

Coil Evolution

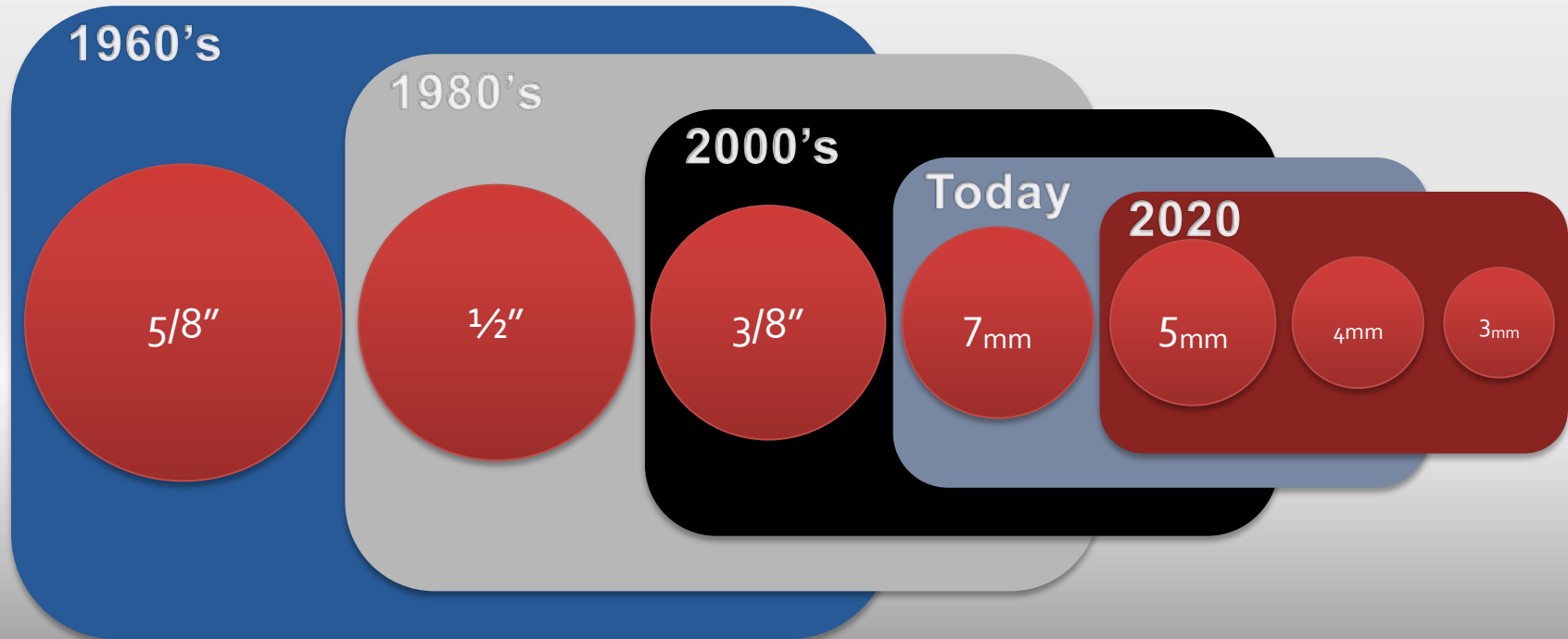
smaller diameter coil production

Burr **OAK** Tool Inc.

Global Experience...Local Solutions

Progression of Size

The design of more efficient coils lead to smaller diameters.



Die Tonnage

Die #	Die Specifications	Length	Width	Draws	Form	Enhance	Enhance Cut Length	Collar Height	Alloy	Material Thickness	ESTIMATED TONNAGES				
											1100 Temper. 0	1100 H22	1100 H24	1100 H26	8008 H26
1	7mm x 49 rows x 4 progression	0.850	0.736	3	R	LAS	3.25	0.050	1100	0.004	42	52	62	68	76
2	9.52mm x 48 rows x 4 progression	1.000	0.866	4	W	LAW	4.06	0.071	1100	0.004	67	82	97	108	124
3	7.94mm x 48 rows x 4 progression	1.000	0.625	4	F	LOF	3.31	0.063	1100	0.006	83	102	121	134	154
4	9.52mm x 48 rows x 4 progression	1.000	0.866	4	F	LOF	3.25	0.100	1100	0.006	94	116	137	152	175
5	7.94mm x 48 rows x 4 progression	1.000	0.625	4	F	LOF	3.31	0.063	1100	0.006	83	102	121	134	154
6	9.52mm x 48 rows x 4 progression	1.000	0.750	4	F, W	LOF	4.65	0.100	1100	0.005	83	103	122	135	149
7	7mm x 48 rows x 4 progression	0.827	0.472	4	S	LAS	2.625	0.125	1100	0.008	86	106	125	139	160
8	9.52mm x 48 rows x 4 progression	1.000	0.866	5	R	LOF	5.2	0.087	1200	0.0051	101	125	148	164	187
9	9.52mm x 48 rows x 4 progression	1.000	0.866	5	R	LOF	3.3	0.071	1200	0.0045	79	97	115	127	146
10	5mm x 70 rows x 4 progression	0.630	0.546	5	F	LAF	3.7	0.056	1100	0.0038	73	90	107	118	135
11	5mm x 70 rows x 6 progression	0.630	0.546	5	F	LAF	3.7	0.056	1100	0.0038	110	135	161	177	204
12	5mm x 70 rows x 8 progression	0.630	0.546	5	F	LAF	3.7	0.056	1100	0.0038	146	180	214	235	270
13	7mm x 72 rows x 3 progression	0.827	0.526	4	F	LOF	2.75	0.071	3102	0.0045	62	77	91	101	112
14	7mm x 72 rows x 4 progression	0.827	0.526	4	F	LOF	2.75	0.071	3102	0.0045	86	107	120	135	148
15	5mm x 84 rows x 4 progression	0.750	0.449	5	F	LOF	3.7	0.063	1100	0.0038	99	123	138	160	176
16	5mm x 84 rows x 6 progression	0.750	0.449	5	F	LOF	3.7	0.063	1100	0.0038	148	184	207	240	264

■ FP3
 ■ FP1000
 ■ FP1400
 ■ FP2100
 ■ Outside Press Range



FP-1400

Dense hole pattern

Maximize collar height capability

Dynamically balanced for less vibration and thereby less maintenance

160 ton press for higher production in a given floor space

Thicker and high tensile materials are easier to manipulate with the 160 ton press



Servo Feed

Servo feed requires less setup downtime as well as providing higher first time throughput

Easier access to the left side of the press and die

Centers and balances the forces on the feed shaft

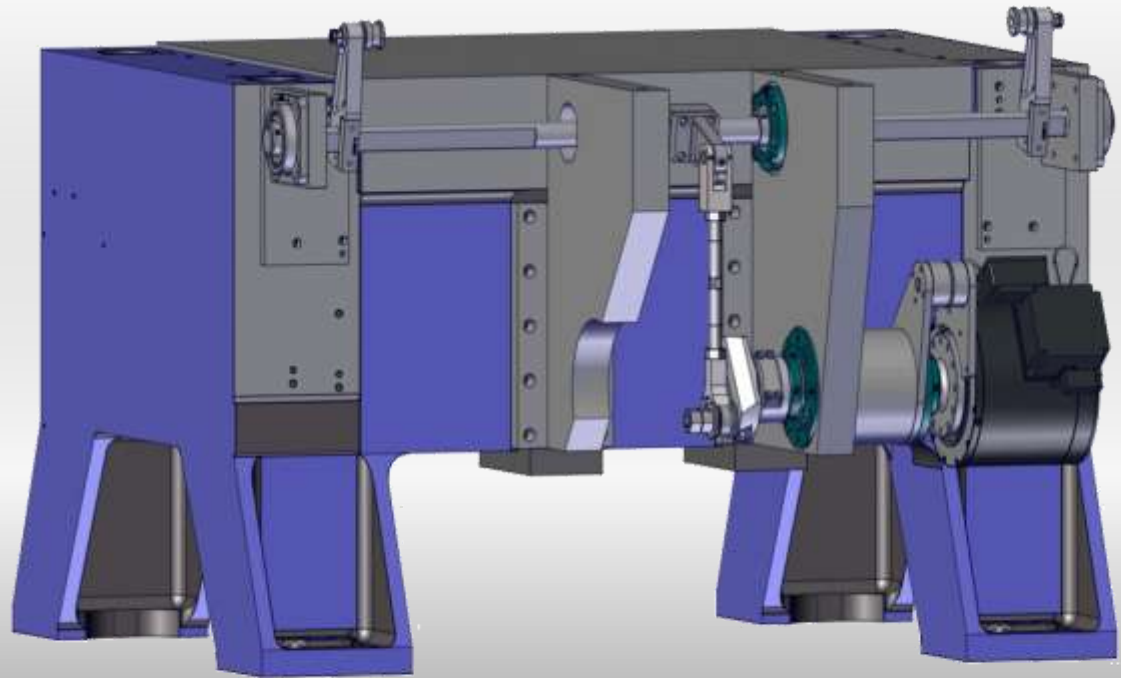
Press operator can program the fin length from the touch screen on the control panel

Eliminates progression changer

No torsional twist

Reduced slivers

Improved out-board supports



Stacking Unit

Locating Rails for the Dampening Bar.

Slide Lock on Rod Holder for Stacker Rods.

Rod Holders can now be moved by 1 person from one side of the stacker.

New Rod Holder Locating Design.

Stacker Table Top has been stiffened to prevent unwanted flexing.

Lifting ball screws are now guided by linear bearings.

All bearings have been upgraded to handle a higher load capacity.

Turntable bearing has been upgraded to a new design.

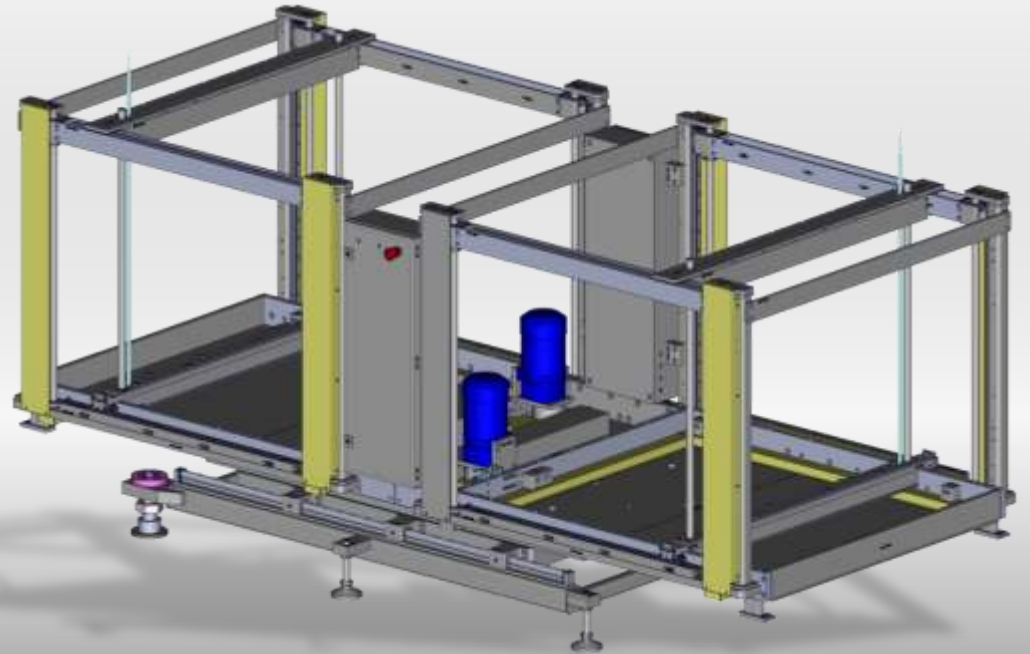
Pullback linear rails are now continuously supported.

Redesigned stacker Base.

Improvements were made to the Pullback frame to increase it rigidity.

New Larger more sturdy leveling feet.

Dowels have been added to many components of the stacker to allow for easier removal and realignment of parts after performing maintenance/repairs.



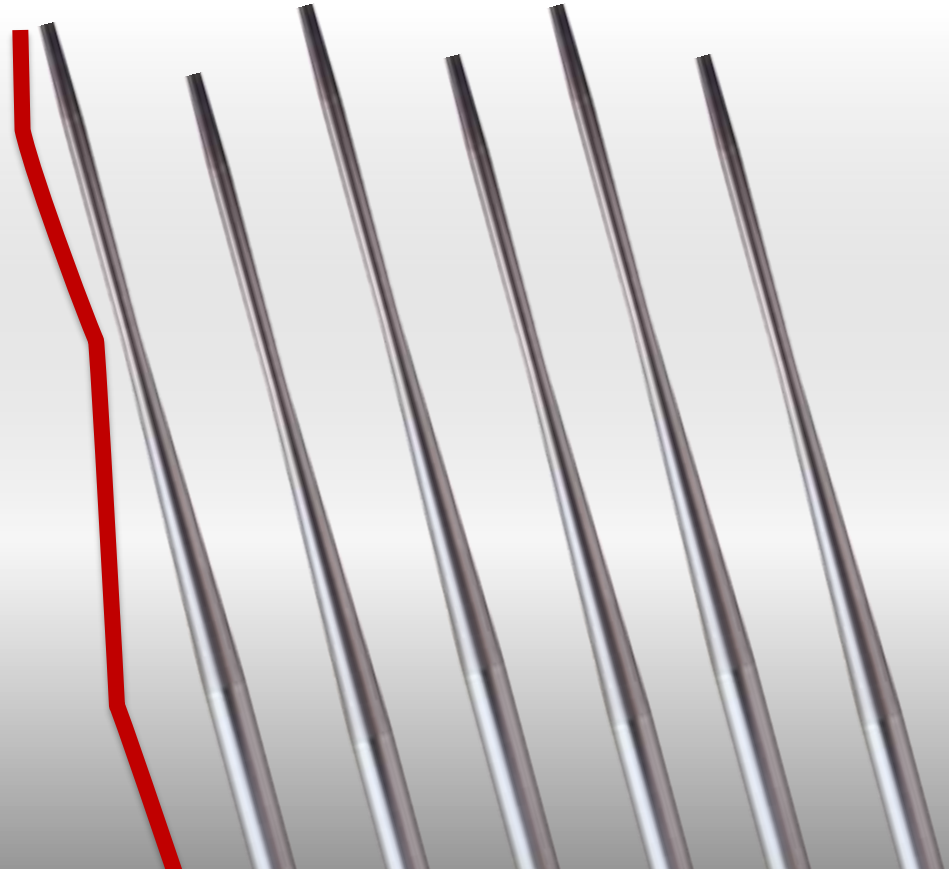
Double Delta Rods

Stainless Steel Double
Delta Stacker Rods

Durability

Surface finish

Tip geometry



Suction Unit

Sheet Tap Down

Reconfigured to improve airflow

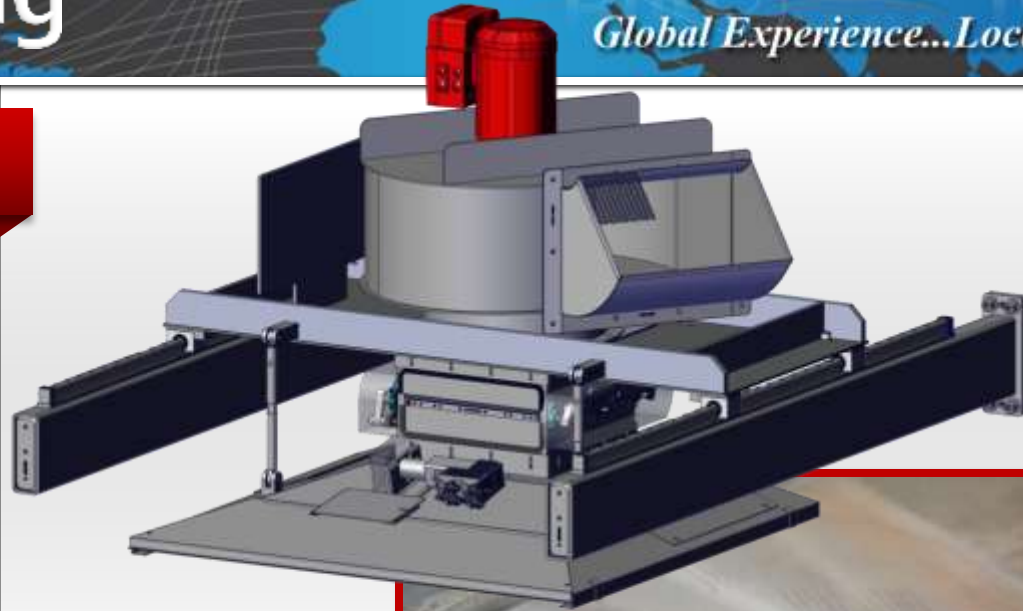
Redesigned Blower
(5Hp Motor to 3 ½ HP)

Quick change Positioning

Easy access to the cut off

Improved action of the doors

Accurately position the fins on
the stacker rods



Fin Stamping

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ElectroStatic Lubricator

- Cleaner machine and environment
- Safer working conditions
- 90% reduction in oil consumption reported by customer
- Longer tooling life



Fin Stamping

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FP- 400

- Increased tonnage
- Lower initial cost
- Improved die take-out capability
- Improved performance through design enhancements



Tube Processing

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Triumph

New Electric Bender

70% increase in
productivity

More tubes/cycle,
reduced changeover time,
faster speeds

Reduced floor space

Reduced capital costs

Improved quality (SPC)

Stretch Straightening

THE **OAK**
TRIUMPH
ELECTRIC HAIRPIN BENDER



Tube Expansion

Burr OAK Tool Inc.
Global Experience...Local Solutions

Vertical Expander

Support and align fragile
expander rods

Alignment and retaining
systems

Reduce tube end splits

New expansion technologies

