MULTIX PRO/TOP, VERTIX Solitaire, VERTIX PRO/TOP

Modular X-ray systems for radiographic applications

Data sheet

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SIEMENS

MULTIX PRO/TOP
VERTIX Solitaire
VERTIX PRO/TOP

Modular X-ray systems for radiographic applications

When it's a question of accurate diagnoses, imaging procedures such as X-ray examinations are still indispensable.

With Siemens, you'll find a reliable partner with more than 100 years of experience in classic radiography – experience from which your hospital or private practice can benefit.

MULTIX TOP and MULTIX PRO for radiographic rooms are prime examples of this experience.

MULTIX radiographic systems feature outstanding image quality with minimal dose and provide a first-rate basis for diagnoses.
They make repeat exposures a thing of the past and get the images to the physician fast.

Radiological technologists will appreciate the system's flexibility and advantages such as simple operation, easy accessibility, and a large range of movement with respect to the X-ray assembly and patient positioning.

The flexibility allows the technologist to concentrate on the patient.

Improved quality of life for all through efficient health care – just as it should be.

The MULTIX family of radiographic systems features a modular design that allows you to tailor the configuration to meet your diagnostic needs:

– lungs, skeletal system, trauma

– bedside exposures

– routine, emergency room diagnostics

– orthopedic applications

– tomographic exposures

MULTIX Upgrade

The similar MULTIX TOP and MULTIX PRO systems can be upgraded with a detector and an imaging system.
With the addition of the POLYDOROS IT generator, the AXIOM Multix MU offers the same capabilities as the AXIOM Multix MP or MT.

What you need:	Our solution:
Cost-effective entry-level floor-mounted system with height-adjustable table	MULTIX PRO
Floor-mounted solution with height-adjustable table suitable for room heights of 221 cm min., including locking devices	Military MULTIX PRO
Floor-mounted system with height-adjustable table and electronic tomography (planigraphy)	MULTIX PRO P
Ceiling-mounted solution for optimum table access, and adjustable table height	MULTIX TOP
Ceiling-mounted solution for optimum table access with adjustable table height and electronic tomography (planigraphy)	MULTIX TOP P
Ceiling-mounted solution for optimum table access, adjustable table height and ACSS (Automatic Cassette Size Sensing)	MULTIX TOP ACSS
Ceiling-mounted solution for optimum table access, adjustable table height, ACSS** and synchronization	MULTIX TOP ACSS N
Ceiling-mounted solution for optimum table access, adjustable table height, ACSS**, and electronic tomography (planigraphy)	MULTIX TOP ACCS P
Ceiling-mounted solution for optimum table access, adjustable table height, ACSS**, electronic tomography (planigraphy), and synchronization	MULTIX TOP ACCS P N
Ceiling-mounted solution for stand-alone operation	VERTIX Solitaire

In addition:	Our solution:
Bucky wall stand with cassette function with or without ACSS**	VERTIX PRO*
Bucky wall stand with cassette function with or without ACSS** and variable, tiltable Bucky tray	VERTIX TOP*

* Option; ** Automatic Cassette Size Sensing

MULTIX PRO/TOP

With the focus on the user

A pleasant atmosphere, comfort, and short examination times are becoming increasingly more important in the radiology department.

This is where our MULTIX systems really shine.

The MULTIX systems were developed in collaboration with an international team of medical professionals.

The MULTIX TOP system is one of the top choices around the world for fast and simple routine exposures of standing, sitting, or recumbent patients.

The slim design of the patient table allows you free access to the patient from all sides.

Experienced medical staff will notice at first glance what a group of radiological technicians described as "a system that was not developed solely by engineers, but was obviously designed in collaboration with medical staff!"

The system is designed to meet your clinical requirements down to the smallest detail.
Its successful system design explains why more than 7,000 MULTIX systems have been sold to date.

Our radiographic systems offer features as standard equipment that are not readily available with most other systems.

Ergonomics, simplified operation, and radiation reduction:

- The table brakes and height adjustment are controlled via a foot kick-switch that you can customize during the installation process.
- Movable components are easy to adjust.
- X-ray tube and Bucky grid movements are operated with one hand.
- Operating controls are arranged according to their frequency of use.
- The operating elements for movement, collimator light, and tomographic parameters are centrally located.
- Patients can be accessed from all sides, particularly when using the TOP versions, thanks to the slim design of the table base.
- The grid can be easily removed for pediatric exams.
- The Bucky tray is ergonomically rounded to avoid sharp edges.
- Patients up to 227 kg (500 lbs.) can be examined.
- Smooth accessory rails are located along the sides of the table; the corners of the table have corner guards.
- The tabletop is available with optional collision sensing
- The standard automatic exposure control (IONTOMAT) helps prevent repeat exposures.

- The ACSS* cassette function saves time and helps guard against over-exposure of the patient.
- The extremely slim patient table with a tabletop-film distance of 53 ± 2 mm is designed with quality in mind.
- The CAREMAX* dose measurement chamber provides additional radiation information. Upon request, it can be integrated into the collimator with automatic collimation.

A table that gets down to the patient's level.

- Our radiographic tables offer motorized adjustment, allowing children and injured or handicapped patients to be positioned on the table with ease.
- Patients up to 190 cm (74.8") in height can be examined from head to toe without repositioning.

Electronic tomography

- Electrically controlled tomography – without tomographic rods – for rapid and automatic procedures
- Tomographic parameters such as tomographic angle, time, and height can be selected directly at the tube support.
- Motorized adjustable tomographic height (3 mm – 250 mm) can also be indicated on the patient's body via a tomographic height light localizer

* Option

MULTIX PRO/TOP

More cost-effective procedures

- Proven, system-tested components from Siemens
- Low life-cycle costs
- Simple, ergonomic, accurate patient-oriented operation
- High patient throughput
- Standard automatic exposure control

Reliable investment for the future through:

- An upgrade strategy for flat detector integration for the MULTIX TOP systems is available.
  If you're interested, please contact your Siemens representative.
- Optimal image quality with minimal dose.

MULTIX TOP with synchronization

During synchronization, the ceiling stand automatically follows the table lift and the Bucky wall stand*.

The synchronization feature can be selected from the table or from the VERTIX TOP* Bucky wall stand.

You set the SID (source-image distance) of your choice and select synchronization; this remains constant during table movement or height adjustment of the catapult Bucky on the Bucky wall stand.

What does this mean for you? Flexibility and independence, because you need select only one SID setting.

Synchronization can be used to work with the catapult Bucky in the table as well as for free tabletop exposures.

When you select a tomography program on the support arm, the ceiling stand automatically starts at the programmed SID.

* Option

MULTIX TOP

MULTIX PRO
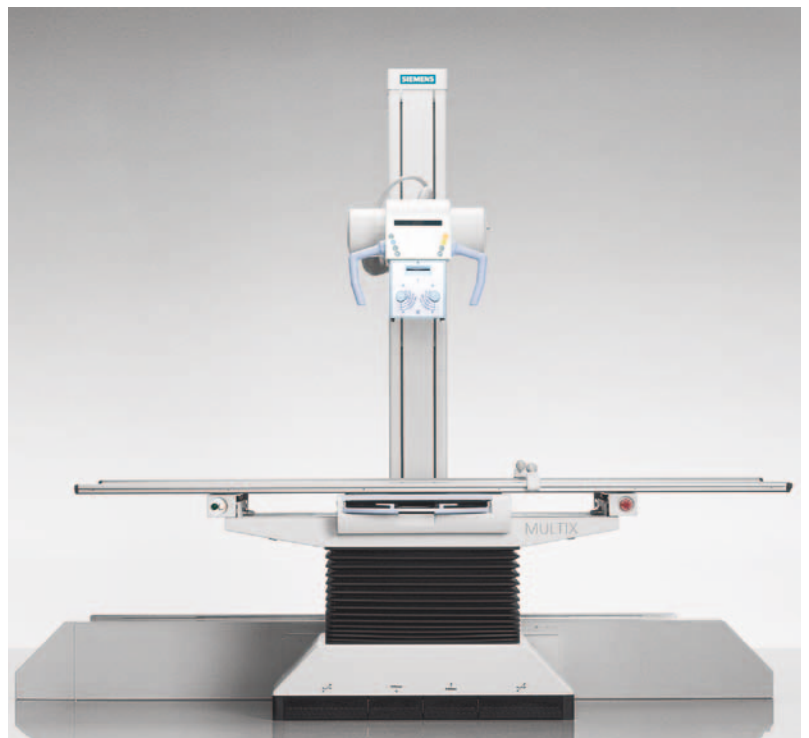
VERTIX Solitaire

The flexible lung and skeletal workstation with ceiling stand and Bucky wall stand*

The VERTIX Solitaire is especially suited for patients positioned on a stretcher and for bedside exposures (i.e., traumatology).

* Option

Table example

VERTIX PRO/TOP

VERTIX PRO* and VERTIX TOP* – two Bucky wall stands that expand your diagnostic capabilities

VERTIX PRO* and VERTIX TOP* complement the MULTIX and have been optimized for examinations of the thorax, abdomen, pelvis, skull, spinal column, and extremities.

VERTIX TOP* offers – in addition to the features above – a Bucky tiltable + 90° to – 20°.

POLYDOROS IT 30 / 55 / 65 / 80

The new generation of POLYDOROS generators

User-friendly operation via membrane keys or touchscreen

- Directly selectable organ programs via the body regions shown

- Workstation selection is integrated into the organ programs

- Tube load processor includes X-ray pause display

- External manual exposure release

Color touchscreen with 1,260 organ programs (with tomo 1,680 organ programs)
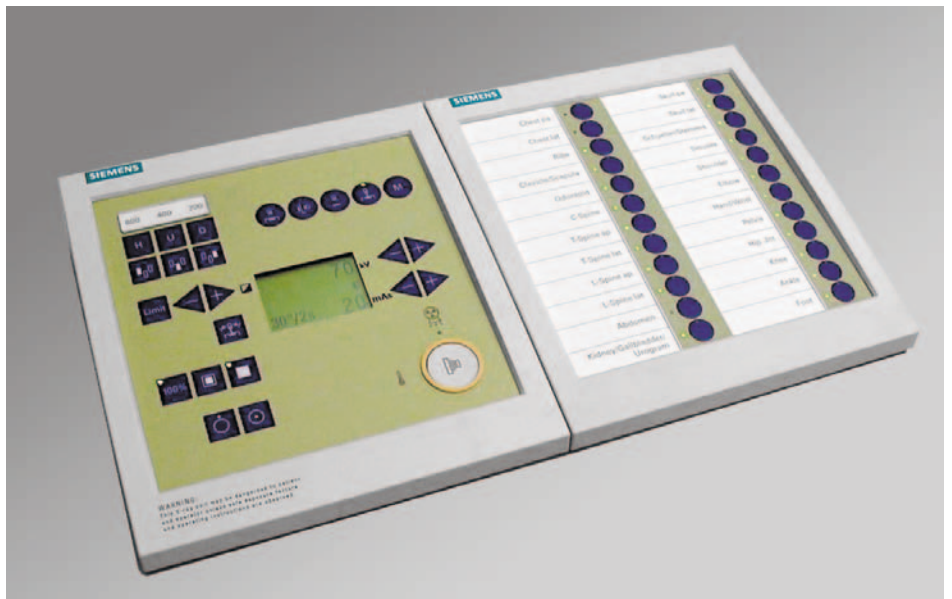
Membrane keys with 72 organ programs (with tomo 96 organ programs)

MULTIX PRO/TOP
VERTIX Solitaire, VERTIX PRO/TOP

Technical Data

Patient table	
Tabletop width	80 cm
Tabletop length	240 cm
Tabletop height (variable, motorized)	59.8 – 88.8 cm
X-ray absorption	≤ 0.7 mm Al (at 100 kV/3.7 Al HVL; IEC 60601-1-3)
Tabletop travel	longitudinal ± 48 cm; transverse ± 13.75 cm
Tabletop material	composite material
Tabletop-to-film distance	53 mm ± 2 mm
Max. patient weight	227 kg (in normal position) (500 lbs)

3D TOP ceiling-mounted tube support	
Travel range	longitudinal 354 cm; transverse 222 cm (optional 322 cm)
Vertical lift	150 cm
Focus-ceiling distance	87.4 cm
Tube rotation	about vertical axis: + 154°, − 182°; detents every 90° about horizontal axis: ± 120°, detent 0°; ± 90°

Catapult Bucky	
Cassette formats	all cassette formats according to IEC, DIN, ANSI standards from 13 cm x 18 cm to 35 cm x 43 cm or 5" x 7" to 14" x 17", vertical and horizontal
Moving transparent grid	Pb 12/40; f_0 = 115 cm
Travel along longitudinal table axis	left 33 cm; right 28 cm (with optional collision sensing 26 cm)

Tube support	
Travel range	160 cm
Tube support rotation	180° (± 90°)
Tube rotation	about horizontal axis ± 120°; detent 0° ± 90°
Focus-to-floor distance	≤ 42 cm to 198 cm

Tomographic equipment	
All settings via central operating console	
Tomographic exposures	planigraphic principle; SID = 115 or 102 cm 40° with 1.2 s and 2.0 s 30° with 0.8 s 20° with 0.6 s 8° with 0.4 s and 0.8 s
Tomographic height	3 mm to 250 mm, digitally adjustable
Tomographic height light localizer*	Display via light localizer on patient's body in range from 30 to 250 mm, with mirror control

* Option

MULTIX PRO/TOP
VERTIX Solitaire, VERTIX PRO/TOP

Technical Data

Collimator	
Inherent filtration (IEC 60601-1-3)	1 mm Al at 70 kV
Full field light localizer	150 W halogen light, timer, laser light localizer (coverable)
Copper prefilter	0.1 mm, 0.2 mm, 0.3 mm, manually or automatically insertable (for ACSS)
Rotation	up to maximum ± 45°, detent at 0°
Square collimation	manual or automatic (for ACSS)

VERTIX PRO* / TOP* Bucky wall stand	
VERTIX PRO*	Bucky wall stand, ACSS***
VERTIX TOP*	Bucky wall stand, ACSS***
Cassette trays	Right or left operation (specify when ordering)
Vertical lift	152 cm
Central beam height	38 cm to 190 cm ± 2 cm above floor level
Cassette formats	all cassette formats according to IEC, DIN, ANSI standards from 13 cm x 18 cm to 35 cm x 43 cm or 5" x 7" to 14" x 17", vertical and horizontal
Moving transparent grid	Pb 13/70; f_0 115, f_0 150, f_0 180 cm**
Object-to-film distance	≤ 42 mm
VERTIX TOP	tiltable Bucky + 90°/– 20° with detent at 0°
X-ray absorption	≤ 0.55 mm Al

High-frequency generators						
POLYDOROS	IT 30 [1]	IT 55	IT 65	IT 80	LX 50*	SX 80*
Output in kW (IEC 60601-2-7)	30	55	65	80	50	80
Exposure voltage	40 kV to 150 kV					
X-ray tube connection (dual-focus X-ray assembly)	1	1	1	1	2	2
Shortest exposure time	2 ms	2 ms	2 ms	2 ms	1 ms	1 ms
mAs area (mA)	0.5-500	0.5-800	0.5-800	0.5-800	0.5-800	0.5-800

MULTIX PRO/TOP
VERTIX Solitaire, VERTIX PRO/TOP

Technical Data

X-ray tube				
	OPTI 150/30/50 HC-100		**OPTITOP 150/40/80 HC-100***	
Max. exposure voltage (IEC 60613)	150 kV		150 kV	
Focal spot nominal value (IEC 60336)	0.6	1.0	0.6	1.0
Nominal output of anode (IEC 60613) (thermal anode reference output = 300 W)	30 kW	50 kW	40 kW	80 kW
Nominal output of anode (thermal anode reference output = 0 W)	45 kW	75 kW	52 kW	103 kW
Optical anode angle (IEC 60788)	12°		12°	
Anode heat dissipation rate	120,000 J/min. (160,000 HU/min.)		120,000 J/min. (160,000 HU/min.)	
Anode heat storage capacity	450,000 J (600,000 HU)		580,000 J (783,000 HU)	
Max. heat storage capacity of the tube housing	1,800,000 J (2,430,000 HU)		1,800,000 J (2,430,000 HU)	
Leakage radiation source assembly (IEC 60601-1-3) (at 150 kV in 1 m distance)	≤ 0.8 mGy/h (450 W)		≤ 0.8 mGy/h (450 W)	
Anode drive	150/180 Hz (8,500 to 10,800 U/min.)		150/180 Hz (8,500 to 10,800 U/min.)	
Complete filtration (IEC 60601-1-3)	≥ 2.5 mm Al/80 kV		≥ 2.5 mm Al/80 kV	
Weight	26 kg		26 kg	

* Option

MULTIX PRO/TOP
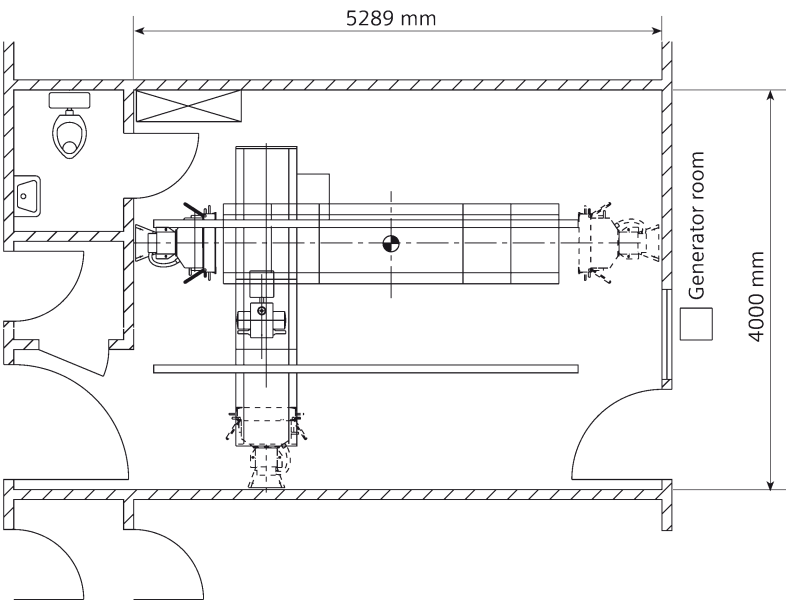# VERTIX Solitaire, VERTIX PRO/TOP

Technical Data

Installation data	
Line voltage at the generator	3-phase 400, 440, 480 V, 50/60 Hz (440, 480 V via pre-transformer)
Permitted tolerance for line voltage	± 10%
Heat dissipation	approx. 300 W
Ambient conditions (operation)	
System	Temperature range: + 10 °C to + 40 °C Relative humidity: 20% to 75% below dew point Barometric pressure: 700 hPa to 1060 hPa
X-ray tube	Temperature range: + 10 °C to + 40 °C Relative humidity: 30% to 75% below dew point Barometric pressure: 700 hPa to 1060 hPa

| System	Approx. weight	Power consumption
MULTIX PRO	680 kg	1.5 kVA
Military MULTIX PRO	700 kg	1.5 kVA
MULTIX PRO P	750 kg	1.5 kVA
MULTIX TOP	360 kg	1.5 kVA
MULTIX TOP P	360 kg	1.5 kVA
MULTIX TOP ACSS	360 kg	1.5 kVA
MULTIX TOP ACSS N	360 kg	1.5 kVA
MULTIX TOP ACSS P	360 kg	1.5 kVA
MULTIX TOP ACSS PN	360 kg	1.5 kVA
3D-TOP ceiling stand	347 – 361 kg	
VERTIX PRO	160 kg	
VERTIX TOP	205 kg	
VERTIX Solitaire	450 kg	0.6 kVA

MULTIX PRO/TOP
VERTIX Solitaire, VERTIX PRO/TOP

Technical Data

Room layout (mm)

5289 mm

Generator room

4000 mm

MULTIX TOP
with VERTIX TOP
(3 var. positions)

5075 mm

Generator room

4115 mm
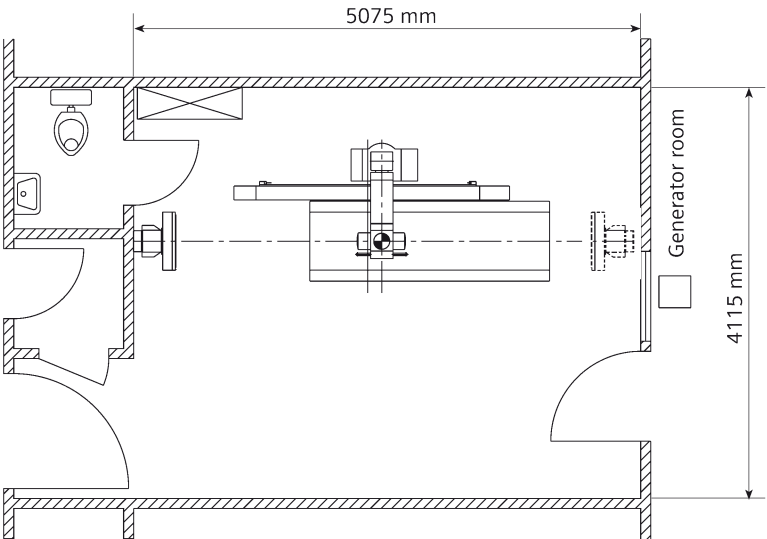
MULTIX PRO
with VERTIX PRO

MULTIX PRO/TOP
VERTIX Solitaire, VERTIX PRO/TOP

Technical Data

Operations

Ergonomics is a key advantage in handling the catapult Bucky. There is extra room for loading the cassettes, regardless of the format. This is a new standard in user-friendliness.

Kick-switch – at the top of a user's wish list. Prevents accidental contact with the switches by a patient or accompanying person.
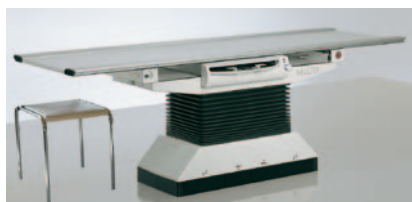

With the catapult Bucky either in the table or wall stand, you are able to remove the grid for pediatric examinations or change it to another SID range.

Motorized filter for ACSS collimation. The copper filters (0.1 to 0.3 mm) are automatically inserted with the push of a button.
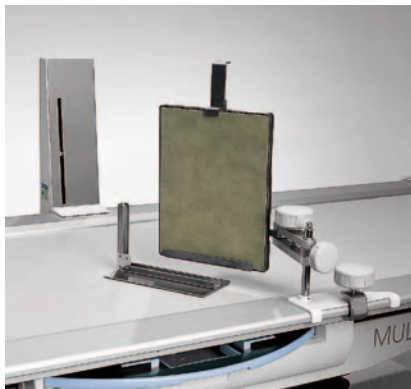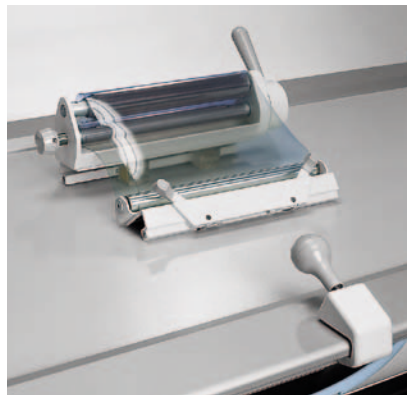

Remote control*

Collision sensing*

* Optional

MULTIX PRO/TOP
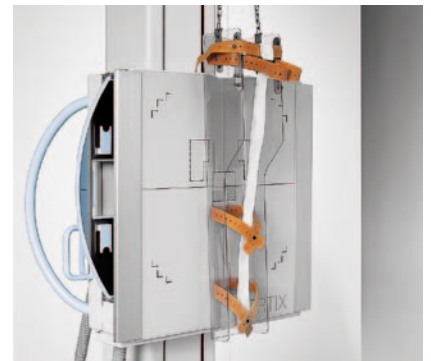# VERTIX Solitaire, VERTIX PRO/TOP
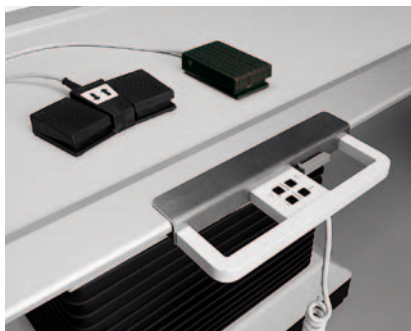
Technical Data

Accessories

Tomographic height light localizer*
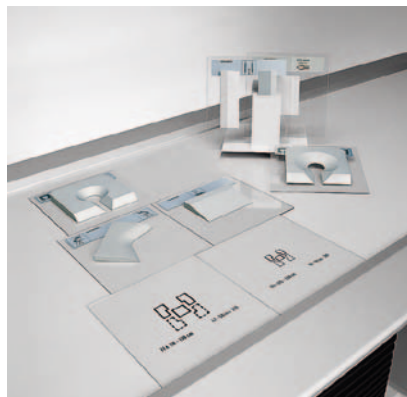*Cassette holder*, rail-mounted*
Cassette holder*, free-standing

Compression belt*
Patient handgrip (standard)

BABIX holder*
BABIX U-shaped*
Lateral patient handgrip*
BABIX retainer* for BABIX U-shaped

Hand switch*
Footswitch for tabletop lock*
Footswitch for height adjustment*

Three-field templates*
Filters*
Holder for 8 supplemental filters*

VERTIX PRO* / TOP* patient stretch grip

* Optional

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