

mechanical  
chucks



 **Renova**  
WE NEVER LOSE CONTROL

mechanical chucks

mechanical chucks

## mechanical chucks

Renova's mechanical core chucks are engineered to deliver the most reliable web tension with the least maintenance. With robust parts, simple movements, and best-in-industry jaw expansion, Renova chucks will out-last and out-perform in every production environment.

### a simple design creates reliability and durability

The Renova chuck is robust. Forged from a single piece, case hardened steel and nickel coated; there are no bolts or joints in the base that can fail under high loads. The tapered roller bearing in the chuck's nose will take a high thrust-load from the paper rolls. The thick jaws have thick tabs that will last as long as the chucks – there will be no more broken jaws to replace. This is not a chuck that needs replacement parts. Dust will always get in your chucks – and so will everything else you can find in a production environment: paper shavings, metal slivers, core fragments, and more. The question isn't whether or not you can keep the debris out.

Renova chucks have no rollers or pins or springs that can jam when conditions aren't perfect. Since there are no moving parts between the expansion cam and the jaw units, these chucks will overpower any debris that finds its way inside and keep working for you.

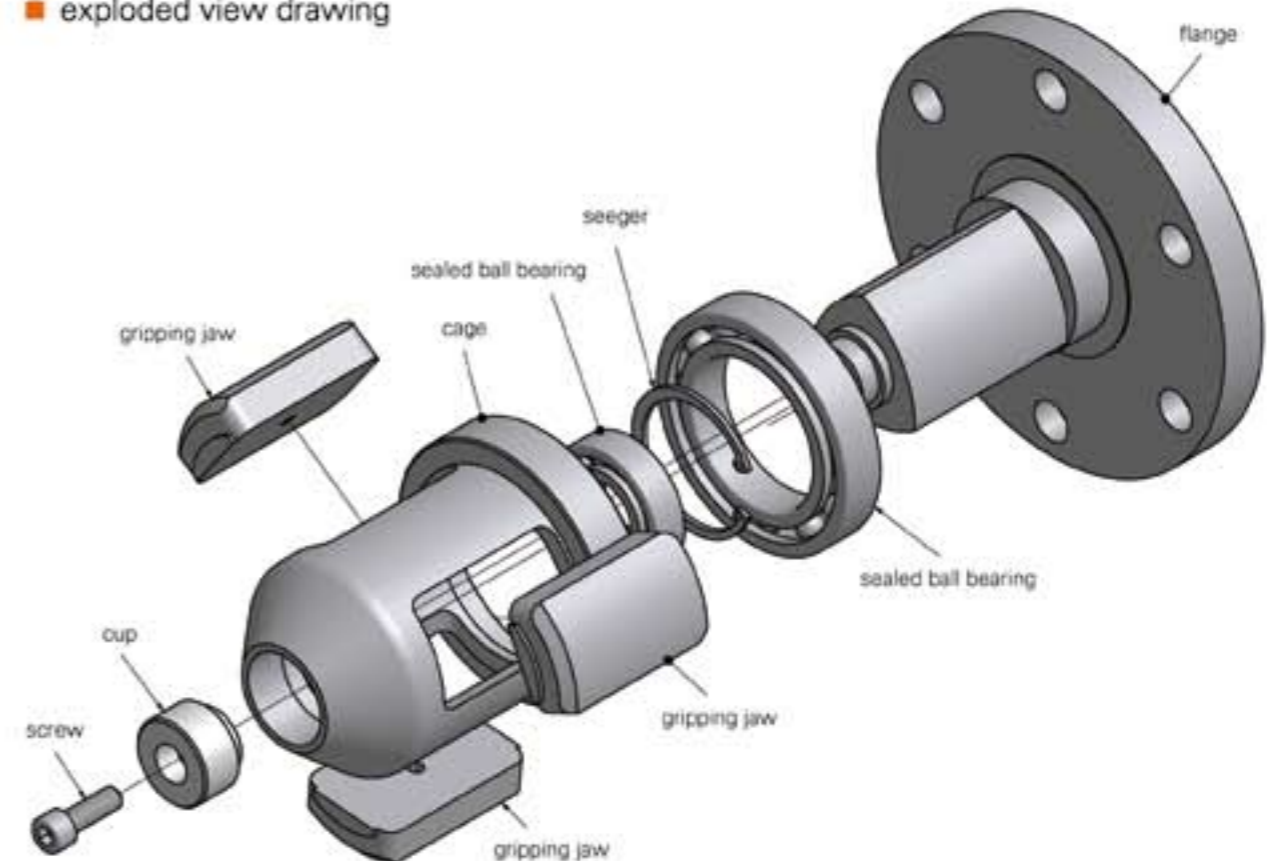
### operating principle

All Renova mechanical chucks make use of the following operating principle: an eccentric at the centre of the spindle which, by means of twisting moment generated by braking action and drive, rotates - with respect to the sector-guides - and pushed the expansion elements (sectors) toward the reel-core. With this system, locking is obtained by a force directly in proportion to the twisting moment, thus ensuring sure locking under all work conditions. The reel is automatically centred. The PM series pneumatic chucks have the same characteristics as the mechanical ones, but, in this case, drive is obtained by air pressure.

### applications

Expanding core chucks are mainly used in the paper industry on printing machines, rolling machines, cutters, unwinders, rewinder and re-reeler cutters.

exploded view drawing



- Chuck base made out of forged steel.
- Sealed bearings.
- High load capacity.
- Very few parts.
- Jaw expansion with very low torque.
- Large jaw expansion.
- Case hardened steel and nickel coated.
- Automatic locking in both rotation directions.



corrugated board



paper



printing

mechanical chucks  
technical data



mechanical chucks  
series CK-S/CK-SF

### series CK-S

- 1/2" expansion rate lets you grip worn or used cores.
- High thrust load capability due to tapered roller bearing.
- Minimum number of parts (easy to clean on the machine).
- No damaged core.



### series CK-SF

- High roll load capacity.
- Hardened flange pin.
- Can be used on a roll stand brands.
- Can be cleaned on the roll stand.

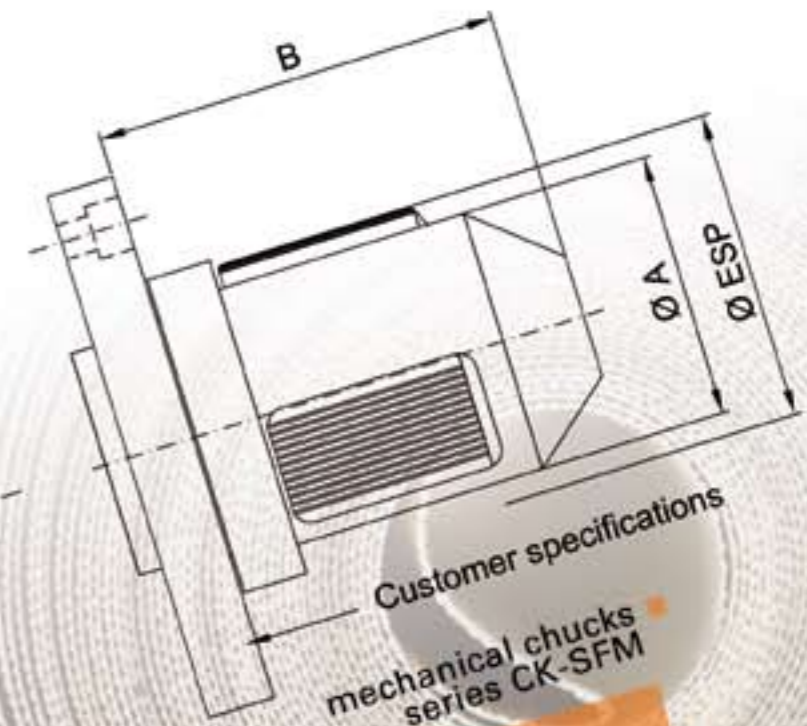
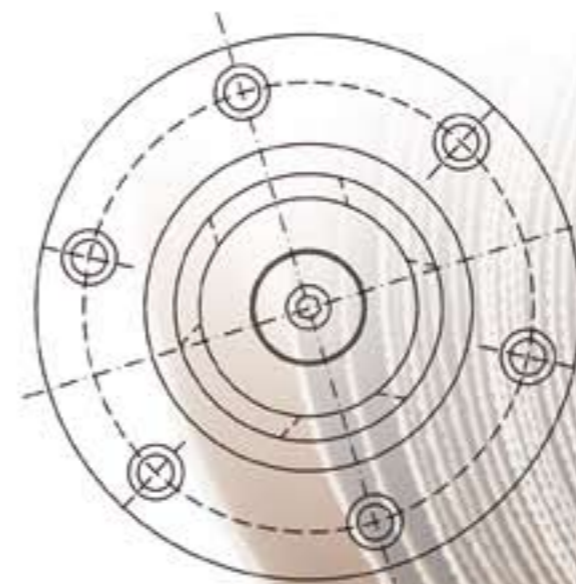
### series CK-SFM

- Models are produced for any core diameter.
- Extensive range of special expanding chucks.
- Automatic core download.
- No damaged core.
- Spring-loaded core ejector.



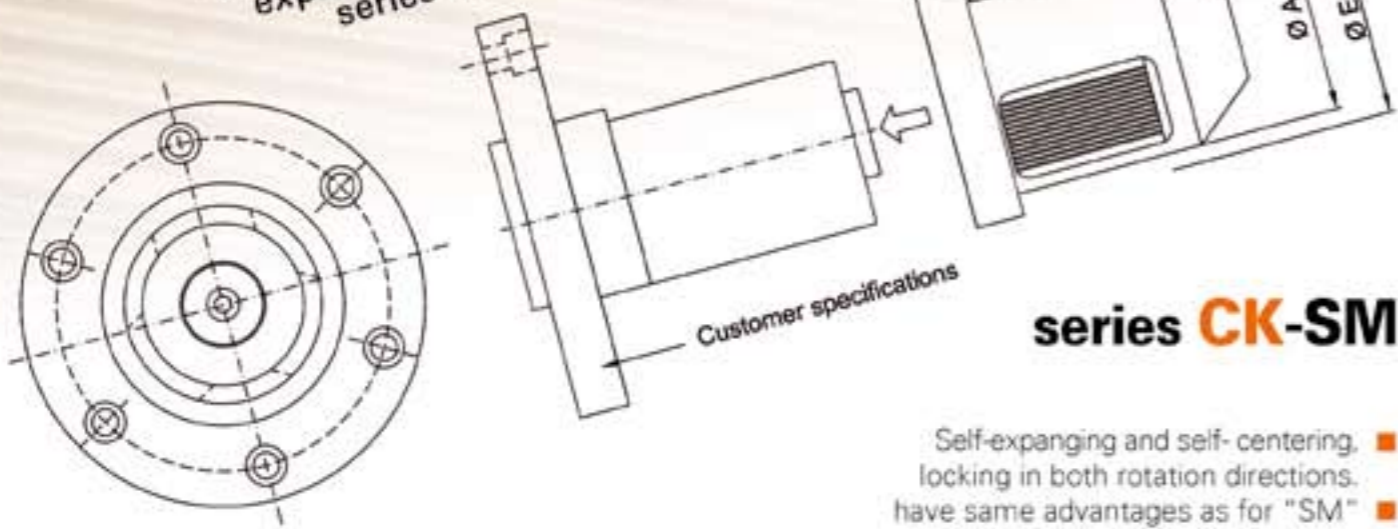
series CK-S / SF / SFM dimensions (mm)

chuck model	A mm	B mm	expansion mm	max weight n	twisting mom. Nm
70	68	150	69-79	18000	1150
3"	74	150	75-85	18000	1150
100	98	150	99-109	45000	2500
4"	100	150	101-110	45000	2500
120	118	150	119-129	45000	2500
5"	125	150	126-137	45000	2500
150	148	150	149-159	110000	5000
6"	150	150	151-161	110000	5000
200	198	150	199-209	110000	5000
8"	201	150	202-212	110000	5000
250	248	150	249-259	110000	16000
10"	252	150	253-263	110000	16000
300	298	150	299-309	110000	16000
12"	302	150	303-313	110000	16000



mechanical chucks  
series CK-SFM

stepped mechanical expanding chucks series CK-SM



series CK-SM

- Self-expanding and self-centering, locking in both rotation directions.
- have same advantages as for "SM" and stepped version together.

The Renova quick-change system allows you to run any core size between 3" and 16" on the same chuck cam unit. It takes only a single screw to go between any core size and lightweight housings make the larger chucks easy to handle in a production environment.



series CK-SM dimensions (mm)

chuck model	A mm	B mm	expansion mm	max weight n	twisting mom. Nm
70	69		79		
3"	75		85		
100	99		109		
4"	100		110		
120	119		129		
5"	127		137		
150	149		159		
6"	151	149	161	18000	1150
200	199		209		
8"	202		212		
250	249		259		
10"	253		263		
300	299		309		
12"	303		313		
100	99		109		
4"	100		110		
120	119		129		
5"	127		137		
150	149		159		
6"	151	149	161	45000	2500
200	199		209		
8"	202		212		
250	249		259		
10"	253		263		
300	299		309		
12"	303		313		
150	149		159		
6"	151	149	161	110000	5000
200	199		209		
8"	202		212		
250	249		259		
10"	253		263		
300	299		309		
12"	303		313		

Maximum weight and maximum twisting moment refer to one chuck

series CK-PM

- Models are produced for any core diameter.
- Extensive range of special expanding chucks.

Self-centring, along-axis or peripheral feed with pneumatic pistol, easy and quick to use, it is employed where the core must be locked in the absence of any twisting moment.

Treated in the same way as the mechanical chucks. Available from 70 mm to 12" diameters.

Can be customised. Locking power is in proportion to the quantity and pressure of air sent to the chuck. When air flow delivery stops, the chuck retracts automatically to its initial position.

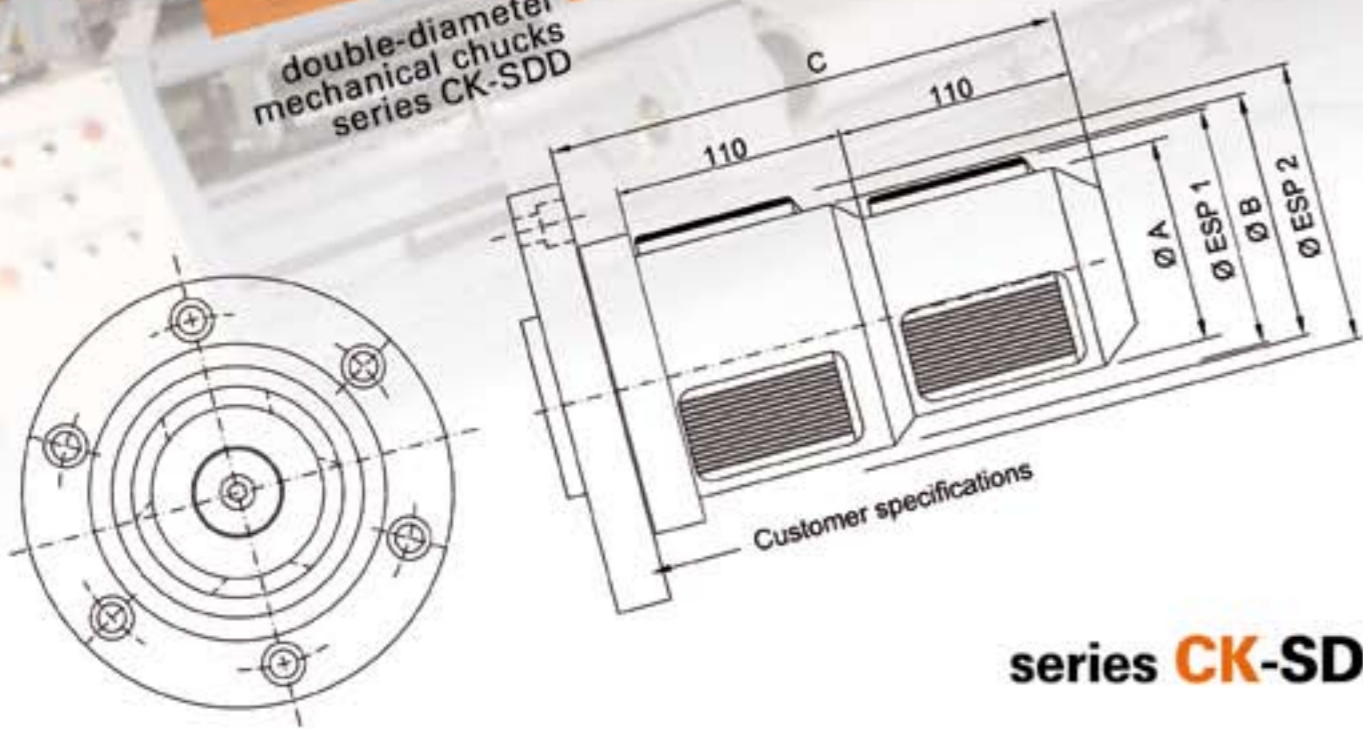


series CK-PM dimensions (mm)

chuck model	A mm	max expans. mm	max weight Kg	max torque Kg/MT.
70/PM	69	79	1600	115
3"/PM	75	85	1600	115
3"/PMS	85	109	4000	150
100/PM	99	129	3500	250
120/PM	119	159	3500	250
150/PM	149	161	4500	500
6"/PM	151		4500	500

pneumatic expanding chucks series CK-PM

double-diameter  
mechanical chucks  
series CK-SDD



### series CK-SDD

- Allows multiple core sizes without downtime for exchanging chucks.
- Heavy duty system with extended expansion unit length.
- Quick-change feature for front chuck from 3" to 12".
- No damaged core.

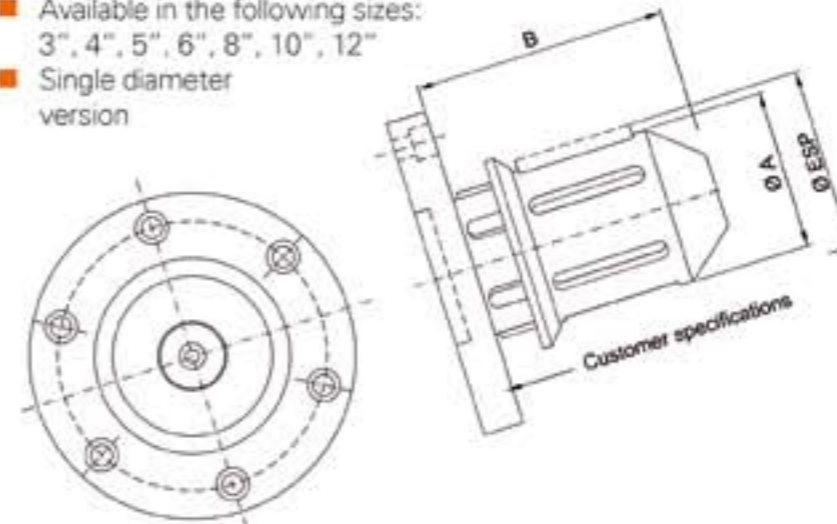
series CK-SDD dimensions (mm)

chuck model	A mm	B mm	expansion mm	max weight n	max weight n	twisting mom. Nm	twisting mom. Nm
70-100	68	98	69-79-99-109	18000	45000	1150	2500
70-4"	68	100	69-79-101-111	18000	45000	1150	2500
70-120	68	118	69-79-119-129	18000	45000	1150	2500
3"-4"	74	100	75-85-101-111	18000	45000	1150	2500
3"-150	74	148	75-85-149-159	18000	11000	1150	5000
3"-6"	74	150	75-85-151-161	18000	11000	1150	5000
4"-5"	100	125	101-111-126-136	45000	45000	2500	2500
4"-6"	100	150	101-111-151-161	45000	11000	2500	5000
150-300	148	298	149-159-299-309	11000	11000	5000	5000
150-12"	148	302	149-159-303-313	11000	11000	5000	5000
6"-12"	150	302	151-161-303-313	11000	11000	5000	5000

Maximum weight and maximum twisting moment refer to one chuck

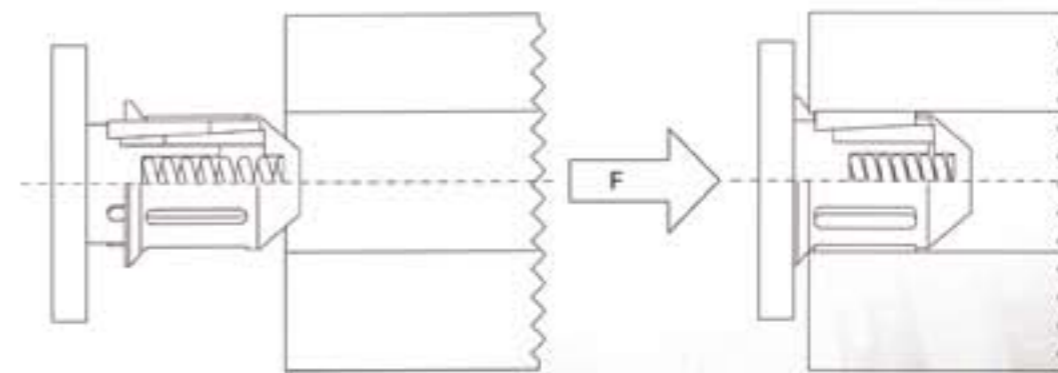
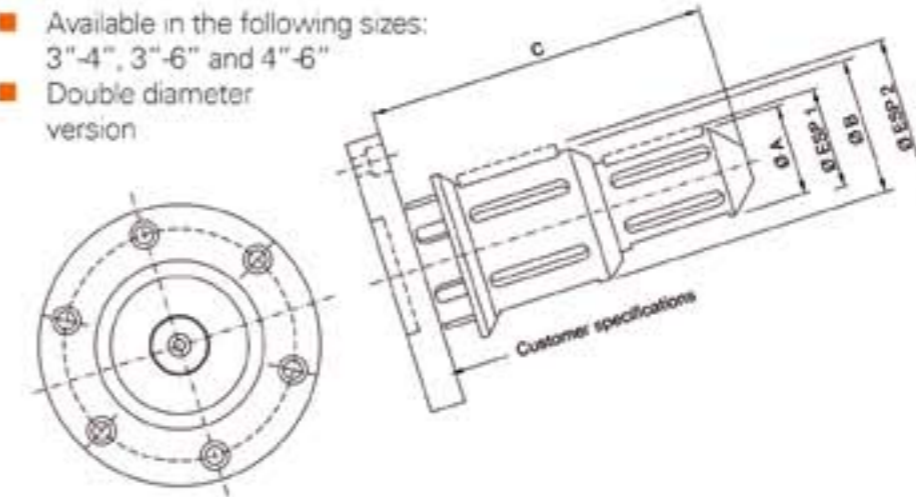
### series CK-TM/S

- Available in the following sizes: 3", 4", 5", 6", 8", 10", 12"
- Single diameter version




### series CK-TM/D

- Available in the following sizes: 3"-4", 3"-6" and 4"-6"
- Double diameter version



Series TM mechanical chuck offer high quality at best prices. For clamping cardboard core. Other sizes are possible upon request. Single diameter chucks can also be supplied bored, suitable for use with photoelectric cells or with a flange for the ejection of the core. Mounting flanges are manufactured to customers requirements simplifying the replacement of old or obsolete chucks.

side load chucks  
series CK-TM



## web tension control systems

Renova offers a wide product range covering the needs of manufactures and end users in the paper, corrugated cardboard, aluminum, adhesive tape, printing, textile and plastic industries

### turborex



A multi-disc brake with double fan ventilation. This patented system reduces internal temperatures and virtually eliminates maintenance costs and brake pollution. The Turborex brake is available in TX120, TX180, and TX240 models and carries a torque range from 0-400 daNm with a power dissipation of up to 12 kW.



### combirex

A mono-disc, multi-caliper, air-cooled brake. It reaches a maximum torque of 96 daNm and a power dissipation of 3kW. This CX model uses a 250mm disc and is available with up to 6 calipers.



### powderex

Magnetic powder brakes with a torque range from 1-12 daNm. Radiator cooling or axial fan cooling.

### isomatic

Control Panel. Completely manage the process by configuring necessary functions on the display. Additional functions can be customized on your request. Advanced regulation capabilities.



### sensorex

Load cells used to detect the web tension of a product. Available in different models, flange load cells and flange load cells with clearance hole, with loads from 5 to 600 daN.



### e/p converter

Electropneumatic converter that converts an electrical signal into compressed air with a pressure directly proportional to the signal provided. It ensures accuracy in tension with power supply of 24 VDC and signal from 0 to 10 V.



### reset

Digital measuring amplifier for strain gauge bridge, equipped with a 24-bit acquisition circuit with programmable gain, of 3 analog outputs to a control unit and a digital input for a reset of the outputs from remote.




### roll pusher

Pneumatic roll pusher that effortlessly moves rolls up to 6000 kg of weight.



**Renova**  
WE NEVER LOSE CONTROL



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

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

Renova's brakes, chucks, load cells, rollpushers, and web tension control panels 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.



 **Renova**  
WE NEVER LOSE CONTROL

Renova srl  
via Pompeo Mariani 16  
20128 Milano - Italy  
phone: +39 02 27007394  
fax: +39 02 25708635

web site: [www.renova-srl.it](http://www.renova-srl.it)  
e-mail: [info@renova-srl.it](mailto:info@renova-srl.it)