

JTP

Cubic Bevel Gearbox

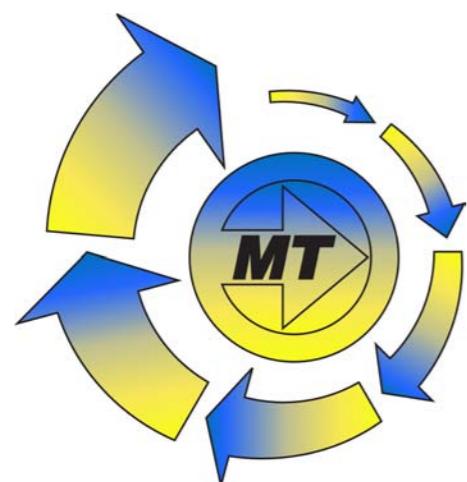
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2D/3D
CAD

JACTON[®]



Product Description

JACTON FOUR Series Modular Design Spiral Bevel Gearboxes with Cubic Housing.

JTP Series: Solid shaft input, Solid shaft output.

JTPH Series: Solid shaft input, Hollow shaft output.

JTPF Series: Input Flange(IEC, NEMA), Solid shaft output.

JTPG Series: Input Flange(IEC, NEMA), Hollow shaft output.

The bevel gearbox offers a robust, powerful and compact design, for right angle power transmission. The practical cubic shape of bevel gearboxes allow universal mounting possibilities on every kind of machines. They are proven in the market for their versatility, very low backlash and low transmission error. The design comprises of ball bearings for quiet operation and tapered bearings for higher radial load capacity. Application in Pulp and paper industry, food processing, off-shore industry, mining and mineral industry, paper machine drives, pulper drives, blowers, pumps, vacuum pump drives and flooding pump stations.

● **Features:**

- * Ultra Compact Design. All-round machined symmetrical housing, and all-round tapped holes for universal mounting, 6 possible mounting positions.
- * Gears ratios of 1:1, 1.5:1, 2:1, 3:1, 4:1 and 5:1 are actual ones.
- * Power range from 0.1kw to 156kw, Torque range from 11.5Nm to 1199Nm.
- * Gear transmission average efficiency up to 94%.

Product Description

- * 2-way, 3-way and 4-way Configurations. Allows both horizontal and vertical shafts.
- * Solid Shaft, Hollow Shaft, and Direct motor mount or via motor flanges.
- * Various Shafts Arrangements, Rotation Directions and Mounting Positions available.
- * High efficiency, high transmission capacity, low backlash, noiseless operation, low running temperature and long service life.
- **Structures and Materials:**
 - * Spiral bevel gears: High purity rugged alloy steel 20CrMnTiH, carburizing and quenching, case hardened and lapped in pairs for intersecting shafts, low noise with grinded spiral teeth, high torque with milled teeth, high rigidity and wear resistance.
 - * Housings(Gearboxes): High rigidity cast iron housings designed for superior thermal conductivity provides rigid gear and bearing support. Custom corrosion resistant stainless steel housings for All sizes. Custom corrosion resistant lightweight aluminum alloy housings for sizes 65 to 140.
 - * Input and output shafts: Hardened and tempered alloy steel 40Cr material, hanging heavy load capacity With key and key way. Custom corrosion resistant stainless steel shafts, or other corrosion resistance painting shafts, spline shaft, shaft without key and key way.
 - * Bearings: Heavy duty tapered roller bearing. Custom reinforced bearings for higher radial and axial load. Custom corrosion resistant stainless steel bearings.

Sample Part Number

The ratings for bevel gearboxes in this catalogue are based on a service factor of 1.00. For other operating conditions, the application power or torque must be multiplied by the appropriate service factor, to determine the equivalent gear drive power rating. A bevel gearbox should be selected with a rated capacity equal to or greater than the equivalent rating. Below table designates recommended service factors for various conditions of load, power source, and duration of service.

Service Factors fl

Driven Machine Load Characteristic	Operating Time per Day		
	≤ 2 hours	2-10 hours	10-24 hours
Uniform (Light Shocks)	1.00 (1.00)	1.00 (1.25)	1.25 (1.50)
Medium Shocks	1.00 (1.25)	1.25 (1.50)	1.50 (1.75)
Heavy Shocks	1.25 (1.50)	1.50 (1.75)	1.75 (2.00)

Note: please use these data inside the brackets when “frequent starts and stops” refers to more than 10 starts per hour.

Note: time specified for intermittent and occasional service refers to total operating time per day.

Uniform (Light Shocks) driven machine: generators, conveyor belts, apron conveyor, ventilators, agitators and mixers for uniform densities, filling and packing stations, gear wheel pumps, feed servos of machine tools, filling machines, elevators, light screw conveyors, light conveyor belts, blowers, small agitators, control machines, assembly lines, auxiliary drives for machine tools, centrifuges, packaging machinery.

Medium Shocks driven machine: lifts, swing gear on cranes, pit ventilators, agitators and mixers for unequal densities, piston pumps, timber processing machines, paper processing machines, winches, auxiliary drives in ships, textile machines, reel winders, plate conveyors, calenders, balancing machines, heavy-duty conveyor belts, sheet metal bending machines, road-building machinery, planing machines, shears, extruders, main drives for machine tools, kneading machines, weaving looms, light table rollers.

Heavy Shocks driven machine: punches, shears, rolling and smelting machines, heavy-duty centrifuges, heavy-duty supply pumps, edge runners, vibrating machines, cutting machines, brick works machines, heavy-duty lifts, excavators, heavy-duty mixers, presses, muller mixers, rolling mills, heavy-duty table rollers, cold reduction mills, stone crushers, eccentric presses, cutter heads, folding machines, rubber belt conveyors (batch loads), bark peeling drums, run ning gears, punching presses, piston pumps, rotary furnaces, mills, plate filters.

Sample Part Number 1: $\frac{JTP90}{(1)} - \frac{2:1}{(2)} - \frac{300R}{(3)} - \frac{150R}{(4)} - \frac{A}{(5)} - \frac{B3}{(6)}$

JTP Series: Solid shaft input, Solid shaft output.

JTPH Series: Solid shaft input, Hollow shaft output.

JTPF Series: Input Flange(IEC, NEMA), Solid shaft output.

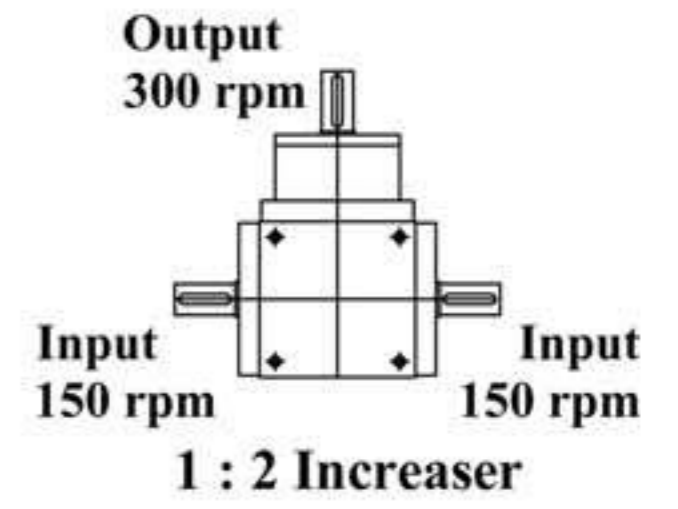
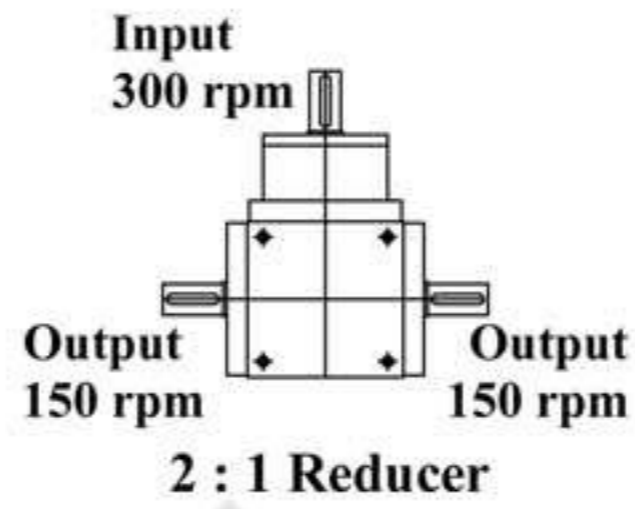
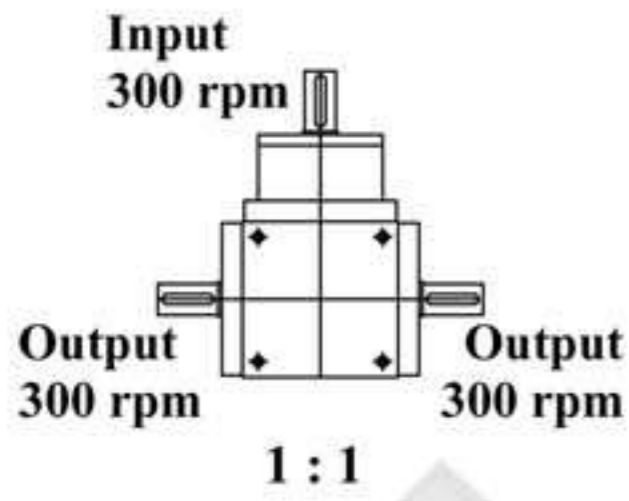
JTPG Series: Input Flange(IEC, NEMA), Hollow shaft output.

(1) Model & (2) Gear Ratios

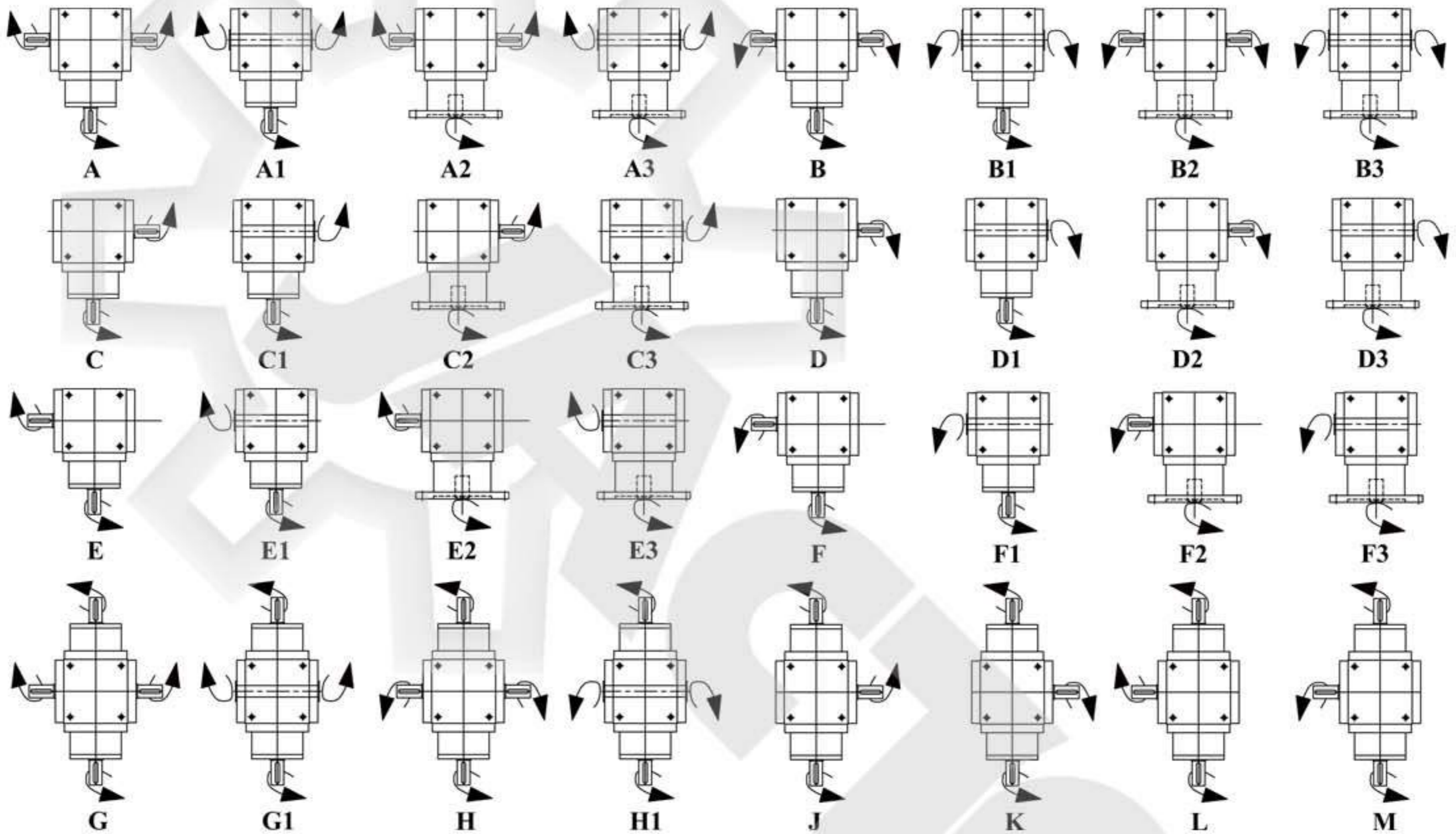
Model	JTP65	JTP90 JTPH90 JTPF90 JTPG90	JTP110 JTPH110 JTPF110 JTPG110	JTP140 JTPH140 JTPF140 JTPG140	JTP170 JTPH170 JTPF170 JTPG170	JTP210 JTPH210 JTPF210 JTPG210	JTP240 JTPH240 JTPF240 JTPG240	JTP280 JTPH280 JTPF280 JTPG280
Input & Output Shafts Dia. (mm)	14	18	22	32	40	45	55	60
Gear Ratios	1:1, 2:1	1:1, 1.5:1, 2:1, 3:1, 4:1, 5:1	1:1, 1.5:1, 2:1, 3:1, 4:1, 5:1	1:1, 1.5:1, 2:1, 3:1, 4:1, 5:1	1:1, 1.5:1, 2:1, 3:1, 4:1, 5:1	1:1, 1.5:1, 2:1, 3:1, 4:1, 5:1	1:1, 1.5:1, 2:1, 3:1, 4:1, 5:1	1:1, 1.5:1, 2:1, 3:1, 4:1, 5:1
Max. Torque (Nm) Under 1500RPM	11	40	70	150	250	430	570	990
Max. Power (kW)	1.8	6.0	11.0	23.9	39.2	67.5	90.5	156

Sample Part Number

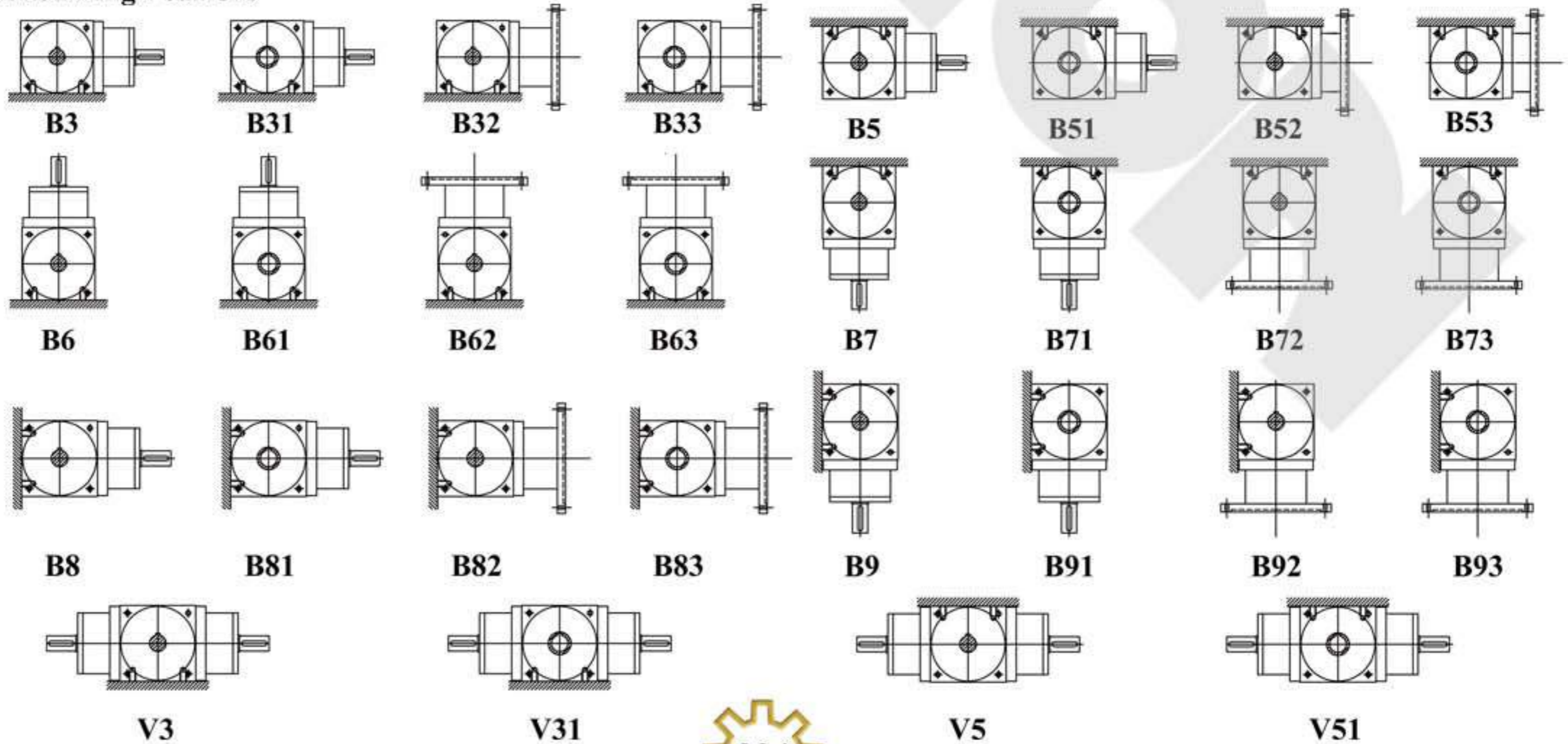
(3) Input Speed & (4) Output Speed, Below is Sample



(5) Shaft Arrangements And Rotation Directions



(6) Mounting Positions



Specifications

JTP Series: Solid shafts (input and output)

JTPH Series: Solid shaft input, Hollow shaft output

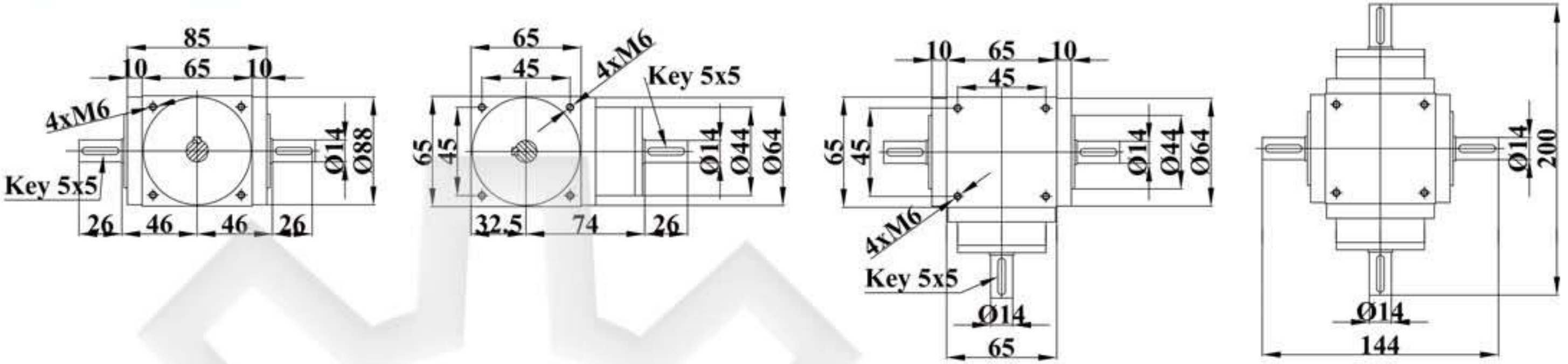
JTPF Series: Hollow shaft & Motor flange input, Solid shaft output

JTPG Series: Hollow shaft & Motor flange input, Hollow shaft output

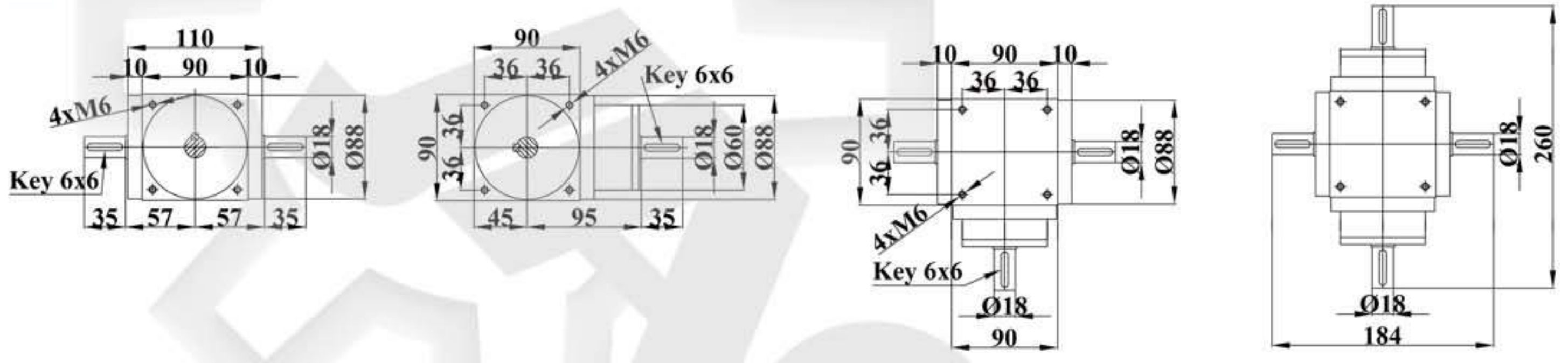
Models			JTP65		JTP90		JTP110		JTP140		JTP170		JTP210		JTP240		JTP280	
			JTPH90		JTPH110		JTPH140		JTPH170		JTPH210		JTPH240		JTPH280			
			JTPF90		JTPF110		JTPF140		JTPF170		JTPF210		JTPF240		JTPF280		JTPG280	
			JTPG90		JTPG110		JTPG140		JTPG170		JTPG210		JTPG240					
Net Weight (kg)			2		7		12		22		40		65		85		180	
Oil Level (L)			0.1		0.2		0.3		0.4		1		2		2.5		3	
Materials			Cast Iron Aluminum Stainless Steel								Cast Iron Stainless Steel							
Ratio	Input (rpm)	Output (rpm)	Nm		Kw		Nm		Kw		Nm		Kw		Nm		Kw	
			Nm	Kw	Nm	Kw	Nm	Kw	Nm	Kw	Nm	Kw	Nm	Kw	Nm	Kw		
1:1	1500	1500	11.5	1.8	38.2	6.0	70.0	11.0	152.2	23.9	250.2	39.3	429.8	67.5	576.2	90.5	993.2	156
	1000	1000	12.6	1.3	41.1	4.3	75.0	7.9	164.3	17.2	275.0	28.8	482.3	50.5	649.4	68.0	1098	115
	750	750	13.6	1.1	43.3	3.4	78.3	6.2	170.6	13.4	290.3	22.8	519.5	40.8	694.0	54.5	1199	94.2
1.5:1	1500	1000			41.1	4.3	74.0	7.8	128.9	13.5	259.8	27.2	539.6	56.5	721.0	75.5	983.7	103
	1000	667			43.7	3.05	78.1	5.5	139.0	9.7	280.8	19.6	590.2	41.2	795.0	55.5	1082	75.5
	750	500			43.9	2.3	81.2	4.3	145.2	7.6	296.1	15.5	630.3	33.0	850.0	44.5	1156	60.5
2:1	1500	750	13.0	1.0	42.7	3.35	80.2	6.3	141.3	11.1	264.9	20.8	550.1	43.2	744.9	58.5	1121	88.0
	1000	500	12.6	0.7	44.9	2.35	85.0	4.5	149.9	7.9	284.6	14.9	599.7	31.4	800.3	41.9	1232	64.5
	750	375	13.8	0.5	45.8	1.8	87.9	3.5	157.9	6.2	295.4	11.6	641.8	25.2	860.8	33.8	1299	51.0
3:1	1500	500			42.0	2.2	85.0	4.5	151.8	8.0	275.0	14.4	529.1	27.7	800.3	41.9	1117	58.5
	1000	333			43.0	1.5	88.8	3.1	160.4	5.6	289.4	10.1	573.0	20.0	865.2	30.2	1215	42.4
	750	250			45.8	1.2	91.7	2.4	168.1	4.4	298.0	7.8	599.7	15.7	901.5	23.6	1280	33.5
4:1	1500	375			42.0	1.65	73.9	2.9	135.0	5.3	213.9	8.4	471.1	18.5	769.1	30.2	980	38.5
	1000	250			43.9	1.15	76.4	2.0	143.3	3.8	225.4	5.9	511.9	13.4	828.9	21.7	1051	27.5
	750	188			44.3	0.87	78.9	1.6	150.3	3.0	231.7	4.6	529.7	10.4	871.0	17.1	1105	21.7
5:1	1500	300			35.0	1.1	74.8	2.4	125.7	4.0	205.3	6.5	404.3	12.7	744.9	23.4	1000	31.4
	1000	200			35.8	0.75	76.4	1.6	131.3	2.8	214.9	4.5	429.8	9.0	783.1	16.4	1070	22.4
	750	150			36.9	0.58	79.6	1.3	133.7	2.1	219.7	3.5	442.5	7.0	827.7	13.0	1127	17.7

Dimensions

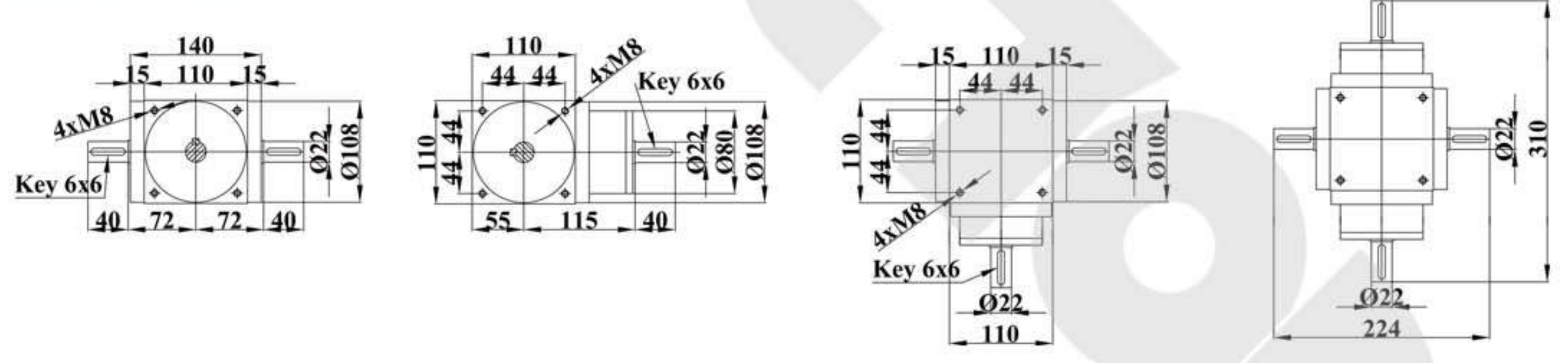
JTP65



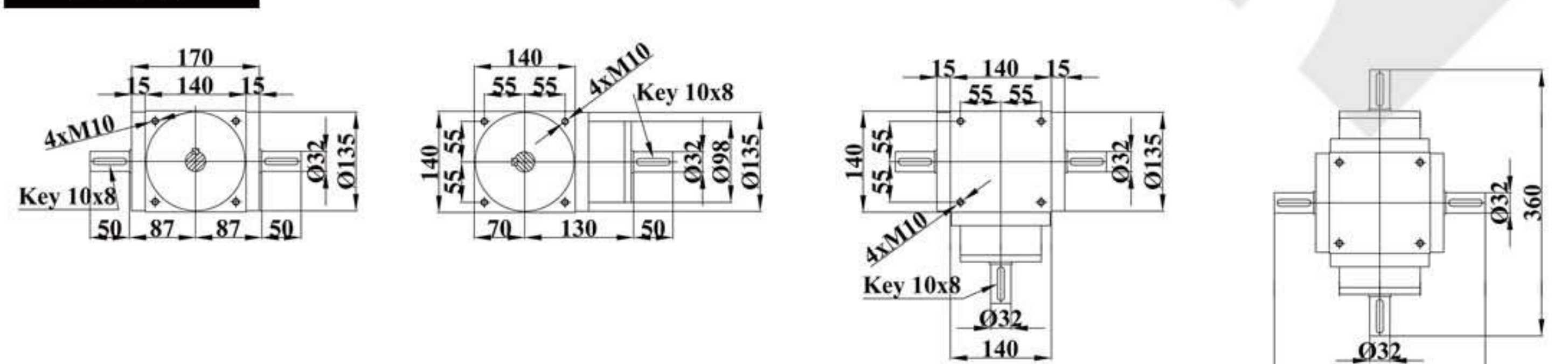
JTP90



JTP110

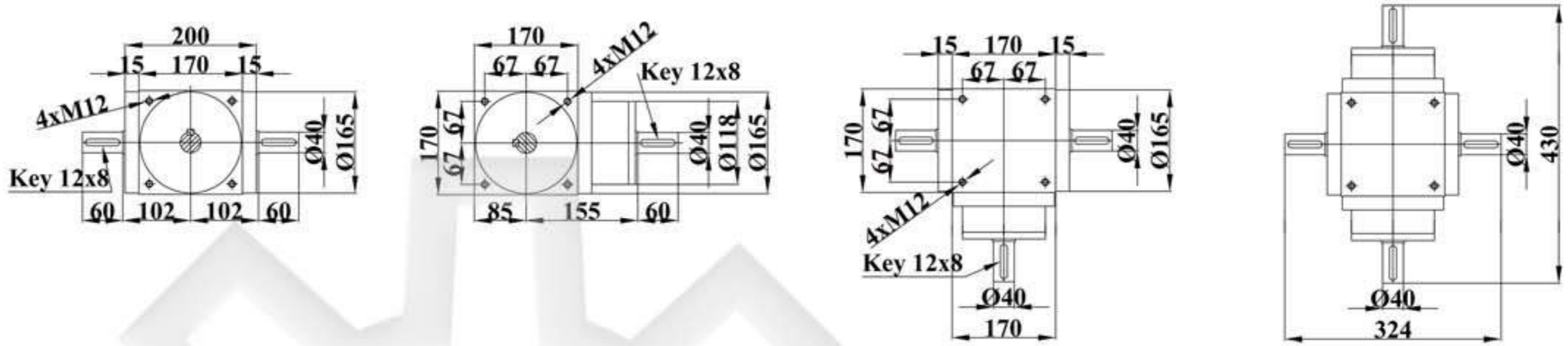


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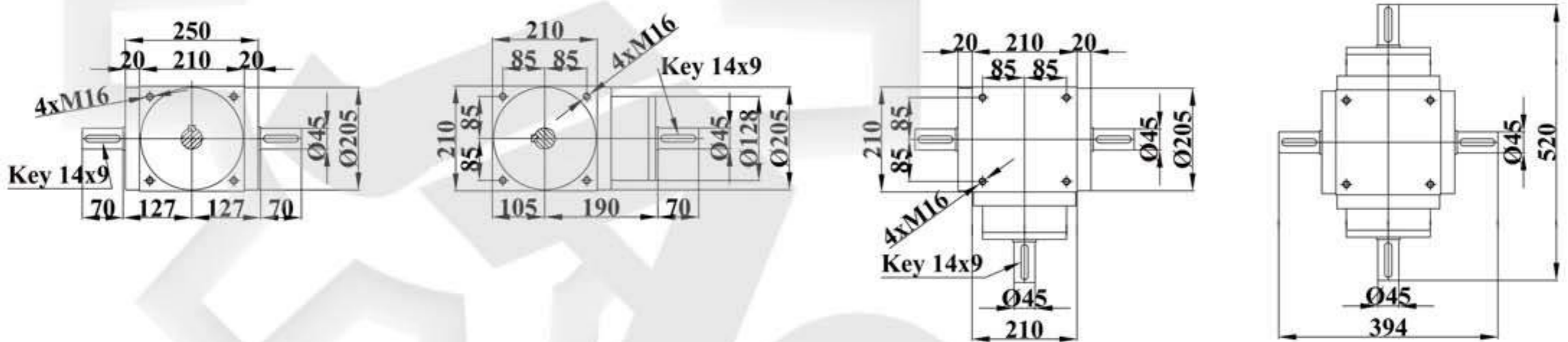


Dimensions

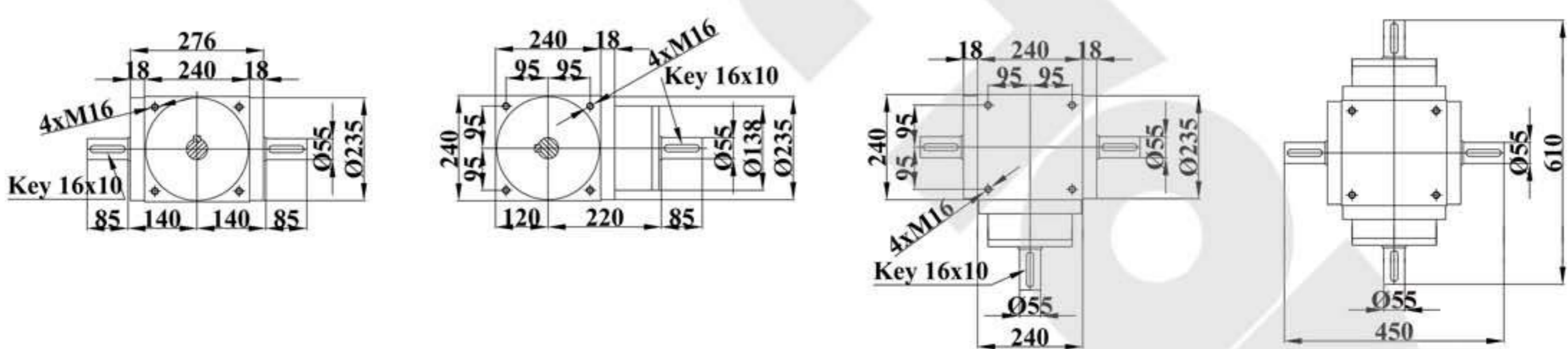
JTP170



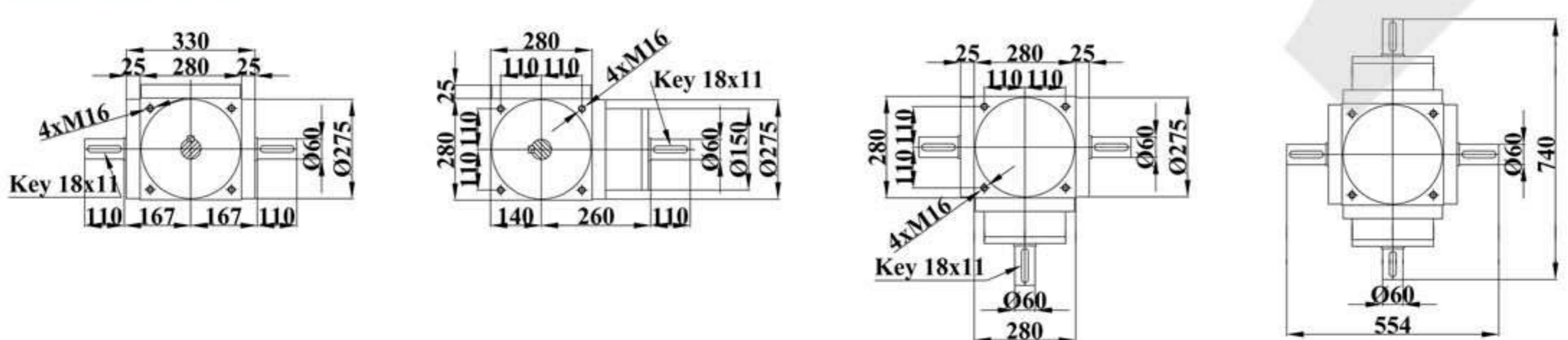
JTP210



JTP240

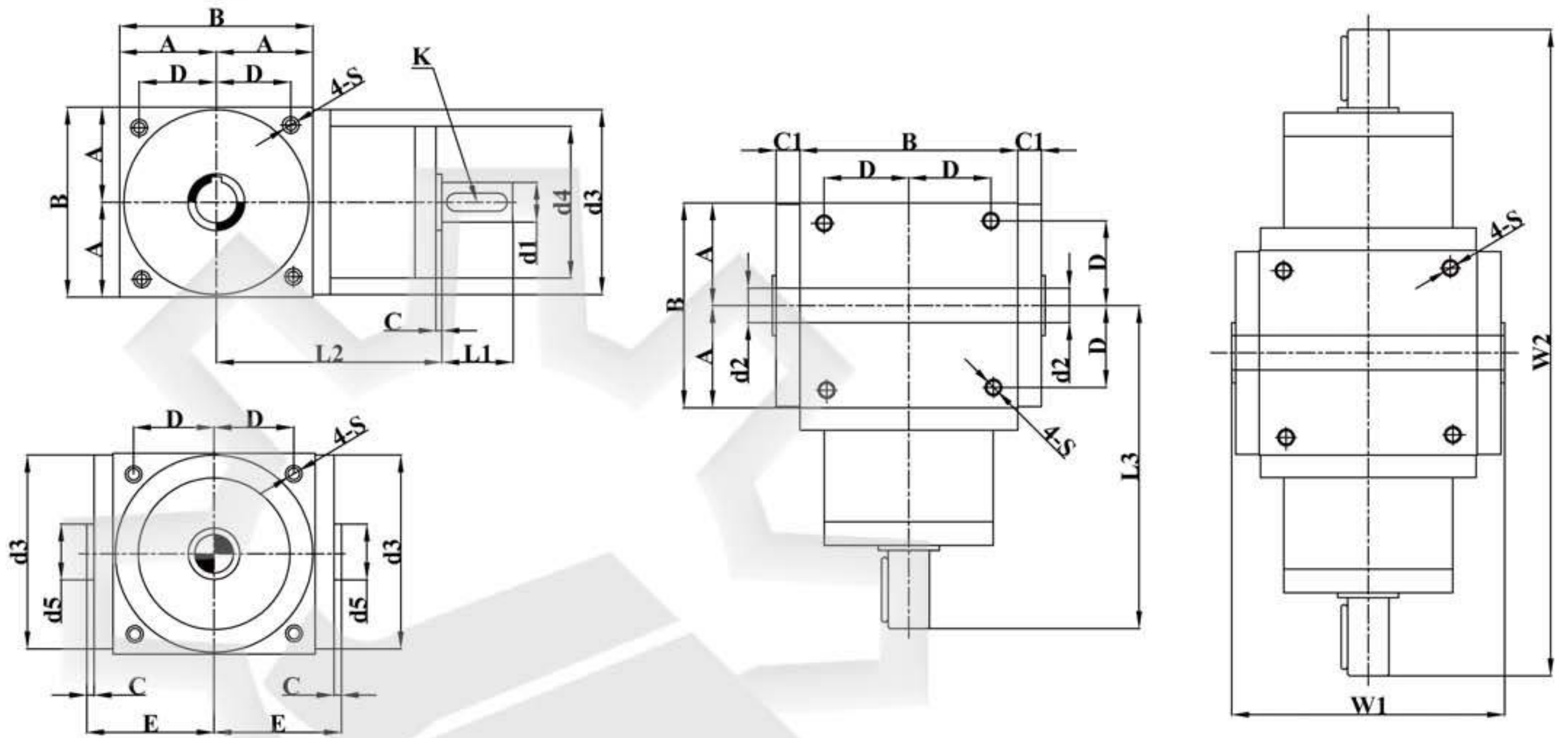


JTP280



Dimensions

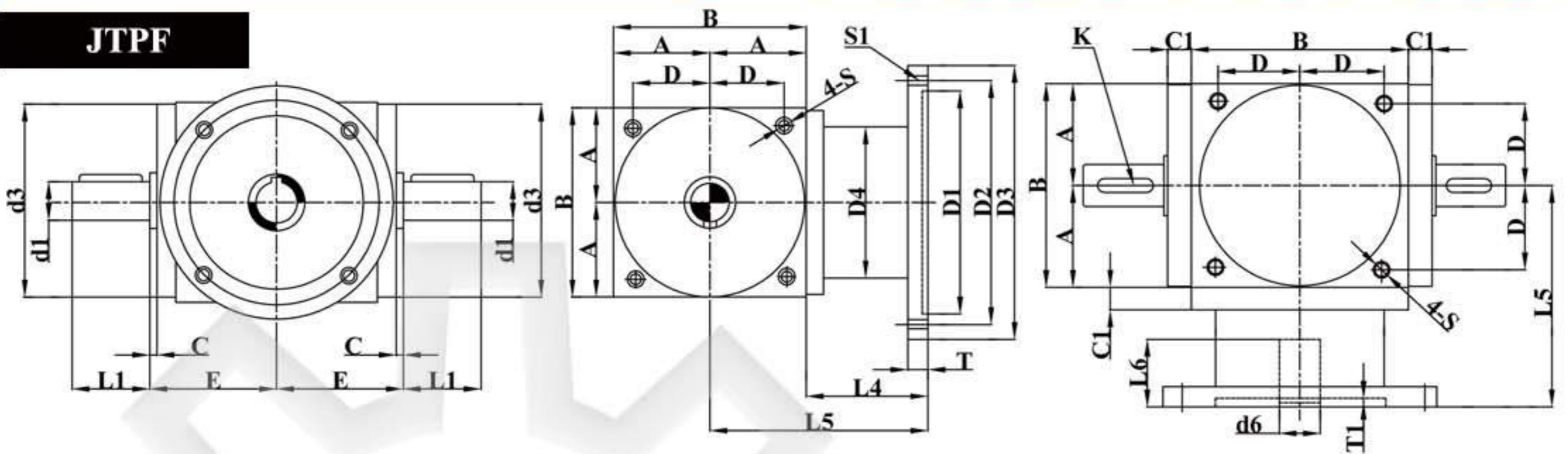
JTPH



Model	B	d1	d2	d3	d4	d5	A	C	C1	D	E	K	L1	L2	L3	S	W1	W2
JTPH90	90	18	16	88	60	25	45	2	10	36	57	6x6	35	95	130	M6	114	260
JTPH110	110	22	22	108	80	35	55	2	15	44	72	6x6	40	115	155	M8	144	310
JTPH140	140	32	28	135	98	45	70	2	15	55	87	10x8	50	130	180	M10	174	360
JTPH170	170	40	38	165	118	55	85	2	15	67	102	12x8	60	155	215	M12	204	430
JTPH210	210	45	45	205	128	65	105	2	20	85	127	14x9	70	190	260	M16	254	520
JTPH240	240	55	55	235	138	75	120	2	18	95	140	16x10	85	220	305	M16	280	610
JTPH280	280	60	60	275	150	85	140	2	22	110	167	18x11	110	260	370	M16	334	740

Dimensions

JTPF

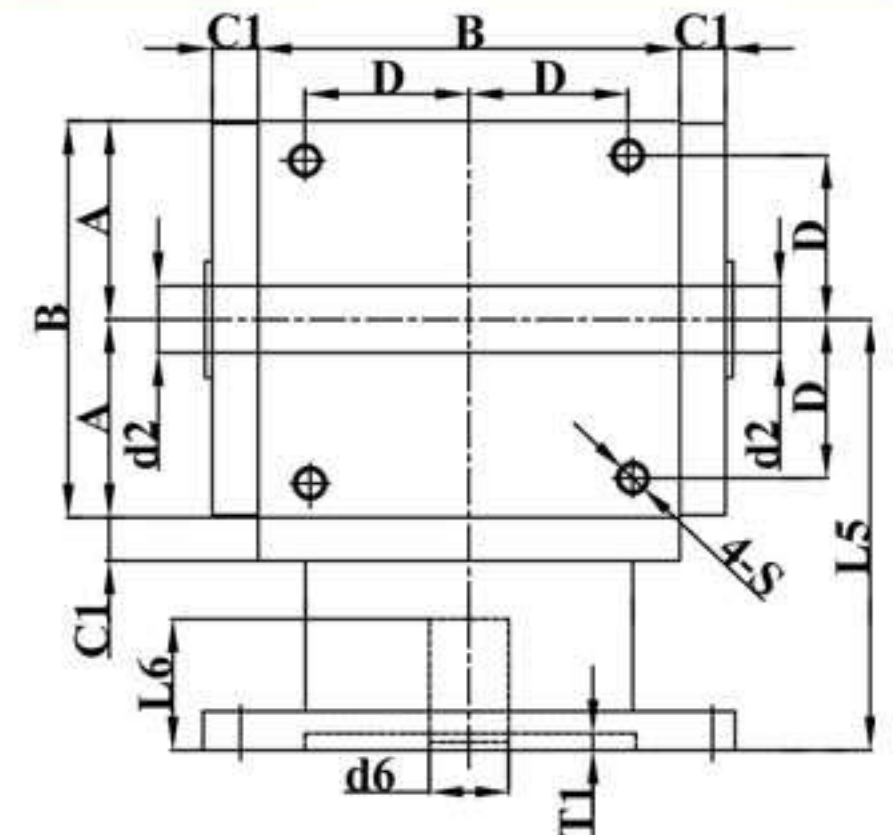
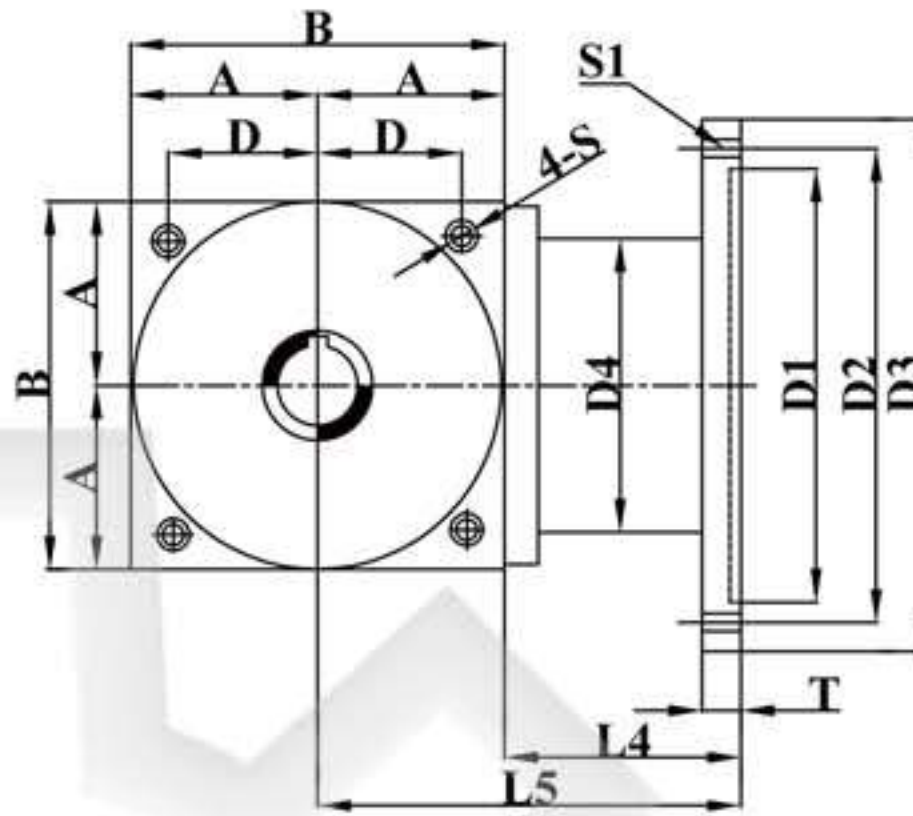
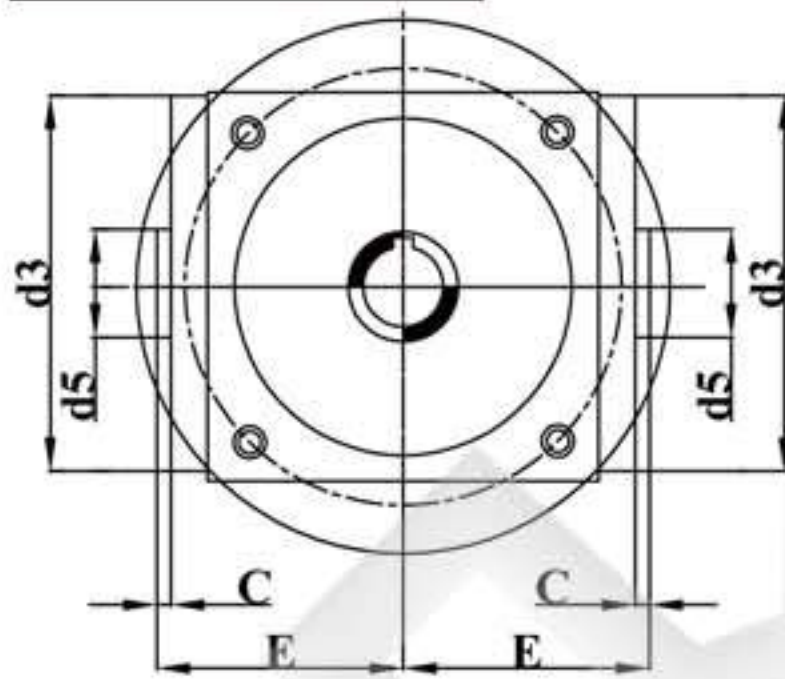


Model	B	d1	d3	A	C	C1	D	E	K	L1	L4
JTPF90	90	18	88	45	2	10	36	57	6x6	35	65
JTPF110	110	22	108	55	2	15	44	72	6x6	40	75
JTPF140	140	32	135	70	2	15	55	87	10x8	50	100
JTPF170	170	40	165	85	2	15	67	102	12x8	60	130
JTPF210	210	45	205	105	2	20	85	127	14x9	70	140
JTPF240	240	55	235	120	2	18	95	140	16x10	85	145
JTPF280	280	60	275	140	2	22	110	167	18x11	110	175

Model	D1 x D2 x D3	D4	d6xL6	L5	S	S1, TxT1, IEC Code
JTPF90	ø80 x ø100 x ø120	76	9x23	110	M6	4xM6, 11x3.5, 56B5
	ø95 x ø115 x ø140		11x26			4xM8, 11x3.5, 63B5
	ø110 x ø130 x ø160		14x33			4xM8, 11x4, 71B5
	ø130 x ø165 x ø200		19x43			4xM10, 14x4, 80/90B5
JTPF110	ø95 x ø115 x ø140	82	11x26	130	M8	4xM8, 11x3.5, 63B5
	ø110 x ø130 x ø160		14x33			4xM8, 11x4, 71B5
	ø130 x ø165 x ø200		19x43			4xM10, 14x4, 80/90B5
	ø180 x ø215 x ø250		24x53			4xM12, 16x4.5, 100/112B5
JTPF140	ø110 x ø130 x ø160	104	14x33	170	M10	4xM8, 11x4, 71B5
	ø130 x ø165 x ø200		19x43			4xM10, 14x4, 80/90B5
	ø180 x ø215 x ø250		24x53			4xM12, 16x4.5, 100/112B5
	ø230 x ø265 x ø300		28x63			4xM12, 16x4.5, 132B5
JTPF170	ø130 x ø165 x ø200	128	19x43	215	M12	4xM10, 14x4, 80/90B5
	ø180 x ø215 x ø250		24x53			4xM12, 16x4.5, 100/112B5
	ø230 x ø265 x ø300		28x63			4xM12, 16x4.5, 132B5
	ø250 x ø300 x ø350		38x83			4xM16, 20x6, 160/180B5
JTPF210	ø180 x ø215 x ø250	160	24x53	245	M16	4xM12, 16x4.5, 100/112B5
	ø230 x ø265 x ø300		28x63			4xM12, 16x4.5, 132B5
	ø250 x ø300 x ø350		38x83			4xM16, 20x6, 160/180B5
	ø300 x ø350 x ø400		42x115			4xM16, 20x6, 200B5
JTPF240	ø180 x ø215 x ø250	170	28x63	265	M16	4xM12, 16x4.5, 100/112B5
	ø230 x ø265 x ø300		38x83			4xM12, 16x4.5, 132B5
	ø250 x ø300 x ø350		42x115			4xM16, 20x6, 160/180B5
	ø300 x ø350 x ø400		48x115			4xM16, 20x6, 200B5
JTPF280	ø180 x ø215 x ø250	190	38x83	315	M16	4xM12, 16x4.5, 100/112B5
	ø230 x ø265 x ø300		42x115			4xM12, 16x4.5, 132B5
	ø250 x ø300 x ø350		48x115			4xM16, 20x6, 160/180B5
	ø300 x ø350 x ø400		55x115			4xM16, 20x6, 200B5
JTPF280	ø350 x ø400 x ø450		60x145			4xM16, 25x6, 225B5
	ø350 x ø400 x ø450					

Dimensions

JTPG



Model	B	d2	d3	d5	A	C	C1	D	E	L4
JTPG90	90	16	88	25	45	2	10	36	57	65
JTPG110	110	22	108	35	55	2	15	44	72	75
JTPG140	140	28	135	45	70	2	15	55	87	100
JTPG170	170	38	165	55	85	2	15	67	102	130
JTPG210	210	45	205	65	105	2	20	85	127	140
JTPG240	240	55	235	75	120	2	18	95	140	145
JTPG280	280	60	275	85	140	2	22	110	167	175

Model	D1 x D2 x D3	D4	d6xL6	L5	S	S1, TxT1, IEC Code
JTPG90	ø80 x ø100 x ø120	76	9x23	110	M6	4xM6, 11x3.5, 56B5
	ø95 x ø115 x ø140		11x26			4xM8, 11x3.5, 63B5
	ø110 x ø130 x ø160		14x33			4xM8, 11x4, 71B5
	ø130 x ø165 x ø200		19x43			4xM10, 14x4, 80/90B5
JTPG110	ø95 x ø115 x ø140	82	11x26	130	M8	4xM8, 11x3.5, 63B5
	ø110 x ø130 x ø160		14x33			4xM8, 11x4, 71B5
	ø130 x ø165 x ø200		19x43			4xM10, 14x4, 80/90B5
	ø180 x ø215 x ø250		24x53			4xM12, 16x4.5, 100/112B5
JTPG140	ø110 x ø130 x ø160	104	14x33	170	M10	4xM8, 11x4, 71B5
	ø130 x ø165 x ø200		19x43			4xM10, 14x4, 80/90B5
	ø180 x ø215 x ø250		24x53			4xM12, 16x4.5, 100/112B5
	ø230 x ø265 x ø300		28x63 38x83			4xM12, 16x4.5, 132B5
JTPG170	ø130 x ø165 x ø200	128	19x43	215	M12	4xM10, 14x4, 80/90B5
	ø180 x ø215 x ø250		24x53			4xM12, 16x4.5, 100/112B5
	ø230 x ø265 x ø300		28x63			4xM12, 16x4.5, 132B5
	ø250 x ø300 x ø350		38x83 42x115			4xM16, 20x6, 160/180B5
JTPG210	ø180 x ø215 x ø250	160	24x53	245	M16	4xM12, 16x4.5, 100/112B5
	ø230 x ø265 x ø300		28x63			4xM12, 16x4.5, 132B5
	ø250 x ø300 x ø350		38x83			4xM16, 20x6, 160/180B5
	ø300 x ø350 x ø400		42x115 48x115			4xM16, 20x6, 200B5
JTPG240	ø180 x ø215 x ø250	170	28x63	265	M16	4xM12, 16x4.5, 100/112B5
	ø230 x ø265 x ø300		38x83			4xM12, 16x4.5, 132B5
	ø250 x ø300 x ø350		42x115			4xM16, 20x6, 160/180B5
	ø300 x ø350 x ø400		48x115 55x115			4xM16, 20x6, 200B5 4xM16, 25x6, 225B5
JTPG280	ø180 x ø215 x ø250	190	38x83	315	M16	4xM12, 16x4.5, 100/112B5
	ø230 x ø265 x ø300		42x115			4xM12, 16x4.5, 132B5
	ø250 x ø300 x ø350		48x115			4xM16, 20x6, 160/180B5
	ø300 x ø350 x ø400		55x115 60x145			4xM16, 20x6, 200B5 4xM16, 25x6, 225B5