

**SAIFUAIR** 

Mutual trust and win win

Compressed air purification expert



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## **Company Profile**

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2000年	2000 Core team of the company was built.
2010年	2010 Suzhou SAIFUAIR Machine Co., Ltd. was established.
2011年	2011 Compression heat dryers were developed, manufactured, and put into use.
2012年	2012 Obtained production license of industrial products and passed the ISO9001 Qualification Management System certification.
2013年	2013 Blower heat regenerative adsorption dryers were developed, manufactured, and put into use.
2014年	2014 Explosion-proof dryers were developed, manufactured, and put into use.
	2015 CO2 purification systems were developed, manufactured, and put into use. Won the title of High-Tech Enterprise, Science and
2015年	Technology SMEs of Jiangsu Province, Jiangsu Province Science & Technology Enterprise. Suzhou SAIFUAIR Machine Engineering
	Technology Research Center was established.
2016年	2016 Obtained more than 40 utility model patents.
2017年	2017 Explosion-proof dryers for oil fields were developed successfully and put into use in Pertamina, the largest oil company in Indonesia.
2018年	2018 Energy-saving vacuum adsorption dryers were developed successfully and put into use.
2019年	2019 SAIFUAIR Gas Technology (Jiangsu) Co., Ltd. was established.
2020年	2020 Biogas dryers and tail gas dryers were developed successfully.

Suzhou SAIFUAIR Machine Co., Ltd. was formally founded on December 22, 2010. According to its strategic layout, SAIFUAIR Gas Technology (Jiangsu) Co., Ltd., functioned as a professional manufacturing base of compressed air purification equipment, was established in Yixing, Wuxi in 2019, with a registered capital of RMB 20 million and 103 employees, covering an area of 65 mu. SAIFUAIR is mainly engaged in the development, production, and marketing of compressed air purification equipment. Its series products include refrigeration dryers, heatless adsorption compressed air dryers, micro-heat adsorption dryers, combined compressed air dryers, compression heat regenerative adsorption dryers, heated blower purge desiccant air dryers, precision filters, precooling units, self-cleaning filters, and other core products. SAIFUAIR actively responds to national environmental policies, vigorously develops energy-saving products, and makes every effort to help customers save energy conservation and reduce consumption, finally realizing green development. Our products are widely used in various industries such as the electronics, chemical fiber, petroleum, chemical, paper, automotive, metallurgy, electric power, food, environmental protection, and pharmaceutical industry. SAIFUAIR has always taken scientific and technological innovation as the driving force of development and core competitiveness. Adhering to the principle of independent innovation, SAIFUAIR has obtained more than 50 utility model patents and the production license of industrial products and has passed the ISO9001 Qualification Management System certification. As a high-tech enterprise, SAIFUAIR has the best processing equipment and high-precision testing instruments. It has the strength and ability to provide customized full range compressed air purification units that have multiple functions and meet the requirements of various complex working conditions, such as air-cooled, water-cooled, normal temperature, high temperature, explosion-proof, high-pressure and special gas compressed air purification equipment. Our products are sold well at home and abroad and are well accepted and praised by our customers.

# **Enterprise Honors**





# SAIFUAIR compressed air purification equipment is an absolute guarantee of meeting customer demand for high-quality compressed air and low running costs!



### Are all types of compressed air purification equipment the same?

For all modern production facilities, compressed air purification equipment is essential and must absolutely guarantee its performance and stability, and meanwhile achieving a reasonable balance between air quality and minimum running costs. There are many types of compressed air purification equipment available on the market today. When choosing these products, customers always consider the initial cost but seldomly or never consider the quality of the compressed air they provide or their running costs and service life. In fact, when purchasing air purification equipment, we must consider air quality it provides, and users' running and maintenance costs comprehensively.



### Design concept of air purification equipment

All SAIFUAIR air purification equipment embodies the design concept of air quality, energy efficiency, long service life and low costs.

## Air quality

Users install compressed air purification equipment to get high-quality, clean air, and to avoid troubles and expense caused by pollution as well. When choosing these types of equipment, the quality of processed air and the confirmed performance are always the first two elements to be considered. Otherwise, why are they installed in the key part of compressed air systems?

## Energy efficiency

When choosing compressed air purification equipment, its running costs should be considered after air quality. SAIFUAIR compressed air purification equipment not only provides compressed air meeting international standards, but also reduces users' running costs, which is its design purpose.

## Long service life & low costs

Buying low-priced equipment could end up costing you a lot more money in the long haul. SAIFUAIR ensures that energy consumption is kept to a minimum while guaranteeing air quality. SAIFUAIR's compressed air purification equipment helps users reduce the overall costs and improve their use costs through improving production efficiency.

## Standard operation conditions required for adsorption compressed air dryers to process compressed air

- 1. Inlet air temperature: 32°C
- 2. Inlet air pressure: 0.7MPa
- 3. PDP: <-40°C, refrigeration dryers required at the front.
- 4. Customization service is provided to meet conditional use requirements.

## Description of adsorption compressed air dryers



# Model selection guide

# Accurate selection of drying machines

- 1.For temperature and pressure compensation coefficient, please select operating pressure and inlet temperature compensation coefficient A1 of in the table below according to dryer model.
- 2.Follow the steps above to select parameters, processing air flow = air production X A1

According to the correspondence between model selection air flow and processing capacity of dryers, processing capacity should be greater than model selection air flow.

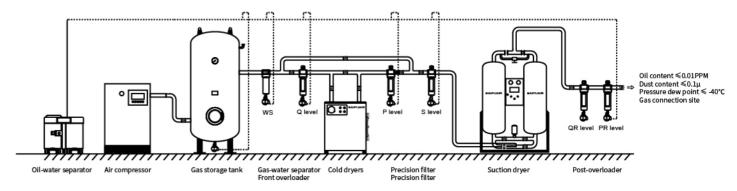
## Operating pressure and inlet temperature compensation coefficient A1

Inlet temp.°C  Operating pressure MPa	32	35	38	40
0.5	0.75	0.64	0.57	0.51
0.6	0.87	0.74	0.66	0.60
0.7	1	0.85	0.76	0.68
0.8	1.13	0.96	0.86	0.77
0.9	1.25	1.06	0.95	0.86
0.98	1.35	1.15	1.03	0.93

## Combination options table of combined compressed air dryers

Combination Options	Example Model	Processing Air Flow
Air-cooled, normal temperature and heatless combined adsorption dryers	SFC-110AN	11Nm³/min
Air-cooled, high temperature and heatless combined adsorption dryers	SFC-110AGN	11Nm³/min
Air-cooled, normal temperature and micro-heat combined adsorption dryers	SFC-110AM	11Nm³/min
Air-cooled, high temperature and micro-heat combined adsorption dryers	SFC-110AGM	11Nm³/min
Water-cooled, normal temperature and heatless combined adsorption dryers	SFC-110WN	11Nm³/min
Water-cooled, high temperature and heatless combined adsorption dryers	SFC-110WGN	11Nm³/min
Water-cooled, normal temperature and micro-heat combined adsorption dryers	SFC-110WM	11Nm³/min
Water-cooled, high temperature and micro-heat combined adsorption dryers	SFC-110WGM	11N㎡/min

## Piping layout of dryers and purification equipment



# Heatless regenerative adsorption compressed air dryers



Automatic pressurization prolongs the service life of dryers



Efficient and reliable parts



Efficient and durable adsorbent



Regeneration gas consumption 14%



Regular ten-minutes standard working cycle



Processing air flow:1.4Nm3/min~450Nm3/min

Standard configuration: Optional configuration:

▲Siemens PLC controller ▲Dew point meter

▲Text display

▲Intelligent control

▲Stainless steel inlet/ outlet filter screen

**▲**Silencer

▲ON/OFF switch, indicator light

▲Dew point control &

high dew point alarm ▲Switch error alarm

▲Computer communication interface

▲Touch screen or LCD works together with PLC to control remote communication and signal transmission

Special customization ①pressure gauge

▲High pressure, high ②Check valve temperature

▲Explosion proof ▲Stainless steel

▲Other special gas ▲PDP: -70°C

③Regenerative air flow control valve

Safety valve ⑤Pneumatic valve

▲The actual configuration is subject to the machine delivered from the factory

# Parameter table of heatless regenerative adsorption compressed air dryers

Model	Processing	Dower cupply	Power	Nominal diameter of	Dir		Mainht I.a	
Wodel	capacity Nm³/min	Power supply	kW	inlet/outlet pipes	Long	Wide	High	Weight kg
SFA-014N	1.4	1φ220V	0.2	G1"	720	500	1360	120
SFA-027N	2.7	1φ220V	0.2	G1"	835	550	1600	210
SFA-038N	3.8	1φ220V	0.2	G1 1/2"	950	560	1580	265
SFA-058N	5.8	1φ220V	0.2	G1 1/2"	950	560	1860	340
SFA-071N	7.1	1φ220V	0.2	G1 1/2"	1065	600	1865	390
SFA-086N	8.6	1φ220V	0.2	G1 1/2"	1065	600	2120	440
SFA-110N	11.0	1φ220V	0.2	DN50	1165	650	2230	620
SFA-130N	13.0	1φ220V	0.2	DN50	1165	650	2280	650
SFA-150N	15.0	1φ220V	0.2	DN80	1255	750	2310	680
SFA-175N	17.5	1φ220V	0.2	DN80	1360	750	2280	760
SFA-210N	21.0	1φ220V	0.2	DN80	1460	880	2320	900
SFA-250N	25.0	1φ220V	0.2	DN80	1460	880	2420	1000
SFA-304N	30.4	1φ220V	0.2	DN100	1585	950	2420	1300
SFA-365N	36.5	1φ220V	0.2	DN100	1675	980	2495	1500
SFA-450N	45.0	1φ220V	0.2	DN125	1850	1100	2680	1880
SFA-520N	52.0	1φ220V	0.2	DN125	1960	1250	2550	2050
SFA-605N	60.5	1φ220V	0.2	DN125	1960	1250	2750	2250
SFA-650N	65.0	1φ220V	0.2	DN125	1960	1250	2860	2400
SFA-713N	71.3	1φ220V	0.2	DN150	2220	1370	2950	3000
SFA-795N	79.5	1φ220V	0.2	DN150	2320	1480	2835	3600
SFA-950N	95.0	1φ220V	0.2	DN150	2420	1480	2980	3900
SFA-1100N	110	1φ220V	0.2	DN200	2650	1730	2930	4350

- Requirements for standard air processing (inlet pressure: 0.7MPa; inlet temperature: 32°C).
   For greater processing capacity or special specifications and material requirements, please contact the Technical Center of our company to get technical data.
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# Micro-heat regenerative adsorption compressed air dryers







Automatic pressurization prolongs the service life of dryers



Regeneration gas consumption 7%



Efficient and reliable parts



Processing air flow:1.4Nm<sup>3</sup>/min~450Nm<sup>3</sup>/min

▲Siemens PLC controller ▲Dew point meter

▲Text display

▲Intelligent control ▲Stainless steel inlet/

outlet filter screen **▲**Silencer

▲ON/OFF switch, indicator light

Standard configuration: Optional configuration:

▲Dew point control &

high dew point alarm ▲Switch error alarm

**▲**Computer communication interface

▲Touch screen or LCD works together with PLC to control remote communication and

signal transmission

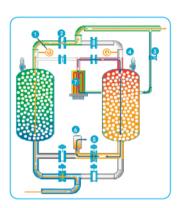
Special customization ①pressure gauge

accepted: ▲High pressure, high ②Check valve

③Regenerative air temperature flow control valve ▲Explosion proof

▲Stainless steel

⑤Pneumatic valve ▲Other special gas ▲PDP: -70°C 



▲The actual configuration is subject to the machine delivered from the factory

## Parameter table of micro-heat regenerative adsorption compressed air dryers

Model	Processing	Dower cumply	Power	Nominal diameter of	Dir			
iviodei	capacity Nm³/min	Power supply	kW	inlet/outlet pipes	Long	Wide	High	
SFA-027M	2.7	1φ220V	1.0	G1"	835	550	1600	230
SFA-038M	3.8	1φ220V	2.0	G1 1/2"	950	560	1580	300
SFA-058M	5.8	1ф220V	2.0	G1 1/2"	950	560	1860	370
SFA-071M	7.1	1φ220V	3.0	G1 1/2"	1065	600	1865	440
SFA-086M	8.6	1φ220V	3.0	G1 1/2"	1065	600	2120	490
SFA-110M	11.0	3ф380V	6.0	DN50	1165	650	2230	675
SFA-130M	13.0	3ф380V	6.0	DN50	1165	650	2280	730
SFA-150M	15.0	3ф380∨	6.0	DN80	1255	750	2310	740
SFA-175M	17.5	3ф380V	6.0	DN80	1360	750	2280	800
SFA-210M	21.0	3ф380V	9.0	DN80	1460	880	2320	985
SFA-250M	25.0	3ф380V	9.0	DN80	1460	880	2420	1120
SFA-304M	30.4	3ф380∨	12.0	DN100	1585	950	2420	1380
SFA-365M	36.5	3ф380V	12.0	DN100	1675	980	2495	1530
SFA-450M	45.0	3ф380V	18.0	DN125	1850	1100	2680	1950
SFA-520M	52.0	3ф380V	18.0	DN125	1960	1250	2550	2200
SFA-605M	60.5	3ф380V	24.0	DN125	1960	1250	2750	2400
SFA-650M	65.0	3ф380V	24.0	DN125	1960	1250	2860	2600
SFA-713M	71.3	3ф380V	24.0	DN150	2220	1370	2950	3200
SFA-795M	79.5	3ф380V	30.0	DN150	2320	1480	2835	3800
SFA-950M	95.0	3ф380V	30.0	DN150	2420	1480	2980	4050
SFA-1100M	110	3ф380V	36.0	DN200	2650	1730	2930	4550
SFA-1430M	143	3ф380V	52.5	DN200	2650	1900	3210	6000

- Requirements for standard air processing (inlet pressure: 0.7MPa; inlet temperature: 32°C).
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## Air-cooled/adsorption regenerative combined compressed air dryers



▲The actual configuration is subject to the machine delivered from the factory

Provide compressed air with different dew points



Integrate the characteristics of refrigeration and adsorption dryers; more energy-saving





Regeneration gas consumption 3%~5%



Processing air flow:1.4Nm<sup>3</sup>/min~450Nm<sup>3</sup>/min

### Standard configuration:

▲Siemens PLC controller

▲LCD touch screen

▲Air pressure gauge

▲Refrigerant high/low pressure gauge

▲High/low voltage protective switch

▲ON/OFF switch, indicator light

▲Stainless steel inlet/outlet filter screen

**▲**Silencer

### Special customization accepted:

▲High temperature

▲High pressure

▲Explosion proof

▲Stainless steel

▲Various types of environmental

refrigerants

▲Other special gas

▲PDP≤-70°C

# Water-cooled/adsorption regenerative compressed air dryers



▲The actual configuration is subject to the machine delivered from the factory



Provide compressed air with different dew points



Integrate the characteristics of refrigeration and adsorption dryers; more energy-saving



Efficient and reliable parts





Regeneration gas consumption 3%~5%



Processing air flow:1.4Nm³/min~450Nm³/min

### Standard configuration:

▲Siemens PLC controller

▲LCD touch screen

▲Air pressure gauge

▲Refrigerant high/low pressure gauge

▲High/low voltage protective switch

▲ON/OFF switch, indicator light

▲Stainless steel inlet/outlet filter screen

**▲**Silencer

Special customization accepted:

▲High temperature

▲High pressure

▲Explosion proof

▲Stainless steel ▲Various types of environmental

refrigerants

▲Other special gas

▲PDP≤-70°C

## Air-cooled combined compressed air dryer (max. inlet temperature ≤ 80°C)

Model	Processing capacity	Power supply	Power consumption	Refrigerant	Nominal diameter of	Dir	Weight kg		
Woder	Nm³/min	1 Ower supply	kW	Reingerant	inlet/outlet pipes	Long	Wide	High	Weight ng
SFC-058AGM	5.8	1φ220V	3.1	R-22	G1 1/2"	1050	1400	1870	530
SFC-071AGM	7.1	1φ220V	3.5	R-22	G1 1/2"	1050	1400	1880	550
SFC-086AGM	8.6	1φ220V	4.7	R-22	G1 1/2"	1050	1450	2150	700
SFC-110AGM	11	3φ380∨	8.6	R-22	DN50	1200	1800	2300	1150
SFC-150AGM	15	3ф380∨	9.1	R-22	DN80	1500	2000	2300	1200
SFC-210AGM	21	3ф380∨	13.1	R-22	DN80	1600	2180	2300	1500
SFC-250AGM	25	3φ380∨	14.0	R-22	DN80	1600	2180	2400	1640
SFC-304AGM	30.4	3ф380∨	17.7	R-22	DN100	1700	2320	2450	2050
SFC-365AGM	36.5	3ф380V	18.3	R-22	DN100	1700	2320	2520	2100
SFC-450AGM	45	3ф380∨	26.8	R-22	DN125	2200	2700	2900	3200

1. Requirements for standard air processing (inlet pressure: 0.7MPa; ambient temperature: 35/50°C; PDP: -40°C).
2. For air flow greater than 45Nm³/min or special specifications, materials, and dew point temperatures, please contact the Technical Center of our company to get technical data.

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## Water-cooled combined compressed air dryers (max. inlet temperature ≤ 45°C)

Model	Processing capacity	Power supply	Power consumption	Refrigerant		Nominal diameter of condenser inlet	Cooling water volume	Dir	Weight kg		
Model	Nm³/min	т омст заррту	kW	Reingerant	inlet/outlet pipes and outlet pipes m³/hr Long Wide				High	Weight kg	
SFC-175WM	17.5	3ф380V	8.8	R-22	DN80	G3/4"	2.0	1500	1550	2280	1150
SFC-210WM	21.0	3ф380V	12.0	R-22	DN80	G1"	3.0	1600	1750	2320	1400
SFC-250WM	25.0	3ф380V	13.0	R-22	DN80	G1"	3.5	1600	1750	2400	1500
SFC-304WM	30.4	3ф380∨	16.7	R-22	DN100	G1"	4.5	1700	2200	2450	1950
SFC-365WM	36.5	3ф380V	17.3	R-22	DN100	G1"	5.0	1700	2200	2495	2100
SFC-450WM	45.0	3ф380V	24.8	R-22	DN125	G1 1/2"	6.5	2200	2300	2660	2900
SFC-520WM	52.0	3ф380V	25.5	R-22	DN125	G1 1/2"	7.0	2200	2500	2550	3050
SFC-650WM	65.0	3ф380V	32.1	R-22	DN125	G1 1/2"	9.0	2300	2650	2690	3600

1. Requirements for standard air processing (inlet pressure: 0.7MPa; inlet temperature: 35/50°C; cooling water temperature: 30°C; PDP: -40°C).
2. For air flow greater than 65Nm³/min or special specifications, materials, and dew point temperatures, please contact the Technical Center

of our company to get technical data.

3. For inlet temperature greater than 45°C, please contact the Technical Center of our company to get technical data.

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# **Description of characteristics**

Key components & parts

Key components and parts produced by international renowned brands are used to ensure stable operation of dryers.



## Intelligent control

PLC is used. Personalized customized service is provided to meet customer needs and save energy and reduce consumption to the greatest extent. Text or touch display can be selected and used for different dryer models to display and monitor the running status and operating data in real time and realize remote communication and signal transmission. Solid state relay or power controller ensures precise temperature control and stepless adjustment of power output to save electrical energy.



### Safe and reliable protective device

The electrical box has a reasonable layout of electric components and parts produced by international renowned brands. High-flow motor with standard bearing is used for the cooling fan, realizing good heat dissipation effect and stable operation of the electrical control system. Low pressure protective device and dual protection of overheating temperature are equipped



For grouped parallel high-power heater, heat transfer tube made of 304 stainless steel is used. Alloy resistance wire is adopted for electric heating elements. Intelligent silicon controlled thermostat is used to control and adjust heating temperature automatically. PID regulatory control design and mechanical overheating dual protection are equipped.



### **Dryness window**

For the tower body design of heatless dryers, an adsorbent dryness window is designed, allowing real-time grasping the drying situation of compressed air.

# **Description of characteristics**

Key components & parts



### **SIEMENS**











### Pneumatic valve

Customized aluminum cylinders. Valve seals are made of high temperature resistant materials, and valve plates are made of stainless steel, featuring long service life and high



### Innovative tower body design

Large drying tower volume, large filling volume of adsorbent, effective adsorption at long time. Conventional PDP is -40°C, and PDP of -70°C can be customized. The drying tower distributor is made of stainless steel, leading to a long service life, and avoiding the tunnel effect and the adsorbent being soaked in water.



### Regenerative air flow control valve

Air flow control valve is designed, allowing the adjustment of regenerative air flow according to actual operation status to realize energy conservation.



### Regenerative air flow control valve

Air flow control valve is designed, allowing the adjustment of regenerative air flow according to actual operation status to realize energy conservation.

# Applications & Achievements

Private large-scale petrochemical enterprise



Listed glass enterprise



Large iron and steel enterprise



Top bio-pharmaceutical enterprise



Listed electronic technology enterprise



Famous auto parts enterprise

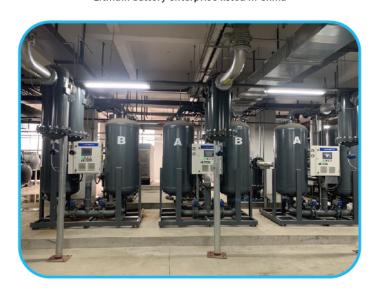
# Applications & Achievements



Listed photovoltaic enterprise



Lithium battery enterprise listed in China



Famous new material enterprise



Chinese new material technology enterprise

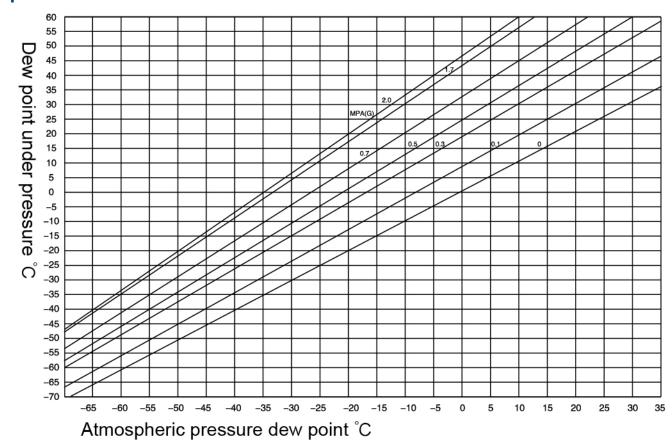


Environmental protection high-tech enterprise



Listed optical instrument enterprise

# Pressure dew point and atmospheric pressure dew point conversion chart



# Atmospheric dew point - moisture content relationship table

Dew point °C	Moisture content g/m³	Dew point °C	Moisture content g/m³	Dew point °C	Moisture content g/m³	Dew point *C	Moisture content g/m³	Dew point °C	Moisture content g/m³
64	153.8	39	48.7	14	12.1	-11	2.19	-36	0.260
63	147.3	38	46.3	13	11.4	-12	2.03	-37	0.236
62	141.2	37	44.0	12	10.7	-13	1.88	-38	0.214
61	135.3	36	41.8	11	10.0	-14	1.74	-39	0.194
60	130.3	35	39.6	10	9.3	-15	1.61	-40	0.176
59	124.7	34	37.6	9	8.8	-16	1.48	-41	0.159
58	119.4	33	35.7	8	8.3	-17	1.37	-42	0.144
57	114.2	32	33.8	7	7.8	-18	1.26	-43	0.130
56	109.2	31	32.1	6	7.3	-19	1.17	-44	0.117
55	104.4	30	30.4	5	6.8	-20	1.07	-45	0.106
54	99.8	29	28.8	4	6.4	-21	0.99	-46	0.095
53	95.4	28	27.2	3	5.9	-22	0.91	-47	0.085
52	91.1	27	25.8	2	5.6	-23	0.84	-48	0.077
51	87.0	26	24.4	1	5.2	-24	0.77	-49	0.069
50	83.1	25	23.1	0	4.8	-25	0.70	-50	0.062
49	79.3	24	21.8	-1	4.5	-26	0.65	-51.1	0.054
48	75.6	23	20.6	-2	4.2	-27	0.59	-53.9	0.040
47	72.3	22	19.4	-3	3.9	-28	0.54	-56.7	0.029
46	68.7	21	18.3	-4	3.7	-29	0.50	-59.4	0.021
45	65.5	20	17.3	-5	3.4	-30	0.45	-62.2	0.014
44	64.1	19	16.3	-6	3.2	-31	0.41	-65.0	0.011
43	59.4	18	15.4	<b>-</b> 7	2.9	-32	0.38	-67.8	0.008
42	56.6	17	14.5	-8	2.7	-33	0.34	-70.6	0.005
41	53.8	16	13.6	-9	2.5	-34	0.31	-73.3	0.003
40	51.2	15	12.8	-10	2.4	-35	0.29		

# Some business partners













































































































