



P.V. TOOL, INC.

10065, So. Greenleaf Ave, Unit #A

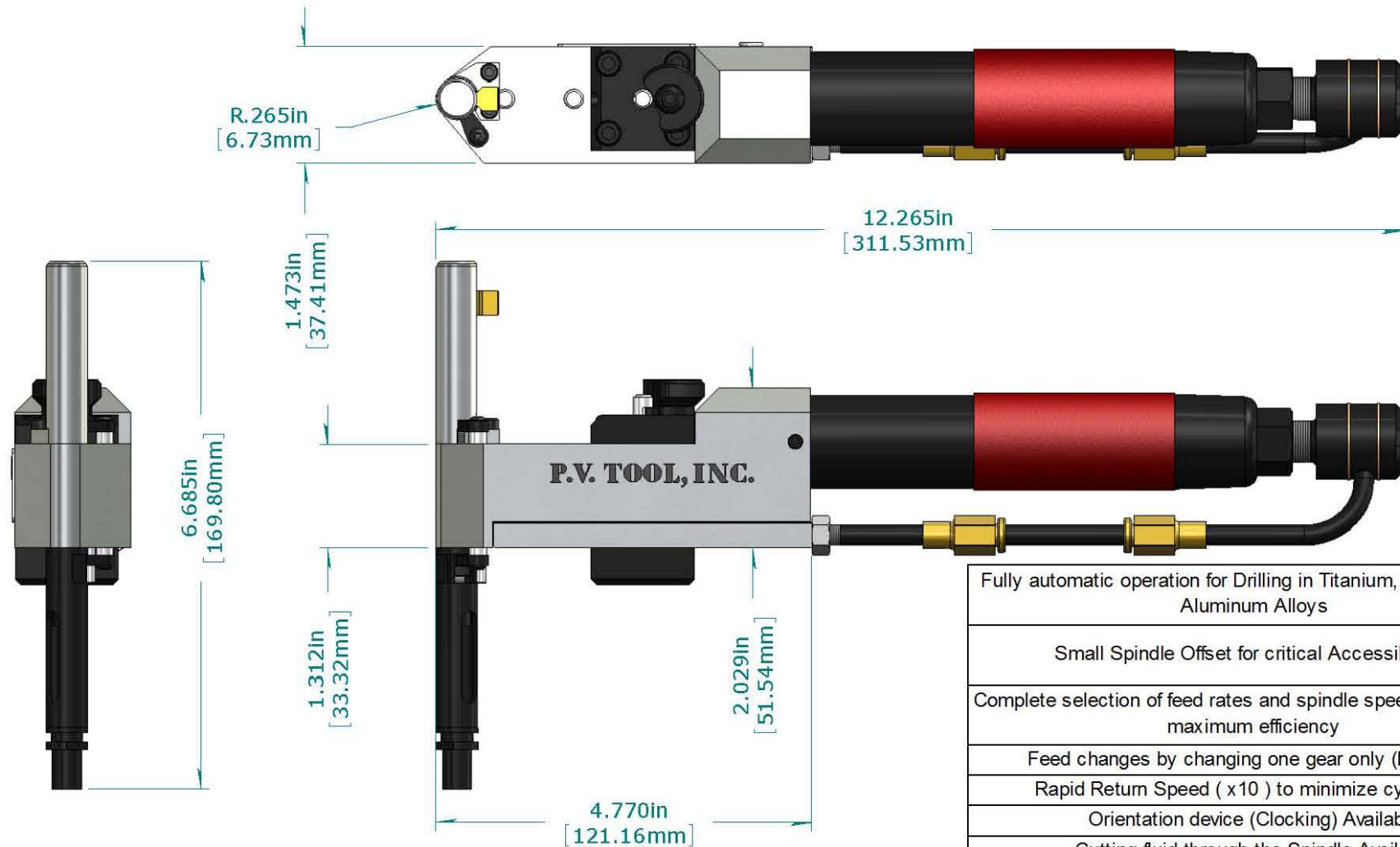
Santa Fe Springs, Ca. 90670

Tel: (562) 777-8176 Fax: (562) 777-8065

Aircraft Tools Positive Feed Drilling & Countersinking Units



VT 20



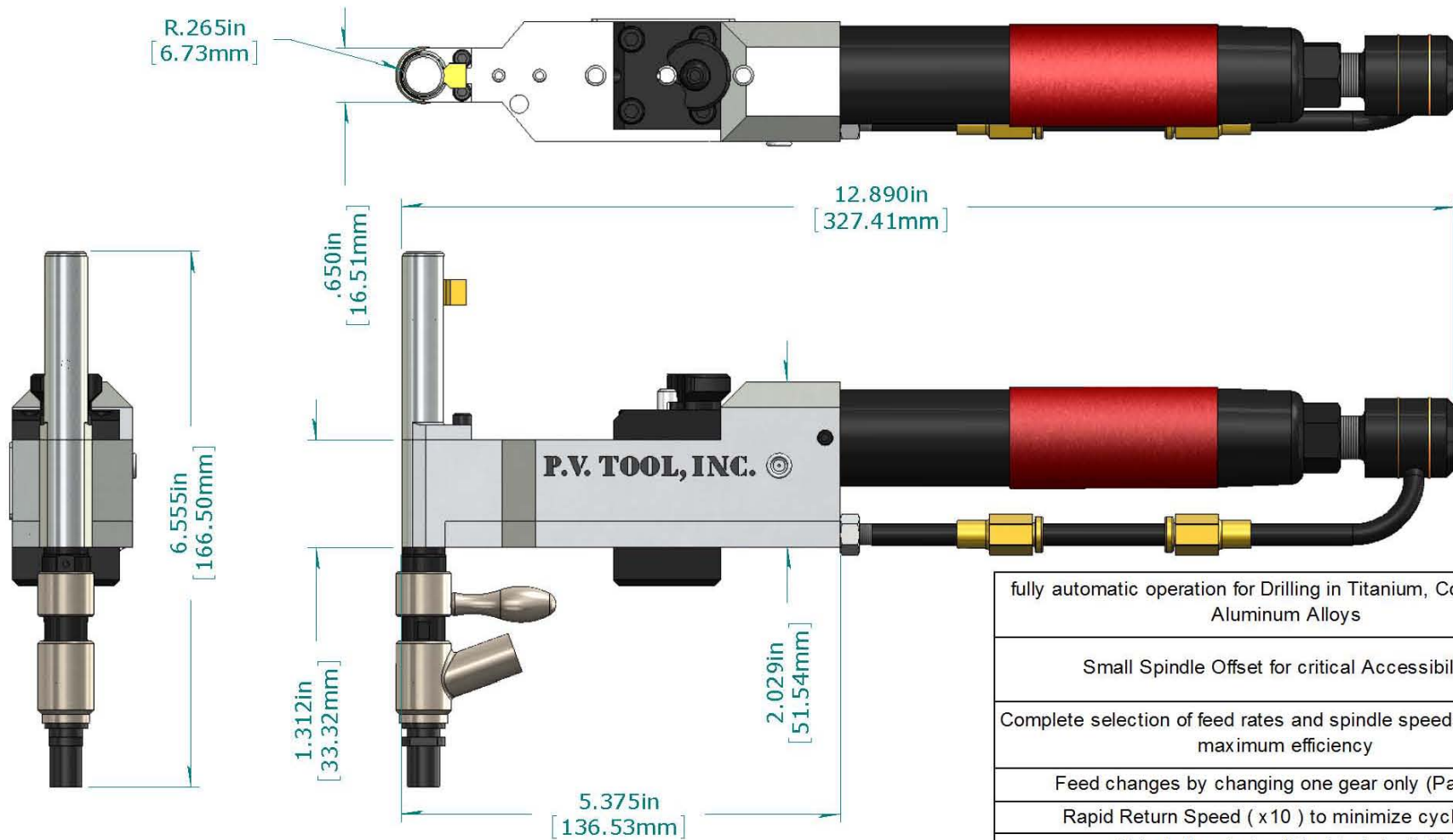
- Fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys
- Small Spindle Offset for critical Accessibilities
- Complete selection of feed rates and spindle speeds available for maximum efficiency
- Feed changes by changing one gear only (Patented)
- Rapid Return Speed (x10) to minimize cycle time
- Orientation device (Clocking) Available
- Cutting fluid through the Spindle Available
- Four digit pneumatic cycle counter Available

Available Feeds		Spindle Speed (rpm)			Weight w/o accessories	Drilling Capacity	Avail. Spindles	
mm/rev	in./rev. (IPR)	9900	1750	850		Aluminum	Max. Stroke	
.038	.0015	5600	1650	750	2.7 lbs. / 4 lbs.	Ø1/4	inch	mm
.054	.0020	4200	1450	500	Drilling Offset		2 1/4	58
.068	.0026	3200	1200	435				
		3000	1000	250	inch	mm	Available Motors	
					.265	6.7	1/4 & 1/2 H.P.	
							Spindle I.D. Thd.	
							1/4-28	

VT 20



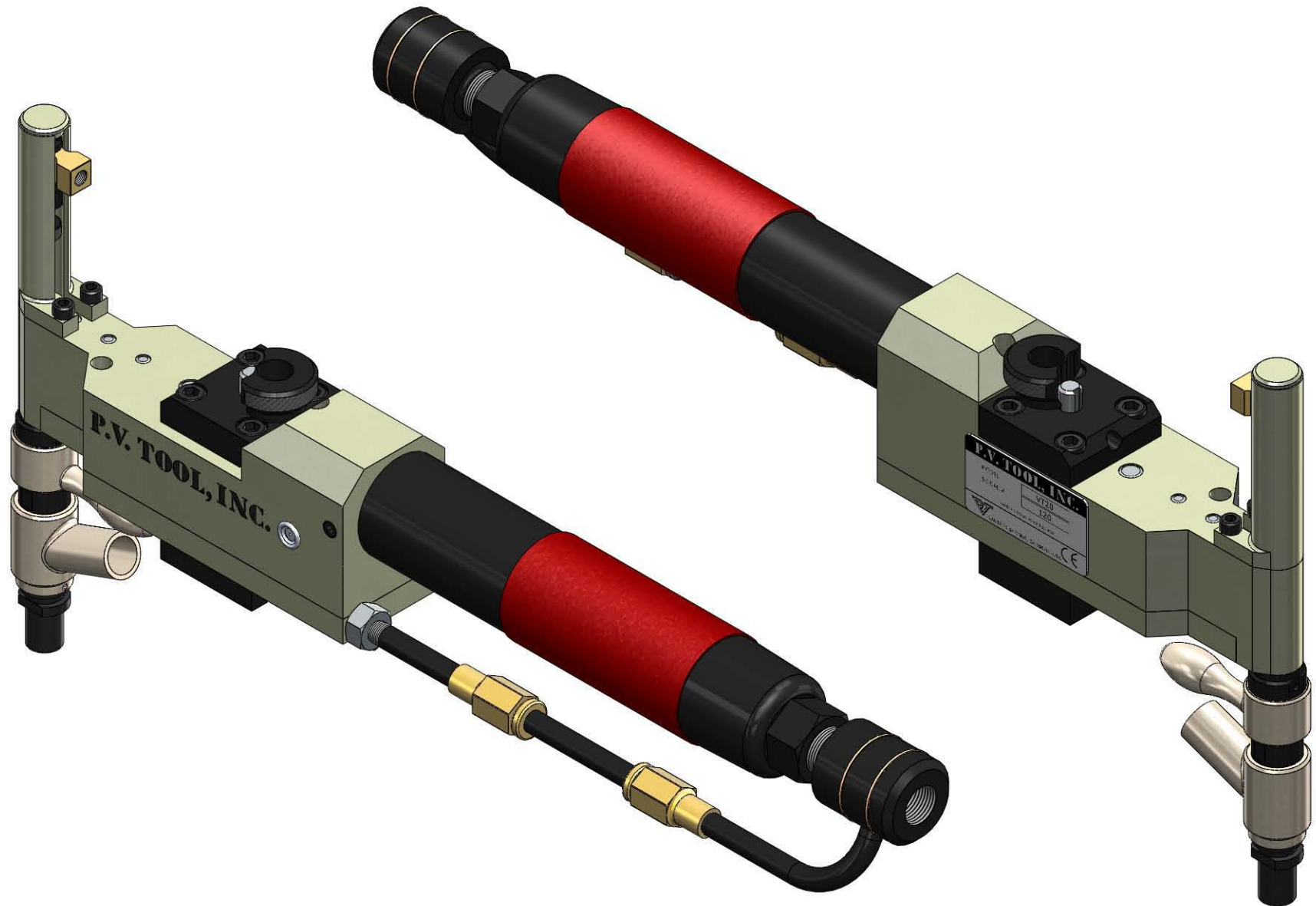
VT 20 SPECIAL



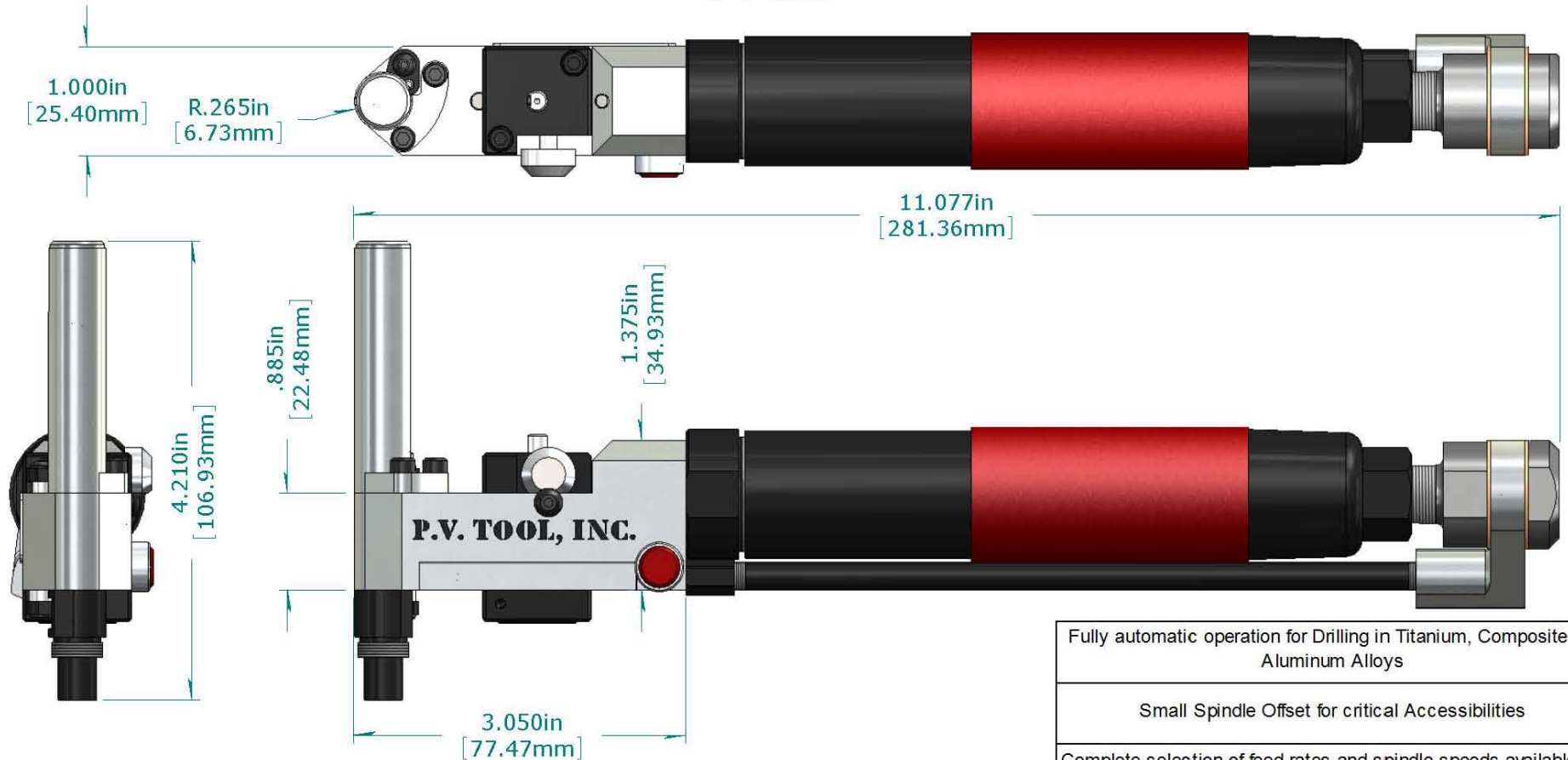
- fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys
- Small Spindle Offset for critical Accessibilities
- Complete selection of feed rates and spindle speeds available for maximum efficiency
- Feed changes by changing one gear only (Patented)
- Rapid Return Speed (x10) to minimize cycle time
- Orientation device (Clocking) Available
- Cutting fluid through the Spindle Available
- Four digit pneumatic cycle counter Available

Available Feeds		Spindle Speed (rpm)			Weight w/o accessories	Drilling Capacity	Avail. Spindles	
mm/rev	in./rev. (IPR)	9900	1750	850		Aluminum	Max. Stroke	
.038	.0015	5600	1650	750	2.7 lbs / 4 lbs.	Ø 1/4	inch	mm
.054	.0020	4200	1450	500			2 1/4	58
.068	.0026	3200	1200	435	Drilling Offset			
		3000	1000	250	inch	mm	Available Motors	
					.265	6.7	1/4 & 1/2 H.P.	
							Spindle I.D. Thd.	
							1/4-28	

VT 20 SPECIAL



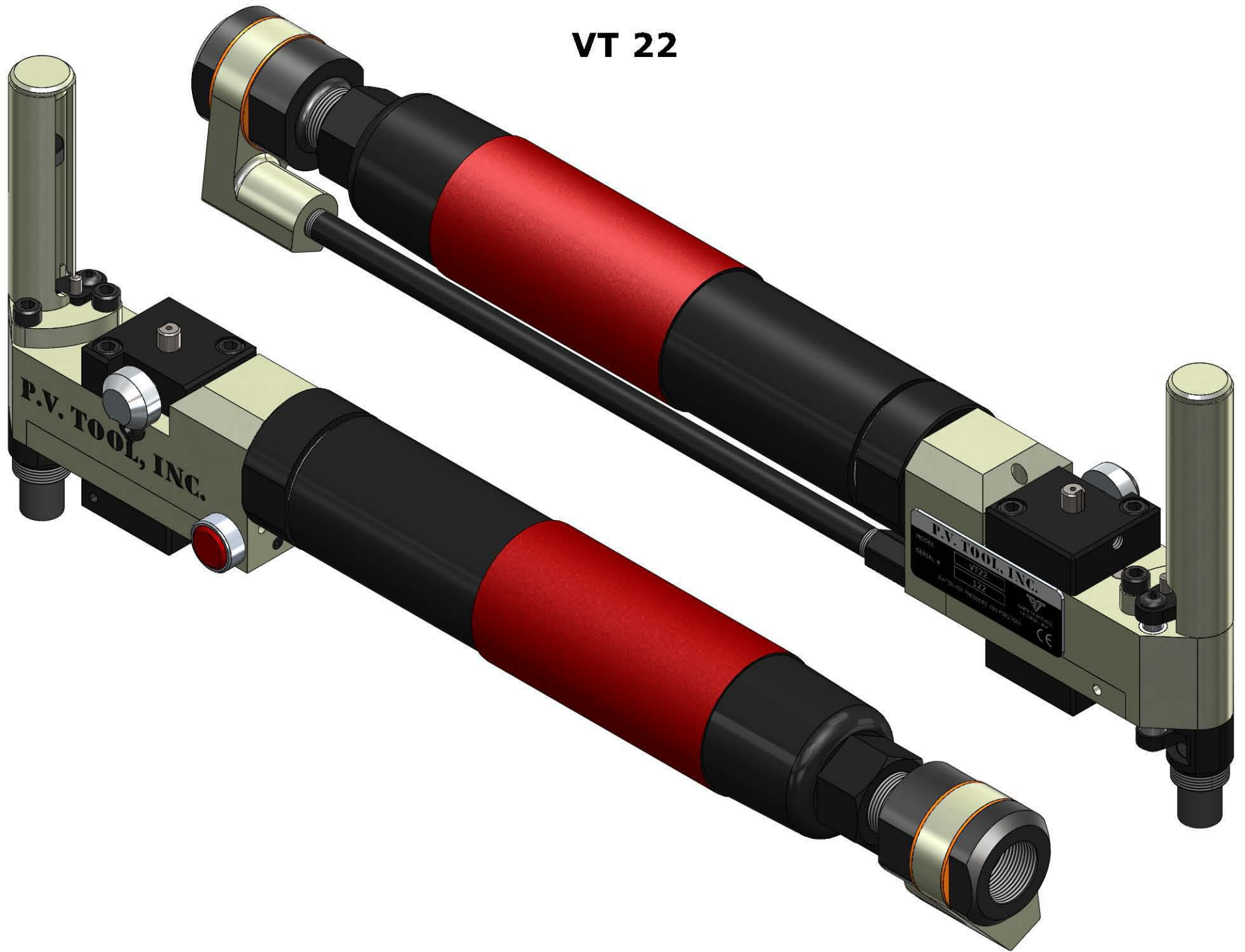
VT 22



- Fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys
- Small Spindle Offset for critical Accessibilities
- Complete selection of feed rates and spindle speeds available for maximum efficiency
- Feed changes by changing one gear only (Patented)
- Rapid Return Speed (x10) to minimize cycle time
- Orientation device (Clocking) Available
- Cutting fluid through the Spindle Available
- Four digit pneumatic cycle counter Available

Available Feeds		Spindle Speed (rpm)			Weight w/o accessories	Drilling Capacity		Avail. Spindles	
mm/rev	in./rev. (IPR)	6600	3800	1100		Alum		Max. Stroke	
.038	.0015		2000	570	2 lbs.	Ø 1/4		inch	mm
.058	.0023		1000	290				2 1/4	58
.068	.0031				Drilling Offset				
					inch	mm	Available Motors	Spindle I.D. Thd.	
					.265	6.7	1/4 H.P.	1/4-28	

VT 22



Technical drawing of the P.V. Tool, Inc. Model 1000 hydraulic rammer, showing dimensions in inches and millimeters.

Side View Dimensions:

- Total Height: 10.081in [256.06mm]

Front View Dimensions:

- Total Height: 9.069in [230.35mm]
- Base Width: 3.831in [97.29mm]
- Rammer Head Height: 4.210in [106.93mm]
- Rammer Head Width: .885in [22.48mm]

Top View Dimensions:

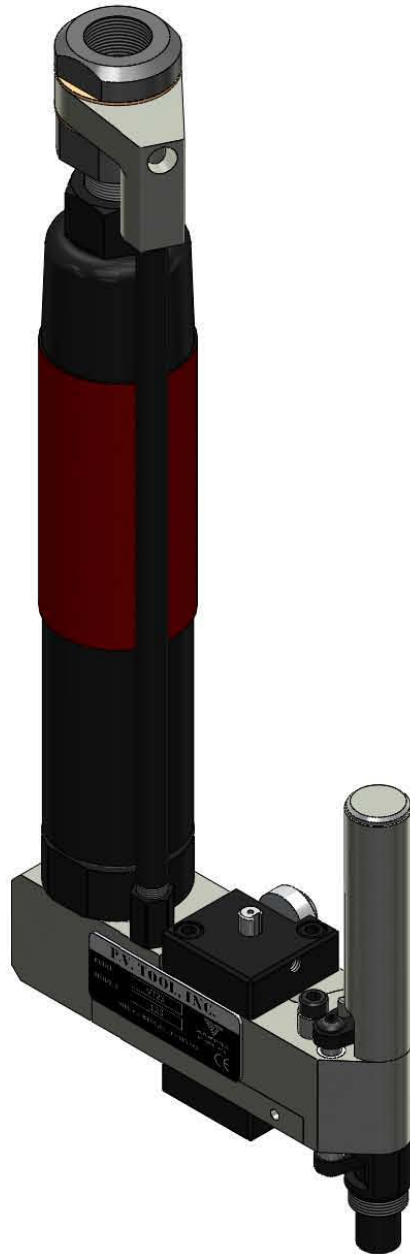
- Width: 1.000in [25.40mm]
- Radius: R.265in [6.73mm]

Other Details:

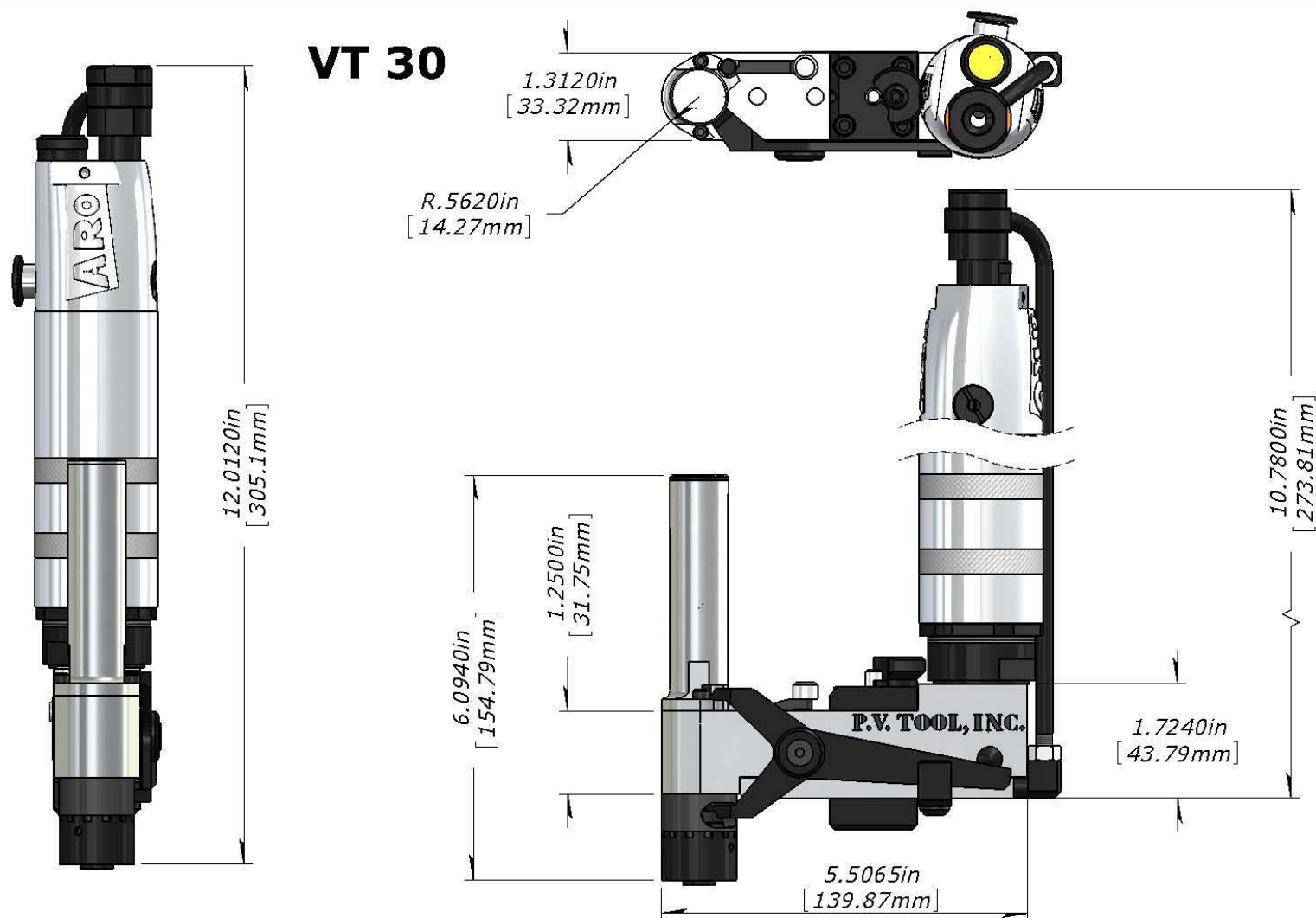
- The rammer head is black with a red band.
- The base is silver with the text "P.V. TOOL, INC." and a red dot.

Available Feeds		Spindle Speed (rpm)			Weight		Drilling Capacity		Avail. Spindles	
					w/o accessories		Alum		Max. Stroke	
mm/rev	in./rev. (IPR)	6600	3800	1100	2 lbs.		Ø 1/4		inch	mm
.038	.0015								2 1/4	58
.058	.0023		1000	290	Drilling Offset					
.068	.0031				inch	mm	Available Motors		Spindle I.D. Thd.	
					.265	6.7	1/4 H.P.		1/4-28	

VT 23



VT 30



Fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys

Rapid conversion from drilling to manual countersinking (Patented)

Complete selection of feed rates and spindle speeds available for maximum efficiency

Feed changes by changing one gear only (Patented)

Rapid Return Speed (x 10) to minimize cycle time

Orientation device (Clocking) Available

Cutting fluid through the Spindle Available

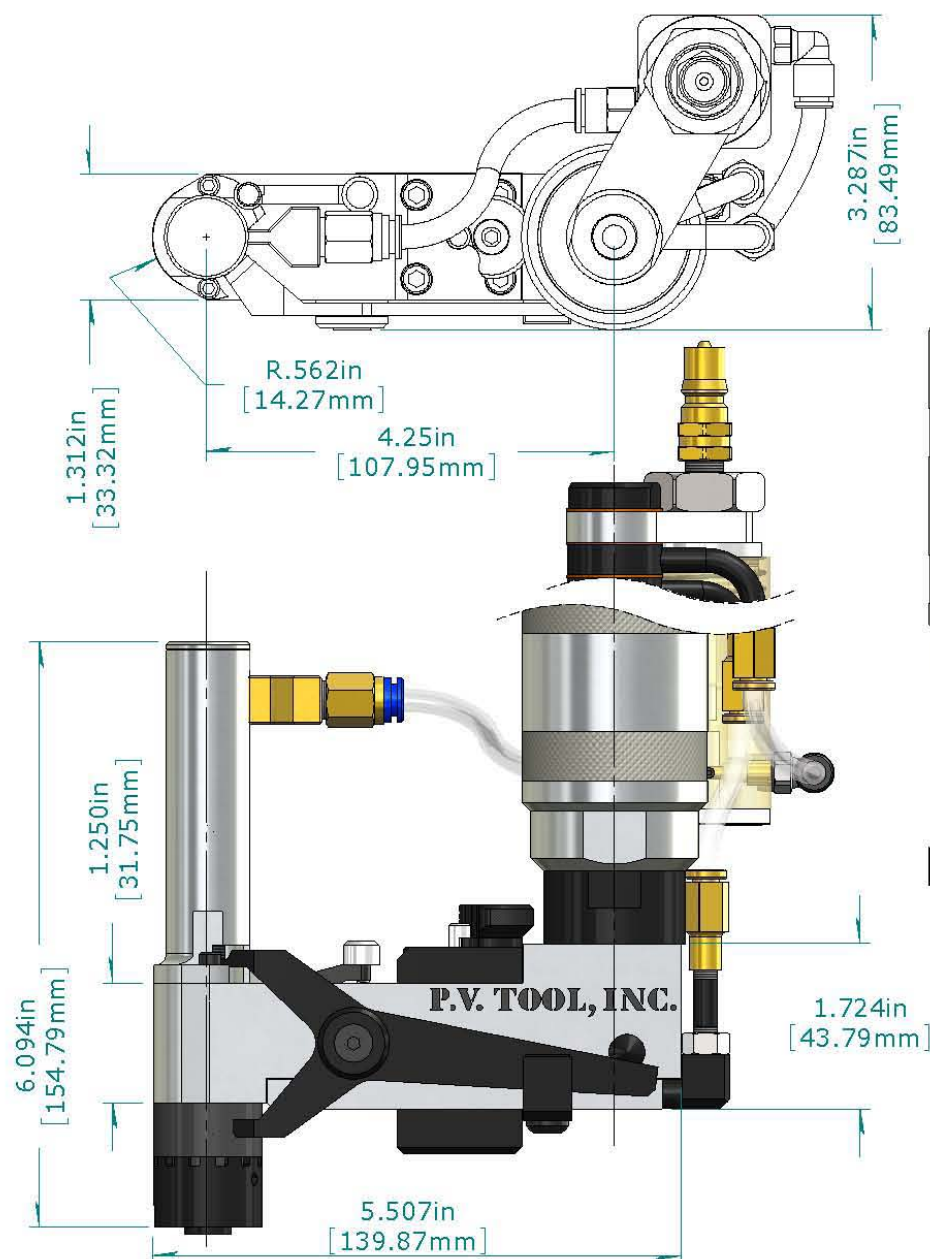
Four digit pneumatic cycle counter Available

Available Feeds		Spindle Speed (rpm)			Weight w/o accessories	Drilling Capacity		Avail. Spindles	
mm/rev	in./rev. (IPR)	4500	850	280		Alum		Max. Stroke	
.012 .015	.0005 .0006	3200	600	220	5 lbs.	Ø 3/8		inch	mm
.036 .050	.0014 .0021	2400	450	150				8½	215
.072 .11	.0028 .0042	1800	325	120	Drilling Offset			Spindle I.D. Thd.	
.15 .18	.0056 .007	1100	200	80 60	inch	mm	Available Motors	1/4-28	3/8-24
					.562	14.3	3/4 H.P.	5/16-24	7/16-20

VT 30



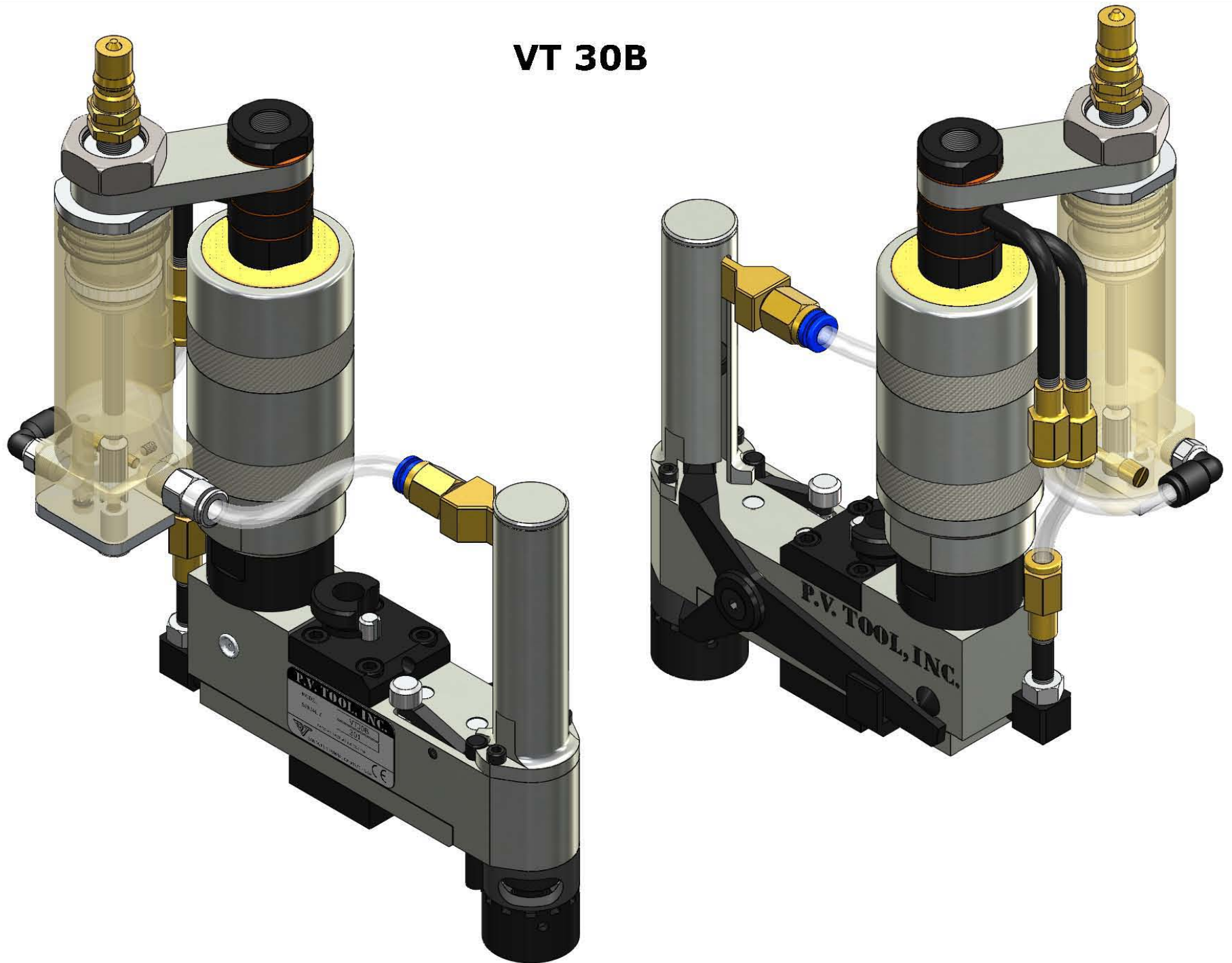
VT 30B



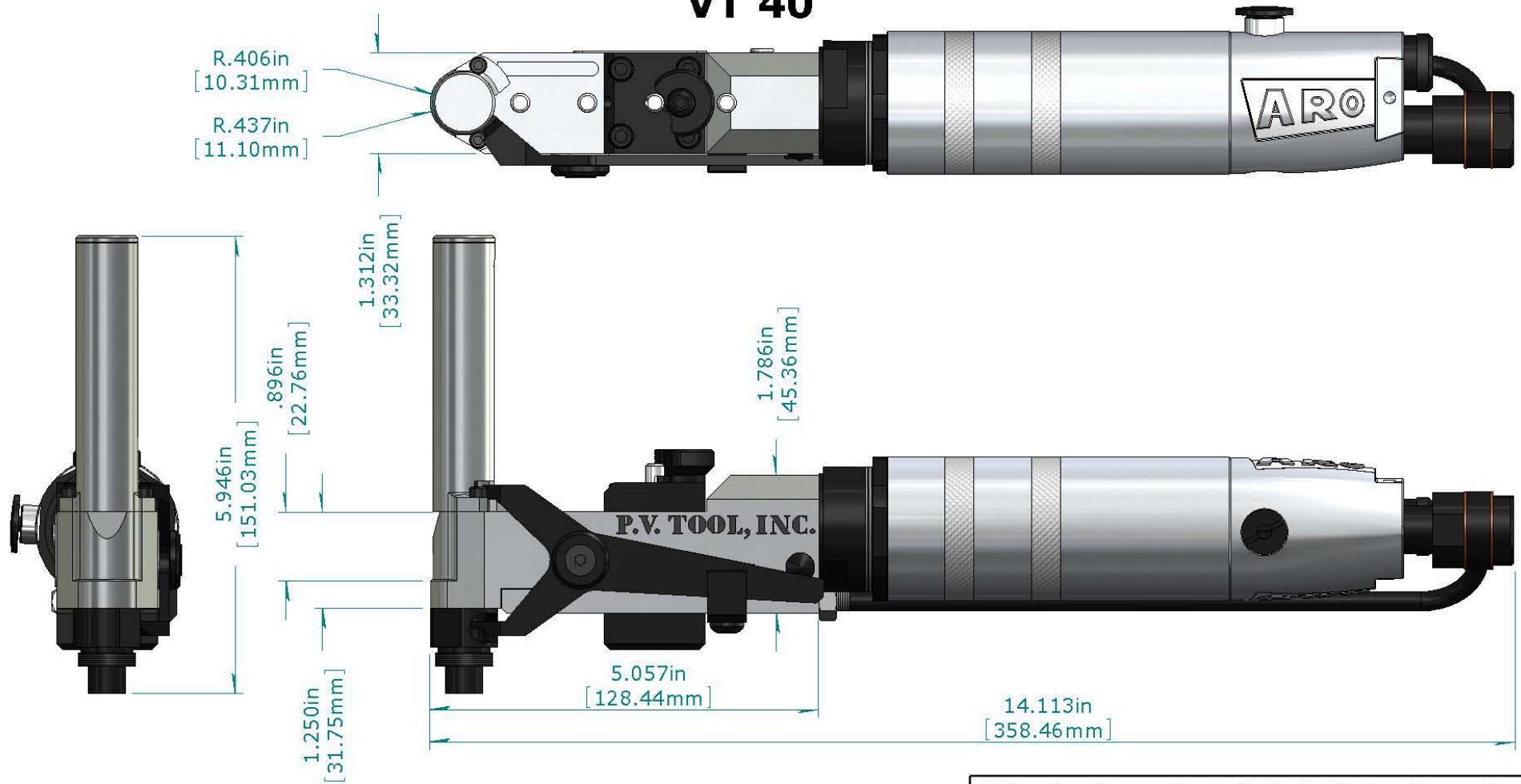
Available Feeds		Spindle Speed (rpm)			Weight w/o accessories		Drilling Capacity	Avail. Spindles	
mm/rev	in./rev. (IPR)	12000	3200	1000	5 lbs.		Alum	inch	mm
.012 .015	.0005 .0006	9000	2400	850				8%	215
.036 .050	.0014 .0021	7000	2000	650	Drilling Offest			Spindle I.D. Thd.	
.072 .11	.0028 .0042	6000	1700	450 350	inch	mm	Available Motors	1/4-28	3/8-24
.15 .18	.0056 .007	5200	1400	280 250	.562	14.3	1½ H.P.	5/16-24	7/16-20

Fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys
Rapid conversion from drilling to manual countersinking (Patented)
Complete selection of feed rates and spindle speeds available for maximum efficiency
Feed changes by changing one gear only (Patented)
Rapid Return Speed (x 10) to minimize cycle time
Orientation device (Clocking) Available
Cutting fluid through the Spindle Available
Four digit pneumatic cycle counter Available

VT 30B



VT 40



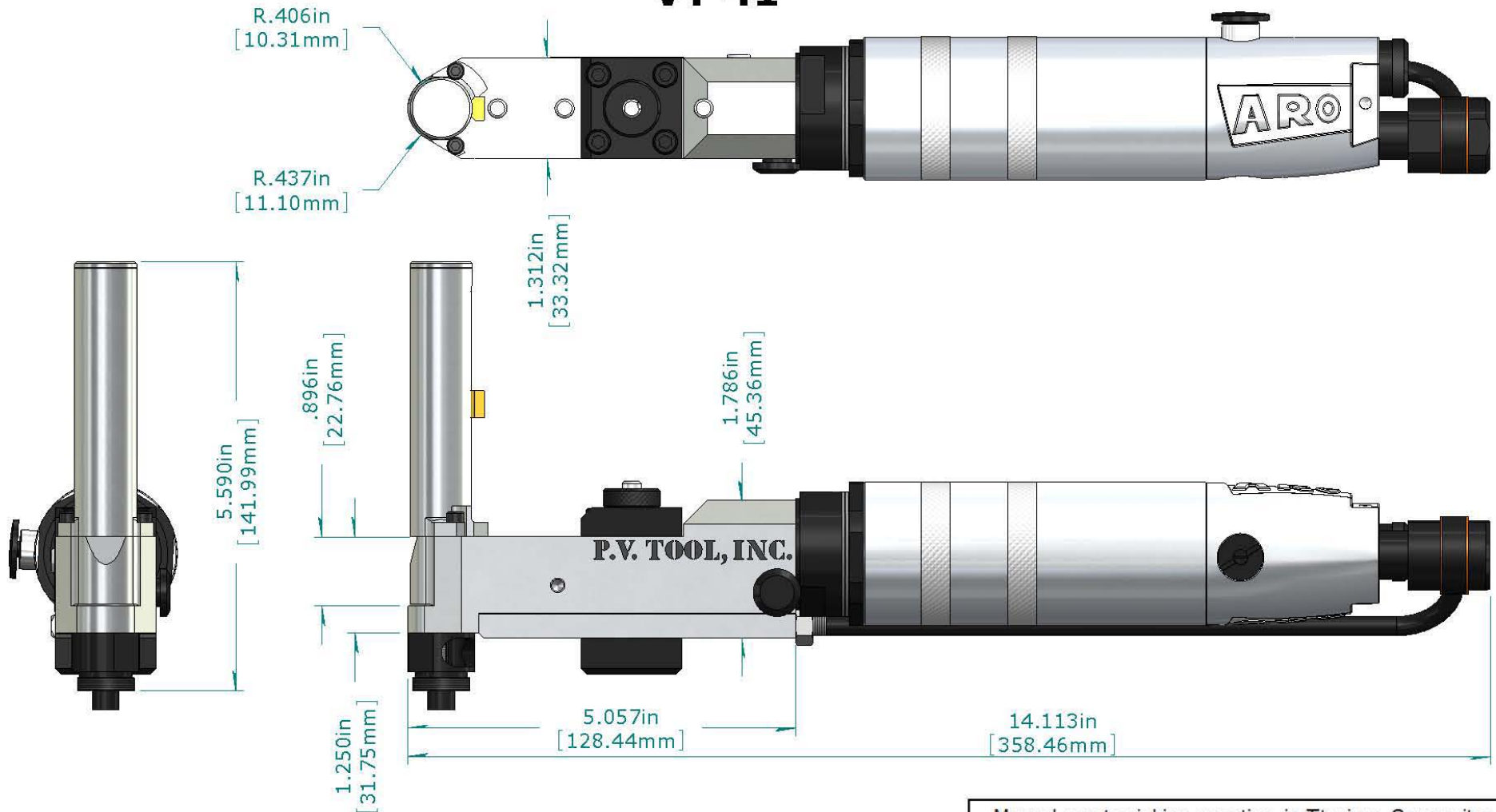
Fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys			
Rapid conversion from drilling to manual countersinking (Patented)			
Small Spindle Offset for critical Accessibilities			
Complete selection of feed rates and spindle speeds available for maximum efficiency			
Feed changes by changing one gear only (Patented)			
Rapid Return Speed (x 10) to minimize cycle time			
Orientation device (Clocking) Available			
Cutting fluid through the Spindle Available			
Four digit pneumatic cycle counter Available			

Available Feeds		Spindle Speed (rpm)			Weight w/o accessories	Drilling Capacity		Avail. Spindles	
mm/rev	in./rev. (IPR)	4500	1800	1500		Alum		Max. Stroke	
.03 .053	.001 .0021	3200	1100	850	4 lbs.	Ø3/8		inch	mm
.106	.0042		550	350				3 3/4	95
.159	.0063				Drilling Offset			Spindle I.D. Thd.	
.212	.0084				inch	mm	Available Motors	1/4-28	
					.437	11.1	3/4 H.P.		

VT 40



VT 41



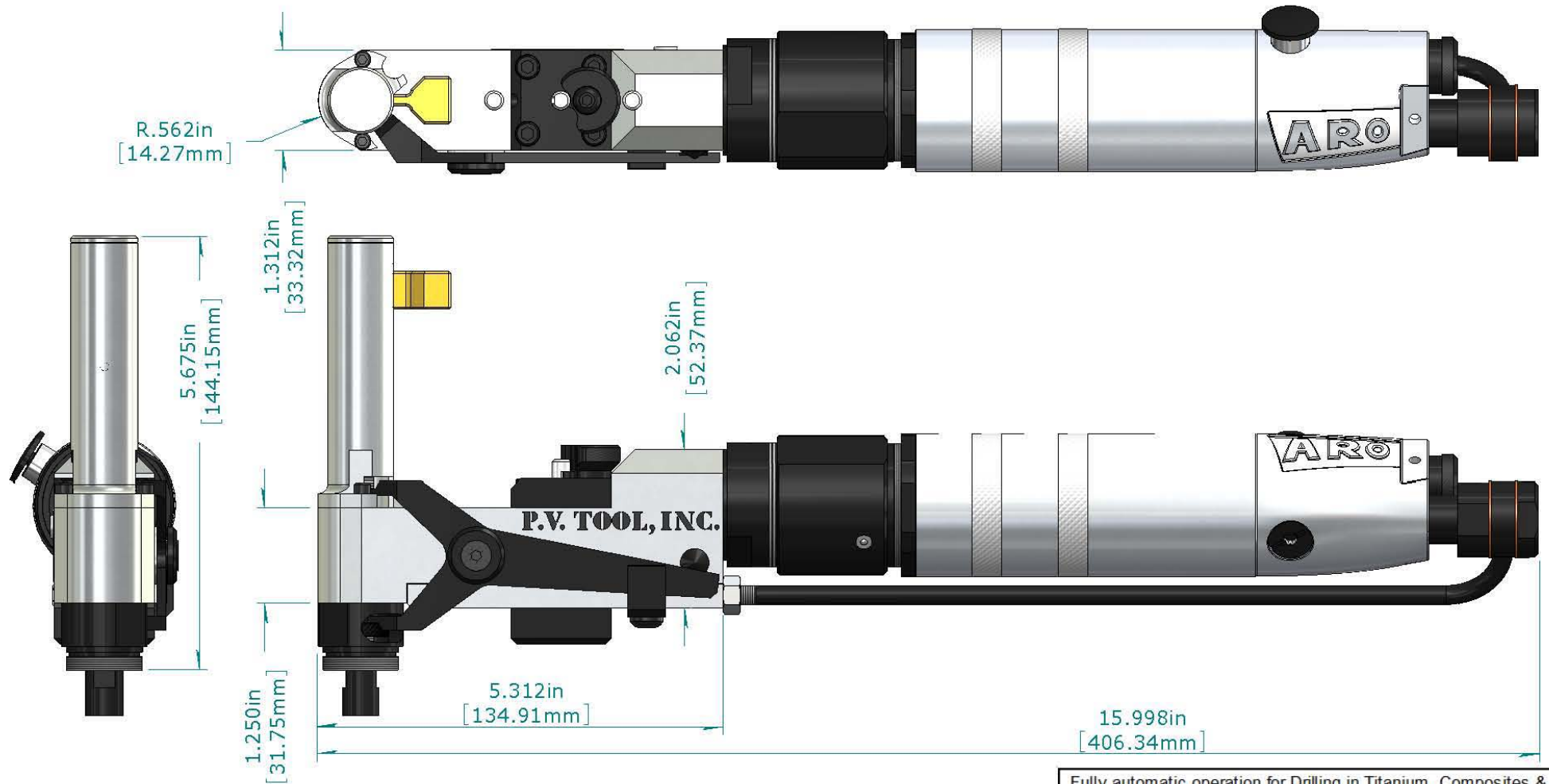
Available Feeds		Spindle Speed (rpm)			Weight w/o accessories		C'Sink Capacity		Avail. Spindles	
mm/rev	in./rev. (IPR)	4500	1800	1500	4 lbs.		Alum		inch	mm
.03 .053	.001 .0021	3200	1100	850			Ø1/2		2 3/4	70
.106	.0042		550	350	Drilling Offset				Spindle I.D. Thd.	
.159	.0063				inch	mm	Available Motors		1/4-28	
.212	.0084				.437	11.1	3/4 H.P.			

Manual countersinking operation in Titanium, Composites & Aluminum Alloys
Countersink dept accuracy ±.001"
Small Spindle Offset for critical Accessibilities
Complete selection of feed rates and spindle speeds available for maximum efficiency
Feed changes by changing one gear only (Patented)
Rapid Return Speed (x10) to minimize cycle time
Orientation device (Clocking) Available
Cutting fluid through the Spindle Available
Four digit pneumatic cycle counter Available

VT 41



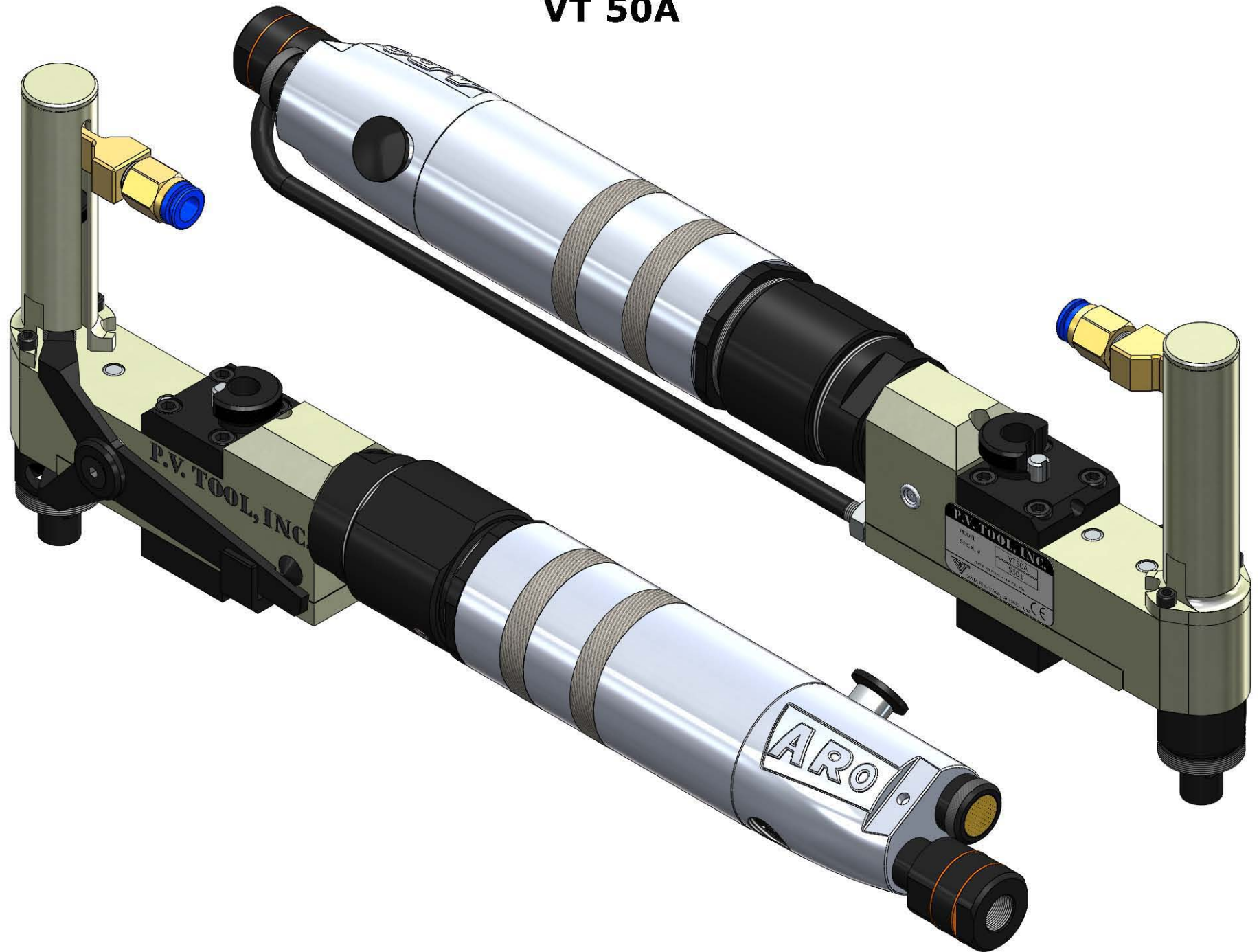
VT 50A



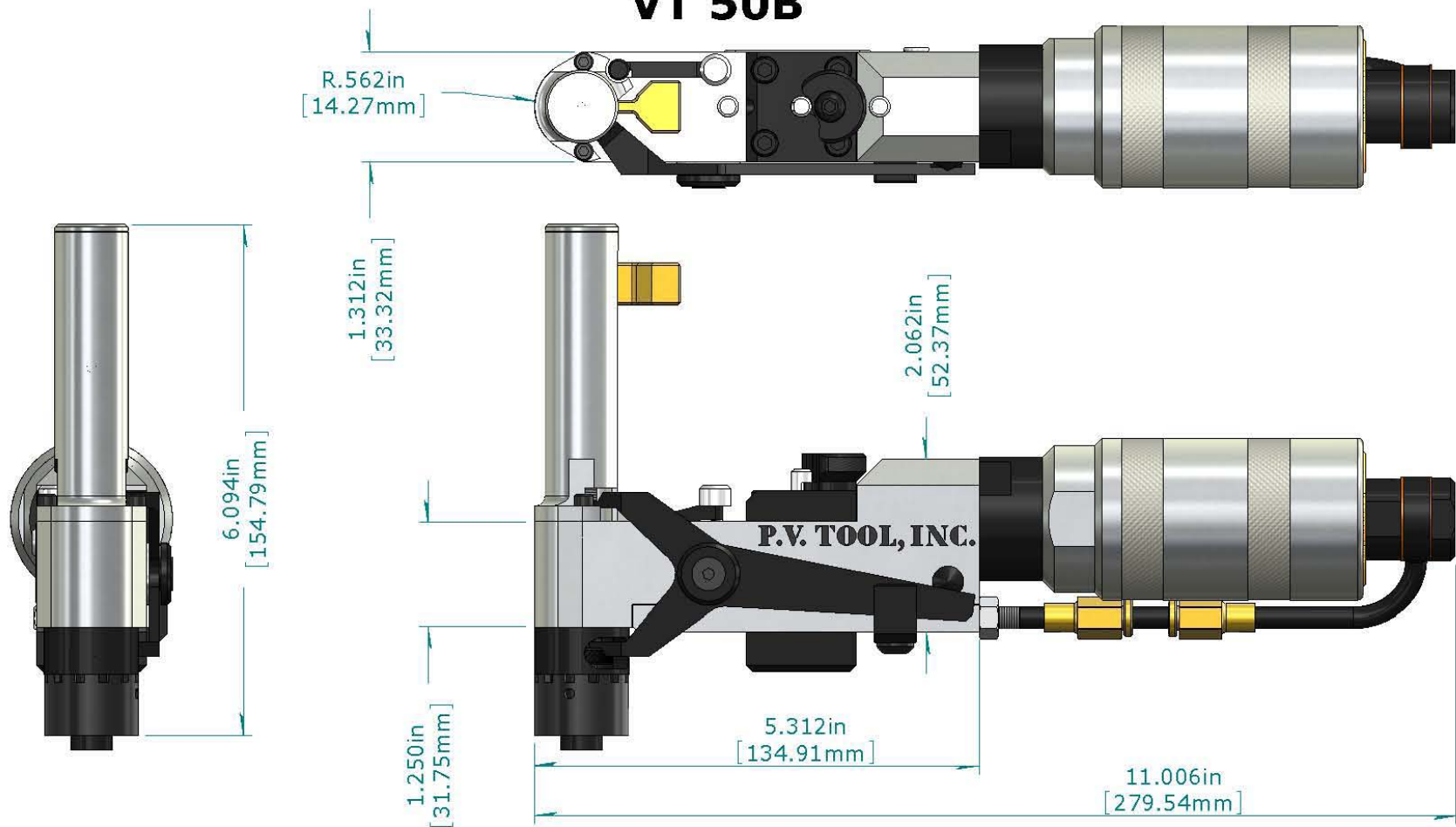
Fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys
Rapid conversion from drilling to manual countersinking (Patented)
Complete selection of feed rates and spindle speeds available for maximum efficiency
Feed changes by changing one gear only (Patented)
Rapid Return Speed (x10) to minimize cycle time
Orientation device (Clocking) Available
Cutting fluid through the Spindle Available
Four digit pneumatic cycle counter Available

Available Feeds		Spindle Speed (rpm)			Weight w/o accessories	Drilling Capacity		Avail. Spindles	
mm/rev	in./rev. (IPR)	4500	850	280		Alum	Max. Stroke	inch	mm
.012 .015	.0005 .0006	3200	600	220	5 lbs.	Ø 3/8	8½	215	
.036 .050	.0014 .0021	2400	450	150	Drilling Offset		Spindle I.D. Thd.		
.072 .11	.0028 .0042	1800	325	120	inch	mm	Available Motors	1/4-28	3/8-24
.15 .18	.0056 .007	1100	200	80 60	.562	14.3	3/4 H.P.	5/16-24	7/16-20

VT 50A



VT 50B



Fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys

Rapid conversion from drilling to manual countersinking (Patented)

Complete selection of feed rates and spindle speeds available for maximum efficiency

Feed changes by changing one gear only (Patented)

Rapid Return Speed (x 10) to minimize cycle time

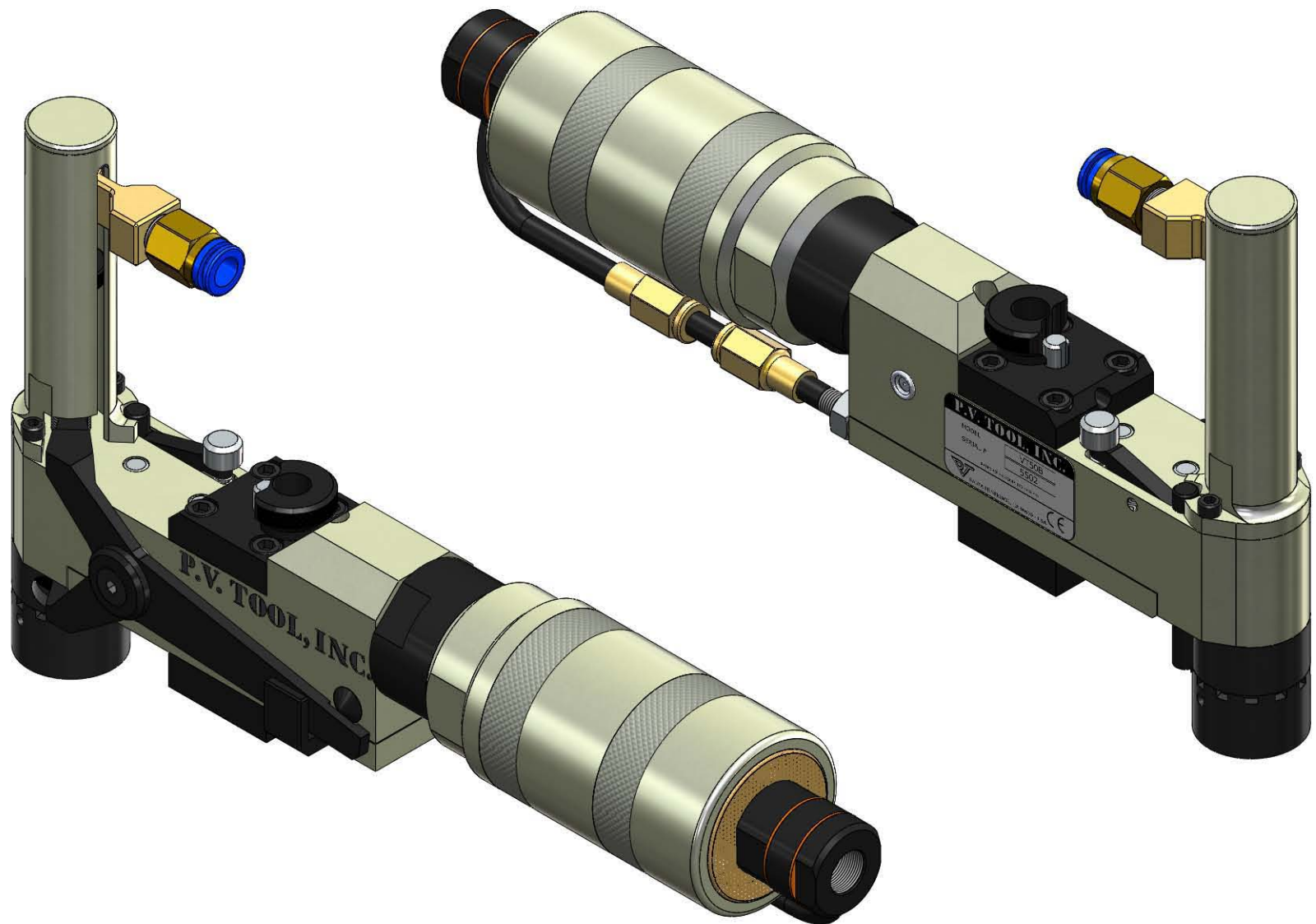
Orientation device (Clocking) Available

Cutting fluid through the Spindle Available

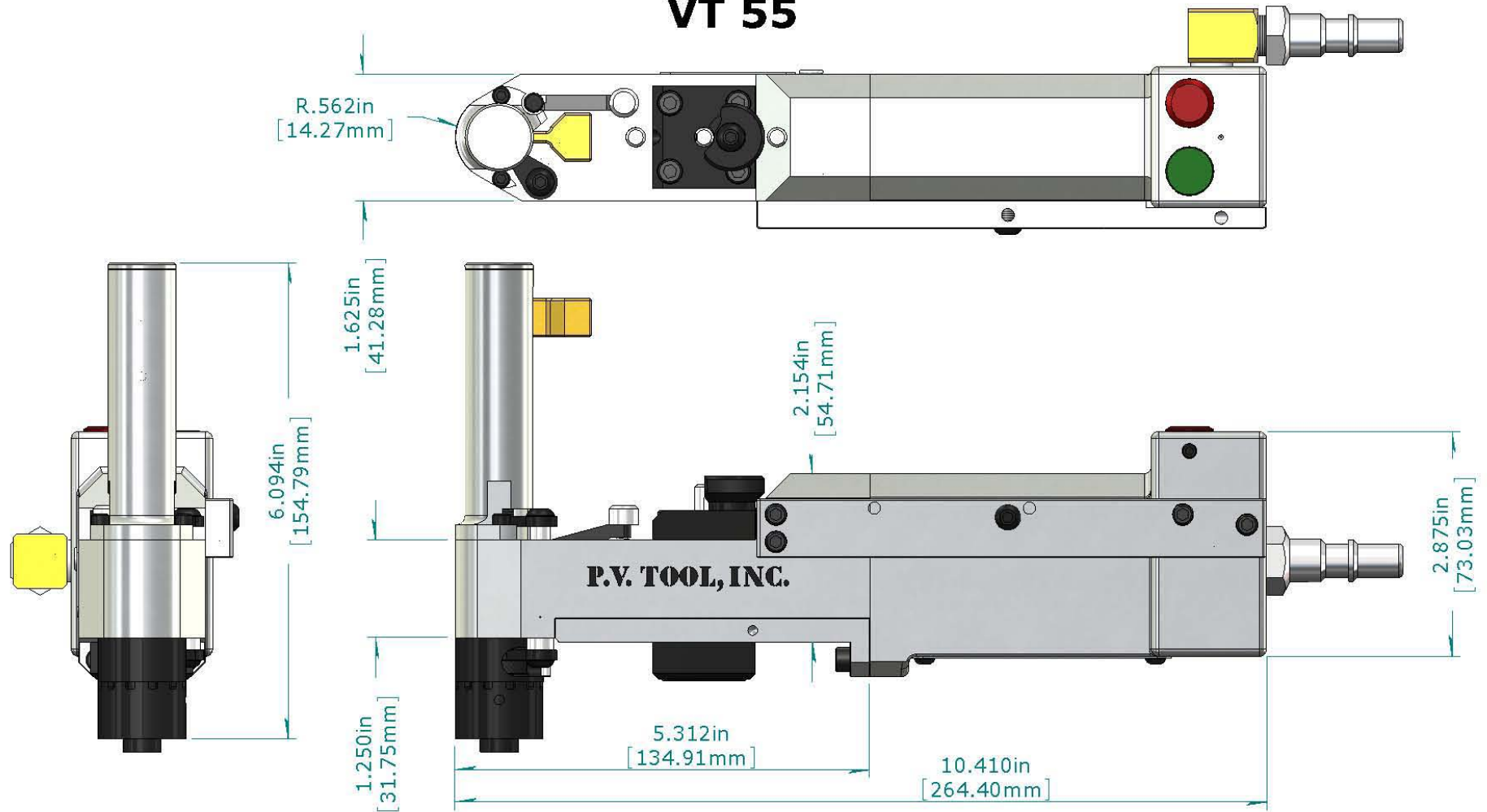
Four digit pneumatic cycle counter Available

Available Feeds		Spindle Speed (rpm)			Weight w/o accessories		Drilling Capacity		Avail. Spindles	
mm/rev	in./rev. (IPR)	12000	3200	1000	5 lbs.		Alum		Max. Stroke	
.012 .015	.0005 .0006	9000	2400	850			Ø1/2		inch	mm
.036 .050	.0014 .0021	7000	2000	650					8½	215
.072 .11	.0028 .0042	6000	1700	450 350	Drilling Offset				Spindle I.D. Thd.	
.15 .18	.0056 .007	5200	1400	280 250	inch	mm	Available Motors		1/4-28	3/8-24
					.562	14.3	1½ H.P.		5/16-24	7/16-20

VT 50B



VT 55



Fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys

Complete selection of feed rates and spindle speeds available for maximum efficiency

Feed changes by changing one gear only (Patented)

Rapid Return Speed (x 10) to minimize cycle time

Orientation device (Clocking) Available

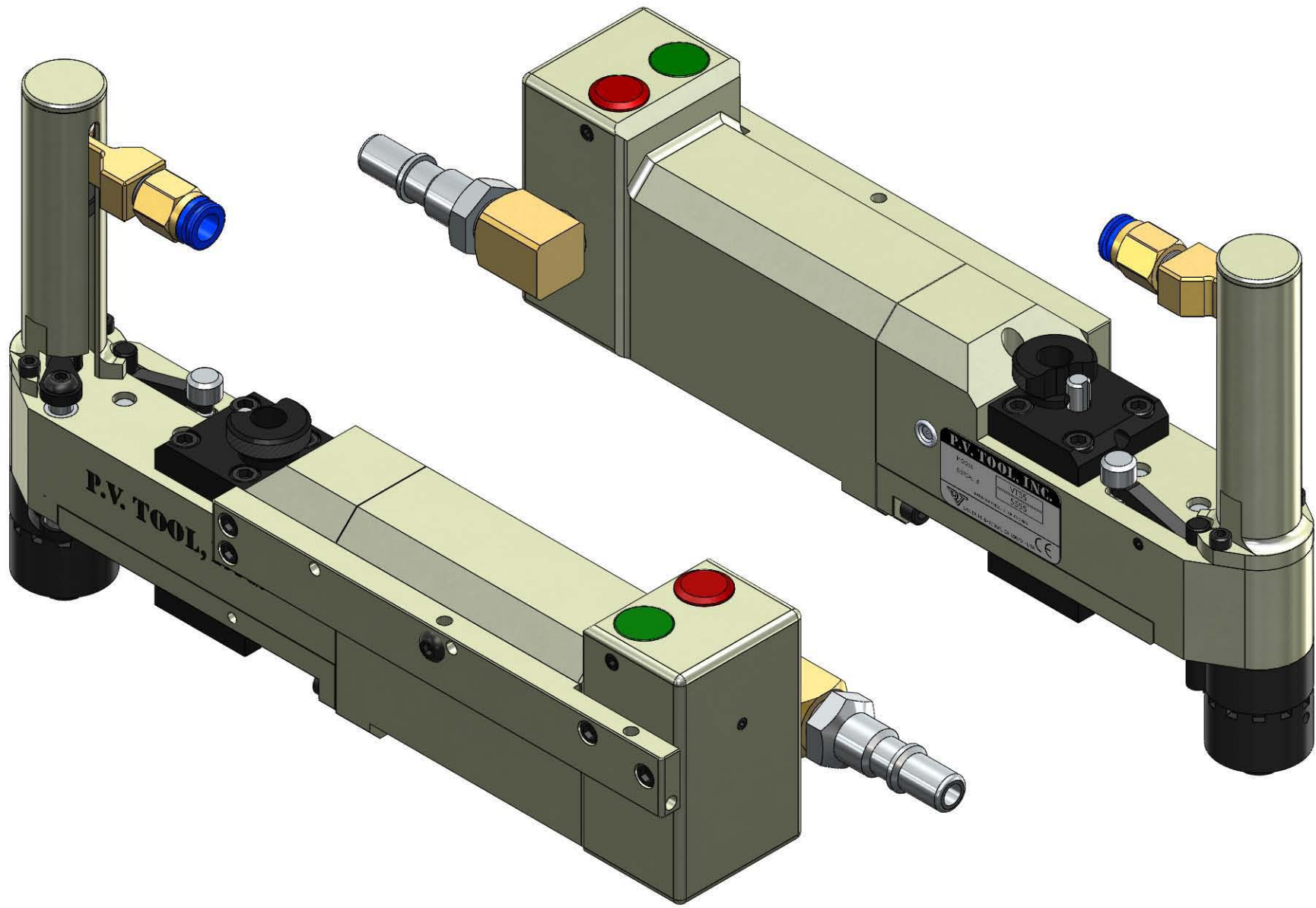
Cutting fluid through the Spindle Available

Four digit pneumatic cycle counter Available

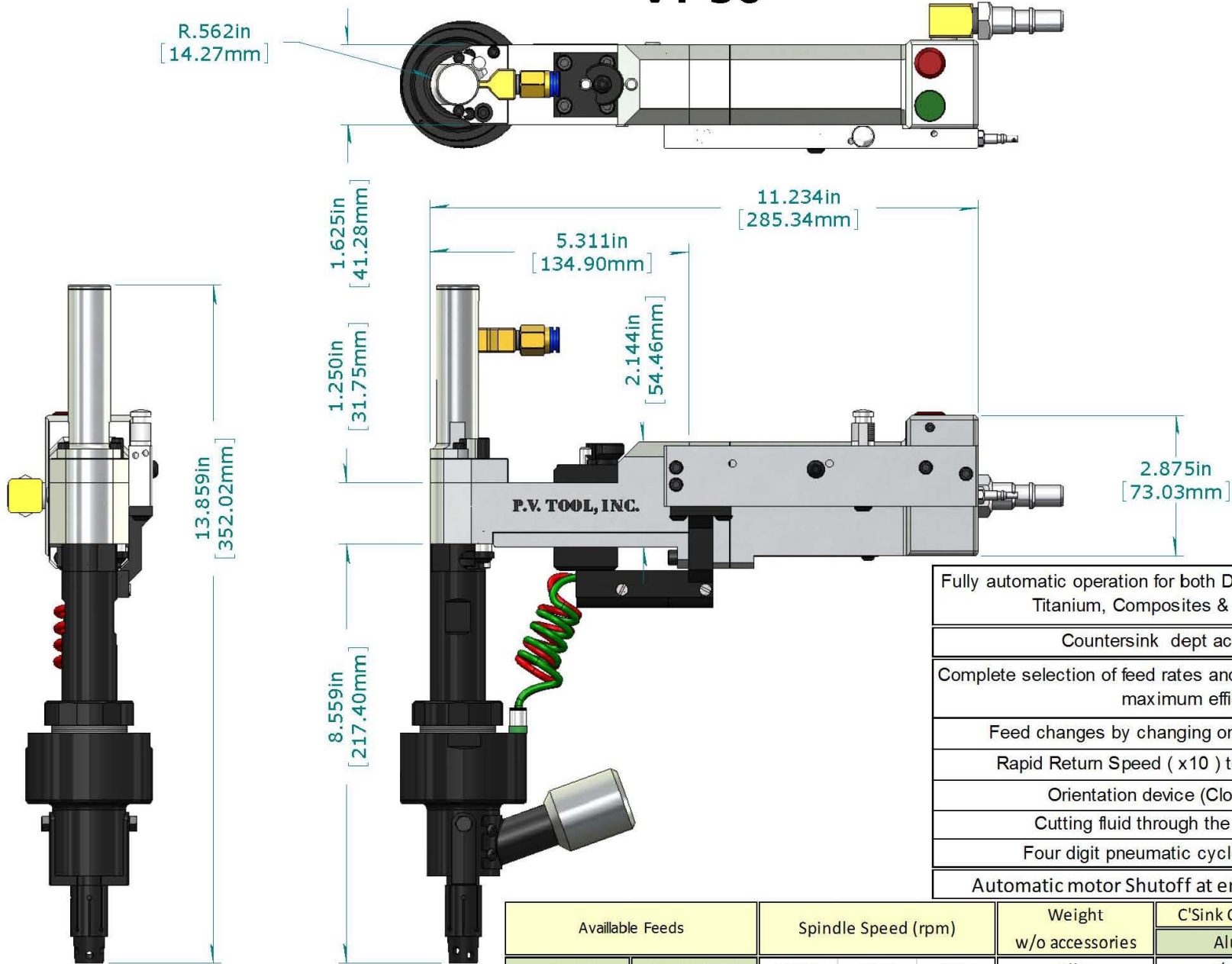
Automatic motor Shutoff at end of retract (Patented)

Available Feeds		Spindle Speed (rpm)			Weight w/o accessories	Drilling Capacity		Avail. Spindles	
mm/rev	in./rev. (IPR)	12000	3200	1000		Alum		Max. Stroke	
.012 .015	.0005 .0006	9000	2400	850	6 lbs.	Ø 9/16		inch	mm
.036 .050	.0014 .0021	7000	2000	650				8	200
.072 .11	.0028 .0042	6000	1700	450 350	Drilling Offset			Spindle I.D. Thd.	
.15 .18	.0056 .007	5200	1400	280 250	inch	mm	Available Motors	1/4-28	3/8-24
					.562	14.3	1½ H.P.	5/16-24	7/16-20

VT 55



VT 56



Fully automatic operation for both Drilling and Countersinking in Titanium, Composites & Aluminum Alloys

Countersink dept accuracy $\pm .001"$

Complete selection of feed rates and spindle speeds available for maximum efficiency

Feed changes by changing one gear only (Patented)

Rapid Return Speed (x10) to minimize cycle time

Orientation device (Clocking) Available

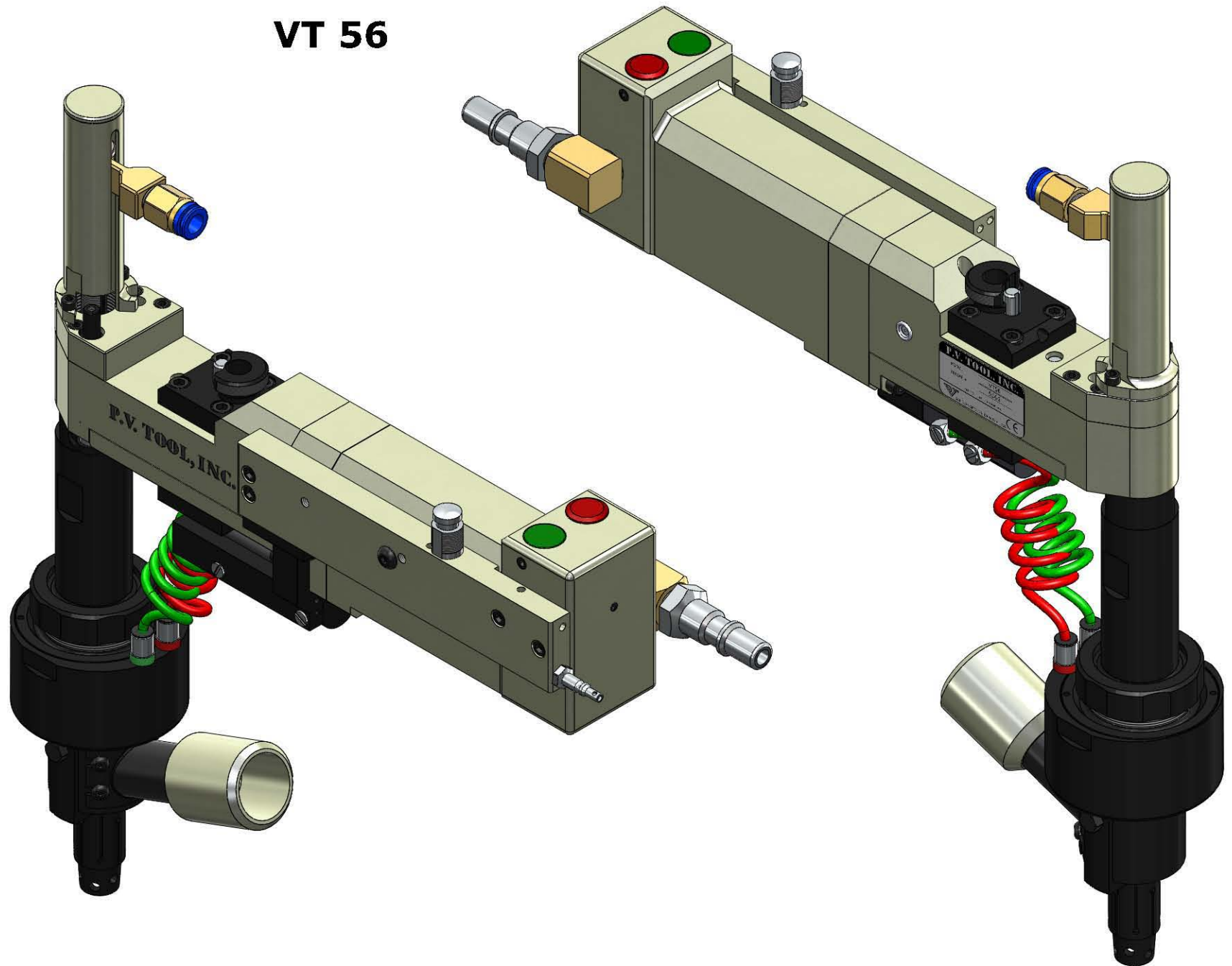
Cutting fluid through the Spindle Available

Four digit pneumatic cycle counter Available

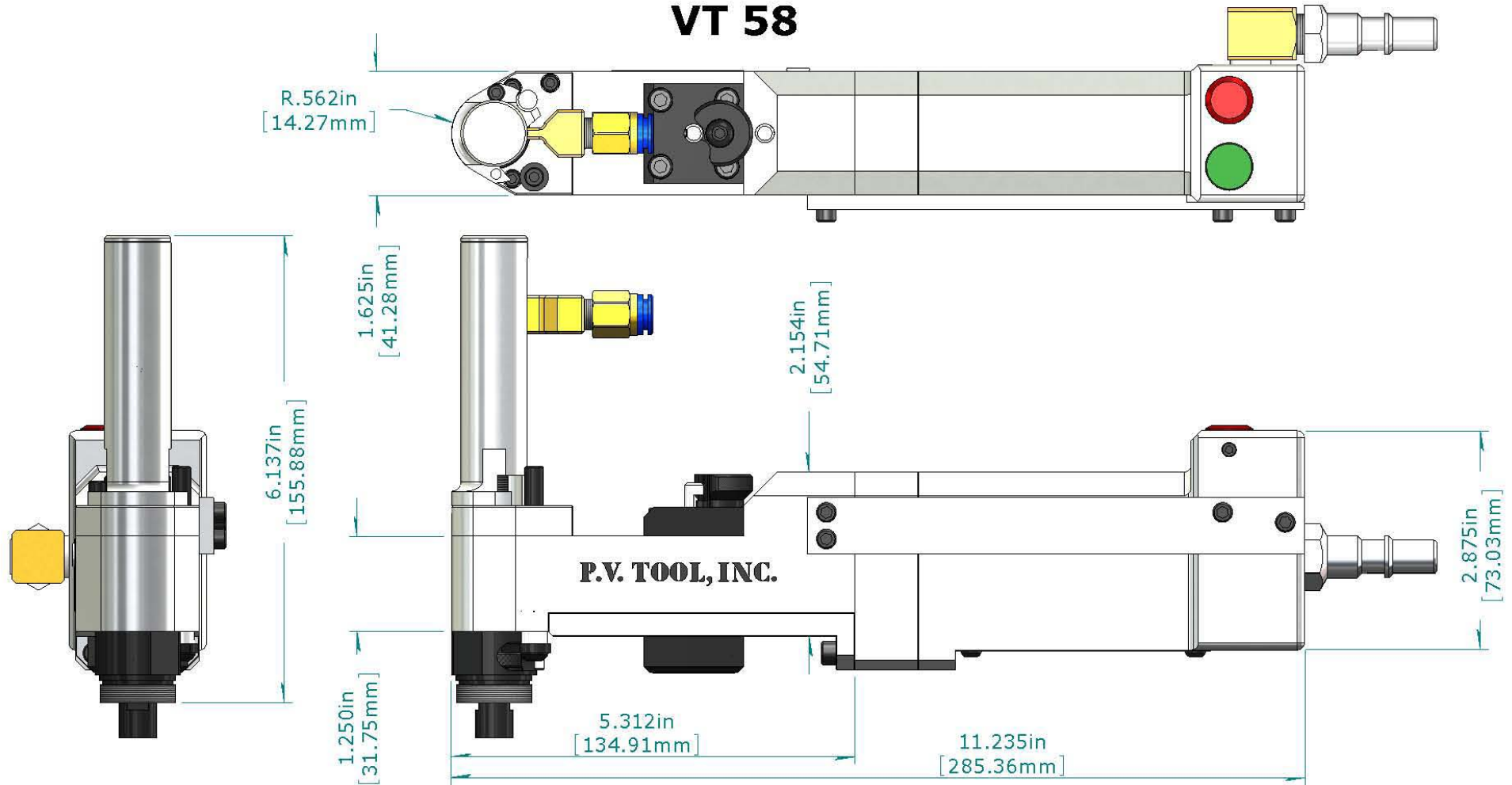
Automatic motor Shutoff at end of retract (Patented)

Available Feeds		Spindle Speed (rpm)			Weight w/o accessories	C'Sink Capacity		Avail. Spindles	
mm/rev	in./rev. (IPR)	12000	3200	1000		Alum		Max. Stroke	
.012 .015	.0005 .0006	9000	2400	850	9 lbs.	\emptyset 5/8		inch	mm
.036 .050	.0014 .0021	7000	2000	650				2	51
.072 .11	.0028 .0042	6000	1700	450 350	Drilling Offset			Spindle I.D. Thd.	
.15 .18	.0056 .007	5200	1400	280 250	inch	mm	Available Motors	M6 X 1	M8 X 1
					.562	14.3	1½ H.P.		

VT 56



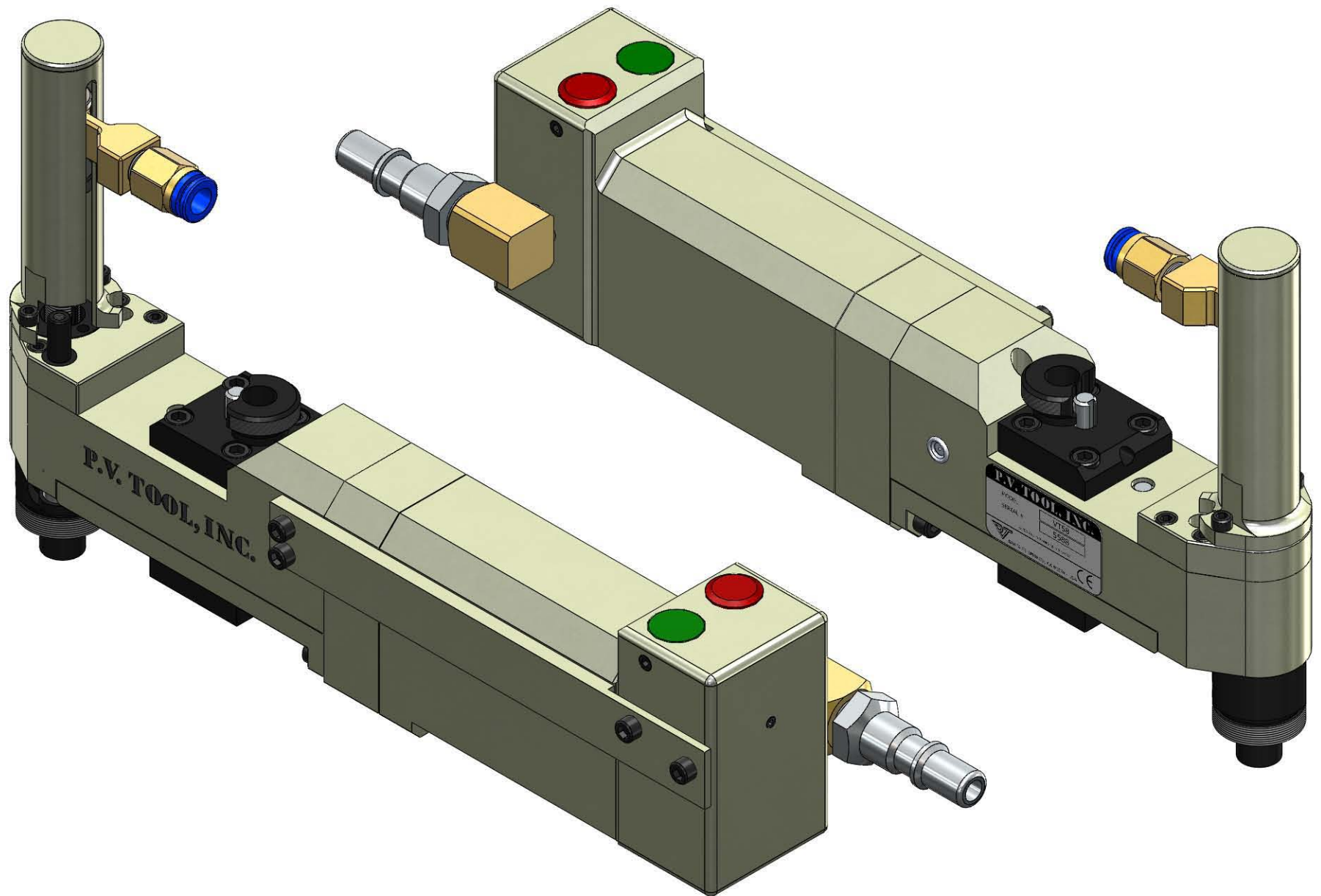
VT 58



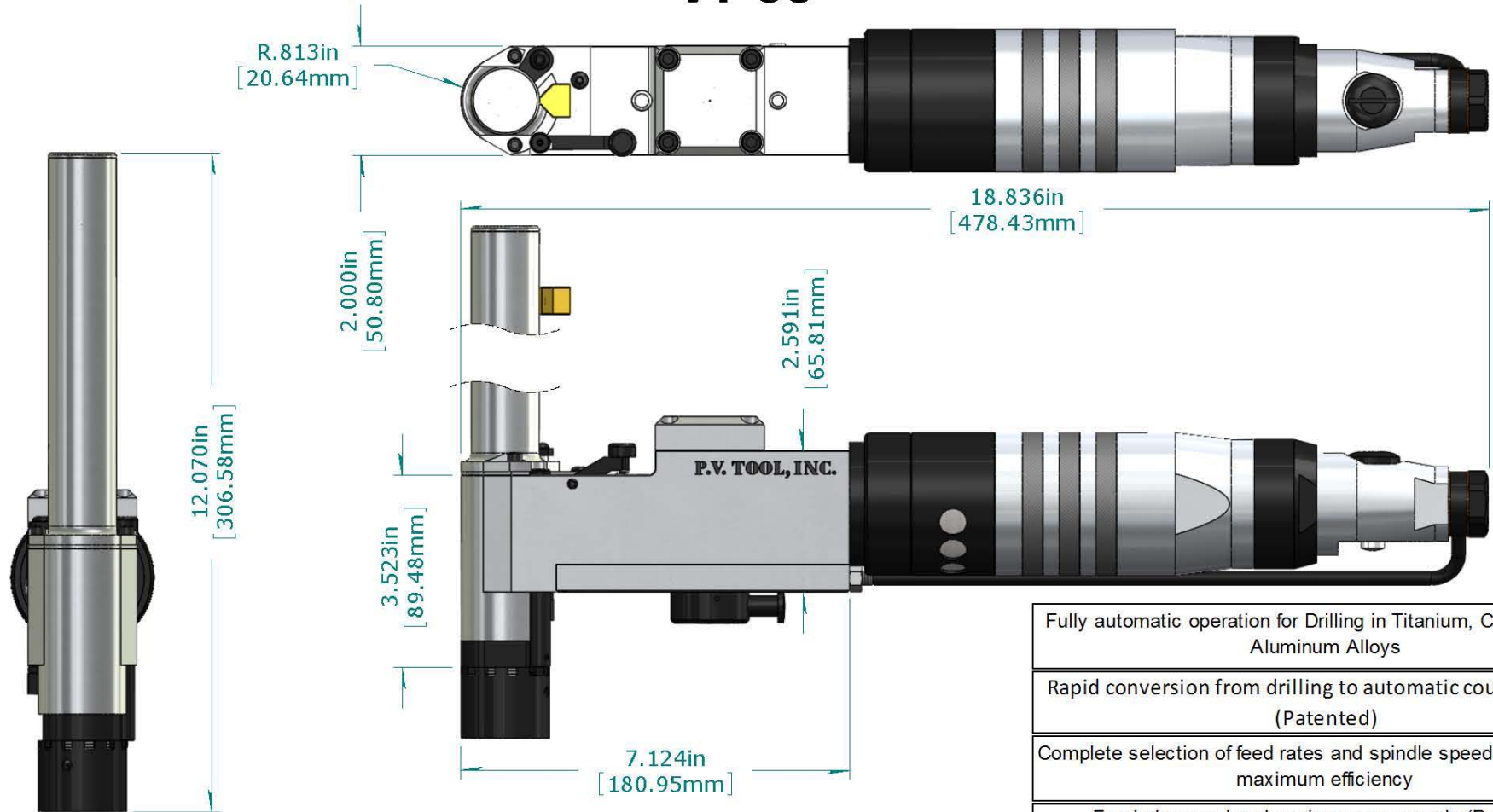
Fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys
Rapid conversion from drilling to automatic countersinking (Patented)
Complete selection of feed rates and spindle speeds available for maximum efficiency
Feed changes by changing one gear only (Patented)
Rapid Return Speed (x 10) to minimize cycle time
Orientation device (Clocking) Available
Cutting fluid through the Spindle Available
Four digit pneumatic cycle counter Available
Automatic motor Shutoff at end of retract (Patented)

Available Feeds		Spindle Speed (rpm)			Weight w/o accessories	Drilling Capacity Aluminum	Avail. Spindles Max. Stroke	
mm/rev	in./rev. (IPR)	12000	3200	1000	6 lbs.	Ø 5/8	inch	mm
.036	.0014	9000	2400	850			8	200
.072	.0028	7000	2000	650	Drilling Offset		Spindle I.D. Thd.	
		6000	1700	450 350	inch	mm	1/4-28	3/8-24
		5200	1400	280 250	.562	14.3	5/16-24	7/16-20
						1½ H.P.		

VT 58



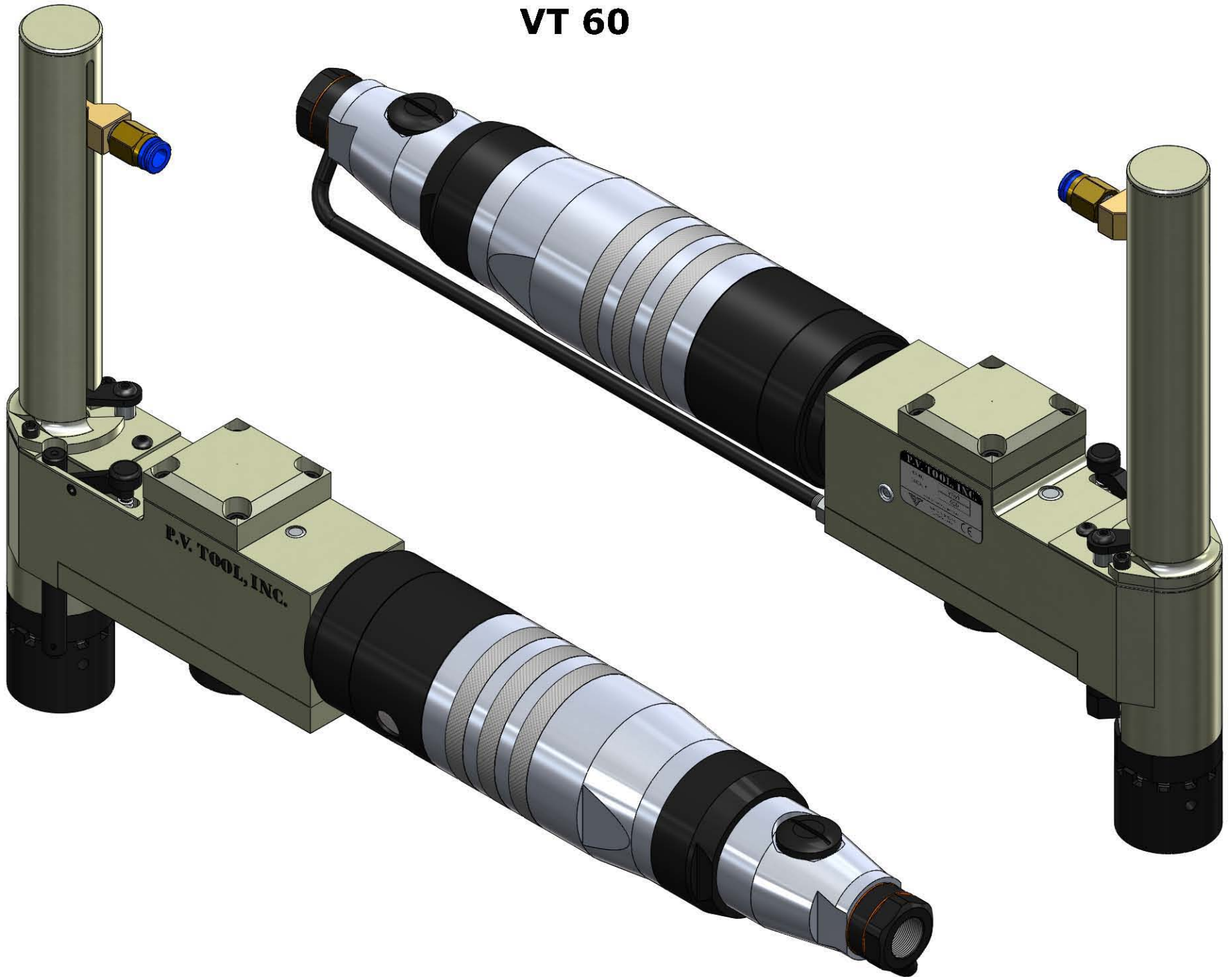
VT 60



- Fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys
- Rapid conversion from drilling to automatic countersinking (Patented)
- Complete selection of feed rates and spindle speeds available for maximum efficiency
- Feed changes by changing one gear only (Patented)
- Rapid Return Speed (x10) to minimize cycle time
- Orientation device (Clocking) Available
- Cutting fluid through the Spindle Available
- Four digit pneumatic cycle counter Available
- Automatic motor Shutoff at end of retract Available

Available Feeds		Spindle Speed (rpm)					Weight w/o accessories		Drilling Capacity	Avail. Spindles	
mm/rev	in./rev. (IPR)	4100	2450	1100	1000	325	280	13 lbs.	Aluminum	Max. Stroke	
.012 .015	.0005 .0006	2375	2000	675	650	240	185		Ø 1-1/4	inch	mm
.033 .067	.0013 .0027	1425		550	400	160	140			11½	292
.10 .134	.004 .0052			375		110	90			Spindle I.D. Thd.	
.167 .20	.0065 .0078			55	45	80	65				
							Drilling Offset				
							inch	mm	Available Motors	5/16-24	3/8-24 5/8-18
							.812	20.6	2.3 H.P.	7/16-20	9/16-18

VT 60



Technical drawing of the P.V. TOOL, INC. countersink tool showing three views: front, side, and top. Dimensions are provided in inches and millimeters.

Dimensions:

- Front View: Total length 18.218 in [462.74 mm]
- Side View: Total length 18.836 in [478.43 mm], Width 7.124 in [180.95 mm]
- Top View: Total length 18.836 in [478.43 mm], Width 2.000 in [50.80 mm]
- Other dimensions: 2.591 in [65.81 mm], 3.038 in [77.17 mm], 2.000 in [50.80 mm], R.813 in [20.64 mm]

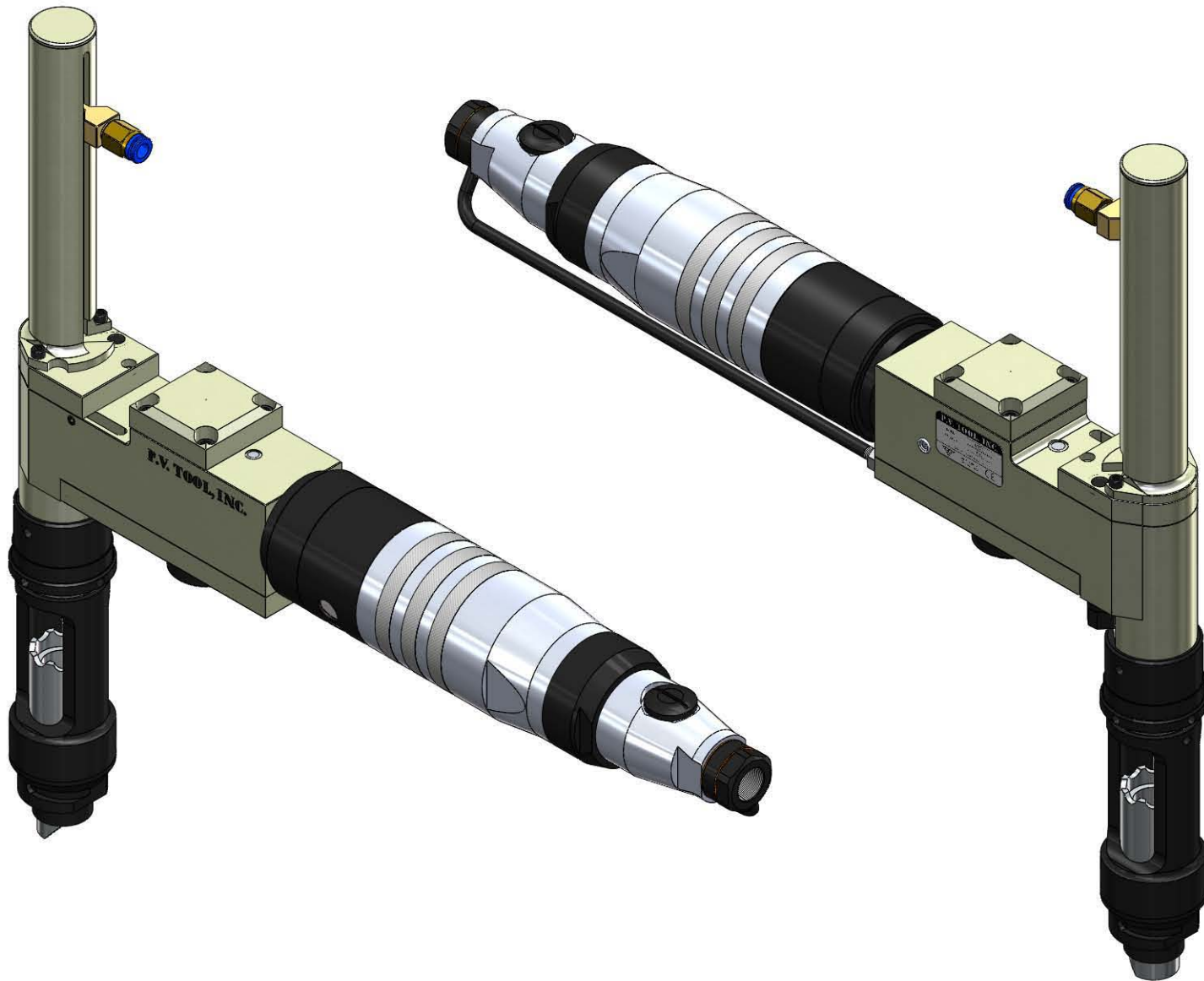
Features:

- Fully automatic operation for both D and H
- Countersink depth adjustment
- Complete selection of feed rates and spindle speeds
- Feed changes by changing on the spindle speed
- Rapid Return Speed (x10) to the start of the cycle
- Orientation device (Clockwise/Counter-clockwise)
- Cutting fluid through the tool
- Four digit pneumatic cycle control
- Automatic motor Shutoff at end of cycle

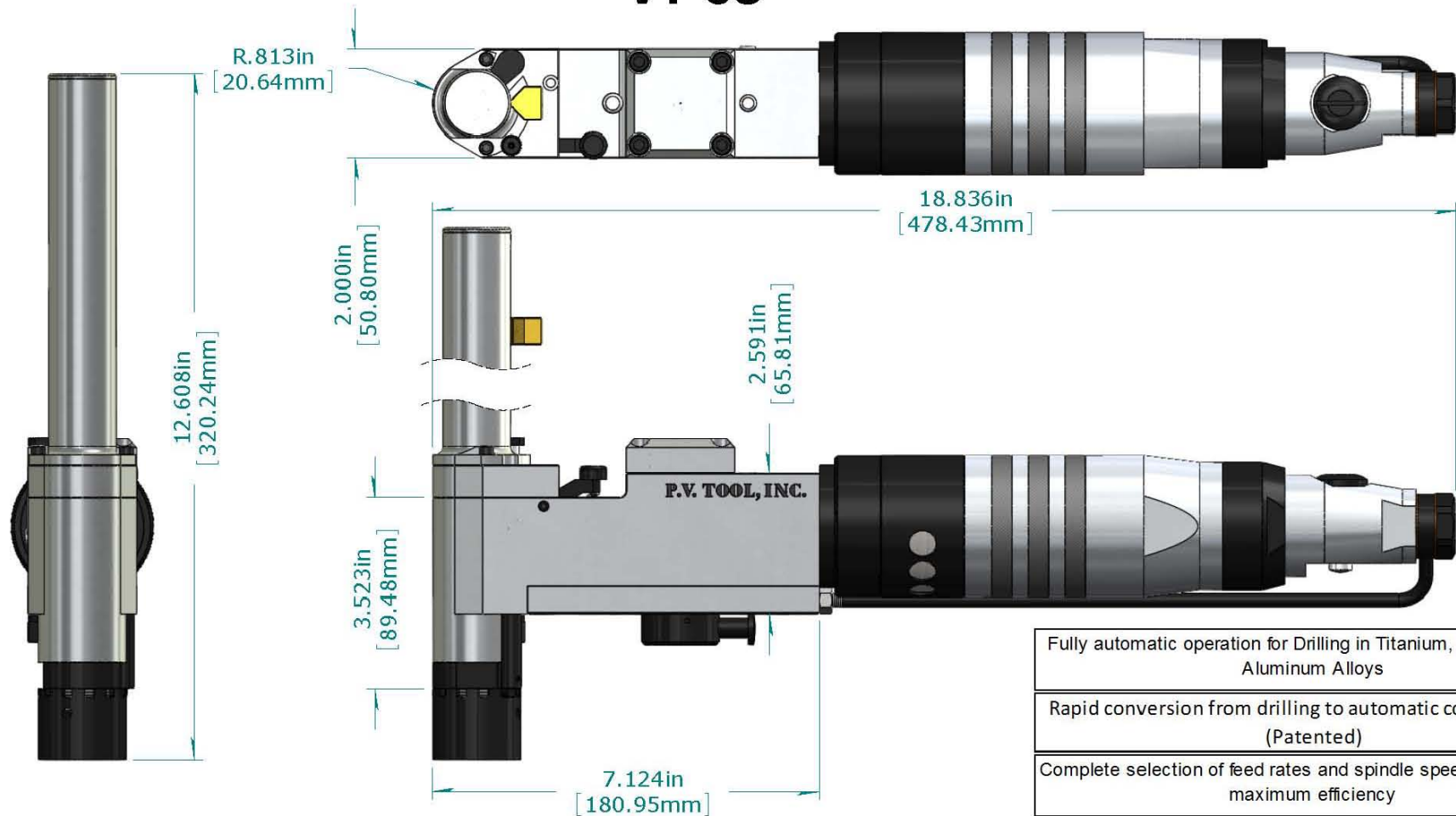
Available Feeds		Spindle Speed (rpm)				Weight w/o accessories	C'Sink Capacity Aluminum		
mm/rev	in./rev. (IPR)	4100	2450	1100	1000	325	280	13 lbs.	Ø 1-1/2"
.012	.015	.0005	.0006	2375	2000	675	650		
.033	.067	.0013	.0027	1425	550	400	160	Drilling Offset	

Fully automatic operation for both Drilling and Countersinking in Titanium, Composites & Aluminum Alloys				
Countersink dept accuracy $\pm .001"$				
Complete selection of feed rates and spindle speeds available for				
Feed changes by changing one gear only (Patented)				
Rapid Return Speed (x10) to minimize cycle time				
Orientation device (Clocking) Available				
Cutting fluid through the Spindle Available				
Four digit pneumatic cycle counter Available				
Automatic motor Shutoff at end of retract Available				
Weight		C'Sink Capacity	Avail. Spindles	
w/o accessories		Aluminum	Max. Stroke	
13 lbs.		Ø 1-1/2	inch	mm
			11½	292
Drilling Offset			Spindle I.D. Thd.	
inch	mm	Available Motors	5/16-24	3/8-24 5/8-18
.812	20.6	2.3 H.P.	7/16-20	9/16-18

VT 61



VT 68



Fully automatic operation for Drilling in Titanium, Composites & Aluminum Alloys

Rapid conversion from drilling to automatic countersinking (Patented)

Complete selection of feed rates and spindle speeds available for maximum efficiency

Feed changes by changing one gear only (Patented)

Rapid Return Speed (x10) to minimize cycle time

Orientation device (Clocking) Available

Cutting fluid through the Spindle Available

Four digit pneumatic cycle counter Available

Automatic motor Shutoff at end of retract Available

Available Feeds		Spindle Speed (rpm)			Weight w/o accessories	Drilling Capacity		Avail. Spindles	
mm/rev	in./rev. (IPR)	1100	400	240 185		Aluminum		Max. Stroke	
.033	.0013	1000	375	160 140	13 lbs.	Ø 1-1/4		inch	mm
.067	.0027	675	325	110 90				11	280
.10	.004	650	280	80 65	Drilling Offset		Spindle I.D. Thd.		
		550	325 280	55 45	inch	mm	Available Motors	5/16-24	3/8-24 5/8-18
					.812	20.6	2.3 H.P.	7/16-20	9/16-18

VT 68

