

The image features a collection of high-performance racing clutch components. In the upper center is the Helix Autosport logo, which consists of the word "HELIX" in a stylized orange and white font above the word "AUTOSPORT" in a white sans-serif font, all set against a blue rectangular background. Surrounding the logo are several mechanical parts: a copper-colored friction disc in the top left, a black pressure plate with a central hub and radial cooling fins in the top right, a large stainless steel flywheel with a gear ring and multiple mounting holes in the bottom left, and a stainless steel input shaft assembly in the bottom right. The components are arranged on a plain white background.

**HELIX**  
AUTOSPORT

**Helix Autosport**

**Racing Clutch Applications**



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## Part Number Legend

| <u>Prefix Number</u> | <u>Description</u>  |
|----------------------|---|
| 40-....              | Release Bearing   |
| 41-....              | Concentric Slave Cylinder/Release Bearing                             |
| 43-....              | Release Bearing for 184mm racing Clutch (on standard carrier)         |
| 44-....              | Release bearing for 200mm & 215mm Racing Clutch (on standard carrier) |
| 46-....              | 215mm Geared Hub Drive Plates   |
| 47-....              | 200mm Geared Hub Drive Plates   |
| 48-....              | 184mm Geared Hub Drive Plates   |
| 49-....              | 184mm 6 Paddle Cerametallic Drive Plate                               |
| 51-....              | 184mm 3 Paddle Cerametallic Drive Plate                               |
| 52-....              | 184mm 4 Paddle Cerametallic Drive Plate                               |
| 53-....              | 184mm Sintered Drive Plate (Outer)                                    |
| 54-....              | 184mm Sintered Drive Plate (Inner)                                    |
| 55-....              | 184mm Organic Drive Plate Rigid                                       |
| 56-1...              | 184mm 3 Paddle Cerametallic Drive Plate                               |
| 56-2...              | 184mm 4 Paddle Cerametallic Drive Plate                               |
| 57-....              | 184mm Organic Drive Plate (sprung hub)                                |
| 63-....              | 184mm Lug Drive Cover Assembly  |
| 68-....              | 200mm Lug Drive Cover Assembly  |
| 69-....              | 215mm Lug Drive Cover Assembly  |
| 70-1...              | 200mm Organic Drive Plate (sprung hub)                                |
| 70-2...              | 215mm Organic Drive Plate (sprung hub)                                |
| 71-....              | 215mm Organic Drive Plate (rigid hub)                                 |
| 71-1...              | 200mm Organic Drive Plate (rigid hub)                                 |



## Part Number Legend

| <u>Prefix Number</u> | <u>Description</u>                      |              |
|----------------------|---|--------------|
| 71-2...              | 215mm Organic Drive Plate (rigid hub)   |              |
| 71-3...              | 215mm Organic Drive Plate (rigid hub)   |              |
| 77-1...              | 200mm 4 Paddle Cerametallic Drive Plate | (sprung hub) |
| 77-11..              | 200mm 6 Paddle Cerametallic Drive Plate | (sprung hub) |
| 77-2...              | 215mm 4 Paddle Cerametallic Drive Plate | (sprung hub) |
| 77-21..              | 215mm 6 Paddle Cerametallic Drive Plate | (sprung hub) |
| 78-1...              | 200mm 4 Paddle Cerametallic Drive Plate | (rigid hub)  |
| 78-11..              | 200mm 4 Paddle Cerametallic Drive Plate | (rigid hub)  |
| 78-2...              | 215mm 4 Paddle Cerametallic Drive Plate | (rigid hub)  |
| 78-3...              | 215mm 4 Paddle Cerametallic Drive Plate | (rigid hub)  |
| 78-21..              | 215mm 6 Paddle Cerametallic Drive Plate | (rigid hub)  |
| 78-31..              | 215mm 6 Paddle Cerametallic Drive Plate | (rigid hub)  |



## The HELIX Racing Clutch Range

The range has been designed to satisfy the needs in the competition market, with a variety of customisation available for all sections of the market.

The racing clutch covers are a one piece aluminium design, this benefits from improved heat dissipation compared with more traditional steel covers. The covers also benefit from a comparatively lower moment of inertia when compared more traditional designs.

The following drive plate configurations are available:-

Sintered Rigid Hub

Cerametallic rigid Hub (Paddle Clutch)

Cerametallic Sprung Hub (Paddle Clutch)

Organic Rigid Hub

Organic Sprung Hub

The customer defined configuration is dependent on application and engine torque output. This will determine the clutch diameter and number of plates required. The information offered here will aid in making the decision, but if required technical information is available from Helix.

Cerametallic & Organic clutches are available in 1 & 2 plate versions diameter 184, 200 & 215mm

Sintered clutches are available in 1, 2, 3, & 4 plate versions, however these only come in 184mm diameter variants.

## Drive Plate Material Explained.

### Organic

- Better Suited to road applications
- Can be used for light competition
- Offers the softest engagement
- Least prone to judder
- Lightweight – low moment of inertia
- Compact installation
- Available in both rigid and sprung hub formats

### Sintered

- Used primarily in race applications.
- Compact dimensions
- Lightweight – Low moment of inertia
- Well suited for Rallying application's

### Cerametallic

- Primarily used for rally applications
- Also used for race applications especially with a diameter over 184mm.
- Can be used for road use where engine torque requires it
- Greater resistance to high energy input
- Smoother engagement than sintered material plates
- Less prone to judder than sintered material plates
- Available in both rigid and sprung centre formats

## **Clutch Terminology**

### **Cover Assembly – Push Type**

This is the most common type of clutch cover assembly where in operation the release bearing pushes the diaphragm spring inwards towards the flywheel in order to release the clutch.

### **Cover Assembly – Pull type**

With the pull type the release bearing is attached to the diaphragm spring and pulls the spring away from the flywheel towards the gearbox to release the clutch.

This type has a lower release load due to its longer lever ratio and given that the diaphragm spring is not being pushed over centre. The design is more efficient and gives a higher clamp load to release load ratio than a push type clutch.

### **Diaphragm Spring**

A Belleville disc spring with a series of fingers pointed inwards. The inside of the Belleville is where the release bearing operates the spring. This is available in different thicknesses / load deflection curves for different torque capacities.

### **Clamp Load**

The pressure / force applied by the diaphragm spring onto the drive plate via the pressure plate and intermediate plate (drive plates). The force applied being determinate on the strength of the spring and the fulcrum ratio of the pressure plate

### **Release Load**

The force required by the release bearing operating on the diaphragm spring to disengage the clutch

### **Pressure Plate**

This is the metal disc with a raised fulcrum point for the transmission of the clamp load to the drive plate from the diaphragm spring.

### **Interplate**

An intermediate pressure plate which is positioned between the drive plates in a multi plate clutch system. A typical two drive plate setup would have one pressure plate and one Interplate where as a three drive plate system would feature one pressure plate and two interplates.

### **Moment of Inertia**

The rotating mass around the centre axis of the clutch, the smaller diameter the lower the moment of inertia, which will give a faster response in engine pick up and gear changes.

### **Set up Height (S.U.H.)**

The dimension from the contact point of the release bearing on the diaphragm spring to the friction face of the flywheel (Cover SUH). For a whole kit setup height, the measurement is taken from the crank shaft mounting face.

## Clutch Fitting & Flywheels

The racing clutches are fitted to the flywheel by either :-

The preferred / recommended method

High quality bolts / mounting studs passing through from the rear of the flywheel.

These need to be a close tolerance push fit through the flywheel with a locating spigot machined on the rear of the flywheel to prevent rotation of the bolts / mounting studs.

These are retained by K-lock nuts. Recommended torque settings 22Nm [ 16lbft ]

See relevant clutch diameter section for dimensions and torque figures.

Or by :-

High quality socket head cap screws ( min tensile 10.9 ) diameter 8mm or 5/16" located through the cover assembly and screwed directly into the flywheel.

In using this method it is important that a counter bore is used to ensure the shear load

Through the screw is across the full shank diameter and NOT the thread.

Recommended torque settings 22Nm [ 16lbft ]

See relevant clutch diameter section for dimensions and torque figures

### Flywheels

These clutches can be fitted to existing cast iron O.E. flywheels but these should not be used above 8000rpm. It is not advisable to modify dual mass flywheels except where there is no other option and in which case these should not be used above 6500 rpm.

It is recommended that a high quality purpose made steel flywheel be used material to be of 0.35 / 0.45 carbon with a minimum hardness of 200Hb minimum

The run out of this flywheel when fitted to the crankshaft must not exceed 0.08mm at 76mm radius.

See relevant clutch diameter section for dimensions and torque figures

### Maintenance

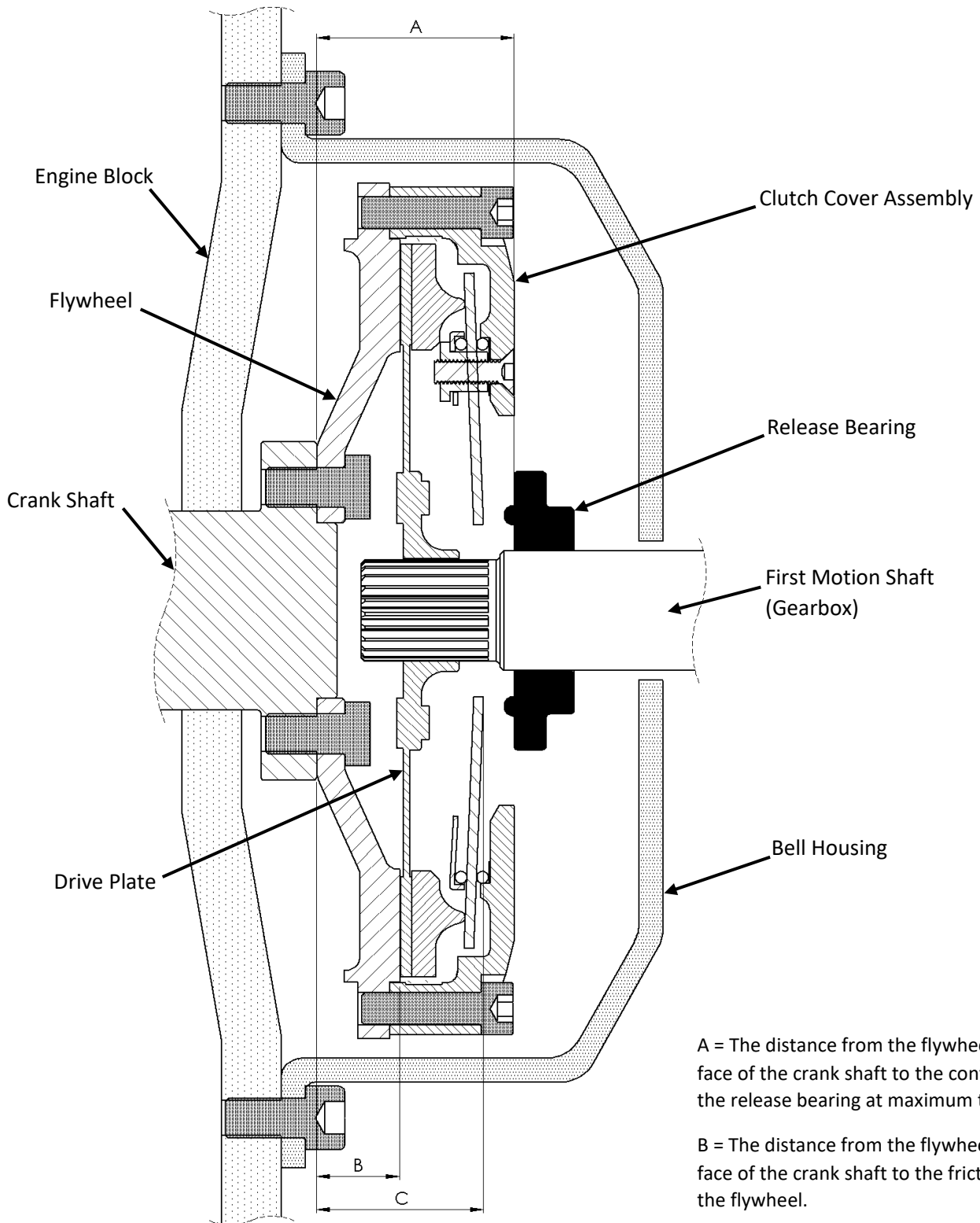
It is advised that regular inspection and maintenance is carried out to ensure the clutch operates to its optimum performance.

Pressure plates should be checked for coning and replaced when more than 0.15mm out of flat, otherwise the clutch can drag interfering with clutch release.

Driven plates should be replaced if showing signs of damage or if the minimum thickness has been reached (see the relevant clutch diameter section for details)



## Clutch Installation Drawing



When fitting a non-standard clutch & flywheel as a replacement for the original certain parameters must be measured. As shown above A, B & C are taken to ensure the replacement kit operates correctly.

A = The distance from the flywheel mounting face of the crank shaft to the contact face of the release bearing at maximum travel.

B = The distance from the flywheel mounting face of the crank shaft to the friction face of the flywheel.

C = Kit Set Up Height, the distance from the flywheel mounting face on the crank shaft to the contact point of the release bearing on the diaphragm spring.

## Release Bearings

The release bearings should be a high quality steel caged radius contact ball bearing with a fulcrum diameter of :-

48 → 52mm for a clutch of Ø 140mm  
 48 → 54mm for a clutch of Ø 184mm  
 52 → 54mm for a clutch of Ø 200mm & 215mm

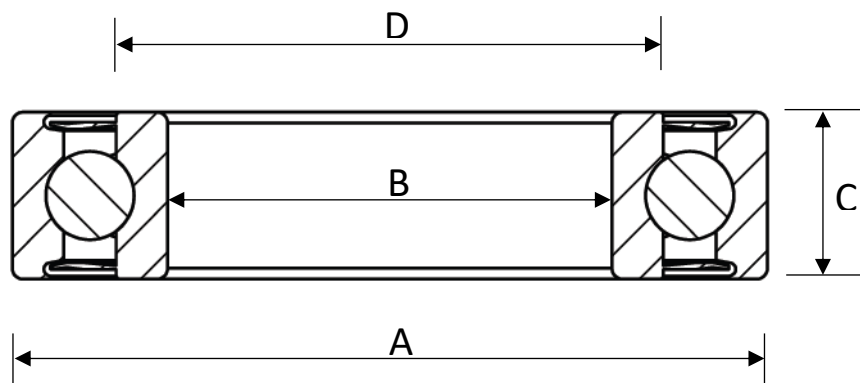
On fitting the release bearing it should be arranged so that the bearing is not in contact with the diaphragm spring fingers when the clutch is fully engaged. Constant contact will result in excessive wear on both the diaphragm spring fingers and the release bearing.

It is also IMPORTANT that the travel of the bearing when operated is to a controlled distance otherwise damage to the diaphragm spring can occur, this travel can be limited by means of an external stop. See relevant clutch part # for dimension.

HSHP = High Speed / High Performance

Bearings available

| Part No | Dimension Ø A | Dimension Ø B | Dimension C | Dimension Ø D |
|---------|---------------|---------------|-------------|---------------|
| 40-1252 | 74.00mm       | 45.00mm       | 18.00mm     | 54mm          |
| 40-2429 | 67.00mm       | 40.00mm       | 19.70mm     | 52mm          |
| 40-3000 | 65.00mm       | 35.00mm       | 18.50mm     | 48mm HSHP     |
| 40-3001 | 70.50mm       | 40.00mm       | 19.00mm     | 54mm HSHP     |
| 40-3264 | 68.50mm       | 38.00mm       | 19.00mm     | 52mm          |
| 40-4941 | 63.00mm       | 40.00mm       | 14.00mm     | 51mm          |



Clutches fitted with an O.E. concentric slave cylinder operating system will require this being replaced with a more robust system and not just a release bearing.

For the fitment of 184mm clutches to BMW vehicles special bearings are available :-

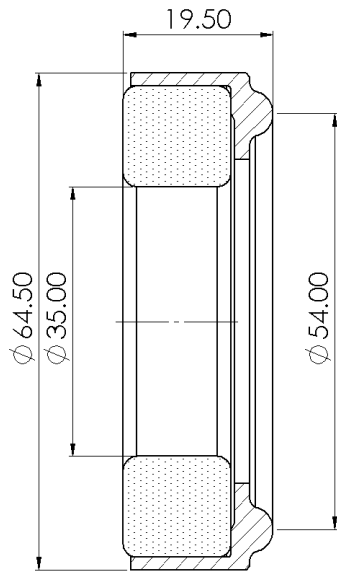
40-3002 for gearboxes with a 28mm x 10teeth spline  
 40-3003 for gearboxes with a 28mm x 22teeth spline  
 40-3004 for gearboxes with a 35mm x 10teeth spline

## Race Series Release Bearings

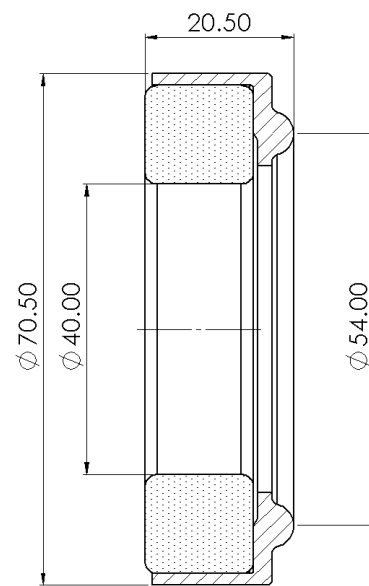
Helix Autosport offer a range of release bearings to accompany the race cover series. These are manufactured to withstand the demanding conditions a competition clutch is exposed to.

All release bearings feature a curved contact face to be used with our flat diaphragm spring covers.

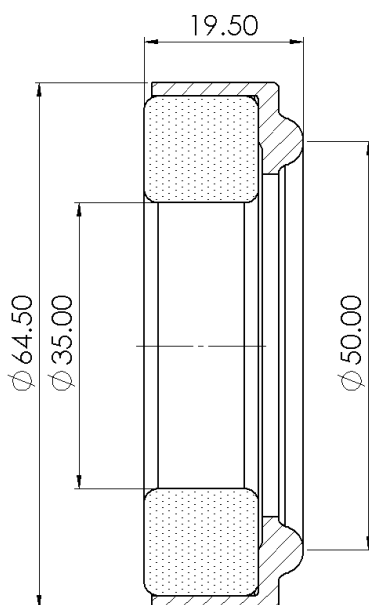
### 40-3000



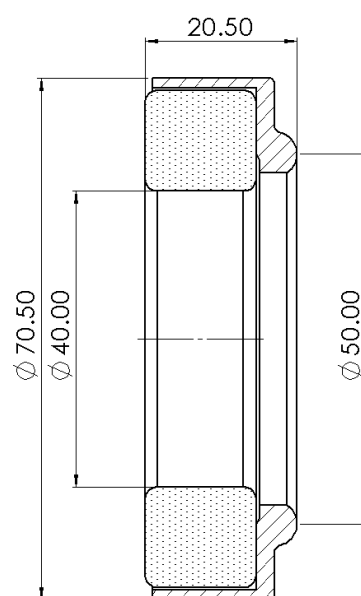
### 40-3001



### 40-3000A



### 40-3001A





## **Concentric Slave Cylinder Release Bearings**

Clutches fitted with an O.E. concentric slave cylinder (CSC) operating system will ideally require being replaced with a more robust system and not just a release bearing.

If the CSC has a flat contact face we offer a range of curly tipped diaphragm spring clutch covers. These are identified by a 'c' at the end of the part number e.g. 62-220c.

### **Cover assemblies with curly tipped springs (with suffix c)**

#### **Ø184mm Racing Clutch**

63-110Bc, 63-110Rc, 63-110Gc, 63-110Yc

63-120Bc, 63-120Rc, 63-120Gc, 63-120Yc

63-130Bc, 63-130Rc, 63-130Gc, 63-130Yc

63-210Bc, 63-210Rc, 63-210Gc, 63-210Yc

63-220Bc, 63-220Rc, 63-220Gc, 63-220Yc

#### **Ø200mm Racing Clutch**

68-110Rc, 68-110Yc

68-120Rc, 68-120Yc

#### **Ø215mm Racing Clutch**

69-110Gc, 69-110Yc

69-120Gc, 69-120Yc

All 'C' suffix model covers are the same configuration and performance as non-C suffix models.

Please Note: Setup heights of C suffix models are increased by around 3mm.

## Clutch to Flywheel Mounting Bolt Kits

Helix Autosport can supply mounting bolts to attach the range of racing clutches to the flywheel.

These bolts are rated at 10.9 tensile strength with a 5/16" UNF thread. All kits are packed in multiples of 6 bolts with the matching locking 'K' nuts.

Single items or multiples thereof can be supplied.



### Bolt Dimensions

| Part No. | Length A (mm) | Length B (mm) | Length C (mm) |
|----------|---------------|---------------|---------------|
| 184-1A7  | 43.50         | 28.00         | 11.00         |
| 184-1A8  | 45.00         | 29.50         | 11.00         |
| 184-1A9  | 46.50         | 31.00         | 11.00         |
| 184-1A10 | 48.50         | 32.50         | 11.00         |
| 184-1A11 | 49.50         | 34.00         | 11.00         |
| 184-1B8  | 51.00         | 35.50         | 11.00         |
| 184-1B9  | 53.00         | 38.00         | 10.50         |
| 184-1B10 | 54.00         | 39.00         | 11.00         |
| 184-1B11 | 55.50         | 41.00         | 10.50         |
| 184-1B12 | 57.00         | 42.00         | 11.00         |
| 184-1C7  | 59.00         | 44.00         | 11.50         |
| 184-1C8  | 60.50         | 45.50         | 11.00         |
| 184-1C9  | 62.50         | 47.00         | 11.00         |
| 184-1C10 | 63.50         | 48.50         | 11.00         |
| 184-1C11 | 65.00         | 50.00         | 11.00         |
| 184-1C12 | 67.00         | 52.00         | 11.50         |
| 184-1C13 | 68.50         | 54.00         | 11.00         |
| 184-1C14 | 70.00         | 55.00         | 11.00         |
| 184-1C15 | 71.50         | 57.00         | 11.00         |

## 184mm 'Ø' HELIX Racing Clutch Range

### Series Part No. 63-100 & 63-200



Cover Assembly is of a lug drive configuration one piece aluminium alloy. This design allows the dust from the friction material to escape and reduces the heat build up. These are used with either sintered, cerametallic or organic faced drive plates in 1 to 3 plate formats.



### Series Part No. 53-1000 & 54-1000

Sintered Drive Plates have a thin layer of metallic friction material bonded to on to both sides of the metal disc. The very nature of this construction means this is normally used for circuit racing only.



This format is available as either a full circle with six thin slots or as a six spoke version for more arduous applications.

### Series Part No. 53-2000 & 54-2000



### Series Part No. 55-1000

Heavy duty organic faced drive plates with a rigid centre hub give a more progressive engagement of the clutch (compared to sintered or cerametallic clutch designs) enabling more control in clutch take up. Available in either single or twin plate formats.



### Series Part No. 57-1000

Heavy duty organic faced drive plates with a sprung centre hub to give the most progressive engagement possible with this design of clutch. Only available as a single plate clutch.

## Series Part No. 49-1000, 51-1000 & 52-1000



Cermetalllic Paddle Drive plates have cermetalllic segments riveted onto a steel back plate. These are thicker than the sintered type to give a higher heat capacity, while also giving improved heat dissipation where a greater level of clutch slip is required.

This design is used mainly for rally applications although it can be used very successfully for racing, especially endurance applications.



This format is available in:-

3 paddle type -- Series part No. 51-1000

4 paddle type -- Series part No. 52-1000

6 paddle type -- Series part No. 49-1000



**Note :-**

See separate sheet for all hub spline configurations available as standard.

Any spline can be manufactured but there will be a short time delay and extra cost.



## Series Part No 56-1000 & 56-2000

Sprung centre cermetalllic drive plate has the same properties as the rigid cermetalllic drive plate, but with the addition of damper springs to cushion the impact of clutch engagement on the driveline components.

Only available as a single plate clutch.



3 paddle type -- Series part No.56-1000

4 paddle type -- Series part No 56-2000



### Series Part No 62-100 & 62-200

Pull Type Design machined from aluminium billet is more efficient than a push type clutch unit.

These are of a less complicated construction and are therefore lighter and give a more consistent operation with better feel.

The Lug drive configuration allows the dust from the friction material to escape and reduces the heat build up. These are used with sintered or cerametallic drive plates.



### Series Part No 63-100TP & 63-200TP

Cover Assembly design and dimensions as per 63-100 & 63-200 series but fitted with a release plate to facilitate the use of a flat face release bearing



### Series Part No 48-2000 & 48-2090

Sintered drive plates with a main geared hub ( 48-2000 ) and floating hub drive plates ( 48-2090 ) either twin or triple



### Series Part No 48-3001 & 48-2093

Organic drive plates with a main geared hub ( 48-3001 ) and floating hub drive plate ( 48-2093 ) shown as a set





### **Series Part No 48-1001 & 48-2091**

Cermetallic 4 paddle drive plates with a main geared hub ( 48-1001 ) and floating hub drive plate ( 48-2091 )



### **Series Part No 48-1101 & 48-2092**

Cermetallic 6 paddle drive plates with a main geared hub ( 48-1101 ) and floating hub drive plate ( 48-2092 )



62-130

Ø184mm, Triple Sintered Drive Plate



| Cover               |         | Torque Capacity      |                              |
|---------------------|---------|----------------------|------------------------------|
| 62-130R             | 945Nm   | [695lb/ft]           |                              |
| 62-130G             | 1428Nm  | [1050lb/ft]          |                              |
| Cover               |         | Release Load         | Release Bearing Travel (Max) |
| 62-130R             | 250Kg   | 7.00mm               |                              |
| 62-130G             | 318Kg   |                      |                              |
| Set-Up Height (New) |         | Set-Up Height (Worn) |                              |
| 62-130R             | 37.80mm | 62-130R              | 34.80mm                      |
| 62-130G             | 38.10mm | 62-130G              | 35.15mm                      |

Drive Plates

|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Sintered (Rigid) | 53-1000        | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.6 Kg |
| Sintered (Rigid) | 54-1000        | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.6 Kg |
| Sintered (Rigid) | 53-1000A       | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.6 Kg |
| Sintered (Rigid) | 54-1000A       | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.6 Kg |

Other configurations available see index.

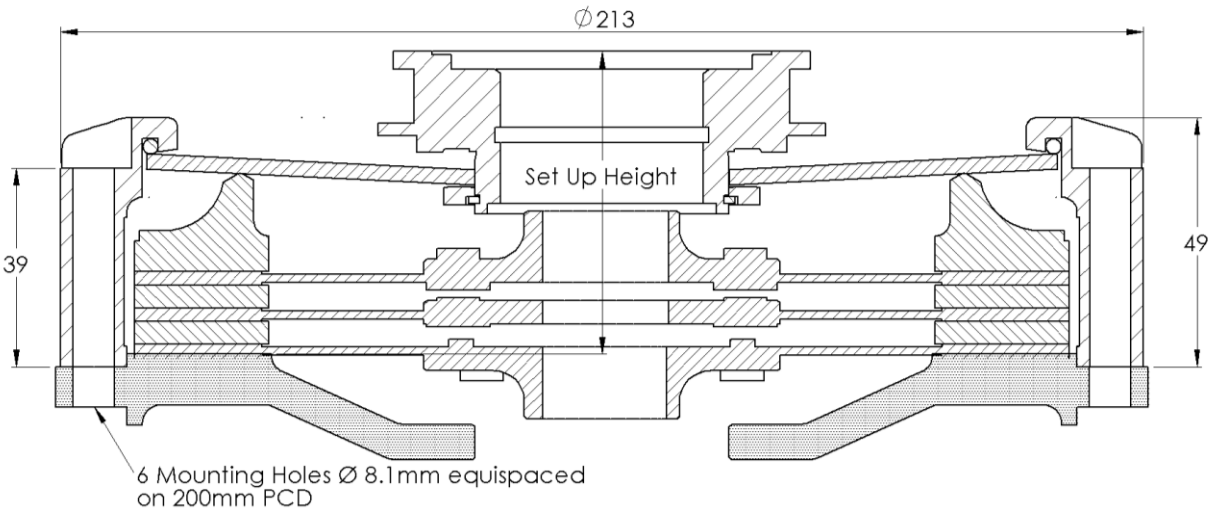
Spare Parts

|                     |             |
|---------------------|-------------|
| Wear Clips          | 184-61C     |
| Pressure Plate      | 184-17      |
| Interplate          | 184-11 (x2) |
| Flywheel Fixing Kit | 184-1C      |

Applications

Sintered Rigid Hub Race

Release Bearing: Depends on vehicle fitment – Please state when ordering.





62-220

Ø184mm, Twin Cerametallic Drive Plate



| Cover               | Torque Capacity |                              |
|---------------------|-----------------|------------------------------|
| 62-220G             | 463Nm           | [340lb/ft]                   |
| 62-220Y             | 652Nm           | [480lb/ft]                   |
| Cover               | Release Load    | Release Bearing Travel (Max) |
| 62-220G             | 250Kg           | 7.00mm                       |
| 62-220Y             | 318Kg           |                              |
| Set-Up Height (New) |                 | Set-Up Height (Worn)         |
| 62-220G             | 37.80mm         | 62-220G 34.80mm              |
| 62-220Y             | 38.10mm         | 62-220Y 35.15mm              |

Drive Plates

|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Organic (Rigid)  | 55-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.6 Kg |
| 3 Paddle (Rigid) | 51-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.6 Kg |
| 4 Paddle (Rigid) | 52-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.6 Kg |
| 6 Paddle (Rigid) | 49-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.6 Kg |

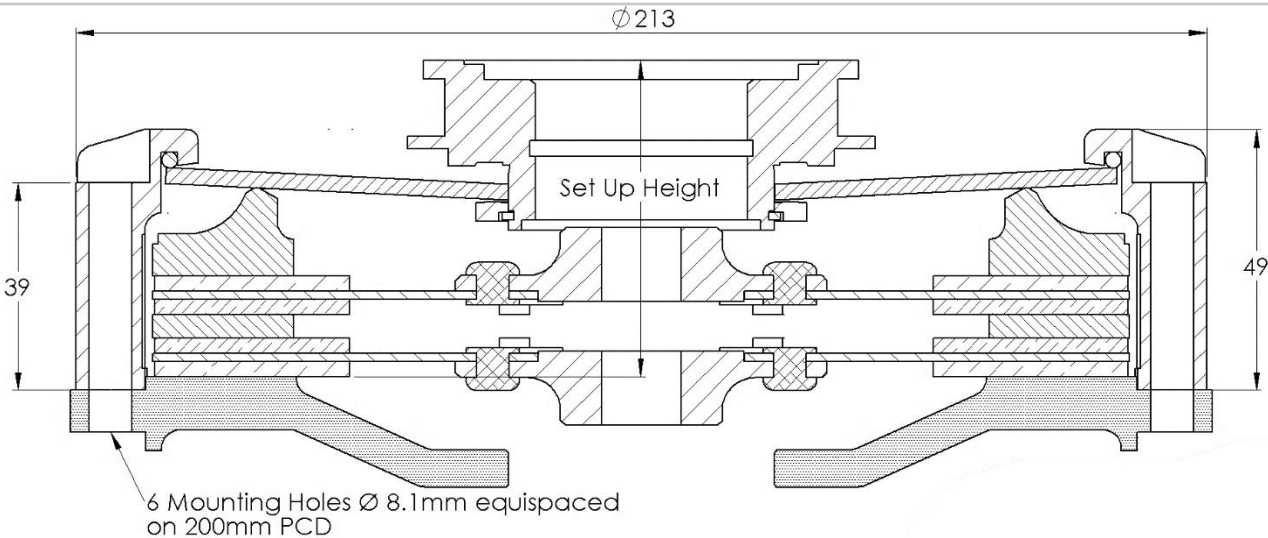
Other configurations available see index.

Spare Parts

Applications

|                     |         |                               |            |
|---------------------|---------|-------------------------------|------------|
| Wear Clips          | 184-61C | Organic Drive Plate Rigid Hub | Road       |
| Pressure Plate      | 184-19  | Paddle Rigid Hub              | Race/Rally |
| Interplate          | 184-11  |                               |            |
| Flywheel Fixing Kit | 184-1C  |                               |            |

Release Bearing: Depends on vehicle fitment – Please state when ordering.





63-110

Ø184mm, Single Sintered Drive Plate



| Cover   | Torque Capacity |            |
|---------|-----------------|------------|
| 63-110B | 231Nm           | [170lb/ft] |
| 63-110R | 324Nm           | [238lb/ft] |
| 63-110G | 494Nm           | [363lb/ft] |
| 63-110Y | 535Nm           | [394lb/ft] |

| Cover   | Release Load | Release Bearing Travel (Max) |
|---------|--------------|------------------------------|
| 63-110B | 250Kg        | 6.00mm                       |
| 63-110R | 318Kg        |                              |
| 63-110G | 345Kg        |                              |
| 63-110Y | 360Kg        |                              |

| Set-Up Height (New) |         | Set-Up Height (Worn) |         |
|---------------------|---------|----------------------|---------|
| 63-110B             | 21.55mm | 63-110B              | 25.05mm |
| 63-110R             | 21.95mm | 63-110R              | 25.45mm |
| 63-110G             | 23.05mm | 63-110G              | 26.55mm |
| 63-110Y             | 23.55mm | 63-110Y              | 27.00mm |

Drive Plates

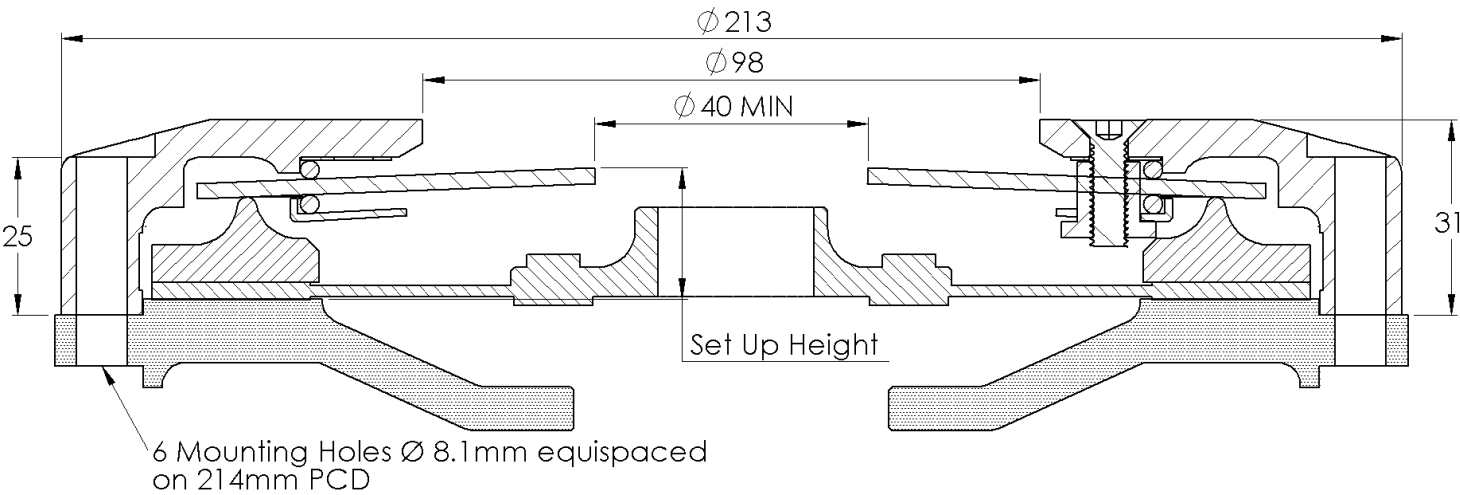
|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Sintered (Rigid) | 53-1000        | 2.66 mm             | 1.88 mm              | [See chart for spline details] | 2.7 Kg |
| Sintered (Rigid) | 53-1000A       | 2.66 mm             | 1.88 mm              | [See chart for spline details] | 2.7 Kg |

Other configurations available see index.

Spare Parts

|                |         |                     |        |
|----------------|---------|---------------------|--------|
| Wear Clips     | 184-61A | Flywheel Fixing Kit | 184-1A |
| Pressure Plate | 184-12  |                     |        |

Release Bearing: Must have curved face with a fulcrum point of between 48mm to 54mm.





63-110c

Ø184mm, Single Sintered Drive Plate  
Curly Tip Diaphragm Spring



| Cover    | Torque Capacity |            |
|----------|-----------------|------------|
| 63-110Bc | 231Nm           | [170lb/ft] |
| 63-110Rc | 324Nm           | [238lb/ft] |
| 63-110Gc | 494Nm           | [363lb/ft] |
| 63-110Yc | 535Nm           | [394lb/ft] |

| Cover    | Release Load | Release Bearing Travel (Max) |
|----------|--------------|------------------------------|
| 63-110Bc | 250Kg        | 6.00mm                       |
| 63-110Rc | 318Kg        |                              |
| 63-110Gc | 345Kg        |                              |
| 63-110Yc | 360Kg        |                              |

| Set-Up Height (New) |         | Set-Up Height (Worn) |         |
|---------------------|---------|----------------------|---------|
| 63-110Bc            | 24.55mm | 63-110Bc             | 28.05mm |
| 63-110Rc            | 24.95mm | 63-110Rc             | 28.45mm |
| 63-110Gc            | 26.05mm | 63-110Gc             | 29.55mm |
| 63-110Yc            | 26.55mm | 63-110Yc             | 30.00mm |

Drive Plates

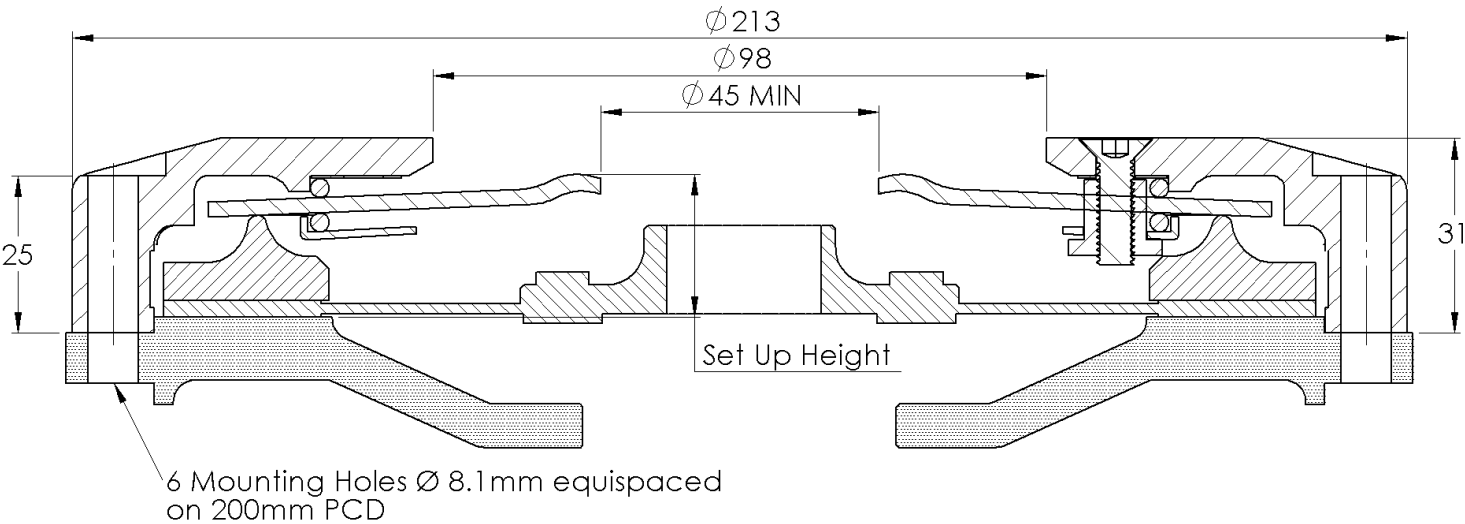
|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Sintered (Rigid) | 53-1000        | 2.66 mm             | 1.88 mm              | [See chart for spline details] | 2.7 Kg |
| Sintered (Rigid) | 53-1000A       | 2.66 mm             | 1.88 mm              | [See chart for spline details] | 2.7 Kg |

Other configurations available see index.

Spare Parts

|                |         |                     |        |
|----------------|---------|---------------------|--------|
| Wear Clips     | 184-61A | Flywheel Fixing Kit | 184-1A |
| Pressure Plate | 184-12  |                     |        |

Release Bearing: Must have flat face with a fulcrum point of between 48mm to 54mm.





63-120

Ø184mm, Twin Sintered Drive Plate



| Cover   | Torque Capacity |            |
|---------|-----------------|------------|
| 63-120B | 469Nm           | [345lb/ft] |
| 63-120R | 650Nm           | [478lb/ft] |
| 63-120G | 982Nm           | [722lb/ft] |
| 63-120Y | 1081Nm          | [795lb/ft] |

| Cover   | Release Load | Release Bearing Travel (Max) |
|---------|--------------|------------------------------|
| 63-120B | 250Kg        | 6.00mm                       |
| 63-120R | 300Kg        |                              |
| 63-120G | 345Kg        |                              |
| 63-120Y | 360Kg        |                              |

| Set-Up Height (New) |         | Set-Up Height (Worn) |         |
|---------------------|---------|----------------------|---------|
| 63-120B             | 27.70mm | 63-120B              | 31.60mm |
| 63-120R             | 28.70mm | 63-120R              | 32.65mm |
| 63-120G             | 29.70mm | 63-120G              | 33.70mm |
| 63-120Y             | 29.95mm | 63-120Y              | 34.20mm |

Drive Plates

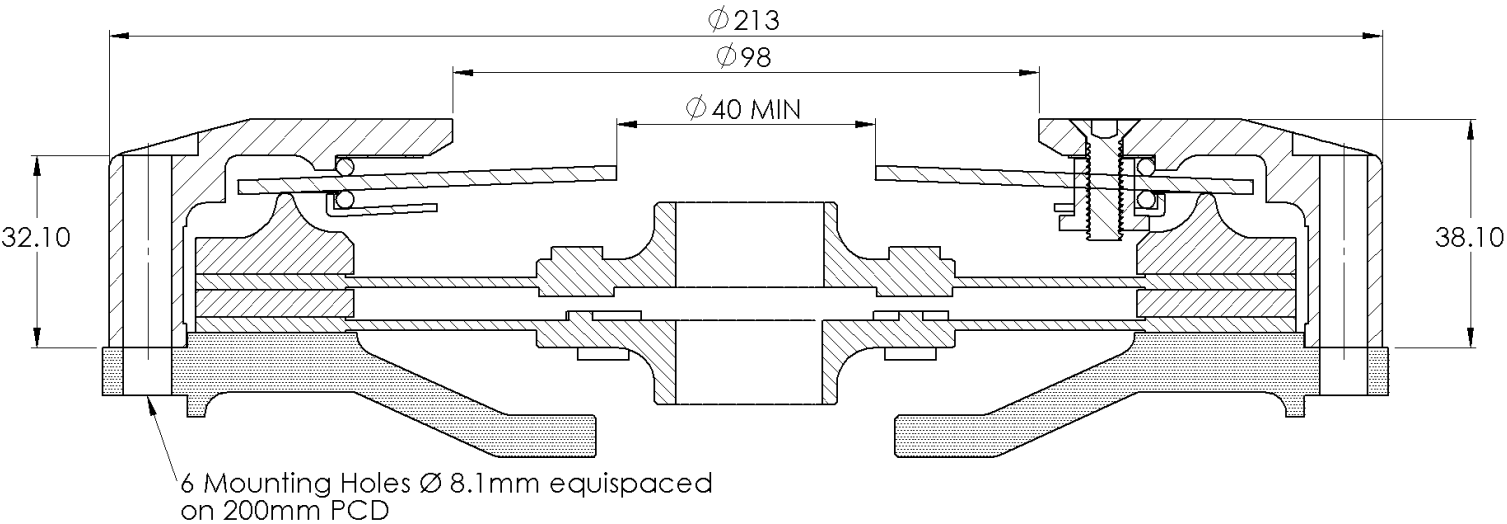
|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Sintered (Rigid) | 53-1000        | 2.66 mm             | 2.22 mm              | [See chart for spline details] | 3.7 Kg |
| Sintered (Rigid) | 53-1000A       | 2.66 mm             | 2.22 mm              | [See chart for spline details] | 3.7 Kg |

Other configurations available see index.

Spare Parts

|                |         |                     |        |
|----------------|---------|---------------------|--------|
| Wear Clips     | 184-61B | Flywheel Fixing Kit | 184-1B |
| Pressure Plate | 184-12  | Interplate          | 184-11 |

Release Bearing: Must have curved face with a fulcrum point of between 48mm to 54mm.







63-120c

Ø184mm, Twin Sintered Drive Plate  
Curly Tip Diaphragm Spring



| Cover    | Torque Capacity |            |
|----------|-----------------|------------|
| 63-120Bc | 469Nm           | [345lb/ft] |
| 63-120Rc | 650Nm           | [478lb/ft] |
| 63-120Gc | 982Nm           | [722lb/ft] |
| 63-120Yc | 1081Nm          | [795lb/ft] |

| Cover    | Release Load | Release Bearing Travel (Max) |
|----------|--------------|------------------------------|
| 63-120Bc | 250Kg        | 6.00mm                       |
| 63-120Rc | 300Kg        |                              |
| 63-120Gc | 345Kg        |                              |
| 63-120Yc | 360Kg        |                              |

| Set-Up Height (New) |         | Set-Up Height (Worn) |         |
|---------------------|---------|----------------------|---------|
| 63-120Bc            | 30.70mm | 63-120Bc             | 34.60mm |
| 63-120Rc            | 31.70mm | 63-120Rc             | 35.65mm |
| 63-120Gc            | 32.70mm | 63-120Gc             | 36.70mm |
| 63-120Yc            | 32.95mm | 63-120Yc             | 37.20mm |

Drive Plates

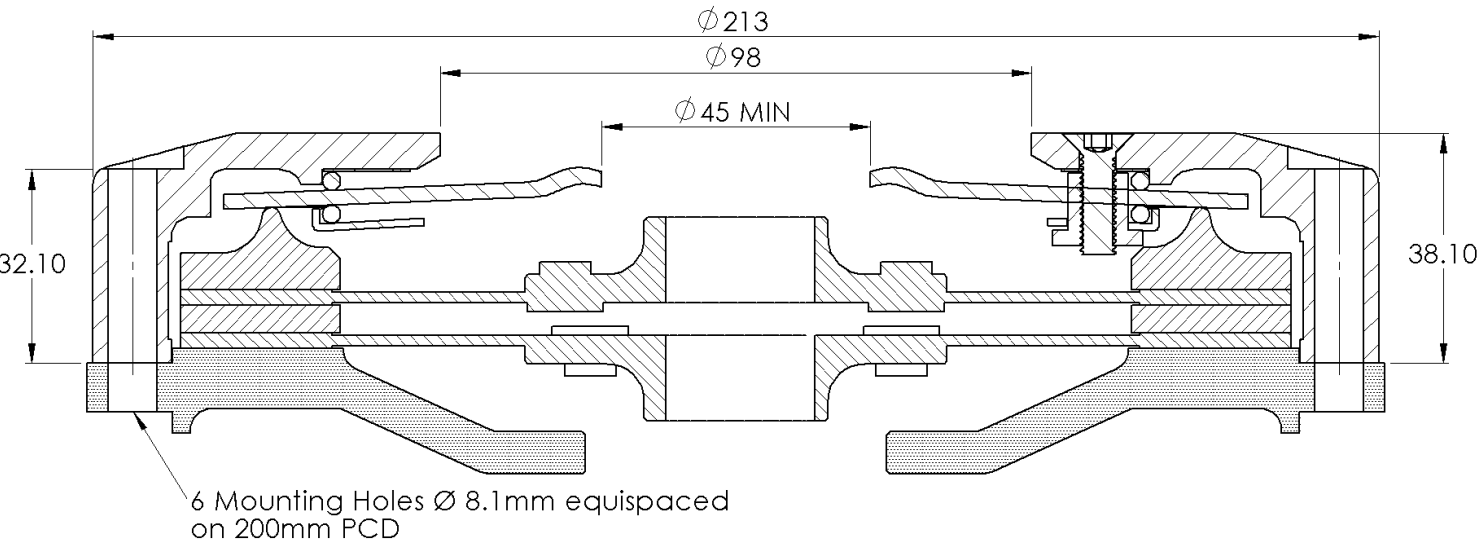
|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Sintered (Rigid) | 53-1000        | 2.66 mm             | 2.22 mm              | [See chart for spline details] | 3.7 Kg |
| Sintered (Rigid) | 53-1000A       | 2.66 mm             | 2.22 mm              | [See chart for spline details] | 3.7 Kg |

Other configurations available see index.

Spare Parts

|                |         |                     |        |
|----------------|---------|---------------------|--------|
| Wear Clips     | 184-61B | Flywheel Fixing Kit | 184-1B |
| Pressure Plate | 184-12  | Interplate          | 184-11 |

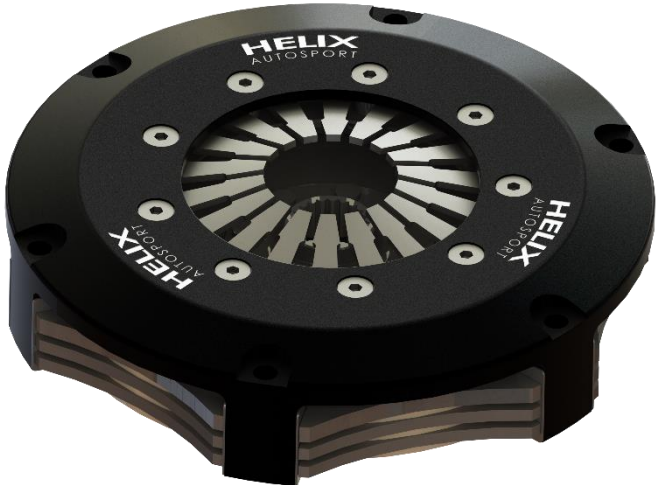
Release Bearing: Must have flat face with a fulcrum point of between 48mm to 54mm.





63-130

Ø184mm, Triple Sintered Drive Plate



| Cover   | Torque Capacity |             |
|---------|-----------------|-------------|
| 63-130B | 460Nm           | [502lb/ft]  |
| 63-130R | 683Nm           | [712lb/ft]  |
| 63-130G | 1466Nm          | [1078lb/ft] |
| 63-130Y | 1612Nm          | [1185lb/ft] |

| Cover   | Release Load | Release Bearing Travel (Max) |
|---------|--------------|------------------------------|
| 63-130B | 250Kg        | 6.00mm                       |
| 63-130R | 300Kg        |                              |
| 63-130G | 345Kg        |                              |
| 63-130Y | 360Kg        |                              |

| Set-Up Height (New) |         | Set-Up Height (Worn) |         |
|---------------------|---------|----------------------|---------|
| 63-130B             | 37.10mm | 63-130B              | 41.00mm |
| 63-130R             | 38.15mm | 63-130R              | 42.05mm |
| 63-130G             | 38.70mm | 63-130G              | 42.65mm |
| 63-130Y             | 39.20mm | 63-130Y              | 43.20mm |

Drive Plates

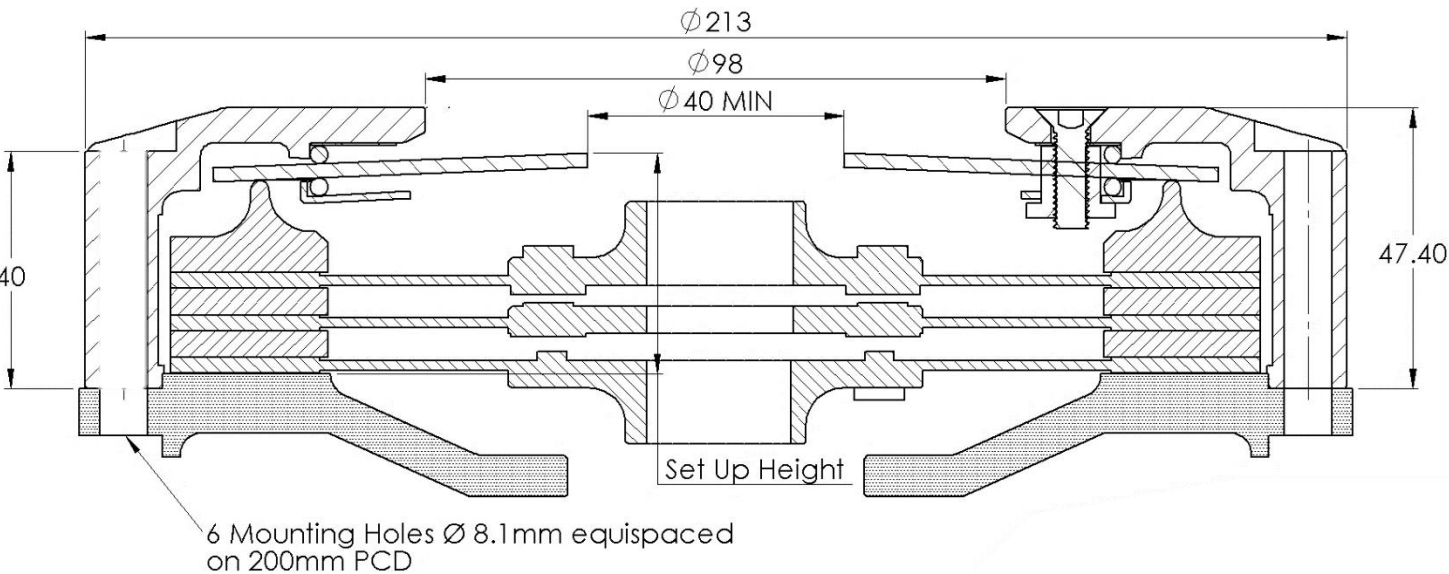
|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Sintered (Rigid) | 53-1000        | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.7 Kg |
| Sintered (Rigid) | 54-1000        | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.7 Kg |
| Sintered (Rigid) | 53-1000A       | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.7 Kg |
| Sintered (Rigid) | 54-1000A       | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.7 Kg |

Other configurations available see index.

Spare Parts

|                |         |                     |             |
|----------------|---------|---------------------|-------------|
| Wear Clips     | 184-61C | Flywheel Fixing Kit | 184-1C      |
| Pressure Plate | 184-14  | Interplate          | 184-11 (x2) |

Release Bearing: Must have curved face with a fulcrum point of between 48mm to 54mm.







63-130c

Ø184mm, Triple Sintered Drive Plate  
Curly Tip Diaphragm Spring



| Cover    | Torque Capacity |             |
|----------|-----------------|-------------|
| 63-130Bc | 460Nm           | [502lb/ft]  |
| 63-130Rc | 683Nm           | [712lb/ft]  |
| 63-130Gc | 1466Nm          | [1078lb/ft] |
| 63-130Yc | 1612Nm          | [1185lb/ft] |

| Cover    | Release Load | Release Bearing Travel (Max) |
|----------|--------------|------------------------------|
| 63-130Bc | 250Kg        | 6.00mm                       |
| 63-130Rc | 300Kg        |                              |
| 63-130Gc | 345Kg        |                              |
| 63-130Yc | 360Kg        |                              |

| Set-Up Height (New) |         | Set-Up Height (Worn) |         |
|---------------------|---------|----------------------|---------|
| 63-130Bc            | 40.10mm | 63-130Bc             | 44.00mm |
| 63-130Rc            | 41.15mm | 63-130Rc             | 45.05mm |
| 63-130Gc            | 41.70mm | 63-130Gc             | 45.65mm |
| 63-130Yc            | 42.20mm | 63-130Yc             | 46.20mm |

Drive Plates

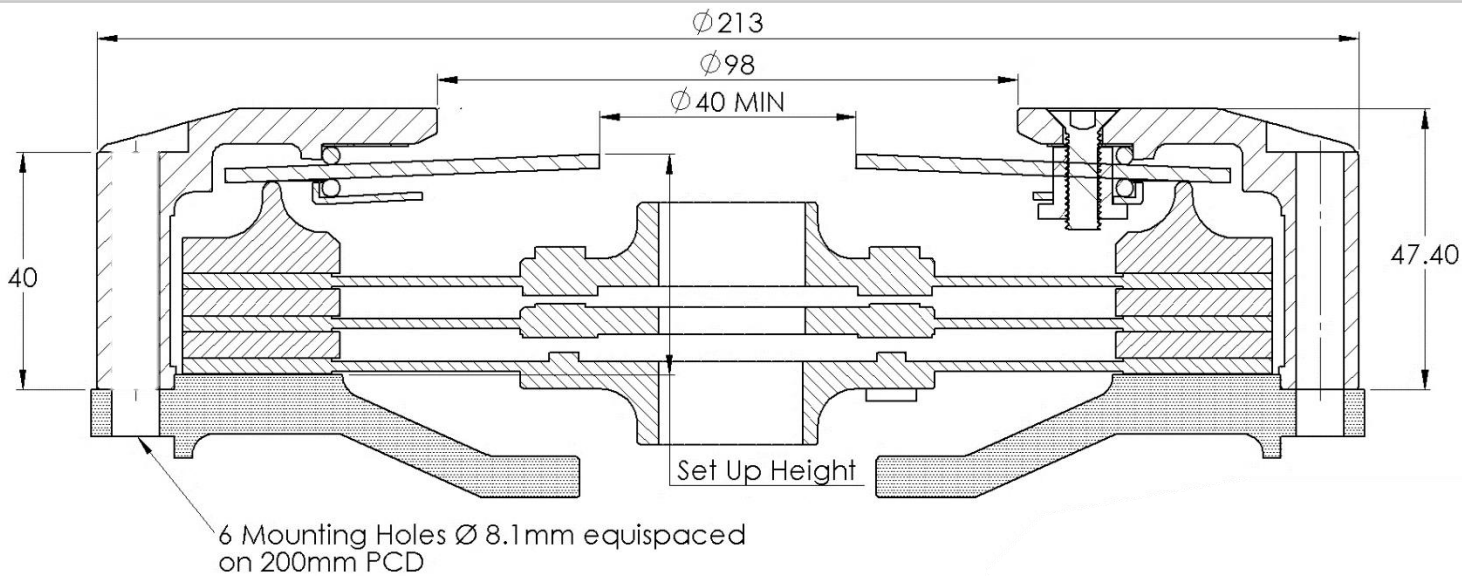
|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Sintered (Rigid) | 53-1000        | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.7 Kg |
| Sintered (Rigid) | 54-1000        | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.7 Kg |
| Sintered (Rigid) | 53-1000A       | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.7 Kg |
| Sintered (Rigid) | 54-1000A       | 2.66 mm             | 2.34 mm              | [See chart for spline details] | 4.7 Kg |

Other configurations available see index.

Spare Parts

|                |         |                     |             |
|----------------|---------|---------------------|-------------|
| Wear Clips     | 184-61C | Flywheel Fixing Kit | 184-1C      |
| Pressure Plate | 184-14  | Interplate          | 184-11 (x2) |

Release Bearing: Must have flat face with a fulcrum point of between 48mm to 54mm.



Ø184mm, Single Cerametallic Drive Plate



|         |       |        |
|---------|-------|--------|
| 63-210B | 250Kg | 6.00mm |
| 63-210R | 300Kg |        |
| 63-210G | 345Kg |        |
| 63-210Y | 360Kg |        |

|         |         |
|---------|---------|
| 63-210B | 32.70mm |
| 63-210R | 33.55mm |
| 63-210G | 35.35mm |
| 63-210Y | 35.70mm |

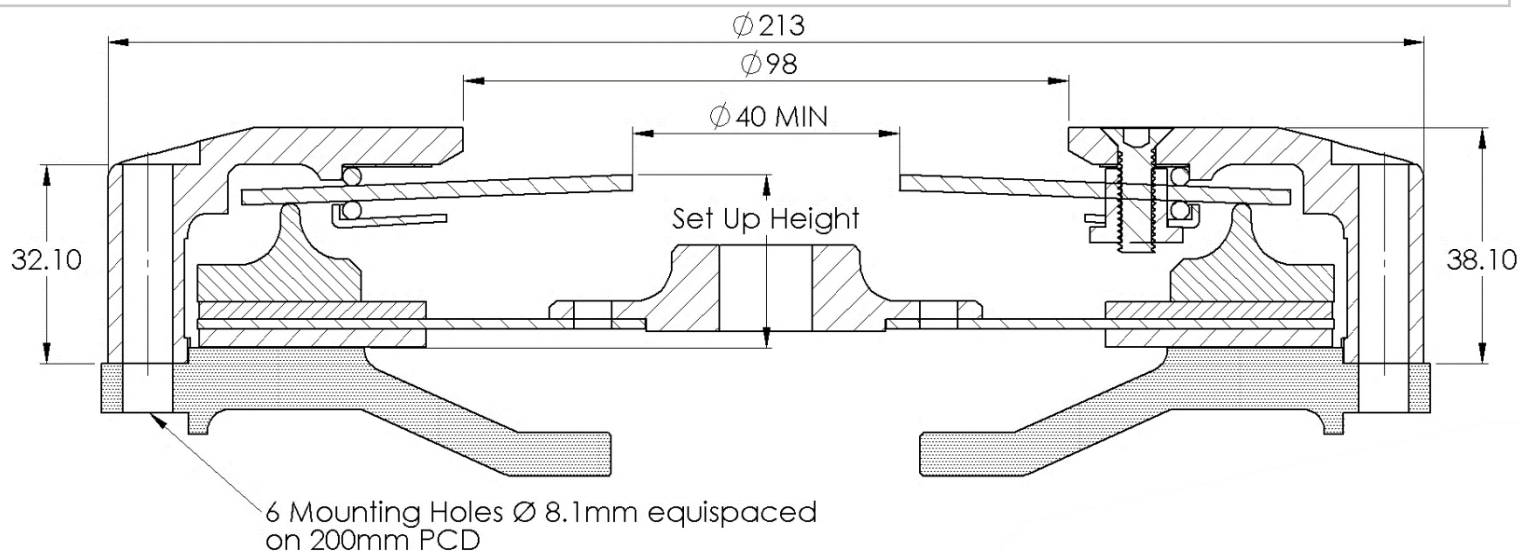
|                  | Series Part No | Thickness New<br>[Nom] | Thickness Worn<br>[Min] |                                | Weight |
|------------------|----------------|------------------------|-------------------------|--------------------------------|--------|
| Organic (Rigid)  | 55-1000        | 7.20 mm                | 6.30 mm                 | [See chart for spline details] | 2.7 Kg |
| 3 Paddle (Rigid) | 51-1000        | 7.20 mm                | 6.30 mm                 | [See chart for spline details] | 2.8 Kg |
| 4 Paddle (Rigid) | 52-1000        | 7.20 mm                | 6.30 mm                 | [See chart for spline details] | 2.9 Kg |
| 6 Paddle (Rigid) | 49-1000        | 7.20 mm                | 6.30 mm                 | [See chart for spline details] | 3.0 Kg |

## Spare Parts

## Applications

|                     |         |                               |            |
|---------------------|---------|-------------------------------|------------|
| Wear Clips          | 184-61B | Organic Drive Plate Rigid Hub | Road       |
| Pressure Plate      | 184-15  | Paddle Rigid Hub              | Race/Rally |
| Flywheel Fixing Kit | 184-1B  |                               |            |

Release Bearing: Must have curved face with a fulcrum point of between 48mm to 54mm.





# 63-210c

Ø184mm, Single Cerametallic Drive Plate  
Curly Tip Diaphragm Spring



| Cover    | Torque Capacity  |                          |
|----------|------------------|--------------------------|
| 63-210Bc | 211Nm [155lb/ft] | Cerametallic Drive Plate |
| 63-210Rc | 299Nm [220lb/ft] | Cerametallic Drive Plate |
| 63-210Gc | 445Nm [327lb/ft] | Cerametallic Drive Plate |
| 63-210Yc | 490Nm [360lb/ft] | Cerametallic Drive Plate |
| 63-210Bc | 152Nm [112lb/ft] | Organic Drive Plate      |
| 63-210Rc | 216Nm [159lb/ft] | Organic Drive Plate      |
| 63-210Gc | 324Nm [238lb/ft] | Organic Drive Plate      |
| 63-210Yc | 356Nm [262lb/ft] | Organic Drive Plate      |

| Cover    | Release Load | Release Bearing Travel (Max) |
|----------|--------------|------------------------------|
| 63-210Bc | 250Kg        | 6.00mm                       |
| 63-210Rc | 300Kg        |                              |
| 63-210Gc | 345Kg        |                              |
| 63-210Yc | 360Kg        |                              |

| Set-Up Height (New) |         | Set-Up Height (Worn) |         |
|---------------------|---------|----------------------|---------|
| 63-210Bc            | 31.80mm | 63-210Bc             | 35.70mm |
| 63-210Rc            | 33.40mm | 63-210Rc             | 36.55mm |
| 63-210Gc            | 34.50mm | 63-210Gc             | 38.35mm |
| 63-210Yc            | 34.80mm | 63-210Yc             | 38.70mm |

Drive Plates

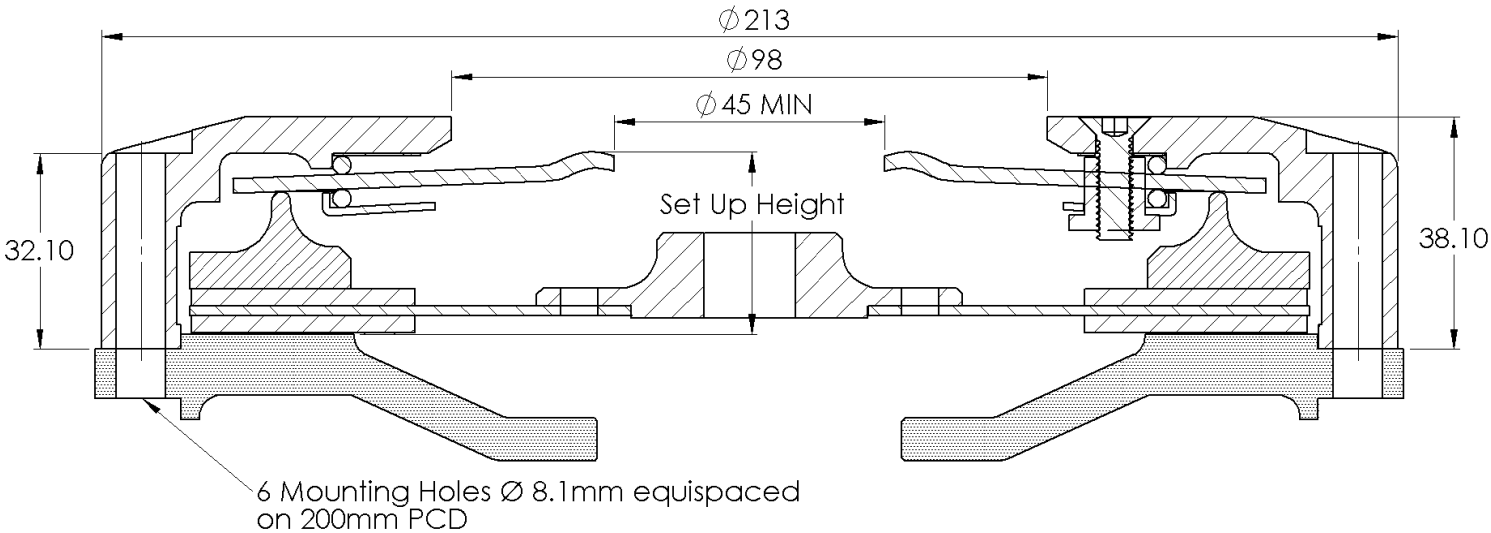
|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Organic (Rigid)  | 55-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 2.7 Kg |
| 3 Paddle (Rigid) | 51-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 2.8 Kg |
| 4 Paddle (Rigid) | 52-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 2.9 Kg |
| 6 Paddle (Rigid) | 49-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 3.0 Kg |

Other configurations available see index.

Spare PartsApplications

|                     |         |                               |            |
|---------------------|---------|-------------------------------|------------|
| Wear Clips          | 184-61B | Organic Drive Plate Rigid Hub | Road       |
| Pressure Plate      | 184-15  | Paddle Rigid Hub              | Race/Rally |
| Flywheel Fixing Kit | 184-1B  |                               |            |

Release Bearing: Must have flat face with a fulcrum point of between 48mm to 54mm.





63-220

Ø184mm, Twin Cerametallic Drive Plate



| Cover   | Torque Capacity  |                          |
|---------|------------------|--------------------------|
| 63-220B | 291Nm [214lb/ft] | Cerametallic Drive Plate |
| 63-220R | 422Nm [310lb/ft] | Cerametallic Drive Plate |
| 63-220G | 626Nm [460lb/ft] | Cerametallic Drive Plate |
| 63-220Y | 688Nm [506lb/ft] | Cerametallic Drive Plate |
| 63-220B | 215Nm [158lb/ft] | Organic Drive Plate      |
| 63-220R | 305Nm [224lb/ft] | Organic Drive Plate      |
| 63-220G | 453Nm [333lb/ft] | Organic Drive Plate      |
| 63-220Y | 498Nm [366lb/ft] | Organic Drive Plate      |

| Cover   | Release Load | Release Bearing Travel (Max) |
|---------|--------------|------------------------------|
| 63-220B | 255Kg        | 6.00mm                       |
| 63-220R | 300Kg        |                              |
| 63-220G | 345Kg        |                              |
| 63-220Y | 360Kg        |                              |

| Set-Up Height (New) |         | Set-Up Height (Worn) |         |
|---------------------|---------|----------------------|---------|
| 63-220B             | 37.55mm | 63-220B              | 41.45mm |
| 63-220R             | 38.40mm | 63-220R              | 42.50mm |
| 63-220G             | 39.30mm | 63-220G              | 43.80mm |
| 63-220Y             | 39.55mm | 63-220Y              | 44.10mm |

Drive Plates

|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Organic (Rigid)  | 55-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 3.8 Kg |
| 3 Paddle (Rigid) | 51-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 3.9 Kg |
| 4 Paddle (Rigid) | 52-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.1 Kg |
| 6 Paddle (Rigid) | 49-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.5 Kg |

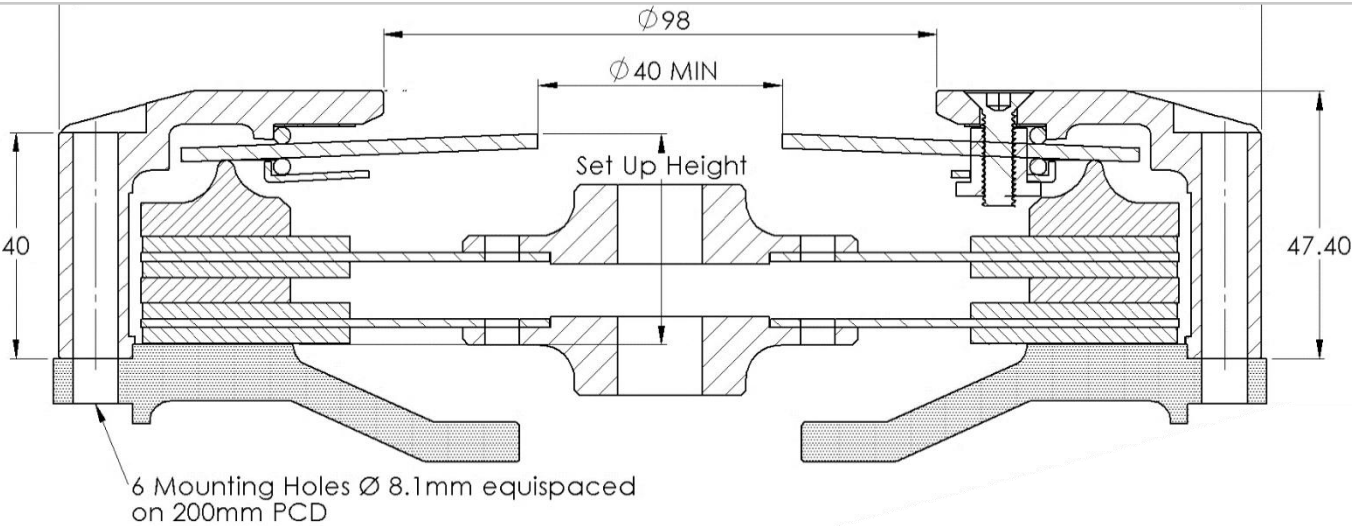
Other configurations available see index.

Spare Parts

Applications

|                     |         |                               |            |
|---------------------|---------|-------------------------------|------------|
| Wear Clips          | 184-61C | Organic Drive Plate Rigid Hub | Road       |
| Pressure Plate      | 184-12  | Paddle Rigid Hub              | Race/Rally |
| Flywheel Fixing Kit | 184-1C  |                               |            |
| Interplate          | 184-11  |                               |            |

Release Bearing: Must have curved face with a fulcrum point of between 48mm to 54mm.







63-220c

Ø184mm, Twin Cerametallic Drive Plate  
Curly Tip Diaphragm Spring



| Cover    | Torque Capacity  |                          |
|----------|------------------|--------------------------|
| 63-220Bc | 291Nm [214lb/ft] | Cerametallic Drive Plate |
| 63-220Rc | 422Nm [310lb/ft] | Cerametallic Drive Plate |
| 63-220Gc | 626Nm [460lb/ft] | Cerametallic Drive Plate |
| 63-220Yc | 688Nm [506lb/ft] | Cerametallic Drive Plate |
| 63-220Bc | 215Nm [158lb/ft] | Organic Drive Plate      |
| 63-220Rc | 305Nm [224lb/ft] | Organic Drive Plate      |
| 63-220Gc | 453Nm [333lb/ft] | Organic Drive Plate      |
| 63-220Yc | 498Nm [366lb/ft] | Organic Drive Plate      |

| Cover    | Release Load | Release Bearing Travel (Max) |
|----------|--------------|------------------------------|
| 63-220Bc | 255Kg        | 6.00mm                       |
| 63-220Rc | 300Kg        |                              |
| 63-220Gc | 345Kg        |                              |
| 63-220Yc | 360Kg        |                              |

| Set-Up Height (New) |         | Set-Up Height (Worn) |         |
|---------------------|---------|----------------------|---------|
| 63-220Bc            | 40.55mm | 63-220Bc             | 44.45mm |
| 63-220Rc            | 41.40mm | 63-220Rc             | 45.50mm |
| 63-220Gc            | 42.30mm | 63-220Gc             | 46.80mm |
| 63-220Yc            | 42.55mm | 63-220Yc             | 47.10mm |

Drive Plates

|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Organic (Rigid)  | 55-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 3.8 Kg |
| 3 Paddle (Rigid) | 51-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 3.9 Kg |
| 4 Paddle (Rigid) | 52-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.1 Kg |
| 6 Paddle (Rigid) | 49-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.5 Kg |

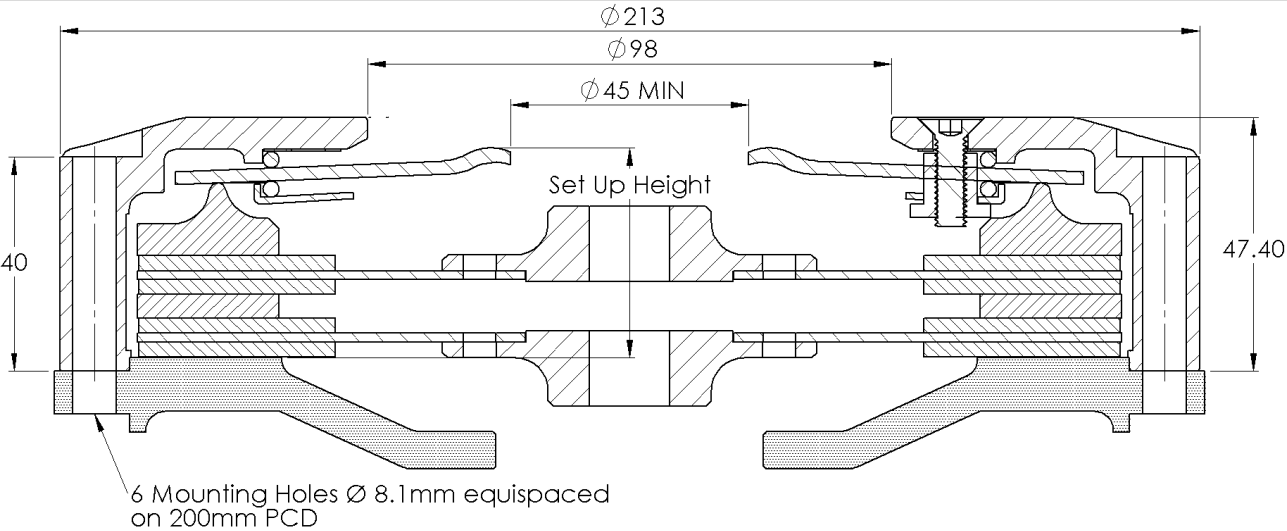
Other configurations available see index.

Spare Parts

Applications

|                     |         |                               |            |
|---------------------|---------|-------------------------------|------------|
| Wear Clips          | 184-61C | Organic Drive Plate Rigid Hub | Road       |
| Pressure Plate      | 184-12  | Paddle Rigid Hub              | Race/Rally |
| Flywheel Fixing Kit | 184-1C  |                               |            |
| Interplate          | 184-11  |                               |            |

Release Bearing: Must have flat face with a fulcrum point of between 48mm to 54mm.





63-230

Ø184mm, Triple Cerametallic Drive Plate



| Cover   | Torque Capacity  |                          |
|---------|------------------|--------------------------|
| 63-230R | 422Nm [310lb/ft] | Cerametallic Drive Plate |
| 63-230G | 626Nm [460lb/ft] | Cerametallic Drive Plate |
| 63-230Y | 688Nm [506lb/ft] | Cerametallic Drive Plate |
| 63-230R | 305Nm [224lb/ft] | Organic Drive Plate      |
| 63-230G | 453Nm [333lb/ft] | Organic Drive Plate      |
| 63-230Y | 498Nm [366lb/ft] | Organic Drive Plate      |

| Cover   | Release Load | Release Bearing Travel (Max) |
|---------|--------------|------------------------------|
| 63-230R | 300Kg        | 6.00mm                       |
| 63-230G | 345Kg        |                              |
| 63-230Y | 360Kg        |                              |

Set-Up Height (New)

|         |         |
|---------|---------|
| 63-230R | 44.00mm |
| 63-230G | 44.70mm |
| 63-230Y | 44.90mm |

Set-Up Height (Worn)

|         |         |
|---------|---------|
| 63-230R | 48.10mm |
| 63-230G | 49.00mm |
| 63-230Y | 49.00mm |

Drive Plates

|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Organic (Rigid)  | 55-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 3.8 Kg |
| 3 Paddle (Rigid) | 51-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 3.9 Kg |
| 4 Paddle (Rigid) | 52-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.1 Kg |
| 6 Paddle (Rigid) | 49-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.5 Kg |

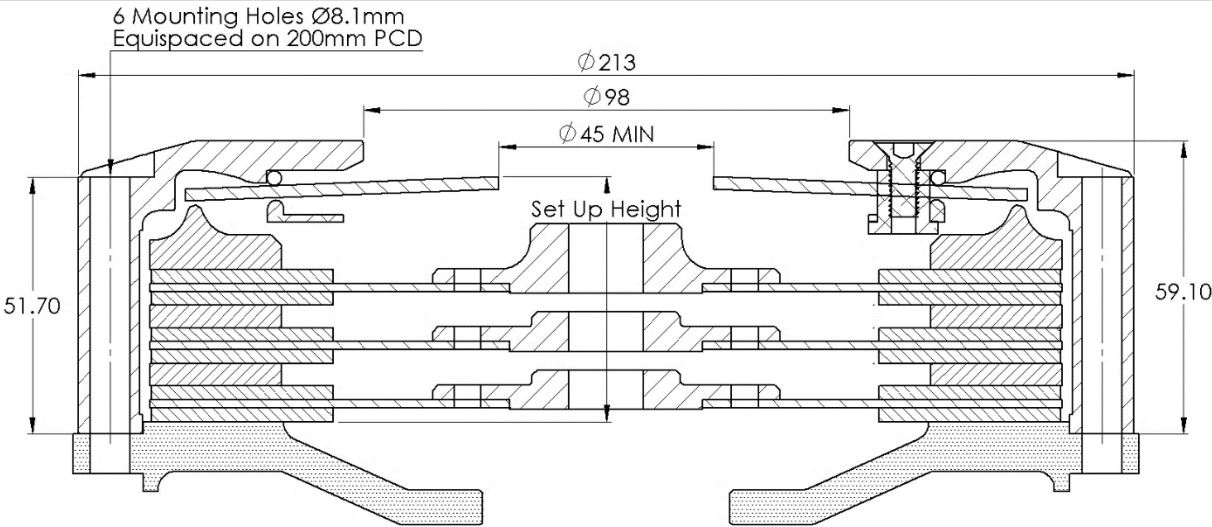
Other configurations available see index.

Spare Parts

Applications

|                     |         |                               |            |
|---------------------|---------|-------------------------------|------------|
| Wear Clips          | 184-61E | Organic Drive Plate Rigid Hub | Road       |
| Pressure Plate      | 184-19  | Paddle Rigid Hub              | Race/Rally |
| Flywheel Fixing Kit | 184-1D  |                               |            |
| Interplate          | 184-11  |                               |            |

Release Bearing: Must have curved face with a fulcrum point of between 48mm to 54mm.





63-230c

Ø184mm, Triple Cerametallic Drive Plate  
Curly Tip Diaphragm Spring



| Cover    | Torque Capacity  |                          |
|----------|------------------|--------------------------|
| 63-230Rc | 422Nm [310lb/ft] | Cerametallic Drive Plate |
| 63-230Gc | 626Nm [460lb/ft] | Cerametallic Drive Plate |
| 63-230Yc | 688Nm [506lb/ft] | Cerametallic Drive Plate |
| 63-230Rc | 305Nm [224lb/ft] | Organic Drive Plate      |
| 63-230Gc | 453Nm [333lb/ft] | Organic Drive Plate      |
| 63-230Yc | 498Nm [366lb/ft] | Organic Drive Plate      |

| Cover    | Release Load | Release Bearing Travel (Max) |
|----------|--------------|------------------------------|
| 63-230Rc | 300Kg        | 6.00mm                       |
| 63-230Gc | 345Kg        |                              |
| 63-230Yc | 360Kg        |                              |

Set-Up Height (New)

|          |         |
|----------|---------|
| 63-230Rc | 47.00mm |
| 63-230Gc | 47.90mm |
| 63-230Yc | 48.00mm |

Set-Up Height (Worn)

|          |         |
|----------|---------|
| 63-230Rc | 52.00mm |
| 63-230Gc | 52.90mm |
| 63-230Yc | 53.10mm |

Drive Plates

|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight |
|------------------|----------------|---------------------|----------------------|--------------------------------|--------|
| Organic (Rigid)  | 55-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 3.8 Kg |
| 3 Paddle (Rigid) | 51-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 3.9 Kg |
| 4 Paddle (Rigid) | 52-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.1 Kg |
| 6 Paddle (Rigid) | 49-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.5 Kg |

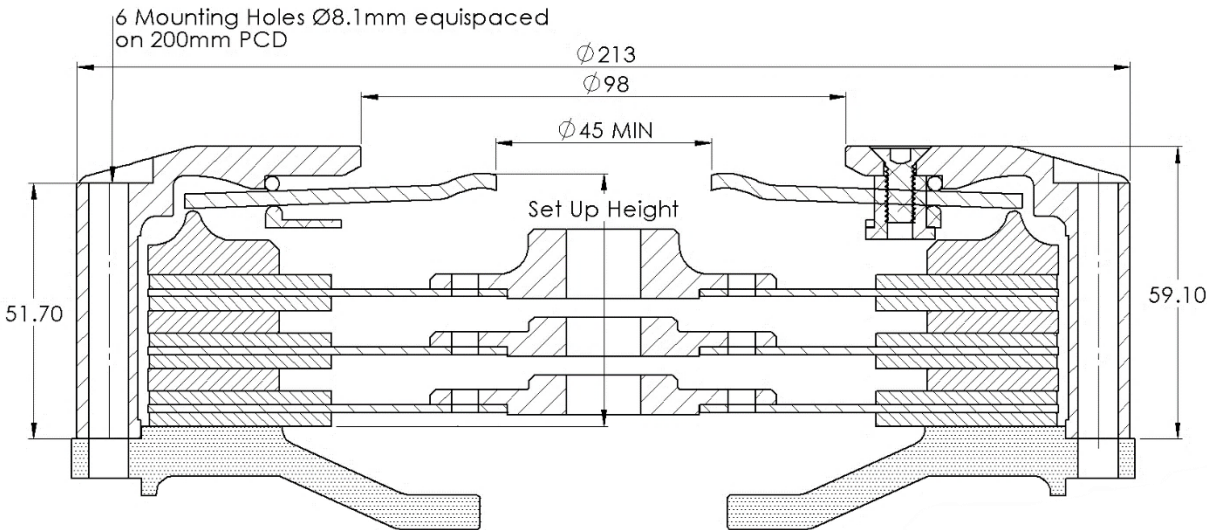
Other configurations available see index.

Spare Parts

Applications

|                     |         |                               |            |
|---------------------|---------|-------------------------------|------------|
| Wear Clips          | 184-61E | Organic Drive Plate Rigid Hub | Road       |
| Pressure Plate      | 184-19  | Paddle Rigid Hub              | Race/Rally |
| Flywheel Fixing Kit | 184-1C  |                               |            |
| Interplate          | 184-11  |                               |            |

Release Bearing: Must have curved face with a fulcrum point of between 48mm to 54mm.



For those wanting greater torque capacity in a smaller form



| Cover    | Torque Capacity  |                     |
|----------|------------------|---------------------|
| 63-230SR | 560Nm [411lb/ft] | Organic Drive Plate |
| 63-230SG | 685Nm [504lb/ft] | Organic Drive Plate |
| 63-230SY | 898Nm [660lb/ft] | Organic Drive Plate |

| Cover    | Release Load | Release Bearing Travel<br>(Max) |
|----------|--------------|---------------------------------|
| 63-230SR | 300Kg        | 6.00mm                          |
| 63-230SG | 345Kg        |                                 |
| 63-230SY | 360Kg        |                                 |

## Set-Up Height (New)

|           |         |
|-----------|---------|
| 63-230SR  | 46.50mm |
| 63-230SG  | 46.30mm |
| 63-230SY  | 46.10mm |
| 63-230SRc | 49.50mm |
| 63-230SGc | 49.30mm |
| 63-230SYc | 49.10mm |

## Set-Up Height (Worn)

|           |         |
|-----------|---------|
| 63-230SR  | 50.50mm |
| 63-230SG  | 49.80mm |
| 63-230SY  | 49.10mm |
| 63-230SRc | 53.50mm |
| 63-230SGc | 52.80mm |
| 63-230SYc | 52.10mm |

## Drive Plates

|                 | Series Part No | Thickness New<br>[Nom] | Thickness Worn<br>[Min] |                                | Weight |
|-----------------|----------------|------------------------|-------------------------|--------------------------------|--------|
| Organic (Rigid) | 55-2000        | 5.50 mm                | 4.90 mm                 | [See chart for spline details] | 2.6 Kg |

Other configurations available see index.

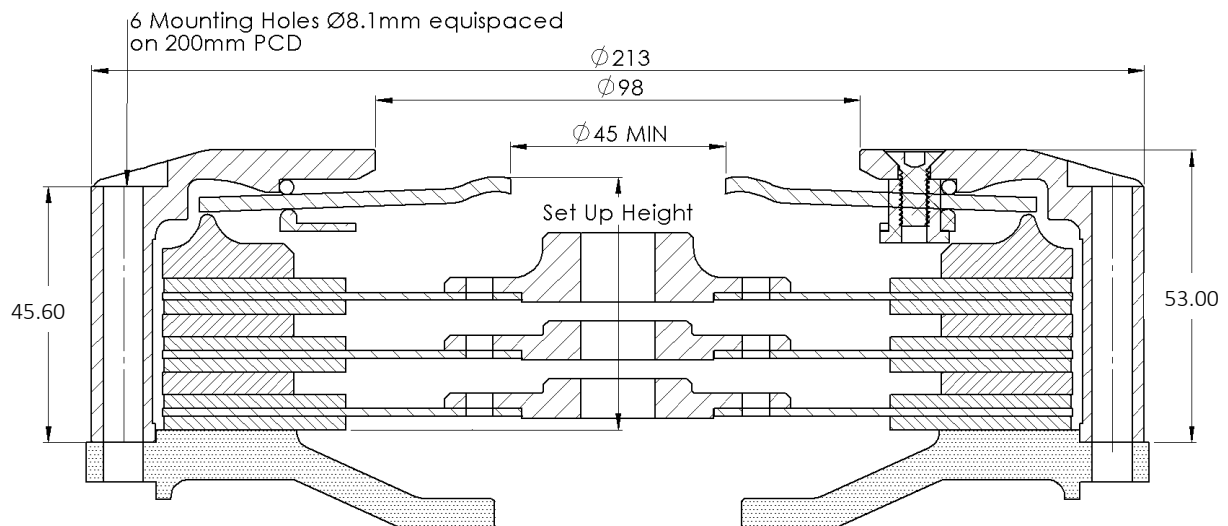
## Spare Parts

|                     |         |
|---------------------|---------|
| Wear Clips          | 184-61D |
| Pressure Plate      | 184-19  |
| Flywheel Fixing Kit | 184-1C  |
| Interplate          | 184-11  |

## Applications


Organic Drive Plate Rigid Hub Road

Release Bearing: Must have curved face with a fulcrum point of between 48mm to 54mm.





184mm Ø Sintered, Cerametallic & Organic Drive Plate Hub Spline Details

| Spline Data  |               | 3 Paddle                  | 4 Paddle                  | 6 Paddle                  | Sintered | Sintered | Organic | Organic    | 3 Paddle                   | 4 Paddle                   | Application                      |
|--|---------------|---------------------------|---------------------------|---------------------------|----------|----------|---------|------------|----------------------------|----------------------------|----------------------------------|
| Teeth  |               | Cerametallic<br>Rigid Hub | Cerametallic<br>Rigid Hub | Cerametallic<br>Rigid Hub | Outer    | Inner    | Rigid   | Sprung Hub | Cerametallic<br>Sprung Hub | Cerametallic<br>Sprung Hub |                                  |
|  | 25.4mm x 23T  | 51-1001                   | 52-1001                   | 49-1001                   | 53-1001  | 54-1001  | 55-1001 | 57-1001    | 56-1001                    | 56-2001                    | Ford,Mitsubishi,MG & Porsche     |
|  | 22.5mm x 20T  | 51-1002                   | 52-1002                   | 49-1002                   | 53-1002  | 54-1002  | 55-1002 | 57-1002    | 56-1002                    | 56-2002                    | Ford, Fiat,Mitsubishi & Porsche  |
|  | 24.3mm x 22T  | 51-1003                   | 52-1003                   | 49-1003                   | 53-1003  | 54-1003  | 55-1003 | 57-1003    | 56-1003                    | 56-2003                    | Mazda                            |
|  | 29mm x 21T    | 51-1004                   | 52-1004                   | 49-1004                   | 53-1004  | 54-1004  | 55-1004 |            |                            |                            | Toyota                           |
|  | 25.6mm x 24T  | 51-1005                   | 52-1005                   | 49-1005                   | 53-1005  | 54-1005  | 55-1005 | 57-1005    | 56-1005                    | 56-2005                    | Nissan                           |
|  | 24mm x 21T    | 51-1006                   | 52-1006                   | 49-1006                   | 53-1006  | 54-1006  | 55-1006 | 57-1006    | 56-1006                    | 56-2006                    | Renault                          |
|  | 24mm x 21T    | 51-1007                   | 52-1007                   | 49-1007                   | 53-1007  | 54-1007  | 55-1007 | 57-1007    | 56-1007                    | 56-2007                    | Toyota                           |
|  | 25mm x 14T    | 51-1008                   | 52-1008                   | 49-1008                   | 53-1008  | 54-1008  | 55-1008 | 57-1008    | 56-1008                    | 56-2008                    | BMW,Mini,Opel & Vauxhall         |
|  | 29mm x 10T    | 51-1009                   | 52-1009                   | 49-1009                   | 53-1009  | 54-1009  | 55-1009 |            |                            |                            | BMW, Ford & Mercedes             |
|  | 21mm x 18T    | 51-1010                   | 52-1010                   | 49-1010                   | 53-1010  | 54-1010  | 55-1010 | 57-1010    | 56-1010                    | 56-2010                    | Peugeot                          |
|  | 20mm x 17T    | 51-1011                   | 52-1011                   | 49-1011                   | 53-1011  | 54-1011  | 55-1011 | 57-1011    | 56-1011                    | 56-2011                    | Ford & Fiat                      |
|  | 20.4mm x 24T  | 51-1012                   | 52-1012                   | 49-1012                   | 53-1012  | 54-1012  | 55-1012 | 57-1012    | 56-1012                    | 56-2012                    | Opel,Vauxhall & Volkswagen       |
|  | 22mm x 19T    | 51-1013                   | 52-1013                   | 49-1013                   | 53-1013  | 54-1013  | 55-1013 | 57-1013    | 56-1013                    | 56-2013                    | Alfa Romeo                       |
|  | 1 1/4" x 10T  | 51-1014                   | 52-1014                   | 49-1014                   | 53-1014  | 54-1014  | 55-1014 |            |                            |                            | Aston Martin,Ferrari & Triumph   |
|  | 24.2 x 23T    | 51-1015                   | 52-1015                   | 49-1015                   | 53-1015  | 54-1015  | 55-1015 | 57-1015    | 56-1015                    | 56-2015                    | Audi & Volkswagen                |
|  | 1 1/8" x 10T  | 51-1016                   | 52-1016                   | 49-1016                   | 53-1016  | 54-1016  | 55-1016 |            |                            |                            | Jaguar,GM( USA ) & Rover         |
|  | 22.1mm x 28T  | 51-1017                   | 52-1017                   | 49-1017                   | 53-1017  | 54-1017  | 55-1017 | 57-1017    | 56-1017                    | 56-2017                    | Audi & Volkswagen                |
|  | 29mm x 10T    | 51-1018                   | 52-1018                   | 49-1018                   | 53-1018  | 54-1018  | 55-1018 |            |                            |                            | Peugeot & Renault                |
|  | 19.3mm x 18T  | 51-1019                   | 52-1019                   | 49-1019                   | 53-1019  | 54-1019  | 55-1019 | 57-1019    | 56-1019                    | 56-2019                    | Suzuki                           |
|  | 22mm x 26T    | 51-1020                   | 52-1020                   | 49-1020                   | 53-1020  | 54-1020  | 55-1020 | 57-1020    | 56-1020                    | 56-2020                    | Renault                          |
|  | 19mm x 14T    | 51-1021                   | 52-1021                   | 49-1021                   | 53-1021  | 54-1021  | 55-1021 | 57-1021    | 56-1021                    | 56-2021                    | Opel & Vauxhall                  |
|  | 22mm x 20T    | 51-1022                   | 52-1022                   | 49-1022                   | 53-1022  | 54-1022  | 55-1022 | 57-1022    | 56-1022                    | 56-2022                    | Honda & Rover                    |
|  | 7/8" x 10T    | 51-1023                   | 52-1023                   | 49-1023                   | 53-1023  | 54-1023  | 55-1023 | 57-1023    | 56-1023                    | 56-2023                    | Austin Healey,Hillman,MG & Rover |
|  | 25.4mm x 24T  | 51-1024                   | 52-1024                   | 49-1024                   | 53-1024  | 54-1024  | 55-1024 | 57-1024    | 56-1024                    | 56-2024                    | Honda & Rover                    |
|  | 25.9mm x 24T  | 51-1025                   | 52-1025                   | 49-1025                   | 53-1025  | 54-1025  | 55-1025 | 57-1025    | 56-1025                    | 56-2025                    | Honda                            |
|  | 1 1/16" x 10T | 51-1026                   | 52-1026                   | 49-1026                   | 53-1026  | 54-1026  | 55-1026 |            |                            |                            | Ford ( USA )                     |
|  | 1 5/32" x 26T | 51-1027                   | 52-1027                   | 49-1027                   | 53-1027  | 54-1027  | 55-1027 |            |                            |                            | GM ( USA )                       |
|  | 20mm x 18T    | 51-1028                   | 52-1028                   | 49-1028                   | 53-1028  | 54-1028  | 55-1028 | 57-1028    | 56-1028                    | 56-2028                    | Nissan & Skoda                   |
|  | 28.7mm x 26T  | 51-1029                   | 52-1029                   | 49-1029                   | 53-1029  | 54-1029  | 55-1029 |            |                            |                            | Mercedes                         |
|  | 1" x 10T      | 51-1030                   | 52-1030                   | 49-1030                   | 53-1030  | 54-1030  | 55-1030 | 57-1030    | 56-1030                    | 56-2030                    | Alfa Romeo, Talbot & Triumph.    |
|  | 25.2mm x 24T  | 51-1031                   | 52-1031                   | 49-1031                   | 53-1031  | 54-1031  | 55-1031 | 57-1031    | 56-1031                    | 56-2031                    | Subaru                           |
|  | 25mm x 22T    | 51-1032                   | 52-1032                   | 49-1032                   | 53-1032  | 54-1032  | 55-1032 | 57-1032    | 56-1032                    | 56-2032                    | Volvo                            |
|  | 21.8mm x 20T  | 51-1033                   | 52-1033                   | 49-1033                   | 53-1033  | 54-1033  | 55-1033 | 57-1033    | 56-1033                    | 56-2033                    | Volvo                            |
|  | 35mm x 10T    | 51-1035                   | 52-1035                   | 49-1035                   | 53-1035  | 54-1035  |         |            |                            |                            | BMW                              |
|  | 28mm x 25T    | 51-1038                   | 52-1038                   | 49-1038                   | 53-1038  | 54-1038  | 55-1038 |            |                            |                            | Lotus & Vauxhall                 |



184mm Ø Sintered, Cerametallic & Organic Drive Plate Hub Spline Details.

| Spline Data  | 3 Paddle<br>Cerametallic | 4 Paddle<br>Cerametallic | 6 Paddle<br>Cerametallic | Sintered<br>Outer | Sintered<br>Inner | Organic<br>Rigid | Organic<br>Sprung Hub | 3 Paddle<br>Cerametallic | 4 Paddle<br>Cerametallic | Application              |
|--------------|--------------------------|--------------------------|--------------------------|-------------------|-------------------|------------------|-----------------------|--------------------------|--------------------------|--------------------------|
| Ø      Teeth | Rigid Hub                | Rigid Hub                | Rigid Hub                |                   |                   |                  |                       | Sprung Hub               | Sprung Hub               |                          |
| 28mm x 20T   | 51-1039                  | 52-1039                  | 49-1039                  | 53-1039           | 54-1039           |                  |                       |                          |                          | Toyota                   |
| 22.5mm x 19T | 51-1040                  | 52-1040                  | 49-1040                  | 53-1040           | 54-1040           | 55-1040          | 57-1040               | 56-1040                  | 56-2040                  | Toyota                   |
| 1 3/8" x 10T | 51-1041                  | 52-1041                  | 49-1041                  | 53-1041           | 54-1041           |                  |                       |                          |                          | Ferrari                  |
| 19mm x 17T   | 51-1042                  | 52-1042                  | 49-1042                  | 53-1042           | 54-1042           | 55-1042          | 57-1042               | 56-1042                  | 56-2042                  | SAAB                     |
| 25.4mm x 23T | 51-1043                  | 52-1043                  | 49-1043                  | 53-1043           | 54-1043           |                  |                       |                          |                          | Sadev Gearbox spline     |
| 29mm x 22T   | 51-1044                  | 52-1044                  | 49-1044                  | 53-1044           | 54-1044           |                  |                       |                          |                          | BMW                      |
| 28mm x 25T   | 51-1045                  | 52-1045                  | 49-1045                  | 53-1045           | 54-1045           |                  |                       |                          |                          | Ferrari                  |
| 20mm x 19T   | 51-1046                  | 52-1046                  | 49-1046                  | 53-1046           | 54-1046           | 55-1046          | 57-1046               | 56-1046                  | 56-2046                  | Honda                    |
| 17.3mm x 20T | 51-1047                  | 52-1047                  | 49-1047                  | 53-1047           | 54-1047           | 55-1047          | 57-1047               | 56-1047                  | 56-2047                  | Fiat, Renault            |
| 35mm x 26T   | 51-1048                  | 52-1048                  | 49-1048                  | 53-1048           | 54-1048           |                  |                       |                          |                          | BMW                      |
| 24.5mm x 21T | 51-1049                  | 52-1049                  | 49-1049                  | 53-1049           | 54-1049           |                  |                       |                          |                          | Renault                  |
| 29mm x 26T   | 51-1050                  | 52-1050                  | 49-1050                  | 53-1050           | 54-1050           |                  |                       |                          |                          | Audi & Volkswagen        |
| 1" x 6T      | 51-1051                  | 52-1051                  | 49-1051                  | 53-1051           | 54-1051           |                  |                       |                          |                          | Ferrari                  |
| 24.3 x 21T   | 51-1052                  | 52-1052                  | 49-1052                  | 53-1052           | 54-1052           |                  |                       |                          |                          | Lotus                    |
| 7/8" x 6T    | 51-1053                  | 52-1053                  | 49-1053                  | 53-1053           | 54-1053           |                  |                       |                          |                          | Alfa Romeo               |
| 25mm x 6T    | 51-1054                  | 52-1054                  | 49-1054                  | 53-1054           | 54-1054           |                  |                       |                          |                          | O.M 1929                 |
| 34mm x 6T    | 51-1055                  | 52-1055                  | 49-1055                  | 53-1055           | 54-1055           |                  |                       |                          |                          | Lancia                   |
| 38mm x 10T   | 51-1056                  | 52-1056                  | 49-1056                  | 53-1056           | 54-1056           |                  |                       |                          |                          | Ferrari Flywheel HF 9476 |
| 33mm x 30T   | 51-1057                  | 52-1057                  | 49-1057                  | 53-1057           | 54-1057           |                  |                       |                          |                          | Lancia Astura            |
| 27.2mm x 10T | 51-1058                  | 52-1058                  | 49-1058                  | 53-1058           | 54-1058           |                  |                       |                          |                          |                          |

184mm Ø Sintered, Cerametallic & Organic Drive Plate Hub Spline Details

|               | Geared<br>Hub Plate | Geared<br>Hub Plate                     | Geared<br>Hub Plate                     | Geared<br>Hub Plate  | Application                      |
|---------------|---------------------|---|---|----------------------|----------------------------------|
| Spline Data   | Sintered            | Cerame <span>tallic</span><br>Hub Plate | Cerame <span>tallic</span><br>Hub Plate | Organic<br>Hub Plate |                                  |
| Ø      Teeth  |                     | 4 Paddle                                | 6 Paddle                                |                      |                                  |
| 25.4mm x 23T  | 48-2001             | 48-1001                                 | 48-1101                                 | 48-3001              | Ford,Mitsubishi,MG & Porsche     |
| 22.5mm x 20T  | 48-2002             | 48-1002                                 | 48-1102                                 | 48-3002              | Ford,Fiat,Mitsubishi & Porsche   |
| 24.3mm x 22T  | 48-2003             | 48-1003                                 | 48-1103                                 | 48-3003              | Mazda                            |
| 29mm x 21T    | 48-2004             | 48-1004                                 | 48-1104                                 | 48-3004              | Toyota                           |
| 25.6mm x 24T  | 48-2005             | 48-1005                                 | 48-1105                                 | 48-3005              | Nissan                           |
| 24mm x 21T    | 48-2006             | 48-1006                                 | 48-1106                                 | 48-3006              | Renault                          |
| 24mm x 21T    | 48-2007             | 48-1007                                 | 48-1107                                 | 48-3007              | Toyota                           |
| 25mm x 14T    | 48-2008             | 48-1008                                 | 48-1108                                 | 48-3008              | BMW/Mini,Opel & Vauxhall         |
| 29mm x 10T    | 48-2009             | 48-1009                                 | 48-1109                                 | 48-3009              | BMW,Ford & Mercedes              |
| 21mm x 18T    | 48-2010             | 48-1010                                 | 48-1110                                 | 48-3010              | Peugeot                          |
| 20mm x 17T    | 48-2011             | 48-1011                                 | 48-1111                                 | 48-3011              | Ford & Fiat                      |
| 20.4mm x 24T  | 48-2012             | 48-1012                                 | 48-1112                                 | 48-3012              | Opel,Vauxhall & Volkswagen       |
| 22mm x 19T    | 48-2013             | 48-1013                                 | 48-1113                                 | 48-3013              | Alfa Romeo                       |
| 1 1/4" x 10T  | 48-2014             | 48-1014                                 | 48-1114                                 | 48-3014              | Aston Martin,Ferrari & Triumph   |
| 24.2 x 23T    | 48-2015             | 48-1015                                 | 48-1115                                 | 48-3015              | Audi & Volkswagen                |
| 1 1/8" x 10T  | 48-2016             | 48-1016                                 | 48-1116                                 | 48-3016              | Jaguar,GM( USA ) & Rover         |
| 22.1mm x 28T  | 48-2017             | 48-1017                                 | 48-1117                                 | 48-3017              | Audi & Volkswagen                |
| 29mm x 10T    | 48-2018             | 48-1018                                 | 48-1118                                 | 48-3018              | Peugeot & Renault                |
| 19.3mm x 18T  | 48-2019             | 48-1019                                 | 48-1119                                 | 48-3019              | Suzuki                           |
| 22mm x 26T    | 48-2020             | 48-1020                                 | 48-1120                                 | 48-3020              | Renault                          |
| 19mm x 14T    | 48-2021             | 48-1021                                 | 48-1121                                 | 48-3021              | Opel & Vauxhall                  |
| 22mm x 20T    | 48-2022             | 48-1022                                 | 48-1122                                 | 48-3022              | Honda & Rover                    |
| 7/8" x 10T    | 48-2023             | 48-1023                                 | 48-1123                                 | 48-3023              | Austin Healey,Hillman,MG & Rover |
| 25.4mm x 24T  | 48-2024             | 48-1024                                 | 48-1124                                 | 48-3024              | Honda & Rover                    |
| 25.9mm x 24T  | 48-2025             | 48-1025                                 | 48-1125                                 | 48-3025              | Honda                            |
| 1 1/16" x 10T | 48-2026             | 48-1026                                 | 48-1126                                 | 48-3026              | Ford ( USA )                     |
| 1 5/32" x 26T | 48-2027             | 48-1027                                 | 48-1127                                 | 48-3027              | GM ( USA )                       |
| 20mm x 18T    | 48-2028             | 48-1028                                 | 48-1128                                 | 48-3028              | Nissan & Skoda                   |
| 28.7mm x 26T  | 48-2029             | 48-1029                                 | 48-1129                                 | 48-3029              | Mercedes                         |
| 1" x 10T      | 48-2030             | 48-1030                                 | 48-1130                                 | 48-3030              | Alfa Romeo,Talbot & Triumph.     |
| 25.2mm x 24T  | 48-2031             | 48-1031                                 | 48-1131                                 | 48-3031              | Subaru                           |
| 25mm x 22T    | 48-2032             | 48-1032                                 | 48-1132                                 | 48-3032              | Volvo                            |
| 21.8mm x 20T  | 48-2033             | 48-1033                                 | 48-1133                                 | 48-3033              | Volvo                            |
| 35mm x 10T    | 48-2035             | 48-1035                                 | 48-1135                                 | 48-3035              | BMW                              |
| 28mm x 25T    | 48-2038             | 48-1038                                 | 48-1138                                 | 48-3038              | Lotus & Vauxhall                 |

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184mm Ø Sintered, Cerametallic & Organic Drive Plate Hub Spline Details

| Geared              |                    | Geared                        |                               | Geared                   |                       | Application              |
|---------------------|--------------------|-------------------------------|-------------------------------|--------------------------|-----------------------|--------------------------|
| Spline Data         | Hub Plate Sintered | Geared Hub Plate Cerametallic | Geared Hub Plate Cerametallic | Geared Hub Plate Organic | Geared Floating Plate |                          |
| Ø    Teeth          |                    | 4 Paddle                      | 6 Paddle                      |                          |                       |                          |
| 28mm x 20T          | 48-2039            | 48-1039                       | 48-1139                       | 48-3039                  |                       | Toyota                   |
| 22.5mm x 19T        | 48-2040            | 48-1040                       | 48-1140                       | 48-3040                  |                       | Toyota                   |
| 1 3/8" x 10T        | 48-2041            | 48-1041                       | 48-1141                       | 48-3041                  |                       | Ferrari                  |
| 19mm x 17T          | 48-2042            | 48-1042                       | 48-1142                       | 48-3042                  |                       | SAAB                     |
| 25.4mm x 23T        | 48-2043            | 48-1043                       | 48-1143                       | 48-3043                  |                       | Sadev Gearbox spline     |
| 29mm x 22T          | 48-2044            | 48-1044                       | 48-1144                       | 48-3044                  |                       | BMW                      |
| 28mm x 25T          | 48-2045            | 48-1045                       | 48-1145                       | 48-3045                  |                       | Ferrari                  |
| 20mm x 19T          | 48-2046            | 48-1046                       | 48-1146                       | 48-3046                  |                       | Honda                    |
| 17.3mm x 20T        | 48-2047            | 48-1047                       | 48-1147                       | 48-3047                  |                       | Fiat, Renault            |
| 35mm x 26T          | 48-2048            | 48-1048                       | 48-1148                       | 48-3048                  |                       | BMW                      |
| 24.5mm x 21T        | 48-2049            | 48-1049                       | 48-1149                       | 48-3049                  |                       | Renault                  |
| 29mm x 26T          | 48-2050            | 48-1050                       | 48-1150                       | 48-3050                  |                       | Audi & Volkswagen        |
| 1" x 6T             | 48-2051            | 48-1051                       | 48-1151                       | 48-3051                  |                       | Ferrari                  |
| 24.3mm x 21T        | 48-2052            | 48-1052                       | 48-1152                       | 48-3052                  |                       | Lotus                    |
| 7/8" x 6T           | 48-2053            | 48-1053                       | 48-1153                       | 48-3053                  |                       | Alfa Romeo               |
| 25mm x 6T           | 48-2054            | 48-1054                       | 48-1154                       | 48-3054                  |                       | 1929 OM                  |
| 34mm x 6T           | 48-2055            | 48-1055                       | 48-1155                       | 48-3055                  |                       | Lancia Aurelia           |
| 38mm x 10T          | 48-2056            | 48-1056                       | 48-1156                       | 48-3056                  |                       | Ferrari Flywheel HF 9426 |
| 33mm x 30T          | 48-2057            | 48-1057                       | 48-1157                       | 48-3057                  |                       | Lancia                   |
| 27.2mm x 10T        | 48-2058            | 48-1058                       | 48-1158                       | 48-3058                  |                       |                          |
| Geared Floating Hub | 48-2090            | 48-2091                       | 48-2092                       | 48-2093                  |                       |                          |

## 200mm Ø 'Helix' Racing Clutch Range



### Series Part No. 68-110 & 68-120

Cover Assembly is of a lug drive configuration one piece aluminium alloy. This design allows the dust from the friction material to escape and reduces the heat build up. These are used with either cerametallic or organic friction faced drive plates in either single or twin plate formats



### Series Part No. 70-1000

A sprung hub centre drive plate with heavy duty metal backed organic linings to give a more progressive engagement of the clutch.

Only available as a single plate clutch and must be used with the 68-110 series of clutch cover assemblies.

Can be used for road or light competition applications



### Series Part No 71-1000

A rigid hub drive plate with heavy duty metal backed organic linings.

Normally used with the twin plate clutch. 68-120 series of clutch cover assemblies

Can be used for road or light competition applications.



### Series Part No. 77-1100

4 paddle sprung centre cerametallic drive plate. Single plate configuration

This design is mainly used for rallying or racing where the damper springs provide a cushion to the impact of clutch engagement on the driveline components.

Can only be used with the 68-110 series of clutch cover assemblies



### Series Part No. 77-1100

6 paddle sprung centre cerametallic drive plate. Single plate configuration

Can only be used with the 68-110 series of clutch cover assemblies.



### Series Part No. 78-1001

4 paddle rigid hub cerametallic drive plate. Single or twin plate format  
Cerametallic drive plates have cerametallic segments riveted onto a steel back plate these give the clutch a higher torque capacity than when using an organic faced drive plate.

This design is mainly used for rallying or racing, especially endurance



### Series Part No. 78-1101

6 paddle rigid hub cerametallic drive plate. Single or twin plate format



### Series Part No 68-110TP & 68-120TP

Cover assembly design & dimensions as per 68-110 & 68-120 series but fitted with a release plate to facilitate the use of a flat face release bearing.



### Series Part No 47-1001 & 47-1090

Cerametallic 4 paddle drive plates with a main geared hub ( 47-1001 ) and floating hub drive plate ( 47-1090 )



### **Series Part No 47-1101 & 47-1091**

Cerametallic 6 paddle drive plates with a main geared hub (47-1101) and floating hub drive plate (47-1091)



### **Series Part No 47-2001 & 47-1092**

Organic drive plates with a main geared hub (47-2001) and floating hub drive plate (47-1092) shown as a set



68-110

Ø200mm, Single Drive Plate



| Cover   | Torque Capacity  |                          |
|---------|------------------|--------------------------|
| 68-110R | 348Nm [256lb/ft] | Cerametallic Drive Plate |
| 68-110G | 514Nm [378lb/ft] | Cerametallic Drive Plate |
| 68-110R | 292Nm [215lb/ft] | Organic Drive Plate      |
| 68-110G | 350Nm [257lb/ft] | Organic Drive Plate      |

| Cover   | Release Load | Release Bearing Travel (Max) |
|---------|--------------|------------------------------|
| 68-110R | 335Kg        | 7.50mm                       |
| 68-110G | 358Kg        |                              |

Set-Up Height (New)

|         |         |
|---------|---------|
| 68-110R | 29.55mm |
| 68-110G | 29.30mm |

Set-Up Height (Worn)

|         |         |
|---------|---------|
| 68-110R | 33.40mm |
| 68-110G | 33.20mm |

Drive Plates

|                   | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight  |
|-------------------|----------------|---------------------|----------------------|--------------------------------|---------|
| Organic (Rigid)   | 71-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.00 Kg |
| Organic (Sprung)  | 70-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.30 Kg |
| 4 Paddle (Rigid)  | 78-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 3.85 Kg |
| 4 Paddle (Sprung) | 77-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.40 Kg |
| 6 Paddle (Rigid)  | 78-1100        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.15 Kg |
| 6 Paddle (Sprung) | 77-1100        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.60 Kg |

Other configurations available see index.

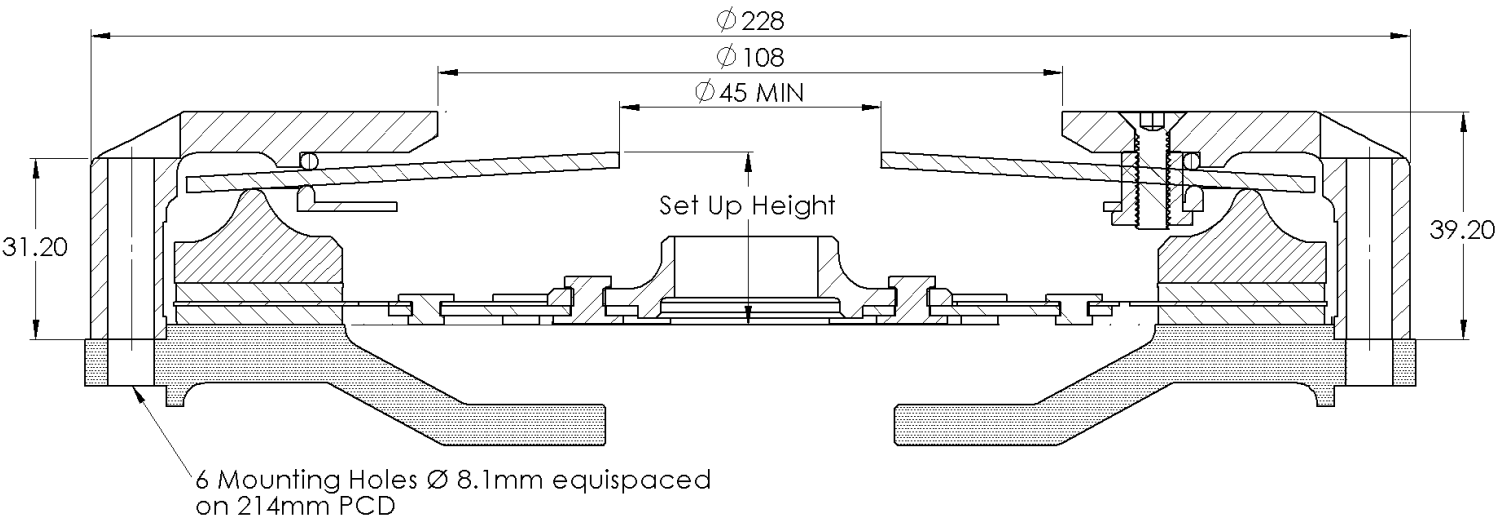
Spare Parts

|                      |         |
|----------------------|---------|
| Wear Clips           | 184-61B |
| Pressure Plate       | 200-12  |
| Push off Springs (3) | 68-POSA |

Applications

|                                |            |
|--------------------------------|------------|
| Organic Drive Plate Rigid Hub  | Road       |
| Organic Drive Plate Sprung Hub | Road       |
| Paddle Rigid Hub               | Race       |
| Paddle Sprung Hub              | Race/Rally |

Release Bearing: Must have curved face with a fulcrum point of between 52mm to 58mm.

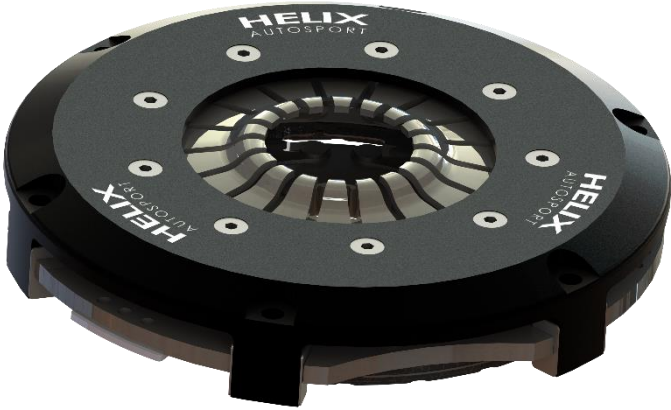






68-110c

Ø200mm, Single Drive Plate  
Curly Tip Diaphragm Spring



| Cover    | Torque Capacity  |                          |
|----------|------------------|--------------------------|
| 68-110Rc | 348Nm [256lb/ft] | Cerametallic Drive Plate |
| 68-110Gc | 514Nm [378lb/ft] | Cerametallic Drive Plate |
| 68-110Rc | 292Nm [215lb/ft] | Organic Drive Plate      |
| 68-110Gc | 350Nm [257lb/ft] | Organic Drive Plate      |

| Cover    | Release Load | Release Bearing Travel (Max) |
|----------|--------------|------------------------------|
| 68-110Rc | 335Kg        | 7.50mm                       |
| 68-110Gc | 358Kg        |                              |

Set-Up Height (New)

|          |         |
|----------|---------|
| 68-110Rc | 32.55mm |
| 68-110Gc | 32.30mm |

Set-Up Height (Worn)

|          |         |
|----------|---------|
| 68-110Rc | 36.40mm |
| 68-110Gc | 36.20mm |

Drive Plates

|                   | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight  |
|-------------------|----------------|---------------------|----------------------|--------------------------------|---------|
| Organic (Rigid)   | 71-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.00 Kg |
| Organic (Sprung)  | 70-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.30 Kg |
| 4 Paddle (Rigid)  | 78-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 3.85 Kg |
| 4 Paddle (Sprung) | 77-1000        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.40 Kg |
| 6 Paddle (Rigid)  | 78-1100        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.15 Kg |
| 6 Paddle (Sprung) | 77-1100        | 7.20 mm             | 6.30 mm              | [See chart for spline details] | 4.60 Kg |

Other configurations available see index.

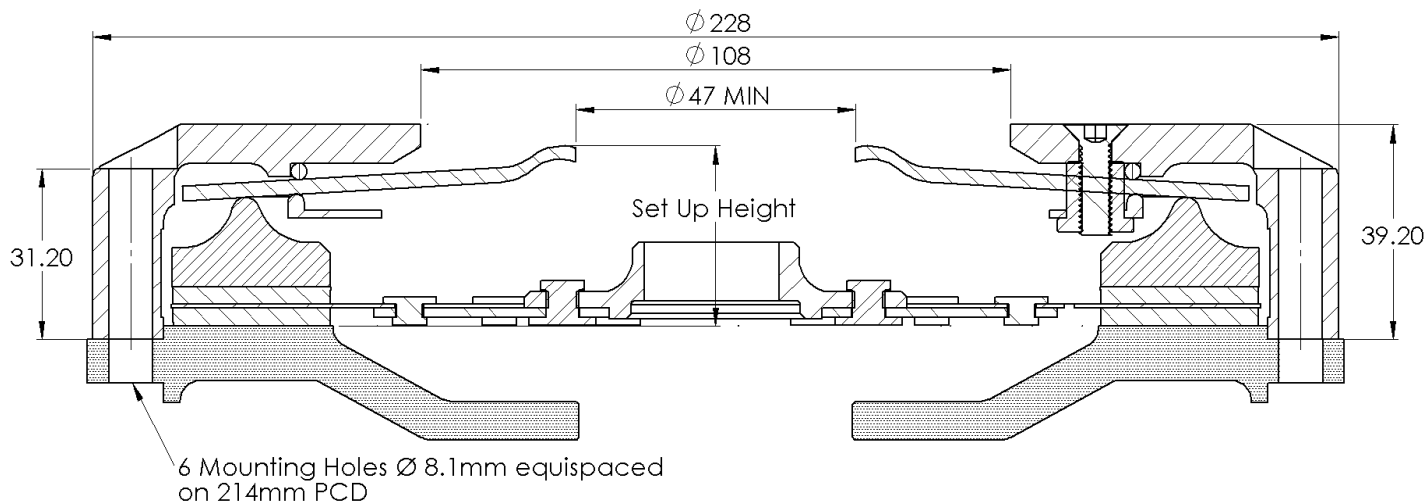
Spare Parts

|                      |         |
|----------------------|---------|
| Wear Clips           | 184-61B |
| Pressure Plate       | 200-12  |
| Push off Springs (3) | 68-POSA |

Applications

|                                |            |
|--------------------------------|------------|
| Organic Drive Plate Rigid Hub  | Road       |
| Organic Drive Plate Sprung Hub | Road       |
| Paddle Rigid Hub               | Race       |
| Paddle Sprung Hub              | Race/Rally |

Release Bearing: Must have flat face with a fulcrum point of between 52mm to 58mm.





68-120

Ø200mm, Twin Drive Plate



| Cover   | Torque Capacity  |                          |
|---------|------------------|--------------------------|
| 68-120R | 499Nm [367lb/ft] | Cerametallic Drive Plate |
| 68-120G | 740Nm [544lb/ft] | Cerametallic Drive Plate |
| 68-120R | 413Nm [304lb/ft] | Organic Drive Plate      |
| 68-120G | 611Nm [449lb/ft] | Organic Drive Plate      |

| Cover   | Release Load | Release Bearing Travel (Max) |
|---------|--------------|------------------------------|
| 68-120R | 335Kg        | 7.50mm                       |
| 68-120G | 358Kg        |                              |

Set-Up Height (New)

|         |         |
|---------|---------|
| 68-120R | 41.60mm |
| 68-120G | 41.70mm |

Set-Up Height (Worn)

|         |         |
|---------|---------|
| 68-120R | 45.50mm |
| 68-120G | 45.65mm |

Drive Plates

|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight  |
|------------------|----------------|---------------------|----------------------|--------------------------------|---------|
| Organic (Rigid)  | 71-1000        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 5.35 Kg |
| 4 Paddle (Rigid) | 78-1000        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 5.15 Kg |
| 6 Paddle (Rigid) | 78-1100        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 6.55 Kg |

Other configurations available see index.

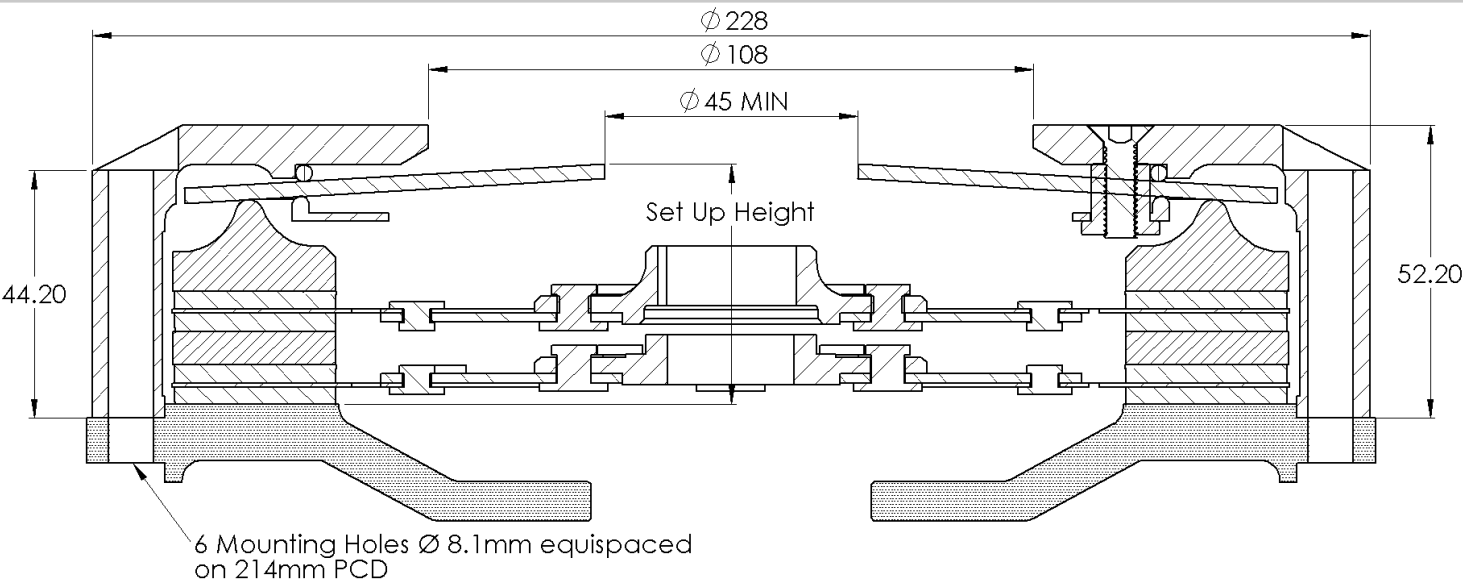
Spare Parts

|                      |         |
|----------------------|---------|
| Wear Clips           | 184-61D |
| Pressure Plate       | 200-13  |
| Interplate           | 200-11  |
| Push off Springs (3) | 68-POSA |
| Push off Springs (3) | 68-POSB |

Applications

|                               |      |
|-------------------------------|------|
| Organic Drive Plate Rigid Hub | Road |
| Paddle Rigid Hub              | Race |

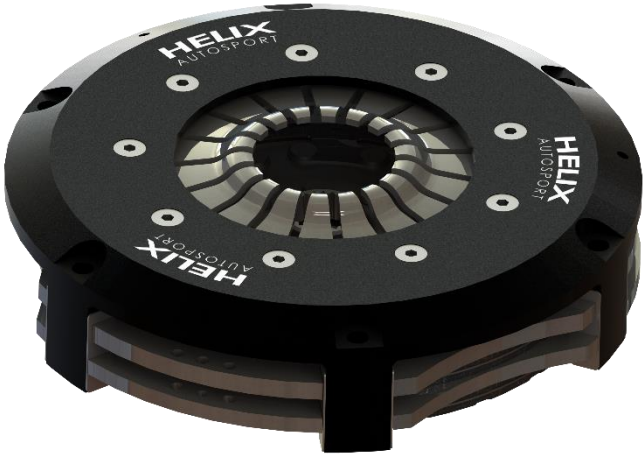
Release Bearing: Must have curved face with a fulcrum point of between 52mm to 58mm.





68-120c

Ø200mm, Twin Drive Plate  
Curly Tip Diaphragm Spring



| Cover    | Torque Capacity  |                          |
|----------|------------------|--------------------------|
| 68-120Rc | 499Nm [367lb/ft] | Cerametallic Drive Plate |
| 68-120Gc | 740Nm [544lb/ft] | Cerametallic Drive Plate |
| 68-120Rc | 413Nm [304lb/ft] | Organic Drive Plate      |
| 68-120Gc | 611Nm [449lb/ft] | Organic Drive Plate      |

| Cover    | Release Load | Release Bearing Travel (Max) |
|----------|--------------|------------------------------|
| 68-120Rc | 335Kg        | 7.50mm                       |
| 68-120Gc | 358Kg        |                              |

Set-Up Height (New)

|          |         |
|----------|---------|
| 68-120Rc | 44.60mm |
| 68-120Gc | 44.70mm |

Set-Up Height (Worn)

|          |         |
|----------|---------|
| 68-120Rc | 48.50mm |
| 68-120Gc | 48.65mm |

Drive Plates

|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight  |
|------------------|----------------|---------------------|----------------------|--------------------------------|---------|
| Organic (Rigid)  | 71-1000        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 5.35 Kg |
| 4 Paddle (Rigid) | 78-1000        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 5.15 Kg |
| 6 Paddle (Rigid) | 78-1100        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 6.55 Kg |

Other configurations available see index.

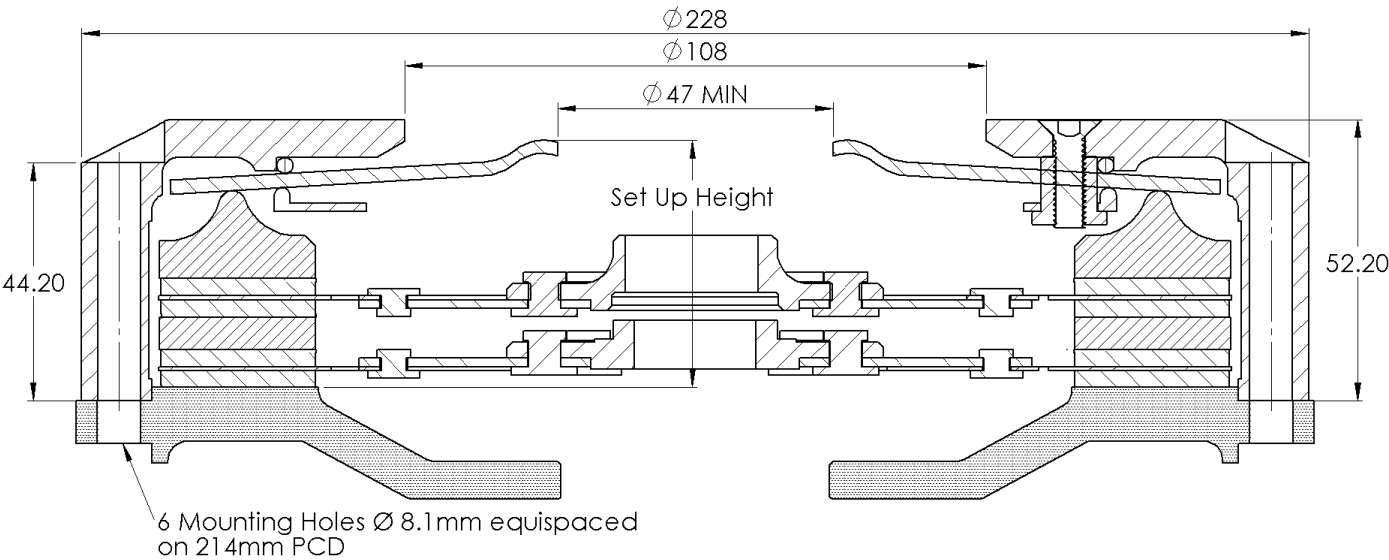
Spare Parts

|                      |         |
|----------------------|---------|
| Wear Clips           | 184-61D |
| Pressure Plate       | 200-13  |
| Interplate           | 200-11  |
| Push off Springs (3) | 68-POSA |
| Push off Springs (3) | 68-POSB |

Applications

|                               |      |
|-------------------------------|------|
| Organic Drive Plate Rigid Hub | Road |
| Paddle Rigid Hub              | Race |

Release Bearing: Must have flat face with a fulcrum point of between 52mm to 58mm.



200mm Ø Cerametallic & Organic Drive Plate Hub Spine Details

| Spine Data    | Organic    | Organic | 4 Paddle                   | 6 Paddle                   | 4 Paddle                  | 6 Paddle                  | Application                      |
|---------------|------------|---------|----------------------------|----------------------------|---------------------------|---------------------------|----------------------------------|
| Ø    Teeth    | Sprung Hub | Rigid   | Cerametallic<br>Sprung Hub | Cerametallic<br>Sprung Hub | Cerametallic<br>Rigid Hub | Cerametallic<br>Rigid Hub |                                  |
| 25.4mm x 23T  | 70-1001    | 71-1001 | 77-1001                    | 77-1101                    | 78-1001                   | 78-1101                   | Ford,Mitsubishi,MG & Porsche     |
| 22.5mm x 20T  | 70-1002    | 71-1002 | 77-1002                    | 77-1102                    | 78-1002                   | 78-1102                   | Ford, Fiat,Mitsubishi & Porsche  |
| 24.3mm x 22T  | 70-1003    | 71-1003 | 77-1003                    | 77-1103                    | 78-1003                   | 78-1103                   | Mazda                            |
| 29mm x 21T    |            | 71-1004 |                            |                            | 78-1004                   | 78-1104                   | Toyota                           |
| 25.6mm x 24T  | 70-1005    | 71-1005 | 77-1005                    | 77-1105                    | 78-1005                   | 78-1105                   | Nissan                           |
| 24mm x 21T    | 70-1006    | 71-1006 | 77-1006                    | 77-1106                    | 78-1006                   | 78-1106                   | Renault                          |
| 24mm x 21T    | 70-1007    | 71-1007 | 77-1007                    | 77-1107                    | 78-1007                   | 78-1107                   | Toyota                           |
| 25mm x 14T    | 70-1008    | 71-1008 | 77-1008                    | 77-1108                    | 78-1008                   | 78-1108                   | BMW Mini,Opel & Vauxhall         |
| 29mm x 10T    |            | 71-1009 |                            |                            | 78-1009                   | 78-1109                   | BMW, Ford & Mercedes             |
| 21mm x 18T    | 70-1010    | 71-1010 | 77-1010                    | 77-1110                    | 78-1010                   | 78-1110                   | Peugeot                          |
| 20mm x 17T    | 70-1011    | 71-1011 | 77-1011                    | 77-1111                    | 78-1011                   | 78-1111                   | Ford & Fiat                      |
| 20.4mm x 24T  | 70-1012    | 71-1012 | 77-1012                    | 77-1112                    | 78-1012                   | 78-1112                   | Opel,Vauxhall & Volkswagen       |
| 22mm x 19T    | 70-1013    | 71-1013 | 77-1013                    | 77-1113                    | 78-1013                   | 78-1113                   | Alfa Romeo                       |
| 1 1/4" x 10T  |            | 71-1014 |                            |                            | 78-1014                   | 78-1114                   | Aston Martin,Ferrari & Triumph   |
| 24.2 x 23T    | 70-1015    | 71-1015 | 77-1015                    | 77-1115                    | 78-1015                   | 78-1115                   | Audi & Volkswagen                |
| 1 1/8" x 10T  |            | 71-1016 |                            |                            | 78-1016                   | 78-1116                   | Jaguar,GM( USA ) & Rover         |
| 22.1mm x 28T  | 70-1017    | 71-1017 | 77-1017                    | 77-1117                    | 78-1017                   | 78-1117                   | Audi & Volkswagen                |
| 29mm x 10T    |            | 71-1018 |                            |                            | 78-1018                   | 78-1118                   | Peugeot & Renault                |
| 19.3mm x 18T  | 70-1019    | 71-1019 | 77-1019                    | 77-1119                    | 78-1019                   | 78-1119                   | Suzuki                           |
| 22mm x 26T    | 70-1020    | 71-1020 | 77-1020                    | 77-1120                    | 78-1020                   | 78-1120                   | Renault                          |
| 19mm x 14T    | 70-1021    | 71-1021 | 77-1021                    | 77-1121                    | 78-1021                   | 78-1121                   | Opel & Vauxhall                  |
| 22mm x 20T    | 70-1022    | 71-1022 | 77-1022                    | 77-1122                    | 78-1022                   | 78-1122                   | Honda & Rover                    |
|               |            |         |                            |                            |                           |                           | Austin Healey,Hillman,MG & Rover |
| 7/8" x 10T    | 70-1023    | 71-1023 | 77-1023                    | 77-1123                    | 78-1023                   | 78-1123                   |                                  |
| 25.4mm x 24T  | 70-1024    | 71-1024 | 77-1024                    | 77-1124                    | 78-1024                   | 78-1124                   | Honda & Rover                    |
| 25.9mm x 24T  | 70-1025    | 71-1025 | 77-1025                    | 77-1125                    | 78-1025                   | 78-1125                   | Honda                            |
| 1 1/16" x 10T |            | 71-1026 |                            |                            | 78-1026                   | 78-1126                   | Ford ( USA )                     |
| 1 5/32" x 26T |            | 71-1027 |                            |                            | 78-1027                   | 78-1127                   | GM ( USA )                       |
| 20mm x 18T    | 70-1028    | 71-1028 | 77-1028                    | 77-1128                    | 78-1028                   | 78-1128                   | Nissan & Skoda                   |
| 28.7mm x 26T  |            | 71-1029 |                            |                            | 78-1029                   | 49-1029                   | Mercedes                         |
| 1" x 10T      | 70-1030    | 71-1030 | 77-1030                    | 77-1130                    | 78-1030                   | 78-1130                   | Alfa Romeo, Talbot & Triumph.    |
| 25.2mm x 24T  | 70-1031    | 71-1031 | 77-1031                    | 77-1131                    | 78-1031                   | 78-1131                   | Subaru                           |
| 25mm x 22T    | 70-1032    | 71-1032 | 77-1032                    | 77-1132                    | 78-1032                   | 78-1132                   | Volvo                            |
| 21.8mm x 20T  | 70-1033    | 71-1033 | 77-1033                    | 77-1133                    | 78-1033                   | 78-1133                   | Volvo                            |
|               |            |         |                            |                            |                           |                           |                                  |
| 35mm x 10T    |            | 71-1035 |                            |                            | 78-1035                   | 78-1135                   | BMW                              |
| 28mm x 25T    |            | 71-1038 |                            |                            | 78-1038                   | 78-1138                   | Lotus & Vauxhall                 |





200mm Ø Cerametallic & Organic Drive Plate Hub Spline Details.

| Spline Data   | Organic    |               |                                  |                                  |                                 |                                 | Application              |
|---------------|------------|---------------|----------------------------------|----------------------------------|---------------------------------|---------------------------------|--------------------------|
|               | Sprung Hub | Organic Rigid | 4 Paddle Cerametallic Sprung Hub | 6 Paddle Cerametallic Sprung Hub | 4 Paddle Cerametallic Rigid Hub | 6 Paddle Cerametallic Rigid Hub |                          |
| Ø Teeth       |            |               |                                  |                                  |                                 |                                 |                          |
| 28mm x 20T    | 70-1039    | 71-1039       | 77-1039                          | 77-1139                          | 78-1039                         | 78-1139                         | Toyota                   |
| 22.5mm x 19T  | 70-1040    | 71-1040       | 77-1040                          | 77-1140                          | 78-1040                         | 78-1140                         | Toyota                   |
| 1 3/8" x 10T  |            | 71-1041       |                                  |                                  | 78-1041                         | 78-1141                         | Ferrari                  |
| 19mm x 17T    | 70-1042    | 71-1042       | 77-1042                          | 77-1142                          | 78-1042                         | 78-1142                         | SAAB                     |
| 25.4mm x 23T  | 70-1043    | 71-1043       | 77-1043                          | 77-1143                          | 78-1043                         | 78-1143                         | Sadev Gearbox spline     |
| 29mm x 22T    |            | 71-1044       |                                  |                                  | 78-1044                         | 78-1144                         | BMW                      |
| 28mm x 25T    |            | 71-1045       |                                  |                                  | 78-1045                         | 78-1145                         | Ferrari                  |
| 20mm x 19T    | 70-1046    | 71-1046       | 77-1046                          | 77-1146                          | 78-1046                         | 78-1146                         | Honda                    |
| 17.3mm x 20T  | 70-1047    | 71-1047       | 77-1047                          | 77-1147                          | 78-1047                         | 78-1147                         | Fiat, Renault            |
| 35mm x 26T    |            | 71-1048       |                                  |                                  | 78-1048                         | 78-1148                         | BMW                      |
| 24.5mm x 21T  | 70-1049    | 71-1049       | 77-1049                          | 77-1149                          | 78-1049                         | 78-1149                         | Renault                  |
| 29mm x 26T    |            | 71-1050       |                                  |                                  | 78-1050                         | 78-1150                         | Audi, Volkswagen         |
| 1" x 6T       | 70-1051    | 71-1051       | 77-1051                          | 77-1151                          | 78-1051                         | 78-1151                         | Ferrari                  |
| 24.3mm x 21T  | 70-1052    | 71-1052       | 77-1052                          | 77-1152                          | 78-1052                         | 78-1152                         | Lotus                    |
| 7/8" x 6T     | 70-1053    | 71-1053       | 77-1053                          | 77-1153                          | 78-1053                         | 78-1153                         | Alfa Romeo               |
| 25mm x 6T     | 70-1054    | 71-1054       | 77-1054                          | 77-1153                          | 78-1054                         | 78-1154                         |                          |
| 34mm x 6T     | 70-1055    | 71-1055       | 77-1055                          | 77-1155                          | 78-1055                         | 78-1155                         | OM 1929                  |
| 38mm x 10T    | 70-1056    | 71-1056       | 77-1056                          | 77-1156                          | 78-1056                         | 78-1156                         | Lancia                   |
| 33mm x 30T    | 70-1057    | 71-1057       | 77-1057                          | 77-1157                          | 78-1057                         | 78-1157                         | Ferrari Flywheel HF 9426 |
| 27.2 mm x 10T | 70-1058    | 71-1058       | 77-1058                          | 77-1158                          | 78-1058                         | 78-1158                         | Lancia                   |

200mm Ø Cerametallic & Organic Drive Plate Hub Spline Details

| Spline Data   | Geared                   |                                       |                                      | Application                      |
|---------------|--------------------------|---------------------------------------|--------------------------------------|----------------------------------|
|               | Hub Plate                | Geared                                | Geared                               |                                  |
|               | Cerametallic<br>4 Paddle | Hub Plate<br>Cerametallic<br>6 Paddle | Hub Plate<br>Cerametallic<br>Organic |                                  |
| Ø    Teeth    |                          |                                       |                                      |                                  |
| 25.4mm x 23T  | 47-1001                  | 47-1101                               | 47-2001                              | Ford,Mitsubishi,MG & Porsche     |
| 22.5mm x 20T  | 47-1002                  | 47-1102                               | 47-2002                              | Ford, Fiat,Mitsubishi & Porsche  |
| 24.3mm x 22T  | 47-1003                  | 47-1103                               | 47-2003                              | Mazda                            |
| 29mm x 21T    | 47-1004                  | 47-1104                               | 47-2004                              | Toyota                           |
| 25.6mm x 24T  | 47-1005                  | 47-1105                               | 47-2005                              | Nissan                           |
| 24mm x 21T    | 47-1006                  | 47-1106                               | 47-2006                              | Renault                          |
| 24mm x 21T    | 47-1007                  | 47-1107                               | 47-2007                              | Toyota                           |
| 25mm x 14T    | 47-1008                  | 47-1108                               | 47-2008                              | BMW Mini,Opel & Vauxhall         |
| 29mm x 10T    | 47-1009                  | 47-1109                               | 47-2009                              | BMW, Ford & Mercedes             |
| 21mm x 18T    | 47-1010                  | 47-1110                               | 47-2010                              | Peugeot                          |
| 20mm x 17T    | 47-1011                  | 47-1111                               | 47-2011                              | Ford & Fiat                      |
| 20.4mm x 24T  | 47-1012                  | 47-1112                               | 47-2012                              | Opel, Vauxhall & Volkswagen      |
| 22mm x 19T    | 47-1013                  | 47-1113                               | 47-2013                              | Alfa Romeo                       |
| 1 1/4" x 10T  | 47-1014                  | 47-1114                               | 47-2014                              | Aston Martin,Ferrari & Triumph   |
| 24.2 x 23T    | 47-1015                  | 47-1115                               | 47-2015                              | Audi & Volkswagen                |
| 1 1/8" x 10T  | 47-1016                  | 47-1116                               | 47-2016                              | Jaguar,GM( USA ) & Rover         |
| 22.1mm x 28T  | 47-1017                  | 47-1117                               | 47-2017                              | Audi & Volkswagen                |
| 29mm x 10T    | 47-1018                  | 47-1118                               | 47-2018                              | Peugeot & Renault                |
| 19.3mm x 18T  | 47-1019                  | 47-1119                               | 47-2019                              | Suzuki                           |
| 22mm x 26T    | 47-1020                  | 47-1120                               | 47-2020                              | Renault                          |
| 19mm x 14T    | 47-1021                  | 47-1121                               | 47-2021                              | Opel & Vauxhall                  |
| 22mm x 20T    | 47-1022                  | 47-1122                               | 47-2022                              | Honda & Rover                    |
| 7/8" x 10T    | 47-1023                  | 47-1123                               | 47-2023                              | Austin Healey,Hillman,MG & Rover |
| 25.4mm x 24T  | 47-1024                  | 47-1124                               | 47-2024                              | Honda & Rover                    |
| 25.9mm x 24T  | 47-1025                  | 47-1125                               | 47-2025                              | Honda                            |
| 1 1/16" x 10T | 47-1026                  | 47-1126                               | 47-2026                              | Ford ( USA )                     |
| 1 5/32" x 26T | 47-1027                  | 47-1127                               | 47-2027                              | GM ( USA )                       |
| 20mm x 18T    | 47-1028                  | 47-1128                               | 47-2028                              | Nissan & Skoda                   |
| 28.7mm x 26T  | 47-1029                  | 47-1128                               | 47-2029                              | Mercedes                         |
| 1" x 10T      | 47-1030                  | 47-1130                               | 47-2030                              | Alfa Romeo, Talbot & Triumph.    |
| 25.2mm x 24T  | 47-1031                  | 47-1131                               | 47-2031                              | Subaru                           |
| 25mm x 22T    | 47-1032                  | 47-1132                               | 47-2032                              | Volvo                            |
| 21.8mm x 20T  | 47-1033                  | 47-1133                               | 47-2033                              | Volvo                            |
| 35mm x 10T    | 47-1035                  | 47-1135                               | 47-2035                              | BMW                              |
| 28mm x 25T    | 47-1038                  | 47-1138                               | 47-2038                              | Lotus & Vauxhall                 |





200mm Ø Cerametallic & Organic Drive Plate Hub Spline Details.

| Spline Data                | G geared                 |                                       |                      | Application                |
|----------------------------|--------------------------|---------------------------------------|----------------------|----------------------------|
|                            | Hub Plate                | G geared                              | G geared             |                            |
|                            | Cerametallic<br>4 Paddle | Hub Plate<br>Cerametallic<br>6 Paddle | Hub Plate<br>Organic |                            |
| Ø      Teeth               |                          |                                       |                      |                            |
| 28mm x 20T                 | 47-1039                  | 47-1139                               | 47-2039              | Toyota                     |
| 22.5mm x 19T               | 47-1040                  | 47-1140                               | 47-2040              | Toyota                     |
| 1 3/8" x 10T               | 47-1041                  | 47-1141                               | 47-2041              | Ferrari                    |
| 19mm x 17T                 | 47-1042                  | 47-1142                               | 47-2042              | SAAB                       |
| 25.4mm x 23T               | 47-1043                  | 47-1143                               | 47-2043              | Sadev Gearbox spline       |
| 29mm x 22T                 | 47-1044                  | 47-1144                               | 47-2044              | BMW                        |
| 28mm x 25T                 | 47-1045                  | 47-1145                               | 47-2045              | Ferrari                    |
| 20mm x 19T                 | 47-1046                  | 47-1146                               | 47-2046              | Honda                      |
| 17.3mm x 20T               | 47-1047                  | 47-1147                               | 47-2047              | Fiat, Renault              |
| 35mm x 26T                 | 47-1048                  | 47-1148                               | 47-2048              | BMW                        |
| 24.5mm x 21T               | 47-1049                  | 47-1149                               | 47-2049              | Renault                    |
| 29mm x 26T                 | 47-1050                  | 47-1150                               | 47-2050              | Audi, Volkswagen           |
| 1" x 6T                    | 47-1051                  | 47-1151                               | 47-2051              | Ferrari                    |
| 24.3mm x 21T               | 47-1052                  | 47-1152                               | 47-2052              | Lotus                      |
| 7/8" x 6T                  | 47-1053                  | 47-1153                               | 47-2053              | Alfa Romeo                 |
| 25mm x 6T                  | 47-1054                  | 47-1154                               | 47-2054              |                            |
| 34mm x 6T                  | 47-1055                  | 47-1155                               | 47-2055              | OM 1929                    |
| 38mm x 10T                 | 47-1056                  | 47-1156                               | 47-2056              | Lancia                     |
| 33mm x 30T                 | 47-1057                  | 47-1157                               | 47-2057              | Ferrari flywheel HF 9426   |
| 27.2mm x 10T               | 47-1058                  | 47-1158                               | 47-2058              | Lancia                     |
| G geared<br>Floating Plate | 47-1090                  | 47-1091                               | 47-1092              | G geared Floating<br>Plate |



## 215mm Ø 'HELIX' Racing Clutch Range



### Series Part No. 69-110 & 69-120

Cover Assembly is of a lug drive configuration one piece aluminium alloy. This design allows the dust from the friction material to escape and reduces the heat build up. These are used with either cerametallic or organic friction faced drive plates in either single or twin plate formats.



### Series Part No. 70-2000

A sprung hub centre drive plate with heavy duty metal backed organic linings to give a more progressive engagement of the clutch. Only available as a single plate clutch and must be used with the 69-110 series of clutch cover assemblies.



### Series Part No. 71-2000 & 71-3000

A rigid hub drive plate with heavy duty metal backed organic linings. Normally used with the twin plate clutch for a more progressive operation.

Series 71-2000 for single plate clutch. Thickness 8.40mm  
Series 71-3000 for twin plate clutch. Thickness 7.20mm



### Series Part No. 77-2000

4 paddle sprung centre cerametallic drive plate, single plate configuration. This design is mainly used for rallying and racing where the damper springs provide a cushion to the impact of clutch engagement on the driveline components. Can only be used with the 69-110 series of clutch cover assemblies.



### Series Part No. 77-2100

6 paddle sprung centre cerametallic drive plate. Single plate configuration. Can only be used with the 69-110 series of clutch cover assemblies.

### Series Part No. 78-2000 & 78-3000



4 paddle rigid hub cerametallic drive plate. Single or twin plate format. Cerametallic drive plates have cerametallic segments riveted onto a steel back plate

these give the clutch a higher torque capacity than when using an organic faced drive plate.

This design is mainly for rallying or racing, especially endurance.

Series 78-2000 for single plate clutch. Thickness 8.40mm

Series 78-3000 for twin plate clutch. Thickness 7.20mm



### Series Part No. 78-2100 & 78-3100

6 paddle rigid hub cerametallic drive plate. Single or twin plate format.

Series 78-2100 for a single plate clutch. Thickness 8.40mm

Series 78-3100 for a twin plate clutch. Thickness 7.20mm



### Series Part No 69-110TP & 69-120TP

Cover assembly design & dimensions are as per 69-110 & 69-120 but fitted with a release plate to facilitate the use of a flat face release bearing



### Series Part No 46-1001 & 46-1090

Cerametallic 4 paddle drive plates with a main geared hub ( 46-1001 ) and floating hub drive plate ( 46-1090 )



### **Series Part No 46-1101 & 46-1091**

Cerametallic 6 paddle drive plates with a main geared hub ( 46-1101 ) and floating hub drive plate ( 46-1091 )



### **Series Part No 46-2001 & 46-1092**

Organic drive plates with a main geared hub ( 46-2001 ) and floating hub drive plate ( 46-1092 ) shown as a set



69-110

Ø215mm, Single Drive Plate



| Cover   | Torque Capacity  |                          |
|---------|------------------|--------------------------|
| 69-110G | 462Nm [340lb/ft] | Cerametallic Drive Plate |
| 69-110Y | 606Nm [446lb/ft] | Cerametallic Drive Plate |
| 69-110G | 371Nm [273lb/ft] | Organic Drive Plate      |
| 69-110Y | 496Nm [365lb/ft] | Organic Drive Plate      |

| Cover   | Release Load | Release Bearing Travel (Max) |
|---------|--------------|------------------------------|
| 69-110G | 290Kg        | 8.00mm                       |
| 69-110Y | 330Kg        |                              |

Set-Up Height (New)

|         |         |
|---------|---------|
| 69-110G | 33.00mm |
| 69-110Y | 32.30mm |

Set-Up Height (Worn)

|         |         |
|---------|---------|
| 69-110R | 36.90mm |
| 69-110G | 36.20mm |

Drive Plates

|                   | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight  |
|-------------------|----------------|---------------------|----------------------|--------------------------------|---------|
| Organic (Rigid)   | 71-2000        | 8.40mm              | 7.40mm               | [See chart for spline details] | 4.60 Kg |
| Organic (Sprung)  | 70-2000        | 8.40mm              | 7.40mm               | [See chart for spline details] | 5.10 Kg |
| 4 Paddle (Rigid)  | 78-2000        | 8.40mm              | 7.40mm               | [See chart for spline details] | 4.70 Kg |
| 4 Paddle (Sprung) | 77-2000        | 8.40mm              | 7.40mm               | [See chart for spline details] | 5.30 Kg |
| 6 Paddle (Rigid)  | 78-2100        | 8.40mm              | 7.40mm               | [See chart for spline details] | 5.00 Kg |
| 6 Paddle (Sprung) | 77-2100        | 8.40mm              | 7.40mm               | [See chart for spline details] | 5.80 Kg |

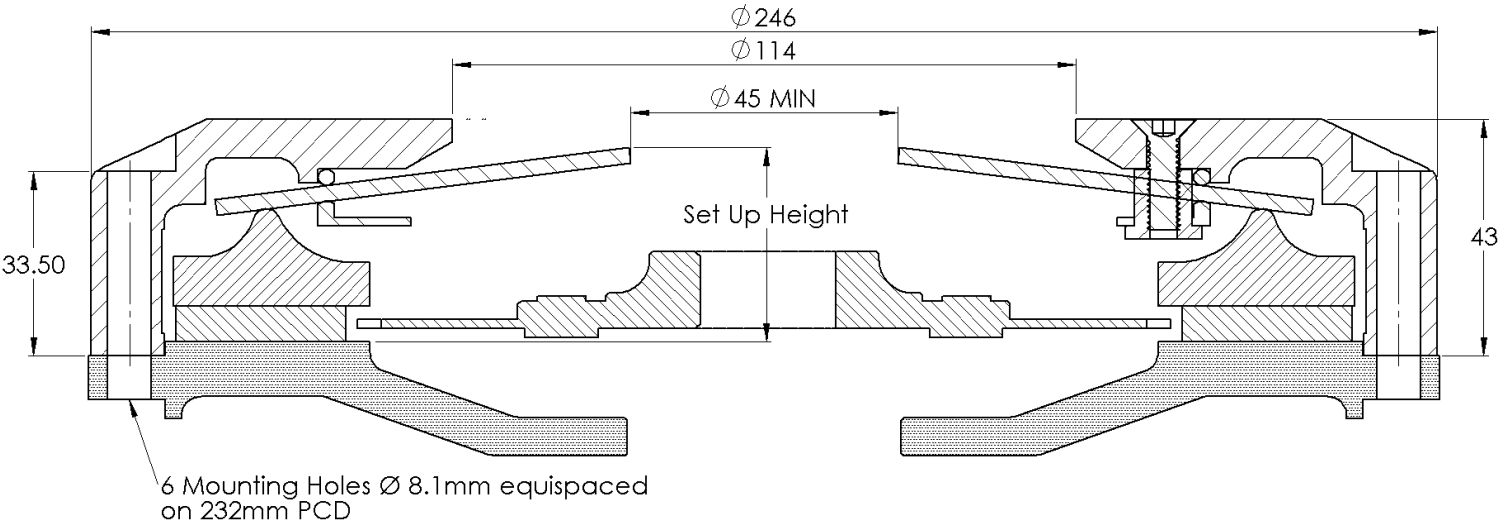
Other configurations available see index.

Spare Parts

Applications

|                      |          |                                |            |
|----------------------|----------|--------------------------------|------------|
| Wear Clips           | 215-61A  | Organic Drive Plate Rigid Hub  | Road       |
| Pressure Plate       | 215-15   | Organic Drive Plate Sprung Hub | Road       |
| Push off Springs (3) | 215-POSB | Paddle Rigid Hub               | Race       |
|                      |          | Paddle Sprung Hub              | Race/Rally |

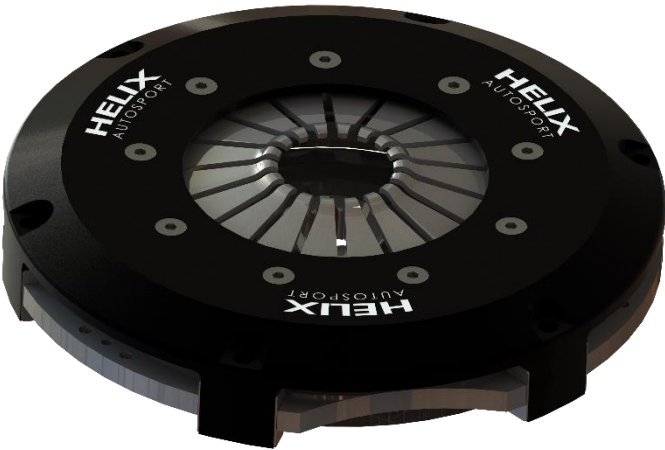
Release Bearing: Must have curved face with a fulcrum point of between 52mm to 58mm.





69-110c

Ø215mm, Single Drive Plate  
Curly Tip Diaphragm Spring



| Cover    | Torque Capacity  |                          |
|----------|------------------|--------------------------|
| 69-110Gc | 462Nm [340lb/ft] | Cerametallic Drive Plate |
| 69-110Yc | 606Nm [446lb/ft] | Cerametallic Drive Plate |
| 69-110Gc | 371Nm [273lb/ft] | Organic Drive Plate      |
| 69-110Yc | 496Nm [365lb/ft] | Organic Drive Plate      |

| Cover    | Release Load | Release Bearing Travel (Max) |
|----------|--------------|------------------------------|
| 69-110Gc | 290Kg        | 8.00mm                       |
| 69-110Yc | 330Kg        |                              |

Set-Up Height (New)

|          |         |
|----------|---------|
| 69-110Gc | 36.00mm |
| 69-110Yc | 35.30mm |

Set-Up Height (Worn)

|          |         |
|----------|---------|
| 69-110Rc | 39.90mm |
| 69-110Gc | 39.20mm |

Drive Plates

|                   | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight  |
|-------------------|----------------|---------------------|----------------------|--------------------------------|---------|
| Organic (Rigid)   | 71-2000        | 8.40mm              | 7.40mm               | [See chart for spline details] | 4.60 Kg |
| Organic (Sprung)  | 70-2000        | 8.40mm              | 7.40mm               | [See chart for spline details] | 5.10 Kg |
| 4 Paddle (Rigid)  | 78-2000        | 8.40mm              | 7.40mm               | [See chart for spline details] | 4.70 Kg |
| 4 Paddle (Sprung) | 77-2000        | 8.40mm              | 7.40mm               | [See chart for spline details] | 5.30 Kg |
| 6 Paddle (Rigid)  | 78-2100        | 8.40mm              | 7.40mm               | [See chart for spline details] | 5.00 Kg |
| 6 Paddle (Sprung) | 77-2100        | 8.40mm              | 7.40mm               | [See chart for spline details] | 5.80 Kg |

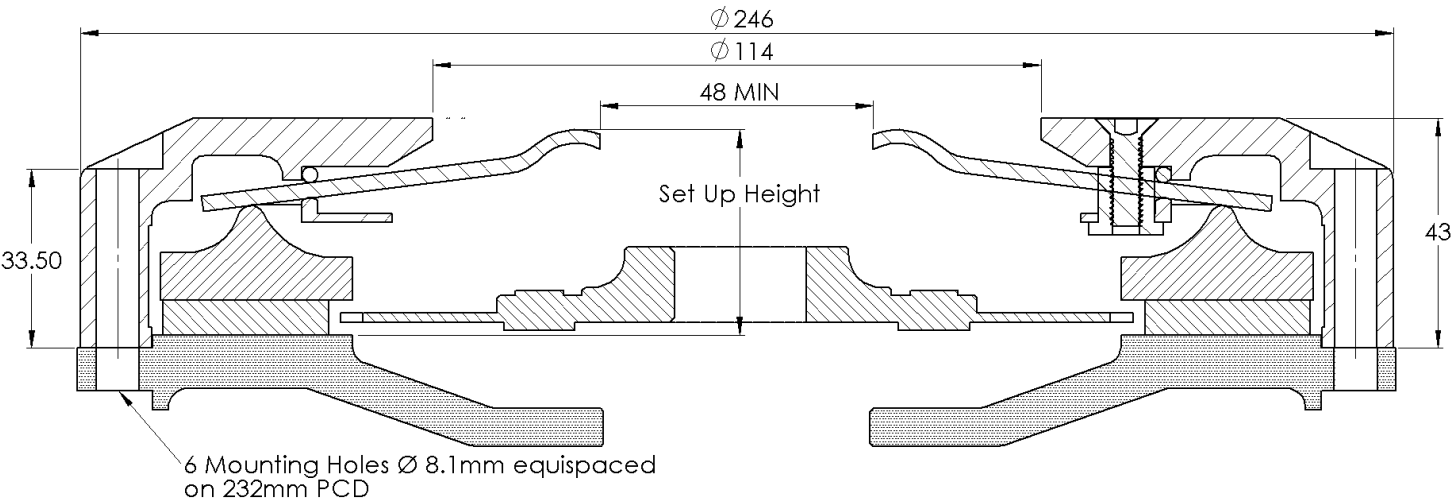
Other configurations available see index.

Spare Parts

Applications

|                      |          |                                |            |
|----------------------|----------|--------------------------------|------------|
| Wear Clips           | 215-61A  | Organic Drive Plate Rigid Hub  | Road       |
| Pressure Plate       | 215-15   | Organic Drive Plate Sprung Hub | Road       |
| Push off Springs (3) | 215-POSB | Paddle Rigid Hub               | Race       |
|                      |          | Paddle Sprung Hub              | Race/Rally |

Release Bearing: Must have flat face with a fulcrum point of between 52mm to 58mm.





69-120

Ø215mm, Twin Drive Plate



| Cover   | Torque Capacity  |                          |
|---------|------------------|--------------------------|
| 69-120G | 578Nm [425lb/ft] | Cerametallic Drive Plate |
| 69-120Y | 868Nm [638lb/ft] | Cerametallic Drive Plate |
| 69-120G | 486Nm [357lb/ft] | Organic Drive Plate      |
| 69-120Y | 695Nm [511lb/ft] | Organic Drive Plate      |

| Cover   | Release Load | Release Bearing Travel (Max) |
|---------|--------------|------------------------------|
| 69-120G | 290Kg        | 8.00mm                       |
| 69-120Y | 330Kg        |                              |

Set-Up Height (New)

|         |         |
|---------|---------|
| 69-120G | 47.30mm |
| 69-120Y | 47.00mm |

Set-Up Height (Worn)

|         |         |
|---------|---------|
| 69-120G | 51.60mm |
| 69-120Y | 51.10mm |

Drive Plates

|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight  |
|------------------|----------------|---------------------|----------------------|--------------------------------|---------|
| Organic (Rigid)  | 71-3000        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 7.10 Kg |
| 4 Paddle (Rigid) | 78-3000        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 7.20 Kg |
| 6 Paddle (Rigid) | 78-3100        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 7.80 Kg |

Other configurations available see index.

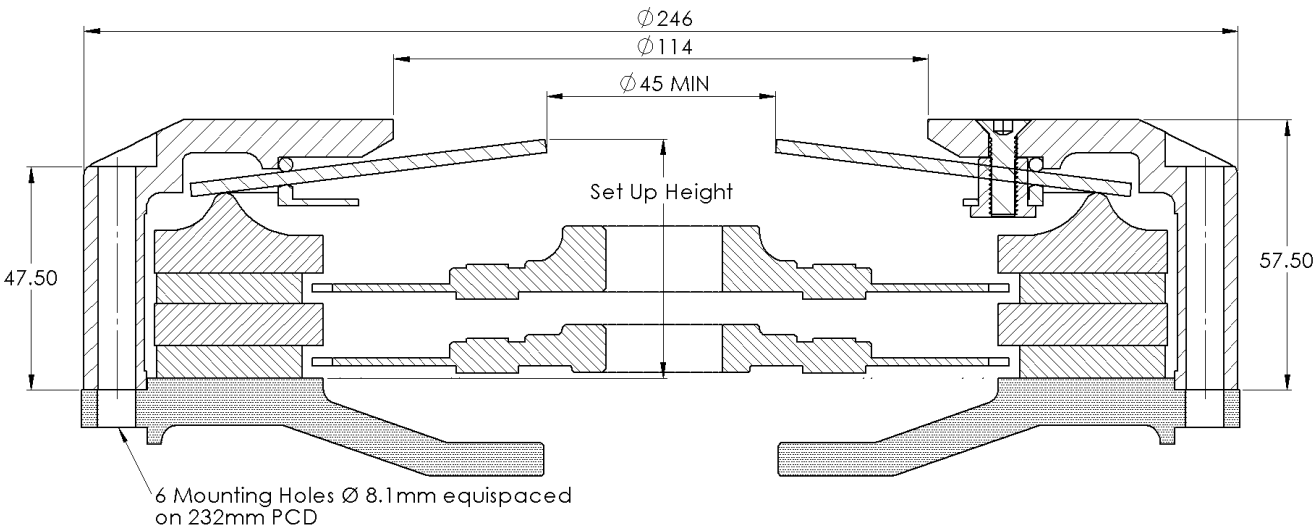
Spare Parts

|                      |          |
|----------------------|----------|
| Wear Clips           | 215-61B  |
| Pressure Plate       | 215-16   |
| Interplate           | 215-11   |
| Push off Springs (3) | 215-POSA |
| Push off Springs (3) | 215-POSB |

Applications

|                               |      |
|-------------------------------|------|
| Organic Drive Plate Rigid Hub | Road |
| Paddle Rigid Hub              | Race |

Release Bearing: Must have curved face with a fulcrum point of between 52mm to 58mm.







69-120c

Ø215mm, Twin Drive Plate  
Curly Tip Diaphragm Spring



| Cover    | Torque Capacity  |                          |
|----------|------------------|--------------------------|
| 69-120Gc | 578Nm [425lb/ft] | Cerametallic Drive Plate |
| 69-120Yc | 868Nm [638lb/ft] | Cerametallic Drive Plate |
| 69-120Gc | 486Nm [357lb/ft] | Organic Drive Plate      |
| 69-120Yc | 695Nm [511lb/ft] | Organic Drive Plate      |

| Cover    | Release Load | Release Bearing Travel (Max) |
|----------|--------------|------------------------------|
| 69-120Gc | 290Kg        | 8.00mm                       |
| 69-120Yc | 330Kg        |                              |

Set-Up Height (New)

|          |         |
|----------|---------|
| 69-120Gc | 50.30mm |
| 69-120Yc | 50.00mm |

Set-Up Height (Worn)

|          |         |
|----------|---------|
| 69-120Gc | 54.60mm |
| 69-120Yc | 54.10mm |

Drive Plates

|                  | Series Part No | Thickness New [Nom] | Thickness Worn [Min] |                                | Weight  |
|------------------|----------------|---------------------|----------------------|--------------------------------|---------|
| Organic (Rigid)  | 71-3000        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 7.10 Kg |
| 4 Paddle (Rigid) | 78-3000        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 7.20 Kg |
| 6 Paddle (Rigid) | 78-3100        | 7.20 mm             | 6.80 mm              | [See chart for spline details] | 7.80 Kg |

Other configurations available see index.

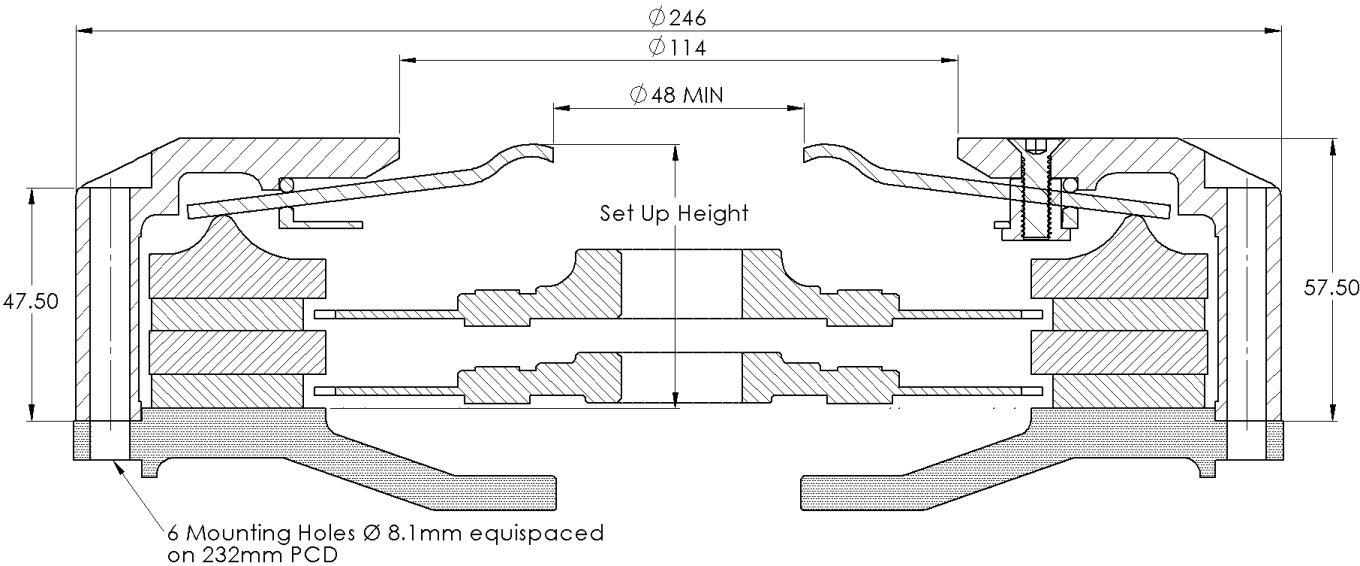
Spare Parts

|                      |          |
|----------------------|----------|
| Wear Clips           | 215-61B  |
| Pressure Plate       | 215-16   |
| Interplate           | 215-11   |
| Push off Springs (3) | 215-POSA |
| Push off Springs (3) | 215-POSB |

Applications

|                               |      |
|-------------------------------|------|
| Organic Drive Plate Rigid Hub | Road |
| Paddle Rigid Hub              | Race |

Release Bearing: Must have flat face with a fulcrum point of between 52mm to 58mm.



215mm Ø Cerametallic & Organic Drive Plate Hub Spine Details

| Splines Data  | Organic Sprung Hub |         | Organic Rigid |                         | Organic Rigid           |                        | 4 Paddle               | 6 Paddle               | 4 Paddle               | 6 Paddle               | 4 Paddle               | 6 Paddle | Application                      |
|---------------|--------------------|---------|---------------|-------------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|----------|----------------------------------|
|               | 8.4mm              | 8.4mm   | 7.2mm         | Cerametallic Sprung Hub | Cerametallic Sprung Hub | Cerametallic Rigid Hub | Cerametallic Rigid Hub | Cerametallic Rigid Hub | Cerametallic Rigid Hub | Cerametallic Rigid Hub | Cerametallic Rigid Hub |          |                                  |
| Ø Teeth       |                    |         |               |                         |                         |                        |                        |                        |                        |                        |                        |          |                                  |
| 25.4mm x 23T  | 70-2001            | 71-2001 | 71-3001       | 77-2001                 | 77-2101                 | 78-2001                | 78-2101                | 78-3001                | 78-3101                |                        |                        |          | Ford,Mitsubishi, MG & Porsche    |
| 22.5mm x 20T  | 70-2002            | 71-2002 | 71-3002       | 77-2002                 | 77-2102                 | 78-2002                | 78-2102                | 78-3002                | 78-3102                |                        |                        |          | Ford, Fiat,Mitsubishi & Porsche  |
| 24.3mm x 22T  | 70-2003            | 71-2003 | 71-3003       | 77-2003                 | 77-2103                 | 78-2003                | 78-2103                | 78-3003                | 78-3103                |                        |                        |          | Mazda                            |
| 29mm x 21T    | 70-2004            | 71-2004 | 71-3004       | 77-2004                 | 77-2104                 | 78-2004                | 78-2104                | 78-3004                | 78-3104                |                        |                        |          | Toyota                           |
| 25.6mm x 24T  | 70-2005            | 71-2005 | 71-3005       | 77-2005                 | 77-2105                 | 78-2005                | 78-2105                | 78-3005                | 78-3105                |                        |                        |          | Nissan                           |
| 24mm x 21T    | 70-2006            | 71-2006 | 71-3006       | 77-2006                 | 77-2106                 | 78-2006                | 78-2106                | 78-3006                | 78-3106                |                        |                        |          | Renault                          |
| 24mm x 21T    | 70-2007            | 71-2007 | 71-3007       | 77-2007                 | 77-2107                 | 78-2007                | 78-2107                | 78-3007                | 78-3107                |                        |                        |          | Toyota                           |
| 25mm x 14T    | 70-2008            | 71-2008 | 71-3008       | 77-2008                 | 77-2108                 | 78-2008                | 78-2108                | 78-3008                | 78-3108                |                        |                        |          | BMW Mini,Opel & Vauxhall         |
| 29mm x 10T    | 70-2009            | 71-2009 | 71-3009       | 77-2009                 | 77-2109                 | 78-2009                | 78-2109                | 78-3009                | 78-3109                |                        |                        |          | BMW, Ford & Mercedes             |
| 21mm x 18T    | 70-2010            | 71-2010 | 71-3010       | 77-2010                 | 77-2110                 | 78-2010                | 78-2110                | 78-3010                | 78-3110                |                        |                        |          | Peugeot                          |
| 20mm x 17T    | 70-2011            | 71-2011 | 71-3011       | 77-2011                 | 77-2111                 | 78-2011                | 78-2111                | 78-3011                | 78-3111                |                        |                        |          | Ford & Fiat                      |
| 20.4mm x 24T  | 70-2012            | 71-2012 | 71-3012       | 77-2012                 | 77-2112                 | 78-2012                | 78-2112                | 78-3012                | 78-3112                |                        |                        |          | Opel,Vauxhall & Volkswagen       |
| 22mm x 19T    | 70-2013            | 71-2013 | 71-3013       | 77-2013                 | 77-2113                 | 78-2013                | 78-2113                | 78-3013                | 78-3113                |                        |                        |          | Alfa Romeo                       |
| 1 1/4" x 10T  | 70-2014            | 71-2014 | 71-3014       | 77-2014                 | 77-2114                 | 78-2014                | 78-2114                | 78-3014                | 78-3114                |                        |                        |          | Aston Martin,Ferrari & Triumph   |
| 24.2 x 23T    | 70-2015            | 71-2015 | 71-3015       | 77-2015                 | 77-2115                 | 78-2015                | 78-2115                | 78-3015                | 78-3115                |                        |                        |          | Audi & Volkswagen                |
| 1 1/8" x 10T  | 70-2016            | 71-2016 | 71-3016       | 77-2016                 | 77-2116                 | 78-2016                | 78-2116                | 78-3016                | 78-3116                |                        |                        |          | Jaguar,GM( USA ) & Rover         |
| 22.1mm x 28T  | 70-2017            | 71-2017 | 71-3017       | 77-2017                 | 77-2117                 | 78-2017                | 78-2117                | 78-3017                | 78-3117                |                        |                        |          | Audi & Volkswagen                |
| 29mm x 10T    | 70-2018            | 71-2018 | 71-3018       | 77-2018                 | 77-2118                 | 78-2018                | 78-2118                | 78-3018                | 78-3118                |                        |                        |          | Peugeot & Renault                |
| 19.3mm x 18T  | 70-2019            | 71-2019 | 71-3019       | 77-2019                 | 77-2119                 | 78-2019                | 78-2119                | 78-3019                | 78-3119                |                        |                        |          | Suzuki                           |
| 22mm x 26T    | 70-2020            | 71-2020 | 71-3020       | 77-2020                 | 77-2120                 | 78-2020                | 78-2120                | 78-3020                | 78-3120                |                        |                        |          | Renault                          |
| 19mm x 14T    | 70-2021            | 71-2021 | 71-3021       | 77-2021                 | 77-2121                 | 78-2021                | 78-2121                | 78-3021                | 78-3121                |                        |                        |          | Opel & Vauxhall                  |
| 22mm x 20T    | 70-2022            | 71-2022 | 71-3022       | 77-2022                 | 77-2122                 | 78-2022                | 78-2122                | 78-3022                | 78-3122                |                        |                        |          | Honda & Rover                    |
| 7/8" x 10T    | 70-2023            | 71-2023 | 71-3023       | 77-2023                 | 77-2123                 | 78-2023                | 78-2123                | 78-3023                | 78-3123                |                        |                        |          | Austin Healey,Hillman,MG & Rover |
| 25.4mm x 24T  | 70-2024            | 71-2024 | 71-3024       | 77-2024                 | 77-2124                 | 78-2024                | 78-2124                | 78-3024                | 78-3124                |                        |                        |          | Honda & Rover                    |
| 25.9mm x 24T  | 70-2025            | 71-2025 | 71-3025       | 77-2025                 | 77-2125                 | 78-2025                | 78-2125                | 78-3025                | 78-3125                |                        |                        |          | Honda                            |
| 1 1/16" x 10T | 70-2026            | 71-2026 | 71-3026       | 77-2026                 | 77-2126                 | 78-2026                | 78-2126                | 78-3026                | 78-3126                |                        |                        |          | Ford ( USA )                     |
| 1 5/32" x 26T | 70-2027            | 71-2027 | 71-3027       | 77-2027                 | 77-2127                 | 78-2027                | 78-2127                | 78-3027                | 78-3127                |                        |                        |          | GM ( USA )                       |
| 20mm x 18T    | 70-2028            | 71-2028 | 71-3028       | 77-2028                 | 77-2128                 | 78-2028                | 78-2128                | 78-3028                | 78-3128                |                        |                        |          | Nissan & Skoda                   |
| 28.7mm x 26T  | 70-2029            | 71-2029 | 71-3029       | 77-2029                 | 77-2129                 | 78-2029                | 78-2129                | 78-3029                | 78-3129                |                        |                        |          | Mercedes                         |
| 1" x 10T      | 70-2030            | 71-2030 | 71-3030       | 77-2030                 | 77-2131                 | 78-2030                | 78-2130                | 78-3030                | 78-3130                |                        |                        |          | Alfa Romeo, Talbot & Triumph.    |
| 25.2mm x 24T  | 70-2031            | 71-2031 | 71-3031       | 77-2031                 | 77-2132                 | 78-2031                | 78-2131                | 78-3031                | 78-3131                |                        |                        |          | Subaru                           |
| 25mm x 22T    | 70-2032            | 71-2032 | 71-3032       | 77-2032                 | 77-2133                 | 78-2032                | 78-2132                | 78-3032                | 78-3132                |                        |                        |          | Volvo                            |
| 21.8mm x 20T  | 70-2033            | 71-2033 | 71-3033       | 77-2033                 | 77-2134                 | 78-2033                | 78-2133                | 78-3033                | 78-3133                |                        |                        |          | Volvo                            |
| 35mm x 10T    |                    | 71-2035 | 71-3035       |                         |                         | 78-2035                | 78-2135                | 78-3035                | 78-3135                |                        |                        |          | BMW                              |
| 28mm x 25T    | 71-2038            | 71-2038 | 71-3038       | 77-2038                 | 77-2138                 | 78-2038                | 78-2138                | 78-3038                | 78-3138                |                        |                        |          | Lotus & Vauxhall                 |





215mm Ø Cerametallic & Organic Drive Plate Hub Spline Details.

| Spline Data  | Organic Sprung Hub | Organic Rigid | Organic Rigid | 4 Paddle Cerametallic Sprung Hub | 6 Paddle Cerametallic Sprung Hub | 4 Paddle Cerametallic Rigid Hub | 6 Paddle Cerametallic Rigid Hub | 4 Paddle Cerametallic Rigid Hub | 6 Paddle Cerametallic Rigid Hub | Application              |
|--------------|--------------------|---------------|---------------|----------------------------------|----------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--------------------------|
| Ø      Teeth | 8.4mm              | 8.4mm         | 7.2mm         | 8.4mm                            | 8.4mm                            | 8.4mm                           | 8.4mm                           | 7.2mm                           | 7.2mm                           |                          |
| 28mm x 20T   | 71-2039            | 71-2039       | 71-3039       | 77-2039                          | 77-2139                          | 78-2039                         | 78-2139                         | 78-3039                         | 78-3139                         | Toyota                   |
| 22.5mm x 19T | 70-2040            | 71-2040       | 71-3040       | 77-2040                          | 77-2140                          | 78-2040                         | 78-2140                         | 78-3040                         | 78-3140                         | Toyota                   |
| 1 3/8" x 10T |                    | 71-2041       | 71-3041       |                                  |                                  | 78-2041                         | 78-2141                         | 78-3041                         | 78-3141                         | Ferrari                  |
| 19mm x 17T   | 70-2042            | 71-2042       | 71-3042       | 77-2042                          | 77-2142                          | 78-2042                         | 78-2142                         | 78-3042                         | 78-3142                         | SAAB                     |
| 25.4mm x 23T | 70-2043            | 71-2043       | 71-3043       | 77-2043                          | 77-2143                          | 78-2043                         | 78-2143                         | 78-3043                         | 78-3143                         | Sadev Gearbox spline     |
| 29mm x 22T   | 70-2044            | 71-2044       | 71-3044       | 77-2044                          | 77-2144                          | 78-2044                         | 78-2144                         | 78-3044                         | 78-3144                         | BMW                      |
| 28mm x 25T   | 70-2045            | 71-2045       | 71-3045       | 77-2045                          | 77-2145                          | 78-2045                         | 78-2145                         | 78-3045                         | 78-3145                         | Ferrari                  |
| 20mm x 19T   | 70-2046            | 71-2046       | 71-3046       | 77-2046                          | 77-2146                          | 78-2046                         | 78-2146                         | 78-3046                         | 78-3146                         | Honda                    |
| 17.3mm x 20T | 70-2047            | 71-2047       | 71-3047       | 77-2047                          | 77-2147                          | 78-2047                         | 78-2147                         | 78-3047                         | 78-3147                         | Fiat, Renault            |
| 35mm x 26T   | 70-2048            | 71-2048       | 71-3048       | 77-2048                          | 77-2148                          | 78-2048                         | 78-2148                         | 78-3048                         | 78-3148                         | BMW                      |
| 24.5mm x21T  | 70-2049            | 71-2049       | 71-3049       | 77-2049                          | 77-2149                          | 78-2049                         | 78-2149                         | 78-3049                         | 78-3149                         | Renault                  |
| 29mm x 26T   | 70-2050            | 71-2050       | 71-3050       | 77-2050                          | 77-2150                          | 78-2050                         | 78-2150                         | 78-3050                         | 78-3150                         | Audi, Volkswagen         |
| 1" x 6T      | 70-2051            | 71-2051       | 71-3051       | 77-2051                          | 77-2151                          | 78-2051                         | 78-2151                         | 78-3051                         | 78-3151                         | Ferrari                  |
| 24.3mm x 21T | 70-2052            | 71-2052       | 71-3052       | 77-2052                          | 77-2152                          | 78-2052                         | 78-2152                         | 78-3052                         | 78-3152                         | Lotus                    |
| 7/8" x 6T    | 70-2053            | 71-2053       | 71-3053       | 77-2053                          | 77-2153                          | 78-2053                         | 78-2153                         | 78-3053                         | 78-3153                         | Alfa Romeo               |
| 25mm x 6T    | 70-2054            |               |               |                                  |                                  |                                 |                                 |                                 |                                 |                          |
| 34mm x 6T    | 70-2055            | 71-2055       | 71-3055       | 77-2055                          | 77-2155                          | 78-2055                         | 78-2155                         | 78-3055                         | 71-3155                         | OM 1929                  |
| 38mm x 10T   | 70-2056            | 71-2056       | 71-3056       | 77-2056                          | 77-2156                          | 78-2056                         | 78-2156                         | 78-3056                         | 71-3156                         | Lancia                   |
| 33mm x 30T   | 70-2057            | 71-2057       | 71-3057       | 77-2057                          | 77-2157                          | 78-2057                         | 78-2157                         | 78-3057                         | 78-3157                         | Ferrari flywheel HF 9426 |
| 27.2mm x 10T | 70-2058            | 71-2058       | 71-3058       | 77-2058                          | 77-2158                          | 78-2058                         | 78-2158                         | 78-3058                         | 78-3158                         | Lancia                   |

215mm Ø Cerametallic & Organic Drive Plate Hub Spline Details

| Spline Data  | Geared                   |                                       |                      | Thickness new 7.2mm all Drive Plates | Application                      |
|--------------|--------------------------|---------------------------------------|----------------------|--------------------------------------|----------------------------------|
|              | Hub Plate                | Geared                                | Geared               |                                      |                                  |
|              | Cerametallic<br>4 Paddle | Hub Plate<br>Cerametallic<br>6 Paddle | Hub Plate<br>Organic |                                      |                                  |
| Ø    Teeth   |                          |                                       |                      |                                      |                                  |
| 25.4mm x 23T | 46-1001                  | 46-1101                               | 46-2001              |                                      | Ford,Mitsubishi,MG & Porsche     |
| 22.5mm x 20T | 46-1002                  | 46-1102                               | 46-2002              |                                      | Ford, Fiat,Mitsubishi & Porsche  |
| 24.3mm x 22T | 46-1003                  | 46-1103                               | 46-2003              |                                      | Mazda                            |
| 29mm x 21T   | 46-1004                  | 46-1104                               | 46-2004              |                                      | Toyota                           |
| 25.6mm x 24T | 46-1005                  | 46-1105                               | 46-2005              |                                      | Nissan                           |
| 24mm x 21T   | 46-1006                  | 46-1106                               | 46-2006              |                                      | Renault                          |
| 24mm x 21T   | 46-1007                  | 46-1107                               | 46-2007              |                                      | Toyota                           |
| 25mm x 14T   | 46-1008                  | 46-1108                               | 46-2008              |                                      | BMW Mini,Opel & Vauxhall         |
| 29mm x 10T   | 46-1009                  | 46-1109                               | 46-2009              |                                      | BMW, Ford & Mercedes             |
| 21mm x 18T   | 46-1010                  | 46-1110                               | 46-2010              |                                      | Peugeot                          |
| 20mm x 17T   | 46-1011                  | 46-1111                               | 46-2011              |                                      | Ford & Fiat                      |
| 20.4mm x 24T | 46-1012                  | 46-1112                               | 46-2012              |                                      | Opel,Vauxhall & Volkswagen       |
| 22mm x 19T   | 46-1013                  | 46-1113                               | 46-2013              |                                      | Alfa Romeo                       |
| 1 1/4" x 10T | 46-1014                  | 46-1114                               | 46-2014              |                                      | Aston Martin,Ferrari & Triumph   |
| 24.2 x 23T   | 46-1015                  | 46-1115                               | 46-2015              |                                      | Audi & Volkswagen                |
| 1 1/8" x 10T | 46-1016                  | 46-1116                               | 46-2016              |                                      | Jaguar,GM( USA ) & Rover         |
| 22.1mm x 28T | 46-1017                  | 46-1117                               | 46-2017              |                                      | Audi & Volkswagen                |
| 29mm x 10T   | 46-1018                  | 46-1118                               | 46-2018              |                                      | Peugeot & Renault                |
| 19.3mm x 18T | 46-1019                  | 46-1119                               | 46-2019              |                                      | Suzuki                           |
| 22mm x 26T   | 46-1020                  | 46-1120                               | 46-2020              |                                      | Renault                          |
| 19mm x 14T   | 46-1021                  | 46-1121                               | 46-2021              |                                      | Opel & Vauxhall                  |
| 22mm x 20T   | 46-1022                  | 46-1122                               | 46-2022              |                                      | Honda & Rover                    |
| 7/8" x 10T   | 46-1023                  | 46-1123                               | 46-2023              |                                      | Honda & Rover                    |
|              | 46-1024                  | 46-1124                               | 46-2024              |                                      | Austin Healey,Hillman,MG & Rover |
|              | 46-1025                  | 46-1125                               | 46-2025              |                                      | Honda & Rover                    |
|              | 46-1026                  | 46-1126                               | 46-2026              |                                      | Ford ( USA )                     |
|              | 46-1027                  | 46-1127                               | 46-2027              |                                      | GM ( USA )                       |
|              | 46-1028                  | 46-1128                               | 46-2028              |                                      | Nissan & Skoda                   |
|              | 46-1029                  | 46-1129                               | 46-2029              |                                      | Mercedes                         |
|              | 46-1030                  | 46-1130                               | 46-2030              |                                      | Alfa Romeo, Talbot & Triumph.    |
|              | 46-1031                  | 46-1131                               | 46-2031              |                                      | Subaru                           |
|              | 46-1032                  | 46-1132                               | 46-2032              |                                      | Volvo                            |
|              | 46-1033                  | 46-1133                               | 46-2033              |                                      | Volvo                            |
|              | 46-1035                  | 46-1135                               | 46-2035              |                                      | BMW                              |
|              | 46-1038                  | 46-1138                               | 46-2038              |                                      | Lotus & Vauxhall                 |





215mm Ø Cerametallic & Organic Drive Plate Hub Spline Details

| Spline Data           | Geared       |              |           | Application                          |
|-----------------------|--------------|--------------|-----------|--------------------------------------|
|                       | Hub Plate    | Geared       | Geared    |                                      |
|                       | Cerametallic | Hub Plate    | Hub Plate |                                      |
| Ø Teeth               | 4 Paddle     | Cerametallic | Organic   | Thickness new 7.2mm all Drive Plates |
|                       | 6 Paddle     |              |           |                                      |
| 28mm x 20T            | 46-1039      | 46-1139      | 46-2039   | Toyota                               |
| 22.5mm x 19T          | 46-1040      | 46-1140      | 46-2040   | Toyota                               |
| 1 3/8" x 10T          | 46-1041      | 46-1141      | 46-2041   | Ferrari                              |
| 19mm x 17T            | 46-1042      | 46-1142      | 46-2042   | SAAB                                 |
| 25.4mm x 23T          | 46-1043      | 46-1143      | 46-2043   | Sadev Gearbox spline                 |
| 29mm x 22T            | 46-1044      | 46-1144      | 46-2044   | BMW                                  |
| 28mm x 25T            | 46-1045      | 46-1145      | 46-2045   | Ferrari                              |
| 20mm x 20T            | 46-1046      | 46-1146      | 46-2046   | Honda                                |
| 17.3mm x 20T          | 46-1047      | 46-1147      | 46-2047   | Fiat, Renault                        |
| 35mm x 26T            | 46-1048      | 46-1148      | 46-2048   | BMW                                  |
| 24.5mm x 21T          | 46-1049      | 46-1149      | 46-2049   | Renault                              |
| 29mm x 26T            | 46-1050      | 46-1150      | 46-2050   | Audi, Volkswagen                     |
| 1" x 6T               | 46-1051      | 46-1151      | 46-2051   | Ferrari                              |
| 24.3mm x 21T          | 46-1052      | 46-1152      | 46-2052   | Lotus                                |
| 7/8" x 6T             | 46-1053      | 46-1153      | 46-2053   | Alfa Romeo                           |
| 25mm x 6T             | 46-1054      | 46-1154      | 46-2054   | OM 1929                              |
| 34mm x 6T             | 46-1055      | 46-1155      | 46-2055   |                                      |
| 38mm x 10T            | 46-1056      | 46-1156      | 46-2056   | Lancia                               |
| 33mm x 30T            | 46-1057      | 46-1157      | 46-2057   | Ferrari flywheel HF 9476             |
| 27.2mm x 10T          | 46-1058      | 46-1158      | 46-2058   | Lancia Astura                        |
| Geared Floating Plate | 46-1090      | 46-1091      | 46-1092   | Geared Floating Plate                |