

# VAQ

# EXTERNAL PNEUMATIC VIBRATOR

Technical Data	
Parts manual	136.1218
Product manual	PM 12
Design File	DF

Customs Tariff Codes		
	Product	Spares
Pokers		
Frequency Convertors		

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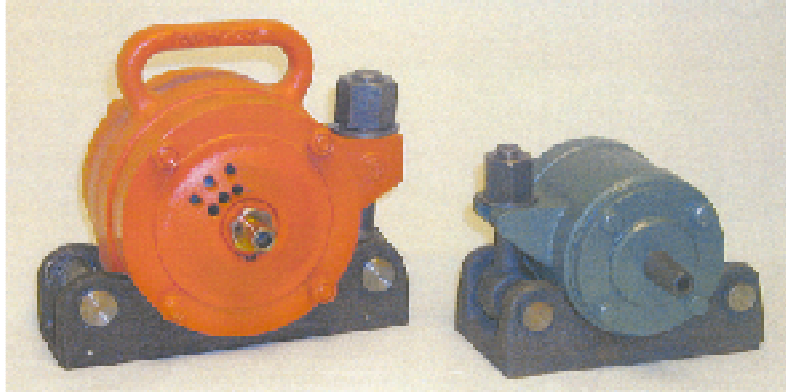
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## Dealer



# VAQ EXTERNAL PNEUMATIC VIBRATOR MANUAL



## WARRANTY

We warrant that the product is free from defects in materials and workmanship. If such a fault is found within six months from date of purchase from an approved dealer, the company will replace free of charge all failed components.

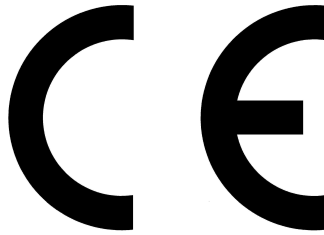
Any failed unit must be returned carriage paid to the factory for inspection.

The warranty does not cover failure attributable to wear and tear, accidental damage, site or operator misuse or lack of maintenance.

We will not accept units under warranty that third parties have attempted to repair or disassembled



# VAQ EXTERNAL PNEUMATIC VIBRATOR MANUAL



## EC DECLARATION OF CONFORMITY AND INCORPORATION

We Declare under our sole responsibility that the products  
VE and VAQ Pneumatic external vibrators

To which this certificate relates are in conformity with the following standards:  
EN 191/L, EN 292/2

Following the provisions of Directives:  
89/39/EEC, 95/68/EEC

This equipment must not be put into service until the machinery into  
which it is to be incorporated has been declared in conformity with  
the provisions of the above mentioned directive.

Certified by

*David Aston*

General Manager

Date

Wednesday, December 12, 2007

# VAQ EXTERNAL PNEUMATIC VIBRATOR MANUAL

## Description

This extremely simple design high frequency vibrator attains maximum working forces with just two moving parts and five basic components.

Because it has no bearings usual maintenance and wear problems have been eliminated without sacrifice of high operating speeds.

## Accessories

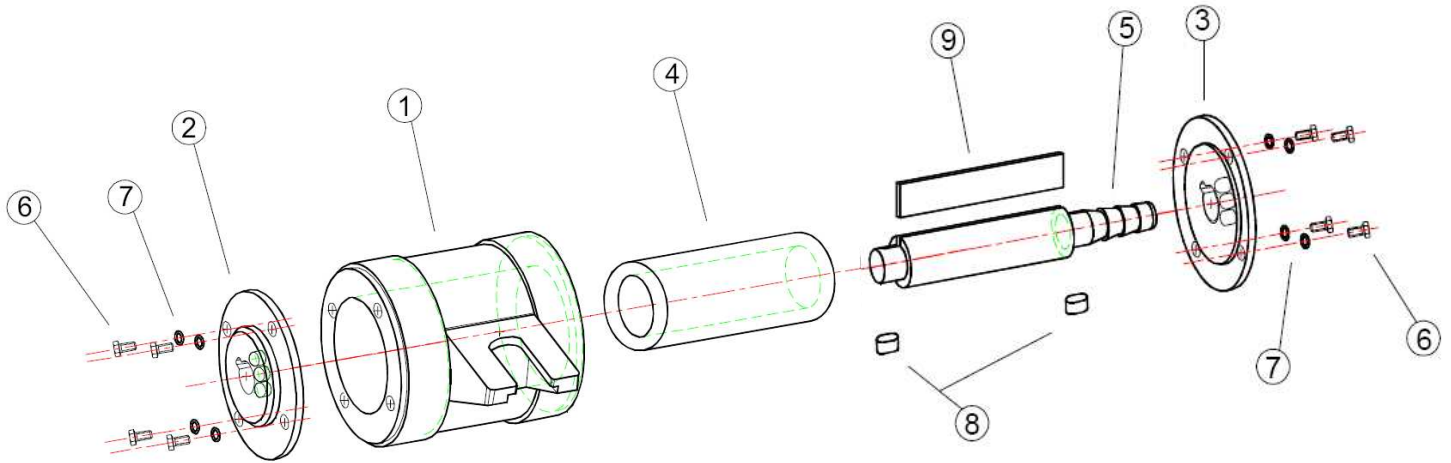
Air supply hose assembly, comprising of 1m hose, on/off cock, quick release coupling with gauze and hose dips.

## Technical Characteristics

	VAQ 75	VAQ 120	VAQ 2500	VAQ 4500	VAQ 4000	VAQ 6000
Part Number						
Centrifugal Force Kgs	750	1200	2500	4500	4000	6000
Amplitude mm	1.2	1.5	3.8	6.7	2.1	3.1
Frequency v.p.m	13000	13000	9000	8500	15000	14500
Air Consumption l/m	1170	1170	1450	1660	1630	1840
Weight Kgs	7.9	8.0	13.2	16.5	15.8	17.0
Bracket used	QR 2	QR 2	QR 4	QR 4	QR 4	QR 4

# VAQ EXTERNAL PNEUMATIC VIBRATOR MANUAL

## Models VAQ 75 & 120 Parts List



### Spares Parts

Ref.	Qty	Part Number	Description
1	1	2572	Body
2	1	642	Front Plate
3	1	644	Rear Plate
4	1	533	Rotor 75
4	1	647	Rotor 120
5	1	643	Shaft
6	8	170	M8x25 Hex Bolts or Skt/Hd capscrews
7	8	169	M8 Spring washers
8	2	530	Shaft Key
9	1	532	Vane

# VAQ EXTERNAL PNEUMATIC VIBRATOR MANUAL

## Models VAQ 75 & 120 User Guide

### **Installation & General Maintenance**

- (1) Vibrators are delivered without lubrication. Ensure to add oil before starting vibrator.
- (2) Before connecting the vibrator, ensure it is clean from any dirt or water.
- (3) Once a day or every two hours of continuous use, introduce 4 cc of 20/30 S.A.E. non-detergent oil into the vibrator airline.
- (4) Ensure vibrator cradle (QR Bracket) is fully welded to the equipment and that the Swing Bolt is locked in position and nut tightened securely. Check this regularly.

### **Dismantling Instructions**

Remove hose from end of shaft (5). Remove Bolts (6) and spring washers (7). Using a soft drift, drive shaft (5) out of front plate (2). The shaft (5) will come out with the rear plate (3) still attached. The front plate (2) remains mounted in the vibrator body (3). Care must be taken not to drop and lose the keys (8) which may fall out of the shaft (5). Remove rotor (4) from the assembly. Clean all parts with paraffin and dry carefully. Check the length of the rotor (4) 100 - 0.06/0.08mm when new. Maximum wear of the rotors must not exceed 0.2mm as speed and power is greatly reduced. Check vane and replace with a new one if worn.

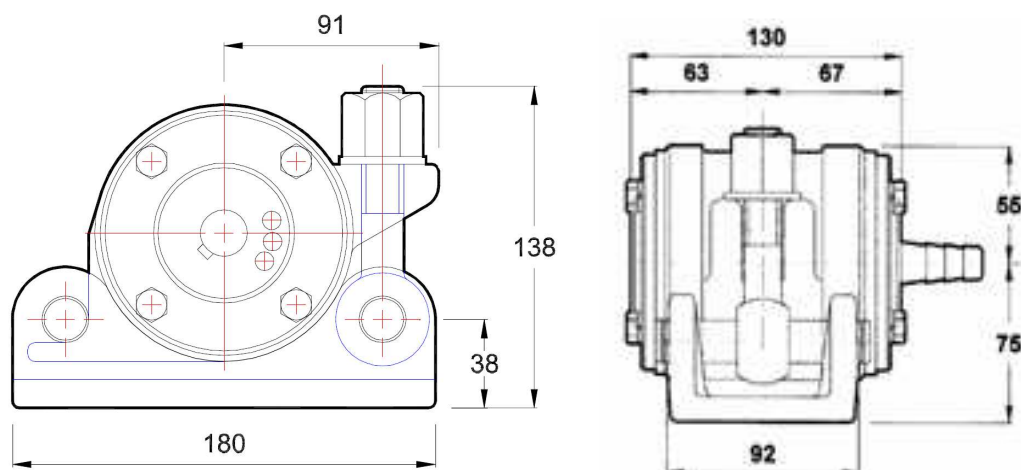
### **Re-assembly Instructions**

When fitting a new vane (9) ensure that it fits freely but snug in the groove of the shaft (5). If necessary, carefully sand down the thickness with fine emery paper. The top of the vane must be flush or slightly under the lip of the groove in the shaft. Lightly oil all parts. Place the body (2), with front plate (2) attached, on a bench with front plate downwards. Locate rotor (4) centrally in body (2). After re-fitting vane (9) in the groove of the shaft (5) fit keys (8) and insert shaft (5) with rear plate (3) attached through the rotor and locate in the front plate (2). Check alignment of key (8) in front plate (2) and tap together. Refit bolts and washers. Refit hose.

### **NOTE**

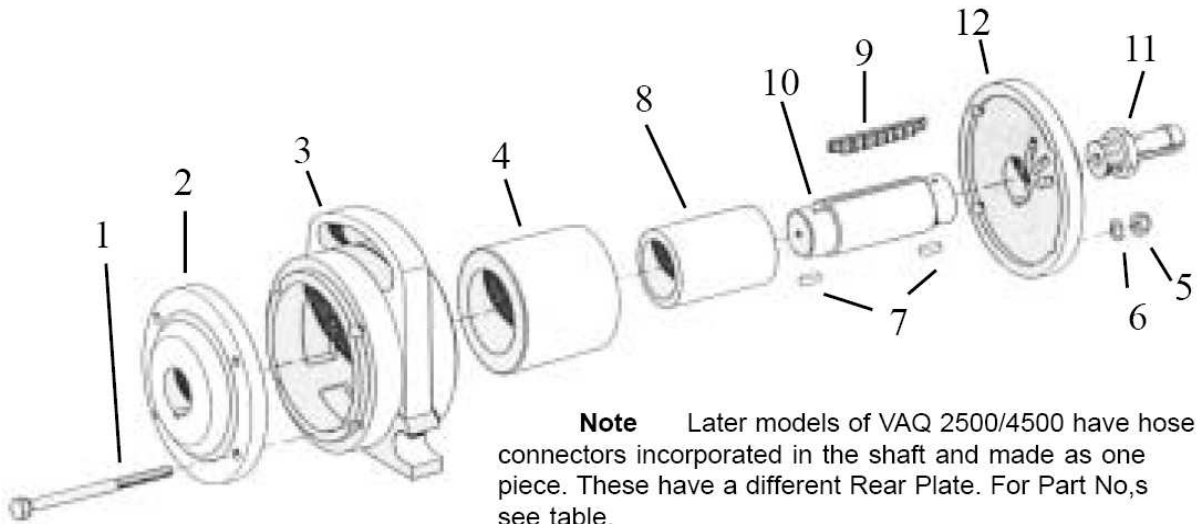
- Always ensure compressed air is off during installation or maintenance.**
- Always ensure only filtered air is used and the filter cleaned regularly.**
- Always check the weld of cradles for fatigue cracks regularly.**
- Always check swing bolt is securely tightened regularly.**
- Always check tightness of hose connections regularly.**

*VAQ 75 & 120 are fitted to QR2 weld-on bracket*



# VAQ EXTERNAL PNEUMATIC VIBRATOR MANUAL

## Models VAQ 2500, 4500, 4000 & 6000 Parts List



**Note** Later models of VAQ 2500/4500 have hose connectors incorporated in the shaft and made as one piece. These have a different Rear Plate. For Part No,s see table.

### Spare Parts

Ref. No.	Qty.	Description	Part No.				
			VAQ 2500	VAQ 4500	VAQ 4000	VAQ 4000S	VAQ 6000
1	4	Bolt	3056	3056	3056	3056	3056
2	1	Front Plate	182006	182006	182004	182004	182004
3	1	Body	181004	181004	181004	181004	181004
4	1	Outer Rotor	187008	187006	187004	187010	187002
5	4	Nut	380	380	380	380	380
6	4	Spring Washer	936	936	936	936	936
7	2	Key	18054	18054	2705	2705	2705
8	1	Inner Rotor	184004	184004	184002	N/A	181002
9	1	Vane	2967	2967	1599	187101	1599
<b>Threaded End Plates</b>							
10	1	Shaft	185004	185004	185002	185006	185002
11	1	Hose Connector	18808	18808	188006	18008	188006
12	1	Rear Plate (th'd)	183006	183006	183004	183008	183004
13	1	Silencer	N/A	N/A	N/A	187102	N/A
<b>Shaft and Hose Connector as one</b>					<b>Threaded Shaft</b>		
10/11	1	Shaft	841014	841015	841006	N/A	841006
11	-	Hose Connector	N/A	N/A	141050	N/A	141050
12	1	Rear Plate	841014	841014	841005	N/A	841005



# VAQ EXTERNAL PNEUMATIC VIBRATOR MANUAL

## Models VAQ 2500, 4500, 4000 & 6000 User Guide

### **Installation & General Maintenance**

- (1) Vibrators are delivered without lubrication. Ensure to add oil before starting vibrator.
- (2) Before connecting the vibrator, ensure the is clean from any dirt or water.
- (3) Once a day or every two hours of continuous use, introduce 4 cc of 20/30 S.A.E. non-detergent oil into the vibrator airline.
- (4) Ensure vibrator cradle (QR Bracket) is fully welded to the equipment and that the Swing Bolt is locked in position and nut tightened securely. Check this regularly.

### **Dismantling Instructions**

Unscrew hose connector (11) and nuts (5), remove spring washers (6) and withdraw bolts (1). Place the vibrator body (3) on a vice locating the raised centre sections with front plate (2) on top. Using a soft drift, drive shaft (10) out of front plate (2). The shaft (10) will come out with the rear plate (12) still attached. The front plate (2) remains mounted in the vibrator body (3). Care must be taken not to drop and lose the keys (7) which may fall out of the shaft (10). Remove outer rotor (4) and inner rotor (8) from the assembly. Clean all parts with paraffin and dry carefully. Check the length of the rotors: Inner (12) 100mm - outer (4) 99.5mm when new. Maximum wear of the rotors must not exceed 0.2mm as speed and power is greatly reduced.

### **Re-assembly Instructions**

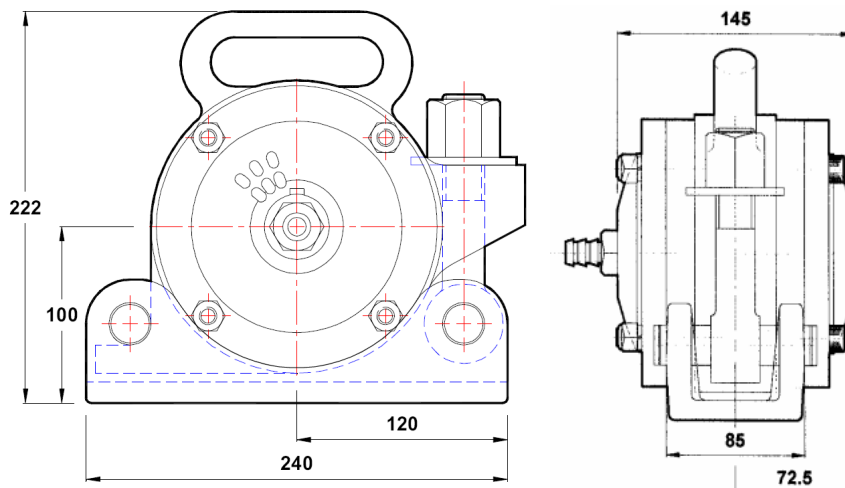
When fitting a new vane (9) ensure that the grooves are as shown in the exploded view, and that it fits freely but snug in the groove of the shaft (10). If necessary, carefully sand down the thickness with fine emery paper. The top of the vane must be flush or slightly under the lip of the groove in the shaft. Lightly oil all parts. Place the body (3), with front plate (2) attached, on a bench with front plate downwards. Locate inner rotor (8) and outer rotor (4) centrally in body (3). After re-fitting vane (9) in the groove (10) fit key (7) and insert shaft (10) with rear plate (12) attached through through the rotors and locate on the front plate (2). Check alignment of key (7) in front plate (5). Fit hose connector.

### **NOTE**

- Always ensure compressed air is off during installation or maintenance.**
- Always ensure only filtered air is used and the filter cleaned regularly.**
- Always check the weld of cradles for fatigue cracks regularly.**
- Always check swing bolt is securely tightened regularly.**
- Always check tightness of hose connections regularly.**

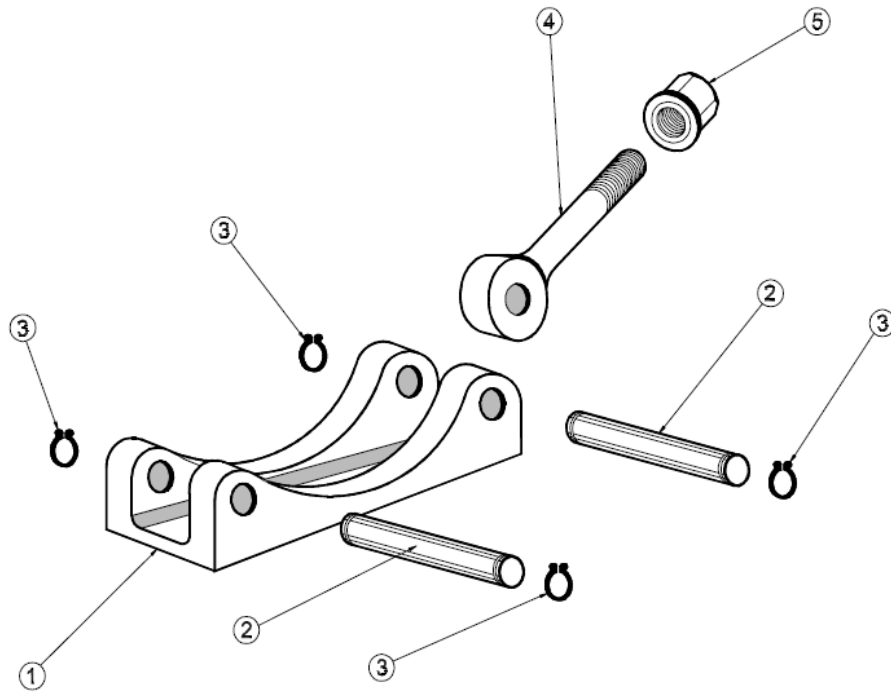
**VAQ 2500, 4500, 4000 & 6000 fitted to QR4 weld - on bracket**

**Note (VAQ4000S is a special version fitted with a silencer)**



# VAQ EXTERNAL PNEUMATIC VIBRATOR MANUAL

## CRADLE BASE PARTS LIST



## DIMENSIONS

Type	Length	Width	Weight
QR 2	171	86	3.15
QR 4	230	86	4.75

Item No.	Qty	Description	QR2 Part No.	QR4 Part No.
1	1	Cradle	2572	1915
2	2	Shaft	4365	4364
3	4	Circlip	4366	4293
4	1	Draw bolt	2573	1948
5	1	Draw nut	1935	1953



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**Dealer**

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