

GLOBE Airmotors | Boerhaaveweg 9-11 | NL - 2408 AD Alphen a/d Rijn | Tel +31 172 426 608 | info@globe-benelux.nl

Manual

# GLOBE Vane Air Motor VA10J&X | VS10C | VA10C

ATEX certified









globe-airmotors.com

### **APPROVALS**

#### ATEX CERTIFICATION

The GLOBE vane air motors are ATEX certified according to the following (harmonized) standards:

EN-ISO80079-36:2016 EN-ISO80079-37:2016

The motors are marked with the following EX marking:



#### In which:

II	Equipment group II for use above ground
2G	Category 2G for use in Zone 1 or 2
2D	Category 2D for use in Zone 21 or 22
Ex h	Protection by constructional safety "c" Gas
IIC	group IIC
IIIC	Dust group IIIC
T4	Temperature class T4
T135°C	Maximum surface temperature 135°C
Gb	Equipment protection level Gb
Db	Equipment protection level Db
Ta	Ambient temperature range

#### **Contents**

Warranty	3
Safety first	3
Checklist to comply to ATEX	4
Installation	5
Mounting to construction	6
Air supply	7
Operation	9
Performance regulation	11
Maintenance	12
Summary of the hazards with	
protective means:	13
Shutdown and long storage	13
Rebuild instructions	14
Trouble shooting	15
Dimensions, Performances & Spare	
Parts	16
Main dimensions VA10J&X	16
Main dimensions VA10J&X Exploded view with spare parts list	16 17
Exploded view with spare parts list	17
Exploded view with spare parts list Main dimensions VS10C	1 <i>7</i> 18
Exploded view with spare parts list Main dimensions VS10C Exploded view with spare parts list	1 <i>7</i> 18 19
Exploded view with spare parts list Main dimensions VS 10C Exploded view with spare parts list Main dimensions VA 10C	17 18 19 20
Exploded view with spare parts list Main dimensions VS 10C Exploded view with spare parts list Main dimensions VA 10C Exploded view with spare parts list	17 18 19 20
Exploded view with spare parts list Main dimensions VS 10C Exploded view with spare parts list Main dimensions VA 10C Exploded view with spare parts list Performance	17 18 19 20 21
Exploded view with spare parts list Main dimensions VS10C Exploded view with spare parts list Main dimensions VA10C Exploded view with spare parts list Performance VA10J&X   VS10C   VA10C	17 18 19 20 21
Exploded view with spare parts list Main dimensions VS10C Exploded view with spare parts list Main dimensions VA10C Exploded view with spare parts list Performance VA10J&X   VS10C   VA10C Ordering code	17 18 19 20 21 22 23



## Congratulations with your GLOBE air motor!

This product is made with quality materials to meet the highest standards. This manual contains safety instructions for the use of your GLOBE air motor. Please read and follow all recommended instructions for a trouble-free use.

#### Warranty

The GLOBE air motor is designed to operate without any problems. This is only guaranteed if the regulations with regards to installation, operation, maintenance and repair are observed. Problems occurring during the guarantee period are corrected in accordance to GLOBE Airmotors BV guarantee conditions. All results of unauthorized replacements and alterations are at the operator's expense. In case of unauthorised opening and repair work carried out during guarantee period by the operator, the guarantees may become invalid.

You can order your service kit at <u>orders@globe-benelux.nl</u>. Please ensure that maintenance is carried out by certified staff.

#### Safety first

Safety is important for you and other people. For the protection of you and others, we have several warnings in this manual and on the product. Please always read carefully and follow the instructions.



Hazard
Possible consequences: dead or severe injuries



**Wear hearing protection** 



Hazard Situation
Possible consequences: slight or mild injuries



Wear eye protection



**Dangerous situation**Possible consequence: damage to the drive of the environment



Important instructions on protection against explosion

# **Checklist to comply to ATEX**

- » To check that the air motor is designed for use in hazardous applications read the air motor label:
  - » Hazardous zone
  - » Hazardous category
  - » Equipment group
  - » Temperature class
  - » Maximum surface temperatures
- » Check the air motor before installation and operation to see if it's not damaged.
- » Any products that are driven by the air motor must meet appropriate ATEX approval as well to be used in a hazardous area.
- » The air motor should be connected to the earth with a maximum earth resistance of 1 Mohm. The motor can be earthed by connecting the motor to a base plate/gearbox etc.
- » The ambient temperature range of the motor (-20°C to +60°C) should be observed at all times.
- » When mounting the engine on a construction or when something is mounted on the shaft of the air motor. Make sure that the alignment is straight to prevent too much force on the shaft.
- » An air filter should be placed in the airline with at least 64 micron near the air motor.
- » Clean surface of air motor unit thoroughly of all dustproofing products, contaminants and other impurities. Do this outside the hazardous area or clean only with a damp cloth.

- » A lubricator must be placed inside the main airline near the motor. The lubricator unit should have a bowl with enough oil for operation and should allow the user to control the amount of oil drop per minute going to the motor.
- » Check airline oil every time before starting. Air motor should be supplied with oil of a viscosity of 32. This type of oil is flammable at a temperature of 218°C.
- » Air supply to the motor should always be taken from non-hazardous area.
- » In case the motor is exposed to high vibrations during operation and when not in operation, please contact the manufacturer. High vibrations might lead to increased inspection interval of the bearings.
- » It's important that no dust or debris can accumulate at the output shaft. This may damage the shaft seal. If the motor is built in a closed system or construction so that no dust or debris can get in contact with the output shaft the air motor can be used in any orientation. If the motor is used is such way that the output shaft is in contact with explosive environment the mounting position is limited from horizontal to vertical downwards. It is not allowed for the shaft to point in any angle upwards.



WARNING: POTENTIAL ELECTROSTATIC CHARGING HAZARD

Before use clean only with damp cloth. Avoid electrostatic charging mechanisms stronger than manual rubbing. Do not subject the equipment to external conditions that could cause build-up of electrostatic charges.

# **Installation**

Correct installation is your responsibility! Make sure you have the proper installation conditions.

## **WARNING - Injury hazard**



Install proper guard around the output shaft if needed.



Wear eye protection: Airflow from product may contain solid or liquid materials that can result in eye or skin damage.



Failure to follow these instructions can result in serious injury or property damage.



It's important that no dust or debris can accumulate at the output shaft. This may damage the shaft seal. If the motor is built in a closed system or construction so that no dust or debris can get in contact with the output shaft the air motor can be used in any orientation. If the motor is used is such way that the output shaft is in contact with explosive environment the mounting position is limited from horizontal to vertical downwards. It is not allowed for the shaft to point in any angle upwards.

In order to guarantee the maximum performance and service life of these motors it is essential that the following points are strictly observed and obeyed.

### Mounting to construction

- » Mount the unit to the construction. Care should be taken, when fitting drive components to the shaft, that excessive force is not used. This will upset the shaft alignments which has been kept to a minimum in order to give high motor performance.
- » Use the proper sized fasteners.
- » Axial loads must be kept to a minimum.
- » Max. radial load midway along shaft as shown in graph below:

#### Air motor

	VI	V2	V4	V6	V8	V10	V12
LBF	4	90	40	70	140	400	157
N	18	400	170	300	620	1.750	700



Ground the motor to the earth with a maximum earth resistance of 1 Mohm.

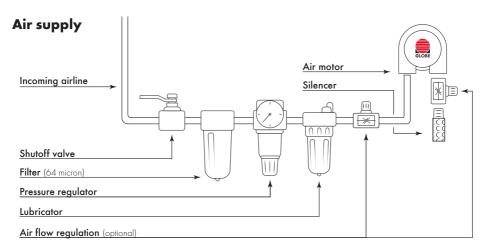


Do not use a hammer on the shaft or body of the motor.

### Air supply

- » Air supply to the motor should always be taken from non-hazardous area.
- » Remove the plastic shipping plugs from the ports. Save the plugs for the future, during shutdown.
- » Please make sure that the temperature of the air used for air supply to the air motor don't exceed the following temperatures, -20°C to +40°C.
- » Install a filter (64 micron) to make sure the air is clean and dry and install an air pressure regulator to control motor speed and torque.
- » A lubricator must be placed inside the main airline near the motor. The lubricator unit should have a bowl with enough oil for operation and should allow the user to control the amount of oil drop per minute going to the motor. Check airline oil every time before starting. Air motor should be supplied with oil of a viscosity of 32. This type of oil is flammable at a temperature of 218°C.
- » Air quality should meet ISO 8573-1:2010 class 4 for solid particles and ISO 8473-1:2010 class 3 for water.

- » For the most efficient power and control of speed, all valves and the airlines should be the same size as the air connections of the motor. If the valves, airlines and other connections have a longer distance than 2m (6 feet) of the motor we advise one size bigger.
- » Before final connection to the motor, clean the compressed air connection with low pressure air to remove any dirt inside the line before connecting to the ports of the air motor.
- » A silencer is supplied with the motor. When installed ensure that condensation cannot run back into the motor port. Mount the air motor with silencer pointed down or make extra piping on the silencer.
- » If the motor unit is not used for a longer period it is advisable to store the unit indoors remove the silencer and plug the exhaust port. See also shut down and long storage at maintenance.



#### **Airline filtration**

- » Use a 64 micron air filter
- » The airline filter should be drained regularly and the element examined for signs of clogging.

#### Airline lubrication

» The airline lubricator should be replenished when needed and set to give the following required drop rate/min:

Motor	Continuous Operation	Intermittent Operation
V1	2-3	4-6
V2	3-4	6-8
V4	4-5	9-12
V6	5-6	10-12
V8	6-7	12-15
V10	7-8	14-16
V12	12-14	18-20

- » For normal ambient temperatures 0°C to 32°C. Use oil with viscosity VG32.
- » For extremes of ambient temperature consult the manufactures.



Use a puller to remove pulleys, pinions and couplings. Check if the tension on the belt pulley matches the specifications of the manufacture. Do not exceed the maximum radial and axial forces on the shaft. If the motor shaft is connected to the part to be driven without a coupling, check that the radial offset and axial force effect will not cause problems.



Use only belts with <100 electrical leakage resistance to prevent static electrical problems.

# **Operation**

Correct operation is your responsibility! Make sure you have the proper operation conditions.

### **WARNING** - Injury hazard



Wear eye protection: Air stream from product may contain solid or liquid materials that can result in eye or skin damage.



Wear hearing protection: The noice level from the air motor may exceed 85 db (A)



Do not use combustible gases to drive this air motor



Failure to follow these instructions can result in serious injury or property damage.



WARNING: POTENTIAL ELECTROSTATIC CHARGING HAZARD

Before use clean only with damp cloth. Avoid electrostatic charging mechanisms stronger than manual rubbing. Do not subject the equipment to external conditions that could cause build-up of electrostatic charges.



Do not run the air motor at high speeds with no load. This will result in excessive internal heat that may cause motor damage.

- » Check all connections before starting the air motor. It is your responsibility to operate this product at recommended speeds, loads and ambient temperatures (-20°C to +60°C)
- » Check if the airline filtration and airline lubrication is OK. The airline filter should be drained and/or cleaned regularly and the filter element examined for signs of clogging.
- The maximum working pressure is 7 bar (100 PSI).
- » Clean surface of air motor unit thoroughly of all dustproofing products, contaminants and other impurities. Clean only with damp cloth.
- » Do not run the air motor at high speeds with no load. This will result in excessive internal heat that may cause motor damage.
- » The starting torque is less than the running torque. The starting torque will vary depending on the position of the vanes in relation to the air intake port when the motor is being started.

- » During operation be aware if unfamiliar sounds or vibrations occur. Stop the unit immediately and investigate the source.
- » In case that the motor is exposed to high vibrations, during operation and when not in operation, please contact the manufacturer. High vibrations might lead to increased inspection interval of the bearings.
- » The motor may run continuously at speeds up to the rated running conditions shown in our performance data sheets. In these sheets the output power/torque is based on running conditions with the actual pressure measured at the motor port. A silencer is supplied together with the motor, but is not installed
- » Advisable is to use an air dryer with set point of 20 degrees Celsius below lowest ambient temperature.

- » Axial loads must be kept to a minimum.
- » Max. radial load midway along shaft as shown in graph below:

#### Air motor

	VI	V2	V4	V6	V8	V10	V12
LBF	4	90	40	70	140	400	157
N	18	400	170	300	620	1.750	700

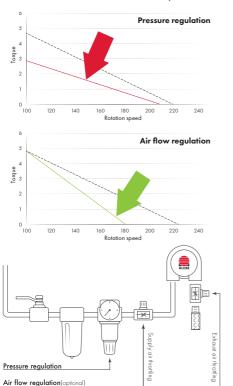
- » Check intake filter and silencer after the first 100 hours of operation.
- » Clean filters and determine how frequently filters should be checked during future operation.

## **Performance regulation**

With the regulation of the inlet pressure and the flow rate, the performance can be adapted to the individual application. This is done by pressure or air flow regulation or a combination of both. The compressibility of the air generates a dampening effect in all ranges. This allows that the motor also can be started, while it is loaded. With a load reduction, the motor reacts immediately with an increase in speed.

#### 1. Pressure regulation

With pressure regulation the output power can be adjusted. When the supply pressure is decreased, the torque and power is reduced proportionally and the torque curve becomes flatter. The forces inside the motor are also reduced, which increases its durability.



### 2. Air flow regulation

Air flow regulation is the best way to reduce the output speed without the loss of torque. The air flow can be regulated with a throttling device. By throttling, the starting torque remains essentially the same but the torque curve is steeper. This means that under the same load fluctuation, the speed fluctuation is smaller in comparison with the pressure regulation. There is a distinction made between the following installation positions:

#### **Exhaust air throttling**

The exhaust air throttling is the less optimal way of throttling relating to the durability and the air consumption. The advantage of this method is that the rotational speed can be regulated constantly in the lower rotation range. In the border area of the rotation range, a combination of supply- and exhaust air throttling should be used. The exhaust throttling should be used for controlling low speed of rotation.

## Supply air throttling

The supply air throttling generates better results in relation to the durability, the running smoothness and the air consumption.

For optimal power and speed control we advise to use the combination of pressure and air flow regulation.

# **Maintenance**

Correct maintenance is your responsibility! Make sure you have the proper maintenance conditions.

## **WARNING - Injury hazard**



Disconnect air supply and vent all air lines.



Wear eye protection: Air stream from product may contain solid or liquid materials that can result in eye or skin damage.



Flush this product in a well ventilated area.



Do not use kerosene or other combustible solvents to flush this product.



Failure to follow these instructions can result in serious injury or property damage.

- » Please ensure that maintenance is carried out by certified staff. You can order your service kit at orders@globe-benelux.nl.
- » Check intake filter and silencer after the first 100 hours of operation.
- » Clean filters and lubricators and determine how frequently filters and lubricators should be checked during future operation. This will help the motor performances and it's service life
- » Do not open when explosive atmosphere is present. Sparks induced by tools may cause an explosion.
- » When performing maintenance on the air motor please use the rebuild instructions which are also enclosed in this manual. Please make sure the motor runs smooth after maintenance and check the clearances in the motor to prevent problems when operating the motor.
- » To comply according to ATEX please change the bearings of the motor according to the table below:

VA10J&X	VS10C	VA10C
20.500 Running hours	20.900 Running hours	20.500 Running hours

If the silencer becomes dirty this will effect the performance of the motor. To clean the silencer follow the next procedure:

## **Cleaning silencer:**

- 1. Disconnect airline
- 2. Remove the silencer
- Clean the silencer
- 4. Lubricate the motor with 3-4 drops of oil
- Connect the airline
- Listen for changes in the sound of the motor. If the motor runs fine, operation can continue
- If it is not running fine, you should install a service kit

## Shutdown and long storage

- » You need to take care of the following procedures for a proper shutdown.
- » Wear eye protection. Keep out of the air steam.
- » Turn off the air supply.
- » Disconnect all air supply and vent all airlines.
- » Disconnect airlines.
- » Disassemble the air motor from its connection.
- » Remove the silencer.
- » Make sure you use clean and dry air to remove condensation from the inlet port.
- » Use a small amount of oil to lubricate the motor.
- » Rotate the shaft by hand several times to distribute the oil.
- » Cap or plug each port of the air motor.
- » Coat output shaft with oil or grease.
- » Store the air motor in a dry environment.

# Summary of the hazards with protective means:

Hot surfaces - misalignment	Check for misalignment which can cause heat up of the bearings.
Hot surfaces - bearings	Bearings shall be inspected and replaced according to operation and replacement instructions as mentioned in this manual by authorised staff.
Hot surfaces - deposit	Prior to start up remove all deposit of the surface.
Electrostatic charging	The motor shall be bonded together to other metal parts and to earth with a earth resistance of maximum 1 $M\Omega$ .
Electrostatic charging	Before use clean only with damp cloth.

### **Rebuild instructions**

These motors are made to precise tolerances and it is vital for efficient operation to achive minimum clearances throughout. Every clearance represents an air leakage path from inlet to exhaust, which will detract from the starting and running characteristics.

The spacing of the rotor is of prime importance in two ways: 1 - rotor to end covers (side clearance) (Cs)

nominally 0.050 mm (0.002")

2 - rotor to body casing (top clearance) (Ct) nominally 0.050 mm (0.002")

To achieve the side clearance each repair kit has a series of plastic shims, colour coded to different thicknesses.

Purple = 0.025 mm (0.001")
Blue = 0.050 mm (0.002")
Green = 0.076 mm (0.003")
Orange or Brown = 0.102 mm (0.004")

This range of vane motors has three styles of rotor locations.

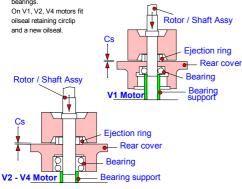
V1 rotor location by single row bearing at each end.

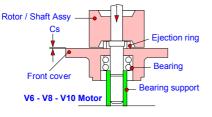
V2 - V4 rotor location by one double row bearing in rear cover.

V2 - V4 rotor location by one double row bearing in rear cover.
V6 - V8 - V10 rotor location by one double row bearing in front cover.

#### Assembly details

All parts must be clean and it is recommended that new oilseals and blades are fitted as a matter of course. Press all bearings fully home into their respective covers, pressing only on the outer track to prevent damaging the bearings.





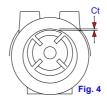
Take the location cover for your particular motor i.e. V2 - V4 rear cover, V6 - V8 - V10 front cover and rear screwed cover for V1 unit.

Provide a good support on the inner bearing track, as the shaft fit is very tight, to provide rotor location.

Place blade ejector ring central on cover and press rotor / shaft assembly down until there is a clearance, Cs of 0.050 mm (0.002") between rotor and cover, check this clearance is even all around the rotor.

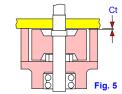
Fit a blue plastic body gasket to the cover, lowering the body into position over the rotor assembly, locating on the existing dowels.

NOTE: Ensure the body is the correct way round i.e. port arrows towards the output shaft.

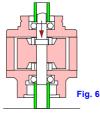


Tighten body bolts and check top clearance, Ct, see Fig No. 4 This should be 0.050 mm (0.002") if there is a problem with this then then reposition and drill for new dowels. Insert second ejection ring, fit new blades, it may be neccessary to work the lower ejection ring across in order to fit the opposite blade.

Refer to Fig No. 5 (axial end clerance, Cs). Measure this by putting a straight edge across the body, then use feeler gauges in the gap between rotor and body face. This should be made up to 0.050 mm (0.002") or as close as possible using the gasket set provided.



Oil inside the motor, ensuring it is free to rotate. On V2 to V10 motors the second cover should slide down into position easily as the second bearing fit is non locating.



On V1 motors (see Fig No. 6) this bearing fit takes up location and the inner track of both the lower and upper bearings must be supported.

Locate cover on dowels and tighten bolts. (V1 fit rear plug). Check for rotation. The motor may be tight at first due to hydraulic lock on the oil just used.

On V1 motors only fit front oilseal and circlip if the motor is free to rotate.

V6, V8, V10 motors - the front oilseal is carried in a separate housing, this should be fitted next, followed by the rear bearing cover and its gasket.

V2, V4 motors - the rear bearing cover and ists 'O' ring can now be fitted.

For trouble free running and long life it is vital that the rotor spacing is correct.

Use only genuine replacement blades as these have a special profile to give correct ejection and contact with the rotor body. Always ensure adequate lubrication.

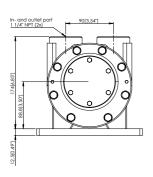
Never run motors completely off load at high speed.

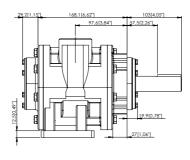
# **Trouble shooting**

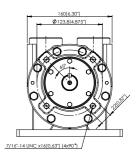
Problem				Conclusion
Low speed	Low Torque	Won't run	Runs well then slows down	
x	×	×		There may be dirt or foreign material in the motor.  Inspect and flush the motor.
х	×	x		There may be internal rust in the motor. Inspect and flush the motor.
x	x			The air pressure may be too low. Increase the air pressure.
×	x			Incoming airline too narrow. Replace with a bigger one.
	x		x	Limited exhaust. Inspect and repair.
x	х	x	x	Motor is running hot. Perform a service maintenance.
	x		x	Inadequate air flow from air source. Inspect and repair.
	x		х	Air source is too far from the motor. Put the air source closer.

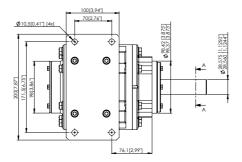
# **Dimensions, Performances & Spare Parts**

## Main dimensions VA10J&X









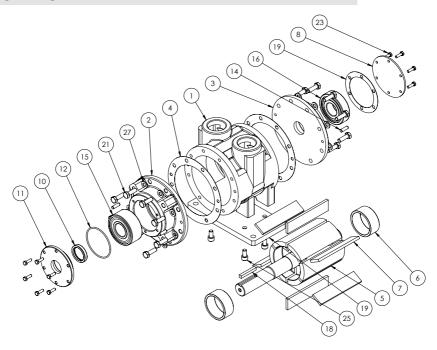


- » Maximum temperature -20°C to +60°C (-4°F to +140°F)
- » Silencer supplied with motor
- » Max. Overhung Force on shaft 1750 N (400 lbf.)
- » Axial loads should be kept to a minimum
- » Mass 22 kg

Note: With air inlet at port 'A', rotation is clockwise looking on shaft.

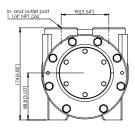
For opposite rotation reverse ports.

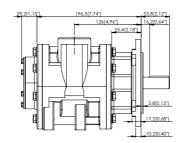
# Spare parts list VA10J&X

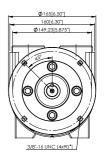


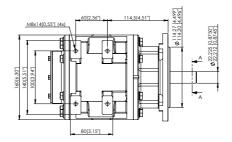
Part No.	Description	Qty	Kit No.
790-001	Body NPT	1	
790-003	Front plate	1	
790-002	Back plate	1	
790-062	Gasket		799-910
790-911	Rotor	1	
790-006	Ejection ring	2	
790-005	Rotor blade	6	799-910
790-008	Cover plate	1	
			799-910
		1	799-910
		1	
		1	799-910
	Dowel pin	4	
807-037	Bearing	1	
807-019	Bearing		
811-024	Key		
790-015	Foot (VA 10J only)		
802-033	Screw		
	Screw	12	
	Screw (VA 10J only)	4	
803-019	Washer	16	
799-910	V10 Seal Kit		
	790-001 790-003 790-002 790-062 790-911 790-005 790-005 790-007 808-038 806-018 807-019 811-024 790-005 808-058 807-019 808-038 807-019	P90-001	P90-001   Body NPT   1   P90-003   Front plate   1   P90-003   Bock plate   1   P90-005   Bock plate   1   P90-0062   Gasket   P90-006   Gasket   P90-006   Gasket   1   P90-006   Gasket   1   P90-009   Gasket   1   P90-007   Seal housing   1   P90-007   Seal housing   1   P90-007   Body P90-009   P90-00

## **Main dimensions VA10C**









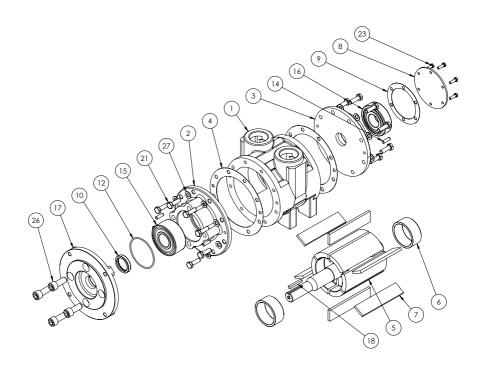


- » Maximum temperature -20°C to +60°C (-4°F to +140°F)
- » Silencer supplied with motor
- » Max. Overhung Force on shaft 1750 N (400 lbf.)
- » Axial loads should be kept to a minimum
- » Mass 24 kg

Note: With air inlet at port 'A', rotation is clockwise looking on shaft.

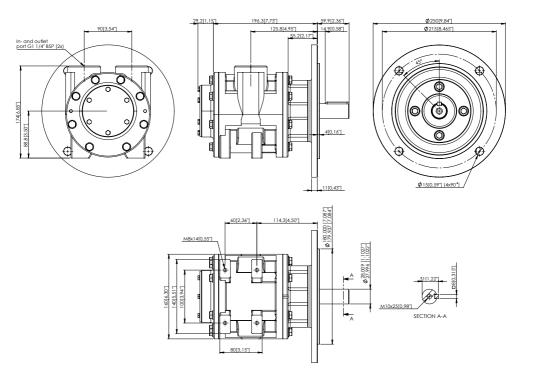
For opposite rotation reverse ports.

# Spare parts list VA10C



Item	Part No.	Description	Qty	Kit No.
1	790-001	Body NPT	1	
2	790-026	Front plate	1	
3	790-002	Back plate	1	
4	790-062	Gasket		799-910
4 5 6 7	790-910	Rotor	1	
6	790-006	Ejection ring	2	
	790-005	Rotor blade	6	799-910
8	790-008	Cover plate	1	
9	790-009	Gasket	1	799-910
10	808-058	Shaft seal	1	799-910
12	808-038	O-ring	1	799-910
14	806-018	Dowel pin	4	
15	807-019	Bearing	1	
16	807-037	Bearing	1	
17	790-018	Flange	1	
18	811-020	Key	1	
21	802-033	Screw	16	
23	802-007	Screw	6	
26	809-019	Screw	4	
27	803-019	Washer	16	
	799-910	V10 Seal Kit		

# Main dimensions VS10C

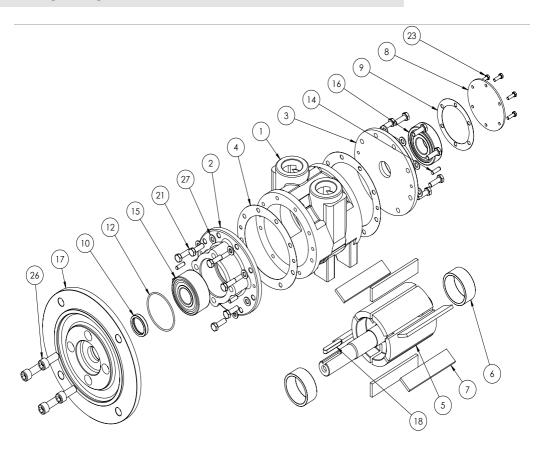


- » Maximum temperature -20°C to +60°C (-4°F to +140°F)
- » Silencer supplied with motor
- » Max. Overhung Force on shaft 1750 N (400 lbf.)
- » Axial loads should be kept to a minimum
- » Mass 27 kg

Note: With air inlet at port 'A', rotation is clockwise looking on shaft.

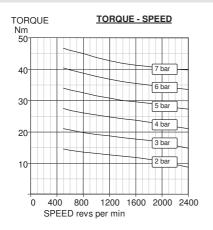
For opposite rotation reverse ports.

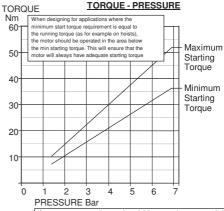
# Spare parts list VS10C



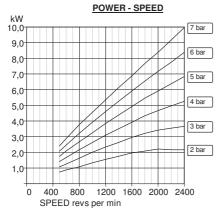
ltem	Part No.	Description	Qty	Kit No.
1	790-101	Body BSP	1	
2	790-026	Front plate	1	
3	790-002	Back plate	1	
4 5 6 7	790-062	Gasket		799-910
5	790-923	Rotor	1	
6	790-006	Ejection ring	2	
	790-005	Rotor blade	6	799-910
8	790-008	Cover plate	1	
9	790-009	Gasket	1	799-910
10	808-058	Shaft seal	1	799-910
12	808-038	O-ring	1	799-910
14	806-018	Dowel pin	4	
15	807-037	Bearing	1	
16	807-019	Bearing	1	
17	790-037	Flange	1	
18	811-033	Key		
21	802-033	Screw	16	
23	802-007	Screw	6	
26	809-019	Screw	4	
27	803-019	Washer	16	
	799-910	V10 Seal Kit		

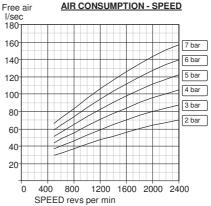
## Performance VA10J&X | VS10C | VA10C





A pressure regulator should be used to control the air pressure to the motor, to limit the maximum output torque applied to the driven assembly.





- » Silencer supplied with motor.
- » Motor is reversible.
- » Maximum temperature ATEX -20°C to +60°C (-4°F to +140°F).
- » Maximum temperature for non ATEX applications: -20°C to +80°C (-4°F to +176°F).

initial startup, inject oil into the inlet port.
Lubricator drop rate 7-8 drop / minute
continuous operations
Lubricator drop rate 14-16 drop / minute
intermittent operation.

lubricator suitable for the flow required. Prior to

### Airsupply lubrication and filtration:

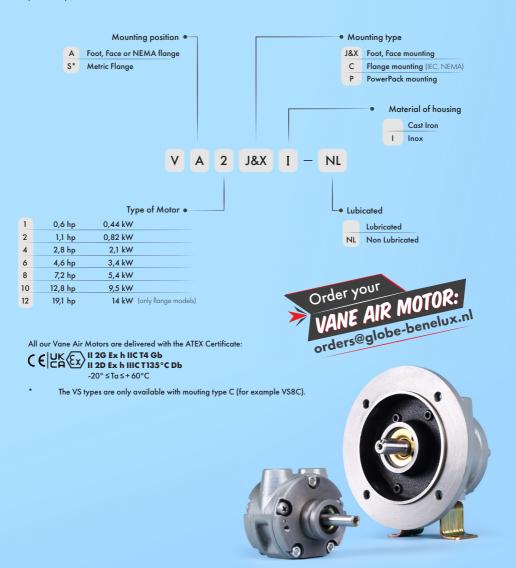
Use 64 micron filtration or better. Choose a

## Maximum speed 2400 rpm

Life time depends highly on operational speed and air pressure.

# **Ordering code**

Select easily with the ordering code your version and order it at our sales team. Do you have special wishes? For example ATEX Certified, oil free, different mountings, gearboxes, brakes etc. You name it and we make it possible. Contact us for your wishes and we will be happy to engineer a proposal to suit your requirements.



## **EU ATEX Certification**



Boerhaaveweg 9-11 2408 AD Alphen aan den Rijn The Netherlands Tel: +31-172-6608 e-mail: info@globe-benelux.nl www.globe-benelux.nl

#### **EU-Declaration of Conformity**

We, GLOBE Airmotors B.V.:

Hereby declare in our sole responsibility, that the following pneumatic vane motor types:

GLOBE V... series vane air motor

are in accordance with the Directives:

2014/34/EU, Equipment and Protective Systems in Potentially Explosive Atmospheres 2006/42/EC, Machinery Directive

The Equipment has been designed and manufactured to the relevant parts of the following harmonized standards:

> EN 1127-1:2019, EN-ISO 80079-36:2016, EN-ISO 80079-37:2016. EN 12100:2010, EN 82079-1:2012, EN 4414:2010

The ATEX marking of the equipment is:

GLOBE Airmotors B.V. Boerhaaveweg 9-11, 2408 AD Alphen aan den Rijn

Model: ..

Serial number: ...

Year build: ....

II 2G Ex h IIC T4 Gb II 2D Ex h IIIC T135°C Db -20° ≤ Ta ≤ + 60°C

A complete Technical File is held at the GLOBE Airmotors B.V office in Alphen aan den Rijn (NL). A copy of the Technical File is archived with file number EXVF-000015 at ExVeritas in the UK.

Alphen a/d Riin 19-02-2022 GLOB AIRMOTORS BV

2468 AD Alphen a/d Riin The Netherlands

## **UK ATEX Certification**



Boerhaaveweg 9-11 2408 AD Alphen aan den Rijn The Netherlands Tel: +31-172-6608 e-mail: info@globe-benelux.nl www.globe-benelux.nl

#### **UKCA-Declaration of Conformity**

We, GLOBE Airmotors B.V.:

Hereby declare in our sole responsibility, that the following pneumatic vane motor types:

GLOBE V...series vane air motor

are in accordance with the Directives:

Equipment and Protective Systems Intended for use in Potentially Explosive
Atmospheres Regulations 2016
Supply of Machinery (Safety) Regulations 2008

The Equipment has been designed and manufactured to the relevant parts of the following harmonized standards:

EN 1127-1:2019, EN-ISO 80079-36:2016, EN-ISO 80079-37:2016, EN 12100:2010, EN 82079-1:2012, EN 4414:2010

The UKCA marking of the equipment is:

GLOBE Airmotors B.V. Boerhaaveweg 9-11, 2408 AD Alphen aan den Rijn



Serial number: .... Year build: ....



A complete Technical File is held at the GLOBE Airmotors B.V office in Alphen aan den Rijn (NL). A copy of the Technical File is archived with file number EXVF-000015 at ExVeritas in the UK.

Alphen a/d Rijn 19-02-2022 GLOBE Airmotors BV

J.G.G. Wannet Director

## **CE Certification**



Boerhaaveweg 9-11 2408 AD Alphen aan den Rijn The Netherlands

Tel: +31-172-6608 e-mail: info@globe-benelux.nl www.globe-benelux.nl

### **EC - DECLARATION OF CONFORMITY**

According to annex II.1.A of the Machinery directive 2006/42/EC

Complies with the provisions of the following EG-directive\* and standards\*

#### GLOBE vane air motors:

VA1X, VA1X-NL, VA2J&X, VS2C, VA2C, VA2P, VS2C-NL, VA2C-NL, VA2J&X-NL, VA4J&X, VS4C, VA4C, VA4C-NL, VA4CI, VS4CI, VA4CI-NL, VS4CI-NL, VA4J&X-NL, VS4Z, VA4P, VS4C-NL, VA6J&X, VS6C, VA6C, VA6C-NL, VA6P, VA6J&X-NL, VS6C-NL, VS6CI, VA8J&X, VS8C, VA8C, VA8J&X-NL, VA8C-NL, VS8C-NL, VA10J&X, VS10C, VA10C, VS10C-S02, VA10J&X-S02, VA10J&X-NL, VA10C-NL, VS10C-NL, VS12C, VA12C, VS12C-NL, VA12C-NL

Complies with the provisions of the following EG-directive\* and standards\*

Machinery directive 2006/42/EC

Safety of machines – basic terminology

EN-ISO 12100:2010

Preparation for using the instructions – structure, content en presentation part 1:

EN-IEC 82079-1:2012

General assumptions and detailed demands

Pneumatics – general rules and safety regulations for systems and parts

EN-ISO 4414:2010

The technical file is present inside the EER and can be drawn from name and the address of the manufacturer by the undersigned of this declaration.

Netherlands, Alphen aan den Rijn

Date: 19-02-2022

Signature assignee of

Name: J.G.G. Wanne

Warnet

rector

<sup>\*</sup> incl. possible changes in the directive and standards during the signing of this declaration.

## **UKCA** Certification



Boerhaaveweg 9-11 2408 AD Alphen aan den Rijn The Netherlands Tel: +31-172-6608

e-mail: info@globe-benelux.nl www.globe-benelux.nl

### **UKCA - DECLARATION OF CONFORMITY**

According to Supply of Machinery (Safety) Regulations 2008

Complies with the provisions of the following EG-directive\* and standards\*

#### GLOBE vane air motors:

VA1X, VA1X-NL, VA2J&X, VS2C, VA2C, VA2P, VS2C-NL, VA2C-NL, VA2J&X-NL, VA4J&X, VS4C, VA4C, VA4C-NL, VA4CI, VS4CI, VA4CI-NL, VS4CI-NL, VA4J&X-NL, VS4Z, VA4P, VS4C-NL, VA6J&X, VS6C, VA6C, VA6C-NL, VA6P, VA6J&X-NL, VS6C-NL, VS6C-NL, VS6CI, VA8J&X, VS8C, VA8C, VA8J&X-NL, VA8C-NL, VS8C-NL, VA10J&X, VS10C, VA10C, VS10C-S02, VA10J&X-S02, VA10J&X-NL, VA10C-NL, VS10C-NL, VS12C, VA12C, VS12C-NL, VA12C-NL

Complies with the provisions of the following EG-directive\* and standards\*

Supply of Machinery (Safety) Regulations 2008

Safety of machines – basic terminology
 EN-ISO 12100:2010

• Preparation for using the instructions – structure, content en presentation part 1:

EN-IEC 82079-1:2012

General assumptions and detailed demands

Pneumatics – general rules and safety regulations for systems and parts

EN-ISO 4414:2010

\* incl. possible changes in the directive and standards during the signing of this declaration.

The technical file can be drawn from name and the address of the manufacturer by the undersigned of this declaration

Netherlands, Alphen aan den

Rijn Date: 19-02-2022

Signature assignee of

Name: J.G.G. Wanne

**Director** 

# **Options & Accessories**

The GLOBE Vane Air Motors can be equipped with options and accessories. We offer a broad range of options and accessories.











Want something special?
Please let us know, our Airmotors specialists
are happy to help.

This document, as well as the CAD data of the vane air motors are available for download on globe-airmotors.com.

globe-airmotors.com