




X 1000



X 1640

Technical Data

Type	X 320	X 500	X 820	X 1000	X 1640
Entire unit explosion-proof  II 2 G Ex db eb h [ib] ib mb IIB T3 Gb					
Volume (l)	320	500	820	1000	1640
Minimum temperature	0 °C	0 °C	0 °C	0 °C	0 °C
Maximum temperature	+35 °C	+35 °C	+35 °C	+35 °C	+35 °C
Temperature deviation in time (°C)	±0,5 °C	±0,5 °C	±0,5 °C	±0,5 °C	±0,5 °C
Height (mm)	990	1500	1500	1500	1500
Width (mm)	610	610	610	2 x 610	2 x 610
Depth (mm)	585	585	935	585	935
Number of shelves (standard delivery scope)	3	4	4	8	8
Maximum load per shelf (kg)	25	25	25	25	25
Unit					
Height (mm)	1600	2105	2105	2105	2105
Width (mm)	760	760	760	1520	1520
Depth (mm)	900	900	1250	900	1250
Electric connection (V/Hz)	400/230/50	400/230/50	400/230/50	400/230/50	400/230/50
Options					
Additional shelf	X0320-01	X0500-01	X0820-01	X1000-01	X1640-01
Additional shelf, reinforced (maximum load per shelf 50 kg)	X0320-02	X0500-02	X0820-02	X1000-02	X1640-02
Glazed panel door, no pane heating	X0320-03	X0500-03	X0820-03	X1000-03	X1640-03
Extension of temperature range down to -20 °C	X0320-04	X0500-04	X0820-04	X1000-04	X1640-04
Extension of temperature range up to +80 °C *	–	X0500-05	X0820-05	X1000-05	X1640-05
Speed rate in temperature change 1 °C/min (0 °C to +35 °C)	X0320-06	X0500-06	X0820-06	X1000-06	X1640-06
Speed rate in temperature change 1 °C/min (-20 °C to +80 °C)	X0320-07	X0500-07	X0820-07	X1000-07	X1640-07
Humidification by evaporative humidifier + dehumidification	X0320-20	X0500-20	X0820-20	X1000-20	X1640-20

*Unit depth is then + 225 mm



Standard Equipment Safety X-Line



Switch cabinet – pressure-proof housing

The switch cabinet is equipped with a pressure-proof housing. Thus, large part of the electric system can be manufactured using standard components. This pressure-proof housing „d“ according to DIN EN 60079-1 effectively avoids inflammation of the atmosphere surrounding the switch cabinet.



Fan motor

Up to a working temperature of 35 °C, the fan and the integrated motor are located in the test room. For higher working temperatures, the motor driving the fan wheel in the test room will be installed outside the appliance. In any case, the motor will be disconnected permanently by a protective motor switch in case of a failure.



Digital control

Operation and control of the appliances is effected by means of the modern, digital control unit. A digital interface for this control unit is optionally available. The option Program Control allows complex, several days' programs with cyclizations and loops.



Refrigerating machine – open compressor with belt drive

The open refrigerating machine is driven by a conductive V-belt and a motor with pressure-proof housing. The explosion-proof solenoid valve bypass system ensures precise control. The refrigerating system is protected against malfunction by an explosion-proof pressure switch, as well as by a protective motor switch.



Optional accessories of the Safety T-Line and Safety X-Line



Tubular port

A 45 mm duct in the side panel allows insertion of measuring lines and hoses into the test room. Delivery including cover.

Order No.: T9930-01 (T-Line)
X9930-01 (X-Line)



Closing plug

Gas-tight closing plug, matching to the tubular port. The gasket system with a flexibility in the range of 4 mm to 23 mm is based on a rubber module with removable skins and can be adapted to the cables, tubes etc. in different sizes.

Order No.: T9930-02 (T-Line)
X9930-02 (X-Line)

Technical ventilation

If an evaporation of solvents cannot be avoided by procedural means, a technical ventilation is compulsory. The ventilation prevents the formation of a permanent explosive atmosphere (zone 0). Its efficiency is supervised redundantly by two flow switches. Depending on the density, the gases will be exhausted out of the unit either at ceiling level or at floor level. The air supply is effected vice-versa, at floor level or at ceiling level, to ensure, that the air flow covers all areas of the room. The fan ensures a high ventilation rate.

Order No.: T9980-01 (T-Line)
X9980-01 (X-Line)



Digital recorder

The digital recorder of the X-Line is working without any paper, and it can be equipped with a digital interface, just like the controller. Due to corresponding transmitters, recording and control can be executed in areas being not explosion-proof.

Order No.: X9990-01 (X-Line)



Steering rollers

Mobile version of the test cabinet with 4 steering rollers, 2 of them lock-type with brake.

Order No.: T9930-04 (T-Line)
X9930-04 (X-Line)

Humidification

Equipped with the options humidification and dehumidification, an explosion-proof cold-heat test cabinet becomes an explosion-proof climatic test cabinet. Humidification of the Safety T-Line is effected by a specially controlled ultrasonic atomizer. Humidification of the Safety X-Line is realized by an explosion-proof version of evaporation humidification being installed in the test room. A plate heat-exchanger of stainless steel, which is optimized for this application, effects a dehumidification by falling below dewpoint. This combination of humidification and dehumidification allows a wide range of temperature/humidity combinations. The sensor is a temperature-compensated, capacitive sensor, which can be calibrated.