

Rittal – The System.

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Enclosure-System VX25 acc. to VW Group standards

according to specification for plants in the USA



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Important Note:

When selecting the components, the current project specifications of the corresponding Volkswagen AG project must always be taken into account!

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Enclosure System VX 25 according to VW Group standards USA



According to specification for plants in the USA.

Stable symmetrical extrusion frame, consisting of welded hollow sections with 25 mm DIN pitch pattern, that is symmetrical across all levels and can be accessed from all sides.

Vertical sections with two pairs of mounting angles for space-saving interior installation, same mounting rails for the vertical and horizontal frame profiles, the mounting levels of the frame are accessible from the outside. Stable floor design for easy fastening to the base or subsurface.

The option to bay is easy and stable on all four sides.

Door(s) with foamed-in seal and locking rod with 4-point latching.

Material:

- Enclosure frame, roof plate, rear panel and gland plates: 1.5 mm sheet steel
- Doors: 2 mm sheet steel
- Base/plinth: sheet steel

Surface finish:

- Enclosure frame: dipcoat-primed
- Panels: dipcoat-primed and textured power-coated
- Gland plates: zinc-plated

Colour:

- Enclosure: RAL 7035, pale grey
- Base/plinth RAL 9005, black

Protection category:

- IP 55 to IEC 60 529
- NEMA 12

Including the following modifications:

Door(s):

- With fitted 180° hinges 8618.330
- Lock: 3 mm double-bit
- enclosures up to a width of 600 mm with single door, hinged on the right
- 800 mm and 1000 mm width enclosure with asymmetrical door design, with two overlapping doors, 800 mm width enclosure with lockable door, hinged on the left (600 mm width) and 200 mm small door, hinged on the right, 1000 mm width enclosure with lockable door, hinged on the left (600 mm width) and 400 mm small door, hinged on the right
- 1200mm width enclosure with symmetrical divided, overlapping doors, lockable door, hinged on the right

Enclosure System VX 25 according to VW Group standards USA

Roof:

- With screwed roof plate, without eye bolts

Sides:

- Open, without side wall panels

Base:

- Underlying 200 mm high plinth, system "VX", containing of:
 - 4 sheet steel corner pieces, in the front and rear with closed trim panel
 - laterally closed trim panels 8640.043
- Zinc-plated gland plate, three-piece, closed

Interior:

- Without mounting plate
- With mounted LED system light 2500.300, rated operating voltage 100 V – 240 V, 1~, 50/60 Hz, without socket (service socket box see accessories). The LED system light is mounted at the top of the front frame profile, in the 600 mm and 800 mm wide cabinet in the middle and the 1000 mm and 1200 mm wide cabinet in the 5th or 9th hole, measured from the right corner piece

Earthing:

- Potential equalization for roof, side walls and gland plates is achieved automatically upon assembly by way of contact elements (provided no equipment is mounted)
- Door(s) earthed to the enclosure frame at the top by way of EMC earthing strap 2412.316

Loose attached:

- 1 comfort handle 8618.240 with integrated VW-E1 lock (key not included in delivery¹⁾)
- 2 floor-fastening plates 8660.100

Width (mm)	PU	600	800	1000	1200
Height (mm):		2000 + 200	2000 + 200	2000 + 200	2000 + 200
Depth (mm):		600	600	600	600
Order No.	1 pc.	7993.516	7993.517	7993.518	7993.519
Integrated standard accessories:					
Base trim panels front & rear		8660.022	8660.023	8660.024	8660.025

¹⁾ According to BV 1.09 § 1.1.2, all locks mounted to machines are always to be delivered without keys.
For internal use by the supplier, the required cylinder keys can be ordered separately under the model no. 2532.002.

Accessories

Accessories for enclosures system VX25



Side panels, screw-fastened

- Time-saving assembly thanks to clip-in side panel holders
- Automatic potential equalization and higher EMC protection, thanks to enclosure panel holders with earthing inserts located on the inside
- Easy positioning in the height and depth with the location aid
- One-person assembly
- Earthing bolts with large, paint-free contact surface for optimum contact

Packs of	Order No.
2 pc(s)	8106.245

Material:

- Sheet steel, 1.5 mm

Surface finish:

- Dipcoat-primed, powder-coated on the outside

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 55

Supply includes:

- Assembly parts



Wiring plan pocket

For fastening to tubular door frames at any height, to fit door width 600 mm, Clearance openings (WxHxD): 455 x 210 x 90 mm.

Packs of	Order No.
1 pc(s)	4116.000

Material:

- Sheet steel, spray-finished

Colour:

- RAL 7035

Supply includes:

- Assembly parts



Utility lectern

Prepared for mounting on the perforated door strip or on any sufficiently large surface. When required for servicing, it folds down quickly with a maximum support area, and after use is stowed away in a space-saving design, to fit door width: 600 mm. Support area: 413 x 400 mm.

Packs of	Order No.
1 pc(s)	4638.600

Material:

- Sheet steel, spray-finished

Colour:

- RAL 7035

Supply includes:

- Assembly parts


Accessories

Accessories for enclosures system VX25



Service socket box

The modular system allows a simple and expandable connection in combination with our LED system lights. Without additional mounting accessories, the socket strip can be used on all profiles with a 25 mm dimension grid.

Socket		UL	PU	Order No.
	US	■	1 pc.	2500.714

Material:

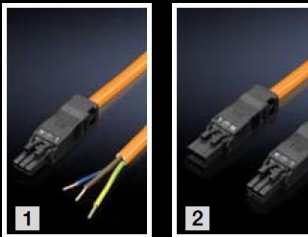
- Plastic

Colour:

- RAL 7016

Supply includes:

- Assembly parts



Connection cables

for Rittal System lights LED and Service socket box.
100 – 240 V AC, 3-pole.

Cable colour:

- Orange



Connection cable for:	Length (mm)	UL	PU	Order No.
1 Power supply	3000	■	1 pc.	2500.500
2 Through wiring	200	-	1 pc.	2500.435
2 Through wiring	1000	■	1 pc.	2500.530
3 T-distributor	-	-	5 pc.	2500.680



Security key VW

The cabinets for the VW group are generally delivered without keys (VW lock no. E1 –E20). According to VW BV 1.09 §1.1.2 all installed locks on machines and other equipment are delivered without keys. For the supplier's own requirements, the required cylinder keys can be ordered separately.

Lock No.	Packs of	Order No.
E1	1 pc(s).	2532.002
E7	1 pc(s).	2532.007
E9	1 pc(s).	2532.015

Keys for other lock No. on request.

Accessories

Accessories for enclosures system VX25



Baying accessories

In order to ensure a stable baying during transport, 3 baying brackets internal must be inserted on the inside of the vertical profile, on each side.

Material:

- Sheet steel

Surface finish:

- Zinc plated, passivated

Supply includes:

- Baying seal



Baying connector external

Packs of	Order No.
6 pc(s).	8617.502



Comfort handle

To replace the enclosed comfort handle with E1 lock for areas where no E1 lock is used (e.g. Porsche).

Prepared for the installation of semi-cylinders with a total length of 40 or 45 mm (to DIN 18 252), e.g. order.-No. 2467.000.

Packs of	Order No.
1 pc(s).	8618.250

Material:

- Die-cast zinc

Colour:

- RAL 7035

Supply includes:

- Assembly parts



Lock insert

For installation in comfort handle 8618.250. Security lock insert No. 3524E. Only for sections where no E1 lock is necessary.

Packs of	Order No.
1 pc(s).	2467.000

Supply includes:

- Assembly parts



Eyebolts

For crane transportation of enclosures, thread: M12, to replace the existing roof bolts.

Material:

- Steel C 15E

Surface finish:

- Zinc plated

Packs of	Order No.
1 pc(s).	4568.000

Supply includes:

- Serrated lock washers

Accessories

Accessories for enclosures system VX25



Base/plinth trim panels

100 mm high, with brush strips.

Material:

- Sheet steel, spray-finished

Colour:

- RAL 9005

Packs of:

- 2 pc(s).

for enclosure width / depth	Order No.
600 mm	8660.092
800 mm	8660.093
1000 mm	8660.094
1200 mm	8660.095



Bracket for base/plinth

For configuring the base/plinth with punched sections with mounting flanges or cable clamp rails.

Material:

- Stainless steel 1.4301 (AISI 304)

Packs of	Order No.
2 pc(s).	8660.400

Supply includes:

- Assembly parts



Cable clamp rails

For mounting in the base/plinth by using the bracket 8620.400.

Material:

- Steel

Surface finish:

- Zinc plated

Supply includes:

- Assembly parts

for enclosure width (mm)	length (mm)	Packs of	Order No.
600	585	2 pc(s).	8619.410
800	785	2 pc(s).	8619.420
1000	985	2 pc(s).	8619.430
1200	1185	2 pc(s).	8619.440



Cable clamps

To fasten cables to cable clamp rails, included plastic insert.

Material:

- Sheet steel

Surface finish:

- Zinc plated, passivated

Packs of:

- 25 pc(s).

F. cable-Ø	Order No.
6 – 12 mm	2350.000
12 – 16 mm	2351.000
14 – 18 mm	2352.000
18 – 22 mm	2353.000
22 – 26 mm	2354.000
26 – 30 mm	2355.000
30 – 34 mm	2356.000
34 – 38 mm	2357.000
38 – 42 mm	2358.000
42 – 46 mm	2359.000
46 – 50 mm	2360.000

Accessories

Accessories for enclosures system VX25



Ride-up roller

Lifts up the door when there is heavy installed equipment (e.g. cooling unit) as a closing aid.

Attaching to the tubular door frame.

Must always be used with a cooling unit installed in the door.

Packs of	Order No.
10 pc(s).	8618.420

Supply includes:

- Assembly parts



Door stay

To secure the door in the open position.

Can be mounted on the enclosure without mechanical processing.

Material:

- Sheet steel

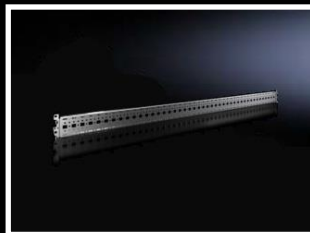
Surface finish:

- Zinc plated

Packs of	Order No.
1 pc(s).	8618.430

Supply includes:

- Assembly parts



Punched section with mounting flange

For variable, individual interior installation of the enclosure frame on the outer mounting level. Simply locate into the system punchings from the outside and screw-fasten.

For enclosure width:

- 1,200 mm

Material:

- Sheet steel

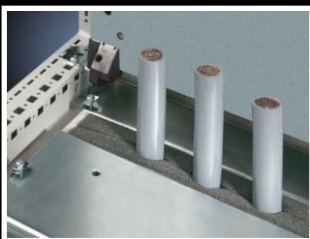
Surface finish:

- Zinc plated

Packs of	Order No.
4 pc(s).	8617.060

Supply includes:

- Assembly parts



Foam rubber cable clamp strip

For sealing the cable entry between the gland plates. Particularly suitable for identical cable crosssections.

Packs of	Order No.
1 pc(s). = 3 m	2573.000

Material:

- Polyurethane foam

Cross-sections:

- 30 x 30 mm

Accessories

Accessories for enclosures system VX25



Isolator door cover

Including main door latch for safety locking of enclosures and bayed enclosure suites in accordance with UL regulations. Meets the requirements of UL 508 A. In conjunction with the operating mechanism, adjacent door lock and interconnecting rods, these requirements are also met for bayed combinations.

May be mounted optionally on the left or right of the enclosure. With this cover, all single-door bayed enclosures may be configured as isolator door enclosures.

Packs of	Order No.
1 pc(s).	8951.010

For enclosure height:

- 2000 mm

For enclosure depth:

- 600 mm

Material:

- Sheet steel, spray-finished

Colour:

- RAL 7035

Supply includes:

- Main door lock
- Cover plate
- Assembly parts



Operating mechanism

Fitted in the enclosure with main switch and additionally in every fourth adjacent enclosure.

Material:

- Sheet steel

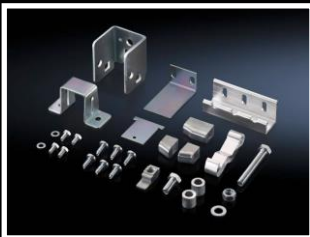
Surface finish:

- Zinc-plated

Packs of	Order No.
1 pc(s).	4912.000

Supply includes:

- Assembly parts



Adjacent door latch

Fitted in the adjacent enclosure.

Material:

- Sheet steel, spray-finished

Colour:

- RAL 7035

Supply includes:

- Assembly parts

f. enclosure	Order No.
single-door	4911.000
two-door	4911.100

Packs of:

1 Set



Interconnecting rods

To extend locking from the main enclosure to the adjacent enclosures of a bayed suite. One interconnecting rod corresponding to the width of the enclosure is required for each adjacent enclosure.

f. enclosure width (mm)	Order No.
600	4916.000
800	4918.000
1200	4920.000

Packs of:

- 10 pc(s).

Wall-mounted cooling units Blue e+S



Benefits:

- Up to 75% energy saved due to speed-regulated components and heat pipe technology
- Suitable for international use due to a unique multi-voltage capability

- Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- User-friendly operation with the Rittal Scan & Service app

Temperature control:

- e+ controller (factory setting +35°C)

Protection category NEMA:

- UL Type 12 / UL Type 3R

Supply includes:

- Cooling unit
- Fully wired ready for connection
- Assembly parts

Note:

- Please observe the mounting instructions

Output class W	500	1000
Order No.	3179.800	3184.840
Total cooling output 50 Hz L35L35 to EN 14511 kW	0.52	1.0
Rate operating voltage V, ~, Hz	110 – 230V, 1~, 50/60 Hz	400/460V, 3~, 50/60Hz
Dimensions (WxHxD) mm	300 x 570 x 199	400 x 950 x 260
Operating temperature range	-20°C ... +60°C	
Setting range	+20°C ... +50°C	
Electric condensate evaporator included	■	■
Energy efficiency ratio (EER) 50 Hz L35L35	1.4	2.37
Refrigerant g	R-513A, 100	R-513A, 310
Weight kg	13.0	26.6

Wall-mounted cooling units Blue e+



Benefits:

- Up to 75% energy saved due to speed-regulated components and heat pipe technology
- Suitable for international use due to a unique multi-voltage capability

- Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- Intuitive operation due to touch display and intelligent interfaces

Temperature control:

- e+ controller (factory setting +35°C)

Protection category NEMA:

- UL Type 12 / UL Type 3R

Supply includes:

- Cooling unit
- Fully wired ready for connection
- Assembly parts

Note:

- Please observe the mounting instructions

Output class W	1600	2000
Order no.	3185.830	3186.930
Colour	RAL 7035	
Total cooling output 50 Hz L35L35 to EN 14511 kW	1,60	2,0
Rated operating voltage V, ~, Hz	110 – 240, 1~, 50/60 / 380 – 480, 3~, 50/60	
Dimensions (WxHxD) mm	400 x 950 x 310	450 x 1600 x 294
Operating temperature range	-20°C ... +60°C	
Setting range	+20°C ... +50°C	
Electric condensate evaporator included	■	■
Energy efficiency ratio (EER) 50 Hz L35L35	2.96	3.23
Seasonal energy efficiency ratio (SEER) 50/60 Hz	6.4	8.1
Refrigerant g	R-513A, 740	R-513A, 1070
Weight kg	37.1	55.2

TopTherm Air/air heat exchanger

**Temperature control:**

- Electronic control with digital display (factory setting +35°C)

Protection category IP to**IEC 60 529:**

- Internal circuit IP 54

Protection category NEMA:

- Certificate is not available

Colour:

- RAL 7035

Supply includes:

- Complete unit ready for connection
- Plug-in terminal strip
- Floating fault signal contact in case of overtemperature

Specific thermal output W/K	45	
Order No.	3128.100	3128.115
Rated operating voltage V, ~, Hz	230, 1~, 50/60	115, 1~, 60
Output per fan W	70 / 90	
Air throughput of fans (unimpeded air flow), external circuit m³/h	600 / 625	
Air throughput of fans (unimpeded air flow), internal circuit m³/h	600 / 625	
Dimensions (WxHxD) mm	400 x 950 x 205	
Operating temperature range	-5°C ... +55°C	
Weight kg	19.0	

Accessories

Accessories for climate control



Thermostat

The thermostat is especially suitable both for controlling fan-and-filter units, heaters and heat exchangers, and for monitoring the enclosure inside temperature.

Bi-metal sensor as the temperature-sensitive element with thermal feedback.

Contact: Single-pole changeover contact as a quick-break contact.

Permissible contact load:

Cat. 5-3 (heating) AC 10 (4)* A, DC = 30 W;

Cat. 5-4 (cooling) AC 5 (4)* A, DC = 30 W

Setting range: + 5°C to + 55°C

Weight: approx. 105 g

Dimensions: 71 x 71 x 33.5 mm

Hysteresis: approx. 1K ± 0.8 K.

* () = Inductive load at cos phi = 0.6.

Packs of	Order No.
1 pc(s).	3110.000

Supply includes:

- Assembly parts



Door operated switch for cooling units

without connection cable,

rated operating voltage: 400 V AC,

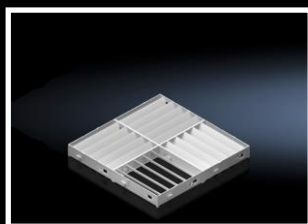
for rated insulation voltage 240 V AC, 6A.

Rated impulse withstand voltage, phase to phase: 6000 V AC.

Packs of	Order No.
1 pc(s).	4127.010

Supply includes:

- Assembly parts



Air diverter

Targeted routing of the cold air flow to avoid hot spots in the enclosure. Particularly well-suited for densely-packed electrical components in the enclosure.

Simple, tool-free assembly.

To fit	Order No.
3185.830	3213.340
3186.930	3213.360

Pack of:

- 1 pc(s).

Material:

- ABS, fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Climate control checklist

To ensure efficient and reliable climate control, the following points should be observed during configuration:

The power loss of the components installed in the enclosure must not exceed the specific cooling output of the cooling unit
The installation location of a cooling unit should be kept as free as possible from heavy dirt and contamination
A minimum clearance of 200 mm should be maintained between two cooling units or between a cooling unit and the wall
The enclosure must be sealed to prevent the intake of ambient air
The lowest possible enclosure inside temperature is not the best
The preset value (35°C) is a good compromise between component service life and condensate formation
Door-operated switches interrupt cooling when the doors are open and thus prevent excessive condensate formation
Cooling units must be provided with filter mats if the ambient air is heavily contaminated with dust or dirt particles. Always use metal filter mats
Provide safe drainage for condensate. Observe the notes given in the operating instructions of the cooling unit concerned
Allow for ventilation spaces above and below components
To prevent hot spots, it is imperative to ensure an adequate air flow around the components in the enclosure
Provide holders in the enclosure for necessary documents
The cooling air should be routed over the components from bottom to top
Do not target cold air directly at active components
Observe the flow direction of components with integrated ventilation (fans)

UL approvals and protection categories

Order No.	Article	UL approval			Protection category
		Certificate Number	Report Reference	Link	
7993.51X	VX25 enclosures	UL-CA-2119647-3	E76083-20180417	Link	Typ 12
2500.300	LED system light	20171020-E489137	E484939-20161013	Link	-
2500.500	Connection cable	E76083	E76083-20191015	Link	-
2500.530	Connection cable	E76083	E76083-20191015	Link	-
2500.714	Service socket box	A-E191125	E511523-20191127	Link	-
8617.502	Baying connector	UL-US-L491171-14-10119102-8	E491171-20191101	Link	-
3110.000	Thermostat	20140815-E203342	E203342-19980702	Link	-
3179.800	Cooling unit 0,5 kW	UL-US-2206352-2	SA8250-20220309	Link	Typ 12
3185.830	Cooling unit 1,6 kW	20181003-SA8250	SA8250-20180112	Link	Typ 12
3186.930	Cooling unit 2,0 kW	UL-CA-L8250-92-12805102-1	SA8250-20150821	Link	Typ 12
3128.1XX	Air-/ air heat exchanger	20130911-E117603	E117603-20040515	Link	-

* = The device itself is UR -approved, but the cabinet must be checked during installation.

Change history

Changes

Topic	Remarks	Date
All	First version of this data sheet.	2018/02/27
Accessories	Service socket box: UL certification in preparation	2019/07/11
Accessories	Connection cable of LED system light changed	2019/07/11
Accessories	Foam rubber cable clamp strip is not UL approved	2019/07/11
VX25 enclosure	Protection category corrected	2019/11/28
Accessories	Change of the packaging unit for the connection cable 2500.435	2020/05/15
Accessories	Change of execution and order no. the door stay	2020/07/16
Document	Note inserted on page 2	2020/01/10
VX25 enclosure	Article number of the VX base/plinth system changed	2024/01/22
Cooling units	3303.5XX replaced by 3179.800, refrigerant changed	2024/10/07
Accessories	Base trim panels, gland plates and air diverter added	2024/10/07

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