

24k® Pump

24k Pump, High Performance, Brilliantly Controlled

Safe: Engineered with redundant pressure safety controls and intraarticular pressure sensing.

High Performance: Software controlled Wave Mode and independent pressure, flow and shaver suction controls.

Balance: Maintains optimum joint distension throughout the full range of outflow and shaver suction levels.

Component Features and Benefits:



24k® Pump

- *Dual rotors and pinch valve* – allows the pump to operate in inflow/outflow/shaver suction mode which provides a complete fluid management solution.
- *Single Rotor Operation* – Easy set up to operate with inflow only 10k® tube set for simple diagnostic arthroscopy.
- *Independent pressure, flow and shaver suction controls* – Increases the surgeon's ability to tailor the function of the pump to the surgical requirements.
- *Selectable Wave Mode* - Keeps the joint crystal clear even with 2 portal knee arthroscopy.
- *Independent tamponade and flush control* – Simplifies controlling bleeding and clearing debris with the Clearfield button.
- *Drain button* – A simple and effective method of removing the remaining fluid from the joint.



24k Shaver Sensor:

- *Clamshell design* – provides an unobtrusive connection to shaver and cannot interfere with shaver operation.
- *Spring loaded clip* - Easily connects on to shaver handpiece cord.
- *Tuned RF antenna* – Allows the sensor to work with any shaver handpiece
- *Shaver handpiece icon* - Appears on the pump display to confirm correct connection and operation.



24k Remote:

- *Multi-function buttons* – Provide greater utility with remote as opposed to tamponade/flush blue pedal/red pedal foot control.
- *Blue Color* – Easily distinguishable from 10k remote.
- *Fully autoclavable* – Allows the remote to be included with Linvatec camera, scope and sheaths

Product Codes:

Cat. No.	Description
24k	24k Pump
24k900	24k Shaver Sensor
24k191	24k Shaver Sensor Extension Cable
C8115	24k Remote
24k100	24k Outflow/Shaver Suction Tube Set
24kTIPS	24k TIPS Tube Set
10k100	10k Inflow Tube Set
10k100D	10k Inflow Tube Set for Dyonics
10k150	10k Inflow Tube Set with Suction Line
10k500	10k Laparoscopic Tube Set
10k505	10k Laparoscopic Tube Set with Probe
C7104	AC Power Cord 115 VAC
C7105	AC Power Cord 230 VAC

Support Materials:

CMR 6011	24k Pump High Performance MRD
CMR 6012	24k Pump High Performance MRD Supplemental and Reference Guide
CMR 6010	24k100 Outflow/Shaver Suction Tube Set MRD
CBR 6007	24k Pump Brochure
COS 6024	24k Pump Quick Set Up Guide
COS 6044	24k Pump Remote Control Card
COS 6042	24k Pump Evaluation Form

24k[®] Pump Evaluation Pearls

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24k[®] Evaluation Pearls:

24k Pump Recommended Settings for Evaluations

- *Knee* – Use Knee Preset for Wave Mode. Adjust Outflow to High; Suction to Medium.
- *Shoulder* – Use Surgery Preset for Shoulder Mode.
- *Small Joint* – Use Surgery Preset for Small Joint Mode.
- *Hip* – Use Surgery Preset for Small Joint Mode.

24k Pump Pearls and Troubleshooting:



- Always “Press for Success” the tab on the outflow cassette to ensure it is captured by cassette retaining latch.
- If low water use is key, first establish good visibility with higher flow rates then reduce flow to demonstrate fluid conservation.
- If joint won't clear of debris, first check blue lights on outflow to ensure it is on.
- In 3 portal knee surgery if pump won't clear joint, check outflow cannula for occlusions while pump is running.
- If no suction to shaver, 1st, check blue lights to see if suction is on; 2nd, check shaver handpiece to see if suction lever is open; 3rd, check to see if shaver icon is appearing on pump display.
- If using 24k100 tube set, joint will only clear automatically if the outflow tube is attached.
- Dyonics inflow scope sheaths flow so poorly that with In-Line Pressure Sensing start at 40 mmHg higher than normal set pressure and be prepared to raise pressure. Check flow rate by running pump with tube set attached to scope sheath outside of joint.
- If using TIPS, do not close inflow stopcock, TIPS Alarm will result.
- When using TIPS in 3 portal knee, if pressure sensing outflow becomes occluded, poor outflow and TIPS Alarm will occur.

24k Shaver Sensor Pearls and Troubleshooting:



- Attached shaver sensor to straight portion of shaver handpiece cord.
- Do not attach to red strain relief boot.
- For best performance always install shaver sensor.
- If RF wand activates suction on pump, separate shaver handpiece cord from RF cord.

24k Remote Pearls and Troubleshooting:



- Autoclave with door open.
- All features available from the remote except for surgical presets.
- Replacement buttons are available as a service part.

Set Point Guideline for In-Line Pressure Sensing Verses Competitors:

	Davol	Arthrex	Dyonics	FMS
24k Pump	Minus 40mmHg	2 times Arthrex set pressure	Plus 40mmHg	2 times FMS set pressure
Example	Davol = 50 24k = 10	Arthrex = 50 24k = 100	Dyonics = 50 24k = 90	FMS = 50 24k = 100