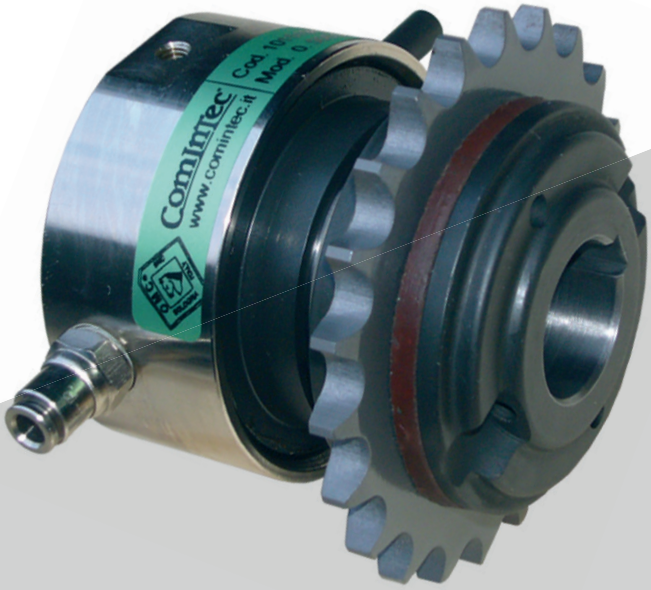
ComInTec®
Safety in Power Transmission

PNEUMATIC CLUTCHES

up to 30 KNm and 120 mm bore diameters



ED. 07/2021

- Download catalogue
- Download instruction sheets

AP

AP - pneumatic clutches: introduction

- Simple and precise calibration.
- Transmission engagement / disengagement and torque limiter functions (safety coupling).
- Reliability and repetitiveness of the calibration torque.
- Torque variation whilst in motion, by pressure regulation.
- Free rotation after the disengagement through a complete disconnection between the parts.
- Low residual torque on disconnected parts.
- Models available only with finished bore.

ON REQUEST

- Complete with transmission element machined and assembled (plate wheel, pulley, gear, ...).
- Can be supplied with various types of rigid/elastic couplings for in-line shafts transmission.
- Possibility of shaft connection with finished bore, locking assembly or other systems.
- Available in anti-corrosive version, with specific surface treatments.

A friction clutch or roller with torque adjustment even during operation. Ability to disengage the drive and driven by pneumatic or electrical impulse. Low residual torque after disengagement. Calibration adjustable by changing the pressure (pneumatic) air supply.

APPLICATION FIELD

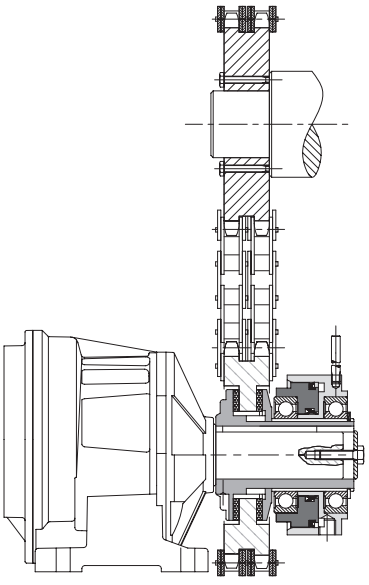
- Machines with variable torque requirements.
- Test benches.
- Coiler and uncoilers.
- Cut format systems.

ADVANTAGES AND BENEFITS

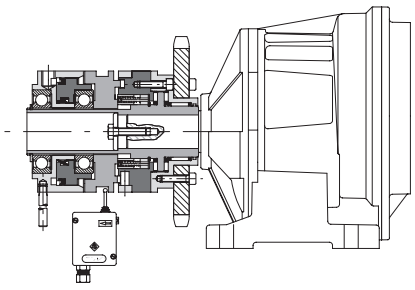
- Engage/disengage different product transmission lines.
- Maintain tension of wire/film coils.
- Regulate different torques depending on the change of the format.
- Protect the motor gearbox against every form of overload.

	DSR/F/AP: Complete engagement-disengagementof the transmission, also for long periods	from 7 to 30 KNm 120 mm max bore	Page 67
	DSR/F/AP + GEC: compact coaxial connection for simple maintenance without being forced to remove the coupling	from 7 to 30 KNm 180 mm max bore	Page 68
	DSF/TF/AP: friction motion transmission as tensioner.	from 3 to 875 Nm 65 mm max bore	Page 69
	DSF/TF/AP/TAC: simple and economic coaxial shaft connection.	from 3 to 875 Nm 80 mm max bore	Page 70

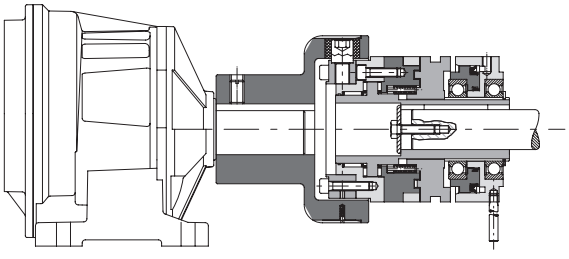
ASSEMBLY EXAMPLES



*Model **DSF/TF/AP** with plate wheel for parallel shaft transmission.*



*Model **DSR/F/AP** with plate wheel for parallel shaft transmission.*



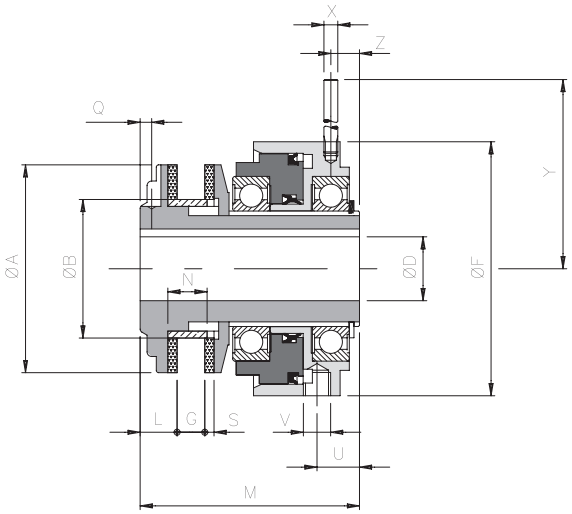
*Model **DSR/F/AP** Compact elastic coupling **GEC** for coaxial shaft transmission.*

NOTES

- Avoid rigid locking of the anti-rotating pin of the cylinder as it can cause imbalances during rotation.
- The engagement of these devices must take placve at low speed or with the machine stopped.

DSF/TF/AP - friction pneumatic clutch: technical data

- Friction torque transmission.
- As tensioner, brake and torque limiter (safety coupling).
- Constant adjustment of the calibration torque.
- Available with special friction rings for specific requirements.
- Available in version to stop the transmission after an overload: .../SI.
- Torque range: 3 – 875 Nm; max. bore ø 65 mm.



DIMENSIONS AND TECHNICAL DETAILS

Size	A	B h7	D H7		F	G		L	M	N	On request	S	U	V	Z	X	Y	Inertia	max speed	Weight
			min	max		min	max				Q							*[Kgm²]*	*[Rpm]*	*[Kg]*
0.50	50	36	8	19*	56	3,5	6	11	62	10	3,5 - M4	3	11	1/8”	7	6	58	0,000065	7600	0,7
1.70	70	45	10	25*	90	5	10	15	85	15	4,5 - M4	4	14,5	1/4”	10,5	6	80	0,000332	5450	2,4
2.90	90	60	15	38	110	6,5	12	16	95	17	5 - M6	4	17,5	1/4”	13,5	8	105	0,001024	4250	4,3
3.115	115	72	19	45	130	9	16	18	113	21	5 - M6	4	18,5	1/4”	14,5	8	115	0,004192	3350	7,0
4.140	140	85	25	55	160	13	19	20	128	25	6 - M6	5	24,5	1/4”	17	10	146	0,008521	2750	11,9
▲ **5.170**	170	98	29	65*	215	15	22	22,5	139,5	28	6,5 - M8	5	26,5	1/4”	18	12	184	0,019153	2250	19,8

TORQUE TRANSMISSION

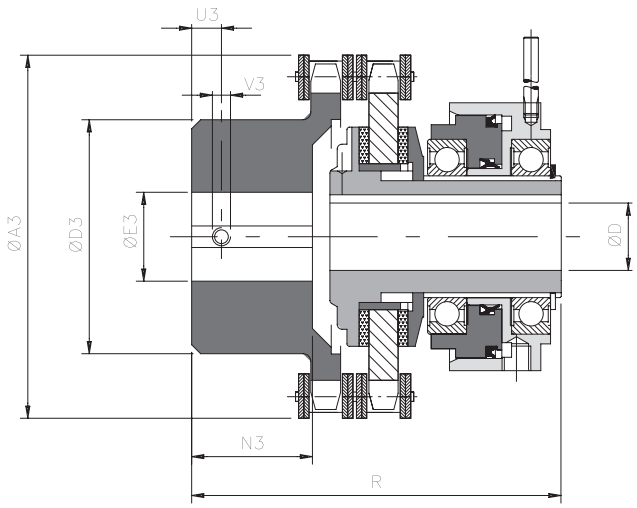
Size	Torque *[Nm]*	Torque transmission *[Nm]* in according to pressure *[bar]*						
		1	**2**	**3**	**4**	**5**	**6**	**10**
0.50	3 - 20	3	5	7	9	11	13	20
1.70	6 - 70	6	10	19	28	36	43	70
2.90	15 - 135	15	27	42	57	73	88	135
3.115	25 - 220	25	52	79	105	130	153	220
4.140	70 - 330	70	115	145	175	205	230	330
▲ **5.170**	170 - 875	170	280	390	500	600	700	875

▲ On request

NOTES

- **DH7*:** finished bore max diameter with reduced keyway UNI7510.
- Weights are relevant only to the connection (DSF/TF/AP), inertias refer to the connection (DSF/TF/AP) hole max.

.../TAC - version with chain coupling: technical data

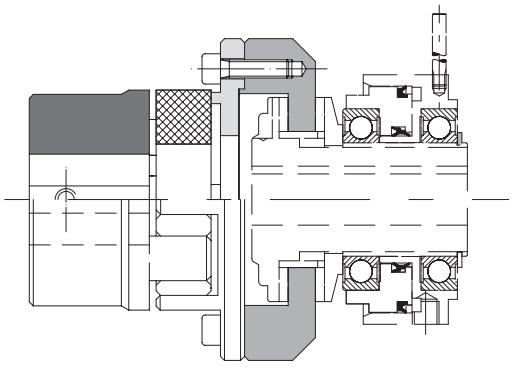


DIMENSIONS

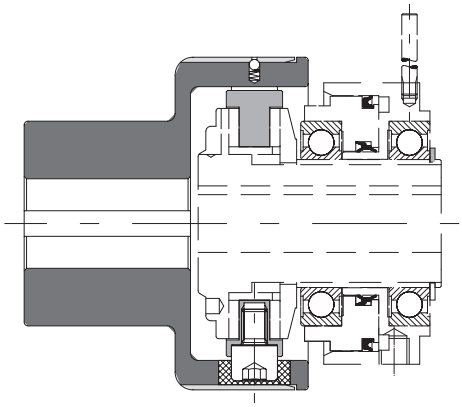
Size	Torque *[Nm]*	A3	D3	E3 H7		N3	D H7		F	R	U3	V3	Max speed *[Rpm]*	Weight *[Kg]*
				pilot bore	max		min	max						
0.50	3 - 20	75	50	12	28	19	8	19*	56	84	8	M4	7600	0,6
1.70	6 - 70	101	70	16	38	29	10	25*	90	117	8	M6	5450	1,7
2.90	15 - 135	126	89	20	55	38	15	38	110	138	12	M6	4250	4,1
3.115	25 - 220	159	112	20	70	56,5	19	45	130	174	12	M6	3350	7,1
4.140	70 - 330	184	130	28	80	59	25	55	160	193,5	15	M8	2750	14,1
▲ **5.170**	170 - 875	216	130	30	80	88	29	65*	215	233	15	M8	2250	19,2

▲ On request

OTHER COUPLING MODELS



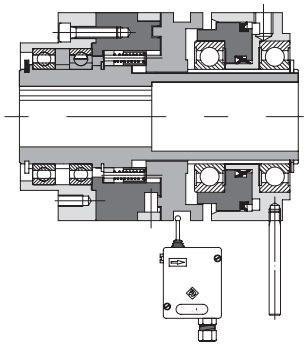
*Model **DSF/TF/AP** with elastic jaw coupling **GAS** to accomodate high misalignments.*



*Model **DSF/TF/AP** with compact elastic coupling **GEC** for simple maintenance without removing the coupling.*

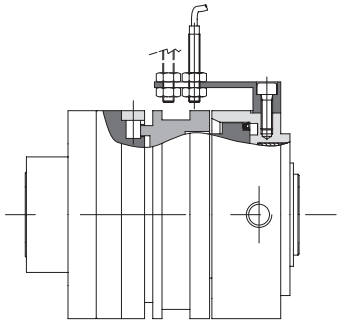
NOTES

- Data is relevant to the whole assembly (DSF/TF/AP/TAC).
- Weights are relevant only to the pilot bore (DSF/TF/AP/TAC).
- **DH7*:** finished bore max diameter with reduced keyway UNI7510.



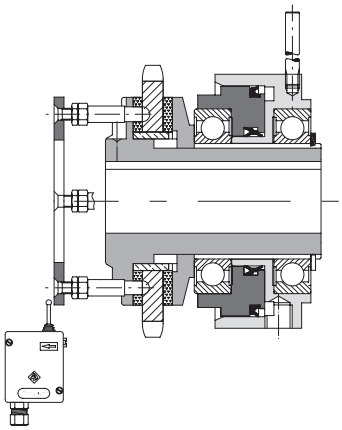
DSR/F/AP/CS

Version with ball bearings as an alternative to the rollers.
Suitable for long rotation on disengagement.



.../PRX

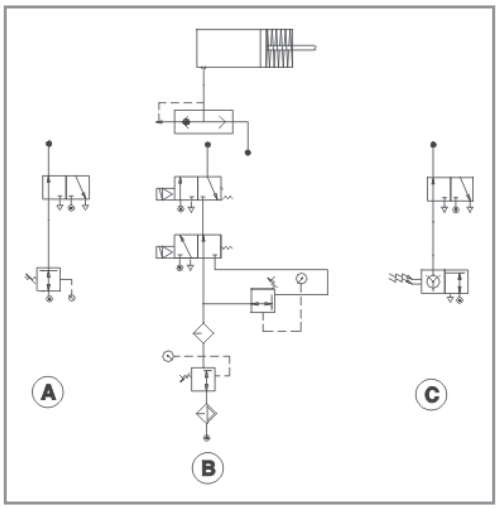
Version with proximity inductive sensor PRX M8x1, integrated into the DSR/F/AP. Compact and versatile solution, without adding equipment and/or external components.



DSF/TF/AP/SI

Friction clutch with intervention signal and further automatic re-engagement. This characteristic requires particular machining on the drive element, which has to be supplied together with the torque limiter.

AP - pneumatic clutch: additional information



EXAMPLE CIRCUIT CONNECTION TYRE

The pneumatic clutch are designed for the connection of pneumatic circuit with connection type *"GAS"*.
Some examples for the control to the pressure are shown here:

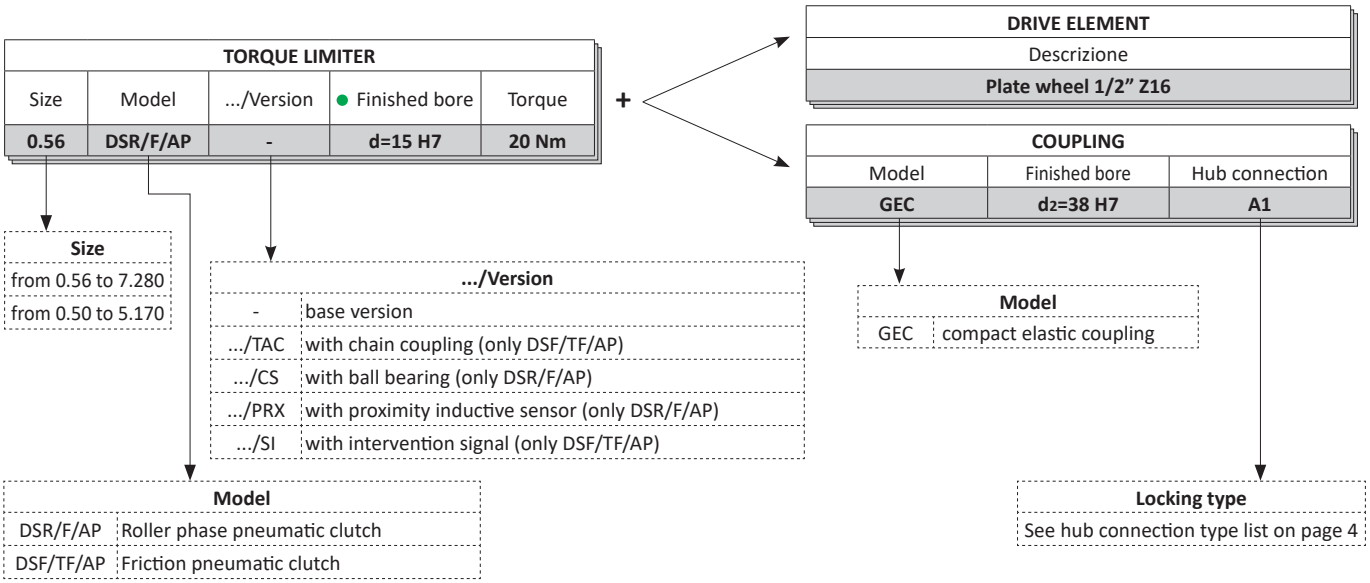
A) Adjustable pressure with pressure regulator.

B) Control of two pressures using solenoid valves.

C) Control of variable pressure by PLC.

AP - pneumatic clutch: additional information

ORDER EXAMPLE



- Both models available only with finished bores.