Shimadzu Corporation Medical Systems Group has been certified by TUV Rheinland as a manufacturer of medical equipment and systems in compliance with ISO13485:2006 Medical Equipment Quality Management Systems.

Remarks:
- Every value in this catalog is a standard value, and it may vary a little from the actual size.
- Specifications and specifications are subject to change for technical reasons.
- Certain configurations may not be available pending regulatory clearance. Contact your Shimadzu representative for information on specific configurations.
- Before operating the system, you should first thoroughly review the Instruction Manual.
The BRANSIST safire VC17 ceiling-mounted vascular package is a digital angiography system that features a 17 x 17-inch direct-conversion FPD, the largest in its class. The system offers not only high image quality, but the optimal image quality for the various complex interventional procedures over the extensive field of views available. Through flexible system operation, fast digital image processing, with due consideration given to patient comfort and the latest applications, the system provides an advanced facility for state-of-the-art medical centers.

Class-Leading 17-inch Direct-Conversion FPD Offers Many Great Features

- Ultra-high image quality for optimal interventional procedures
- Versatile operation with due consideration to safety
- Image display functions to support interventional procedures
- Highly efficient workflow
- Leading-Edge 3D Application Provides a Valuable IVR Tool
- Patient-friendly low-dose system
Ultra-High Image Quality for Optimal Interventional Procedures

BRANSIST safire VC17 was developed for optimal support of interventional procedures with excellent visibility of fine blood vessels and devices over the entire field of view range. The high-performance flat-panel detector which is based on a revolutionary Direct-Conversion technology achieves enhanced visibility and easily visualizes even the smallest devices which are available today. The large-field-of-view 17 x 17 inch is the largest in its class.

Class-Leading 17-inch Wide Field of View Detector

By utilizing a 17-inch FOV, a single image can cover the entire abdomen, thorax, or both legs, while also retaining fine resolution of the body part. By using a larger FOV, the system can reduce the number of contrast medium injections, fluoroscopy positioning operations, and relieve the patient burden during procedures.

Unparalleled Image Sharpness Provides Clear Visibility of the Finest Blood Vessels

The BRANSIST safire system offers an extremely small 150 μm pixel size to ensure a clear representation of fine blood vessels and interventional devices. The clear imaging of these interventional devices and blood vessels provides powerful support for examinations and treatments.

Equipped with a Next-Generation X-ray Detector to Create the Ideal Imaging Chain

Direct-Conversion Detector, which converts X-rays directly to electrical signals, eliminates the blurring that results from the scattered light generated in conventional imaging processes, realizing “true digital imaging”.

Wide Field of View
Versatile Operation with due Consideration to Safety

BRANSIST safire VC17 features a tableside controller for all C-arm and image operations, offering the ability of switching between fluoroscopy and radiography protocols. This versatile controller offers the operator great ease-of-use. INTELLISHEILD allows the FPD to detect the patient and automatically stop C-arm operation, allowing the operator to use the high-speed C-arm with complete confidence.

INTELLISHEILD Hybrid Sensor Enhances Patient Safety

INTELLISHEILD is a contact-avoidance function that uses capacitive sensors embedded around the FPD to automatically stop C-arm operation when the patient is detected. In addition, a touch-type safety sensor is provided at the center of the FPD where detection is difficult. These duplicate safety mechanisms allow the operator to use the high-speed C-arm with complete confidence.

Clear Display of Essential Information

The essential system information is clearly displayed on an independent LCD monitor in the examination room (on MTA series monitor support). This allows the operator to confirm essential IVR information, including C-arm angle, field size, and total fluoroscopy time at a glance.

Wide Coverage Ensures a Safe Approach

The ceiling-mounted C-arm offers a wide coverage, extending 160 cm laterally and 287 cm longitudinally. This helps in choosing a safe brachial, radial or femoral approach.

Wide Range of Control From Within the Angiography Room

In addition to basic imaging operations, such as multi-display and split display, zoom, measurement and stopwatch, the IVR NEO controller permits accurate control of the overall system from the angiography lab, including setting imaging techniques, switching fluoroscopy modes and recording fluoroscopic images.

New Concept Auto Positioning DirectMemory

The new DirectMemory unit intuitively calls up C-arm clinical angles for a patient and allows rapid repositioning. DirectMemory provides powerful support for smooth, stress-free diagnostic catheterization and interventional procedures.

CyberConsole: Compact and Easy-to-Handle, Independent Lever Console

With independent control levers, the CyberConsole enables free, quick manipulation of the C-arm at speeds up to 25 degrees per second. Since the C-arm can be rotated and the FPD moved up or down using separate levers, necessary operations can be accomplished quickly.
The BRANSIST safire system supports a high efficiency workflow, including a seamless network interface, and a high image-storage capacity.

**Highly Efficient Workflow**

### Dynamic Reference Function Offers a Versatile Image Display

The Dynamic Reference function permits the simultaneous display of moving images on the live and reference monitors. Independently and simultaneously displaying prerecorded images on the respective monitors is a powerful means of evaluating results before and after the procedure.

### Fluoro Back Record

This feature stores up to 1023 frames in temporary memory and allows the images to be retroactively recorded to the hard drive for permanent storage. This is especially useful for recording the exact moment the guide wire passes by a point of interest or the exact moment of ballooning or other important fluoroscopy scenes. Fluoroscopic images can also be stored as DICOM images on external media or transferred to other locations via a network.

### Data Mirroring

By installing two hard drives for storing data, images are instantaneously mirrored to a second computer, which allows not only processing in parallel, but also provides a backup for peace of mind.

### Fast Imaging Operation

Both the hardware and software were redesigned for a digital system, resulting in a faster operating environment. This provides exceptional responsiveness for selecting reference images, displaying fluoroscopic or radiographic images, or displaying cine-loops, and offers a stress-free operating environment for interventional procedures.

### Dual Road Mapping

Standard features of this system include two types of road mapping functions. One type is a superimposed mapping of a fluoroscopic image overlaid on a DSA image. The other type is a subtraction mapping where a peak-hold image is flashed during fluoroscopy processing and then subtracted from the live fluoroscopic image. This allows easy selection of the optimal mapping mode for a specific technique or objective.

### Seamless Interface with DICOM Network

BRANSIST safire provides flexible handling of image networking processes (DICOM storage, storage commitment, query/retrieve services), and HIS management (optional DICOM-MWM service), making it possible to interface seamlessly with the network.

### Equipped with High-Capacity Liquid-Bearing X-ray Tube

A 3.0-MHU, high-capacity, liquid-bearing X-ray tube (IX-2011) is a standard feature, provides a quiet examination room and eliminates the need for cooling time between repeated examinations. This allows efficient operation at facilities performing large numbers of examinations.

### Large Capacity Internal Storage of High Definition Images

All collected radiographic images are stored as 12-bit high-definition 1024 matrix images. The internal storage capacity is 100,000 frames. Even for interventional procedures, which tend to generate a large number of frames, this means it can store enough frames for approximately 20 to 30 interventional procedures.

### Optional Review Station for Image Post-Processing

The BRANSIST safire system can connect an optional Review Station, which is a dedicated image post-processing station that operates fully independently of the angiography system. It enhances workflow efficiency for all image processing operations during procedures, including pixel shifting, remasking, filming, and image capture.

### IVR-shuttle (optional)

Enables Quick and Easy operation

IVR-shuttle is an unique console to be used during examination. This item optimizes operations on acquisition and simplified intuitive without using mouse and keyboard.

### Seamless Network Interface

Seamless Network Interface
**New Application**

**Leading-Edge 3D Application Provides a Valuable IVR Tool**

BRANSIST safire includes state-of-the-art 3D imaging software, effective for complicated interventions that require super-selective catheterization and wide-ranging therapy. Thanks to this, you can perform high-level medical procedures reliably, safely, and efficiently.

**Efficient Patient-Friendly RSM-DSA Chasing**

RSMDSA Chasing is a new application with a multitude of patient benefits since it greatly reduces the amount of contrast medium required, patient does not need to be strapped down, flexible framing is performed in conjunction with contrast medium flow, and patient radiation dose is reduced since a mask run is not required.

**3D Reconstruction Workstation (optional)**

**NaviDAS® 3D-Recon**

**3D Angiography Safire 3D-A**

The combination of ultrahigh-definition rotational DA and DSA images obtained via direct-conversion FPDs and a state-of-the-art 3D reconstruction workstation equipped with a wide range of functions ensures that this option produces superior diagnostic images. Additionally, our Max Scan function quickly rotates the C-arm at 60°/second, shortening the time required for large-range radiography. This in turn reduces injection time and usage volume of contrast medium, helping to lower patient stress.

**CT-Like Imaging Safire 3D-C (optional)**

In workflows using a CT scanner for diagnosis and an angiography system for treatment, one new advantage provided by this angiography system is the "Safire 3D-C" CT-like imaging function. Using rotational images to reconstruct low-contrast regions that contain, for example, tumor stains and soft tissues enables the observation of freely specified cross-sectional images of the region of interest during treatment.

**Built-In MBH Filter Excludes Soft X-rays**

BRANSIST safire has MBH (Multi Beam Hardening) filter built into the front end of the X-ray tube. Automatically select the optimum filter for examination or operation and to exclude soft X-rays that do not contribute to the image.

**Wave-Tail Elimination via Grid Control**

The X-ray generator uses grid control to enable the ideal form of wave-tail elimination. In low-dose pulsed fluoroscopy mode, accurately eliminating X-rays corresponding to wave tails helps reduce exposure even further.

With treatments involving interventional procedures on the increase, exposure levels to physicians, X-ray technologists and patients cannot be ignored. The BRANSIST safire system does not rely merely on its high-performance direct-conversion FPD to determine a trade-off between low exposure and high image quality, but rather accomplishes a balance using the entire system.

**Patient-Friendly Low-Dose System**