1720 31
		9 08	9 29	31 53	296 66
		10 04	14 24	04 64 95	
7			2116	3	

---

400 95	4 82	6601 69	79 41
1311 22	15 77		
4	7	2022 72	6 2 = 10°



“5 31 ”

11 ST

“ ”

8 14 ST

YANGHUAIJIN

ST 312 383 022

6 61

271 773 229 00

12

2 8GW

2653

2018

2794MW 2018

2 015MW

38 7

60 6



17 17 3

17 3

“

20

166

4

”

18

“

”

19

0 81

8 10

0 0336

0 45

0 4744 0 4814

0 2324 0 2394

2018 5 1

5

2018

9

20

8 15

7

<https://solar.ofweek.com/2018-08/ART-260006-8440-30258405.html>

Top

23

2020

20

2018 9 4 SEMI

IC

The China IC Ecosystem

Report	IC				
	16	2020		20	
		2020		200	
		SEMI			IC
	IC			2017	319
IC		2020		IC	
			1,400	215	2014
1500-2000	230	300			
IC					
	IC		25		
	17	300mm		DRAM	3D NAND
	IC				
		IC		2016	2017
					2015
2019	10			Fab	14



IC

IC

IC

<http://www.semi.org/en/china-ic-ecosystem-report>

[http://www.semi.org.cn/news/news\\_show.aspx?ID=53889&classid=117](http://www.semi.org.cn/news/news_show.aspx?ID=53889&classid=117) Top

24

3

10

8

40%

5

50%

“

”

2014

2017 2600  
20%  
300  
2014 220  
1300  
8 2017 40  
2020

16%

13%

9%

2018 9 15

2018 9 5

[http://www.semi.org.cn/news/news\\_show.aspx?ID=53929&classid=117](http://www.semi.org.cn/news/news_show.aspx?ID=53929&classid=117) Top

26

9 13

[http://www.semi.org.cn/news/news\\_show.aspx?ID=53991&classid=117](http://www.semi.org.cn/news/news_show.aspx?ID=53991&classid=117)

[Top](#)

27

/

/

270

AMOLED

465.8

22.9%

10

346.8

22%

“

”

“

”

369.4

32.9%

10

78.9%

7 10

“

100

”

50

550

60

411.3

32%

10

75

213.6

54.1%

387

12

“

”

4

12

28

14

675

“12

”

14

—10/7

7

15

---

28

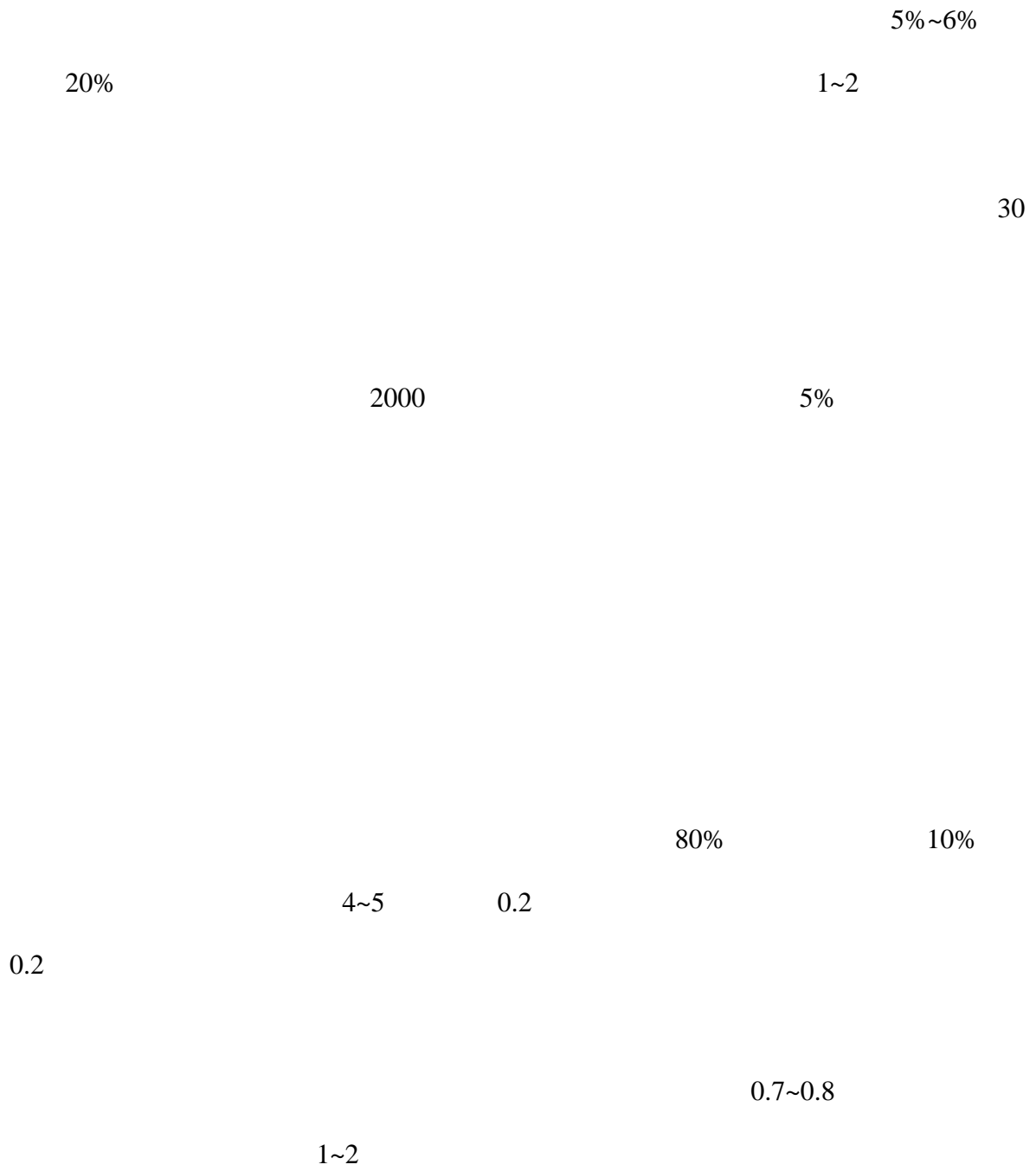
"

--"

“

”

Mirai “ ”  
Mirai Yoshikazu Tanaka  
“ Mirai  
”  
11000 8000  
60000 (40 )  
FCV FCV  
2020 Mirai  
“ ”  
2025  
SUV  
2020  
Mirai 500km 700-750km 2025  
1000km  
<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=108&id=8123> Top





<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=106&id=8138> Top

2 2018 “ ”

2018 “ ”

(

1.

1

1

2

1

2.

1

2

2

2

2

“ ”

“ ”

1.

2.

“ ”

3.

“

”

<http://www.compressor.cn/News/hyqx/2018/0628/105391.html>

49%

2020

21.7%

2017

2386

2018

2987

2020

4700

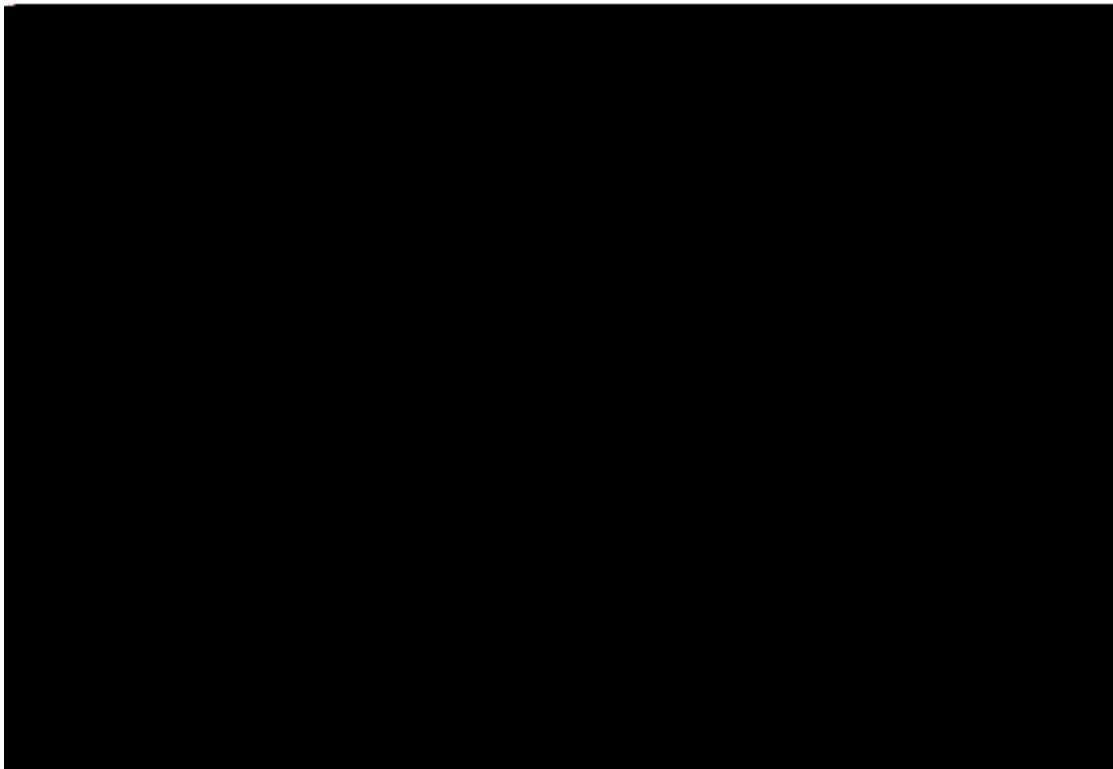
2020

1200

<http://www.chinaiol.com/cold/s/0905/11201057.html> Top



产品	价格	8月1日	8月8日	8月15日
多晶硅片 (RMB)	高	2.550	2.550	2.520
	低	2.400	2.420	2.400
	均	2.500	2.500	2.500
多晶硅片 (USD)	高	0.330	0.330	0.330
	低	0.320	0.322	0.320
	均	0.325	0.325	0.322
单晶硅片 (RMB)	高	3.400	3.280	3.280
	低	3.120	3.120	3.120
	均	3.150	3.150	3.150
单晶硅片 (USD)	高	0.450	0.420	0.420
	低	0.390	0.395	0.395
	均	0.405	0.405	0.405



0 6

95 kg

110 kg

“ ”



---



270 275W

285 290W

PERC

8

2 1 W

5 8 | + 21

1

GB

IEC

“ ”

2

8 15

7

3

4

8 20

3

8

10

10

2017 1 2018 7

5

8 24

---

2018 9 3

300

500

10

0 85

0 85

0 15

2018 7 1

11

8 8

5

12

2018 8 1

2 2

2 2

2 2

2 2

13

2018 2020

2020

45

14

0 81

8 10

0 0336

0 45

0 4744 0 4814

0 2324 0 2394

15

2020

500MW

2020

450MW

100MW

570MW









”

“

”

“

”

“

”

[http://www.semi.org.cn/news/news\\_show.aspx?ID=54005&classid=117](http://www.semi.org.cn/news/news_show.aspx?ID=54005&classid=117) Top

7

5

2018 5 31

2018-2022

<http://news.ehvacr.com/news/2018/0808/104878.html> Top

8

	(2017-2018)	2017	
40			
	2020		72
2017		40	32
10			3
	2017	2018	
	9120	52	6

---

		2020	5000	/kW	2030		
600	/kW						
						2020	
1000	/kW	2030	150	/kW			
2020			3000	/kg	2030	1800	/kg
1kg			1800				
					2030		
				40	/kg		2020
	20	/kg		2030	9	/kg	
							2t
		1000	2030	350			

---

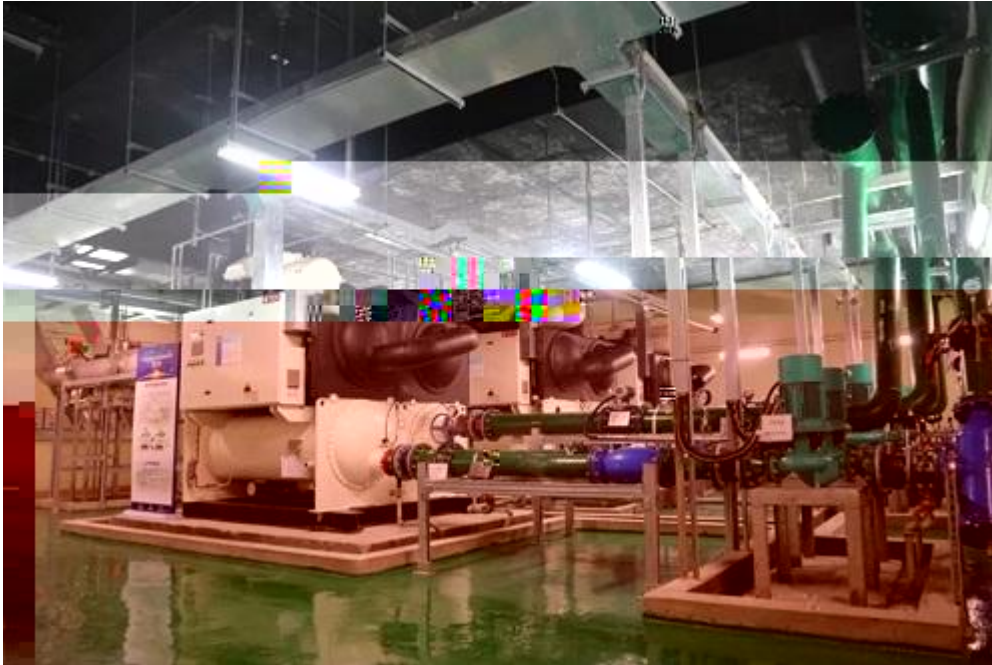
12m)

60

15L, 66

“ ”

COP 6.0

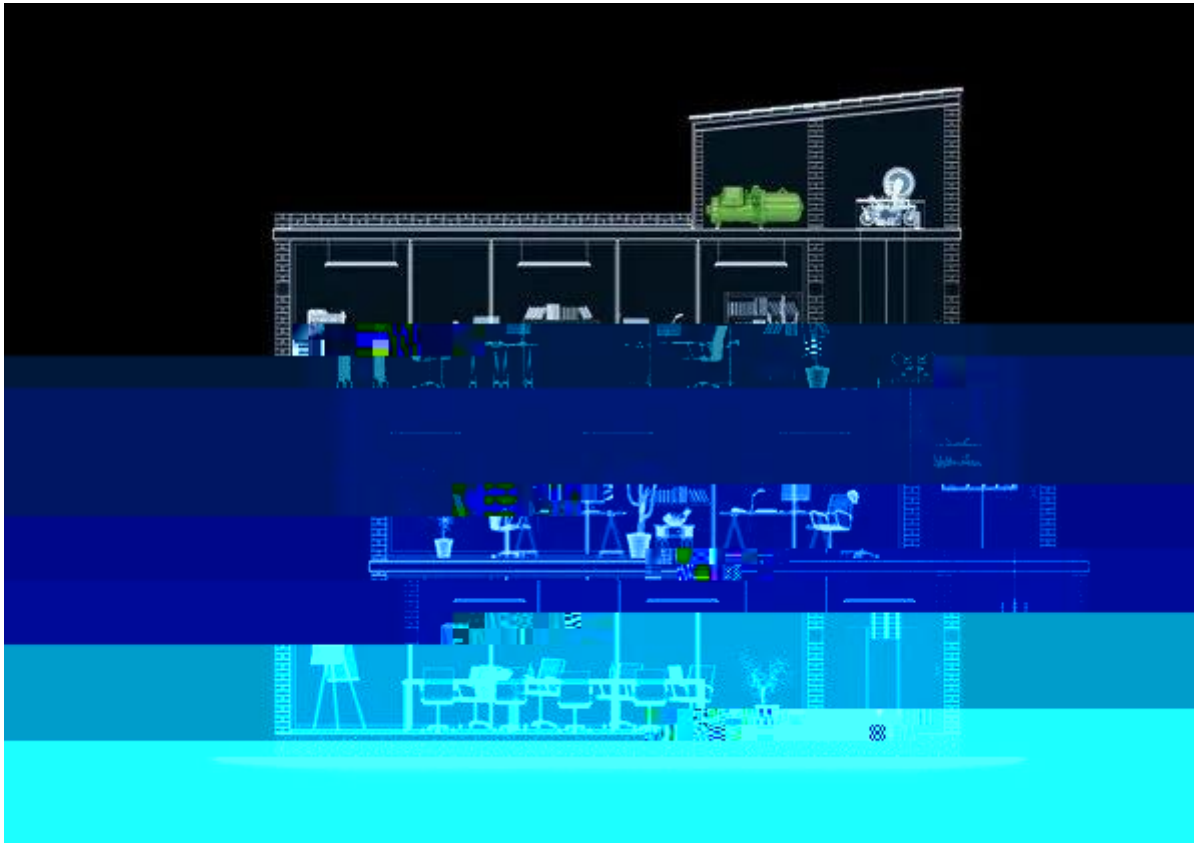


CSW



R134a

20℃



<http://www.chinaiol.com/cold/s/0810/53199900.html> Top

2

CO2

UNDP

FECO

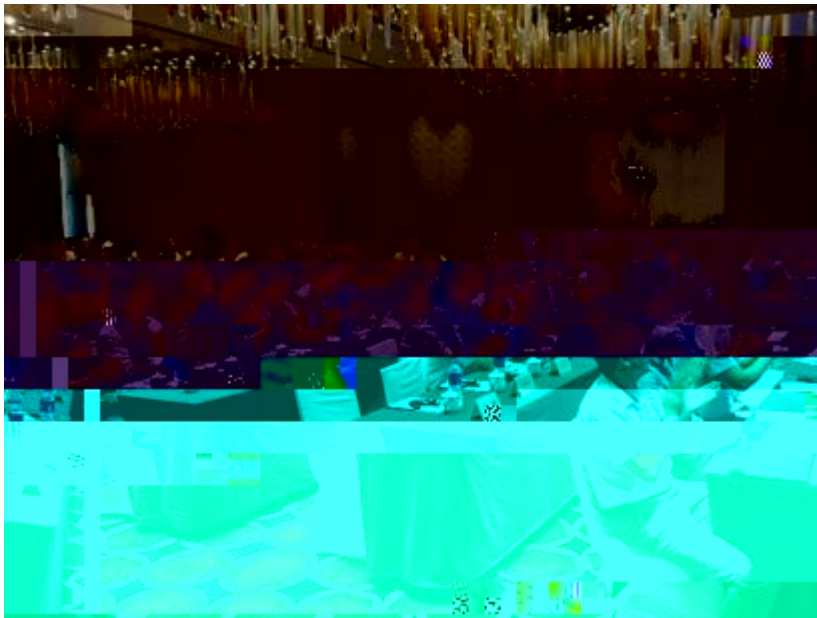
“

CO2

” 07 30-31

CO2

20



HCFCs

GWP

HFCs

CO2

10

CO2

CO2

CO2

CO2

CO2



CO2

CO2

CO2



CO2

CO2

<http://www.chinaiol.com/cold/s/0810/07199902.html> Top

8 23 2018

-60°C

-60°C



“

”

-30°C

-60°C

-60°C

25°C

-18°C

30~40

-60°C

5

3

-60°C



-18℃

-60℃

<http://www.chinaiol.com/cold/s/0824/09200511.html> Top

4

9 21

“ ”

15

“ ”

2003

15

35%

“

” “ ” “ ” “ ”

“ ”

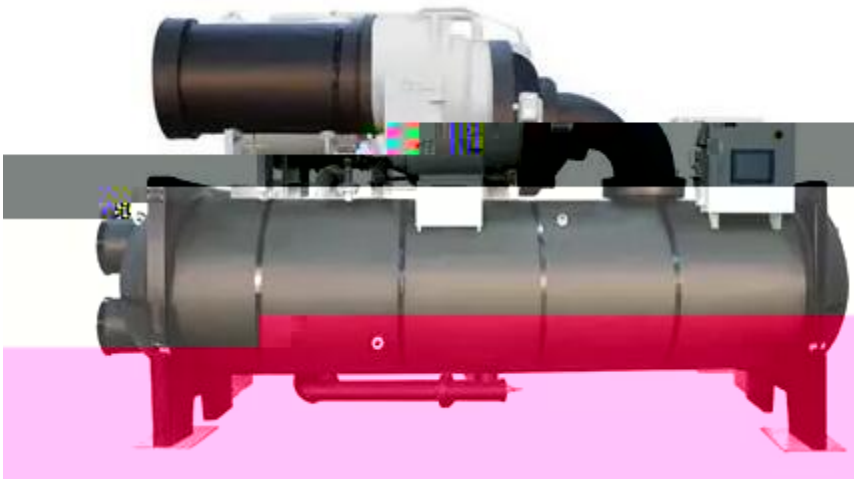
“ ” “ ”

---

WCFX



DCLCDX



HFC-134a

CCS TOUCH

I-VISION

WCOX

-110~25℃

WCDSX-D

<http://cac.chinaiol.com/s/0921/29201666.html> Top

6

9 18 “2018 ” “ ”

20

“ ”

“ ” “ ”

“ 2010

”

“ ”

“

”

“

”

“ ”

“

”

“ ”

“

”

“ ”

“ ”

\_\_\_\_\_

“ ” “ ”

“ ”

\_\_\_\_\_

“

|

7

9 14

ICEA

“2018 ICT

”

200

5G

ICT

5G

ICT

+freecooling

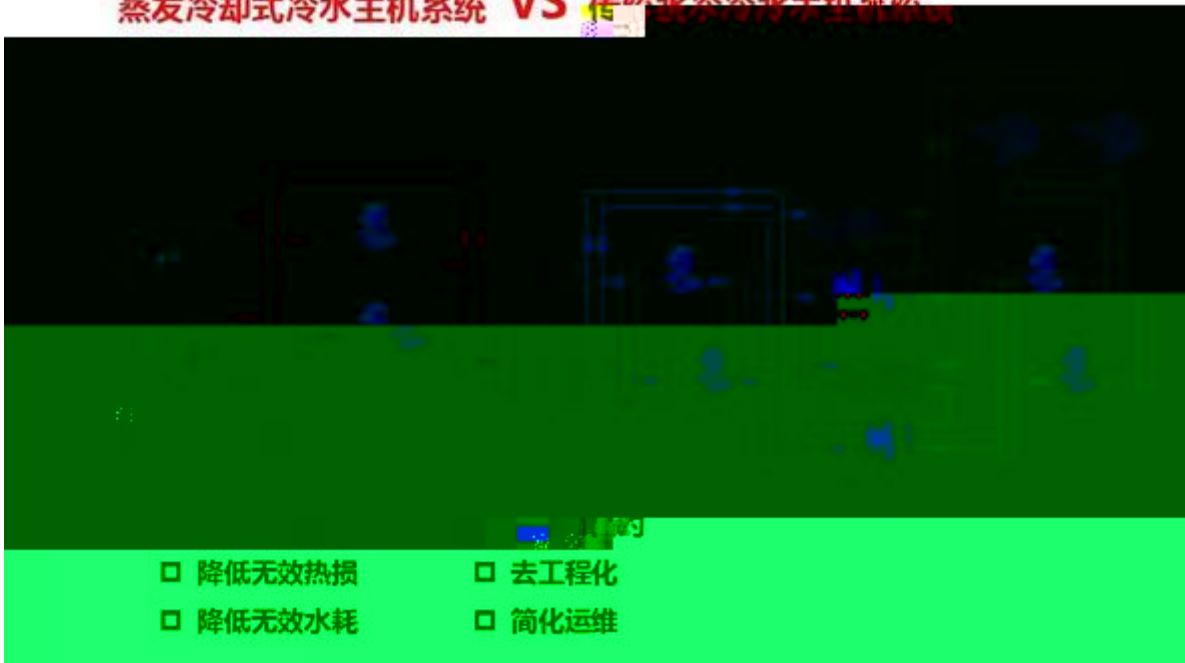
+freecooling

1

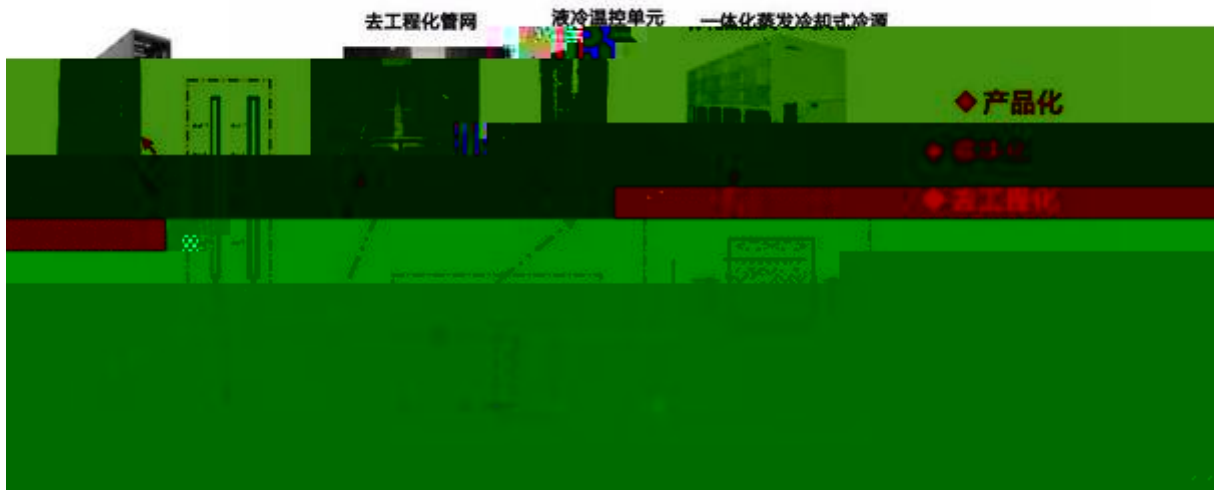
2

3

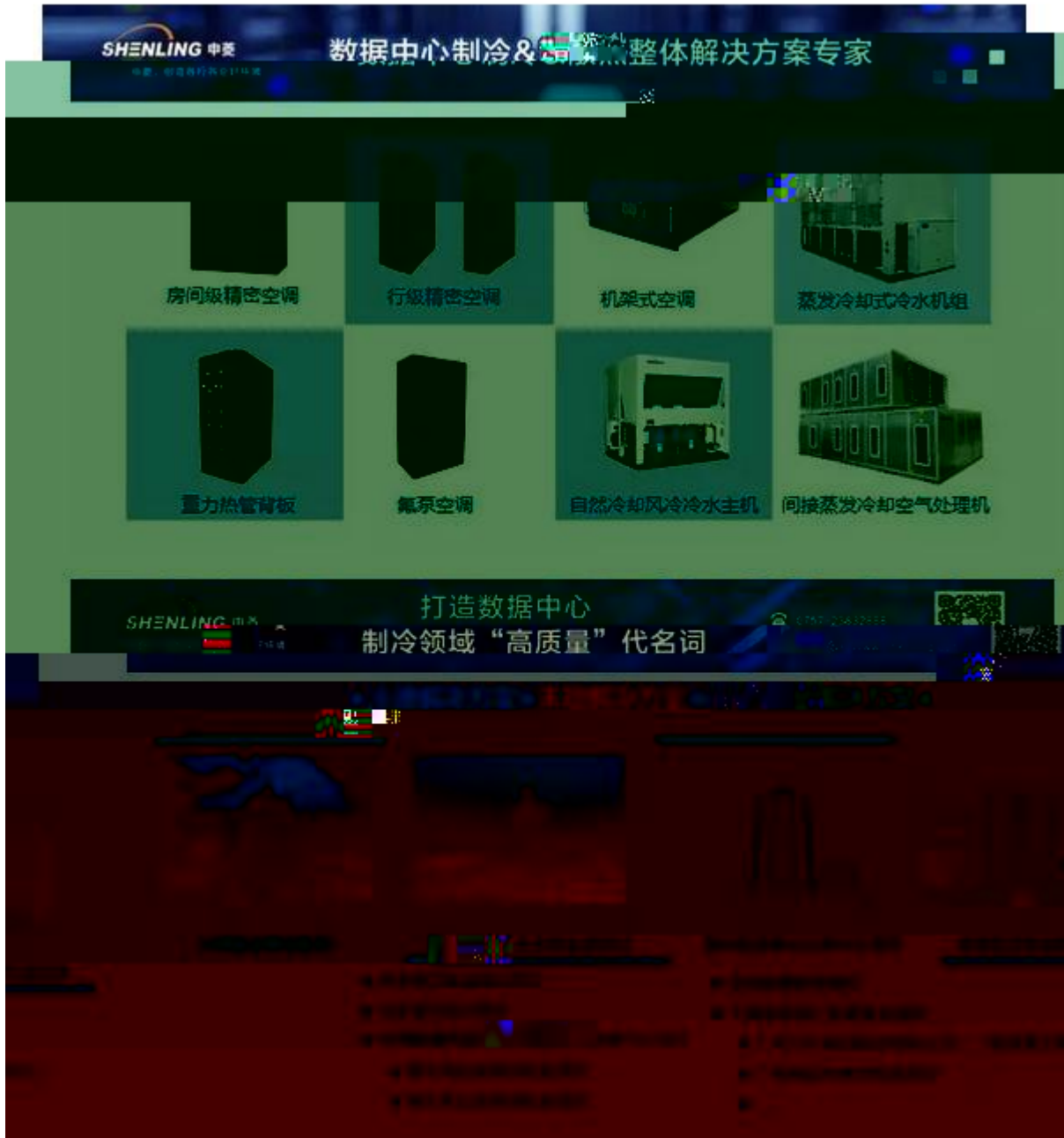
蒸发冷却式冷水主机系统 VS 传统水冷冷水主机系统



产品化阶段



“ ”



<http://cac.chinaiol.com/s/0920/32201604.html> Top

8

15 “ ”

15

“ ”

3

8 27

1

8°C

4°C

50°C

2019

9 30

T2

“ ”

<http://cac.chinaiol.com/s/0829/17200722.html> Top

9

“ 4.0”

9 19

(

) ( )

<http://www.chinaiol.com/cold/s/0912/02201299.html> Top

11



“

”

!

2006 8

100

<http://www.chinaiol.com/cold/s/0829/01200710.html> Top

12

7 16

Alabama Baldwin

---

	65000		2019	2
	Loxley		62	
	1100			
Kaishan USA	CEO, Keith Schumacher	“		
Loxley				”
“				
		”		
“	Loxley	”Loxley	Billy Middleton	“
				”
Baldwin	CEO Lee Lawson		Baldwin	
			2017	Baldwin
MSA	11	3		SmartAsset
2009			“	”

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=107&id=8073>

---

15 TM

2018 7

TM

“

”

TM

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=107&id=8130> Top

16 7

2018

69

7

69

7

7

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=106&id=8068> Top

17

2018 7

-

,

5

2007

100

-

Nicolas Bonleux

“

1840

BPRT SHRT

“

” “ ”

16GW

20GW

21.08

/

“ ” “ ”

<http://www.compressoronline.cn/index.php?m=content&c=index&a=show&catid=106&id=8062> Top

19

1.6

GE

ATB

SIR

OLI

GE

1.6

“SIM”

SIM

GE

1750

100%

100%

10

SIM

GE

SIM

SIM

1+1

2

4.0

20

“

”

1.5

50

3



6

5%



2.5

1.3

4

8

1.2

8

<https://www.ysjw.cn/news/show-2805.html> Top

22

|

8

17

18

1

2017 12 27

1120

1080

100

4 8GW

2018

45GW

83GW

63 2

TOP10

---

	67		2017	55						
		7			2	2				
		7								
		1	7	51	8		800			
10	5						2	2		
									1	7
	16	1			29	8				
		43	90		17	0				
5	4		2	2						
			21	2	139	1				
		8	16							
										Buffalo
	2016	26			SolarCity					
SolarCity										
		SolarCity					ElonMusk			
					SolarCity			6		
	9				SolarCity			12		
			HomeDepot						SolarCity	
		2015			SolarCity		253			
	76									

72

**9 19**

**16**

1 246 066 96

12 24

91 935 44

16 14

88 994 56

15 85

Buffalo

2016

26

SolarCity

SolarCity

2017 8

Buffalo

SolarCity

.

Elon Musk

SolarCity

6

9

SolarCity

12

Home Depot

SolarCity

2015

SolarCity

253

76

<https://solar.ofweek.com/2018-08/ART-260008-8460-30258505.html> Top

24

8 18

12

11

25

<https://solar.ofweek.com/2018-08/ART-260002-8460-30258622.html> Top

25

3GW

3 3GW

2018

2012

COMSYS

200

47

3 3GW

430

350

PID

PERC

PERC

PERC

“

”

<https://solar.ofweek.com/2018-08/ART-260008-8460-30257388.html> Top

26

“

”

“

”

“ ”

“

”

8+12

“ ” %

“ ” “ ” “ ”

“ ” 2018 3 2 4 3  
3 6 25 3  
7 21 4 “ ”  
8 12 —

2019 1

[http://www.semi.org.cn/news/news\\_show.aspx?ID=53702&classid=117](http://www.semi.org.cn/news/news_show.aspx?ID=53702&classid=117) Top

27 “ ”

8 13

PowerPC CPU

PowerPC

C\*Core CPU

C2000/C8000/C9000

CPU

“ ”

2014 9

3

2017

67

1188

4

5%

11

3200

350

6

28

12

1987

2

6

2

4

[http://www.semi.org.cn/news/news\\_show.aspx?ID=53678&classid=117](http://www.semi.org.cn/news/news_show.aspx?ID=53678&classid=117) Top

28

7 30

7 30





2210

70

2210

“ ”

“

2018 6

2210

1054

60

326

569

31

674

5

150

”

2017

2018 -2019

100

594

“

31

9 5 --

Hydrogen Council

Air Products

SINOPEC

(thyssenkrupp)

15

(Mitsubishi Heavy Industries) Re-Fire

7

Re-Fire

2017

Anglo American plc

Air Liquide

Iwatani

Linde

Shell

Statoil

Total

18%

6Gt

2.5

3000





65°C      125°C

RC2-Z LB LT RG

LB

LT

LB-PLUS

LB-PLUS

-35~0°C

LT

COP

26%

LT-S-L

LT

LT-S-L

8%

10%

1

2

3





LT-S-L

LT

:

1

2

3

1-18°C —LB VS RC2

2-35°C —LB VS LT

3 — VS LT

1

2

3

1 RC2-G R134a 80°C 15°C

2 LT-S-H R134a 90°C 15°C

3 RC2-T 100°C

4 LT-S-A -35°C 60°C

1

2

3

:

Top

4

342.00

4.70%

2018-07-04

7 2

832605

342.00

4.70%

,3,420,000.00

,0

2018 6 29

2018 12 28

,

,

2017 12 31

2.31

1.23

7017.03

20.83%

793.00

29.38%

002158

Top

5 2018

2018-07-11

973

2017

2020

1000

17

2018 2

2018 5

Mirai



DCDC FCU



Ballard Plug Power Hydrogenics

Doosan

EWII

.....

TE

Connectivity

.....

300

4 20-21

2018

TrendBank

TrendBank

unima

/

Top

6

2018-07-17

Wind

2016 5 31

2016 7

11 45.79%

39.68

2016 7

12

2018 7 13

48.41%

42.94

2016

9

4

5

5

2

,3



17897

1418

2020

21.7%

30% 14

12

289

290.7 21.2% 29.5%

12.4%

Top

7 A

5

2018-07-18

1

MLF

1:1 MLF

AA+

AA

AA+

2

3

“

”

18

“

”

T3

4

“ ”

5

IPO

IPO

IPO

6

CSX

6 13

2 1

60

1227.90

1% 68.76

600

0.5%

387.06

2800

OLED

8

15%

3275

2000

(7.63 +0.93%, )

(5.61 -0.71%, )

7 17

11680 /

41.08%

12500 /

(7.28 +6.43%, )

(5.24 +0.58%, )

18

“ ”

“ ”

“ ”

2016 1

(9.50 +2.26%,







1

002463

PCB

( )

(27.42%)

603306 ( )

,

603799

002158

1943

1969-1994

1994

2011 11

000536

2005

1971

1989

2008

44.51 /

60

A

300260

ASME BPE

603922

2003 ,

,

ED

603929

2002

2008

IC

603160

2002







“ ”

A

LKJ15S

◇

300 /

1000 /

Top

12

2018-08-30

3

		11-7	2018 021
		18 F 1-1 1-2	2018 022
	23 25	1	2018 023

Top

14 “ ” A

2018-08-22

[ ] 8:30

1. “ ” A 5

2. A 6

3. 5

4.[ ]

5.PTA 40% 4

6. 5G 6 5G

7. 4

“ ” A 5

( “ ”)6 29

8 ( ) ( “

) IPO

A

002371                      300604                      300666                      603690

603929

A                      6

300                      500

“

”                      50

A

50

50

600030

600036

601211

601288

601318

601336

5

“                      ”

30% 2021

18.7

002065

300075

300212

600171

600602

[                      ]

0.8%

0.5%

0.9%

(CNH)

04:59 6.8351

PTA 40% 4

PTA PTA1809 PTA1809

2500 40% PTA1809 4.58%

PTA -PTA

PTA 000703 002493 600346 601233

5G 6 5G

8 20

5G

5G

4 5G

5G

2018

5G

5G 300570 002913 603559 300312

300563 002792

4

2017

1200

1.3

20%

2020

4700

75%

“

GDP

”

2030 15.7 GDP 7

2035 27% GDP 27

3 2018 8 24

2018 8 24 2729.43 0.18% 8484.74

0.20% 1044.38 0.25%

4 2018 8 24

5 2018 8 24

5.1

002529 2018

17111.61 0.46%

2618.12 0.56%

ST 600421 2018

-34104.54 100.20% -339.52

002613 2018

6.25 41.81% 1.01 542.86%

0.76 393.33% 0.0813

393.50% 5.14%

000903 2018

---

	318941.73	9.47%	20323.01	
19.98%	20303.63	4.63%		17650.49
	5.93%			
	300193		2018	
	45116.07		12.49%	10262.47
	21.46%		8634.50	
20.68%				
	603855		2018	
	67199.76		21.99%	
5543.33		72.83%		
	4258.86	48.02%		
	300210		2018	

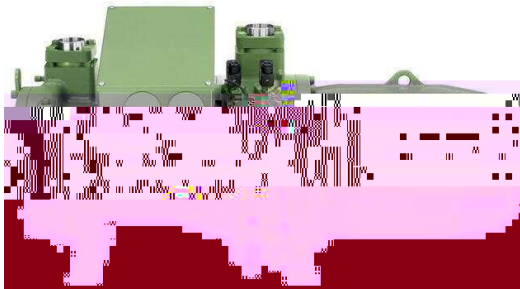
---

5.80%	0.92%		
603277		2018	2018
68616.60		3.51%	
11648.39	0.83%	.....	Top

16

2018-08-27

1994				
1997	Hailfingen		EEC1836/93	
1998				
1999	CO2			CSH
2003		ESH7		
2003		CO2		
2005				
2008				
2009	R410A	/		
2009	CSW		R134a	
2009	HSK			
2010	R134a		ECOLINE	CSH
2010	2600		5	



1

1968

UL CE

PED

ISO-9001

2004 039

2005 2 23 ,

(2005)29 , 130 , HERMES EQUITIES CORP.

CAPITAL HARVEST TECHNOLOGY LIMITED 65

2005 2020 2005 5

, (2005)34 , HERMESEQUITIES

CORP. 3.75 ( 0.75%),

1.25 1.25

CAPITAL HARVEST TECHNOLOGY LIMITED

3.75 ( 0.75%)

,

2005 5 30

024506

4





<https://baijiahao.baidu.com/s?id=1608949480644837003&wfr=spider&for=pc> Top

17

2018-08-29

7.2%

7

	2018	7	11123	45.28%	8745
	26.74%		479	38.84%	1383
2.47%	2018	6	548	28.34%	3198





