

**Performance Table**

Feature		Output	Increment	Control	
Venturi Pump	Aspiration	20-500 mmHg	10 mmHg	Fix-Linear	
Peristaltic Pump (Optional)	Aspiration	10-60 cc/min	2 cc/min	Fix-Linear	
	Vacuum Limit	30-500 mmHg	10 mmHg	Fix-Linear	
Irrigation		Fluid serum pressure related to bottle height	Any position of bottle height	Manual	
Phaco Power		5-100 % PWR	5 % PWR	Fix-Linear	
Phaco Control	Continuous	-	-	Fix-Linear	
	Pulse	1-15 PPS	1 PPS	Fix	
	Burst	30-300 msec	5 msec	Fix	
	Micro Pulse	Cool 1	42 PPS/25 % duty cycle	-	Fix
		Cool 2	56 PPS/33 % duty cycle	-	Fix
Cool 3		100 PPS/60 % duty cycle	-	Fix	
Vitreotomy Cutter (Pneumatic Activator)		60-1200 CPM	10 CPM	Fix	
Bipolar Coagulation		10-100 % PWR	10 % PWR	Fix-Linear	



Manufacturer of PHACO VITRECTOMY Machines & Ophthalmic Devices



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**اولین و تنها تولید کننده  
 دستگاههای  
 جراحی چشم  
 (فیکوویترکتومی)  
 در ایران و خاور میانه**

**شرکت مهندسی پزشکی عالی پیام**  
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**CE 2195**  
 Morvarid Catalog  
 C1504 - 01





## Chamber Stability

Chamber stability is secured in high vacuum by:

- Anti collapse system  
Int. & Ext. Anti Surge Device (A.S.D)
- Pressurizing bottle serum by using disposable BAP (bottle air pressure) set

## Memory Setting

- Three memories are available for quick switch between predefined surgery parameters.
- Surgeon can adjust all parameters for one, two or three memories in setup menu and use these predefined settings during surgery.
- More than 50 surgeons can have their own preset setting via setup menu.

## Graphical User Interface

- 10.4 inch touch screen LED display
- Intuitive graphical user interface
- Voice feedback
- User friendly visual interface

## Irrigation Feed

- Gravity feed irrigation by adjusting bottle height
- Pressurized feed irrigation by air injection into the bottle via (BAP) set

## Foot Controller

Multifunctional dual linear foot controller let surgeon have linear control of phaco power and aspiration independently. It is possible to change the surgery modes via foot controller by pressing mode switch.



Phaco Anterior Vitrectomy machine with dual pump, peristaltic & venturi pump flexibility in :

- Aspiration flow control via peristaltic pump
- Aspiration vacuum control via venturi pump fluidics
- System for using each pump

## Optional & Surgery Accessories

### ● Peristaltic Module

Morvarid is upgradable from venturi pump to dual pump system by installing the peristaltic module in left side of main device



### ● Phaco Handpiece

Powerful titanium 40 KHz long term sterilizable (10-100)  $\mu$ m strike length



### ● Venturi Fluidics Set

- Venturi disposable cassette
- Venturi reusable twin silicon tube



### ● Vit Cutter & I/A set

(30psi; 20G & 23G)  
Reusable irrigation / aspiration bimanual set



### ● Compressor Trolley

Morvarid is mounting on particular trolley which provides required compressed air to feed the device and including automatic IV pole.

# An Intelligent, Trustworthy Medical Device in Ophthalmology



## Machine Information

- **Output air for bottle pressurizing:**  
30-160 mmHg
- **Aspiration system:**  
Dual pump (venturi + peristaltic)
- **Foot controller:**  
Dual linear foot pedal include reflux switch, surgery mode switch and permanent Irrigation switch
- **Surgery features:**
  - Phaco with 4 control manner, 40-42 KHz
  - Anterior vitrectomy up to 1200 CPM
  - Irrigation / Aspiration
  - Bipolar coagulation: 7.5 W, 450 KHz

## General Specification

- **Electrical power:**  
90-264 VAC, 47-63 Hz, 200 W
- **Input compressed air:**  
Venturi pump: 4-8 bar, 35 L/min max.  
Peristaltic pump: 4-6 bar, 5 L/min
- **Dimensions:**  
50 (W) x 35 (D) x 21 (H)
- **Net weight:**  
18 Kg

