INNOVATIVE TEST & MEASUREMENT SYSTEMS

TECHNICAL DESCRIPTION

DUST CHAMBER SK

SK 2000 Q / L / D / QD

SK 2000 QD in extra-high design

FULFILLED STANDARDS AND REGULATIONS –SK SERIES

The iTS dust chambers from the SK series enable standard-compliant testing of electrical equipment *inside an enclosure* against the ingress of dust. The following standards and specifications for dust testing are met. Depending on the test component or standard, options may be required.

Standards and regulations	Included	Optional	Option
IEC 60529:1989 + A1:1999 + A2:2013	x		
ISO 20653	x		
EN 60068-2-68 – test La2	x		
IEC 60598-1	x		
LV 124	x		
BMW GS 95003-4	x		
SAE 575 (with option)		x	SK.OP-140 (12333)
JIS D203 (with option)		x	SK.OP-140 (12333)

STANDARD SCOPE OF DELIVERY – SK SERIES

The SK dust chamber is a self-contained system and can be easily positioned in the test room via castors. After connecting the system, reproducible tests are carried out repeatedly in the SK dust chambers using standardised test dusts.

SK2000 - series	Q	L	D	QD
Internal test chamber width [mm]	2000	1000	2 x 1000	2000
Internal test chamber depth [mm]	1000	2000	1000	1000
Internal test chamber height [mm]	1000	1000	1000	1000
Door cut-out W x H [mm]	1920 x 920	920 x 920	920 x 920	920 x 920
Number of doors with window wiper	2 Side by side without centre bar (hinged doors)	2 Opposite each other	2 Side by side with centre bar	2 Side by side with centre bar
Size viewing window W x H [mm]	580 x 780	580 x 780	580 x 780	580 x 780

STANDARD SCOPE OF DELIVERY – SK SERIES

SK2000 -series	Q	L	D	QD
External test chamber width [mm]	2240	1670	2240	2240
External test chamber depth [mm]	1850	2400	1850	1850
External test chamber height [mm]	1980	1980	1980	1980
Number of dust blowers	2	2	2	2
Number of vacuum devices	1	1	1	1
Test chamber lighting	Yes / LED	Yes / LED	Yes / LED	Yes / LED
Weight [kg]	850	1050	850	900
Cable entry port [number/ø mm]	2 / 100	2 / 100	2 / 100	2 / 100
Load capacity test grid [kg]	100	100	100	100
Position of control panel	left	left	left	left

GENERAL REQUIREMENTS ON SITE – SK SERIES

Climatic conditions	SK 2000 Q / L / D / QD
Ambient temperature [°C]	10 - 30
Relative humidity max. [%] - non condensing	70

Electrical power supply	SK 2000 Q / L / D / QD
Power supply	3 x 400 Volt /50Hz N/PE
Power consumption up to [kW]	up to 2,5
Installed load max. [A]	16
Electrical connection via	CEE 16A plug
Ethernet (Optional)	RJ 45 socket

- **Note: If connected via a CEE socket outlet, this must be protected by a separate residual current device (RCD) of TYPE B (AC/DC sensitive).**

Compressed air supply	SK 2000 Q / L / D / QD
Compressed air [bar]	3-6, max. 40 l/min
Compressed air quality	ISO 8573-1:2010 [3:3:4]
Compressed air connection	Via quick-release coupling NW 7,2

- **Note: The adapter for the connection is included in the scope of delivery.**

Dust chamber with connections in the lower area (here: compressed air / power / network)

COMPARISON OF THE SK 2000 SERIES

Selection criteria	Q	L	D	QD
Test chamber size and configuration	1 large test chamber 1x 2m³	1 large test chamber 1x 2m³	2 separate test chambers next to each other 2x 1m³	2 separate test chambers next to each other with removable partition wall 2x 1m³ oder 1x 2m³
DUT size and loading	For long DUT: Loading crosswise without centre bar 1x test chamber 2x1x1m	For long DUT: Loading lengthwise without centre bar 1x test chamber 1x2x1m	For compact DUT 2x test chamber 1x1x1m	For compact DUT with partition wall: 2x test room size 1x1x1m For long DUT without partition wall: Loading crosswise with centre bar at the test chamber door 1x test chamber 2x1x1m
Dust types per test chamber	1 dust	1 dust	Use of 2 different dusts in the separate test chambers possible	Use of 2 different dusts in the separate test chambers possible: with partition wall 1 dust: without partition wall
Preparation and testing time	Preparation and test run one after the other	Preparation and test run one after the other	The 2 test chambers can be used separately: 1. test chamber for testing 2. test chamber for preparation	Divided test chamber can be used separately (with partition wall): 1. chamber for testing 2. chamber for preparation Without partition wall: Preparation and test run one after the other
Continuous testing without stops (preparation and follow-up)	-	-	2nd (prepared) test starts automatically after preselection in the control unit after the 1st test	With partition wall: Test run possible as with D Without partition wall: -
Vacuum device (max. 3 more optional)	1 integrated vacuum unit	1 integrated vacuum unit	1 integrated vacuum unit switchable to both test chambers	1 integrated vacuum unit (switchable to both test chambers for operation with partition wall)

OVERVIEW: OPTIONS - SK SERIES

Option number	Option	Checkbox
SK.OP-030 (11834)	DAkkS calibration of the vacuum sensor and flow meter	☐
SK.OP-131 (11848)	Factory calibration of the vacuum and volumetric flow sensors	☐
SK.OP-040 (11835)	Additional Flow Meter (0- 60l/h)	☐
SK.OP-041 (11836)	DAkkS calibration of the secondary flow meter (0-60 l/h)	☐
SK.OP-141 (11849)	Factory calibration of the second flow meter (0-60 l/h)	☐
SK.OP-042 (12322)	Additional low pressure unit (max.3 per dust chamber)	☐ ☐ ☐
SK.OP-132 (14541)	DAkkS calibration of the vacuum sensor and flow meter (SK.OP-042)	☐ ☐ ☐
SK.OP-133 (14542)	Factory calibration of the vacuum sensor and flow meter (SK.OP-042)	☐ ☐ ☐
SK.OP-045 (12279)	Discount for chamber without low pressure unit	☐
SK.OP-046 (12319)	Gloves installed in the window of the front door	☐
SK.OP-070 (11839)	Side wall as a bulkhead	☐
SK.OP-081 (12325)	1-phase test room socket	☐
SK.OP-090 (11841)	Additional entry port 100 mm	☐
SK.OP-091 (11842)	Additional entry port 150 mm	☐
SK.OP-092 (11843)	Additional entry port 200 mm	☐
SK.OP-093 (11844)	Additional entry port 250 mm	☐
SK.OP-100 (11845)	Heavy load grid with increased surface load	☐
SK.OP-140 (12333)	SAE nozzles for SAE and JIS Test	☐
SK.OP-200 (12289)	Data recording incl. ITS companion App - Basic	☐
SK.OP-210 (12290)	Ethernet interface for data recording incl. iTS Companion App - Pro	☐
SK.OP-212 (14583)	iTS Companion App – Pro Plus	☐
SK.OP-220 (12291)	Programmable digital channel (1st channel)	☐
SK.OP-224 (14545)	Additional programmable digital channel (2/3/4. channel)	☐ ☐ ☐
SK.OP-225 (14543)	Emergency stop switch-off of the dust chamber from external	☐
SK.OP-226 (14544)	Dust chamber safety signal for on-site control centre	☐

The individual options are described below.

OVERVIEW: ACCESSORIES - SK SERIES

Accessory number	Accessory	Amount [kg]	Checkbox
SK.ZB-020 (11853)	Talcum powder according to DIN EN 60529		☐
SK.ZB-030 (11854)	Arizona dust A2 according to ISO 12103-1		☐
SK.ZB-035 (14538)	Arizona dust A2 quartz-free according to ISO 12103-1		☐
SK.ZB-040 (11855)	China dust according to FLTM BZ106-01		☐
SK.ZB-080 (11859)	Arizona dust according to SAE J 726		☐
SK.ZB-090 (11860)	Test dust according to ECE R 16		☐
SK.ZB-095 (12318)	Test dust according to DIN EN 40050-9		☐
SK.ZB-070 (11858)	Starter kit for dust chamber		☐
SK.ZB-060 (11857)	Test leak for controlling low pressure equipment		☐

The accessories are described below.

NOTE

We reserve the right to make design and technical changes in the interests of further technical development. This applies to the entire technical description.

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