

CUT YOUR TURNING OPERATION IN HALF

FORKARDT SHAFT CHUCK

The Forkardt Shaft Chuck (FSC) allows one continuous turning operation. Its jaws are designed to extend and retract *during* the turning operation. Chuck jaws are extended to clamp the shaft. As the turning tool approaches the end of the workpiece, the chuck jaws retract, driving the shaft with (3) replaceable carbide drive pins or drive blades. The result is one non-interrupted, continuous turning operation.

This unique design feature is a major advantage over conventional chucks which require two operations and / or two machines to maintain shaft turning production, and can cut your turning operation cost in half.

TOTAL TURNING WITHOUT INTERRUPTION:

The Forkardt Shaft Chuck (FSC) allows machining of workpieces between centers over the entire length, eliminating unnecessary part handling.



IMPROVED CONCENTRICITY AND END LOCATION:

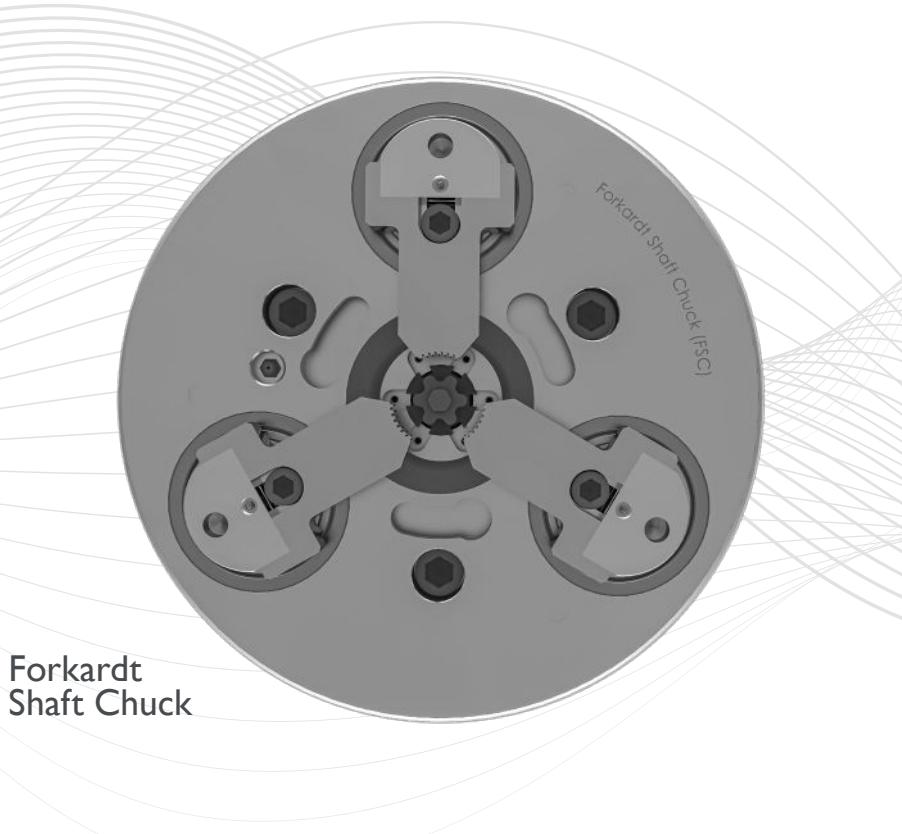
Drive centers provide true between centers machining for greater accuracy, eliminating part turnaround.

POSITIVE END DRIVING:

The FSC utilizes a self-contained equalizing drive pin mechanism. Each pin adjusts to the end of the workpiece, even if there is a slight out-of-squareness from part to part, ensuring evenly distributed driving force.

PRE-LOADED CENTER:

The FSC can provide a spring loaded center to accommodate locating center tolerance variation.



WIDE VARIETY OF APPLICATIONS

- Camshafts
- Drive Shafts
- Crankshafts
- Motor Shafts
- Transmission Shafts
- Axle Shafts
- Electric Motors
- Compressor Shafts

THE PROBLEM: INEFFICIENT MANUFACTURING PROCESSES

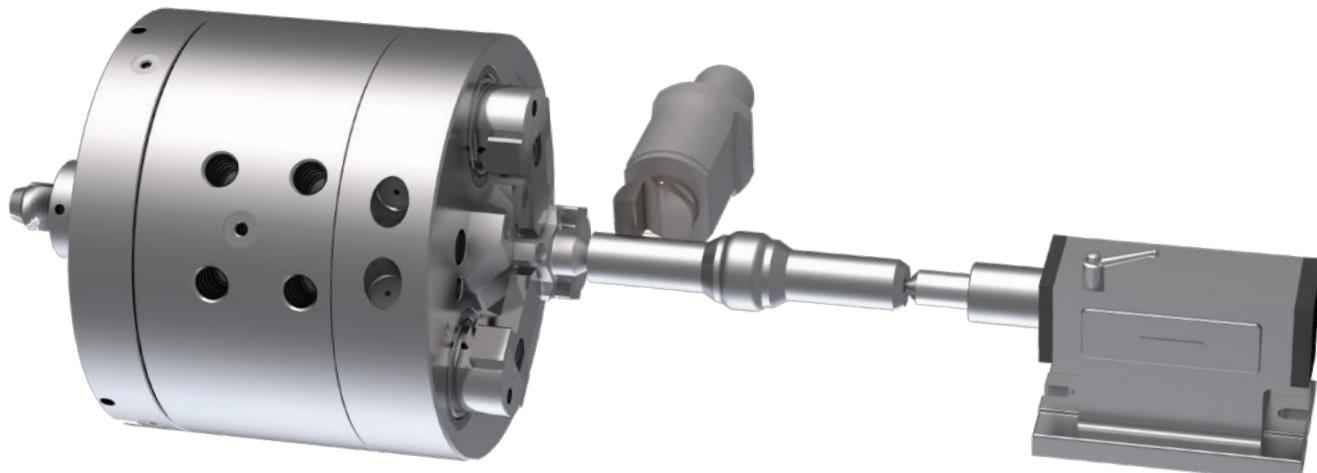
ASSUMPTIONS

FSC INVESTMENT	\$35,000
STANDARD SLIDING CHUCKS (OP10 & OP20)	\$7,500
TYPE OF WORK	MID-LARGE SHAFTS
LABOR RATE	\$50 PER HOUR
MATERIAL COST	\$35 PER PART
SHIFTS PER DAY	2 SHIFTS PER DAY RUNNING 8HRS A DAY
NUMBER OF ANNUAL PARTS	25,000

THE SOLUTION: FORKARDT SHAFT CHUCK

BENEFITS ASSUMPTIONS USING THE FORKARDT SHAFT CHUCK VS. STANDARD SLIDING CHUCKS

MANUFACTURING TIME	37% PROCESSING TIME SAVINGS
QUALITY IMPROVEMENT	5% IMPROVEMENT
INCREASED CAPACITY	60% ADDITIONAL COMPONENTS
PAYBACK PERIOD	LESS THAN 6 MONTHS



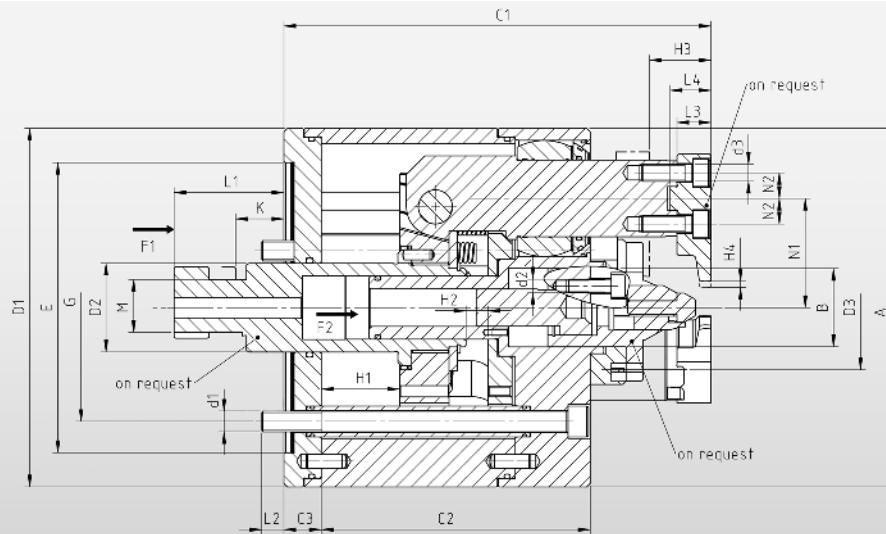
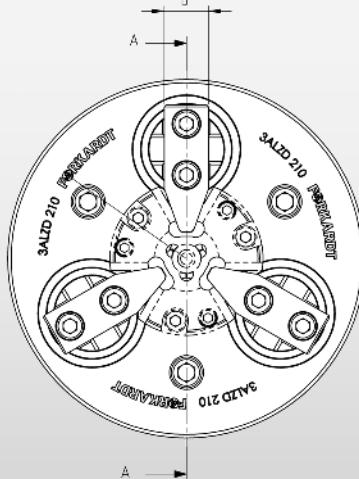
*TCO is based on general industry estimations across a broad spectrum of parts

POWER OPERATED CHUCKS 3 ALZD/3 ALZDA WITH RETRACTABLE JAWS

TECHNICAL SPECIFICATION

These chuck types are built to the requirements of machine and workpiece. The final design will be confirmed by the design drawing in the case of order.

FORKARDT



TYPE			210	255	280	315	400	500
Max. actuating force	Chuck	F1 [daN]	5000	9000	9000	9500	11000	18000
	Face driver	F2 [daN]	700	800	800	900	1000	--
Max. gripping force		[daN]	7500	12000	15000	15000	15000	30000
Max. speed		min-1	4000	3000	2800	2500	2000	1500
Weight*		kg	37	68	80	125	140	350
Mass moment of inertia*		kNm2	0.16	0.45	0.784	1.364	2.8	10.94
Chuck size		A	210	255	280	315	400	500
Spindle connection		E**				on request		
Connection of face driver		B**	46	52	49	92	128	176
Axial jaw movement		H3	45	50	55	55	55	77
Total chuck length		C1	255	293	323	350	357	434
Chuck length		C2	168	189	209	220	243	280
Flange height		C3	11.5	20	35	49	35	40
Flange diameter		D1	210	255	280	315	388	482
Radial jaw stroke		H4	5.3	6.5	6.5	6.5	6.5	7.5
Piston stroke	retraction stroke	H1	45	50	55	55	55	77
	clamping stroke	H2	13	15	15	17	17	17
Piston length		K max.			on request			
		K min.			on request			
Piston guidance diameter		D2 g6	52	62	70	76	80	120
Cylinder connection		M			on request			
		L1			on request			
Chuck fastening	d1	3xM12	3xM16	3xM20	3x M16	3xM20	3x M24	
	L2	19	19	31	23	25	35	
	G	133.4	171.4	235	171.4	235	330.2	
Face driver fastening	d2	3x M8	3x M8	3x M8	3x 16 T-slot	3x M12	6x M12	
	D3	74	74	74	120	176	200	
Jaw	L3				on request			
	L4				on request			
	N2	15	19	20	20	24	29	
Jaw fastening	d3	M10	M12	M16	M16	M16	M20	
Jaw width	b	26	38	40	40	40	50	
Clamping lever axis	NI	64	75	85.5	101.5	138	170	
Max. permissible eccentricity		2	2	2	3	3	on request	

* without clamping inserts, without face driver ** other designs are possible