

# Pharmaceutical X-ray Inspection System



# Advanced inspection of pharmaceuticals

## Suitable for pharmaceutical products that cannot be inspected by conventional means.

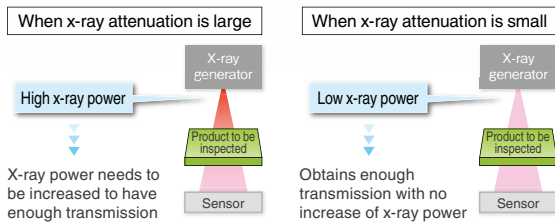
While the pharmaceutical products packaged in aluminum-foil have been increasing, product defects such as missing pieces and products caught within hermetic seals cannot be observed by visual or camera inspection. Anritsu developed an x-ray inspection system designed specifically for pharmaceutical products. Its unique x-ray control technology enables it to inspect transdermal patches caught in sealed areas and broken or missing pieces of orally-disintegrating tablets that were previously undetectable.



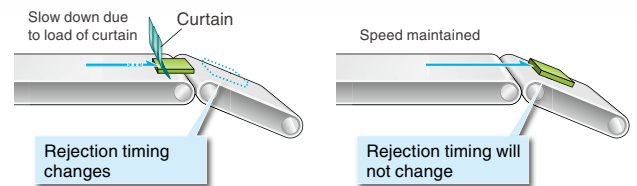
### High sensitivity and high stability — X-ray control technology optimized for pharmaceutical applications

- Newly developed x-ray generator and sensor are specifically designed for low density items.
- Achieves high sensitivity inspection with lower power level thanks to reduced x-ray attenuation, delivering a curtain-less design and reduced energy costs.

- The curtain-less design prevents product jam and false detection. It also can maintain rejection timing and thereby minimize false detection.



Note: Actual machine structure may be different.



### X-ray Inspection — Optimized for pharmaceutical manufacturing lines

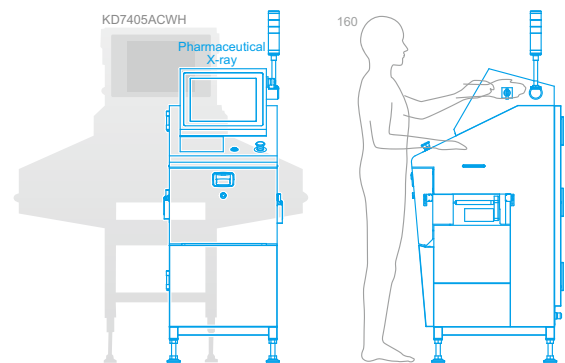
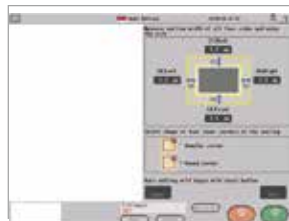
- Easy to use 15" touch panel display



- 550-mm compact footprint saves valuable floor space.
- Operator-oriented design offers easy operations.
- Chassis with minimized horizontal surfaces will not allow operators to put an object that could cause possible contamination.

- Automatic seal inspection setting

An optimal parameter can be determined automatically by entering seal width. With no complicated procedure required, anyone can perform optimized inspection.



Overall system length: 550 mm  
(reduced by 60% from conventional systems)

- Full visibility

The pull-out-style conveyor is easy to clean. Its blind-spot-free design prevents product missing.



- Offers 70% reduction in operating power.
- Standard features include a printer for statistical data output and a USB port.
- Configured with QUICCA, an overall quality management and control software, it can record inspection data electronically.



## Anritsu safety mechanism

### Safety in design

Anritsu believes customer safety is of utmost importance. The Anritsu x-ray system incorporates six safety design features to ensure safe operation.

#### X-ray ON/OFF key

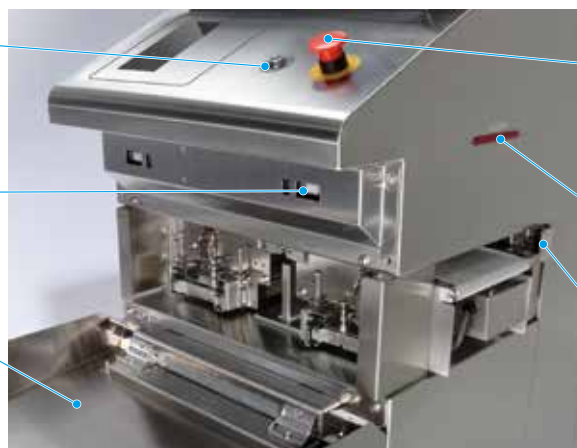
Turning the key to OFF stops x-ray radiation completely.

#### X-ray shield cover open/close sensor

Opening the cover stops x-ray radiation completely.

#### X-ray shield cover

Opened/Closed using x-ray irradiation ON/OFF key. Opening the cover stops x-ray radiation due to the x-ray shield cover open/close sensor.



#### Emergency stop switch

Cuts power to x-ray and drive circuits, stops the conveyor and x-ray radiation.

#### X-ray irradiation display

The lamp is lit during x-ray radiation.

#### Hand insertion sensor

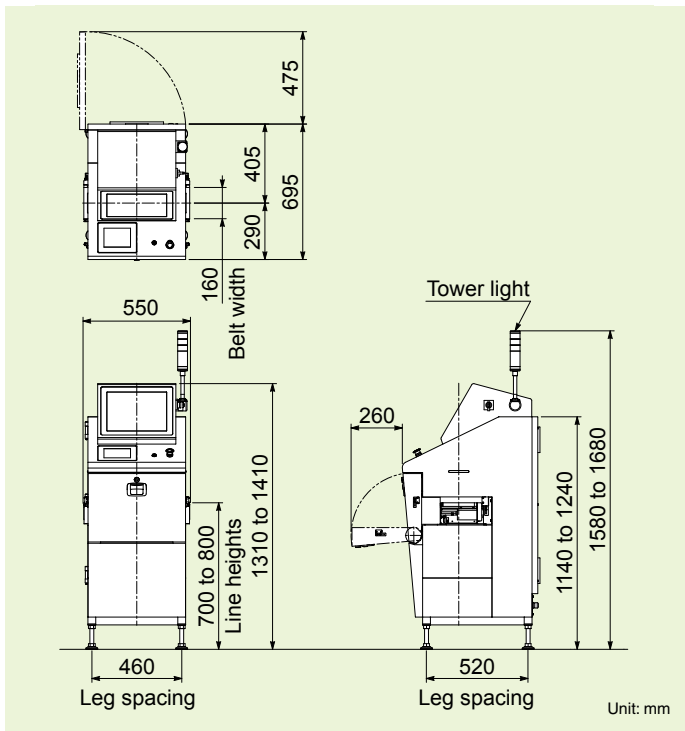
Interrupting the sensor for a certain period of time stops x-ray radiation.

### Safety management

It is your responsibility to check and ensure that you comply with all applicable laws and regulations of your country or region regarding the effect of x-ray exposure on pharmaceutical products. Anritsu conducted a research with the Nagoya City University about the effect of x-rays on the pharmaceutical quality of drug tablets and found that exposure to x-rays did not affect pharmaceutical quality of the drug content.

We exposed commercially available non-steroidal anti-inflammatory drugs (acetaminophen, loxoprofen and mefenamic acid) to x-rays of various doses from 0.34 mGy to 300 Gy, and evaluated the quality of the tablets using pharmaceutical tests. We found the samples exposed to x-rays exhibited almost the same profile in the tests as control samples (0 Gy). We also investigated the influences of heat and humidity on drug tablets after x-ray exposure, and confirmed that the combination of x-ray exposure with accelerated temperature and humidity tests (40°C, relative humidity 75%) also did not affect the pharmaceutical quality. For more details, refer to the full report at <http://informahealthcare.com/ddi>

## External Dimensions



## Specifications

Model	KD7490LYN
Application size <sup>1</sup>	Width: max. 100 mm, Height: max. 30 mm, Length: max.230 mm
Safety	X-ray leakage: Max 1 $\mu$ Sv/h or less, Prevention of x-ray leakage by safety devices
Display	15-inch color TFT LCD (unified image monitoring screen and operation screen)
Operation method	Touch panel (with buzzer)
Preset memory	Maximum 100
Belt speed <sup>2</sup> Maximum product weight <sup>3</sup>	10 to 40 m/min, Maximum 0.5 kg
Power requirement <sup>4</sup>	100 Vac to 120 Vac, or 200 Vac to 240 Vac, single phase, 50/60 Hz, 300 VA
Mass	160 kg
Environmental conditions	Temperature 10°C to 30°C, relative humidity 30% to 85%, air pressure 700 hPa to 1060 hPa, non-condensing
Protection class	IP30
Exterior	Stainless steel (SUS304)

1: Width of 160 mm is available as an option.

2: Variable depending on Product No.

3: Sum total of product weight on the conveyor.

4: Allowable power fluctuation range is  $\pm 10\%$ .

Note: Noise level does not exceed 70 dB(A).

**Anritsu** envision : ensure

## ANRITSU INFIVIS CO., LTD.

### International Sales Department

5-1-1 Onna, Atsugi-shi, Kanagawa-Prf., 243-0032, JAPAN  
 TEL: +81-46-296-6699 FAX: +81-46-296-6786  
<https://www.anritsu.com/infivis>

### Anritsu Industrial Solutions (Shanghai) Co., Ltd.

3F, No.55, Lane 1505, Zuchongzhi Road, Zhangjiang Hi-tech Park, Pudong New Area, Shanghai 201203, P.R.China  
 TEL: +86-21-5046-3066 FAX: +86-21-5046-3068

### ANRITSU INFIVIS (THAILAND) CO., LTD.

700/678 Moo 1, Amata Nakorn Industrial Estate, T. Pangthong A. Pangthong Chonburi Province Thailand 20160  
 TEL: +66 38-447180 FAX: +66 38-447182

### ANRITSU INFIVIS LTD.

200 Capability Green Luton LU1 3LU, United Kingdom  
 TEL: +44(0)1582-433227 FAX: +44(0)1582-731303

### ANRITSU INFIVIS INC.

1001 Cambridge Drive, Elk Grove Village, IL 60007-2453, U.S.A.  
 TEL: +1-847-419-9729 FAX: +1-847-537-8266

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- To ensure proper operation, read the Operation Manual before using the machine.
- In addition to daily inspection, a full maintenance inspection should be completed annually.

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