Medium Pressure

Screw Air Compressors

Industrial Medium Pressure Series
PET & Blow Molding - Laser Cutting Application

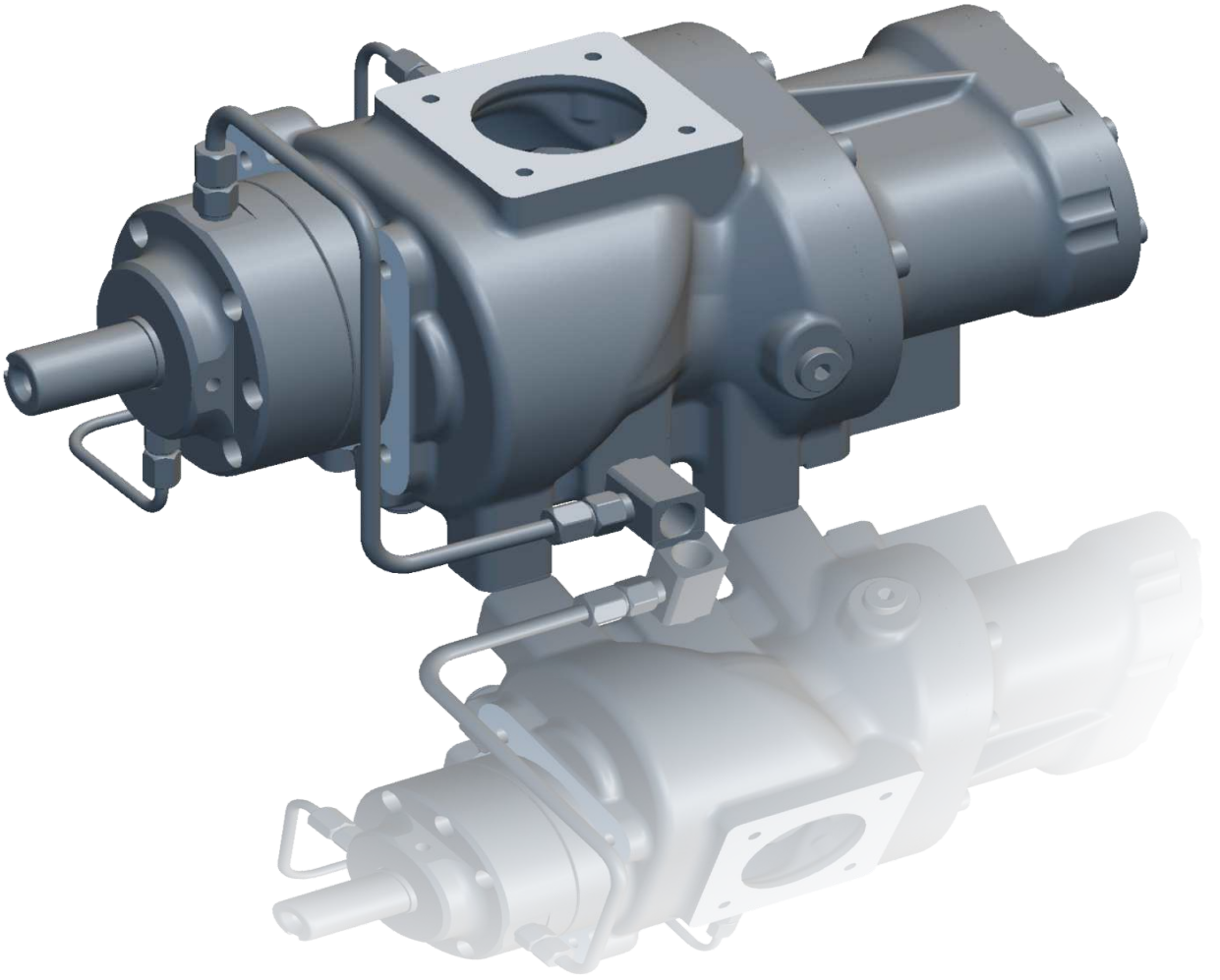
Installed motor power 22-315 kw
Free air delivery from 1.6-37.7 m³/min
Pressure 16-40 bar

Farafanhava Co

Medium Pressure Single Stage Series

Technical Parameters

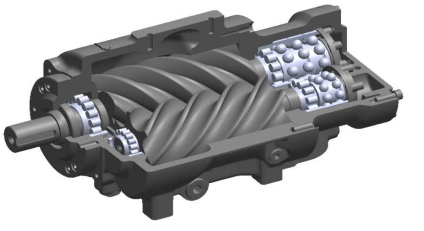
16-30 Bar 1- 4 m3/min



01 Air End Design Analysis

.9 Bearing Air end Technology

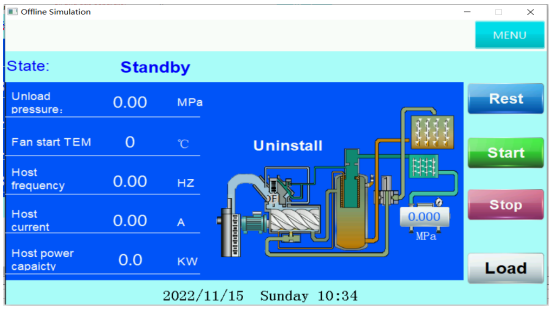
· Design pressure: 20-30 bar
· Volume efficiency: ≥95%
· Transmission ratio: 1:1
· Noise level: lower
· Power consumption: ultra-low
· Rotor diameter and center distance: large
· Max. operating temperature: 110℃ continuous running
· Profile design: the third generation α model asymmetrical 5:6 tooth. Best energy efficiency



GHH Technology

02 Control Module

· RS485 communication mode transmission control signal
· Intelligent PID flow adjustment mode
· Closed-loop control, with ideal dynamic characteristics and control accuracy
· Accurately control the torque
· Fast response speed
· Constant pressure control to avoid excess energy loss

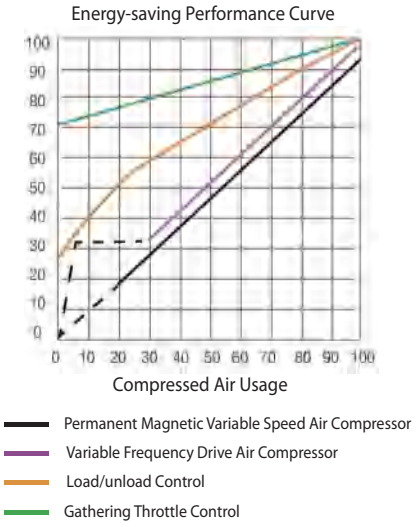


03 High Efficiency Permanent Magnetic Motor

· High Efficiency Motor IE4 & IE5
· Cooling method: oil cooling/air coolling
· No bearing design, 100% transmission efficiency
· UH series magnets, can withstand temperature up to 180 °C
· Up to 5 years durability test, 40,000 hours of durable operation without failure
· IP65, F class insulation, B grade temperature rise
· PM motor cooling structure design
· Perfectly linear output torque, low speed still retains high torque output

04 More Advanced Technology. More Powerful Inverter

· The standard equipment is equipped with a high-frequency reactor to reduce the high frequency generated by the inverter.
· The soft start of the inverter reduces the peak current at startup, resulting in a smooth start and greatly reduced power costs.
· Forced cooling of the inverter to prevent high temperature shutdown in Summer.
· Standard equipment dust screen, circuit board surface coating treatment, high efficiency and durability against dirt, dust, moisture.
· The special design of the heat dissipation area of the inverter ensures stable operation of the inverter under high temperature environment.
· No idling occurs under any load conditions to achieve the desired power saving effect.



· Quickly track changes in pressure, control pressure fluctuations within ±0.1 bar, and optimize the use of the power to accurately provide the right amount of air as needed.

Laser Selection Guide 16-30 bar

Model election and main technical parameters

Laser Power Range	Low Power Range	Mid Power Range	High Power Range	Super High Power	High Pressure
	1000-3000w	4000-6000W	6000-8000W	≥ 8000w	20bar~40bar Pressure
Compressor Model	DBZY-15A CPBZY 15 CPMZY 15 DMZY-15A	DBZY-20A CPBZY 20 CPMZY 20 DMZY-20A	DCZY-30A DMZY-30A	Skid-mounted Air System	High Pressure Air System
Main Tech	Power: 11kw/15hp Airflow: 1.05m3/min Pressure: 1.58Mpa/15.8bar	Power: 15kw/20hp Airflow: 1.41m3/min Pressure: 1.58Mpa/15.8bar	Power: 22kw/30hp Airflow: 2.41m3/min Pressure: 1.58Mpa/15.8bar	Power: ≥30kw/40hp Airflow: 3m3/min Pressure: 1.58Mpa/15.8bar	Power: ≥30kw/40hp Airflow: ≥1m3 Pressure: ≥2Mpa/20bar
Compressor Picture					
Main Components	1. 11kw/15hp screw compressor 2. Built-in refrigerated dryer 3. 500 liters storage tank 4. 1 pc moisture filter 5. 4 pcs precision line filters 6. Pneumatic auto-drain valve	1. 15kw/20hp screw compressor 2. Built-in refrigerated dryer 3. 500 liters storage tank 4. 1 pc moisture filter 5. 4 pcs precision line filters 6. Pneumatic auto-drain valve	1. 22kw/30hp screw compressor 2. Built-in refrigerated dryer 3. 500 liters storage tank 4. 1 pc moisture filter 5. 4 pcs precision line filters 6. Pneumatic auto-drain valve 7. Extra adsorption dryer (Optional)	1. DIY screw compressor 2. Built-in refrigerated dryer 3. DIY L storage tank 4. 1 pc moisture filter 5. 4 pcs precision line filters 6. Pneumatic auto-drain valve 7. Extra adsorption dryer (Optional)	1. DIY screw compressor 2. Built-in refrigerated dryer 3. DIY L storage tank 4. 1 pc moisture filter 5. 4 pcs precision line filters 6. Pneumatic auto-drain valve 7. Extra adsorption dryer (Optional)
Compressed Air Quality	Particle content: ≦0.01um Oil content: ≦ 0.003 ppm Pressure dew point: 2-8 ℃	Particle content: ≦0.01um Oil content: ≦0.003 ppm Pressure dew point: 2-8 ℃	Particle content: ≦0.01um Oil content: ≦0.003 ppm Pressure dew point: -40~ -70 ℃	Particle content: ≦0.01um Oil content: ≦0.003 ppm Pressure dew point: -40~ -70 ℃	Particle content: ≦0.01um Oil content: ≦0.003 ppm Pressure dew point: -40~ -70 ℃
Remarks	1. The number in the model represents rated motor power, for example, 20 represents 20hp 15kw, 30 represents 30hp 22kw. 2. "B" means Belt drive, "C" means direct coupling, "M" means "permanent Magnet VSD" 3. This form is just a rough suggestion. Please inform professional sales of your own parameter information in detail to obtain professional suggestions.				

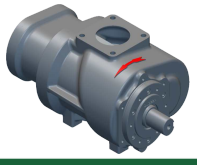
Technical Parameters

16 Bar

Model	Air Delivery (m^3/min)	Rated exhaust pressure (Bar)	Power (kW)	Noise (Db)	Outlet diameter (In)	Dimension (mm)	Weight (Kg)	Exhaust pressure dew point (℃)	Exhaust dust content (μm)	Exhaust oil content (ppm)	Gas storage tank capacity (L)
DBZY-10A	0.55	16	7.5	65	G3/4	1418*700*1500	395	2~10	0.01	0.01	260
DBZY-15A	1.05	16	11	65	G3/4	1882*790*1731	560	2~10	0.01	0.01	500
DBZY-20A	1.51	16	15	65	G3/4	1882*790*1731	572	2~10	0.01	0.01	500
DMZY-15A	1.05	16	11	65	G3/4	1882*790*1731	560	2~10	0.01	0.01	500
DMZY-20A	1.52	16	15	65	G3/4	1882*790*1731	572	2~10	0.01	0.01	500
DMZY-30A	2.41	16	22	68	G3/4	1882*1081*1801	630	2~10	0.01	0.01	500
DCZY-30A	2.21	16	22	68	G3/4	1882*1081*1801	630	2~10	0.01	0.01	500

Technical Parameters

20-30 Bar



DR-Z	Working pressure		Capacity		Power		NOise	Air outlet pipe diameter	Net weight	Dimensions(mm)		
	bar	psig	(m3/min)	cfm	kW	hp	dB		kg	Length	Width	Height
DR-18Z	20	291	1.6	61	18	25	65±3	G3/4"	868	1600	1100	1150
	25	364	1.3	61	18	25	65±3	G3/4"	868	1600	1100	1150
	30	437	1.2	61	18	25	65±3	G3/4"	868	1600	1100	1150
DR-22Z	20	291	2.0	74	22	30	65±3	G3/4"	900	1600	1100	1150
	25	364	1.6	74	22	30	65±3	G3/4"	900	1600	1100	1150
	30	437	1.4	74	22	30	65±3	G3/4"	900	1600	1100	1150
DR-37Z	20	291	3.0	117	37	50	65±3	G3/4"	1340	1800	1350	1500
	25	364	2.5	117	37	50	65±3	G3/4"	1340	1800	1350	1500
	30	437	2.2	117	37	50	65±3	G3/4"	1340	1800	1350	1500
DR-55Z	20	291	4.2	225	55	75	67±3	DN32	2100	2400	1580	1700
	25	364	3.7	176	55	75	67±3	DN32	2100	2400	1580	1700
	30	437	3.3	165	55	75	67±3	DN32	2100	2400	1580	1700

Medium Pressure Double stage Series

Technical Parameter

20-40 bar 6-37 m3/min

Air End

Reducing Rpm to 1500 and increasing life time of bearing ensure Performance and Reducing maintenance cost

. The rotor adopts the world's leading high-efficiency profile and is made of 1141 special steel, which has good hardness and high wear resistance.

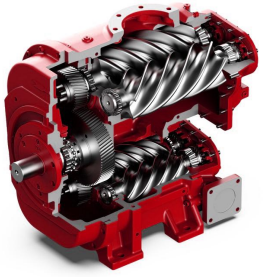
· Two-stage independent compression, low-speed design, lower overall noise.

· The low compression ratio at each stage ensures smaller leakage and higher volumetric efficiency.

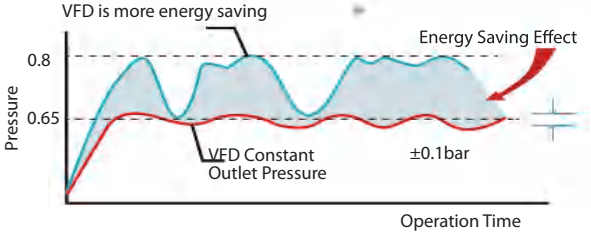
· Oil mist spray cooling is used between stages, and the compression process is close to isothermal compression to improve efficiency.

· The rotor and bearings are under little stress, and the long life of screw element is guaranteed to continue running.

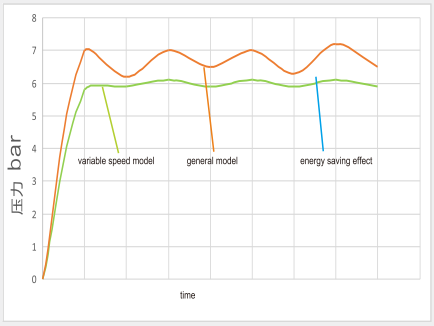
· Under the set frequency conversion pressure, the unit will automatically adjust to keep the output pressure within ±0.1 bar, reducing unnecessary waste (the power consumption increases by 7% for every 1 bar of pressure increase)

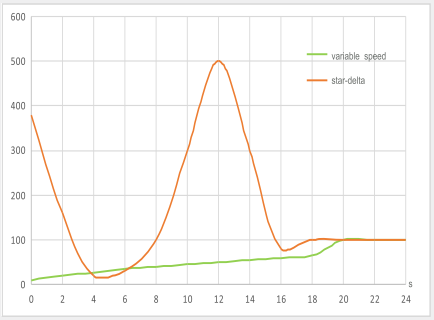


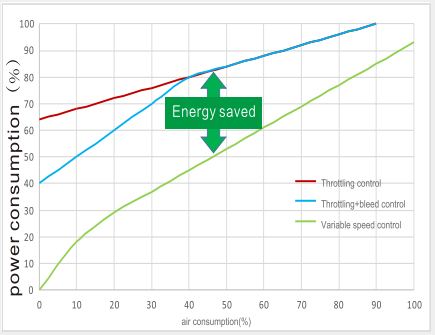
15% More efficiency



Compared with power fixed speed air compressor, variable speed air compressor has practical significance in energy saving.







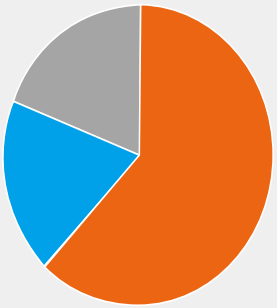
1.The pressure control of variable speed air compressor is precise. It can quickly respond to pressure changes, adjust the speed of the permanent magnet motor, control the pressure fluctuation range within ± 0.1bar, stabilize the pressure of the pipe network, provide the necessary air volume with the most reasonable power, and reduce excess energy loss.

2.Variable speed air compressor adopts the method of frequency conversion start up, eliminating the peak current of star-delta start up and starting smoothly. Reduce the starting power, reduce the impact on the power grid and equipment, and can reduce the equipment operation noise.

3.Variable speed control is more excellent than ordinary throttle control. The adjustment range of the flow rate is larger, and with the high-efficiency permanent magnet motor, the energy saving effect is more significant at a low percentage flow rate.

4. Most of the cost in the life cycle of the air compressor is generated by the electricity it consumes. The power consumption of the compressor is closely related to the on-site air planning. The variable speed air compressor can not only ensure smooth production, but also save considerable electricity costs and achieve a win-win situation for the enterprise.

Cost of regular air compressor

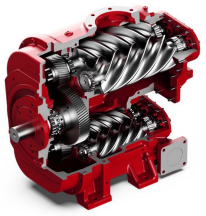


Energy consumption Maintenance cost
Purchase cost

Cost of variable speed air compressor

Energy consumption Maintenance cost
Purchase cost Energy saved

Technical Parameter



DR(V)-Z	Working pressure		Capacity		Power		NOise	Air outlet pipe diameter	Net weight	Dimensions(mm)		
	bar	psig	(m3/min)	cfm	kW	hp	dB		kg	Length	Width	Height
DRV-55Z	20	291	3.8-6.4	134-226	55	75	67±3	DN32	2200	2400	1580	1700
	25	364	3.6-6.0	127-212	55	75	67±3	DN32	2200	2400	1580	1700
	30	437	3.1-5.2	109-184	55	75	67±3	DN32	2200	2400	1580	1700
	35	510	2.6-4.3	92-152	55	75	67±3	DN32	2200	2400	1580	1700
	40	583	2.3-3.8	81-134	55	75	67±3	DN32	2200	2400	1580	1700
DRV-75Z	20	291	4.6-7.7	162-272	75	100	68±3	DN32	2400	2400	1580	1700
	25	364	4.5-7.5	159-265	75	100	68±3	DN32	2400	2400	1580	1700
	30	437	4.0-6.7	141-237	75	100	68±3	DN32	2400	2400	1580	1700
	35	510	3.8-6.3	134-222	75	100	68±3	DN32	2400	2400	1580	1700
	40	583	3.0-5.0	106-177	75	100	68±3	DN32	2400	2400	1580	1700
DR-90Z	20	291	6.7-11.2	237-396	90	120	70±3	DN32	2800	2400	1580	1700
	25	364	6.2-10.3	219-364	90	120	70±3	DN32	2800	2400	1580	1700
	30	437	6.0-10.0	212-353	90	120	70±3	DN32	2800	2400	1580	1700
	35	510	4.1-6.8	145-240	90	120	70±3	DN32	2800	2400	1580	1700
	40	583	3.8-6.3	134-222	90	120	70±3	DN32	2800	2400	1580	1700
DRV-110Z	20	291	8.2-13.6	290-480	110	150	72±3	DN40	3100	2700	1680	1900
	25	364	7.5-12.5	265-441	110	150	72±3	DN40	3100	2700	1680	1900
	30	437	6.5-10.8	230-381	110	150	72±3	DN40	3100	2700	1680	1900
	35	510	5.8-9.6	205-339	110	150	72±3	DN40	3100	2700	1680	1900
	40	583	5.5-9.1	194-321	110	150	72±3	DN40	3100	2700	1680	1900
DRV-132Z	20	291	10.1-16.8	357-593	132	175	74±3	DN40	3300	2700	1680	1900
	25	364	9.0-15.0	318-530	132	175	74±3	DN40	3300	2700	1680	1900
	30	437	7.9-13.1	279-463	132	175	74±3	DN40	3300	2700	1680	1900
	35	510	7.1-11.8	251-417	132	175	74±3	DN40	3300	2700	1680	1900
	40	583	6.8-11.3	240-399	132	175	74±3	DN40	3300	2700	1680	1900
DRV-160Z	20	291	9.6-16.0	339-565	160	215	75±3	DN50	3800	3000	1830	2000
	25	364	10.0-16.6	353-586	160	215	75±3	DN50	3800	3000	1830	2000
	30	437	9.8-16.3	346-576	160	215	75±3	DN40	3700	2700	1680	1900
	35	510	9.4-15.6	332-551	160	215	75±3	DN50	3800	3000	1830	2000
	40	583	8.3-13.8	293-487	160	215	75±3	DN40	3700	2700	1680	1900
DRV-185Z	20	291	14.1-23.5	498-830	185	250	76±3	DN50	4000	3000	1830	2000
	25	364	11.7-19.5	413-689	185	250	76±3	DN50	4000	3000	1830	2000
DRV-200Z	20	291	15.6-26.0	551-918	200	270	76±3	DN50	4200	3000	1830	2000
	25	364	13.7-22.9	484-809	200	270	76±3	DN50	4200	3000	1830	2000
	30	437	13.3-22.2	470-784	200	270	76±3	DN50	4200	3000	1830	2000
DRV-220ZW	20	291	17.8-29.7	629-1049	220	300	78±3	DN65	5000	3300	1930	2250
	25	364	15.5-25.8	547-911	220	300	78±3	DN65	5000	3300	1930	2250
	30	437	13.9-23.2	491-819	220	300	78±3	DN65	5000	3300	1930	2250
	35	510	13.2-22.0	565-777	220	300	78±3	DN65	5000	3300	1930	2250
	40	583	12.2-20.3	431-717	220	300	78±3	DN65	5000	3300	1930	2250
DRV-250ZW	20	291	20.5-34.2	724-1208	250	350	78±3	DN65	5700	3300	1930	2250
	25	364	17.5-29.1	618-1028	250	350	78±3	DN65	5700	3300	1930	2250
	30	437	16.5-27.5	583-971	250	350	78±3	DN65	5700	3300	1930	2250
	35	510	15.1-25.2	533-890	250	350	78±3	DN65	5700	3300	1930	2250
	40	583	13.7-22.8	484-805	250	350	78±3	DN65	5700	3300	1930	2250
DR-280ZW	20	291	22.6-37.7	798-1331	280	375	80±3	DN65	6000	3300	1930	2250
	25	364	20.4-34.0	720-1201	280	375	80±3	DN65	6000	3300	1930	2250
	30	437	18.0-30.0	636-1059	280	375	80±3	DN65	6000	3300	1930	2250
	35	510	16.4-27.3	579-964	280	375	80±3	DN65	6000	3300	1930	2250
	40	583	15.0-25.0	530-883	280	375	80±3	DN65	6500	3300	1930	2250

P-DNR202404-08 Specifications are subject to change without prior notice.
Never use compressed air as breathing air without prior purification in accordance with local legislation and standards.

Farafan Hava Energy Saving Technology company .

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