

**Self-Lubricating,  
Lightweight,  
Long-wearing  
Components  
for Canmaking**

**Increase**

Machine speed, ROI

**Decrease**

Downtime, Maintenance  
Costs

**Eliminate**

Lubrication, Cam wear



# INTECH'S PRODUCTS FOR THE CAN MAKING INDUSTRY

Following in the tradition of engineering and manufacturing light weight, self-lubricating gears and cam followers, since 1993 Intech has been developing long wearing, lubrication free machine components for the can making industry. These components, some running several times longer than the original components, reduce operating costs by eliminating lubrication, allowing increased output by lowering inertia and by reducing the amount of maintenance and down time through increased component life. Reduced energy consumption comes as a welcome bonus.

Eliminating lubrication while increasing machine speed and at the same time reducing wear and extending components' life seems contradictory, yet we accomplished this goal by using new light weight materials, advanced coatings, and by improving existing design. We also use the latest engineering software to design and calculate the structural integrity of the parts.

Our engineers spent time analyzing the reasons for high wear, high rejection rates and component's premature failure. Based on the analysis, we were able to design parts to counter the forces leading to wear, failure, etc., often developing new engineering calculations to assess the useful life of the components. In the process we registered several patents. Our efforts are rewarded with parts that last beyond our initial expectations, and produce savings greatly improving the ROI. For example, many of the patented Intech square rams initially installed in the year 1999 on a 595 Belvac necker are still in operation, continuously running between 2450 and 2700 cpm without lubrication, and a measurement of electrical consumption on the 795 line with installed Intech rams show 25% energy savings.

With the introduction in 2006 of Intech composite cam followers in the necking operation, we have succeeded in developing a 100% self lubricating ram. The central lubrication system can be disconnected and as a result there is no more grease build-up on the turret and perhaps more importantly, no more cam wear.

## LIST OF AVAILABLE COMPONENTS

For Belvac necker 595 and 795, Super K

- Drive gears
- Transfer gears
- Transfer box gears for joining two neckers
- Square rams
- Air selector face seals
- Self-lubricated cam followers
  - > For Intech rams
  - > For Belvac rams

For ANC necker

- Drive gears
- Square Ram (Pins)
- Cam followers

For Decorator

- Anti-backlash gears

For Inker

- Inker blades

For Decorator II

- Oscillating cylinder cam and gear
- Shaft scraper

For Reynold Spin Flanger

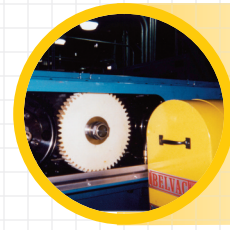
- Gears

For RT6 Light Tester

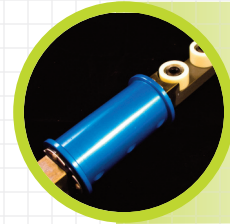
- iCamFollowers®

For Trimmers, Palletizes, Other

- iCamFollowers®



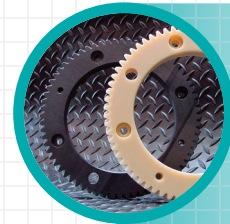
**NECKER  
GEARS**



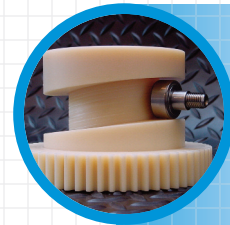
**SQUARE  
RAMS**



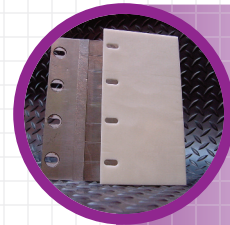
**ICAM  
FOLLOWERS®**



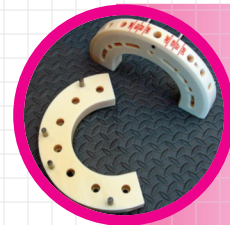
**DECORATOR  
GEARS**



**OSCILLATING  
INKER GEAR**



**INKER  
BLADES**



**AIR SELECTOR  
MANIFOLD**

## BELVAC NECKER GEARS FOR MODELS 595, 795, SUPER K, MODULAR AND TRANSFER BOXES TO JOIN TWO NECKERS

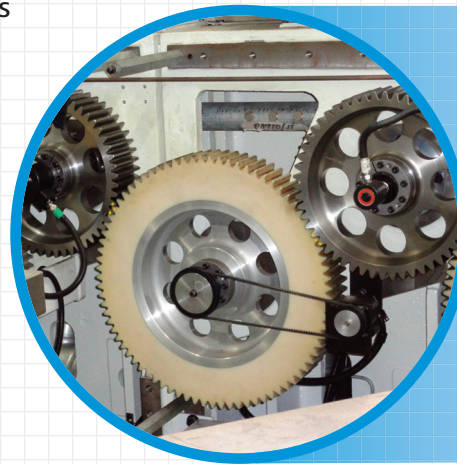
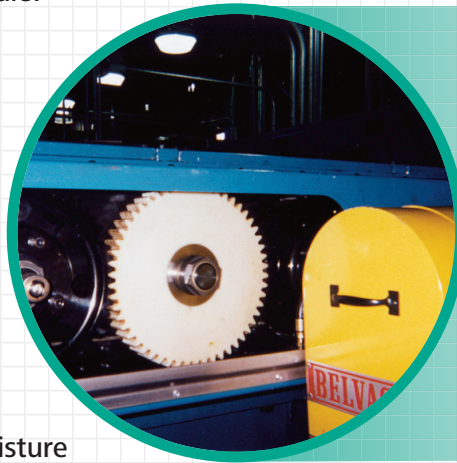
Benefits of self-lubricating Intech Power-Core gears:

- No oil draining or refilling
- No more oil leaks
- Reduced noise
- Absorb shock and vibration
- Integral metal core for high torque transmissions and reduced back lash
- Proven performance, sudden stops (jams) did not damage gears
- High impact strength
- Do not swell or lose tensile strength in moisture
- Available for 575, 795 and modular models
- Used in joining two multi-stage neckers
- Expected (calculated) life: 10 years plus
- Over 300 gears installed in Belvac Neckers

Note: Gears installed in 1994 are still running strong

Benefits of self-lubricating Intech Power-Core gears:

- Improved efficiency due to less friction in gear mesh
- 7x lower weight , less inertia compared to metal gears)



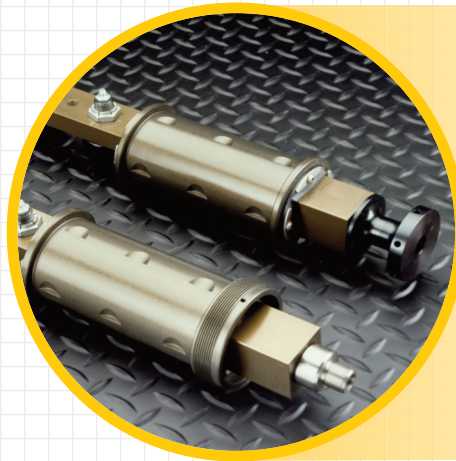
**For more information please request or download "Intech Power-Core™ Gears for Neckers in the Can Making Industry":**  
[www.intechpower.com/canmaking](http://www.intechpower.com/canmaking)

*Note: CMB Selected Intech Power-Core™ gear design for their new neckers*

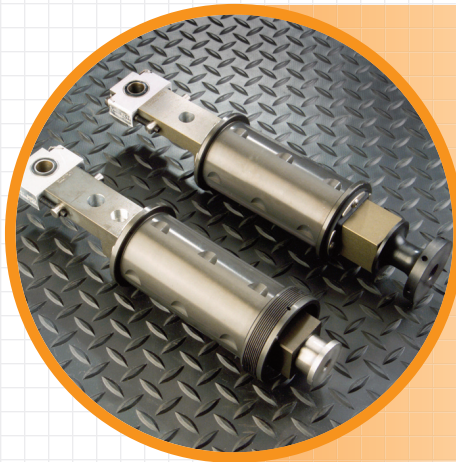
## INTECH POWER-CORE™ PATENTED SELF-LUBRICATING SQUARE RAMS FOR BELVAC NECKERS 595, 795 AND SUPER K

### Design Evolution

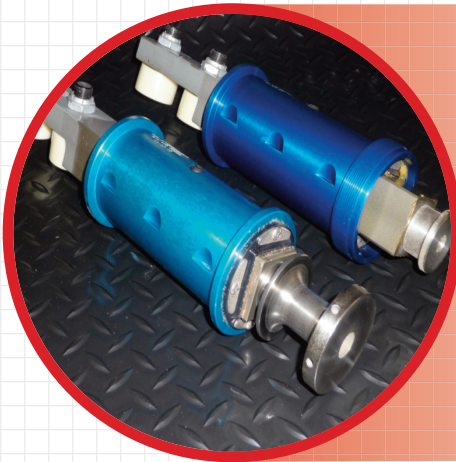
Original design for 595.  
Introduced in the year 1999.  
Many are still running to date.



Full contact design for 795 necker  
with patented shock bushing.  
Introduced in 2003



New Intech square ram Model 40MM  
with Intech iCamFollowers®.  
Same ram design can be used on all Belvac  
neckers i.e. 590, 595, 795 and Super K.  
Introduced in 2009



## INTECH PATENTED SQUARE RAM

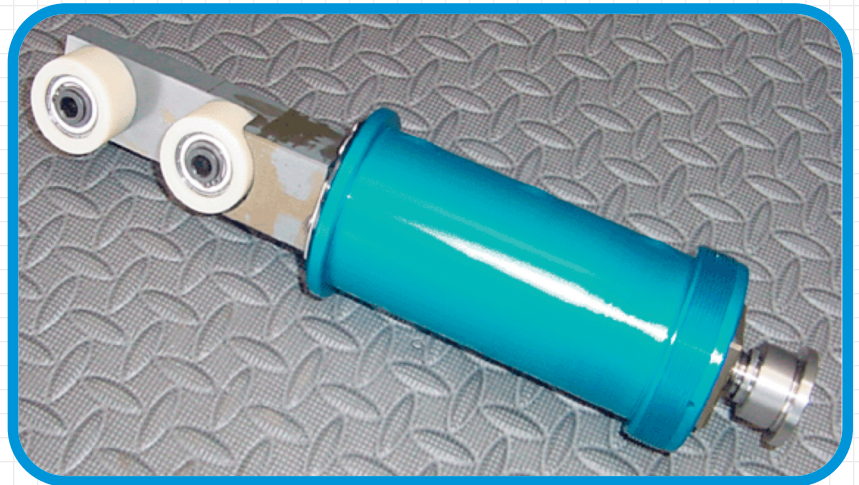
Having proven the performance of Intech iCam Followers® on Belvac neckers, we are now able to offer our customers a ram that does not require any lubrication. Not on the ram, or the cam followers. Additionally, the iCam Followers do not wear the cam, a significant step forward reducing maintenance and down time.

The use of composite easy rolling cam followers, which absorb shock and vibration, opened up new ways to think about full cam contact. It allowed us to simplify the design and introduce one ram to work on all Belvac necker models. The new design together with advances in manufacturing allowed us to significantly reduce the ram's price.

Eliminate lubrication and cam wear with Intech patented Square Ram and iCam Followers®.

Savings Achieved with the Intech Ram Program:

- No more lubrication on rams or cam followers. Savings on grease, maintenance time and possible can contamination.
- Low ram replacement cost.
- No more worn cams. Saving cost of replacing a cam and approx. 10 to 15 hrs of lost production.



## Savings Achieved with the Intech Patented Square Ram

- Saving on frequent changes of worn metal cam followers, especially on spring pre-loaded high speed models.
- Prevention of premature cam and cam follower wear due to mal-functioning central lubrication system, high spring pressure on new high speed neckers
- Saving time needed to clean grease from the turret to gain access.
- Proven long ram wear times.
- No more repair and assembly of worn rams. Savings on maintenance.
- Improved rejection rate to about 0.1%. The square rams guide better. No more lift and twist.
- Up to 25% line speed increase is possible due to lighter ram assembly, corresponding lower inertia and easy rolling, lighter weight iCam®Followers.
- 22 to 25% energy savings. We measured 25% less energy consumption on a 795 line equipped with Intech square rams compared with a line using the original Belvac rams.
- Simple, proven design. Full cam contact is assured by slightly reduced cam followers' center distance. Shock load is absorbed by the cam follower tire.
- With the new Intech Ram 40MM you can convert a 10 stage 595 to run 2800 to 3000cpm, a Super-K design speed, for under \$500K, and eliminate lubrication and cam wear.

Types of Belvac neckers on which the Intech Exchange Ram can be used:

- 595
- 795
- Super-K
- Modular
- 590

Intech rams can be installed on turrets alongside Belvac original rams. We recommend installing two Intech rams at a time to balance the turret.

If you have to install a new cam, we recommend installing all Intech rams with iCam Followers® on that turret. You will never have to change that cam again.

## INTECH iCAM FOLLOWERS®

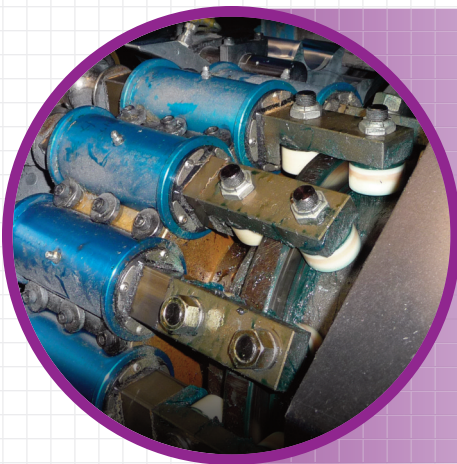
### iCams:

- Proven since 2006 on 795 Intech Rams, 595 and Super-K
- Running successfully on Belvac Rams, 795 and 595 models

### Benefits:

- No lubrication on bearings. No skidding or wear due to over greasing.
- Huge cost savings, no cam wear – never change a cam again (light grease film on cam surface will extend cam follower life: recommended)
- Absorb shock when ram changes direction reducing ram tendency to push up and wear
- Are 35% lighter than metal cam followers
- Precision ball bearings have less friction than needle bearings in metal cam followers allowing higher rotational speeds
- Lightweight and easy rolling motion result in up to 5% energy savings
- Installed on lightweight Intech Rams, the cam followers will allow line output increase on the 595 necker to 3000 cpm on any cam, hardened or through hardened or not hardened at all. You can effectively convert any 595 to a Super-K performance with Intech rams and cam followers for a very low investment.

## iCamFollowers® running on



Intech square rams  
on the 1st stage of  
a Super-K necker  
(note: no lub lines)



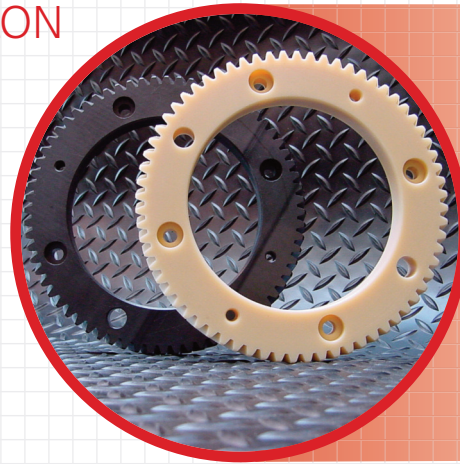
Spring loaded  
795 Belvac rams



## INTECH POWER-CORE SELF-LUBRICATING ANTI-BACKLASH DECORATOR GEARS REPLACE GRAY NYLON

### Benefits:

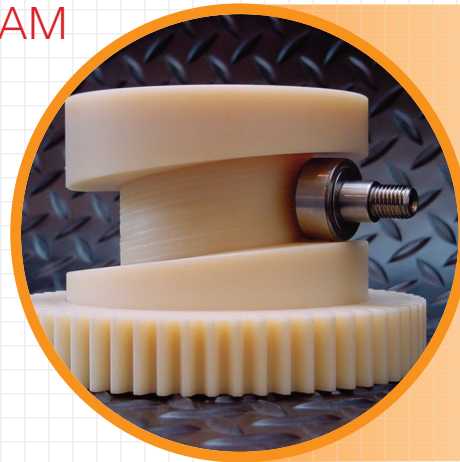
- Will not chip or break under shock load
- Able to absorb shock
- First installation in 2001
- Gears have no abrasive fillers, will not wear out steel gear



## INTECH POWER-CORE SELF-LUBRICATING ONE PIECE DESIGN INKER OSCILLATING GEAR AND CAM REPLACED METAL GEAR AND CAM AT THE END OF THE OSCILLATING SHAFT

### Benefits:

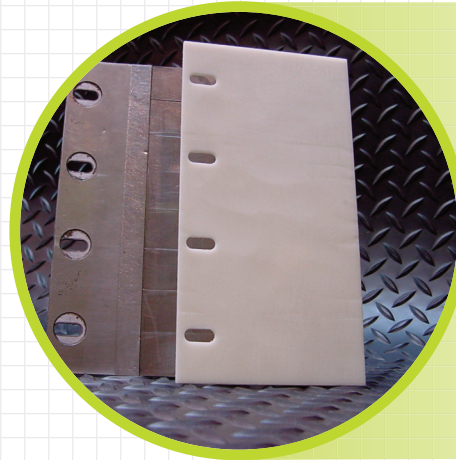
- No lubrication required. Eliminate oil from the gear box
- 7 times lighter than all steel design
- First installation in 1995
- Integrated, one-piece gear/cam design
- No wear on the cam surfaces
- Smooth oscillating movement due to material damping properties
- Runs with mating steel gears



## INTECH POWER-CORE INKER BLADES REPLACE STEEL

### Benefits:

- Costs 4 times less than steel
- Lasts as long as steel, or longer
- Protect cylinder from wear (scratches)
- Available from stock
- Introduced in 2004



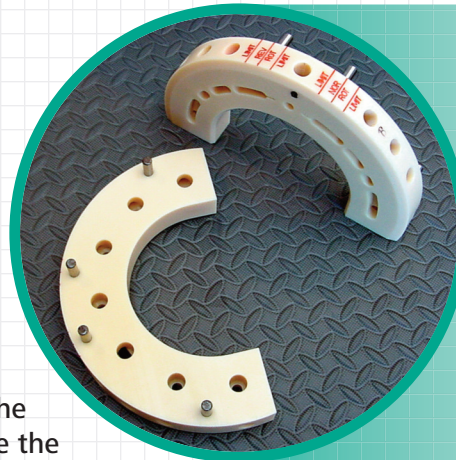
## AIR SELECTOR FACE SEAL FOR 595 BELVAC NECKER

### Characteristics:

- Replaces metal face seal with composite wear surface
- Seal surface, and the entire part is machined from Intech Power-Core™

### Benefits:

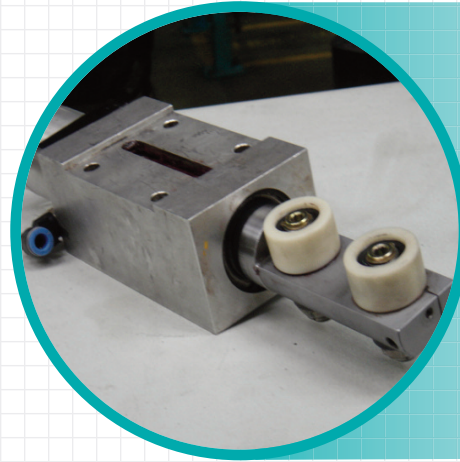
- Long wear life -2 years
- Eliminates danger of wearing out the rotary part of the air coupling, since the body of the part is made of the same material as the seal face, can theoretically wear all the way to the air inlet fitting
- Light weight (2lbs), easy to change
- No relining, shipping back and forth of worn air selectors
- Cost of the entire part about the same as relining



## INTECH iCAM FOLLOWERS® ON RT6 LIGHT TESTER

### Benefits:

- No lubrication required
- Absorb shock and vibration
- Long wear life
- On light testers since 2007
- No wear on cam.



### Customers who trust Intech solutions include:



**REXAM**

