



Racing Clutch System

motorsport



RCS 140

The forged high-strength aluminium housing is the result of brilliant engineering, delivering a motorsport clutch that efficiently fulfils all your performance requirements. The housing design integrates heat ventilation supporting the high-performance friction stack and thus ideal for a wide range of applications. The star in our clutch program is equipped with an extremely wear resistant state of the art patented aluminium coating, providing high mileage capabilities. At the same time it contributes significantly favourable to your race car, in terms of mass and inertia, making it an extremely competitive drivetrain component.

Designed and developed for:

- Circuit racing
- Formula cars
- Touring cars
- Prototypes

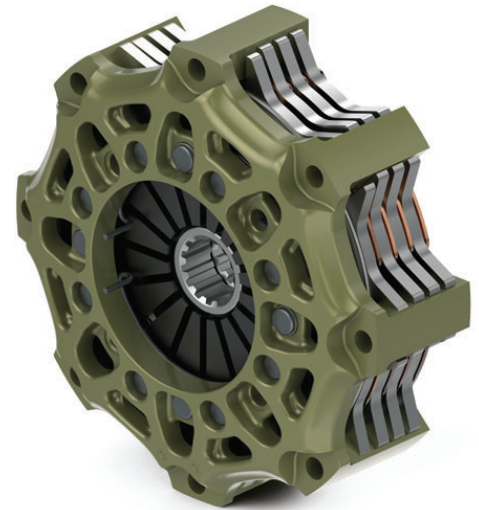
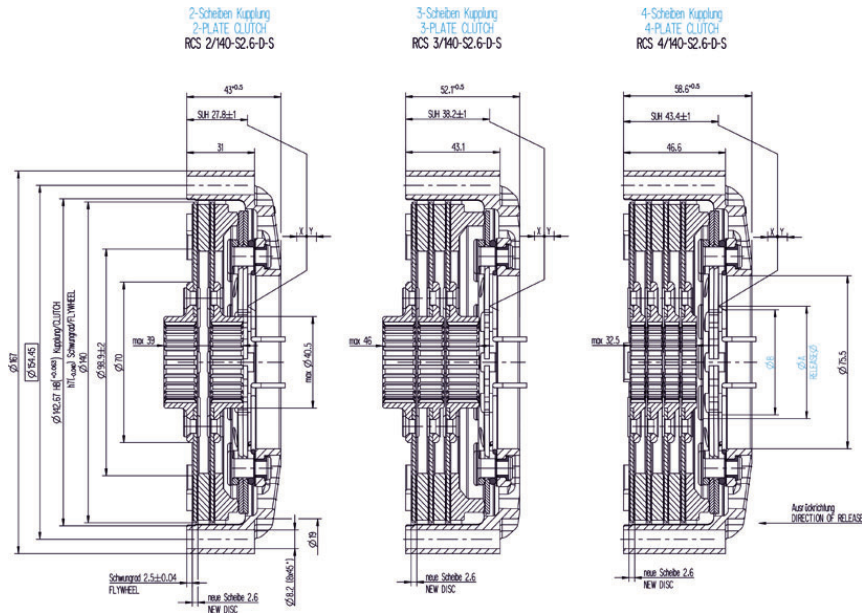
Advantages:

A wide range of spring loads available.
Proven and tested in all motorsport classes.
Convertible to carbon/carbon and carbon/
sinter.

Clutch	Torque Range	Number of Discs	Facing	Friction Lining	Actuation	Flywheel Type
RCS 140-S2.6-D-S-XX	960 ... 1,910 Nm	2 / 3 / 4	S2.6	Sinter	Push Type	Step (internal spigot)
RCS 140-S2.6-D-F-XX	1,910 Nm	4	S2.6	Sinter	Push Type	Flat (external spigot)
RCS 140-S3.4-D-S-XX	480 ... 1,910 Nm	2 / 3 / 4	S3.4	Sinter	Push Type	Step (internal spigot)
RCS 140-S3.4-D-F-XX	1,430 ... 1,910 Nm	3 / 4	S3.4	Sinter	Push Type	Flat (external spigot)
RCS 140-S5.2-D-S-XX	960 ... 1,430 Nm	2 / 3	S5.2	Sinter	Push Type	Step (internal spigot)
RCS 140-S5.2-D-F-XX	960 Nm	2	S5.2	Sinter	Push Type	Flat (external spigot)
RCS 140-S7.8-D-S-XX	480 Nm	1	S7.8	Sinter	Push Type	Step (internal spigot)

RCS 140-S2.6-D-S-XX

Key Dimensions



Selection of driven disc order number:

- Select the suitable hub configuration
- The order number of the driven discs is defined with the ZF Code / spline size application
- A configuration example can be found on pages V15 & V16

Technical Specifications

Selection Criteria			Technical Specification					Purchase Order Number				
Clutch Torque	Release ØA	Spring inner ØB	Release Force max.	Wear Range	Release Travel X	Wear Travel Y	Mass	Inertia	Housing	Pressure Plate	Intermediate Plate 003019000224	Driven Disc*
[Nm]	[mm]	[mm]	[N]	[mm]	[mm]	[mm]	[kg]	[kgm2]	Part Number	Part number	Qty.	Qty.
2-Disc Clutch												
960	49	46	4,900	1.5	4.0 +0.5	4.5	2.27	0.006920	003072000289	003002001469	1	2
960	38	34	4,200	1.5	4.5 +0.5	5.0	2.31	0.007051	003072000296	003002001469	1	2
3-Disc Clutch												
720	49	46	2,450	1.5	4.0 +0.5	4.5	2.85	0.009151	003072000294	003002001770	2	3
4-Disc Clutch												
1,910	49	46	4,900	1.5	4.0 +0.5	4.5	3.44	0.010921	003072000166	003002003631	3	4
1,910	38	34	4,200	1.5	4.5 +0.5	5.0	3.54	0.011204	003072000149	003002003631	3	4

More clutch torque without safety margin!

*) The order number for driven discs, according to the required hub spline configuration and spline selection can be found on the following pages

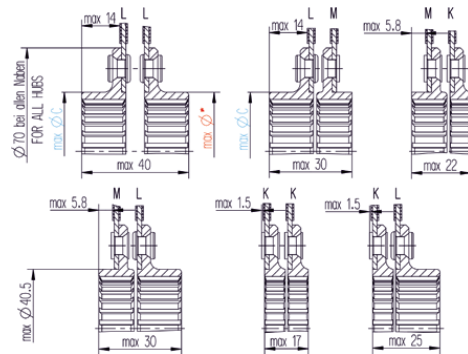
Product Range

ZF motorsport Racing Clutch System

Hub Configuration

RCS 140-S2.6

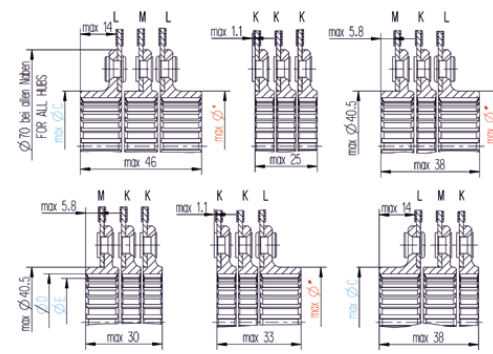
2-Disc Clutch



Flywheel

Gearbox

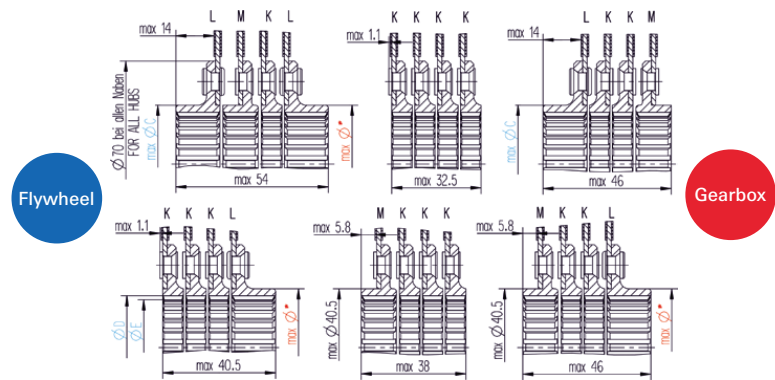
3-Disc Clutch



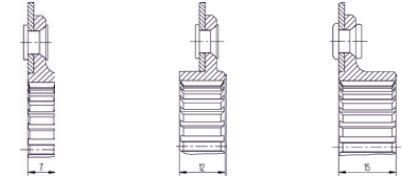
Flywheel

Gearbox

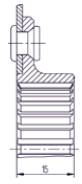
4-Disc Clutch



Driven Disc Selection according to Hub Type RCS 140-S2.6



ZF Code	Spline Basic	Spline Inch	No. of Teeth	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]	K	M	L
002	1 SAE 10C	1" x 10T	10	30.5	25.8	20.6	881864002148	881864002152	881864002169
003	1 1/8 SAE 10C	1.12" x 10T	10	34.5	28.9	23.4	881864002149	881864002153	881864002170
010	A10 x 16 x 20		10	26.5	20.0	16.0	881864002394	881864002421	881864002508
013	A10 x 23 x 29	29mm x 10T	10	34.5	29.0	23.0	881864002150	881864002154	881864002171
016	A10 x 28 x 35	1.25" x 10T	10	40.5	35.0	28	881864002151	881864002155	881864002174
035	24 x 2.5	0.8" x 24T	24	25.5	20.4	18.27	881864002395	881864002422	881864002366
038	25 x 22	1" x 14T	14	32.5	25.0	22.0	881864002396	881864002423	881864002367
045	24/48-20-30°	0.875" x 20T	20	28.5	22.58	20.109	881864001777	881864001782	881864002368
047	24/48-23-30°	1" x 23T	23	32.5	25.994	22.995	881864002397	881864001826	881864002369
065	32/64-20-30°	17.3mm x 20T	20	24.5	17.305	15.08	881864002398	881864002424	881864002370
075	25 x 23	25mm x 24T	24	32.5	25.0	23.0	881864002399	881864002425	881864002371
076	24/48-22-30°		22	30.5	25.189	22.225	881864002400	881864002426	881864002372
081	20x18°		18	26.5	20.0	18.0	881864002401	881864002427	881864002373
091	24/48-23-30°		23	32.5	26.25	23.28	881864001774	881864001779	881864002172
092	23 x 3.14		23	30.5	24.2	21.8	881864002402	881864002428	881864002374
094	24/48-17-30°	20mm x 17T	17	25.5	19.9	16.92	881864002403	881864002429	881864002375
522	NA	26mm x 24T	24	32.5	26.0	24.0	881864002404	881864002430	881864002376
532	24/48-26-30°-5		26	34.5	29.55	26.5	881864002405	881864002431	881864002377
575	N24T-1-30°	1" x 24T	24	32.5	25.6	23.1	881864002406	881864002432	881864002378

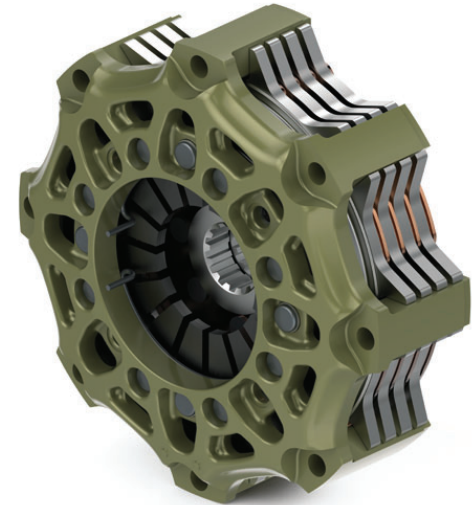
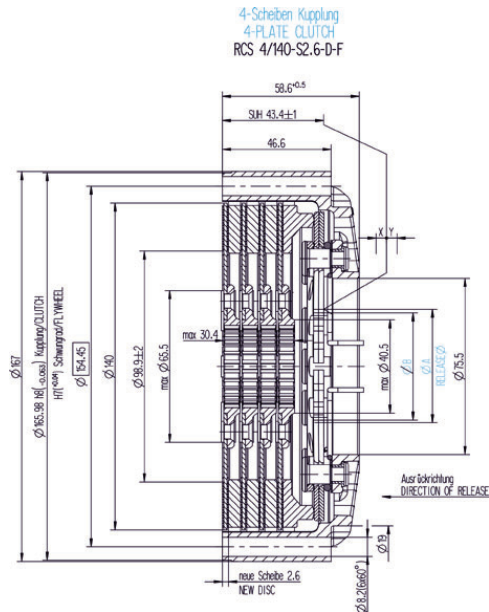
ZF Code	Spline Basic	Spline Inch	No. of Teeth	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]			
							K	M	L
802	25,2-1-30-24		24	32.5	25.2	22.6	881864002407	881864002433	881864002379
804	26x3.93		26	40.5	35.2	32.6	881864002408	881864002434	881864002380
808	24/48-25-30°		25	36.5	28.5	25.4	881864002409	881864002435	881864002381
812	24/48-28-30°		28	34.5	30.5	28.1	881864002410	881864002436	881864002382
820	22x3.93		22	34.5	29.0	26.5	881864002411	881864002437	881864002383
823	24/48-26-30°		26	34.5	28.68	23.83	881864002412	881864002438	881864002384
906	24/48-25-30°		25	34.5	28.04	24.87	881864001776	881864001781	881864002385
916	24/48-21-37.5°		21	30.5	24.308	21.387	881864002413	881864002439	881864002386
924	18.65 x 15.7		14	28.5	18.65	15.7	881864002414	881864002440	881864002387
926	20/40-21-30°		21	34.5	28.5	25.4	881864002415	881864002441	881864002388
927	24/48-21-30°	0.92" x 21T	21	28.5	23.75	21.19	881864002416	881864002442	881864002389
931	24/48-26-30°	1.16" x 26T	26	34.5	28.68	26.49	881864001775	881864001780	881864002173
935	24/48-18-37.5°		18	26.5	21.01	18.22	881864002417	881864002443	881864002390
938	28 x 2.36		28	28.5	22.1	20.3	881864002418	881864002444	881864002391
962	21.8 x 1 x 20		20	28.5	21.8	19.12	881864002419	881864002445	881864002392
980	32/64-26-37.5°		26	28.5	21.91	20.0	881864002420	881864002446	881864002393

The customer is required to check the chosen configuration and that it can be assembled clash free.

*) All red labelled driven discs are not compatible to be used as the first disc on the gearbox / diaphragm spring side with a release diameter of 38 mm or 44 mm respectively.

RCS 140-S2.6-D-F-XX

Key Dimensions



Selection of driven disc order number:

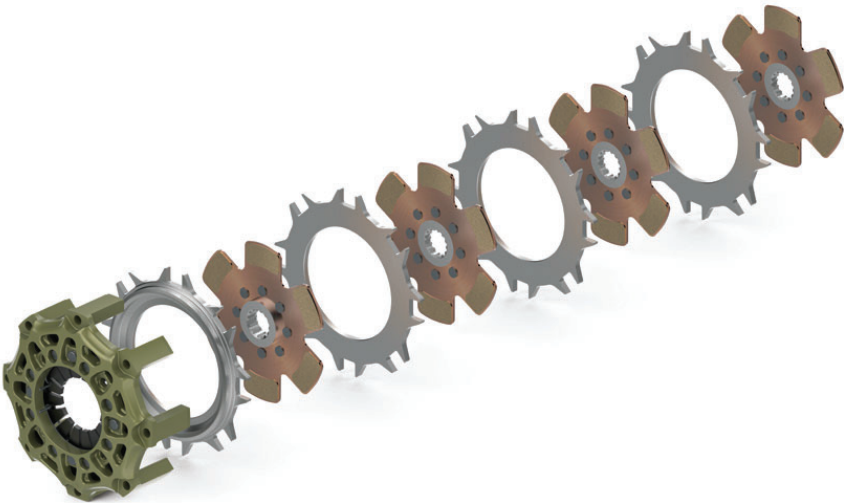
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- The order number of the driven discs is defined with the ZF Code / spline size application
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Technical Specifications

Selection Criteria			Technical Specification				Purchase Order Number					
Clutch Torque	Release ØA	Spring inner ØB	Release Force max.	Wear Range	Release Travel X	Wear Travel Y	Mass	Inertia	Housing	Pressure Plate	Intermediate Plate 003019000224	Driven Disc*
[Nm]	[mm]	[mm]	[N]	[mm]	[mm]	[mm]	[kg]	[kgm2]	Part Number	Part number	Qty.	Qty.
4-Disc Clutch												
1,910	49	46	4,900	1.5	4.0 +0.5	4.5	3.52	0.011207	003072000299	003002003632	3	4
1,910	38	34	4,200	1.5	4.5 +0.5	5.0	3.57	0.011214	003072000306	003002003632	3	4

More clutch torque without safety margin!

*) The order number for driven discs, according to the required hub spline configuration and spline selection can be found on the following pages

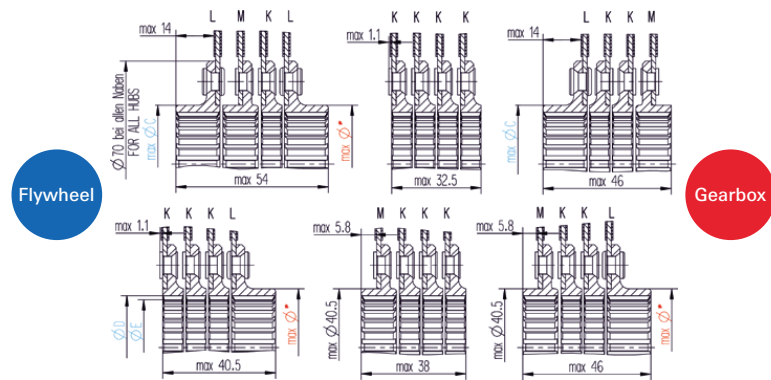


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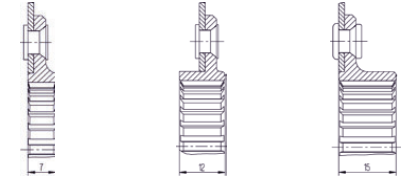
Hub Configuration

RCS 140-S2.6

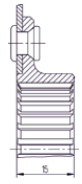
4-Disc Clutch



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