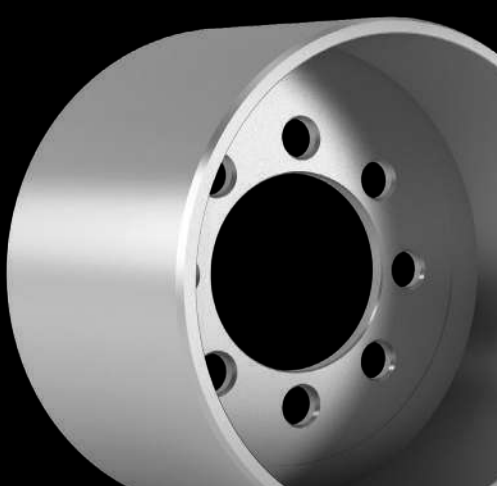


# TECHNICAL DATASHEET

## FOR WHEEL MEASUREMENTS



**STANDARD MULTI-PIECE WHEELS  
(2-, 3- OR 4-PIECE)**



**PRESS-ON WHEELS  
FOR PRESS-ON TIRES (POW)**



**SPLIT WHEELS /  
DIVIDED RIMS (SPW)**



**DOUBLE MULTI-PIECE WHEELS  
(2-, 3- OR 4-PIECE)**



**SINGLE-PIECE DROP-CENTER  
WHEELS (DCW)**



**EARTHMOVING WHEELS  
(3-OR 5-PIECE)**

# TECHNICAL DATASHEET

## STANDARD MULTI-PIECE WHEELS (2-, 3- OR 4-PIECE)



Tire size	
Wheel size	

Rim diameter	A	inch
Rim width	B	inch
Rim thickness	N	mm
Valve slot	R	Yes/No
Centre bore	C	mm
PCD	D	mm
Number of holes		
Stud hole dia	E	mm
Countersink dia	F	mm
Radius	r	mm
Angle	$\beta$	°
Distance from FF to nave	K	mm
Distance from LF to nave	L	mm
Nave thickness	G	mm
Skimming dia	J	mm
FF reinforcement	P	Yes/No
LF reinforcement	Q	Yes/No
Color (indicate RAL code if not black primer)		

Type of rim	2-piece	3-piece	4-piece
Tire type	Resilient	Pneumatic	
Rings	Incl.	Excl.	

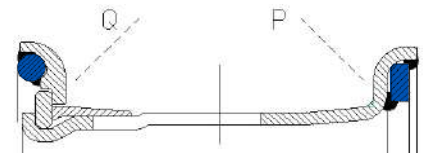
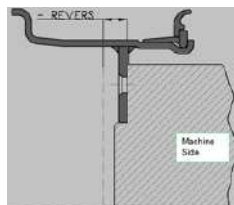
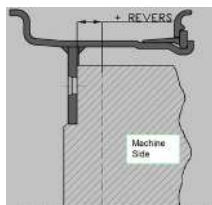
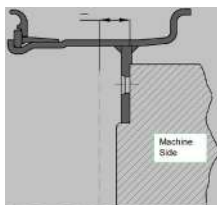
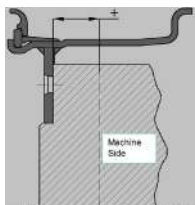
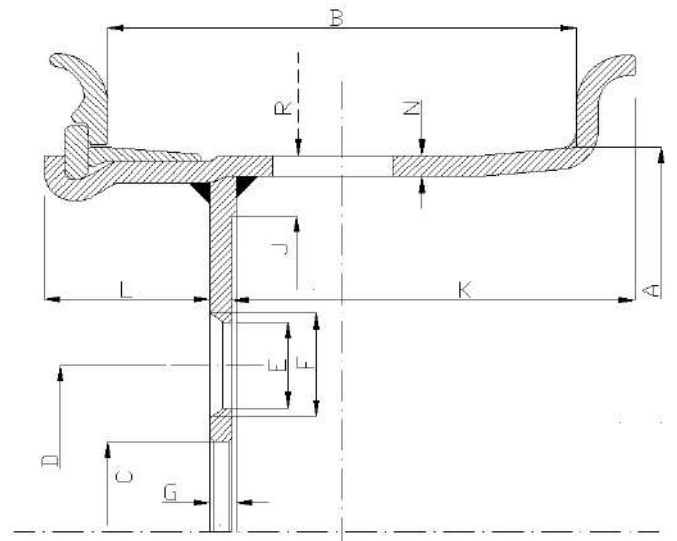
Vehicle model

Wheel identification number

Quantity

Remarks

Company name / Contact person



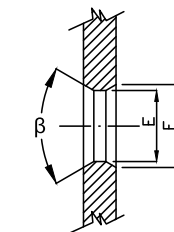
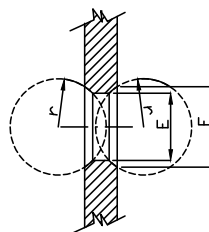
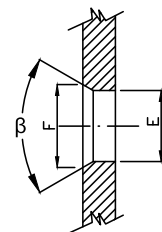
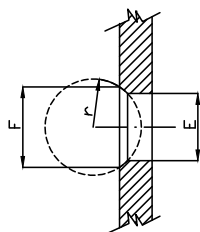
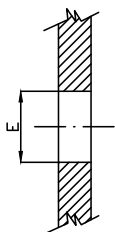
Straight

One side spherical

One side conical

Both sides spherical

Both sides conical



# TECHNICAL DATASHEET

## DOUBLE MULTI-PIECE WHEELS (2-, 3- OR 4-PIECE)



<b>Tire size</b>	
<b>Wheel size</b>	

Rim diameter	<b>A</b>	inch
Rim width	<b>B</b>	inch
Rim thickness	<b>N</b>	mm
Valve slot	<b>R</b>	Yes/No
Centre bore	<b>C</b>	mm
PCD	<b>D</b>	mm
Number of holes		
Stud hole dia	<b>E</b>	mm
Countersink dia	<b>F</b>	mm
Radius	<b>r</b>	mm
Angle	<b>β</b>	°
Distance from FF to nave	<b>K</b>	mm
Distance from LF to nave	<b>L</b>	mm
Total width	<b>V</b>	mm
Nave thickness	<b>G</b>	mm
Skimming dia	<b>J</b>	mm
FF reinforcement	<b>P</b>	Yes/No
LF reinforcement	<b>Q</b>	Yes/No
Color (indicate RAL code if not black primer)		

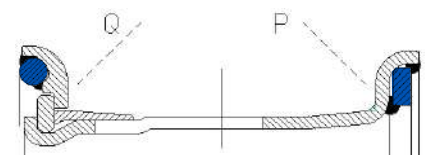
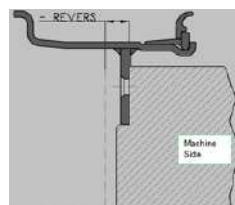
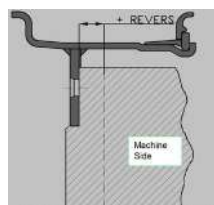
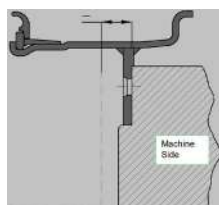
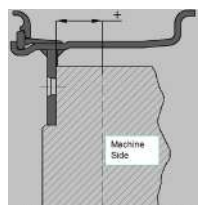
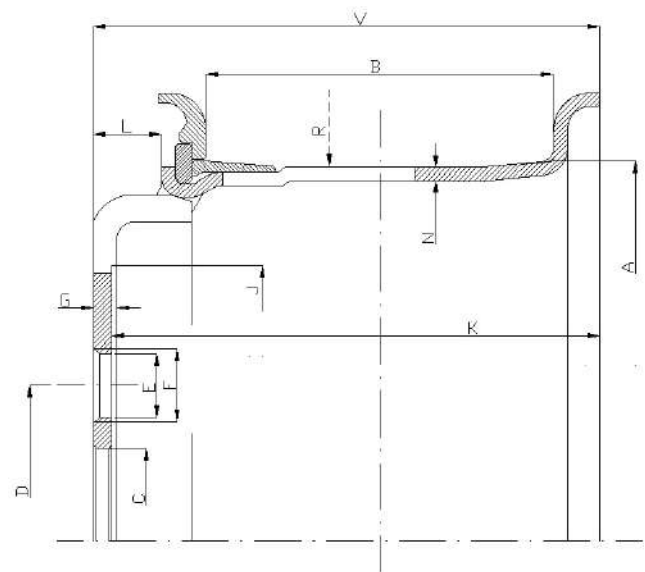
<b>Type of rim</b>	2-piece	3-piece	4-piece
<b>Tire type</b>	Resilient	Pneumatic	
<b>Rings</b>	Incl.	Excl.	

**Vehicle model**

**Wheel identification number** **Quantity**

**Remarks**

**Company name / Contact person**



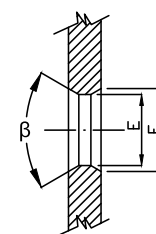
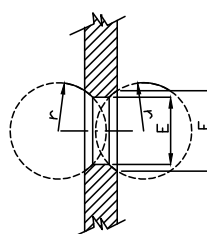
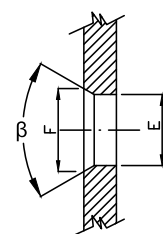
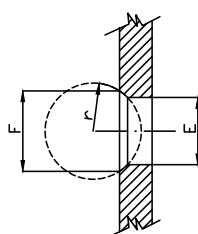
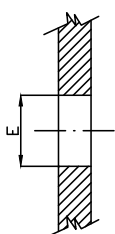
Straight

One side spherical

One side conical

Both sides spherical

Both sides conical



# TECHNICAL DATASHEET

## PRESS-ON WHEELS FOR PRESS-ON TIRES (POW)



Tire size		
Wheel size		
Rim diameter	A	inch/ mm
Rim width	B	inch/ mm
Rim thickness	N	mm
Centre bore	C	mm
PCD	D	mm
Number of holes		
Stud hole dia	E	mm
Countersink dia	F	mm
Radius	r	mm
Angle	$\beta$	°
Distance from FF to nave	K	mm
Distance from LF to nave	L	mm
Nave thickness	G	mm
Skimming dia	J	mm
Color (indicate RAL code if not black primer)		

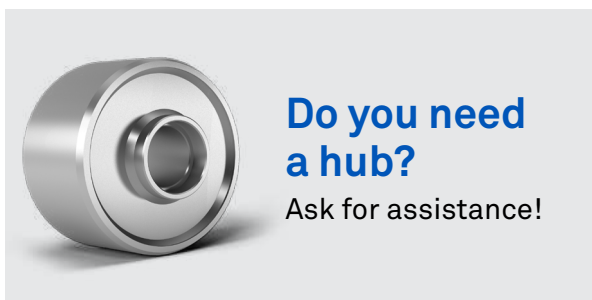
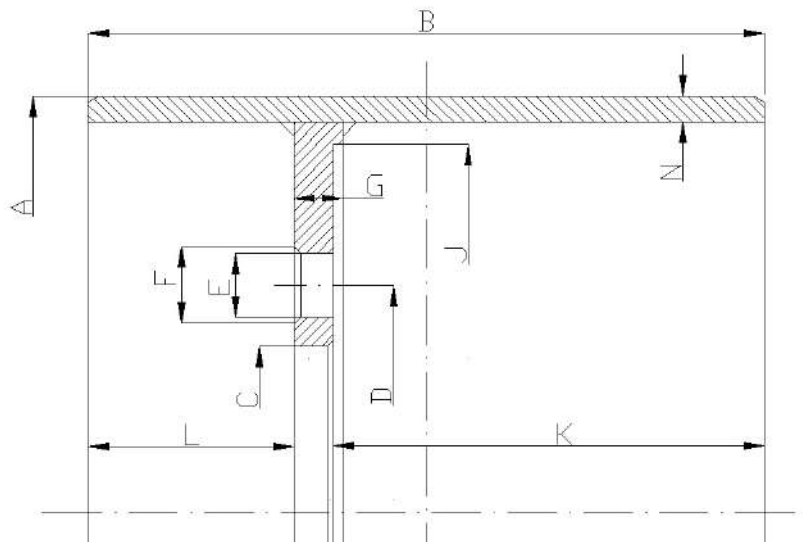
Vehicle model

Wheel identification number

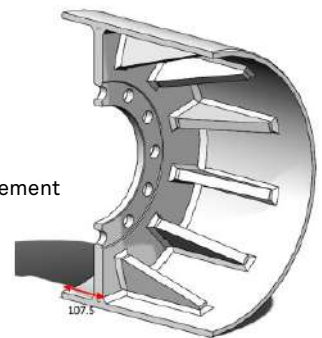
Quantity

Remarks

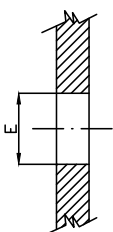
Company name / Contact person



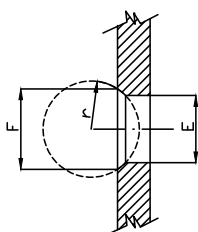
Tick if there is gusset-reinforcement



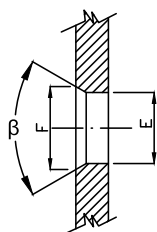
Straight



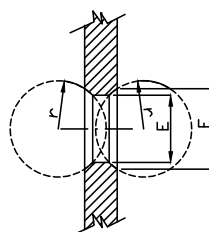
One side spherical



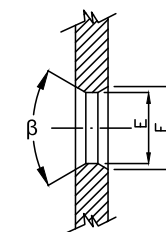
One side conical



Both sides spherical



Both sides conical



BACK

# TECHNICAL DATASHEET

## SINGLE-PIECE DROP-CENTER WHEELS (DCW)



Tire size		
Wheel size		
Rim diameter	A	inch
Rim width	B	inch
Rim thickness	N	mm
Centre bore	C	mm
PCD	D	mm
Number of holes		
Stud hole dia	E	mm
Countersink dia	F	mm
Radius	r	mm
Angle	$\beta$	°
Distance from FF to nave	K	mm
Distance from LF to nave	L	mm
Nave thickness	G	mm
Skimming dia	J	mm
Color (indicate RAL code if not black primer)		

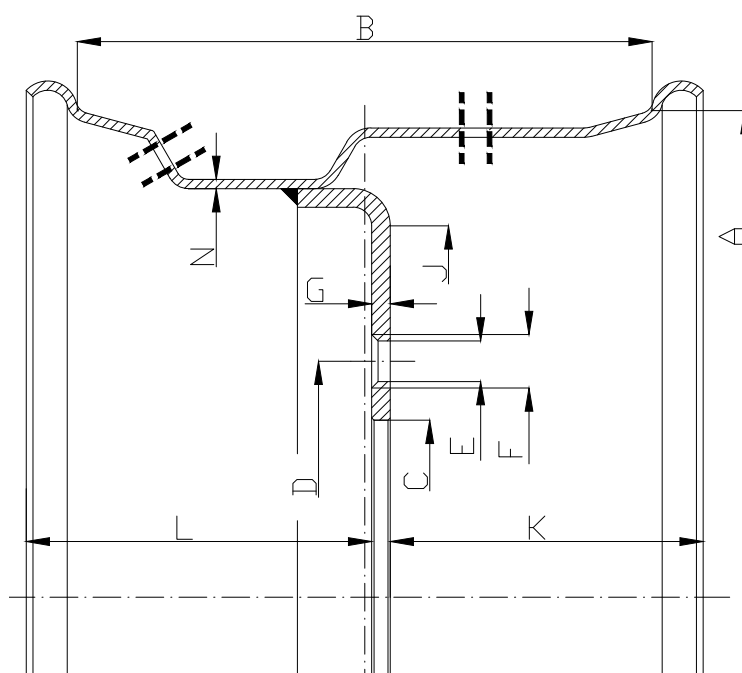
Vehicle model

Wheel identification number

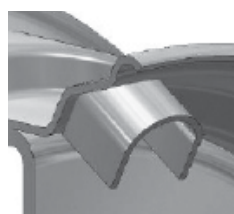
Quantity

Remarks

Company name / Contact person

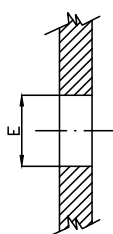


Valve hole position

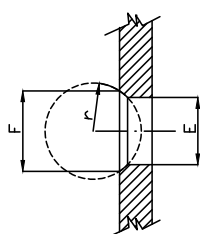


Tick if there is valve protector

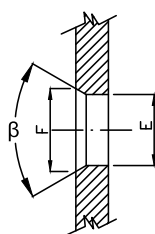
Straight



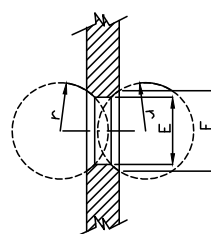
One side spherical



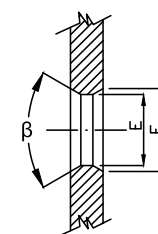
One side conical



Both sides spherical



Both sides conical



BACK

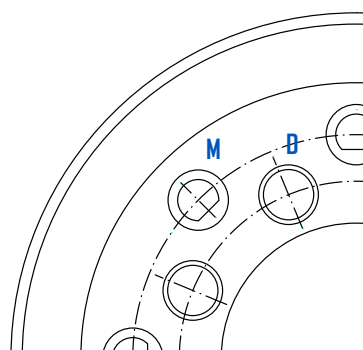
# TECHNICAL DATASHEET

## SPLIT WHEELS / DIVIDED RIMS (SPW)

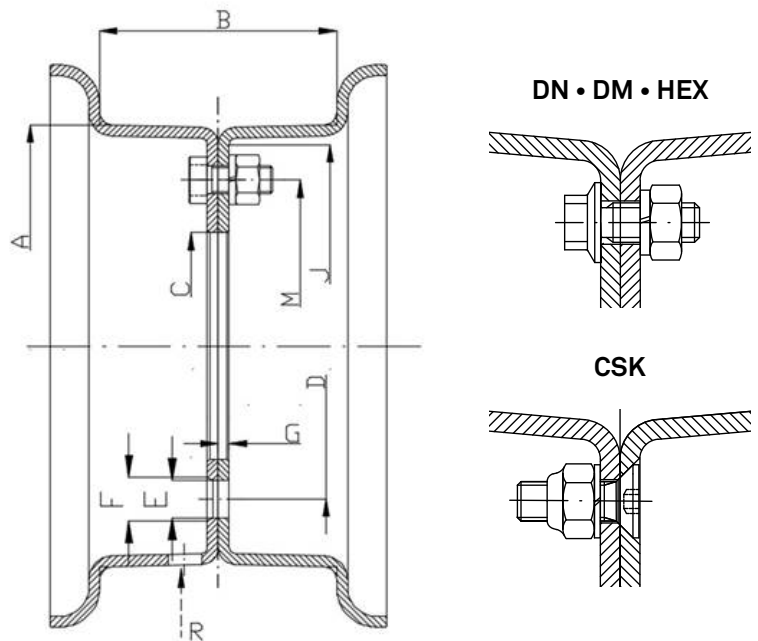


Tire size		
Wheel size		
Rim diameter	A	inch
Rim width	B	inch
Valve slot	R	Yes/No
Centre bore	C	mm
PCD	D	mm
Number of holes		
Stud hole dia	E	mm
Countersink dia	F	mm
Radius	r	mm
Angle	$\beta$	°
Nave thickness	G	mm
Skimming dia	J	mm
Dia of clamping PCD	M	mm
Color (indicate RAL code if not black primer)		

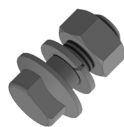
DN and DM bolt heads must be fitted to the outside.



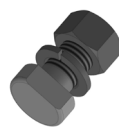
Tire type	Resilient	Pneumatic
Vehicle model		
Wheel identification number	Quantity	
Remarks		
Company name / Contact person		



DN



DM



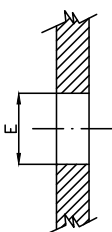
HEX



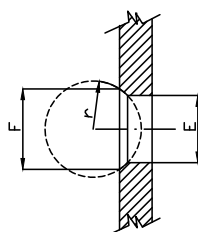
CSK



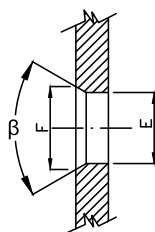
Straight



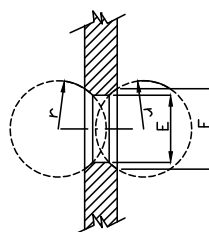
One side spherical



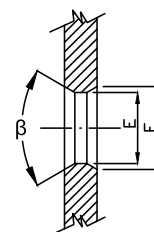
One side conical



Both sides spherical



Both sides conical



BACK

# TECHNICAL DATASHEET

## EARTHMOVING WHEELS (3-OR 5-PIECE)



<b>Tire size</b>		
<b>Wheel size</b>		
Rim diameter	<b>A</b>	inch
Rim width	<b>B</b>	inch
Rim thickness	<b>N</b>	mm
Flange height	<b>O</b>	mm
Centre bore	<b>C</b>	mm
PCD	<b>D</b>	mm
Number of holes		
Stud hole dia	<b>E</b>	mm
Countersink dia	<b>F</b>	mm
Radius	<b>r</b>	mm
Angle	<b>β</b>	°
Distance from FF to nave	<b>K</b>	mm
Distance from LF to nave	<b>L</b>	mm
Nave thickness	<b>G</b>	mm
Skimming dia	<b>J</b>	mm
Valve protector		Yes/No
Color (indicate RAL code if not black primer)		

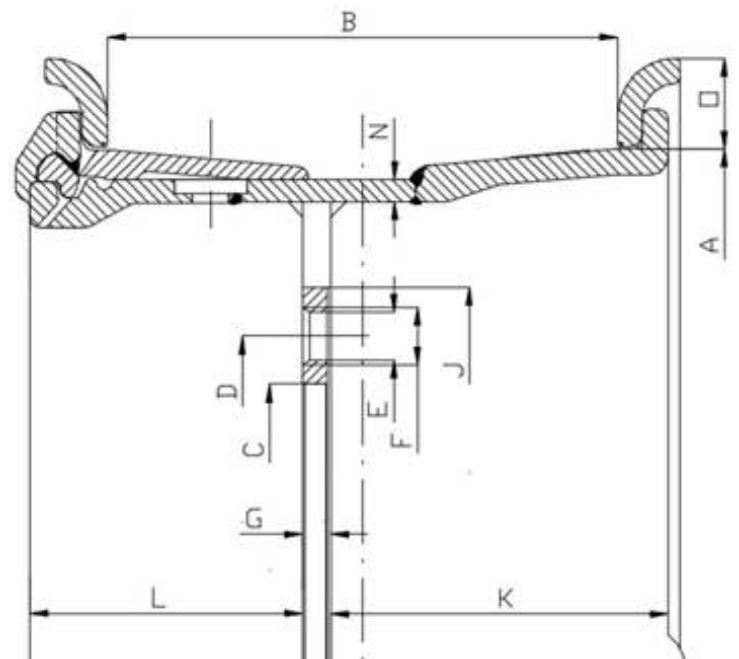
<b>Type of rim</b>	3-piece	5-piece	
<b>Tire type</b>	Tube-type	Tubeless	Resilient

**Vehicle model**

**Wheel identification number** **Quantity**

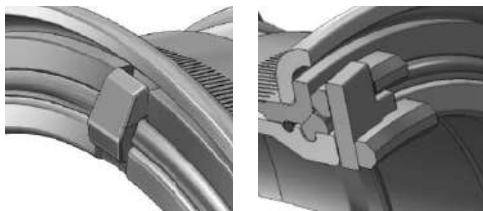
**Remarks**

**Company name / Contact person**



Lock-ring driver

Heavy-duty driver



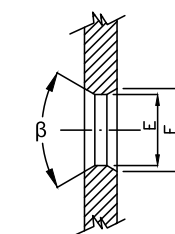
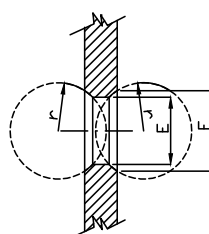
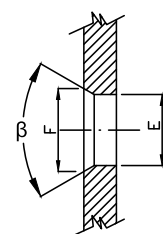
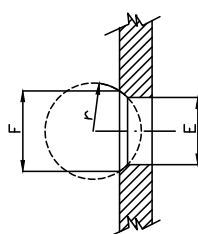
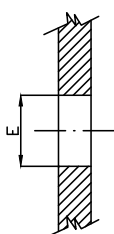
Straight

One side spherical

One side conical

Both sides spherical

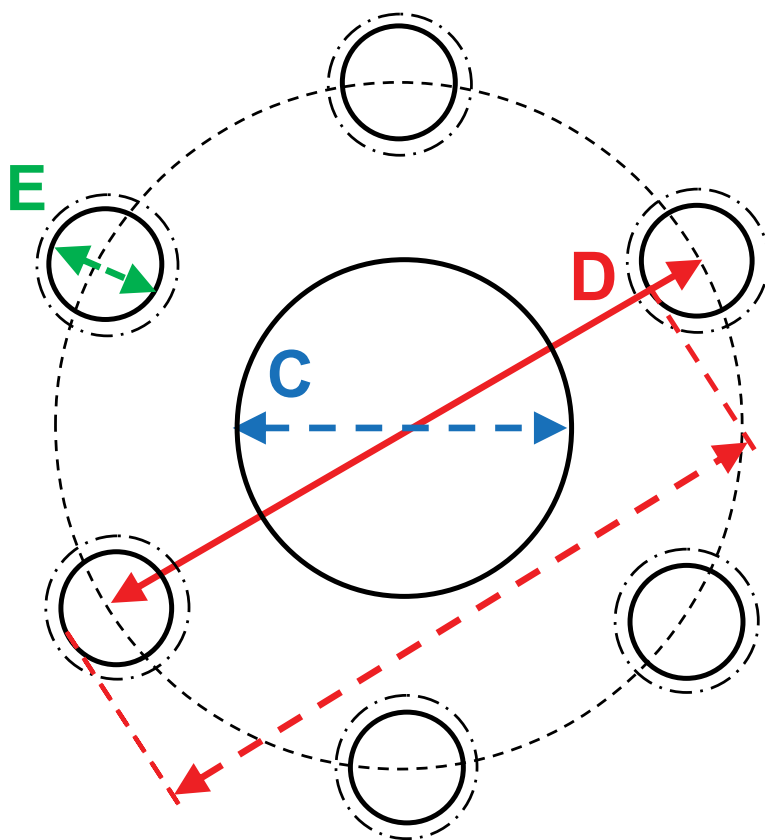
Both sides conical



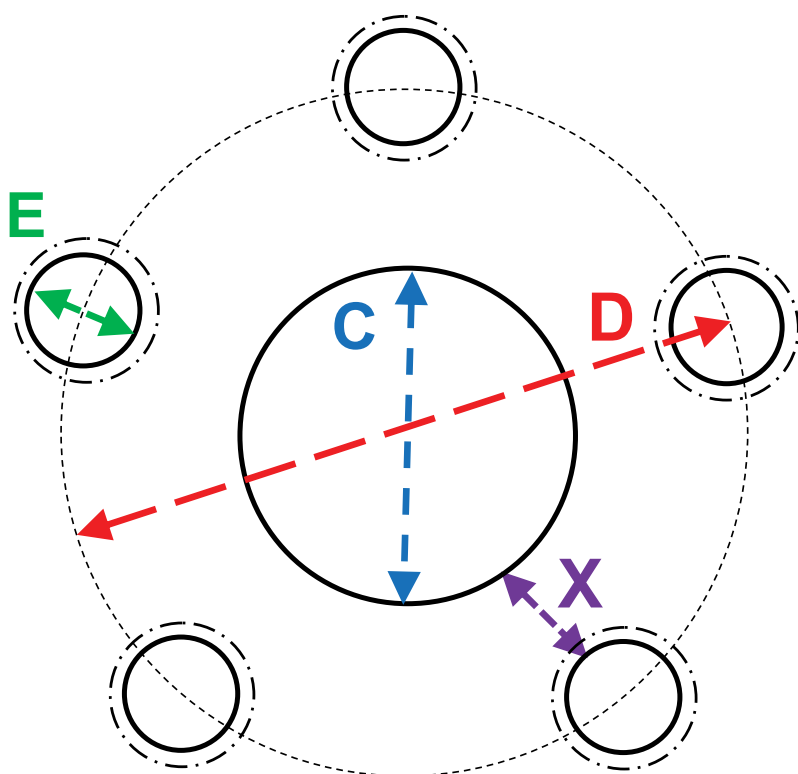
BACK



# PITCH CIRCLE DIAMETER (PCD) HOW TO MEASURE THE PCD



- For **even** number of stud holes: measure the red-dashed arrow (same distance as D) to get the PCD



- For **uneven** number of stud holes  $PCD = D = C + X + X + E$

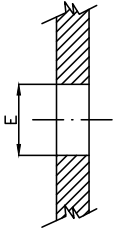


# MOST COMMON STUD HOLE TYPES



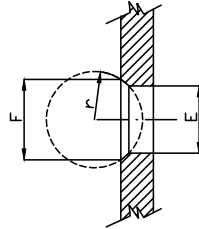
## Hub-centered (MZ)

Straight

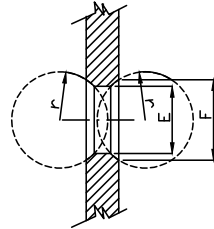


## Stud-centered (BZ)

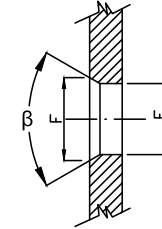
One side spherical



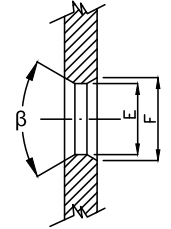
Both sides spherical



One side conical



Both sides conical

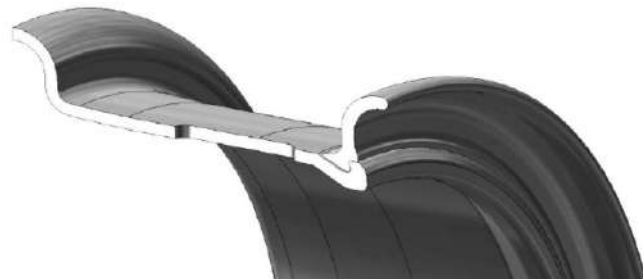


EUWA CODE	E	F	BALL Ø	ANGLE β	SIDE(S)	THREAD
M18	21	-	-	-	-	M18 x 1.5
M20	24	-	-	-	-	M20 x 1.5
M22	26	-	-	-	-	M22 x 1.5
B14 ES 28	18.5	24	28	-	single	M14 x 1.5
B14 DS 28	18.5	24	28	-	double	M14 x 1.5
B18 ES 32	21.5	27	32	-	single	M18 x 1.5
B18 DS 32	21.5	27	32	-	double	M18 x 1.5
B22 ES 36	26	32	36	-	single	M22 x 1.5 (M20 x 1.5)
B22 DS 36	26	32	36	-	double	M22 x 1.5 (M20 x 1.5)
B19 ES 44.4	32.5	37.5	44.4	-	single	3/4" UNF thread
B19 DS 44.4	32.5	37.5	44.4	-	double	3/4" UNF thread
B23 EC 80	26	31	-	80	single	7/8" UNF thread
B23 DC 80	26	31	-	80	double	7/8" UNF thread

## COMMENTS



**1-PIECE WHEEL**



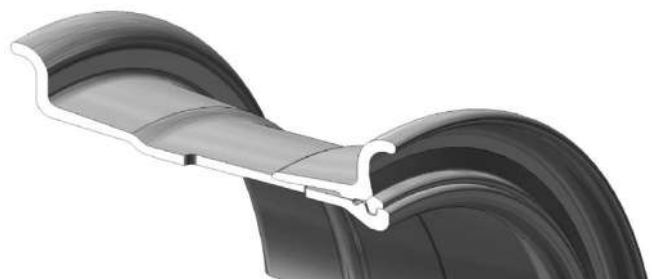
**2-PIECE WHEEL**



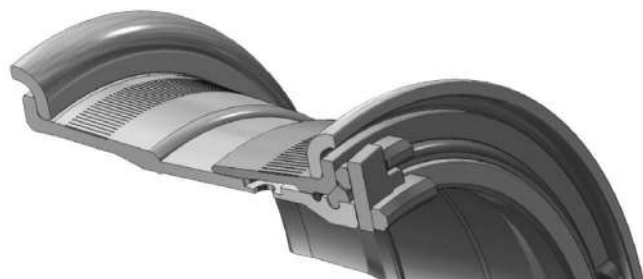
**3-PIECE WHEEL**



**4-PIECE WHEEL**



**3-PIECE SDC WHEEL**



**5-PIECE WHEEL**

## SAFETY WARNING AND DISCLAIMER

The European Tyre and Rim Technical Organisation (E.T.R.T.O.) and the Association of European Wheel Manufacturers (EUWA) recommend that rim components of multipiece wheels should not be modified, nor should components of various rim manufacturers be mixed. The origin of the components must be the same. The risks associated with the non-observance of this recommendation and safety warning includes, without limitation, damage to property, bodily injury and death. Under no circumstances shall Camso be liable for any loss, expense, damage, accident or death incurred or suffered in connection with a third-party misuses or mixture of any component of a multi-piece wheel.