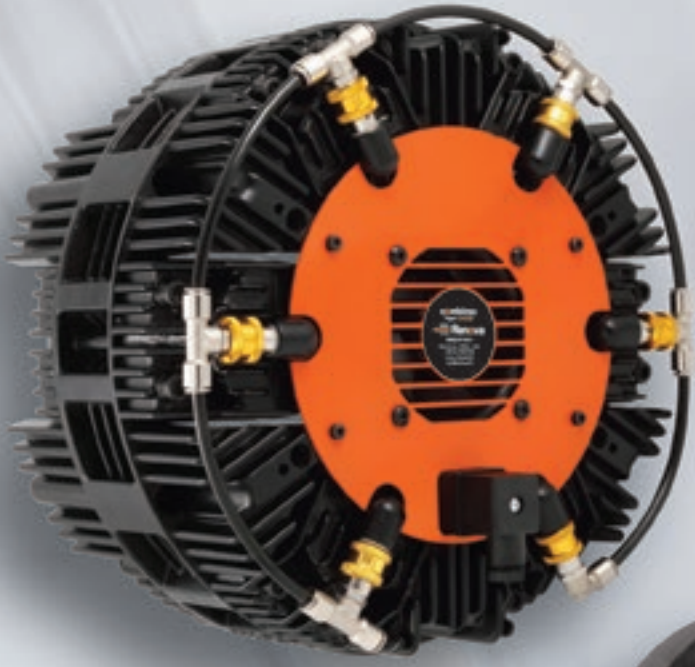


pneumatic brake ■



 **Renova**
WE NEVER LOSE CONTROL

combirex

- Torque ratio for each caliper: 1.5-160 Nm
- Air pressure: 0.2 - 6 bar
- Thermal power: 3kw at 100 RPM
- Max RPM: 2500

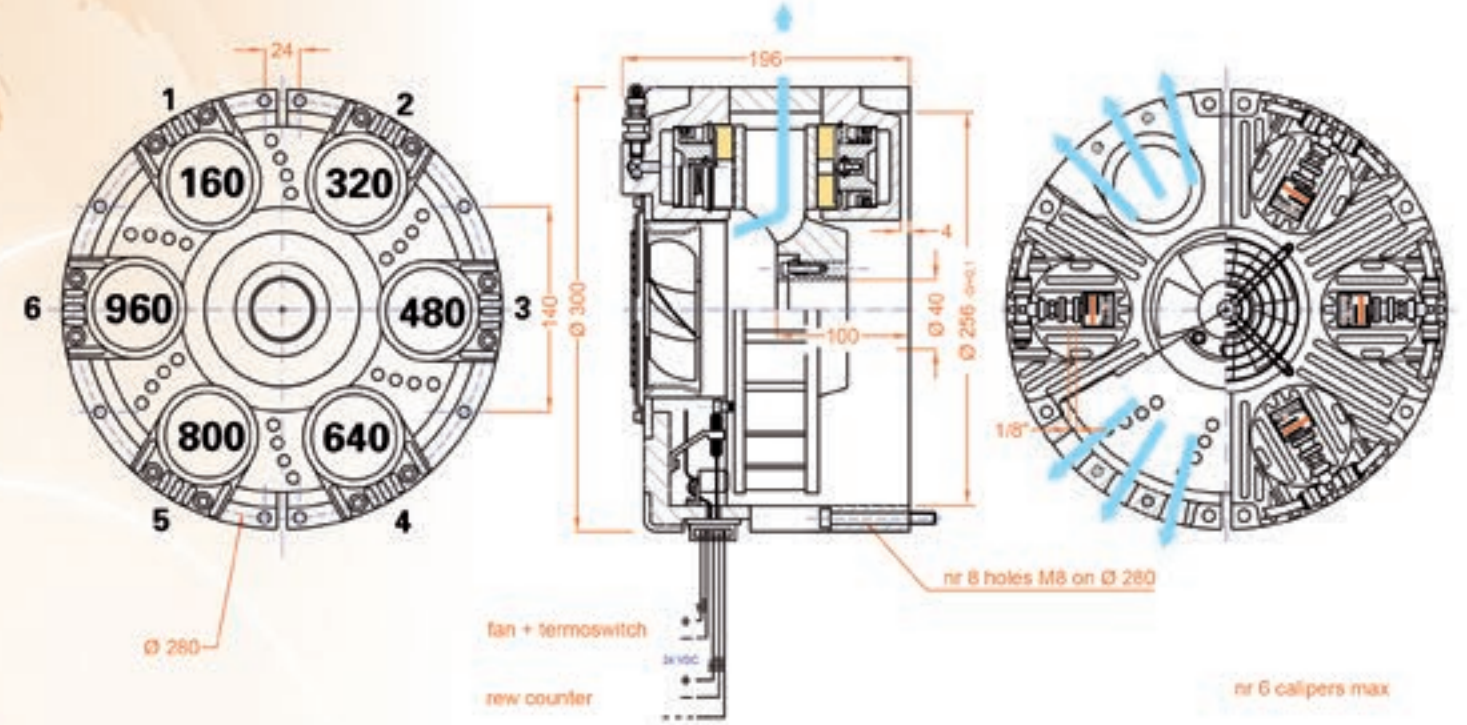


combirex CX250

Pneumatic brake for the web tension control on all unwinders

Tecnology
Mono-disc, multi-caliper
air-cooled brake

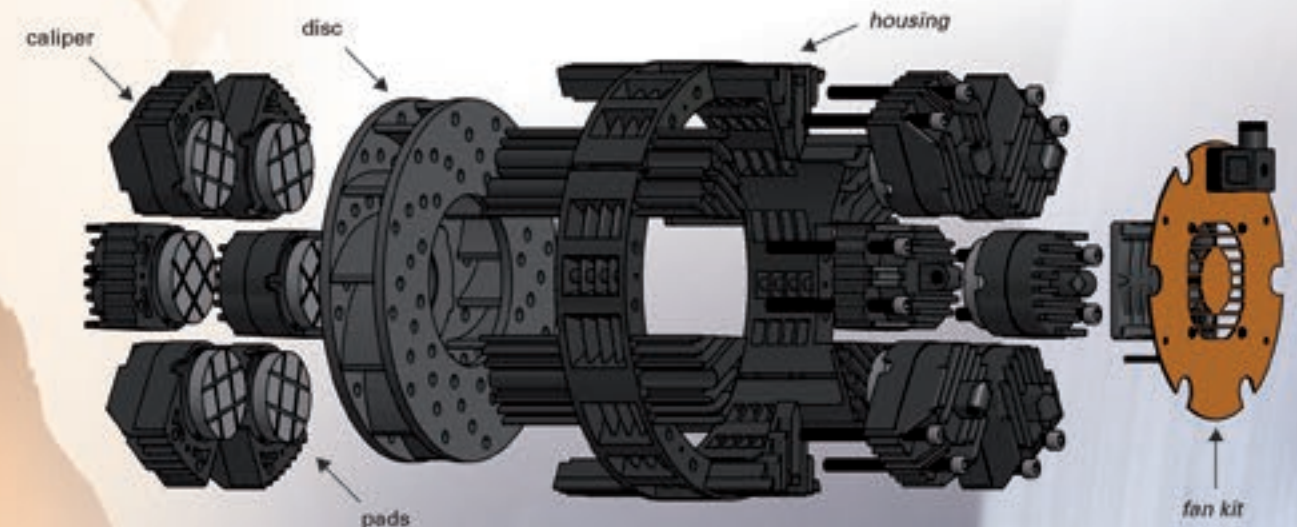
It reaches a maximum torque of 960 Nm and a power dissipation of 3 kW. This CX model uses a 250 mm disc and it is available with up to 6 calipers.



applications

- PAPER&CONVERTING**
sitters and sheeters
- CORRUGATED BOARD**
corrugators and bridge applications
- FILM** plastic, aluminium, adhesive tape and all laminates for flexible packaging
- PRINTING** flexographic and gravure printing machines, labeling machines
- OTHER** all applications where there is a roll to unwind or rewind.

Model	Number of calipers	Torque (Nm) 6-0,2bar	Heat dissipation (kW)		
			Fan 24 Vdc HP1	Fan 24 Vdc HP2	Fan 24 Vdc HP3
CX 250.1	1	160 - 1,5	3,5	4	4,5
CX 250.2	2	320 - 3			
CX 250.3	3	480 - 4,5			
CX 250.4	4	640 - 6			
CX 250.5	5	800 - 7,5			
CX 250.6	6	960 - 9			

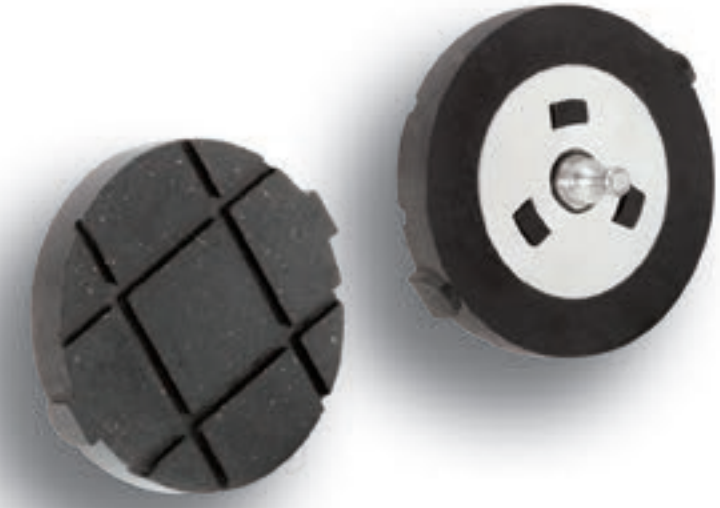


**the difference
is orange**

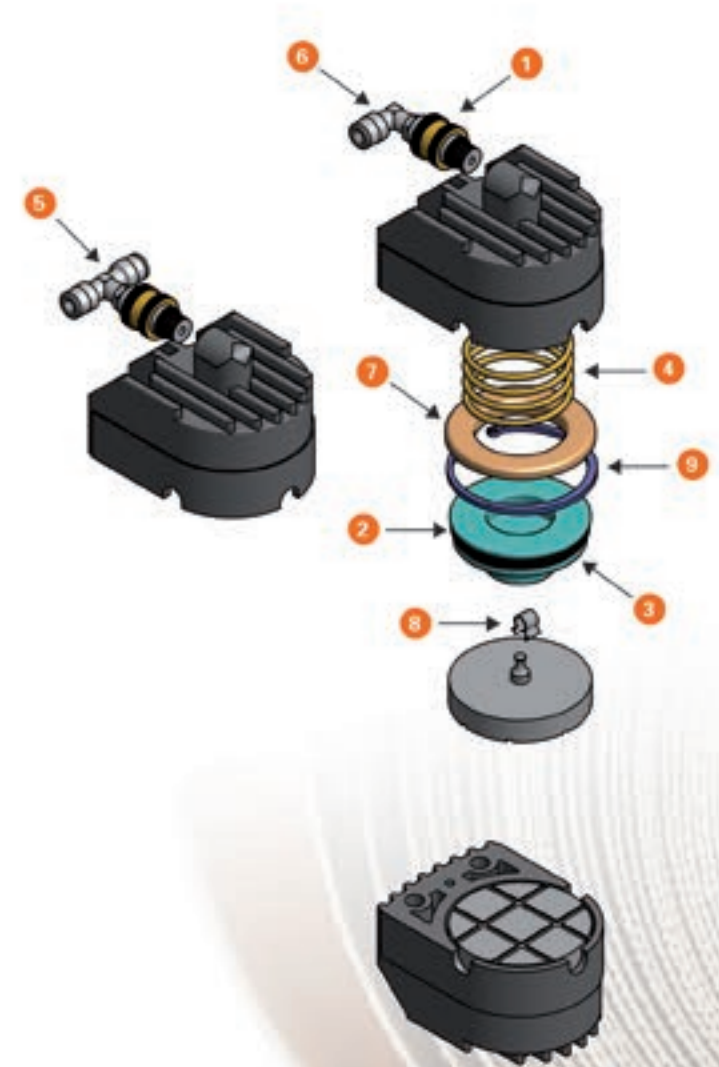
CX250 spare parts

Renova offers a wide range of spare parts for all the brakes series CX250

100% INTERCHANGEABLE ■
HIGH QUALITY GUARANTEED! ■

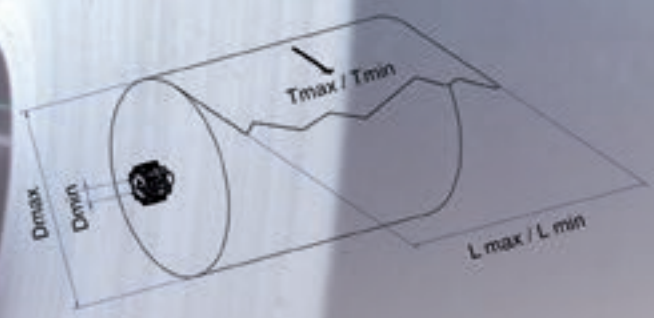


CALIPERS



description	Code
Complete caliper	00CX250P00
1 Selector	SELAIRCX250
2 Dem gasket	00DEM63250
3 Complete piston	00CXP25000
4 Spring	00CXMO8910
5 Rapid fitting TEE for caliper	00CXRT1080
6 Rapid fitting ELBOW for caliper	00CXRL1080
7 Locking ring	00CX250ANP
8 Pad spring	00CXMO9010
9 Seeger	00CXAS3065

Brake selection guide



unit of measure

$T_{max/min}$	max/min web tension [N]
T_s	web tension per centimeter [N/cm]
$D_{max/min}$	max/min roll diameter [m]
$L_{max/min}$	max/min web width [cm]
m	Roll maximum weight [Kg]
v	web speed [m/min]
p	heat dissipated [kW]
t	braking time [s]

tensioning

$T_{max} = T_s \cdot L_{max}$	maximum web tension
$T_{min} = T_s \cdot L_{min}$	minimum web tension
$C_{fmax} = \frac{D_{max} \cdot T_{max}}{2}$	maximum torque
$C_{fmin} = \frac{D_{min} \cdot T_{min}}{2}$	minimum torque
$P = \frac{T_{max} \cdot v}{60 \cdot 10^3}$	heat dissipated


emergency stop

$C_{fmax} = \frac{m \cdot D_{max} \cdot v}{240 \cdot t}$	torque
--	--------






Specific tension values for materials

Paper			
Weight g/m ²	10-15	30-60	100-200
Web tension [N] per centimeter Ts	0,3 - 0,4	1 - 2,5	3,5 - 7
Board			
Weight g/m ²	100-150	200-300	400-700
Web tension [N] per centimeter Ts	5 - 7,5	10 - 11,5	16 - 18
Cellophane (N/cm for μ of thickness)	0,042		
Polyethylene (N/cm for μ of thickness)	0,01 - 0,02		
Polypropilene (N/cm for μ of thickness)	0,015 - 0,025		
Aluminium (N/cm for μ of thickness)	0,035 - 0,105		

PADS 

**environment respect
safe for the operator** 

Renova's high quality pads are asbestos, hexavalent chromium, mercury, cadmium, antimony, lead FREE!

-  **Reduced powder emission**
-  **High life span**
-  **Waterproof**
-  **Rohs compliance**
-  **High performance**

new formula!

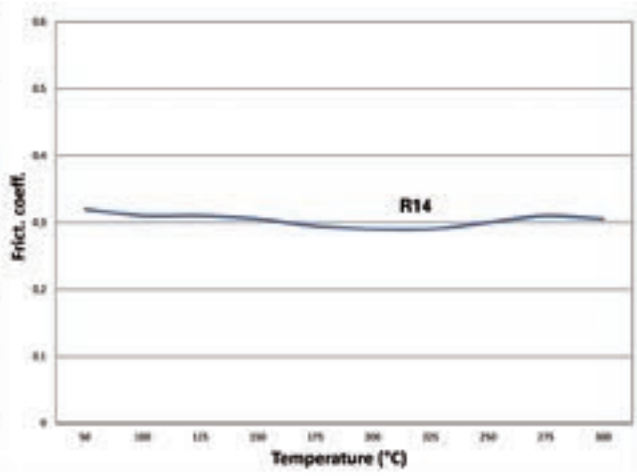
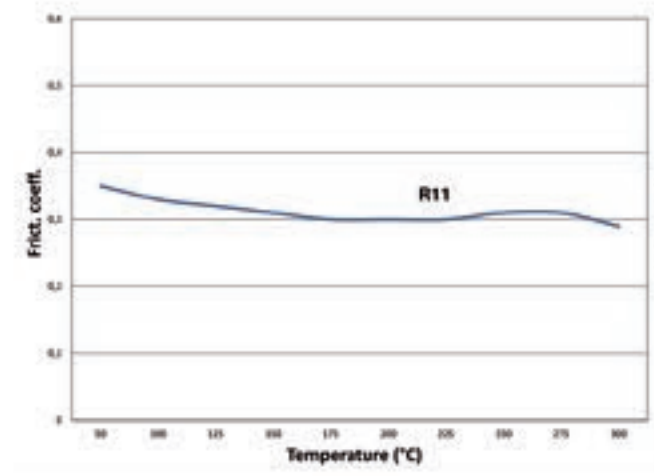
R11



R14



Modello / Model	Codice / Code
Standard pads (R11)	00CX250PR11
Anti-rotation pads (R14)	00CX250PR14
Anti-vibration pads (R11)	00CX250PR11A
Generic pads with anti-vibration ring and anti-rotation ring (R14)	00CX250PR14A



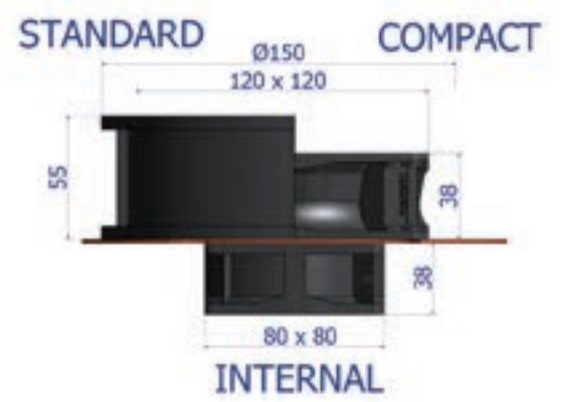
FAN 

Upgrade kit fan cover + fan

Model	Code
KIT HP1 (fan cover + INTERNAL 24Vdc HP1)	KVCX000000
KIT HP2 (fan cover + INTERNAL 24Vdc HP2)	KVCX0000H30
KIT HP3 (fan cover + INTERNAL 24Vdc HP3)	KVCX0000H40

Spare parts

Model	Code
STANDARD (Ø150X55) 24 Vdc	VT15000024
STANDARD(Ø150X55) 220 AC	VT15000220
STANDARD(Ø150X55) 110 AC	VT15000110
COMPACT (120X120X38) 220 AC	VT12038220
COMPACT (120X120X38) 110 AC	VT12038110
COMPACT (120X120X38) 24Vdc	VT12038024
COMPACT (120X120X38) 24Vdc HP4	VT120380H4
COMPACT (120X120X38) 24Vdc HP6	VT120380H6
INTERNAL (80x80x38) 24 Vdc HP1	VT80038024
INTERNAL (80x80x38) 24Vdc HP2	VT800380H3
INTERNAL (80x80x38) 24Vdc HP3	VT800380H4



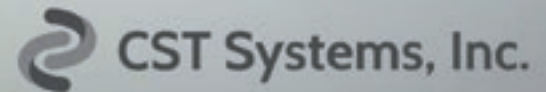
DISC 

Model	Code
Disc hole 35mm for taper lock	DCCX250D35C
Disc hole 40mm for taper lock	DCCX250D40C
Disc hole 45mm for taper lock	DCCX250D45C
Disc hole 50mm with keyway	DCCX250D50K
Disc hole 60mm with keyway	DCCX250D60K

all other dimensions are available - customizable disc



USA distributor:



705 Laurel Chase SW
Marietta, GA 30064
www.cstsystems.net
sales@cstsystems.net
Phone: (770) 425 3353
Fax: (770) 425 3304

Renova Srl is an Italian manufacturer and supplier of web tension control systems with more than four decades of application know-how.

With its wide product range, Renova extends its business to many application fields (corrugated board, paper & converting, printing & flexo, film, tapes, tissue, plastic and tire) to the complete satisfaction of the most important machine builders and end users.

Renova's brakes, chucks, load cells, roll pushers, and web tension control panel are all 100% designed and made in Italy. This Renova choice is representative of a direct control of the entire production chain to ensure the highest product quality.



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