



The new RFFM Series now brings about multi rollers for the production of dimensionally precise, tubular hollow work pieces. The fixed roller housing of the CNC controlled machine can be equipped with three, four, five or six rollers depending upon customer requirements, including **extremely large diameter** part productions!

Furthermore, Repkon is able to offer unique flowforming solutions for very long parts, because:

- extreme forming forces may be applied due to the robust body structure, closed-loop force transfer and negligible bending effects,
- drive power can be fully transferred to the workpiece as slip-stick effect is totally eliminated due to roller-holder being a fixed part of the main frame,
- full-load forming possible due to minimal vibration,
- tailstock (headstock-2) that can be independently driven, and
- adequate number of tiltable CNC controlled support units that can be included for radial and axial support during forming.

TECHNICAL SPECIFICATIONS OF REPKON'S STANDART FLOWFORMING MACHINES

			RFFM 330-192	RFFM 645-472		RFFM 670-344	
Number of Rollers	pcs.		3	3	6	3	6
Workpiece Diameter	Ø max	mm	300	450		700	
	Ø min	mm	40	40	220	50	270
Final Workpiece Length	Forward FF.	mm	2500	3000		3000	
	Backward FF.	mm	5000	6000		6000	
	Free FF.	mm	2500	2500		2500	

OPTIONS

CNC (Siemens Simotion) System
Complete Coolant Emulsion
Load/Unload Automation

AUXILIARIES

Quick Roller Resetting Device

ADD-ONS

Tooling
Remote Access Tele-service Group
Product Process Development

REPKON MACHINE AND TOOL INDUSTRY AND TRADE INC.

Built upon over three decades of metal forming experience, REPKON is proud to offer high precision manufacturing alternatives through advanced in-house capabilities in strategic technologies such as flowforming, shear forming and hot-spinning.

With a strong background in various kinds of sophisticated hydraulic presses, as well as their relevant tooling, REPKON has built countless top-notch equipment for a wide-ranging client base across the globe.

REPKON has been a diligent supplier of custom-tailored solutions that were explicitly based on customer requirements in a wide range of industries such as, Defense, Aerospace, Oil & Gas, Pipe/Tube, Mining, Pressurized Gas Cylinders, Automotive, Home Appliances... which lead to an outstanding track record of a capability to solve virtually any problem - the chipless way!

THE CORE COMPETENCIES OF REPKON INCLUDE:

Precision Metal Forming Machines: • Flowforming and Profiling • Shear Forming • Hot Spinning (Necking-in) • Wheel Forming • Hydraulic Presses (e.g., with ex-proof and/or heated table) • Special Purpose

Turn-key Production Lines for:

- Cylinders: • Industrial Gases • Compressed Natural Gas (CNG) • Fire Extinguishing • Liquefied Petroleum Gas (LPG)
- Steel Wheels: • Passenger Cars, Light Commercial and Commercial Vehicles • Agricultural and Special Purpose Vehicles (Incl. Military, Off-Road, Heavy Industry)
- Mining Conveyor Tubes
- Cartridge Cases



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40 YEARS OF QUALITY

A CHIPLESS ALTERNATIVE:
'FREE' FLOWFORMING

REPKON

..setting flowforming 'free'.

FLOWFORMING

-Can it really be a feasible production method?

As a result of REPKON's patented breakthrough, "free" flowforming, this decades-old technology can indeed offer a cost-effective alternative to conventional manufacturing practices while yielding significant material savings and reduced part weight!

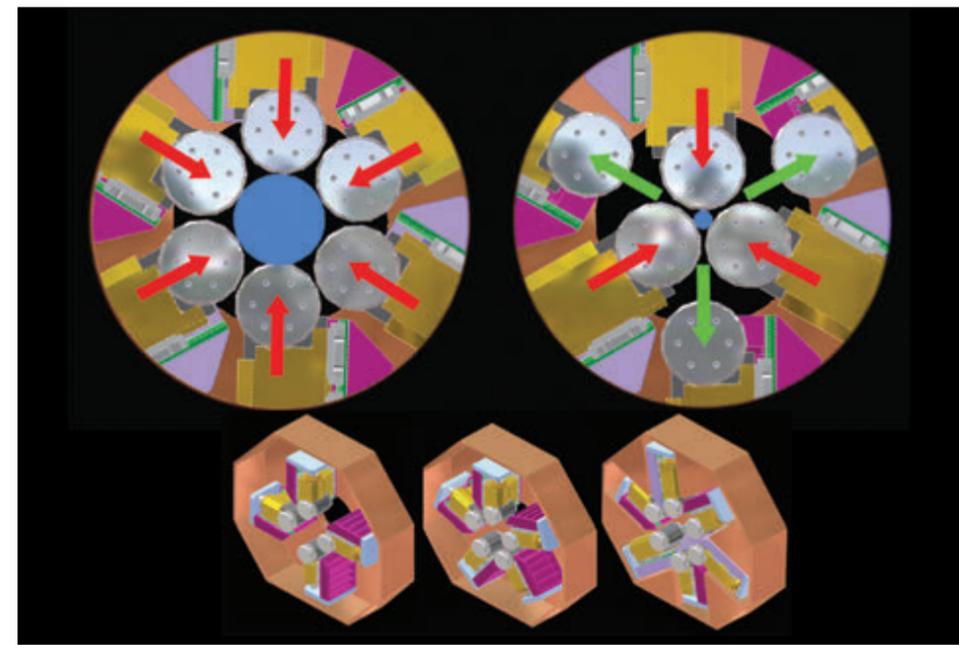


RIGID AND TROUBLE-FREE MACHINE DESIGN

Our corporate motto, since day one, has been "innovation" versus replicating the existing, which has been the driving force behind our revolutionary approach to this, until now, dormant technology. An elite team of professionals experienced in this extremely specialized discipline and their "outside-the-box" approach has been the source of innovation in this undertaking. Our unique design features such as fixed roller holder and moveable headstock(s) as well as our patented "free" flowforming method enables us to achieve much higher speeds, while generating minimum heat, allowing for us to offer such high-precision machines to even the cost-conscious end-users in lower-margin/higher volume industries such as automotive.

WHAT IS "FREE" FLOWFORMING?

Through the use of a floating mandrel, friction between tooling and the workpiece may now be virtually eliminated, yielding free flow of material to achieve wall-thickness reduction. The mandrel is, in fact, driven by the flowformed material, axially and tangentially. Consequently, it is possible to achieve higher precisions/accuracies than in traditional forward flowforming, while attaining multifold speeds of traditional backward flowforming with this revolutionary technique, we call "free" flowforming!



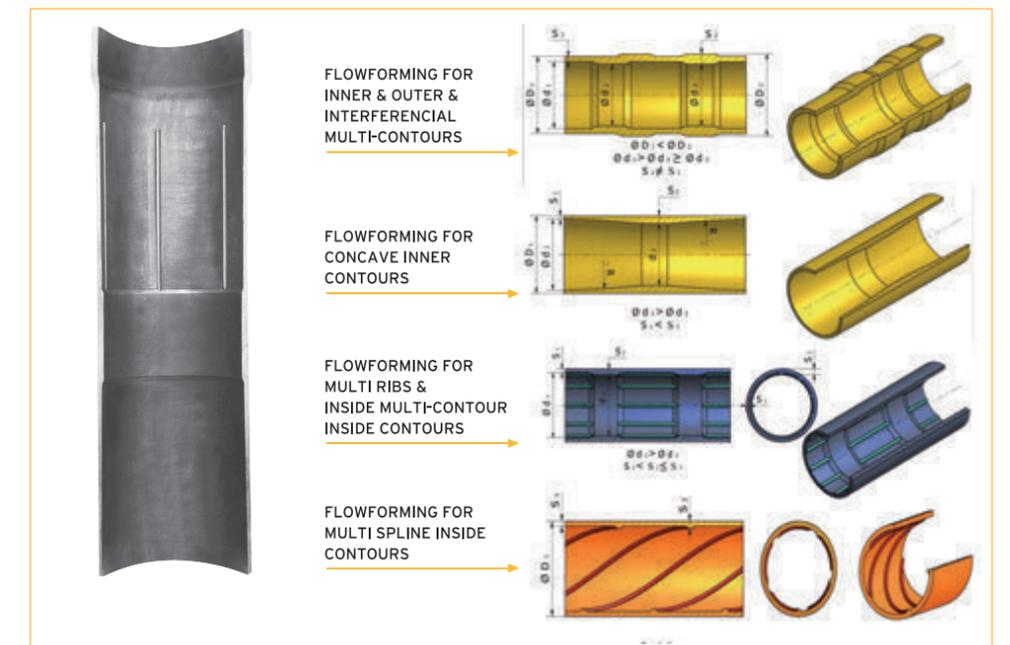
ADVANTAGES

- Increased feed rates leading to condensed production cycles
- Improved energy consumption efficiency
- Reduced work-piece heating
- Less deformation leading to better geometrical tolerances
- Excellent inner and outer surface finish quality
- Uniform wall thicknesses with reduced run-out
- Increased tool life-time
- Capability of forming inner-conical, hyperbolic and inner ribbed contours
- Easy stripping of workpiece even with inner conical forming

PART GEOMETRIES NOW POSSIBLE

Using the "free" flowforming technology (Patent Registration No: 2 127 775), producing inner and outer cylindrical/conical/hyperbolic multi-contours, inner concave contours, multi-ribs and multi-spline inner contours, multi-ribs and multi-inside contours and multi-spline inner contours of conical in one clamping and one pass is now possible by way of a short mandrel; whereas traditional flowforming remains inadequate for long parts with such contours even in several clamping and passes.

COMPLEX PART GEOMETRIES NOW POSSIBLE WITH "FREE" FLOWFORMING:



SAMPLE APPLICATIONS OF THIS NEW TECHNOLOGY

- drill pipes, high precision pipes,
- bulk pressurized gas transportation cylinders,
- conical light poles with:
 - tapered outside conical and ogival geometries
 - internal multi-splines