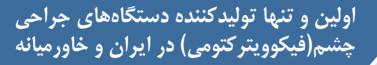
PERFORMANCE TABLE

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	Gravity feed irrigation		5-110 cm	Any position of bottle height	Manual
	Pressurized feed irrigation		30-160 mmHg	5 mmHg	From Screen
Phaco Power			5-100 % PWR	5 % PWR	Fix-Linear
Phaco Cotrol	rol Continuous		-	-	Fix-Linear
	Pulse		1-15 PPS	1 PPS	Fix
	Burst		30-300 msec	5 msec	Fix
	Micro pulse	Cool1	42 PPS/25 % duty cycle	-	Fix
		Cool2	56 PPS/33 % duty cycle	-	Fix
		Cool3	100 PPS/60 % duty cycle	-	Fix
Vitrectomy Cutter (pneumatic Activator)			60-1200 CPM	10 CPM	Fix
Bipolar Coagulation			10-100 % PWR	10 % PWR	Fix-Linear











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Design: assessing

MORVARID

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

Machine Information

- Output Air for bottle pressurizing: 30-160 mmHg
- Aspiration system: Dual pump (Venturi + Peristaltic)
- Foot controller: Dual linear foot controller 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, 1 MHZ

General Specification

Electrical Power: 90-264 VAC, 47-50 Hz, 200 W

Input Compressed Air:

- Venturi pump: 4-8 bar, 35 L/min Maximum
- Peristaltic pump: 4-6 bar, 5 L/min
- Dimensions: 50 (W)x35 (D)x21 (H)
- Net weight: 18 Kg
- An intelligent , trustworthy medical device in ophthalmology

Chamber Stability

Chamber stability is secured in high vacuum by:

- Anti collapse system by using Anti surge device
- Pressurizing bottle serum by using disposable BAP (Bottle Air Pressure) set



Vitrectomy and I/A Set

- Vit cutter(30psi; 20Ga & 23Ga)
- Reusable Irrigation / Aspiration bimanual set

Memory Setting Three memories are available

- for quick switch between predefined surgery parameters. (Sculpting, Chop and Epinucleus)
- 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.

Irrigation Feed

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



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

■ Trolley Include air source

Morvarid is could be mounting on particular trolley which provide required compressed air for feed in the device and including automatic IV Pole

Graphical User Interface

- 10.4 inch touch screen LED display
- Intuitive Graphical User Interface
- Voice feedback
- User friendly, User Interface



Foot Controller

Multifunctional Dual linear foot controller let surgeon to have linear control of Phaco power and Aspiration independently. It is possible to change the surgery modes via foot controller by pressing Mode Switch.



Cutters & Probes

- Standard Vitrectomy Cutters 20, 23 , 25 Ga
- High Speed Vit. Probes 20, 23, 25 Ga
- Illumination Probes 20, 23, 25 Ga

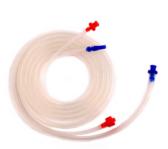


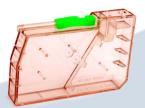




Phaco Handpiece

Powerful titanium 40 KHz long term sterilizable 10 -100 µm stroke.





Venturi Fluidics Set

- Venturi disposable cassette
- Venturi reusable twin silicon tube

