# Ondal Medical Display Carriers

The rapid development of new medical display technologies poses a significant challenge for hospitals. In **increasingly technologically complex environments** a 26'' or 32'' monitor may be required today, a 42'' monitor in five years time. Today a four-fold system may be used in diagnostics, in five years time a large screen system may be preferred.

Ondal Medical Display solutions are ready for today's requirements and can easily handle future requirements – with the goal of **enabling the best workflow** and **patient throughput**. Cables can be routed through the arm systems easily and can be replaced with minimal effort.
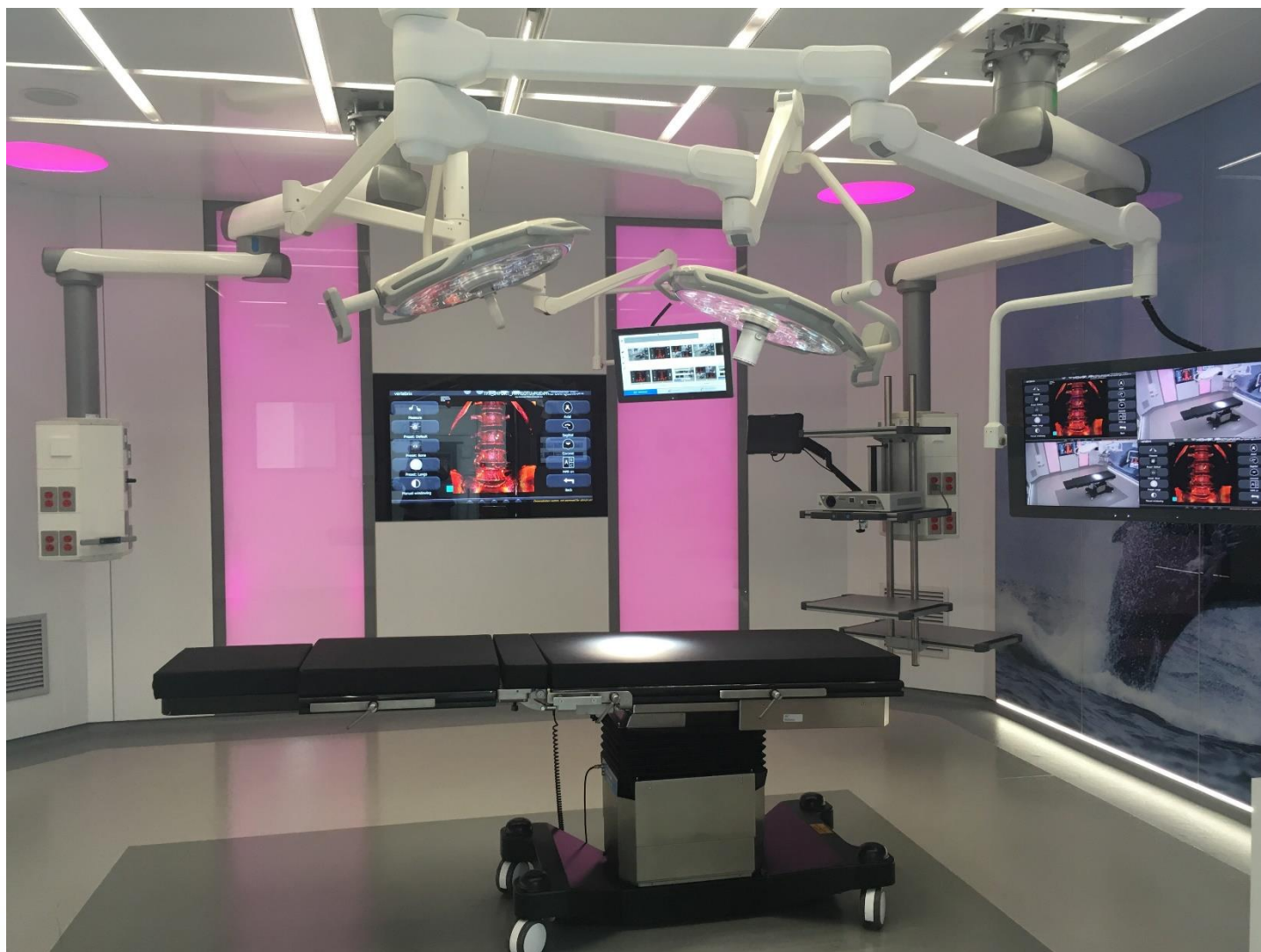
Ondal's mission is to support medical teams by providing monitor carriers with **best in class hygiene, vertical and horizontal movement** and with state of the art monitor tilting and handle options - **meeting the high international medical hygiene and safety standards**.

This booklet provides insights into Ondal's offering of **surgical and diagnostic solutions** of monitors in the following sizes:
-   Up to 1 x 42''
-   Up to 2 x 32''
-   Up to 8 x 24'' and
-   Up to 1 Large Screen, ≤ 70''

Photo credit: Karl Storz

Surgical Monitor Carriers

Ondal Surgical Monitor Carriers are designed for **Standard Operating Rooms, Hybrid Operating Room and Endoscopic Rooms**, for environments in which rooms have to be turned over quickly and where monitors have to be **re-adjusted for every surgeon's preference, helping the medical team to optimize their workflow.**

A **clean and safe Operating Room** is created, on the one hand, by moving as much equipment as possible onto the ceiling, and on the other hand, by offering large cable routing capacity, avoiding cable clutter and enabling fast cleaning. Also the **removable and sterilizable handles will prevent micro-organism build up.**

The smooth movement and large tilt angle of Ondal medical display systems perfectly **support surgeons, assistants and nurses during surgical procedures**. Monitors up to 1 x 42'' or 2 x 32''' can be mounted using the following Ondal monitor carrier configurations:
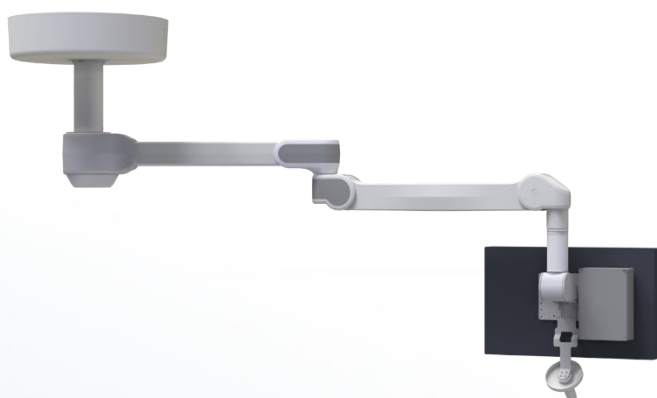

Up to 1 x 32"

Up to 2 x 21"

VarioView 32 | Dual
Tilting: +90° / -30°
Handle: Sterilizable, removable

Up to 1 x 42"

Up to 2 x 32"

Vista Single | Dual
Tilting: +10° / -60°
Optional accessory box
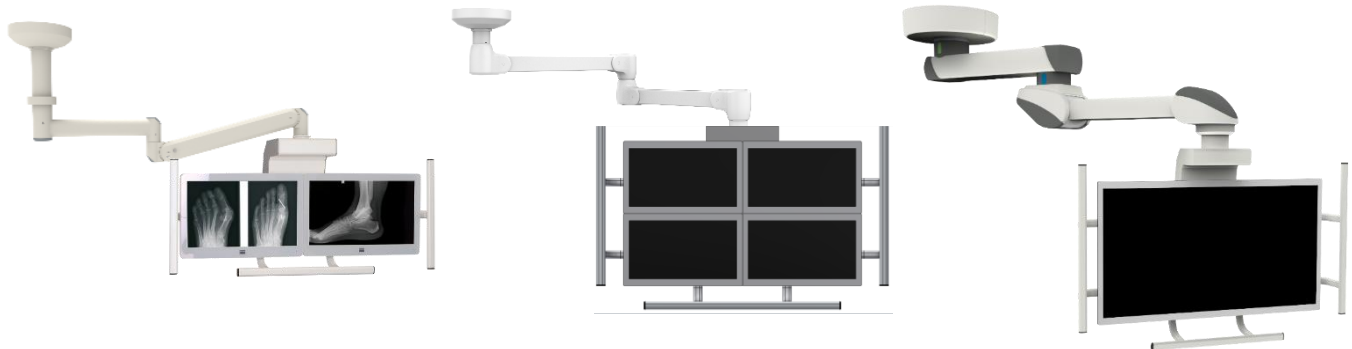Handle options: stainless steel | sterilizable/removable | handles for disposable sleeves

Diagnostic Monitor Carriers

Ondal diagnostic medical display carriers are used with imaging systems in **radiology, cardio-vascular procedures, and hybrid operating rooms**. The multiple monitor and large screen carriers provide fluoroscopy live and reference pictures, ultrasound and PACS data – a perfect platform to be **displayed simultaneously.**

The monitor carriers are moved using ergonomically shaped handles for **maximum grip and safe operation**. Handles are available for the bottom, lateral and rear of the system. Additionally the operating handles offer **protection** from collisions with walls or other equipment.

Monitors up to 1 x 70'' or 8 x 24'', with a payload of up to **180 kg**, ''' can be mounted using the following Ondal monitor carrier configurations:

Large Screen | 2/3/4/6 x 32" | 8 x 24"
CEMOR
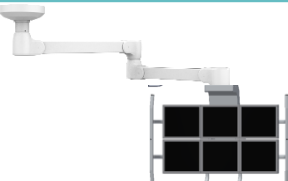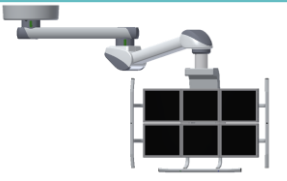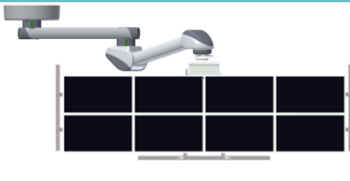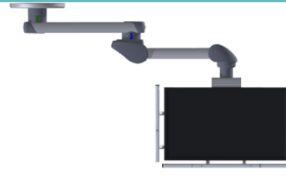
SpacePort	VALiA X	MediLift 180
Payload up to 57 kg	Payload up to 110 kg	Payload up to 180 kg
Reach: up to 2.2 m	Reach: up to 2.2 m	Reach: up to 2.6 m
Handles: front, side and rear	Handles: front, side and rear	Handles: front, side and rear
Friction brake	Friction brake	Friction or electro-magnetic brake

VALiA X available Q3/ 2022

The rail-based design principle of the diagnostic medical display systems allows for the installation of up to eight flat screen monitors or a single large screen. The **modularity** of the monitor carrier systems even supports easily replacing a 4X, 6X or 8X system with a single large screen system. This provides an amazing amount of **flexibility and upgradability**.
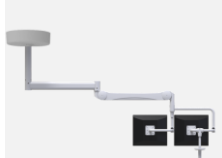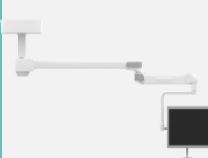
Imaging Solutions (Sample Configurations)

ondal®
Medical Systems

1 Medical Display	2 Medical Displays	3 Medical Displays	4 Medical Displays
MD21+/MD26+: up to 21/26 kg	MD26+/MD40+: up to 26/40 kg	SpacePort 45/57: up to 40/57 kg	VALiA X up to 110 Kg
Cable passage: 253/500 mm²	Cable passage: 500 mm²	Cable passage: 784 mm²	Cable passage: min. 1.550 mm²
Max. reach: 2.1 m/1.9 m (VALiA S)	Reach: 3.1 m/2.2 m *** (VALiA C)	Max. reach: 2.2 m	Max. reach: 2.2 m
CEMOR® Smart: 1 x 24''****	CEMOR® Smart: 2 x 24''****	CEMOR®: 3 x 32''	CEMOR®: 4 x 32''
Yoke Dead weight: 6.5-8.5 kg	Yoke Dead weight: 6.5-8.5 kg	Yoke Dead weight: 14.7 kg	Yoke Dead weight: 17 kg

6 MD (< 8,5 kg monitors)	6 MD (> 8,5 kg monitors)	8 Medical Displays	Large Screen (LS)
VALiA X up to 110 kg	MediLift: up to 180 kg	MediLift: up to 180 kg	MediLift: up to 180 kg
Cable passage: 1550 mm²	Cable passage: 3000 mm² *)	Cable passage: 2500 mm² **)	Cable passage: 2500 mm² **)
Brake: friction	Brake: friction	Brake: electro magnetic	Brake: electro magnetic
Max. reach: 2.2 m	Max. reach: 2.6 m	Max. reach: 2.6 m	Max. reach: 2.6 m
CEMOR®: 6 x 32''	CEMOR®: 6 x 32''	CEMOR®: 8 x 24''	CEMOR®: 1 x LS up to 70''
Yoke Dead weight: 30 kg	Yoke Dead weight: 30 kg	Yoke Dead weight: 33 kg	Yoke Dead weight: 28 kg

*<80 kg payload **>80 kg payload
***VALiA C + MD26+ =3.1 m; VALIA C + MD40+ =2.2 m
****currently up to 2 x 24'' registered; up to 3 x 32'' feasible on request (Z7);

Surgical Solutions (Sample Configurations)

	One Medical Display	
Up to 1 x 24''	• CEMOR A1-N - up to 10 kg • Tilting: +15°/-30° • Value Spring arm • Cable passage: 150 mm² (tbc) • Yoke Dead weight: 2.4 kg • Value Suspension System	
Up to 1 x 32''	• VarioView 32 - up to 18 kg • Tilting: +90°/-15° • MD21+(21kg) / MD26+(26 kg) • Cable passage: 253/500 mm² • Yoke Dead weight: 4.5/5.2 kg • VALiA S	
Up to 1 x 42''	• Vista Single • Tilting: +10°/-60° • MD40+ (up to 40 kg) • Cable passage: 500 mm² • Yoke Dead weight: 3.5 kg • VALiA C	

	Two Medical Displays	
Up to 2 x ~21''	• VarioView Dual (< 6 kg MD**) • Tilting +90°/-15° • 1 x MD21+ • Cable passage: 253 mm² • Yoke Dead weight: 9 kg • VALiA S	
Up to 2 x 26''	• Vista Dual (< 8kg MD->MD26) • Tilting: +10°/-60° • MD26+(26kg)	MD40+(40kg) • Cable passage: 500 mm² • Yoke Dead weight: 7 kg • VALiA S	VALiA C	
Up to 2 x 32''	• Vista Dual (Accessories*) • Tilting: +10°/-60° • incl. Accessories Box* • MD40+ (up to 40 kg) • Yoke Dead weight: 7 kg • VALiA C	

Handles CEMOR A1-N: fixed stainless steel handle
Handles VarioView 32 | Dual: removable / sterilizable handle
Handles Vista: 1: fixed stainless steel handle: 2. removable / sterilizable handle 3. handle for disposable sterile sleeves

Choice of Monitor Carriers

Maximum monitor sizes and suspension system payloads

	Payload	1-fold	2-fold	3-fold	4-fold	6-fold	8-fold	Large Screen	Compatible Suspension Systems
CEMOR A1-N **CEMOR A1-N+**	Up to 10 kg	Up to 24"							VALiA MD21 VALiA MD21+ ACROBAT 2000 ACROBAT 3000 OndaSpace
VarioView 32	Up to 18 kg	Up to 32"							VALiA MD21 VALiA MD21+ ACROBAT 2000 ACROBAT 3000
Vista Single	Up to 44 kg (VALiA)	Up to 42"							VALiA MD21 VALiA MD21+ VALiA MD23i+ VALiA MD26+ VALiA MD40+ VALiA MD44i+
VarioView Dual	Up to 15 kg		Up to 21"						VALiA MD21+ ACROBAT 2000 ACROBAT 3000 OndaSpace
Vista Dual	Up to 44 kg (VALiA)		Up to 32"						VALiA MD21+ VALiA MD23i+ VALiA MD26+ VALiA MD40+ VALiA MD44i+
CEMOR Smart	Up to 44 kg if combined with **VALiA**	Up to 24"	Up to 24"						VALiA MD21+ VALiA MD23i+ VALiA MD26+ VALiA MD40+ VALiA MD44i+ SpacePort
CEMOR	Up to 57 kg if combined with **SpacePort**		Up to 32"	Up to 32"	Up to 32"			Up to 55"	VALiA MD21+ VALiA MD23i+ VALiA MD26+ VALiA MD40+ VALiA MD44i+ VALiA X MediLift OndaSpace SpacePort
	Up to 75 kg if combined with **VALiA X**		Up to 32"	Up to 32"	Up to 32"	Up to 32"	Up to 24"	Up to 60"	
	Up to 180 kg if combined with **MediLift**		Up to 32"	Up to 32"	Up to 32"	Up to 32"	Up to 24"	Up to 70"	

Monitor Carrier Mounting

Ondal Medical Display Solutions can be mounted stand alone, combined with lights on a Central Axis or installed in tandem with a surgical boom, an x-ray shield or a ceiling mounted camera.

Individual Mounting

The single suspension system will enable best horizontal and vertical adjustment, thanks to generous arm lengths in combination with state of the art monitor tilting.

The small footprint will support image viewing wherever required in order to provide the surgical team with optimal conditions to work together as a team.

Part of the Central Axis

Ondal offers Central Axes up to four arms installed above the operating table - for best viewing of endoscopic, PACS and room images. Cables with DVI or similar connectors can be routed through the systems as-is. The large cable capacity shortens installation time. HDC Technology allows unlimited (>360°) rotation.
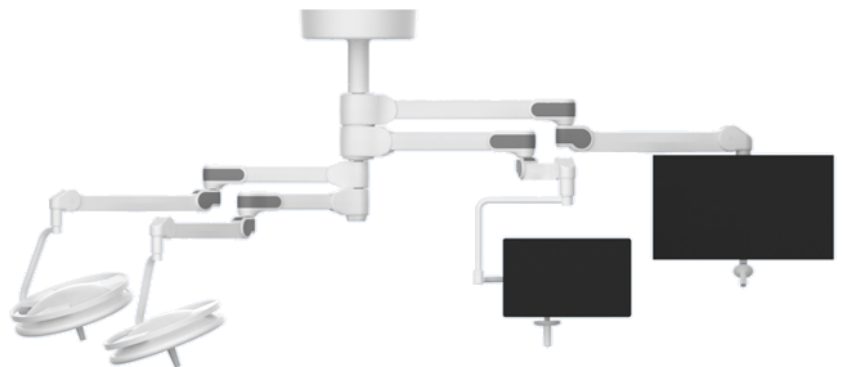
Tandem Configuration

Tandem installations reduce complexity in the ceiling and lower the installation cost.

The benefits of tandem mounting are:
• A smaller footprint
• Focused positioning, hence collision protection and
• Cost saving in terms of product cost plus installation cost

Mounting a single system on a tandem plate allows for future expansion. With proper planning, a second system can be added with little effort.

Photo credit: KLS Martin

Benefits at a Glance

Accurate positioning

Based on **50+ years experience** Ondal spring arms stay where they are supposed to stay. **70% of hospitals worldwide** rely on Ondal spring arms.

Longest arms in the market

In Hybrid Operating Rooms Ondal spring arms provide the best flexibility of any suspension system. With a horizontal **reach up to 3.2 m,** the system can be installed outside the ceiling rail or may entirely **eliminate the need for a rail.**

Ergonomic use

Best in class bearings allow easy movement, which means monitor carriers can be quickly re-positioned between procedures. This reduced room turnover time helps to maximize the use of the OR.

Outstanding up-/down movement range

With its large vertical movement range, extraordinarily low positions can be achieved, which makes any **seated procedure more effective.** When not in use, the system can be parked high, out of the way, so that **headspace is free and clear**.

Hygienic and safe operation

Hygiene requirements and safety become every day more important in an OR environment. Cables are completely enclosed within the Ondal system, which helps **streamline the cleaning process** and prevents accidental separation of cable and connector. They are also **designed to have all the cords inside** in order to reduce potential trip hazards.

Future fit

Effortless cable management is necessary nowadays as cables may have to be exchanged after a certain time. The intelligent cable routing from Ondal enables **quick cable installation and retrofit** which will keep downtime at its minimum. Also, **HD, 4K and 8K signals** can be transmitted easily with the VALiA HDC solution.