



## **Product Lineup**

### **Passion for innovation**

LISTEM's state-of-the art technology is the result of technical know-hows built a half century of top quality craftsmanship. Our respect for Human Life is an inspiration for Listem's constant innovation and passion.



# **ADR** LISTEM i for LISTEN LISTER

### **Advanced Digital Radiography System** ADR

#### Versatile, Easy, Convenient, Effective, Fully motorized Digital radiography system

The system includes overhead tube crane, elevating table and Bucky wall stand. ADR saves your time and effort by fast image processing, seamless data transfer and convenient interfaces.

- Remarkably fast Image Processing Touch Console
- Superb Design

- Auto Positioning / Auto Tracking
- · Intuitive user Interface Auto Stitching '
- · LCD touch screen display control panel on the overhead tube crane
- Wide range of overhead tube crane movement in 5 directions
- · Auto tracking elevating table and Bucky wall stand with overhead tube crane
- · Remote controlled Bucky wall stand for convenient patient positioning

#### **Overhead Tube Crane**

Enhance workflow and productivity with new automated features, fast processing speed and easy examination process

- Touch screen displays key data and controls where needed to streamline the examination process • 10.4" Color LCD touch screen Preview image display
  - Generator parameter settings
  - Motorized movements keys Increased range of travel

#### Bucky Wall Stand

- Flexible and extensive vertical range of motion Easy to use and simplifies patient positioning
- · Use for upright examination such chest, lateral, cervical spine Standing knee and more
- · Synchro. Mode enables automatic alignment of the detector with the overhead tube crane
- · Easy access for variety of examinations such as a patient in a wheelchair Motorized tilting bucky stand (+90 ° / -20 °)

#### Elevating table

- The easy positioning table, ergonomic design, a super low x-ray absorption table top motorizedr elevating table with digital receptor enables smooth operation
- · Provide for automatic tracking of the detector in the table and the overhead tube crane
- Heavy duty table with a maximum 270kg patient load
- · Permanent magnetic brakes for table top for safety

### **UNI-DR**



### **Digital Universal Radiography System UNI-DR**

UNI-DR system is composed of a cost-effective universal DR system with the integrated U-arm which is designed to allow the X-ray tube and the image receptor to remain in constant alignment with motorized movement of the U-arm for vertical and rotational movement

The system is composed of a floor mounted column and a rotational U-arm with variable height. It facilitates fast examination of patients in erect, sitting or supine position.

#### **Controller on WINDOW screen**

- · Supports Windows platform
- Higher patient throughput using Pre-set APR
- Built-in patient positioning program (34 positions)
- · Supports unlimited manual exposure conditions
- · Adjustable pre-set APR conditions
- Remote control of four movements by a single click on the screen-rotation and vertical movement of the U-arm, rotation of the detector assembly, vertical movement of the tube according to the SID
- · Display of five movement directions-rotation and vertical movement of the U-arm, rotation of the detector assembly, rotation and vertical movement of the tube

#### **Patient Positioning**

CHEST AF









P.N.S LATERAL \* optional function

SKULL TOWN'S

SHOULDER AP

SETTEGAST









SKULL PA







### DRS



### **Digital Radiography System** DRS

#### General and chest examination are available

- · Components include: ceiling suspension tube crane/Bucky wall stand / elevating Bucky table
- · Synchronized operation with ceiling suspension tube and detector and table
- · Excellent X-ray image quality
- High quality Flat-Panel-Detectors ensure to get high-definition Digital x-ray image · Instantaneous acquisition of X-ray image
  - Enable to get digital image with in 5 seconds after exposure
- Fast to transfer images to PACS with simple easy steps
- Full DICOM configuration as standard feature Easy to transfer images through PACS network system by using DICOM3.0
- Save patient's waiting time
  - Only 8 seconds for a next examination
- Cost effective solution
- No film, no cassette, no chemicals / need only a moderate space Easy to maintenance
- High frequency generator ensures less dose and more accurate diagnosis

#### **Patient Positioning**



### **CLASCAN**



### **Digital Remote Radiography** Fluoroscopy System **CLASCAN**

#### Features

- Archiving and transfer of studies in DICOM 3.0 format
- High quality digital image system for DVF(Digital Video Fluoroscopy) and DSR(Digital Spot Radiography)
- · Various image processing features such as Window, Level, Inversion, Edge Enhancement, Subtraction and Magnification
- 1k×1k resolution image for the best diagnosis
- Supports DICOM printer
- Maximizing hospital management by easy management of images and patient information
- High performance High Frequency Generator

#### Applications

 General Radiography and Fluoroscopy of the stomach, intestines, gall bladders, biliary ducts and spines etc.(Compatible with PACS·RIS·HIS)







90° Table Tilting 90 degree tilting of the table allows Upper and Lower Digestive System evamination



X-ray tube/collimator assembly can be rotated 90 degree to accommodate the radiography of the emergency patient admitted in the R/F room.

90° Tube Rotation

180° Tube Rotation

180 degree X-ray tube / collima rotation for wall Bucky radiogra possible to for Chest examinati

**40° Tube Angle** previously unheard ±40 \*X-ray

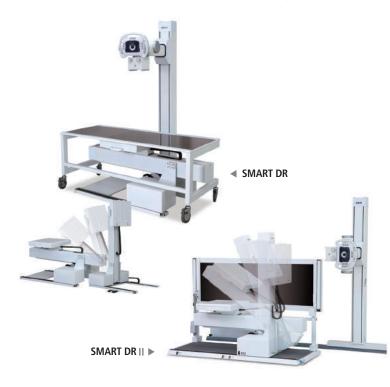
Minus 20 degree tilting of the table enables the observation of Pylorus Portion during Upper GI examination.

A previously tube tilting



hopedic and Urologica sible with 43 cm x 30 ▶ IP (Imaging Plate for Computed Radiography)

### **SMART Digital Radiography**



### SMART Digital Radiography SMART DR

Smart DR can retrofit any existing X-ray system to DR system. Smart DR consists motorized detector stand, mobile table, and workstation. Smart DR II is composed of motorised detector stand and built-in-table. You will have true DR experience with minimum space and investment.

#### Compact DR upgrade kit with full functionalities

- · Convenient and safe motorized positioning of standing mode and table mode
- Single Flat Panel Detector covers both table and standing positions smartly
- Wide coverage of Bucky movement minimize patient positioning time
- Smart packaging of geometry ensures 180cm(72in.) SID for standing mode and 110cm(44in.) for table mode

#### Going digital Smart way

- Fast and high quality digital image in just 4 seconds
- Same renowned Listem's imaging Software used in big hospitals
- $\boldsymbol{\cdot}$  Saves burdens for handling cassettes, films, chemicals for film processors
- DICOM 3.0 compatibility for easy transfer of images to PACS
- Convert your existing X-ray system to DR with minimized investment

### **High Frequency X-ray System REX**

#### High Frequency Radiography System (R System)

	REX-325R	REX-525R	REX-550R	REX-650R
Output Rating	320mA at 100kVp	500mA at 80kVp	500mA at 100kVp	640mA at 100kVp
	250mA at 125kVp	320mA at 125kVp	320mA at 150kVp	400mA at 150kVp
(W	32KW	40KW	50KW	64KW
kVp Range	40~125kVp Scale	40~120kVp Scale	40~150kVp Scale	40~150kVp Scale
mA Range	10~320mA(16 steps)	10~ 500mA(18 steps)	10~ 500mA(18 steps)	10~ 640mA(19 steps)
mAs Range	0.01~600mAs	0.01~600mAs	0.01~600mAs	0.01~600mAs
ExposureTime Range	0.001~10sec(38 steps)	0.001~10sec(38 steps)	0.001~10sec(38 steps)	0.001~10sec(38 steps)
Control Method	Membrane Switch	Membrane Switch	Membrane Switch	Membrane Switch
Display Method	LCD	LCD	LCD	LCD
Exposure Signal	Buzzer, Lamp Indicator	Buzzer, Lamp Indicator	Buzzer, Lamp Indicator	Buzzer, Lamp Indicato
Power Supply	220 / 380 VAC, 50 / 60Hz	220 / 380 VAC, 50 / 60Hz	380VAC, 50 / 60Hz	380VAC, 50 / 60Hz



\* AEC : Available with lon Chamber (option)

\* 80kw generator available upon request

#### High Frequency Radiography & Fluoroscopy X-ray TV System (RF System)

	REX-525RF	REX-550RF	REX-650RF		
	500mA / 125kVp,40kW inverter type High Frequency Genertor	500mA / 150kVp,50kW inverter type High Frequency Genertor	640mA / 150kVp,64kW inverter type High Frequency Genertor		
Output Rating	Rad.: 500mA at 80kVp, 400mA at 100kVp 320mA at 125 kVp	Rad.: 500mA at 100kVp, 400mA at 125kVp 320mA at 150 kVp	Rad.: 640mA at 100kVp, 500mA at 125kVp 400mA at 150 kVp		
	Fluo.: 4mA / 120kVp				
Kv Range	Rad.: 40 to 125kVp , 1kV Step	Rad.: 40 to 150kVp , 1kV Step	Rad.: 40 to 150kVp , 1kV Step		
	Fluo.: 40 to 120kVp	Fluo.: 40 to 120kVp	Fluo.: 40 to 120kVp		
mA Range	Rad.: 10 to 500mA(18 Steps)	Rad.: 10 to 500mA(18 Steps)	Rad.: 10 to 640mA(19 Steps)		
	Fluo.: 0.4~4mA	Fluo.: 0.4~4mA	Fluo.: 0.4~4mA		
nAs Range	0.01 to 600mAs				
Time Range	Rad.: 0.001~10sec(38 Steps)				
	Fluo.:Max. 5min				
AEC	Automatic Exposure Control bY Ion Chamber, Photodiode				
ABC	Automatic Brightness Control (Fluoro only)				
APR	Anatomical Progrmmed Radiography(Rad.: upto 768 programs / Fluoro.: upto 48 programs)				
PSU	Power Storage Unit (30 / 50 / 80kW) - Optional item				
Input power	220V / Single phase, 380V / Three phase, 50 / 60Hz	380V / Three phase, 50 / 60Hz			



\* AEC : Available with Ion Chamber (option)

\* 80kw generator available upon request

### High Frequency X-Ray System / Compact Solution

### High Frequency X-ray System



#### Generator

LX 7

- Type : High Frequency Inverter
- Maximum Output : 7kW
- Maximum Rating : 60kV / 120mA
- 105kV / 64mA • kVp Range : 40~100kV(1kV step)
- wop Range : 40~100kV(1kV step)
   mAs Range : 0.01~600mAs
- Control Display : LED Display
- (7 segment) • Input Power Requirement :
- 220VAC, Single Phase, 50 / 60Hz

#### X-Ray Tube

- Type : Stationary Anode X-ray Tube built in Mono-Tank
- Maximum Tube Voltage : 125kVp
   Anode Heat Storage Capacity : 77kHU
- Focal Spot : 3mm

#### X-Ray Beam Collimator

- Type : Manual driven
- Radiation shielding : Upto 150kVp
  Leakage : Less than 100mR/h at
- 100cm from source

#### Tube Support

- Type : Manual Movement
- Lock : PMB Lock

#### Unit Dimension (L $\times$ W $\times$ H)

- Table : 1790 × 870 × 550mm
   Stand : 580 × 830 × 1990mm
- Console : 305×200×212mm
- Option

#### Vertical Stand : BS-20

- PSU(Power Storage Unit)
- 4 way table

LX 32/40

#### Generator

- Type : High Frequency Inverter
- Maximum Output : 32kW / 40kW
- Maximum Rating : 125kV / 200mA, 60kV / 500mA (32kW)
   125kV / 320mA, 60kV / 640mA (40kW)
- kVp Range : 40~125kV (1kV step)
- mAs Range : 0.01~600mAs
- Control Display : LED Display(7 segment)

 Input Power Requirement : 220VAC, Single phase, 50/60 Hz

**DMH-325** 

Type : High Frequency Inverter type

Output Rating : 320mA at 100kVp,

• kV Range : 40 to 125kV, 1kV step

mA Range : 10 to 320mA

Frequency : 30kHz

• mAs Range : 0.01 to 600mAs

Control Display : LCD Display

Switch Type : Membrane Type

Nominal 220VAC, 50 / 60HZ

· Input Power Requirement :

Magnetic Lock System

Time Range : 0.001 sec to 10sec

Generator with H.T.Transformer

Anatomical Programming Radiography (APR)

250mA at 125kVp(Rad)

Generator

#### X-Ray Tube

- Type : Rotation X-ray Tube
- Maximum Tube Voltage : 125kVp
- Anode Heat Storage Capacity : 140KHU
- Focal Spot : Small Focus-1mm, Large Focus-2mm

### X-Ray Beam Collimator

- Type : Manual dirven
- Radiation shielding : upto 150kVp
- Leakage : Less than 100mR/h at
- 100cm from source

#### **Tube Support**

- Type : Manual Movement
- Lock : PMB Lock

#### Unit Dimension (L×W×H)

- Table : 1790 × 720 × 550mm
- Stand : 580×830×1990mm
- Console :  $305 \times 200 \times 212$ mm

#### Option

- Vertical Stand : BS-20
- PSU(Power Storage Unit) : PSU-20

### **High Frequency Mobile X-ray System**

### **MOBIRAY**

#### Features

Battery Type, Outstanding Image by 7kw High Frequency Inverter Generator

- Superior image by 7kw generator
- Lower radiation dose to a patient
- Enable exam while recharging the battery
- · Checking the power level with the battery indicator
- Freevoltage (AC85~265V)
- Examining with out wall socket connection
- · Easy to move in small patient rooms (width 640mm)
- Operating by remote controller or manual
- Integrated motor for compact design
- Handle brake for safety
- Easy operation, user a friendly design

#### Generator • Type

High Frequency Inverter 40-100kv 120mA

7kw

0.01~600

#### voltage range (kv)

- max current (ma)
- mAs range (mAs)
- Max. power

### **MOBIX-1000**

#### Generator

- Type : High Frequency Inverter with Mono-tank
- Output : 2.5kW
- Maximum Rating : 200mAs at 50kV
- kVp Range : 40-125kVp(1kV step)
- mAs Range : 1-200mAs(42 steps)
- Control Display : LCD Display
- Switch Type : Membrane
- Input Power Requirement : Nominal 220VAC, 1Ø, 3KVA, 50 / 60Hz

#### X-Ray Tube(LTY-26M)

- Type : Stationary anode X-ray Tube built in Mono-Tank
- Maximum Tube Voltage : 125kVp

### Maximum Tube Voltage : 125kVp Anode Heat Storage Capacity : 50kHU

Focal Spot : 1.2mm×1.2mm

#### 

Max. kv
 Max. anode heat capacity

125kv

77KHU (55KJ)

150kv Max.

1.5mmAl. Eq

160LUX @100

7kW

AC 85~265V

DC 12V 24FA

Max.  $35 \times 35$  (cm) at SID 65cm

Max. 5×5 (cm) at SID 100cm

#### X-Ray Collimator

Shielding Rate

Illuminance

Arm Position

Input Power

Battery

X-Ray Beam Collimator

· Radiation shielding : Upto 150kVp

Mobile Cart with Tube Support

Tube Rotation : vertical -20°+90°

· Arm Position from the Floor :

· Leakage : Less than 100mR/h at 100cm

Type : Manual driven pantographic arm

horizontal  $\pm 180^{\circ}$ 

Max. Height 1840mm, Min. Height 418mm

Type : Manual driven

Inherent Filrtation

X-Ray Tube stand

P.S.U Specification
Output Power

Max, Min Height: 2025/578mm

Rectangular Max. opening

### **MOBILE SURGICAL C-ARM**

# High Frequency Mobile C-Arm X-ray System SM-20HF

#### Generator

- Type : High Frequency Inverter with Mono-tank
- Maximum Rating : 120mAs / 125kV(Rad),
- 4mA 110kV(Flu)
- kV Range : 40-125kV(Rad), 40-110kV(Flu)
- mAs Range : 1.0-120mAs(Rad)
- mA Range : 0.2-4.0mA(Flu)
- Maximum Output : 2.5kW
- Control Display : Digital
- Input Power Requirement : Nominal 220VAC, 1Ø, 3.0KVA, 50 / 60Hz

#### X-Ray Tube

- Type : Stationary anode X-ray Tube built in Mono-tank
- Maximum Tube Voltage : 125kVp
- Anode Heat Storage Capacity : 45KHU
- Focal Spot : 0.5mm  $\times$  0.5mm / 1.5mm  $\times$  1.5mm
- \* Dicom 3.0 compatibility(option)

#### 6" Image Intensifier unit(LIC-06)(LIC-09 : 9", Option)

- Central Resolution : 48 Lp/cm(typical)
- Contrast Ratio : 23:1
- DQE : 65%(typical)

#### TV Camera(LCC-RD) (LCC-CD : Option)

- Type :CCD
- Image memory : Last Image Holder Noise Reduction Frame memory Image Conversion Image Rotation

#### Video Mobile Cart with Monitor(PM-K12)(PM-K17:Option)

- Type : Manual driven Mobile with wheel
- Monitor Size : 14" Ultra bright monitor(Option: 17")
- Scanning : 525 / 625 lines
- Function : Brightness & Contrast Control



### Features

SM-25HF

- Advanced super metal I.I with High resolution CCD-TV system
- Image editing function(Left/Right, Up/Down)
- Controlled by microprocessor
- Large radius C-Arm for easy positioning of patient.
- ${\boldsymbol{\cdot}}$  Smooth movement with sturdy construction C-Arm
- $\boldsymbol{\cdot}$  High efficiency, excellent image quality by High Frequency Generator
- Minimum radiation dose during continuous fluoroscopy

#### Applications

- Surgical, Orthopedic, Endoscope, Cardiology, ER, Panic clinic, Anesthesiology
- \* Dicom 3.0 compatibility(option)

### New Mobile Surgical C-ARM System Q'Scan

#### High Quality Image at Low Dose

- \* 1k  $\!\times\!$  1k High resolution CCD camera support
- High Frequency Inverter Generator
- DICOM 3.0 support
- Pulsed Fluoroscopy
- ${\boldsymbol{\cdot}}$  Wide C-arm depth
- Database mannagement
  Excellent maneuverability

Rotating anode type

- Boost function for better image
   Advanced image processing
- Easy operation and user friendly design
- Virtually unlimited image saving storage
- Longer fluoro time for surgery with 300kHU Heat Storage X-ray tube

#### Generator

- Power capacity : 7.5kW
- RAD Rating • Maximum kW : 125kV • Maximum mAs : 300mAs • mA Range : 40.75mA • FLU Rating • Maximum kW : 120kV
  - -Maximum mA : 5mA (Boost : 10mA)
    - -Time Range : 0~5 Minutes (Boost Mode : 30 second)
- SID(Source Image Distance) : 100cm

#### Dimensions

- H : 180cm, L : 195cm, W : 78cm
- Up&Down movement(Motorize) : 45cm
- Horizontal movement(Motorize) : 20cm
- Swinging(Motorize) :  $\pm 45^{\circ}$
- Rotation(Motorize) : ±180°
- Orbital Rotation(Motorize) : 120°(+90°, -30°)
- SID(Source Image Distance) : 100cm

#### Tube

- Rotating Anode Type
- Focus : L : 0.6mm, S : 0.3mm
- Heat Storage : 210kJ (300kHU : 300,000HU)
- Target Angle : 10 degrees

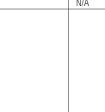


### **TUBE STAND & TABLE & TUBE**

#### **TUBE STAND**

	Floor to Ceiling Tube Stand (SFC-31R)	Floor to Ceiling Tube Stand (SFC-31)	Floor to Mounting Tube Stand (SFM-31)	Ceilng Suspended Tube Support (CSTS-28)
Counter-balance System	Weight balance	Weight balance	Counter-Weight	Spring-balancer type
Vertical Travel	Approx. 1,343mm	Approx. 1,423mm	Approx. 1,343mm	Approx. 1,400mm
Longitudinal Travel	Approx. 2,452mm	Approx. 2,452mm	Approx. 2,420mm	Approx. 1070mm
Lateral Travel	Approx. 235mm	Approx. 382mm	Approx. 235mm	Approx. 760mm
Column Rotation	$\pm$ 180 degrees	$\pm$ 180 degrees	$\pm$ 180 degrees	$\pm$ 180 degrees
Tube Rotation	±180 degrees	$\pm$ 180 degrees	$\pm$ 180 degrees	$\pm$ 180 degrees
Lock System	Manual Locking System	Manual Lock System	Electromagnetic Lock System	Electromagnetic Lock System
Rail Length	Ceiling 2,400, Floor 3,000mm	Ceiling 2,400, Floor 3,000mm	Floor 3,050mm	3,000mm×2,400 (Changeable)
Ceiling height	Min. 2,500mm	Min. 2,500mm	Min. 2,250mm	Approx. 3,048mm
Weight	160kg(Excl. Rail)	166kg(Excl. Rail)	205kg(Excl. Rail)	N/A
Positioning indicator	N/A	N/A	N/A	Dual Digital LED display (Focal spot to bucky & table SIE

Features







### Vertical Bucky Stand (BS-20)

#### Generator

- · System Constitution : Vertical Column, Bucky device
- · Vertical Travel : Approx. 110cm film center to floor
- distance approx 1,343mm
- Vertical Lock : Magnetic Lock
- Film Formats : From  $5" \times 7"$  to  $14" \times 17"$  Cassette
- Grid Movement : Spring driven Motor driven (Option)
- Grid Ratio : r= 8 :1, d = 85 lines / inch r=10:1, d=103 lines / inch (Option) r=12:1, d=103 lines / inch (Option)
- Focusing Distance : from 100 to 180 cm
- Inherent Filtration of Front Plate : Less than 0.5 mm Aluminum equivalent at 100kVp
- Dimensions : Approx. 59W × 40D × 204H

#### **TABLE**

#### Six-Way Floating Top Bucky Table (KOB-60)

- Table top sliding : Approx. 900mm longitudinal.
  - Approx. 300mm transverse. Approx. 400mm vertical with hydraulic Motor
- · Automatic centering index
- Table top to Film distance : Approx. 102mm
- · Table top material : Laminated type 0.6cm Thickness
- Bucky travel to be approx. 390mm
- Inherent Filtration : less than 1.0mm Al. eq. at 100kVp.
- Film formats :  $5" \times 7"$  to  $14" \times 17"$
- · Grid ratio 8:1, density 85 lines/inch.
- (10:1, 103 lines/inch available)
- · Lock system : Electromagnetic locks operated by Foot switch
- Dimension : 2,100(L) × 739(W) × [Min. 500 Max. 900(H)]. mm
- Weight : 235kg

+90° / -15° Tilting Table with Spot Film Device (LFT-20)

· Power Requirements : 110VAC, 50 / 60Hz

• AEC : Available with Ion Chamber (Option)

Weight : Aoovox. 120kg without column base

- Type : Motor Driven +90°/-15° Tilting Table
- Speed : Approx. 90°/ 24sec
- Table Top Sliding : 2-way Motor Driven Approx.
- 500mm Toward Head End, 500mm Toward Foot End
- Inherent Filtration : Less than 1.0mm Al. eq. At 100kVp
- · Spot Film Device : Motor driven Rear Loading Spot Film Device • Film Formats : 14" × 14", 11" × 14", 10" × 12", 8" × 10"
- Traveling range of Spot Film Device : 690mm(Longitudinal)
- Approx. 510mm Lateral travel.
- Grid ratio 8:1, density 85 lines/inch.( 10:1, 103 lines/inch available)
- · Locking of spot film device movement : Electromagnetic lock system. • Dimension : 214(L)  $\times$  706(W)  $\times$  853(H) mm
- Weight : Approx.650kg
- Standard Accessories : Compression Band (1ea), Foot Rest (1ea), Shoulder Rest (1ea), Hard Grip (2ea)



	Fixed Type Bucky Table (TS-10B)	Four-Way Floating Top Bucky Table(KOB-I)	Four-Way Floating Top Bucky Table (KOB-III	
Table top sliding	Not Necessary	Approx. 840mm longitudinal.		
Table top shalling	Not Necessary	Approx. 300mm transverse.	_	
Table top to Film distance	Approx. 80mm	Approx. 75mm		
Dimension	1,780L $ imes$ 612W $ imes$ 605 mm	2,100L $ imes$ 740W $ imes$ 737H mm		
Inherent filtration	Less than 1.0mm Al, equivalent at 100kVp	Less than 1.0mm Al. equivalent at 100kVp.	Equivalent to KOB-I	
Grid Ratio & Density	8:1, 85 lines/inch. (10:1, 103 lines/inch available)	8:1, 85 lines/inch. (10:1, 103 lines/inch available)		
Grid Focal distance	34-44 inch	N/A	-	
Bucky travel	Approx.1,280mm	Approx. 415mm		
Film formats	5"×7" to 14"×17"	5"×7" to 14"×17"	_	
Lock system	Electromagnetic locks.	Electromagnetic locks operated by sensor	Electromagnetic locks operated by Foot switch	
Weight	68kg	135kg	135kg	
Features			- All and a second seco	

### **Passion** For Innovation





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