

# SPLASH WATER CHAMBER SWK



## FULFILLED STANDARDS AND REGULATIONS –SWK SERIES

The iTS splash water chambers from the SWK series enable standard-compliant tests in accordance with the following test standards (always without the addition of NaCl). The tests simulate conditions that can occur during vehicle operation, particularly in the rain or when driving through puddles.

Standards and regulations	Included	Optional	Option
<b>ISO 16750 – 4</b>	x		
<b>BMW Group Standard GS 95003</b>	x		
<b>VW 80101; 2009 – 03</b>	x		
<b>VW 80000; 2009 – 10</b>	x		
<b>MBN LV124-2</b>	x		
<b>Renault 36-00-802 / --Q (Option)</b>		x	SWK.OP-070

The test standard for the splash water test specifies the following general conditions for the SWK:

	SWK
<b>Max. oven temperature [°C]</b>	160
<b>Water temperature of the splash water (prior to entering the splash nozzle) [°C]</b>	+2 to +4
<b>Splash water quantity per splash [l] (splash duration 3 seconds)</b>	3 to 4
<b>Splash fluid</b>	Municipal water or demineralised water (to be provided onsite by the customer) with optional admixture of 3% by weight of Arizona dust, fine in accordance with ISO 1203-1 or SAE 575

- **Note: Admixtures of NaCl in the splash water are not permissible.**

## STANDARD SCOPE OF DELIVERY – SWK SERIES

The SWK splash water chamber can be easily positioned in the test room using the castors. After connection to the supply and operating media, standard-compliant and self-defined test runs can be started in the SWK.

Splash Water Chamber	SWK 100-100-75	SWK 125-100-75	SWK 125-125-125	SWK 200-150-100
Internal test chamber width [mm]	1000	1250	1250	2000
Internal test chamber depth [mm]	1000	1000	1250	1500
Internal test chamber height [mm]	750	750	1250	1000
Number of doors	1	1	1	2
Door cut-out W x H [mm]	900x690	1150x690	1150 x 1190	1900x940
Size viewing window W x H [mm]	500 x 500	500 x 500	500 x 500	500 x 500
External test chamber width[mm]	2065	2320	2320	2500
External test chamber depth [mm]	1320	1320	1570	2460
External test chamber height [mm]	2320	2320	2570	2660
Test chamber lighting	Yes / LED			
Weight [kg]	1280	1320	1450	1980
Cable entry port [number/ø mm]	2 / DN125 (in the left side wall)	2 / DN125 (in the left side wall)	2 / DN125 (in the left side wall)	4 / DN125 (2 left/ 2 right)
Load capacity test grid [kg]	250	250	250	250
Position of control panel	right			
Recirculated air volume flow [m³/h]	4.000	4.000	4.000	8.000
	By using IE4 fans The air flow in the heating chamber is horizontal from left to right.			
Operating temperature of the hot oven [°C]	Room temperature RT + 30 to + 160 ( $\leq \pm 3$ K in steady state)			

## STANDARD SCOPE OF DELIVERY – SWK SERIES

Splash Water Chamber	SWK 100-100-75	SWK 125-100-75	SWK 125-125-125	SWK 200-150-100
Heating capacity of the heating oven [kW]	17kW	17kW	17kW	25kW
	Positioning in the recirculated air flow without contact with the medium. At temperatures below 60°C, warm exhaust air is generated at the exhaust air connection of the oven.			
Number of splash nozzles	2	2	2	4
Temperature selector limiter	Provided (to protect the test material)			
Material inner housing and funnel	Stainless steel 1.4371 (tightly welded) The base of the heating oven is designed as a funnel and ensures rapid drainage of the medium.			



SWK 100 – 100 - 75

## STANDARD SCOPE OF DELIVERY – SWK SERIES

### Functional description of splash water nozzles



Splash water nozzles	according to ISO 16750-4
<b>Splash nozzle</b>	2-component milled part consisting of material no. 1.4301
<b>Norm distance between the nozzle and DUT [mm]</b>	325 +/-25
<b>Splash width (at norm distance) [mm]</b>	450
<b>Water amount per splash [l] (at a splash duration of 3 sec)</b>	3 to 4
<b>Number of splash nozzles for simultaneous use</b>	2 (fixed and flexible nozzles (optional) can be freely combined) 4 (for SWK 200-150-100)



*Splash water nozzle installed in the right side wall (installation of a 2nd nozzle possible)*

## GENERAL REQUIREMENTS ON SITE – SWK SERIES

Climatic conditions	SWK - series
Ambient temperature [°C]	10 - 30
Relative humidity max. [%] - non condensing	70

Electrical power supply	SWK - series
Power supply	3 x 400 Volt /50Hz N/PE
Power consumption up to [kW]	
Installed load max. [A]	63
Electrical connection via	Direct wiring
Ethernet (Optional)	RJ 45 socket

Compressed air supply	SWK - series
Compressed air [bar]	3-6
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.

Water supply	SWK - series
Water quality	Municipal or demineralised water
Water filter (customer supplied) Micronage [µm]	100
Water pressure min. [bar]	3
Water connection to system	Via hose nozzle for hose 13 mm inside

## GENERAL REQUIREMENTS ON SITE – SWK SERIES

Waste water connection	SWK - Serie
Waste water temperature max. [°C]	100
Interface	HT pipe DN 40 / max. 200mm above the floor

- **Note: The waste water connection also serves as overflow protection for the tanks of the splash water system and must be present.**



*SWK 250-150-100 with 2 tank modules and 4 nozzles (2 right / 2 left)*



## OVERVIEW: OPTIONS – SWK SERIES

Option number	Option	Checkbox
<b>SWK.OP-010 (11773)</b>	Water-cooled splash water nozzles	<input type="checkbox"/>
<b>SWK.OP-020 (12314)</b>	Flexible splash nozzle	<input type="checkbox"/>
<b>SWK.OP-040 (11772)</b>	Water-cooled cooling compressor	<input type="checkbox"/>
<b>SWK.OP-060 (12269)</b>	Sensor for test material 20°C - 160°C	<input type="checkbox"/>
<b>SWK.OP-070 (12282)</b>	Extension for Renault Test 36 - 00 - 802	<input type="checkbox"/>
<b>SWK.OP-200 (12299)</b>	Data recording incl. ITS companion App - Basic	<input type="checkbox"/>
<b>SWK.OP-210 (12300)</b>	Ethernet interface for data recording incl. ITS Companion App - Pro	<input type="checkbox"/>
<b>SWK.OP-212 (14661)</b>	iTS Companion App – Pro Plus	<input type="checkbox"/>
<b>SWK.OP-220 (11775)</b>	Programmable digital channel (1st channel)	<input type="checkbox"/>
<b>SWK.OP-224 (14660)</b>	Additional programmable digital channel (2/3/4. channel)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>SWK.OP-221 (12270)</b>	Door-switch for external usage	<input type="checkbox"/>
<b>SWK.OP-225 (14659)</b>	Emergency switch-off the splash water chamber from external	<input type="checkbox"/>
<b>SWK.OP-226 (14658)</b>	Splash water chamber safety signal for on-site control centre	<input type="checkbox"/>

The individual options 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.

### **iTS GmbH**

INNOVATIVE TEST  
& MEASUREMENT SYSTEMS

Industriestraße 18  
47589 Uedem / Germany

Internet: [www.its-gmbh.de/](http://www.its-gmbh.de/)

Email: [info@its-gmbh.de](mailto:info@its-gmbh.de)

Tel.: +49 2825 - 30798-0

Fax: +49 2825 - 30798-20