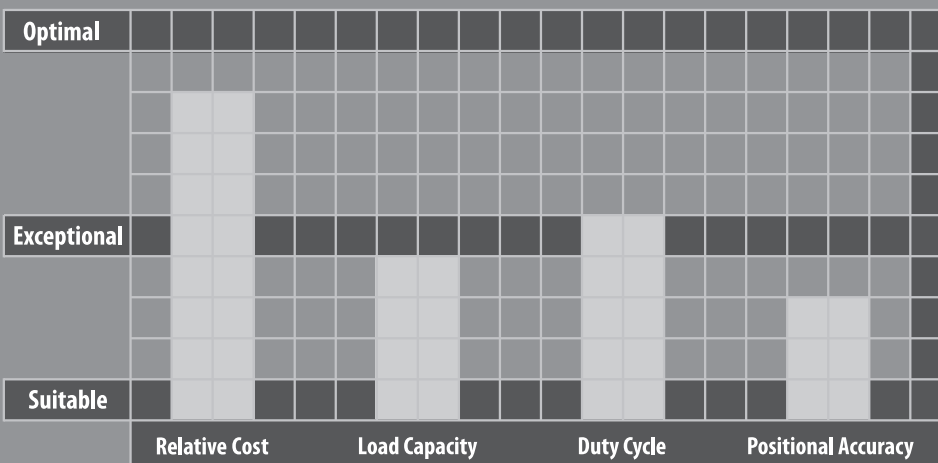


# NEV SERIES

The NEV right angle gearbox is the ideal solution for servo or stepper applications running primarily in one direction. With 30 arc-minute backlash, the NEV is an excellent cost-effective, compact choice for applications such as conveyors, where positioning is not as critical. The NEV is often used in situations where our customers upgrade induction duty motors to servos. The price point of this product helps OEMs control costs, especially when updating several axes on one machine. The performance, efficiency and footprint of the NEV allows it to outperform helical bevel or worm gearboxes in a similar class.

The NEV has a lightweight aluminum frame with either a hollow or solid output shaft configuration. It can handle motors ranging between 50w and 3.5kW, achieving nominal output torque ratings ranging between 6 Nm to 90 Nm. Four frame sizes and ratios between 5:1 and 105:1 are available, as well as various wash down options, making this product ideal for applications in food & beverage.



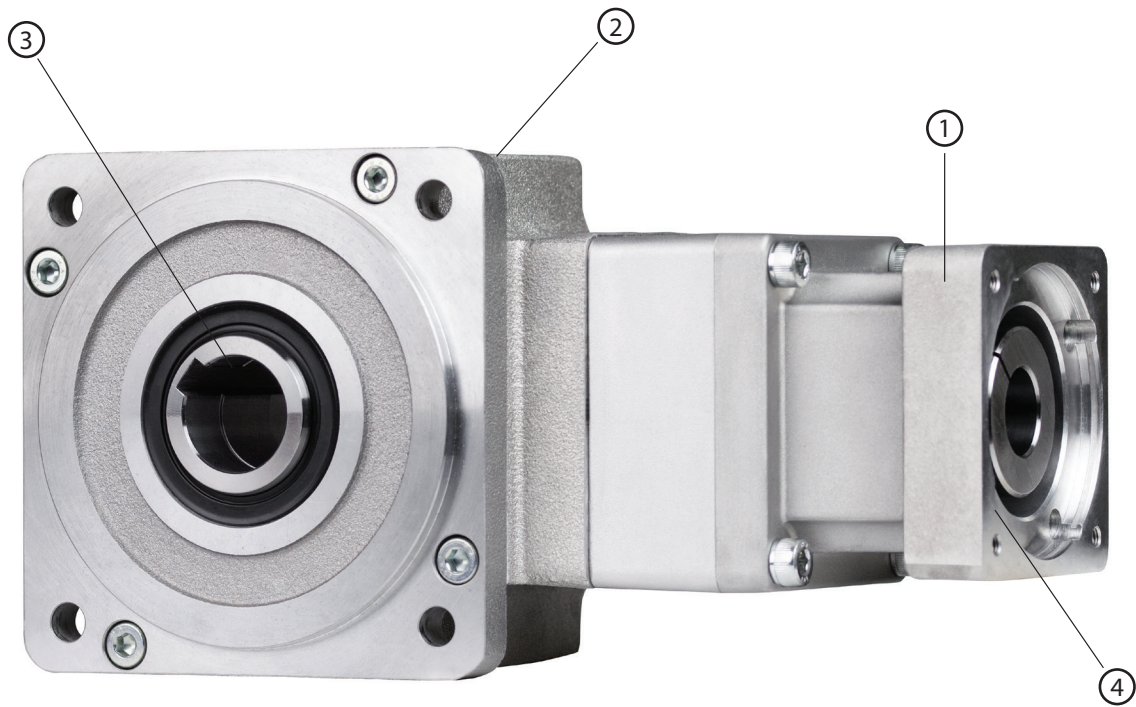


## NEV SERIES

- Hollow output shaft option gives machine builders a very compact foot print
- Value engineered solution for simple servo and stepper motor applications
- Quiet operation: Helical cut gears contribute to reduced vibration and noise
- Wide range of mounting adapters offer a simple, precise attachment to any motor
- Lightweight aluminum body reduces excess weight
- Aluminum body, combined with other wash-down features can be used in harsh environments
- Maintenance-free solution that is lubricated for life. High performance grease allows flexible mounting in any orientation

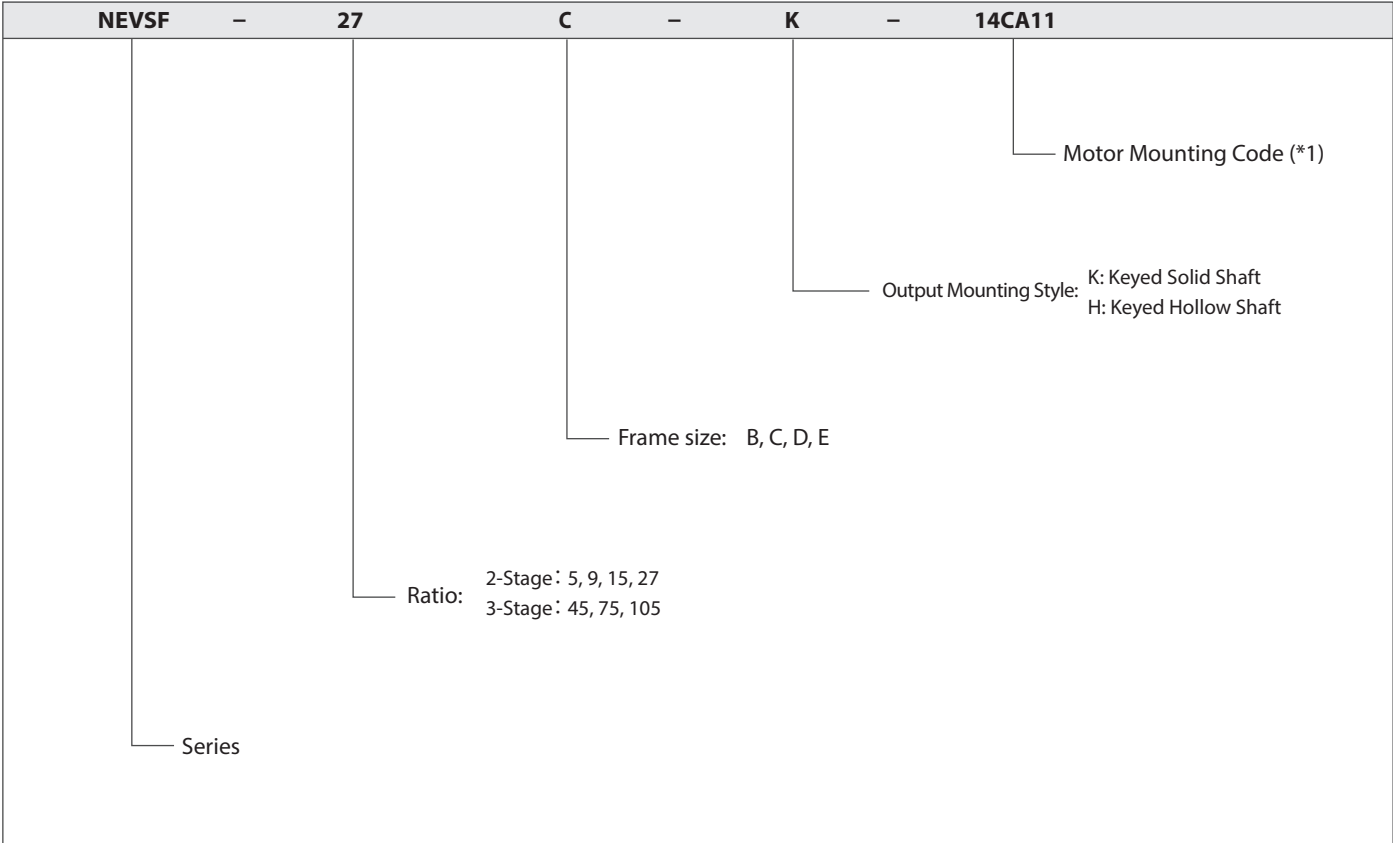
# NEV SERIES Right-angle Planetary

## NEV Series Features



- ① Motor adapter allows for flexible mounting to any motor manufacturer
- ② Lightweight aluminum body, an excellent fit for washdown applications
- ③ Hollow or solid output shaft options
- ④ Input seal provides IP65 protection against the elements

## NEV Series Model Code



\*1) Contact us for washdown, food grade or other modifications

# NEV SERIES Right-angle Planetary

## NEV B-Frame 2-Stage Specifications

Frame Size	B (78mm)					
Ratio	Units	Note	5	9	15	27
Nominal Output Torque	[Nm]	--	6	6	10	10
Maximum Acceleration Torque	[Nm]	--	20	20	30	30
Emergency Stop Torque	[Nm]	--	35	40	50	50
Nominal Input Speed	[rpm]	--	3000			
Maximum Input Speed	[rpm]	--	6000			
No Load Running Torque	[Nm]	--	0.18			
Permitted Radial Load	[N]	--	1000	1200	1500	1800
Permitted Axial Load	[N]	--	500	600	750	900
Moment of Inertia ( $\leq \emptyset 8$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--
Moment of Inertia ( $\leq \emptyset 14$ )	[kgcm <sup>2</sup> ]	--	0.275	0.110	0.059	0.146
Efficiency	[%]	--	85			
Torsional Rigidity	[Nm/arcmin]	--	0.4			
Maximum Torsional Backlash	[Arc-min]	--	$\leq 30$			
Noise Level	[dB]	--	$\leq 73$			
Protection Class	--	--	IP65			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight (Solid Output Shaft)	[kg]	--	3.8			
Weight (Hollow Output Shaft)	[kg]	--	3.6			

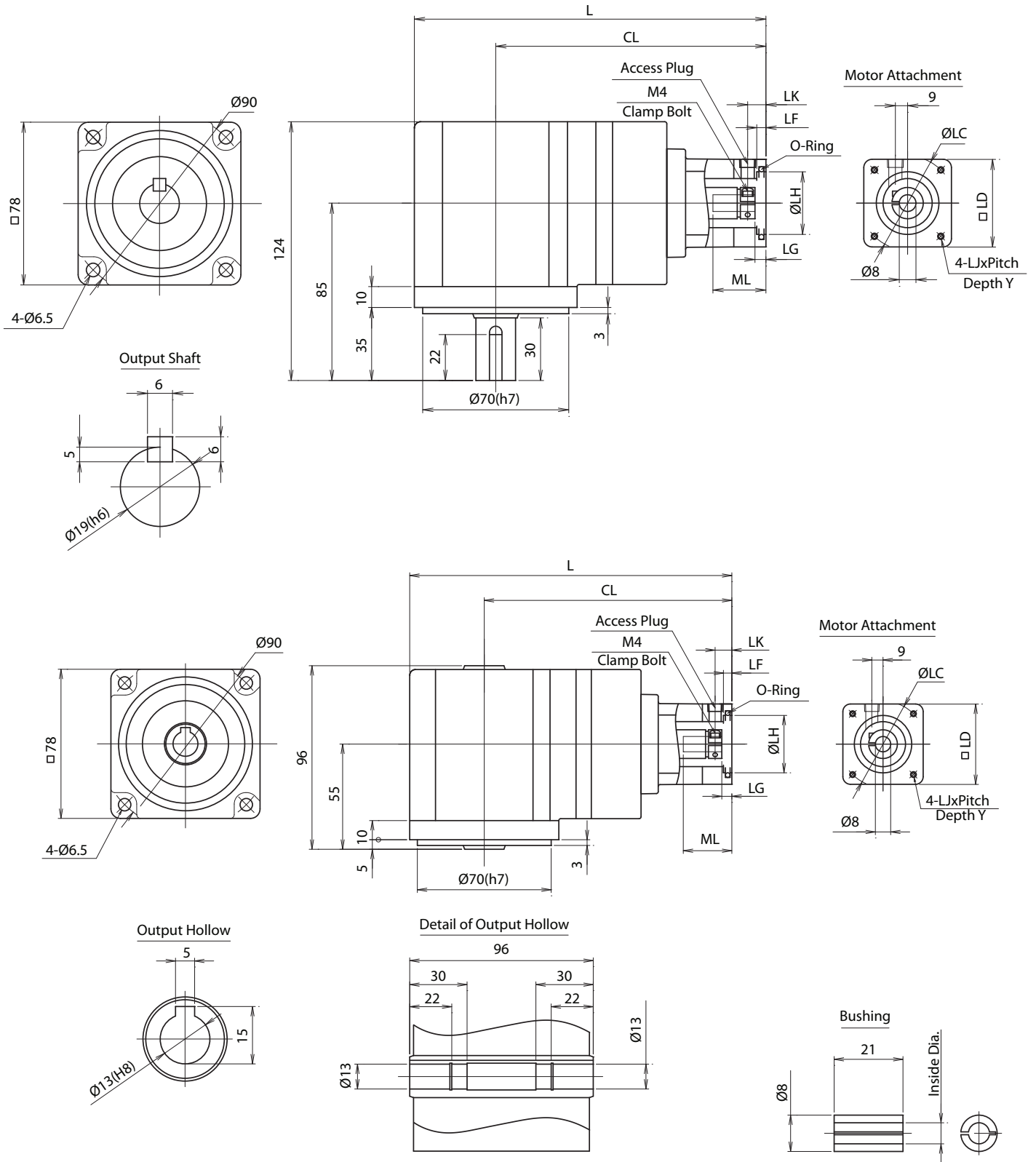


# NEV SERIES Right-angle Planetary

## NEV B-Frame 3-Stage Specifications

Frame Size	B (78mm)				
Ratio	Units	Note	45	75	105
Nominal Output Torque	[Nm]	--	10	15	15
Maximum Acceleration Torque	[Nm]	--	30	30	30
Emergency Stop Torque	[Nm]	--	50	50	50
Nominal Input Speed	[rpm]	--	3000		
Maximum Input Speed	[rpm]	--	6000		
No Load Running Torque	[Nm]	--	0.109		
Permitted Radial Load	[N]	--	1800	1800	1800
Permitted Axial Load	[N]	--	900	900	900
Moment of Inertia ( $\leq \emptyset 8$ )	[kgcm <sup>2</sup> ]	--	0.091	0.083	0.078
Moment of Inertia ( $\leq \emptyset 14$ )	[kgcm <sup>2</sup> ]	--	--	--	--
Efficiency	[%]	--	80		
Torsional Rigidity	[Nm/arcmin]	--	0.4		
Maximum Torsional Backlash	[Arc-min]	--	$\leq 30$		
Noise Level	[dB]	--	$\leq 63$		
Protection Class	--	--	IP65		
Ambient Temperature	[°C]	--	0-40		
Permitted Housing Temperature	[°C]	--	90		
Weight (Solid Output Shaft)	[kg]	--	3.9		
Weight (Hollow Output Shaft)	[kg]	--	3.7		

## NEV B-Frame (78mm) 3-Stage Dimensions – Ratios: 45:1, 75:1, 105:1



NEV



# NEV SERIES Right-angle Planetary

## NEV C-Frame 2-Stage Specifications

Frame Size	C (90mm)					
Ratio	Units	Note	5	9	15	27
Nominal Output Torque	[Nm]	--	15	20	20	30
Maximum Acceleration Torque	[Nm]	--	30	35	40	40
Emergency Stop Torque	[Nm]	--	50	50	60	75
Nominal Input Speed	[rpm]	--	3000			
Maximum Input Speed	[rpm]	--	6000			
No Load Running Torque	[Nm]	--	0.3			
Permitted Radial Load	[N]	--	1000	1500	1800	1800
Permitted Axial Load	[N]	--	500	750	900	900
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	0.806	0.744	0.415	0.585
Efficiency	[%]	--	85			
Torsional Rigidity	[Nm/arcmin]	--	1.0			
Maximum Torsional Backlash	[Arc-min]	--	$\leq 30$			
Noise Level	[dB]	--	$\leq 73$			
Protection Class	--	--	IP65			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight (Solid Output Shaft)	[kg]	--	4.1			
Weight (Hollow Output Shaft)	[kg]	--	4.0			

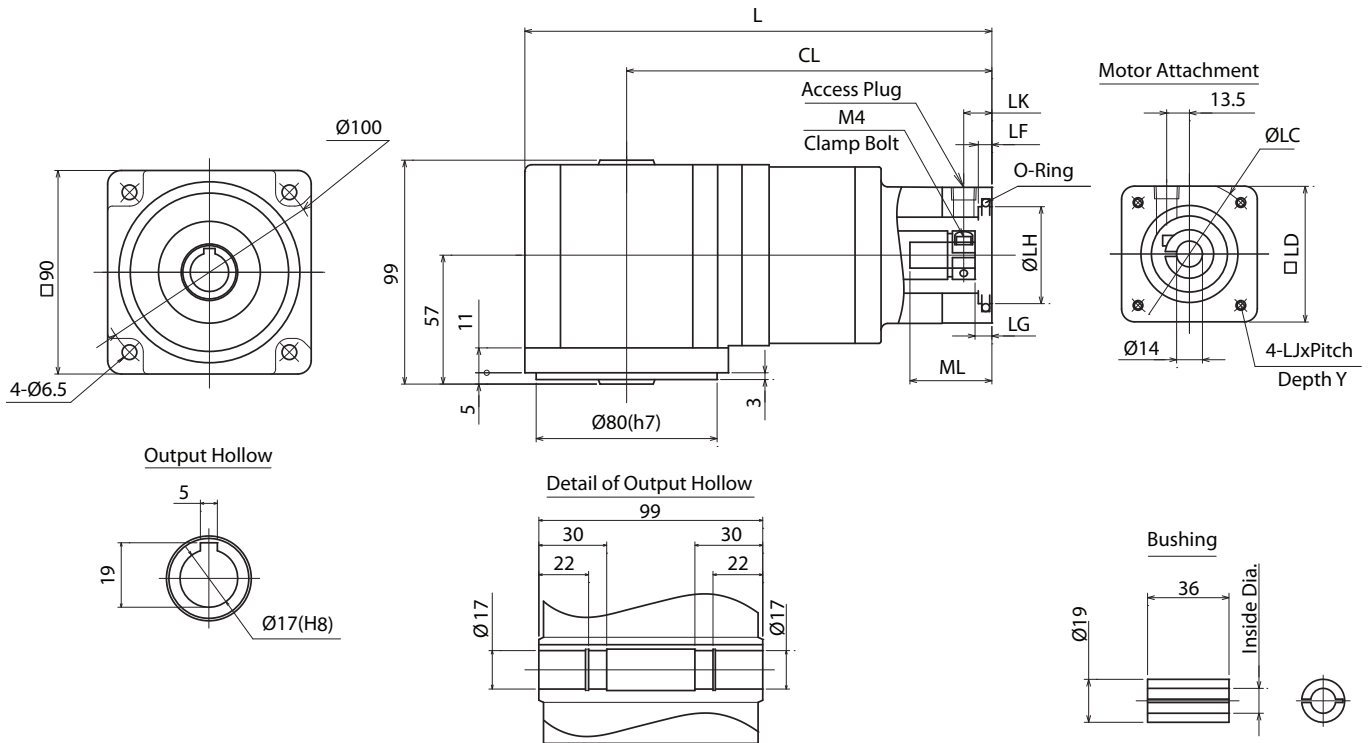
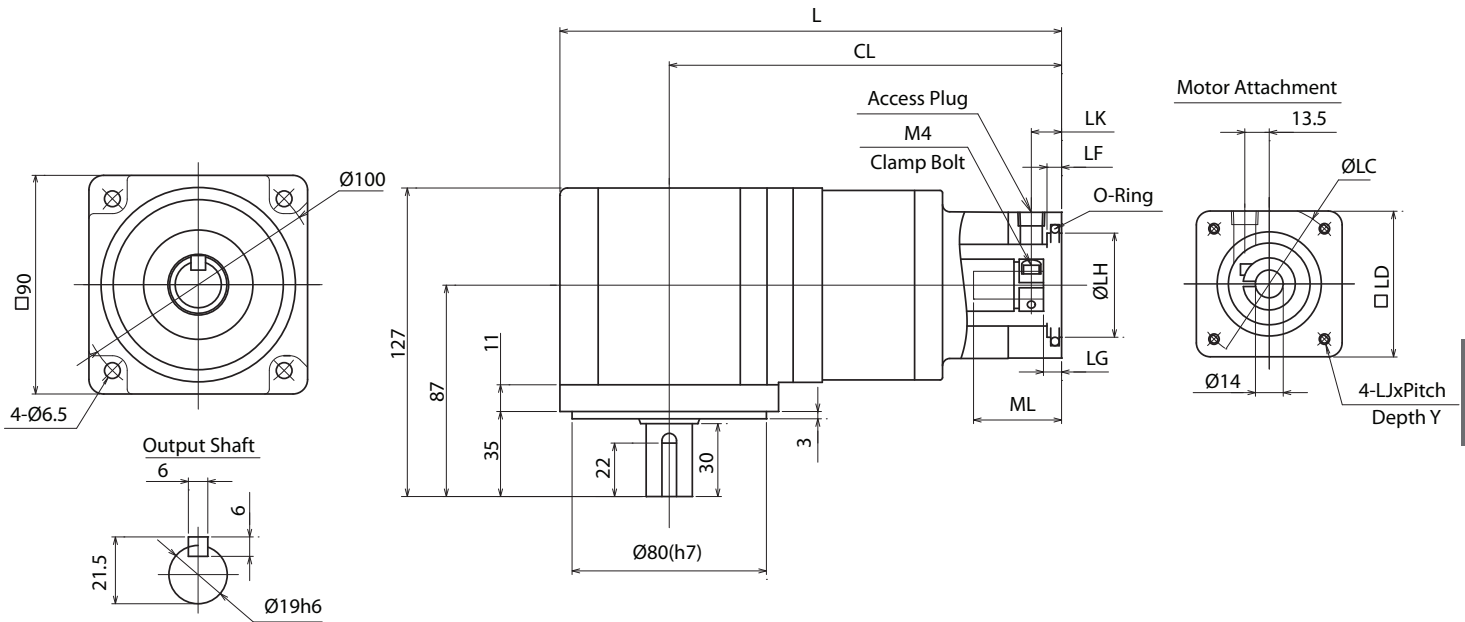


# NEV SERIES Right-angle Planetary

## NEV C-Frame 3-Stage Specifications

Frame Size	C (90mm)				
Ratio	Units	Note	45	75	105
Nominal Output Torque	[Nm]	--	30	30	30
Maximum Acceleration Torque	[Nm]	--	40	40	40
Emergency Stop Torque	[Nm]	--	75	75	75
Nominal Input Speed	[rpm]	--	3000		
Maximum Input Speed	[rpm]	--	6000		
No Load Running Torque	[Nm]	--	0.205		
Permitted Radial Load	[N]	--	1800	1800	1800
Permitted Axial Load	[N]	--	900	900	900
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.794	0.690	0.590
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	--	--	--
Efficiency	[%]	--	80		
Torsional Rigidity	[Nm/arcmin]	--	1.0		
Maximum Torsional Backlash	[Arc-min]	--	$\leq 30$		
Noise Level	[dB]	--	$\leq 63$		
Protection Class	--	--	IP65		
Ambient Temperature	[°C]	--	0-40		
Permitted Housing Temperature	[°C]	--	90		
Weight (Solid Output Shaft)	[kg]	--	4.3		
Weight (Hollow Output Shaft)	[kg]	--	4.2		

## NEV C-Frame (gomm) 3-Stage Dimensions – Ratios: 45:1, 75:1, 105:1



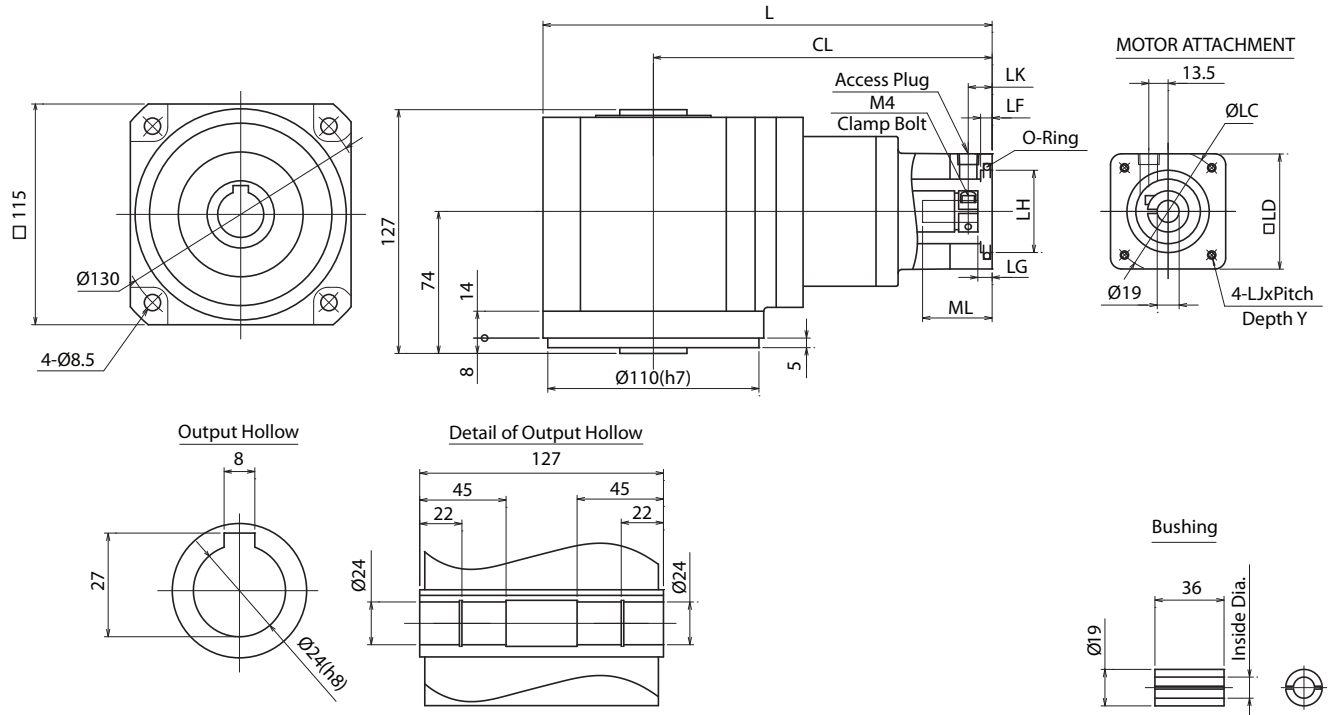
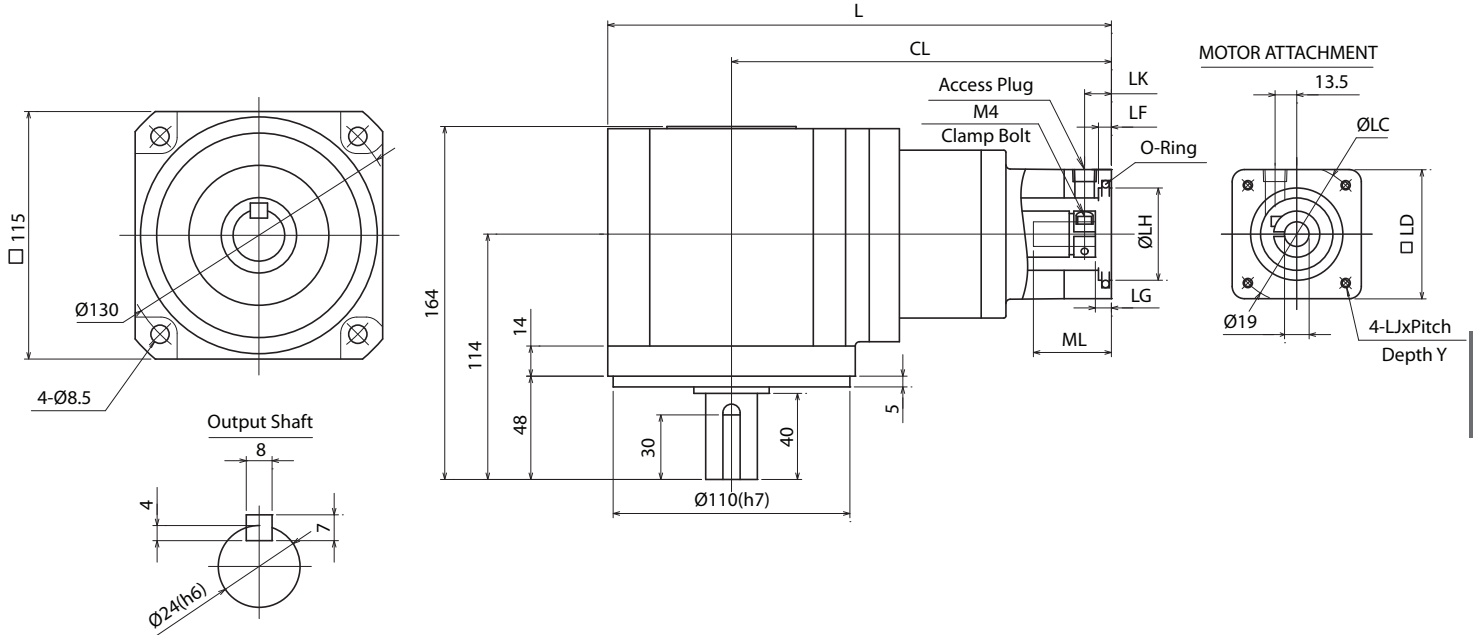
NEV

# NEV SERIES Right-angle Planetary

## NEV D-Frame 2-Stage Specifications

Frame Size	D (115mm)					
Ratio	Units	Note	5	9	15	27
Nominal Output Torque	[Nm]	--	25	25	25	40
Maximum Acceleration Torque	[Nm]	--	55	75	75	80
Emergency Stop Torque	[Nm]	--	100	140	140	180
Nominal Input Speed	[rpm]	--	3000			
Maximum Input Speed	[rpm]	--	6000			
No Load Running Torque	[Nm]	--	0.45			
Permitted Radial Load	[N]	--	2200	2200	2600	2600
Permitted Axial Load	[N]	--	1100	1100	1300	1300
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	1.502	1.254	0.464	0.720
Efficiency	[%]	--	85			
Torsional Rigidity	[Nm/arcmin]	--	1.2	1.5	1.5	1.5
Maximum Torsional Backlash	[Arc-min]	--	$\leq 30$			
Noise Level	[dB]	--	$\leq 73$			
Protection Class	--	--	IP65			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight (Solid Output Shaft)	[kg]	--	7.1			
Weight (Hollow Output Shaft)	[kg]	--	6.7			

## NEV D-Frame (115mm) 2-Stage Dimensions – Ratios: 5:1, 9:1, 15:1, 27:1



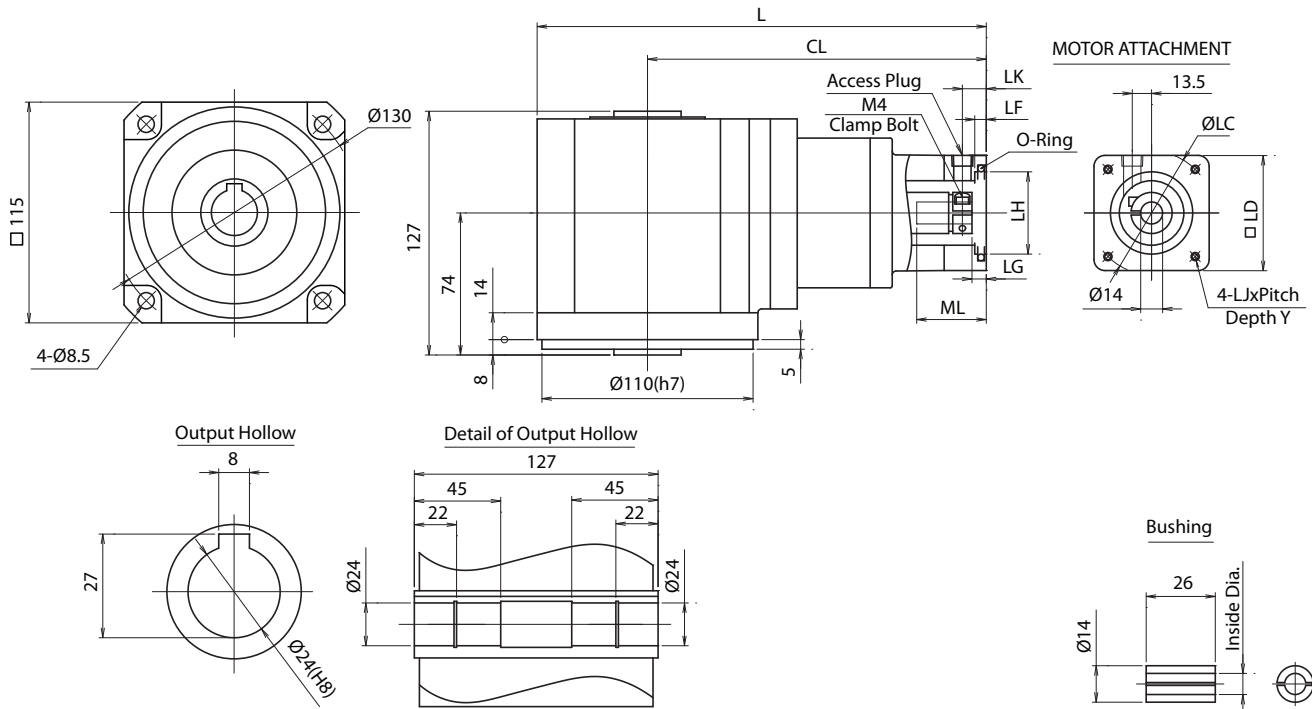
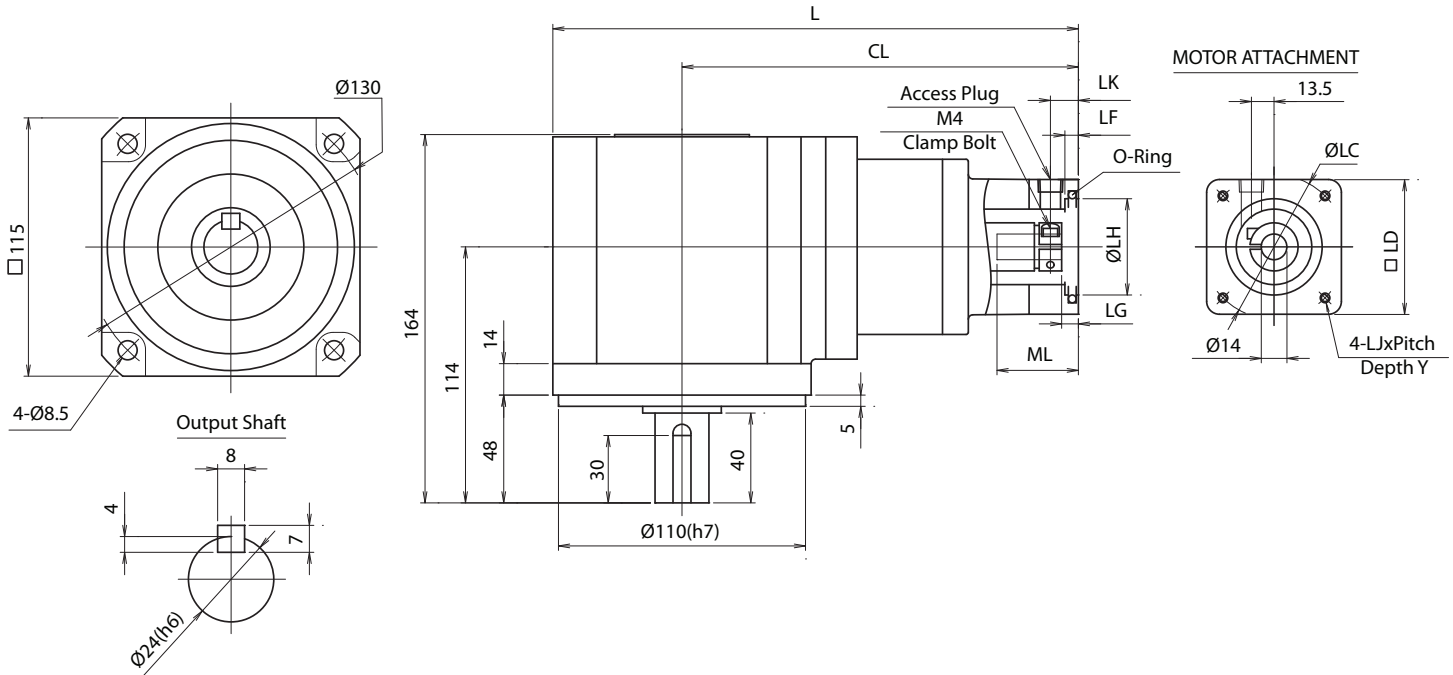
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# NEV SERIES Right-angle Planetary

## NEV D-Frame 3-Stage Specifications

Frame Size	D (115mm)				
Ratio	Units	Note	45	75	105
Nominal Output Torque	[Nm]	--	45	50	50
Maximum Acceleration Torque	[Nm]	--	80	80	80
Emergency Stop Torque	[Nm]	--	180	180	180
Nominal Input Speed	[rpm]	--	3000		
Maximum Input Speed	[rpm]	--	6000		
No Load Running Torque	[Nm]	--	0.355		
Permitted Radial Load	[N]	--	2600	2600	2600
Permitted Axial Load	[N]	--	1300	1300	1300
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.806	0.694	0.648
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	--	--	--
Efficiency	[%]	--	80		
Torsional Rigidity	[Nm/arcmin]	--	1.5		
Maximum Torsional Backlash	[Arc-min]	--	$\leq 30$		
Noise Level	[dB]	--	$\leq 67$		
Protection Class	--	--	IP65		
Ambient Temperature	[°C]	--	0-40		
Permitted Housing Temperature	[°C]	--	90		
Weight (Solid Output Shaft)	[kg]	--	7.3		
Weight (Hollow Output Shaft)	[kg]	--	6.9		

## NEV D-Frame (115mm) 3-Stage Dimensions – Ratios: 45:1, 75:1, 105:1



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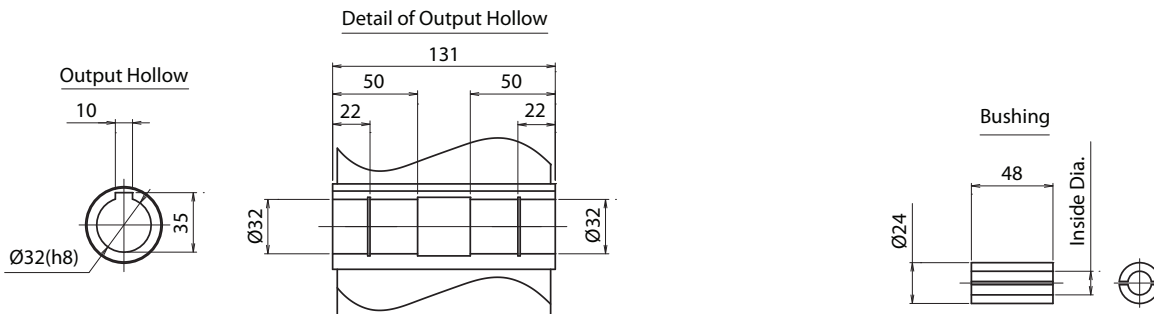
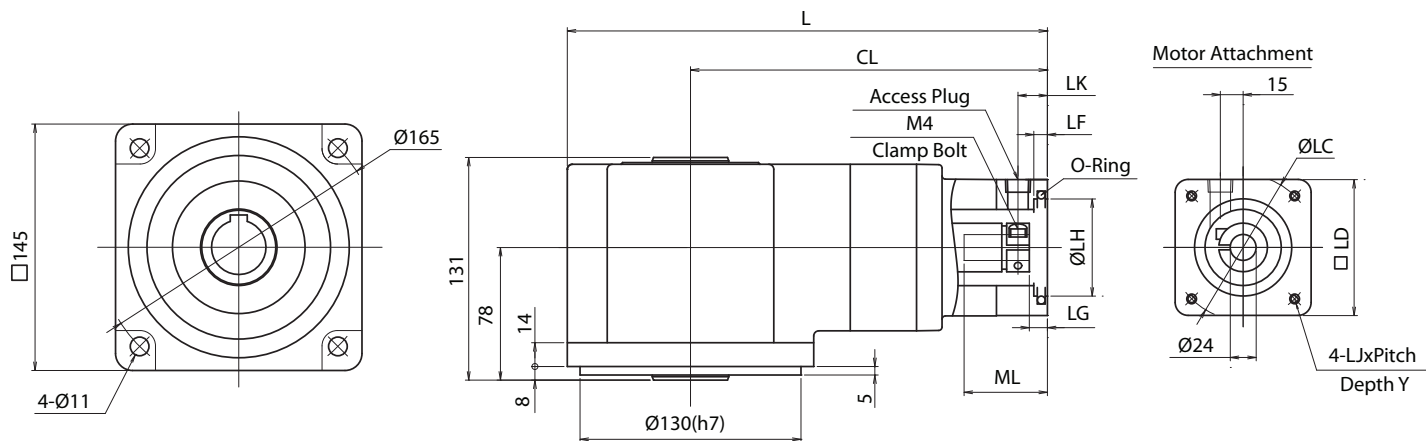
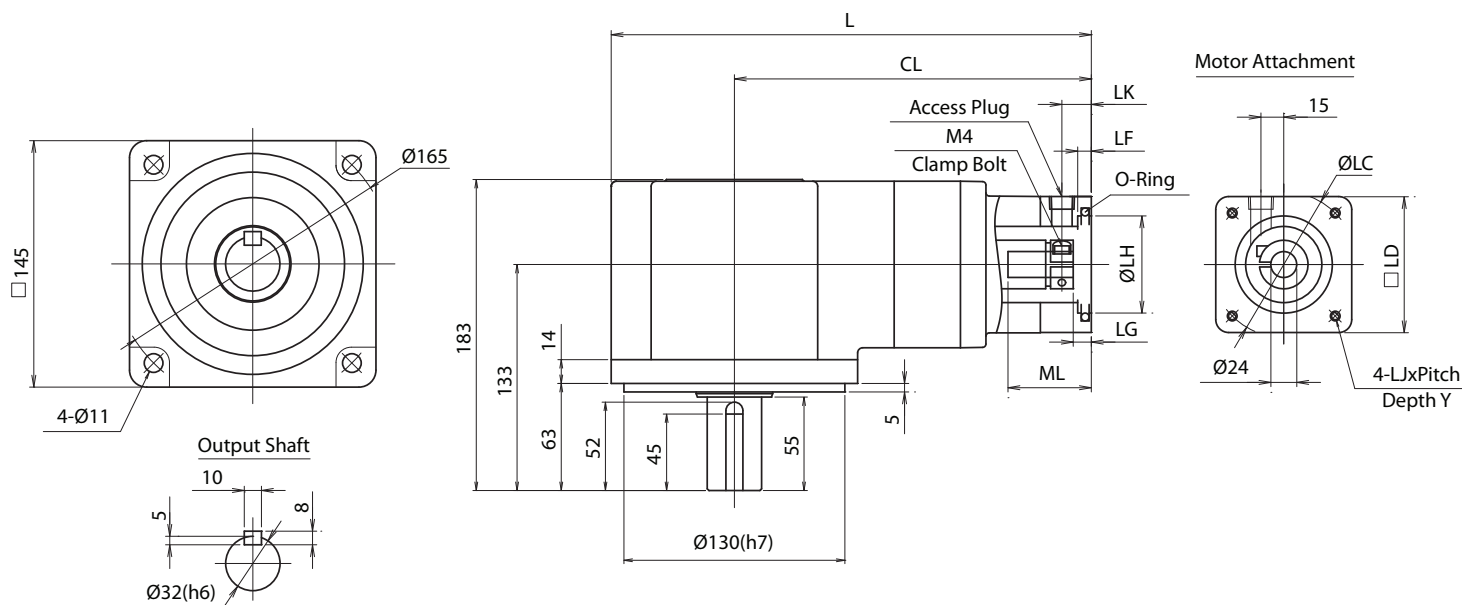


# NEV SERIES Right-angle Planetary

## NEV E-Frame 2-Stage Specifications

Frame Size	E (145mm)					
Ratio	Units	Note	5	9	15	27
Nominal Output Torque	[Nm]	--	50	50	55	60
Maximum Acceleration Torque	[Nm]	--	100	140	140	180
Emergency Stop Torque	[Nm]	--	250	250	250	300
Nominal Input Speed	[rpm]	--	3000			
Maximum Input Speed	[rpm]	--	6000			
No Load Running Torque	[Nm]	--	1.21			
Permitted Radial Load	[N]	--	3000	3000	3000	4000
Permitted Axial Load	[N]	--	1500	1500	1500	2000
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 24$ )	[kgcm <sup>2</sup> ]	--	3.559	2.940	1.193	2.044
Efficiency	[%]	--	85			
Torsional Rigidity	[Nm/arcmin]	--	3.2	4.0	4.0	4.0
Maximum Torsional Backlash	[Arc-min]	--	$\leq 30$			
Noise Level	[dB]	--	$\leq 74$			
Protection Class	--	--	IP65			
Ambient Temperature	[°C]	--	0-40			
Permitted Housing Temperature	[°C]	--	90			
Weight (Solid Output Shaft)	[kg]	--	11.0			
Weight (Hollow Output Shaft)	[kg]	--	10.0			

## NEV E-Frame (145mm) 2-Stage Dimensions – Ratios: 5:1, 9:1, 15:1, 27:1



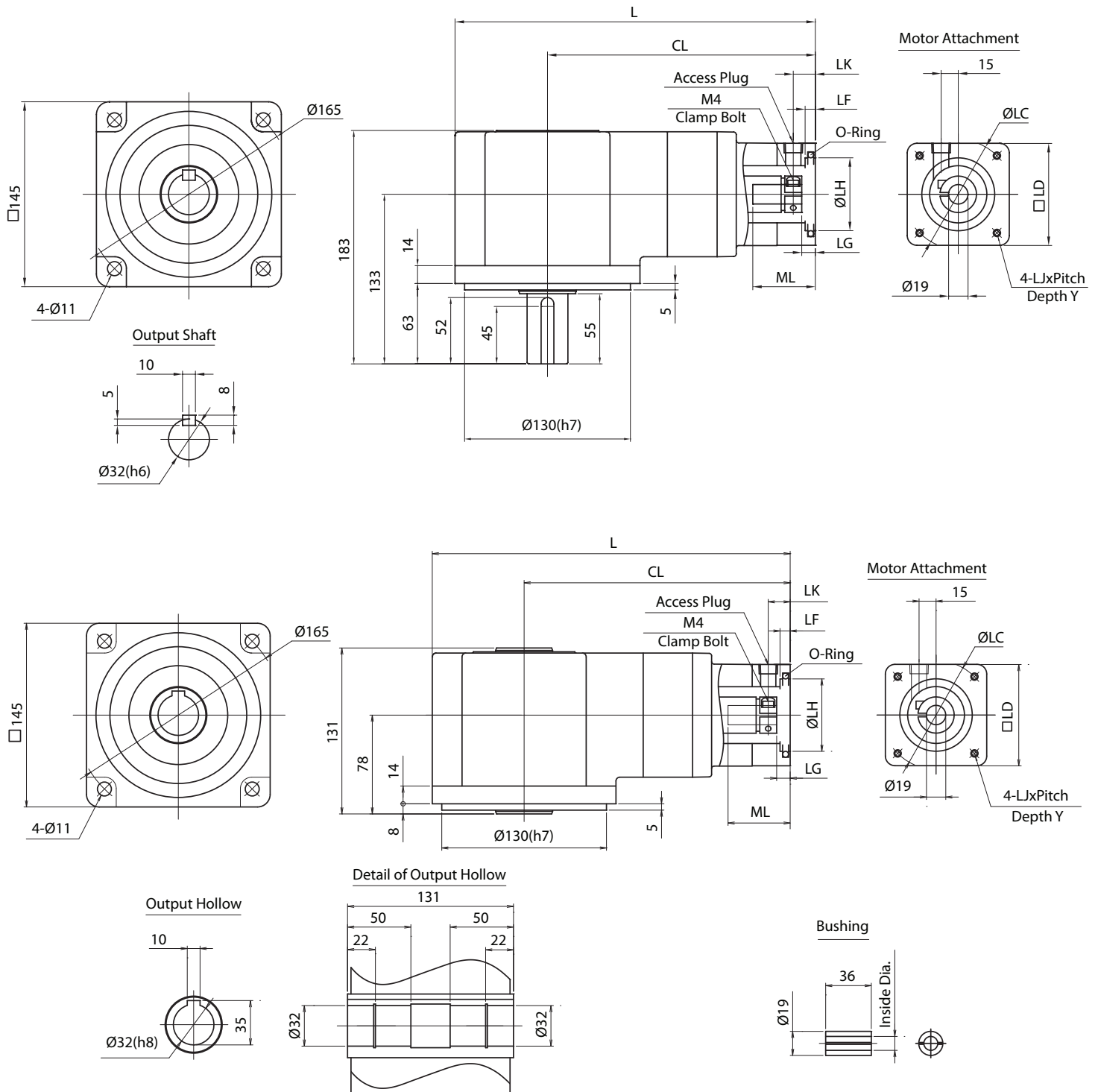
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# NEV SERIES Right-angle Planetary

## NEV E-Frame 3-Stage Specifications

Frame Size	E (145mm)				
Ratio	Units	Note	45	75	105
Nominal Output Torque	[Nm]	--	80	90	90
Maximum Acceleration Torque	[Nm]	--	180	180	180
Emergency Stop Torque	[Nm]	--	300	300	300
Nominal Input Speed	[rpm]	--	3000		
Maximum Input Speed	[rpm]	--	6000		
No Load Running Torque	[Nm]	--	0.961		
Permitted Radial Load	[N]	--	4000	4000	4000
Permitted Axial Load	[N]	--	2000	2000	2000
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	1.878	1.303	1.184
Moment of Inertia ( $\leq \varnothing 24$ )	[kgcm <sup>2</sup> ]	--	--	--	--
Efficiency	[%]	--	80		
Torsional Rigidity	[Nm/arcmin]	--	4.0		
Maximum Torsional Backlash	[Arc-min]	--	$\leq 30$		
Noise Level	[dB]	--	$\leq 69$		
Protection Class	--	--	IP65		
Ambient Temperature	[°C]	--	0-40		
Permitted Housing Temperature	[°C]	--	90		
Weight (Solid Output Shaft)	[kg]	--	11.4		
Weight (Hollow Output Shaft)	[kg]	--	10.4		

## NEV E-Frame (145mm) 3-Stage Dimensions – Ratios: 45:1, 75:1, 105:1



NEV