CONTEG FLY SHEET

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OPTIMAL RACK SERIES

RMF SERIES 19" FREE STANDING RACKS

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Dear partners,

At CONTEG we're continually striving to improve our products. Optimal series RMF rack is the latest to receive a series of updates to ensure that our Optimal rack family remains at the leading edge of the market in terms of functionality whilst continuing to offer the best price to performance ratio.

Here we bring you a brief overview of the changes. On the following pages you can find detailed information about the changes including illustrative pictures.

BRIEF SUMMARY OF CHANGES

- **Load ratings have increased from 400 to 500 kg, including a new solution of vertical extrusions holder for the 800mm wide racks** – the increased load rating enables housing of all kinds of equipment. The standard load rating is 500kg only if RMF-BRACE is used, otherwise the load rating drops to 400kg. If the load rating is still not enough the customer may order our High-load distribution rack (RHF series), where the load rating is up to 1500 kg.

- **A new type of 19" extrusion as standard** - all racks in the RMF portfolio will use 19" extrusions with L profile made of 2mm (previously 1,5mm) galvanized sheet steel. The mounting holes have been enlarged to 9.5 x 9.5mm to be compatible with most server mounting kits, so their installation in new RMF racks will be much easier.

- **A new type of pedestal for mounting feet and castors -** the lower part of the new rack is completely flat, so if the adjustable feet, castors or a plinth are not used, it doesn't cause any damage to the floor. (of course not in case sliding the racks across the floor).

- **A new method of connection** - connecting racks together with the new system is much simpler. In the rack's column will be 2 or 3 holes (depending on height), so the only thing you have to do to link them is to use the newly developed set of DP-DR-UNI. These openings do not affect the IP protection, because they are covered with blank panels as standard. This has the benefit of allowing RMF racks with side panels fitted to be easily connected into blocks.

- **Changes of door lock options** - the RMF series will be fitted with a new type of handle. The available Lock options have been significantly improved. The main advantage is provide by a new removable cylinder lock 333, which allows individual locking arrangements depending on the customer needs and is already in the standard configuration of ROF rack.

- **Change of hinges** - new types of door hinges improve security as it is now impossible to remove a door from a locked rack.

- **Changing the type of screws used** – Hex screws will be used in the rack construction for improved aesthetics, each rack will be supplied with an appropriate size hex key as standard.

- **Extra items** - pads for easier assembly / disassembly / rotation of the doors.

These changes will be applied to all RMF series racks manufactured from 1/12/2011.

INCREASED LOAD RATINGS AND NEW SOLUTION OF VERTICAL EXTRUSIONS HOLDER

The practice of installing ever heavier equipment into racks is leading to increased pressure on the rack's tonnage rating. This requirement has led to the decision to improve the load rating capability of the racks by construction adjustments which translate to a significantly increased tonnage rating of the racks. **The original 400 kg load rating has increased to 500 kg.** And at a glance overview of load ratings for new RMF racks is listed below:

- **300 kg** for RMF racks height 21 and 33U (2 pairs of vertical extrusions holders)
- **500 kg** for RMF racks height 42 and 45U (4 pairs of vertical extrusions holders)

The increased load rating has been achieved primarily through the introduction of new extrusion supports. This change of the mounting has already been applied to the existing 800 mm wide racks with a load rating of 400 kg. The extrusion holders that were originally used will be replaced with straight extrusion holders that were previously used only in 600mm wide racks. To these holders will be attached adjustable supports for mounting 19" vertical extrusions. To ensure the load rating of 500 kg it is necessary to use reinforcing elements - RMF-BRACE. These are not included and must be ordered separately.

Please note that changes of holders and supports will also cause a change of vertical wire management panel. The previous code HVM will be replaced with a new model code HVMF.
Important: the change of supports is linked with a change of 19" extrusions, see the section bellow.

19" EXTRUSIONS

The original "S" profile 19" extrusions made of 1,5mm galvanized sheet steel will be replaced by "L" profile 19" extrusions made of 2mm galvanized sheet steel as standard. "S" profile extrusions made of 2mm will be available as an option.

The new type of extrusion brings several improvements. The extrusion is now fully compatible with most mounting kits for servers, which was one of the main objections with the original S-design. New construction of the extrusions in conjunction with stronger material provides increased rigidity in the extrusions. The properties of the new extrusion, together with the improved supports help to achieve the increased load rating, see the previous section.

Modifications were also to the mounting holes. The new dimensions are 9.5 x 9.5 mm. This size allows for easy deployment of assembly sets, while maintaining the strength of the connection! Changing the size of the holes is not only a step forward in pursuit of being user-friendly, but also creates a compatibility with new features of accessories which will be launched shortly.

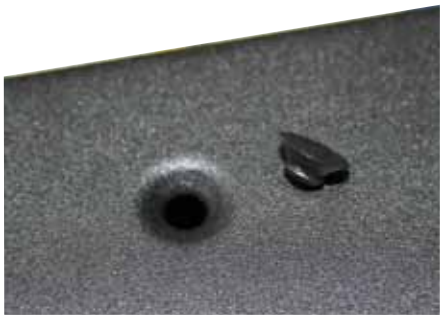
Important: the new extrusions will fit into racks with the old type of holders and can be ordered as a spare part, even if you own a current (old) type of rack, however it is not possible to use the old type of extrusions in the facelift racks.

NEW TYPE OF PEDESTAL FOR MOUNTING FEET AND CASTORS

The previous method of attaching leveling feet or castors ensured a secure and stable mounting, however if a customer decided to use their RMF rack without plinth or feet, the possibility of bottom nuts damaging the floor was a possibility due to the high "spot" load. This was primarily a concern for customers who have installed their racks in Data Centers and server IT rooms with raised floors.

The bottom panel of the face-lifted RMF rack is now flat and therefore the rack can be placed without fear of damaging the floor and avoiding the high "spot" load that would have occurred with the previous design.

CONNECTION HOLES IN COLUMNS



In order to improve functionality and make connection of racks easier, the columns of all RMF racks will now include holes designed to allow the easy connection of racks. 2 holes (up to 33U height) or 3 holes (from 36U height) with a diameter of 5.5mm (prepared for the 5mm screw), covered by a standard blank panels will enable the racks to be simply and easily bolted together. Blank panels over the holes ensure that in case of not using the connection holes, the racks will maintain their IP 30 rating and it also means that the IP54 rating option will still feature these connection holes.

To connect racks together all that needs to be done is simply to remove the blank panels, place the racks in row so that the connecting holes align and then just connect the columns of contiguous racks. We have developed a new connecting kit DP-DR-UNI for the baying of racks which can be ordered separately. In contrast with previous system you will now be able to connect racks together without the need to remove the side panels. This can be especially beneficial in preventing thermal transfer between racks.

This way of connecting the racks was designed to achieve maximum versatility when assembling blocks of racks, especially in Data Centers and server IT rooms where the racks are often connected together. When mounting a contained cold aisle, assembly is simplified as the aisle door assembly uses the same holes for attachment to the end-of-the-row racks.

NEW TYPE OF HINGES

To improve the physical security of the ROF racks we have changed the design of the door hinge. The new hinge can only be removed from the inside of the rack, meaning that it is impossible to remove the door without access to the inside of the cabinet. The doors can still be removed and reversed as before, however only from the inside of the rack. To ease the process of door reversal all racks will be shipped with special wedges which can be used to support the door in the correct position while the hinges are re-fastened.

STANDARD RAL COLORS AVAILABLE

To standardize the colors of CONTEG rack portfolio, the new RMF rack will be available in RAL 9005 and RAL 7035.

RAL 9005 ***RAL 7035***

CHANGES ON LOCK DOOR OPTIONS

The facelift of RMF rack also includes changes to the door lock options. The "old" standard swivel handle with universal key 333 will be replaced by a new type of handle with same appearance as the electronic door handle used in the access control system RMS-ACS-02. The handle not only operates more positively but also features a removable lock cylinder. This change provides the end user the ability to change the key systems used in racks, as it allows using both half cylinder profile and secured cylinder profile systems without the need to change the whole handle. It is therefore possible to manage master key or other custom modifications of key systems.

In connection with this change the encoding system of door lock options has changed. Lock options labeled A, B, C and D will no longer be available. Standard options are now noted as V and W in the code - be careful, do not confuse this with the door code! Variants E, F, G and H remain unchanged. From the functional point of view the lock options I, J, K and L will remain unchanged as well, but there will be change in design of swivel handles (in accordance with options V and W). That means variants I and J will be half cylinder profile with universal key and variants K and L will be equipped with unique keys, individual key for each door (on the rack will be 2 different keys , one for the front door and one for the rear door).

The Multipoint Locks system has been upgraded and now features a redesigned "draw bar" and gearbox. The result of the change is a more robust and stronger locking system that is less sensitive to racks that are not leveled properly. A futher enhancement is that all multipoint locks now 3 point, meaning that three points on locking are achieved on the door; top, middle and bottom.

"OLD" door lock options for RMF racks, with changes noted for "NEW" RMF racks		
Code	**Options**	**Change**
A	Standard swivel handle, universal key	**ENDS - REPLACED BY OPTION V**
B	Standard swivel handle, universal key, multipoint	**ENDS - REPLACED BY OPTION W**
C	Standard swivel handle, keyed different	**ENDS - USE OPTION I**
D	Standard swivel handle, keyed different, multipoint	**ENDS - USE OPTION J**
E	Swivel handle with combination lock and universal key	UNCHANGED
F	Swivel handle with combination lock and universal key, multipoint	UNCHANGED
G	Swivel handle with combination lock, keyed different	UNCHANGED
H	Swivel handle with combination lock, keyed different, multipoint	UNCHANGED
I	Swivel handle with profile half cylinder, universal key	**NEW DESIGN**
J	Swivel handle with profile half cylinder, universal key, multipoint	**NEW DESIGN**
K	Swivel handle with profile cylinder, keyed different	**NEW DESIGN**
L	Swivel handle with profile cylinder, keyed different, multipoint	**NEW DESIGN**

NEW door lock variants for RMF racks	
Code	**Options**
E	Swivel handle with combination lock and universal key
F	Swivel handle with combination lock and universal key, multipoint
G	Swivel handle with combination lock, keyed different
H	Swivel handle with combination lock, keyed different, multipoint
I	Swivel handle with profile half cylinder, universal key
J	Swivel handle with profile half cylinder, universal key, multipoint
K	Swivel handle with profile cylinder, keyed different
L	Swivel handle with profile cylinder, keyed different, multipoint
V	Swivel handle with lock assembly 333
W	Swivel handle with lock assembly 333, multipoint

CHANGE OF TYPE USED SCREW

The Slotted Phillips (PH2) screws used on the "old" RMF will be replaced by the stronger and more user-friendly "Allen key" hexagonal type in the face-lift RMF. A uniform screw type for all connections in the rack is M5.

EXTRA ITEMS

Each RMF rack will now come supplied with an Allen key and door positioning wedges (easy refitting and reorientation of doors).