

OUTPUT OVERLOAD CLUTCHES

GSR1 • GSR2 • GSR3 • GSR4

GSR



- Rigid transmission and no backlash with clutch engaged.
- Automatic re-engagement of clutch and reset of transmission in phase.
- Accurate, constant operation.
- Release torque maintained over time.
- No maintenance necessary.



COLOMBO FILIPPETTI SPA

COLLABORATIVE ENGINEERING

CF1201 09-06

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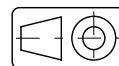
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The units of measurement correspond with System International /Severity Index SI General tolerances of manufacture are conform to UNI – ISO 2768-1 UNI EN 22768-1

Illustrations and drawings according to UNI 3970 (ISO 128-82).

Method of projection of the drawings.



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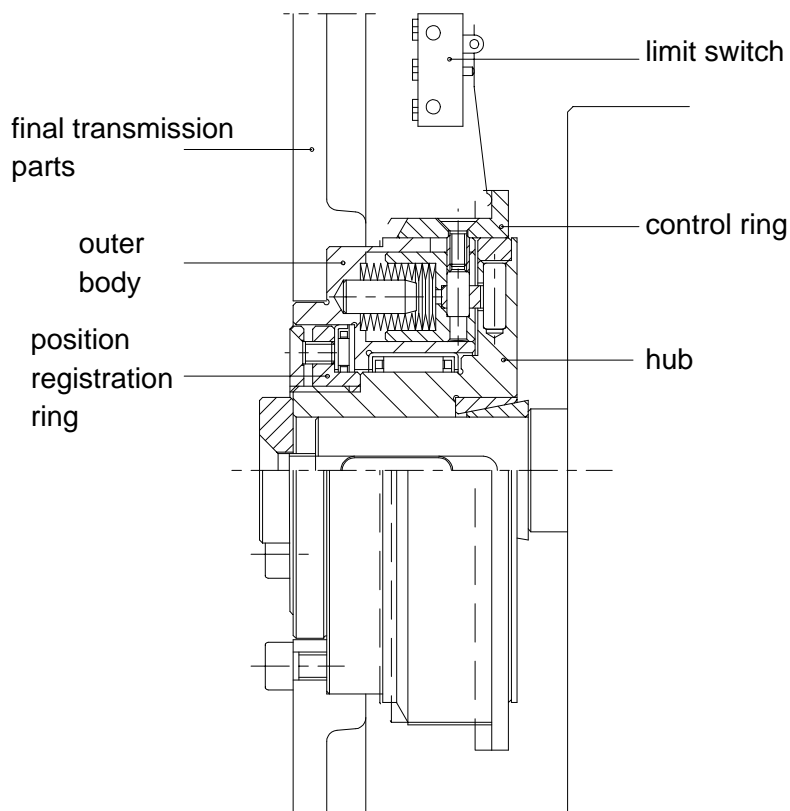
OPERATION

Under normal operating conditions, with the clutch engaged, torque is transmitted from the hub mounted directly on the output shaft of INDEX DRIVE CF3 to the external casing, to which the transmission parts (chain wheels, gears, shaft etc.) and the final intermittent motion parts (dial plates, rotary arms etc.) can be connected using a flange splining system. If a blockage should occur in the

intermittent motion system the outer casing locks and the hub driven by the CF3 INDEX DRIVE, rotating in correspondence to the outer casing, disengages the clutch, also causing axial movement of the detector plate. The movement of the detector plate can be used to active a limit switch, easily obtained on the market, which cuts off the energising circuit of the remote control on-off switch, thus causing the motor to shut down.

DESCRIPTION

The COLOMBO - FILIPPETTI OUTPUT OVERLOAD CLUTCHES are torque limiters designed to protect the CF3 INDEX DRIVES against accidental overload of intermittent motion parts during the cycle. They are mounted on the output shaft of the CF3 INDEX DRIVE and must meet the needs of the intermittent motion transmission.



When the cause of the jamb which has locked the transmission and caused the clutch to disengage has been remedied, the transmission can be reset in either of the following two ways:

1) Move transmission bak to original position.

2) Continue forward rotation until a full revolution of the CF3 INDEX DRIVE output shaft has been performed.

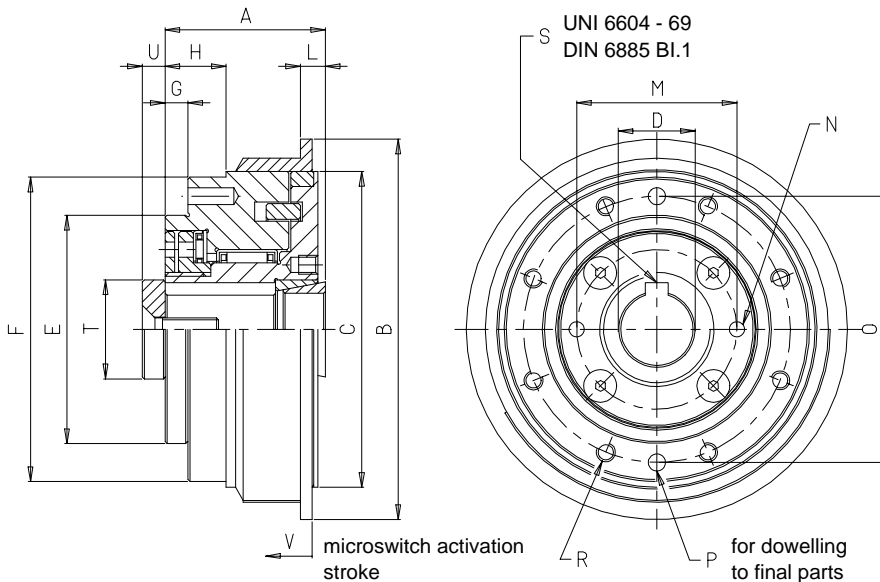
In both cases the OUTPUT OVERLOAD CLUTCH automatically reengages with the power factor of the transmission perfectly corrected.

DIMENSIONS AND CHARACTERISTICS

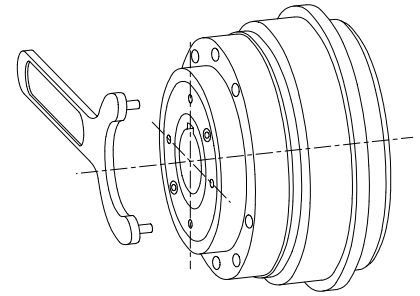
- The GSR OUTPUT OVERLOAD CLUTCHES operate in the same way in both directions of rotation.
- The dimensions of holes P shown in the table are such as to allow simultaneous boring with the part to be splined at the mounting stage.

These two holes are in phase with the hub keyway.

- The clutch is fitted with a pair of tapered locking rings which ensure rigid, backlash-free coupling to the CF3 INDEX DRIVE shaft.



TORQUE REGULATION



The OUTPUT OVERLOAD CLUTCH is normally supplied ready calibrated to the value of the maximum torque of the CF3 INDEX DRIVE to which it is connected. When it becomes necessary to alter the value of the release torque, the following procedure should be followed.

1) Loosen the two front screws on the adjuster plate.

2) Turns as follows with a spanner, using the 4 holes on the adjuster plate:

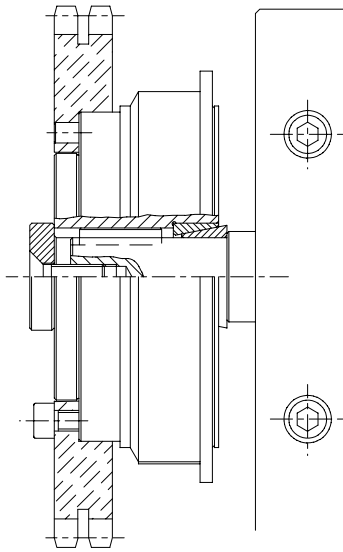
- *clockwise*, to increase release torque. When the plate locks, the maximum torque setting obtainable from the clutch has been reached.

- *anticlockwise*, to reduce the release torque. The minimum torque is that which provides backlash-free transmission.

Continue turning plate anticlock-wise to remove clutch.

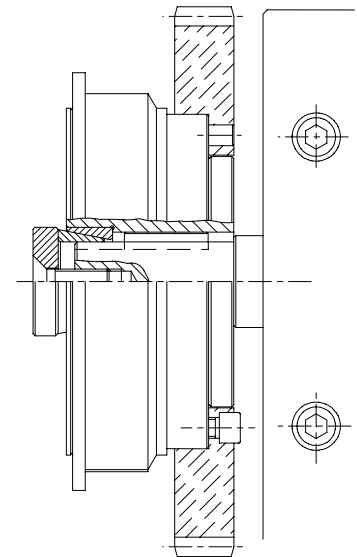
3) When the OUTPUT OVERLOAD CLUTCH has been calibrated to the required torque setting, lock the two fixing screws to prevent accidental rotation of the adjuster plate. The clutch is now ready for use.

Series	GSR-1	GSR-2	GSR-3	GSR-4
CF3 INDEX DRIVE	65 P	80 P	105 P	130 P
A	42	62	82	100
B	100	120	138	138
C	83	102	121	121
D ^{H7}	19	28	30	42
E ^{h6}	60	75	90	90
F ^{h6}	80	100	120	120
G	6	10	10	10
H	16	26	30	30
L~	7	9.5	18	37.5
M	42	53	72	72
N	4x6	4x6	5x10	5x10
O	70	88	105	105
P	4.5x10	4.5x10	6.5x16	6.5x16
R	M5x10	M6x12	M8x16	M8x16
S	6x6	8x7	8x7	12x8
T	28	38	38	50
U	6	8	8	10
V	1.5	2	3	3
Max torque [da N m]	8	16	32	56
Moment of inertia [Kg·m ²]	1.31x10 ⁻³	3.78x10 ⁻³	14.18x10 ⁻³	14.49x10 ⁻³
Mass [Kg]	1.36	3.57	5.81	6.58



MOUNTING POSITIONS

The GSR CLUTCHES may be splined to the CF3 INDEX DRIVE shaft in either of the two positions shown alongside. Do not hammer to mount and remove the CLUTCH to and from the shaft - use the systems described in the figures below.



MOUNTING IN POSITION WITH EXTERNAL COUPLING

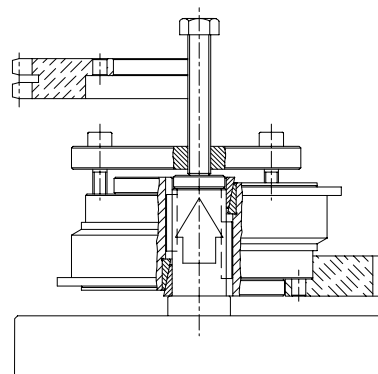
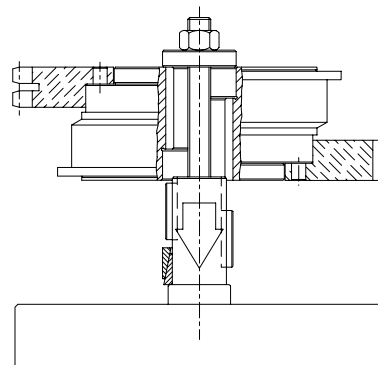
- Remove the tapered rings from the clutch seat and insert into shaft in the position shown.
- Insert the key in the correct position into its seat on the shaft.
- Insert the clutch in the shaft and spline, screwing the nut on the tie-bar.

Ensure that the key is centred to the clutch slot.

- Fix the clutch to the shaft with the washer and screw supplied.
- Connect the transmission parts to the clutch.

REMOVAL FROM POSITION WITH EXTERNAL COUPLING

- Disconnect transmission parts from clutch.
- Remove screw and washer fixing clutch to shaft.
- Using the threaded front holes, remove the clutch by screwing the bolt against the shaft.
- Remove key from shaft seat.
- Remove tapered rings



MOUNTING IN POSITION WITH INTERNAL COUPLING

- Remove tapered rings from the clutch seat and fix the transmission parts to them.
- Insert key in the correct position into its seat on the shaft.
- Insert the clutch in the shaft and spline, screwing the nut on the tie-bar.

Ensure that the key is centred to the clutch slot.

- Insert the tapered rings in the seat and fix the clutch to the shaft with the washer and screw supplied.

REMOVAL FROM POSITION WITH INTERNAL COUPLING

- Remove screw and washer fixing clutch to shaft.
- Using the removal holes, remove clutch by screwing the bolt against the shaft.
- Disconnect transmission parts from clutch.

N.B.: The GSR OUTPUT OVERLOAD CLUTCHES are designed only to protect the CF3 INDEX DRIVES from internal breakage, and does not protect either persons or parts from accidents or damage

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