

 **GKN Wheels**

# **GKN Wheels FAD catalogue 2008**



**GKN Wheels FAD**  
Viale Santa Maria, 76  
I - 25013 - Carpenedolo (BS)

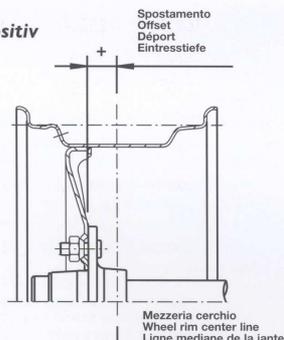
e-mail: [gkn.fad@wheelsit.gknplc.com](mailto:gkn.fad@wheelsit.gknplc.com)  
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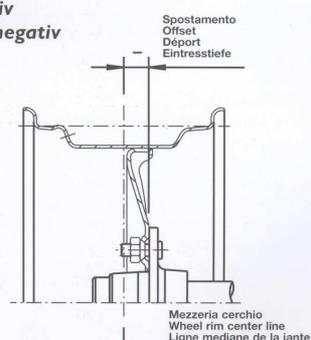
# How to order wheels

Al momento della richiesta preghiamo indicare le informazioni disponibili relative a:	When sending your enquiry please let us have the available information concerning the following points:	Au moment de la demande, nous vous prions de spécifier les informations suivantes:	Bei Raederanfragen bitten wir folgende Daten (falls bekannt) anzugeben:
<b>1</b> Tipo pneumatico (Dimensioni, PR)	<b>Type of tyre</b> (Dimension, PR)	<b>Type de pneu</b> (Dimension, PLY)	<b>Refentyp</b> (Abmessung, PR)
<b>2</b> Tipo di ruota (Dimensioni, disegno cerchio)	<b>Type of wheel</b> (Dimension, rim drawing, etc).	<b>Type de roue</b> (Dimension, plan, jante).	<b>Raedertyp</b> (Abmessung, Zeichnungen des Rings).
<b>3</b> Portata (e) ruota e velocità relativa	<b>Carrying capacity (ies) of wheel and corresponding speed (s).</b>	<b>Charge de la roue et vitesse</b>	<b>Tragfähigkeit und entsprechende Geschwindigkeit.</b>
<b>4</b> Foratura (Nelle tabelle seguenti sono indicate le nostre forature e svasature standard).	<b>Piercing</b> (In the following tables we list our standard piercings and countersinks).	<b>Percage</b> (Dans les tables suivantes nous avons indiqué nos percages et fraisages standard).	<b>Anschlussmasse, Bohrung</b> (unsere Standardbohrungen und Standardansenkungen entnehmen Sie bitte den folgenden Tabellen).
<b>5</b> Spostamento (Vedere a pie' pagina per il segno + o -)	<b>Offset</b> (See at page bottom for sign + or -)	<b>Déport</b> (Voyez au pied de la page le signe + ou -)	<b>Einpresstiefe</b> (S. hier unten Zeichen + -)
<b>6</b> Se è già in uso: - Tipo di ruota usata, spessore cerchio e disco. - Se disponibile inviare disegno.	<b>If already in use:</b> - Type of wheel used, rim and disc thickness. - If possible send a drawing	<b>Si déjà employée:</b> - Type de roue utilisée, épaisseur de la jante et du voile. - Si possible, envoyer plan.	<b>Wenn schon gebraucht:</b> - Raedertyp - Abmessung Ring und Schuessel
<b>7</b> Veicolo su cui la ruota è applicata	<b>Vehicle on which the wheel is mounted</b>	<b>Véhicule où la roue est appliquée.</b>	<b>Fahrzeugtyp</b>
<b>8</b> Se la ruota è fissa o sterzante	<b>If the wheel is fixed or steering.</b>	<b>Si la roue est fixe ou pivotante.</b>	<b>Lenkraeder</b>
<b>9</b> Se la ruota è trainata o motrice	<b>If the wheel is driven or trailing</b>	<b>Si la roue est trainée ou motrice.</b>	<b>Antriebsraeder, Zugraeder</b>

**Spostamento positivo**  
**Positive offset**  
**Déport positif**  
**Eintresstiefe positiv**



**Spostamento negativo**  
**Negative offset**  
**Déport négatif**  
**Eintresstiefe negativ**



# GKN Wheels Technical Centres



The very heart of the GKN Wheels FAD team lies in the work force and staff with a high level of know-how and experience. The task of continuous research in innovative technology to secure and maintain product excellence is ongoing. Every planning phase is studied at CAD workstations, on a finite elements programme and hi-tech testing facilities which tests wheels and prototypes from the UK, Denmark, China as well as from FAD.



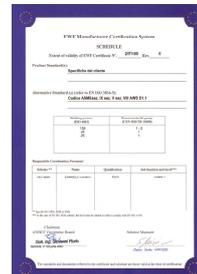
**ISO 14001:2004**



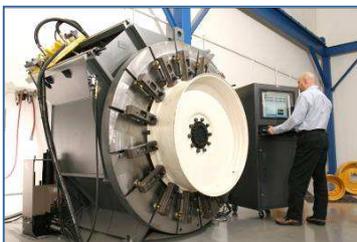
**ISO 9001:2000**



**UNI EN ISO 3834-2**

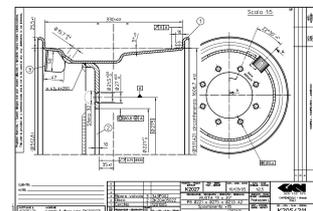


Flexibility in product development means that “specialised engineering” projects can be dealt with quickly and professionally. The customer’s involvement in these phases insures that every production step is monitored and evaluated.

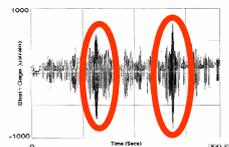


The end result is a product designed and produced to the customer’s specific needs and requirements.

The entire design and production process is guided by a Quality Manual.



This Quality Manual is the rule book which controls, instructs and guides every single aspect of the production operations in all departments.



GKN Wheels FAD, with the **ISO 14001**, **ISO 9001** and **ISO 3834-2** certifications, is totally committed to following and improving all essential quality requirements



## GKN Wheels Safety and Service Instructions

### Safety and Service Instructions: General information

The wheel of a self propelled or trailed vehicle is subjected to extreme forces. For this reason, special attention must be paid to all fitting, stripping/removal and maintenance operations.

The following general instructions and, in addition, those specific and relevant to particular types of wheels as per the following paragraphs, shall be inserted in the 'Use and Maintenance' hand book of the vehicle to ascertain the end user shall know and apply the correct procedures.

Please also refer to the ETRTO Recommendations and EUWA 'Safety and Service Recommendation for wheels' ([www.EUWA.org](http://www.EUWA.org)) for both mounting and removal of the tyres and wheels.

### Wheel Selection

To assure a proper operation, and in accordance with the tyre manufacturer's information or the current international standards (ETRTO, T&RA, STRO etc.), check that the chosen rim is suitable for the utilised tyre;

Usage of the wheel (Load conditions, speed, application i.e.: steering or fixed, driving or free rolling, ...) must comply with the indications supplied by FAD, who declines any responsibility for usage not conform with its given indication.

The piercing of the disc must be compatible with the following dimensions of the vehicle's hub:

Hub	Wheel
Number & diameter of the bolts	Number & diameter of the holes
Centring diameter	Centre hole or bore diameter
Pitch circle diameter of the bolt	Pitch circle diameter of the bolt's holes
Type of fixing nuts/washers	Shape of the eventual countersink

Centring of the wheel can be made in two different ways:

- hub-centring: make sure there isn't too much play that between the pilot hole and the centring diameter of the hub. Use nuts with flat washers.

- stud-centring: make sure the nuts/screws/washers you are using match with eventual countersink of the wheel's holes.

### Mounting or fitting

For multi-piece wheels, divided wheels and adjustable track wheels, please also read the safety prescriptions given in the following chapters.

The wheel must be used in its original condition of supply. Without authorisation from FAD, modifications to the product are not allowed, i.e.: welding of reinforcements plates or stiffening ribs. In no case shall FAD be liable for wheels with such modifications.

Fitting and removal of the wheels must only be performed by properly trained personnel.

Never use aggressive mounting paste to fit the tyre.

The tyre must be inflated to the very pressure indicated by the tyre manufacturer. Improper tyre pressure can cause damages to the tyre and/or to the rim.

Prior to fitting the wheel to the vehicle, make sure that the components you are about to use (screws, nuts, washers) are adequate for an eventual countersink of the disc's bolt holes. Usage of improper parts can damage the bolt's holes and be responsible for the failure and the loosening of the wheel.

Do not use lubricants on the fixing screws or nuts.

Tightening of the disc's stud should be effected cross wise and not clock wise.

Prior to fitting the wheel to the vehicle, make sure that the components you are about to use (screws, nuts, washers) are adequate for an eventual countersink of the disc's bolt holes. Usage of improper parts can damage the bolt's holes and be responsible for the failure and the loosening of the wheel.

Do not use lubricants on the fixing screws or nuts.

Tightening of the disc's stud should be effected cross wise and not clock wise.

The right tightening torque values, as specified by the FAD catalogue, must be used. Too high or too low a tightening torque can respectively cause loosening or breakage of the studs, with the subsequent risk of breaking the disc or of loosening of the wheel.

Re-check the tightening torque after the first 50 km.

### Maintenance

Periodically, unscrew the wheel from the vehicle (ETRTO recommended procedure) after having completely deflated the tyre, strip the tyre from its wheels and proceed to check the following:

Remove all dirt, especially in the area of the tyre bead seat and from the groove (in case of a multi-piece wheel) and carefully check the rim and the disc. If you notice deformations or cracks, the wheel must be replaced.

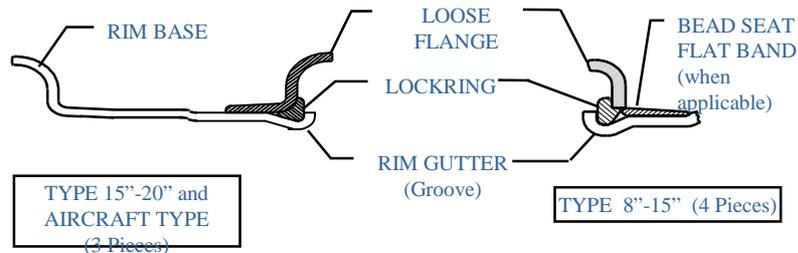
Carefully check area around the wheel's attachment holes: if you notice ovalisation of the holes or the presence of cracks the wheels must be replaced.

If the screws or fixing nuts show signs of corrosion or damage, they must be scrapped and new ones fitted. To avoid corrosion and damages, recondition the paint skin when necessary. In the fixing area never exceed the thickness of 50 µm (primer included). In any case avoid to carry out repairing on the rim or the disc through welding with or without strengthening material.

## GKN Wheels Safety and Service Instructions

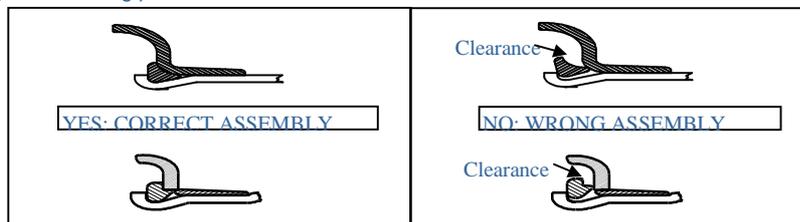
### MULTI-PIECE WHEELS

For safety reasons, when multi-piece (locking) wheels are used, apart from the instructions given here above in the General Information paragraph, the instructions of this paragraph must be carefully read, understood and followed.



### **ASSEMBLY INSTRUCTIONS - PNEUMATIC TYRE**

- 1- Do not assemble or disassemble tyres without proper training.
- 2- Use only tyres suitable for the rim.
- 3- Make sure to only use FAD's original parts or components. Check components are compatible with each other and that data stamped on each one corresponds to the rim size stamped on the rim.
- 4- Fit the tyre to the Rim Base, place the tube with its valve inserted into the valve hole.
- 5- When applicable insert the Flat Band under the Tyre Bead.
- 6- Place the Loose Flange on the Tyre Bead with its edge in the direction shown in the above picture and push on it to free the Rim Groove where the Lockring has to be inserted.
- 7- Insert the Lockring in the groove with by means of a specific tyre fitting equipment or by means of two levers and a rubber hammer. Check that in all circumstances, the lockring seats in the groove along its full circumference. For stripping purposes, make sure there is enough space to insert a tool between the lockring's end.
- 8- Place the wheel in a safety cage and start inflating the tyre to a pressure no higher of 1/1.5 bar.
- 9 - Visually check the lockring to be correctly seated inside the Rim Groove and that no clearance is present between it and the Loose Flange as shown by the following pictures:



If the Lockring is not properly seated or in an incorrect position (clearance) stop the assembly operation. Indeed, pursuing the inflation could cause the lockring to be ejected from its groove by the air pressure or, even worse, could cause it to remain in an unstable position for a short time and be ejected from the groove after removal of the wheel from its cage, with serious danger for the people in the vicinity. In such a case deflate the tyre and restart from step 7.

If the mounting is right, continue to inflate the tyre, always keeping the wheel in the cage, until reached the required pressure.

- 10- Before removing the wheel from the safety cage, repeat the visual check of the Lockring and Loose Flange position as indicated at point 8 above. Would the lockring be out of position the case in which the rings are not in the correct position deflate the tyre and start again from step 7.

### IMPORTANT NOTES ABOUT UTILISATION

Once correctly fitted, the Lockring and the Loose Flange are constitutive of a locking device through the pressure of the tyre reacting on the rim.

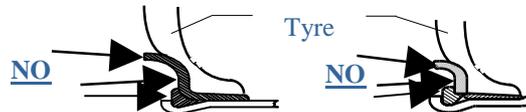
When the tyre is inflated, if the relative position of these two rings is forced into a different one, the locking of the tyre would not be secured any more: the air pressure (and a sudden movement of these components) could cause the explosion of the tyre with the consequent ejection of the rim's components from the rim or of the wheel from its hub, with serious danger for the people around. For this reason it is compulsory to comply with the following instructions:

When already fitted to the vehicle, wheels should never be inflated. Only inflated wheels are to be fitted to a vehicle.

Once the tyre is inflated, never use hammer on the Loose Flange or the Lockring.

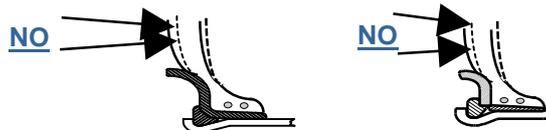
Avoid to apply pressure to the Loose Flange and/or the Lockring.

## GKN Wheels Safety and Service Instructions



Do not put the tyre wall under pressure so as to deform the wall above the Loose Flange: the tyre could carry the Loose Flange with itself, thus freeing the Lockring.

### TWIN WHEELS



Special care must be taken in the where twin wheels are fitted. In fact, twin wheels mounting involves specific risks: the Lockrings and the Loose Flanges of the wheels (thereafter called "the rings") are located in the "inside" of the wheels facing each other and are not in sight when the wheels are mounted on the vehicle.

Under this condition it's impossible to check the right position of the rings: possible movements of the rings or deformations of the rings and/or the rim edge, that for any reason could occur during usage of the vehicle, can not be seen. For this reason:

- To avoid any risk, it is necessary that both tyres be deflated before removal from the vehicle.

Due to the risk inherent to this situation, this instruction is also indicated by the **ETRTO Recommendations**: 'It is strongly recommended that tyres are deflated before removal from the vehicle'. It is advisable to lift the vehicle before deflating.

- Any component inserted between the two tyres must be carefully designed in order to comply with the statements of the previous chapter.

Without a careful design, a situation could arise whereby the components are forced out from their seats. This unseating can not be observed with the wheels assembled on the vehicle.

For this reason, if the tyres were not deflated before removal as stated above, there would be a real risk of the tube tyre's explosion during the removal of the wheel from the vehicle and of the wheels being thrown against the operator.

- In case when one or both tyres have lost pressure, before re-inflating it is necessary to deflate completely both tyres, then remove them the vehicle and check the rings position. If OK, then put the wheels in a safety cage and proceed with the inflation according with the instruction given above.

### WHEELS WITH SOLID TYRES

Comply to the instructions given by the tyre manufacturer.

### STRIPPING /CHANGING OF THE TYRE

For safety reason, when you work with multi-piece wheels, both in single than in twin assembly, before removing the wheel form the vehicle is mandatory to deflate completely the tyres (it is advisable to lift the vehicle before deflating).

This instruction is given also by the **ETRTO Recommendations**: 'It is strongly recommended that tyres are deflated before removal from the vehicle'.

1- Before beginning any stripping operation, make sure that the tyre is completely deflated;

2- Press on the Loose Flange in order to unlock the Lockring.

3 - Remove Lockring from the groove by means of a tool inserted in the gap between its ends: in this phase the operator shall avoid standing in front of the wheel in the path of the components which might spring-off;

4 - Strip the tyre from the rim base;

5 - Separate the tyre from the Loose Flange or from the flat band;

6 - Prior to fitting a new tyre, carefully clean the rim groove and check that all the components you are about to use are in good condition, not damaged, cracked or deformed.

If any part should seem damaged, cracked or deformed it must be replaced with an original FAD spare part.

7 - Reassemble according to the above given instructions.

### MAINTENANCE

When a tyre has lost pressure, make sure it is completely deflated prior to removing the wheel from the vehicle.

**Beware**, in the case of twin wheels, prior to removing any of the wheels, **the other tyre must also be completely deflated.**

## GKN Wheels Safety and Service Instructions

Prior to re-inflating, check that the Lockring and the Loose Flange are correctly seated, than place the wheel into a safety cage and inflate according to the above given instructions.

Periodically check the wheel. Clean it and carefully check the rim and the disc: if deformations or cracks are visible the wheel must be replaced.

In all cases avoid to repair cracks with welding. Only use original and compatible FAD spare parts.

### **DIVIDED WHEELS**

The divided wheels are so manufactured that, fastening together two main parts (called 'half-wheels', that can also be of different width) makes up a rim with two fixed flanges.

If the two parts (half-wheels) are unfastened while the tyre is inflated, the tube could explode with the consequent throwing away of the two half-wheels with great risk to the people around the area.

For safety reason, and apart from the above given general instructions, the following instructions must be carefully read, understood and applied.

### **MOUNTING**

Fit the tyre with the tube on one half-wheel;

Fit the second half-wheel putting the valve through the valve hole;

Fasten the two half-wheels with the screws and nut supplied with the wheel using the holes shown in the drawing. Tighten the screws cross wise and not clock wise.

Tighten the nuts with the following torque:

Thread	Tightening Torque (Screw class 8.8) N . m
M8	19.4 ÷ 21.4
M10	38.4 ÷ 42.4
M12	66.5 ÷ 73.5
M12x1.5	70 ÷ 77

### **Warning!**

The use of improper tightening torque values could cause the loosening of the nuts or the breakage of the screws with, in both cases, the risk of the detachment of the two half-wheels and the explosion of the tyre, with risk for all the people in the vicinity.

Inflate the tyre at the pressure given by the tyre manufacturer.

Fix the wheel to the vehicle using the tightening torque given on FAD catalogue;

After the first 50 km check, and, if necessary, retighten, the tightening torque of all the screws/nuts.

### **STRIPPING /CHANGING OF THE TYRE**

For safety reasons, prior to beginning any removal operation of the wheel from the vehicle it's absolutely necessary to completely deflate the tyre.

Once checked that the tyre is completely deflated, remove the wheel from the vehicle and divide the two half-wheels loosening the fastening nuts.

To fit a new tyre proceed according the instructions given above.

If necessary change screws/nuts with components identical to the original one, in dimensions and class of resistance.

### **ADJUSTABLE TRACK WHEELS**

For safety reason, apart from the general instructions given above, the following instructions must be carefully read, understood and applied.

#### **Track Changing**

To let the wheel rotate freely from any load, lift the tractor as much as necessary.

Remove the wheel and place it horizontally on the ground;

If changing the mounting position of the disc on the rim is necessary, loosen the screws/nuts fixing the disc to the lugs, free the disc and put it in the desired new position.

Fix the disc to the lugs of the rim, taking care to hold it as much centred as possible (to avoid run-out of the wheel) and correctly reposition all the fixing components (screws, nuts, washers). Use the tightening torque given by the FAD's catalogue. Improper tightening torque values could cause the loosening of the nuts or the breakage of the screws, with, in both cases, the dangerous effect of losing the wheel.

Re-assemble the wheel to the tractor using tightening torque indicated by the FAD's catalogue. Improper tightening torque values could cause the loosening of the nuts or the breakage of the screws, with, in both cases, the dangerous effect of losing the wheel.

After the first 10 km re-check the proper tightening of all the screws/nuts.

# Drop centre wheels

Description	Min. lot	Stud hole standard	Description	Min. lot	Stud hole standard
3.50B X 10"		F4 - F5/140	W9 X 16"	300	F5/140 - F6/205
4.00B X 10"	700	F4 - F5/140	11 X 17.0"	660	F6/205 - F8/275
10.50I X 12"H2		F4 - F5/140	13.00 X 17"		F6/205 - F8/275
3.00B X 12"		F4 - F5/140	16.00 X 17"		F6/205 - F8/275
4.00B X 12"H2	600	F4 - F5/140	10 X 18"		F6/205 - F8/275
4.25 X 12"	500	F4 - F5/140	11 X 18"		F6/205 - F8/275
5J X 12"		F4 - F5/140	13 X 18"		F6/205 - F8/275
7.00 X 12"		F4 - F5/140	5.50F X 18"	260	F6/205 - F8/275
7.00I X 12"H2	500	F4 - F5/140	9 X 18"		F6/205 - F8/275
8.50I X 12"H2	500	F4 - F5/140	W7 X 18"	260	F6/205 - F8/275
9.00 X 12"	800	F4 - F5/140	W9 X 18"		F6/205 - F8/275
4.1/2J X 13H2		F4 - F5/140	2.15 X 19"	400	F5/140 - F6/205
4J X 13"H		F4 - F5/140	3.00D X 19"	400	F5/140 - F6/205
5J X 13"H2		F4 - F5/140	11 X 20"		F6/205 - F8/275 - F10/335
6J X 13"H2	1000	F4 - F5/140	13 X 20"		F6/205 - F8/275 - F10/335
4J X 14"H		F5/140 - F6/205	14 X 20"	600	F6/205 - F8/275 - F10/335
5.1/2J X 14H2		F5/140 - F6/205	16 X 20"	680	F6/205 - F8/275 - F10/335
5J X 14"H2		F5/140 - F6/205	5.50F X 20"	230	F6/205 - F8/275 - F10/335
6J X 14"H2		F5/140 - F6/205	9 X 20"	540	F6/205 - F8/275 - F10/335
10LB X 15"H2		F5/140 - F6/205	W10 X 20"		F6/205 - F8/275 - F10/335
13LB X 15"H2		F5/140 - F6/205	W11 X 20"		F6/205 - F8/275 - F10/335
3.00D X 15"		F5/140 - F6/205	W8 X 20"	250	F6/205 - F8/275 - F10/335
4J X 15"H		F5/140 - F6/205	DW13 X 24"Z		F6/205 - F8/275 - F10/335
5J X 15"H2		F5/140 - F6/205	DW16L X 24"Z		F6/205 - F8/275 - F10/335
6J X 15"H2		F5/140 - F6/205	TW14L X 24"Z		F6/205 - F8/275 - F10/335
7J X 15"		F5/140 - F6/205	W10 X 24"		F6/205 - F8/275 - F10/335
8LB X 15"		F5/140 - F6/205	W12 X 24"		F6/205 - F8/275 - F10/335
8W X 15"	700	F5/140 - F6/205	W15L X 24"Z	510	F6/205 - F8/275 - F10/335
9.00 X 15.3"		F5/140 - F6/205	W16L X 24"Z		F6/205 - F8/275 - F10/335
9.00 X 15.3"Lowered	320	F5/140 - F6/205	W7 X 24"	160	F6/205 - F8/275 - F10/335
9W X 15"	800	F5/140 - F6/205	13.00/1.4 X 25"		F8/275 - F10/335
11 X 16"	640	F5/140 - F6/205	DW16L X 26"Z		F8/275 - F10/335
4.00E X 16"		F5/140 - F6/205	DW20A X 26"Z		F8/275 - F10/335
4.50E X 16"		F5/140 - F6/205	TW14L X 28"Z		F8/275 - F10/335
5.50F X 16"		F5/140 - F6/205	W10 X 28"	510	F8/275 - F10/335
6J X 16"H2	300	F5/140 - F6/205	W12 X 28"	680	F8/275 - F10/335
8W X 16"		F5/140 - F6/205	W15L X 28"Z	420	F8/275 - F10/335
W7 X 16"	320	F5/140 - F6/205	TW14L X 30"Z		F8/275 - F10/335
W8L X 16"		F5/140 - F6/205	W10 X 36"		F8/275 - F10/335

Min.lot: Rims that need a minimum quantity for production

8

**GKN Wheels FAD**

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# 15° drop centre wheels

Description	Min. lot	Stud hole standard
6.75 X 14.5"	800	F5/140 - F6/205
8.00 X 14.5"	800	F5/140 - F6/205
13.00 X 15.5"		F5/140 - F6/205
13.00 X 15.5"H2		F5/140 - F6/205
8.25 X 16.5"		F6/205 - F8/275
9.75 X 16.5"		F6/205 - F8/275
10.50 X 17.5"	600	F6/205 - F8/275
16.00 X 17.5		F6/205 - F8/275
6.75 X 17.5"		F6/205 - F8/275
13.00 X 19.5"		F6/205 - F8/275 - F10/335
14.00 X 19.5"		F6/205 - F8/275 - F10/335
7.50 X 19.5"		F6/205 - F8/275 - F10/335
8.25 X 19.5"		F6/205 - F8/275 - F10/335
11.75 X 22.5"		F6/205 - F8/275 - F10/335
13.00 X 22.5"		F6/205 - F8/275 - F10/335
14.00 X 22.5"		F6/205 - F8/275 - F10/335
16.00 X 22.5"		F6/205 - F8/275 - F10/335
16.00 X 22.5"H2		F6/205 - F8/275 - F10/335
20.00 X 22.5"H2		F6/205 - F8/275 - F10/335
7.50 X 22.5"	450	F6/205 - F8/275 - F10/335
9.00 X 22.5"		F6/205 - F8/275 - F10/335



**Min.lot:** Rims that need a minimum quantity for production

# Lock ring wheels

Description	Min. lot
3.00D - 8"S	
4.33R - 8"S	
4.00E - 9"S	
6.00E - 9"S	
5.00F - 10"S	
6.50F - 10"S	
5.00S - 12"S	
8.00G - 12"S	
7.00 - 14"	660
10.00 - 14.1/4	
10.00 - 14.1/2	750
5.5 - 15"	660
5.5 - 15"S	
6.0 - 15"S	
6.5 - 15"S	
7.0 - 15"	660
7.0 - 15"S	
8.0 - 15"S	
9.75 - 15"S	
6.00G - 16"	600
6.50H - 16"	600
9.00 - 18"	600
11.00 - 19"	510
6.5T - 20"	450
7.0T - 20"	560
7.5V - 20"	
8.0V - 20"	



**Min.lot:** Rims that need a minimum quantity for production

**10**

**GKN Wheels FAD**

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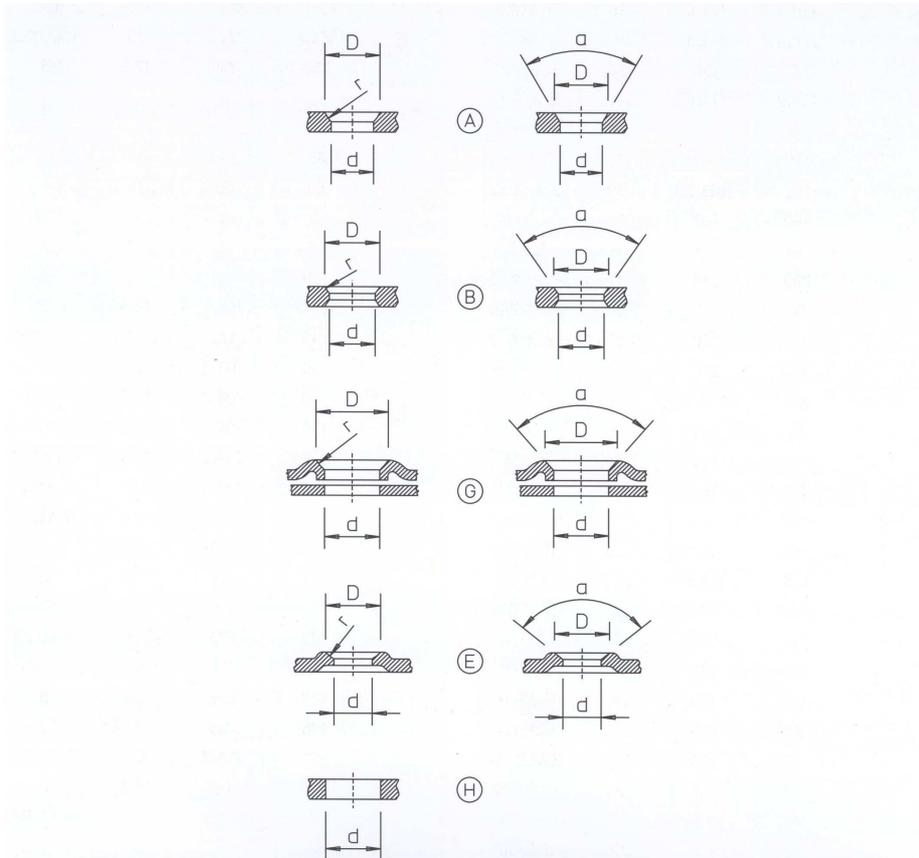
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# Stud hole specifications

Hole setting	Countersinks			Hole setting	Countersinks		
F3 78,3X130X10,5	A-60°			F5 80X114X13,5	A-R12		
F4 102X150X18	E-90°			F5 80X115X15	E-60°	A-60°	H
F4 113X152,4X23,5	B-90°			F5 85X115X13	H		
F4 120X160X13	H			F5 94X140X15	H		
F4 221X275X21,5	A-R22,2	B2		F5 94X140X18,5	E1	A1	B1
F4 50X75X11	H			F5 95,1X140X15,5	H		
F4 50X85X15	H			F6 100,5X140X19	A-R14	H	
F4 52X70X11,5	H			F6 117,8X152,4X15	A-90°	H	
F4 57X100X15,5	A-60°			F6 117,8X152,4X15,0	B-90°		
F4 58,5X98X15	A-60°	E-60°	H	F6 130X170X21,5	A2		
F4 60X100X15,5	E-60°	A-60°	B-60°	F6 150X180X17,5	A-60°		
F4 62,5X95X15	A-60°	E-60°	H	F6 161X205X19	A-60°	A-R14	H
F4 62X94X13	H			F6 161X205X21,5	E-R16	A2	B2
F4 74X94X11	H			F6 161X205X27	A3		
F4 85X110X12	E-90°	H		F6 250X285X17,5	B-90°	H	
F4 85X130X14,5	A-90°			F6 65X140X15	H		
F4 85X130X18,5	E-R14	A1		F6 80X120X18	E-90°		
F5 101,7X139,7X15	E-60°	A-60°		F6 80X120X20	H		
F5 108X165,1X18,5	E-90°			F8 110X152,4X20,5	H		
F5 109,5X139,7X15	E-60°	A-60°		F8 123,8X165,1X15,5	H		
F5 110X160X18,5	E-R14	A1	B1	F8 135X175X17	E-90°		
F5 110X160X21	A-R16	B-R16		F8 152,4X203,2X17,5	E-90°	A-90°	B-90°
F5 110X165,1X17	E-90°			F8 152,4X203,2X20	A-90°		
F5 110X165,1X18,5	A-90°			F8 152,4X203,2X20,5	H		
F5 127,8X165,1X18,5	E-90°			F8 161X205X19	H		
F5 131X180X20	A-90°			F8 221X260X21,5	A2		
F5 145X202,2X21	A-60°			F8 221X275X19	H		
F5 150X203,2X22,5	A-90°			F8 221X275X21,5	A2	B2	H
F5 160X205X18	E-R14			F8 221X275X24	A-R18	H	
F5 281X335X27	A3			F8 221X275X27	A3	B3	H
F5 290X335X21,5	A-R22,2			F8 80X135X17	A-90°	B-90°	
F5 50,2X85X15	H			F10 176X225X24	H		
F5 66,6X112X16	E-R12			F10 176X225X27	A3	H	
F5 66,6X112X18,5	E-R14	A1	B1	F10 281X335X23,5	A-R18	H	
F5 75X128X17	E-90°			F10 281X335X27	A3	B3	H

# Stud hole types and dimensions



DIMENSIONI PER SEDI SFERICHE Spherical fitting dimensions Dimension du fraisage sphérique Masse für Kugelansenkung			
Nr.	d	D	r
1	18.5	24	14
2	21.5	27	16
3	27	32	18
5	32.2	37	22.2
12	16	20	12

DIMENSIONI PER SEDI CONICHE Conical fitting dimensions Dimension du fraisage conique Masse für Kegelsenkung			
Nr.	d	D	a
15	16	22	90°
16	15.5	-	60°
21	21.5	27	90°

# Painting

Code	Type	Colour	RAL Specification
J25	P	yellow	RAL 1003
JQ		yellow	RAL 1007
C5		ivory	RAL 1013
JL		yellow	RAL 1021
J20	P	yellow	RAL 1028
A7 - A3		orange	RAL 2002
AE	P	orange	RAL 2002
A2		orange	RAL 2004
AL	P	orange	RAL 2009
RB		red	RAL 3000
RF		red	RAL 3002
R1		red	RAL 3013
RL	P	red	RAL 3020
B7	P	blue	RAL 5011
V8		green	RAL 6017
G27		grey	RAL 7015
GA		grey	RAL 7016
GH	P	grey	RAL 7021
GP		grey	RAL 7021
G7		grey	RAL 7022
G3		grey	RAL 7035
G20		grey	RAL 7039
W8		white	RAL 9001
WD		white	RAL 9002
WN		white	RAL 9003
N1		black	RAL 9005
S1 - S2		silver	RAL 9006
S5 - SD	P	silver	RAL 9006
S6		silver	RAL 9006
SA - SB		silver	RAL 9006
WE		white	RAL 9018



# GKN Wheels has five global manufacturing locations



**Carpenedolo (Italy)**



**Telford (UK)**



**Nagbøl (Denmark)**



**Armstrong & Estherville (USA)**



**Liuzhou (China)**

## Social Responsibilities

### progetto alice



Progetto Alice ONLUS is an association which supports Alice who at the age of 5 months was diagnosed with Haemolytic-Uremic Syndrome (HUS), a very rare disease characterized by haemolytic anaemia, acute renal failure and thrombocytopenia (reduced number of platelets).

## Mission Everest for Global Angels

Global Angels is an international charity that champions the needs of children around the world. Founded by Molly Bedingfield, it aims to make the world a safer and kinder place for the children of this generation.



Companies are made of people and the people at GKN Wheels FAD are proud to support Mission Everest for Global Angels and Progetto Alice: GKN FAD (Wheels & Axles) raised more than 30.000 € (\$38,000) thanks to the contribution of partner companies, employees and local citizens.



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