

MADE
IN
GERMANY



**Electromagnetic
Technology**



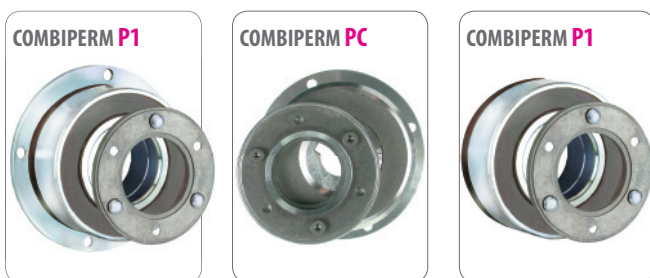
Safe braking and holding



COMBISTOP

Electromagnetically actuated dual-surface spring applied DC brakes for dry operation.

... starting from page 4



COMBIPERM

Permanent magnet brakes and clutches for dry operation.

... starting from page 16

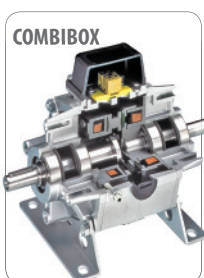
SWITCHING, STOPPING, POSITIONING



COMBINORM

electromagnetic-actuated open-circuit operated clutches and brakes without slip rings.

... starting from page 22



COMBIBOX

a ready to be installed electromagnetic- actuated clutch-brake-module

... starting from page 36

POWER SUPPLY / SWITCHGEAR



COMBITRON

DC-supply from the alternating voltage supply system and electronic switches for electromagnetic clutches and brakes.

... starting from page 44

COMBINORM - operating-current operated brakes and clutches use the flux of an electromagnet, concentrated on two pole surfaces, for the connecting, separating or holding of shafts and the connected loads.

COMBINORM covers a complete program with brakes, clutches and combinations as installation and attachment components for the applications in machines, plants and equipment in the application range of 0.5 to 500 Nm.

On request we adapt the **KEB COMBINORM** to your constructional and electrical requirements.

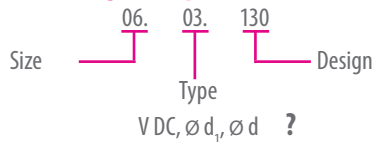
Program Schedule

COMBINORM Operating-current operated brakes and clutches			
Operating current brake	0.5 ... 500 Nm	page 24	COMBINORM B
Operating current clutch-brake-combination	7 ... 500 Nm	page 26	COMBINORM K
Operating current clutch	0.5 ... 500 Nm	page 26	COMBINORM C
Operating current toothed clutch	21 ... 390 Nm	page 32	COMBINORM T

Technical Data

Switching times	page 34
Moments of inertia, friction, rating	page 35
Dimensioning / Calculations	page 50
Bores table COMBINORM / COMBIPERM	page 51

Ordering example: **COMBINORM C**

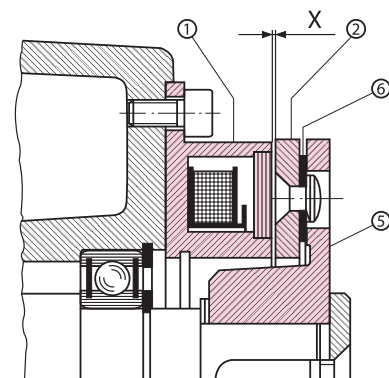


Installation Examples

flange mounted brakes

COMBINORM B ...02.120...

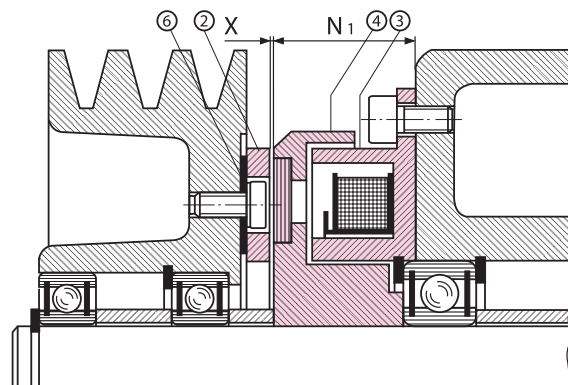
- ① brake magnet
- ② armature
- ⑤ hub
- ⑥ spring



flange mounted clutches

COMBINORM C and T ...03.110...

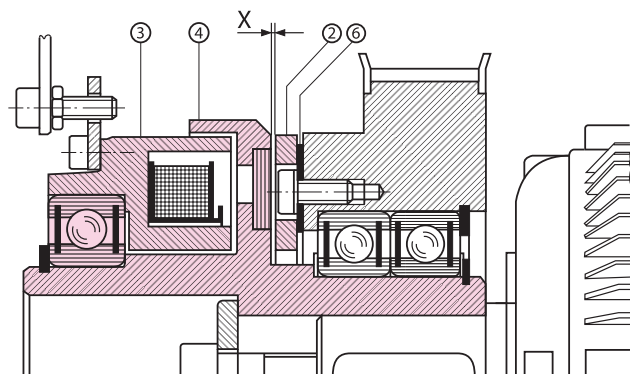
- ② armature
- ③ clutch magnet
- ④ rotor
- ⑥ spring



shaft mounted clutches

COMBINORM C and T ...03.810...

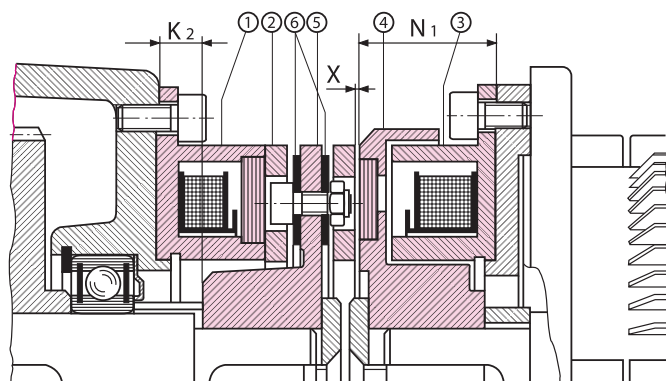
- ② armature
- ③ clutch magnet
- ④ rotor
- ⑥ spring



clutch-brake-combination

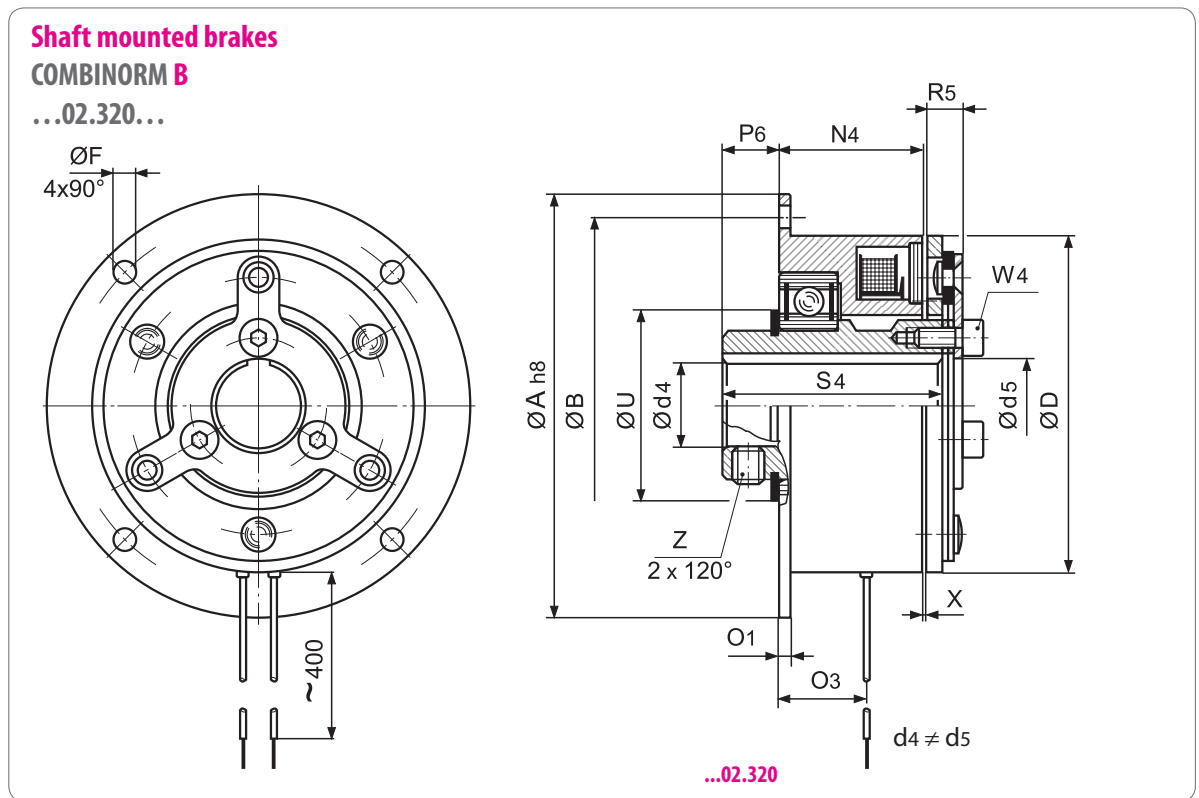
COMBINORM K ...04.170...

- ① brake magnet
- ② armature
- ③ clutch magnet
- ④ rotor
- ⑤ hub
- ⑥ spring



COMBINORM B are the most economical solution for the deceleration and holding of loads for the flange- and shaft-mounted installation in machines and plants. The magnets with a rated voltage of 24 V DC are designed according to ISO class B and are available in various special voltages on request.

COMBINORM

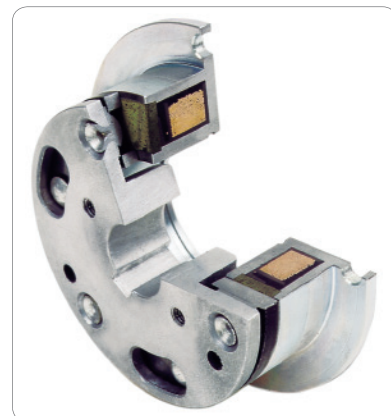


available shaft diameters page 51

Size	M _{2N} ¹⁾ [Nm]	P ₂₀ [W]	A _{h8}	B	C ^{H8}	C ₁	C ₂	d/d ₄ max	d ₅	D	E	F	G	H	J	K	K ₁
01	0.5	6	39	33.5	11	13.5	-	6		28	19.5	3.4	2 x 2.1	5.3	4.5	-	-
02	0.75	6	45	38	13	16	13.6	8		32	23	3.4	3 x 2.6	6	5	3	1.1
03	1.5	8	54	47	19	22	20	10		40	30	3.4	3 x 3.1	6	5.5	3	1.1
05	3	10	65	58	26	24	27	15		50	38	3.4	3 x 3.1	6.5	5.5	3.2	1.3
06	7	12	80	72	35	32	36	20	18	63	50	4.5	3 x 4.1	10	8	3.5	1.6
07	15	16	100	90	42	38	43.5	22	21	80	60	5.5	3 x 4.1	11	8	4.25	1.85
08	30	21	125	112	52	48	53.8	30	28	100	76	6.6	3 x 5.1	11.5	10	5	2.15
09	65	28	150	137	62	58	63.8	35	35	125	95	6.6	3 x 6.1	15	11.5	5.5	2.15
10	130	38	190	175	80	73	82.1	45	44	160	120	9	3 x 8.1	21	14.5	6	2.65
11	250	50	230	215	100	92	102.1	60		200	158	9	3 x 10.1	19	17.5	7	3.15
12	500	65	290	270	125	112	127.4	70		250	210	11	4 x 12.1	28	20.5	8	4.15
13	Dimensions and technical data see drawing 02.004-4-01001																

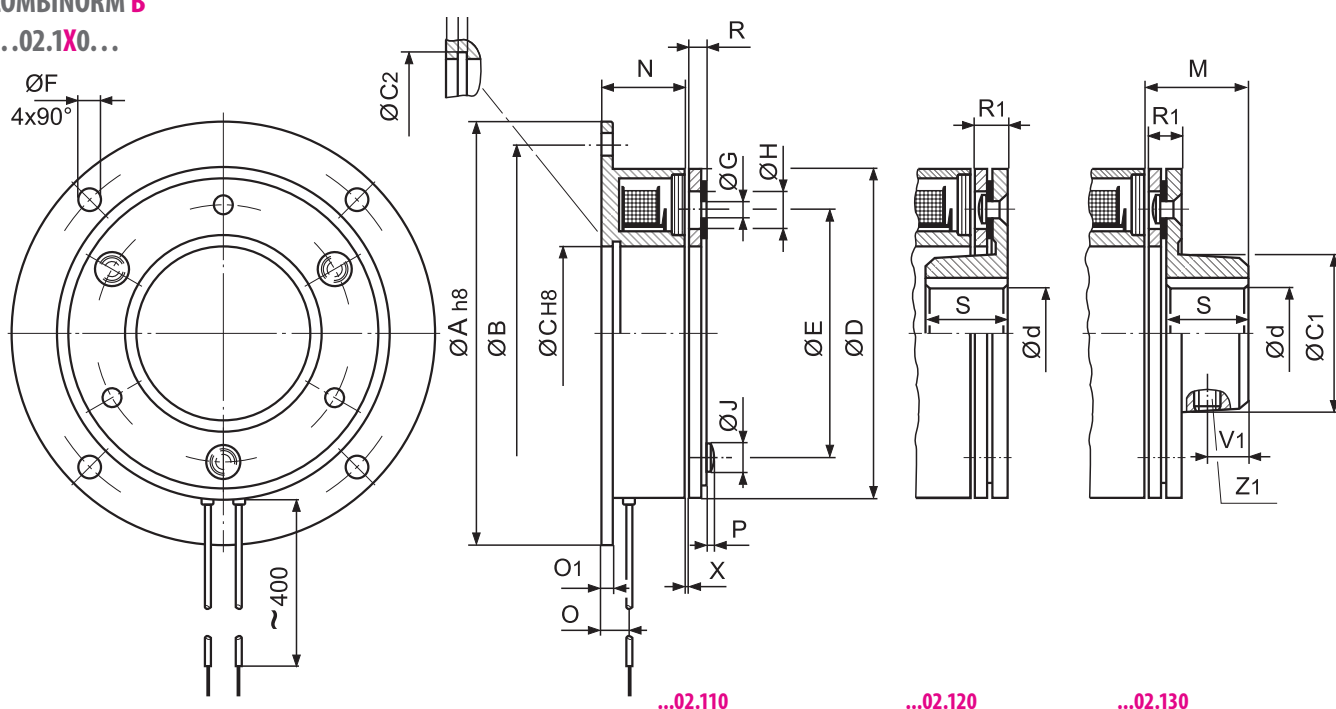
All dimensions in mm keyway according to DIN 6885/1-P9 Standard voltage 24 V DC VDE 0580, ISO-class „B“ ¹⁾ rated torque after running in process

Range of application: e.g. mail processing, winding equipment, door and gate systems, roller conveyor, strapping machines, balancing machines, sorting machines.



**Flange mounted brake
COMBINORM B**

...02.1X0...



...02.110

...02.120

...02.130

M	N	N ₄	O	O ₁	O ₃	P	P ₆	R	R ₁	R ₅	S	S ₄	U	V ₁	W ₄	X	Z	Z ₁	Weight [kg]		
																			110	120/130	320
9.3	13.7		5	1.5		1		2.3	4.3		7			2.5		0.1		1 x M 3	0.05	0.05	
12.1	17		7.5	2		1.3		2.1	4.1		10			4		0.15		1 x M 3	0.1	0.1	
14.7	20		7	2		1.5		2.7	5.3		12			5		0.15		1 x M 4	0.15	0.15	
15	22		7.5	2		1.5		3	6		12			5		0.2		1 x M 5	0.2	0.25	
18.8	18	31.2	6	3	19	2	9.3	3.8	7.3	6.3	15	45	39	6	M4	0.2	M6	1 x M 6	0.3	0.3	0.8
24.3	20	34.2	7	3	21.5	2	13.2	4.3	8.3	6.9	20	52.5	45	8	M5	0.2	M8	1 x M 6	0.5	0.6	1.5
31	22	38	8	4	24	2.5	13.5	6	11	9.3	25	58.5	56	10	M6	0.2	M8	1 x M 8	0.9	1.1	2.7
36.9	24	40	9	4	25	3	13.8	6.9	12.9	10.9	30	62	61	12	M8	0.3	M8	2 x M10	1.7	2	4.2
46.9	26	46.3	11	5	31.5	4	17.3	8.9	15.9	14.1	38	74	84	15	M10	0.3	M10	2 x M10	3.2	4	7.8
59.2	30		12	5		4.5		11.2	20.2		48			19		0.4		2 x M12	5.9	7	
68	35		15	6		5		13	24		55			22		0.4		2 x M12	11.2	13.5	