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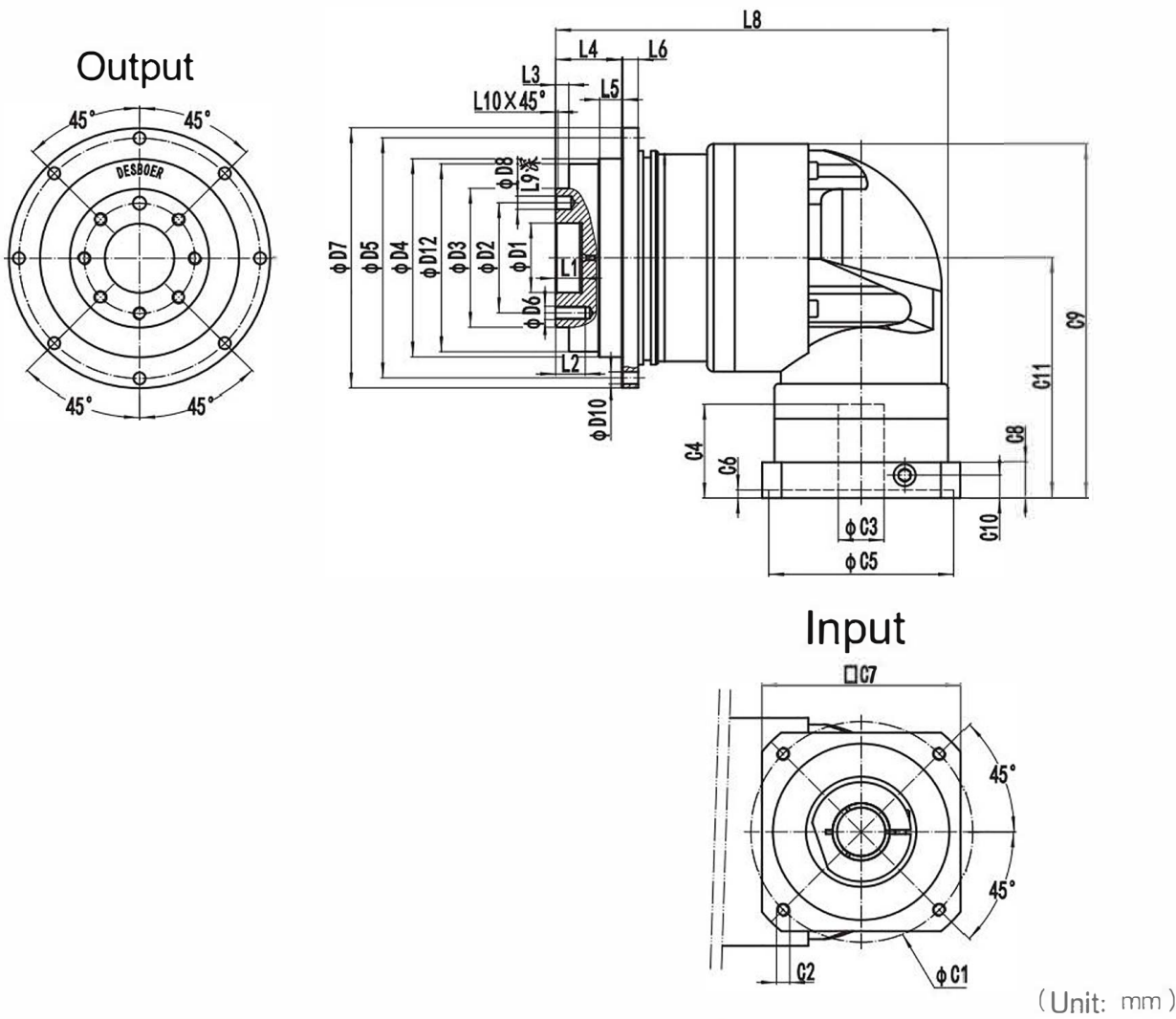
NBR SERIES

High precision planetary reducer



Dimensions (Single , Ratio i=4 ~20)

NDR064 Series



NDR064	D1	D2	D3	D4	D5	D6	D7	D8	D10	D12	
	20	31.5	40	64	79	7—M5×0.8P	86	5	8—4.5	63.2	
	L1	L2	L3	L4	L5	L6	L8	L9		L10	
	8	8	3	19.5	7	4	126	6		0.5	
	C1*	C2*	C3*	C4*	C5*	C6*	C7*	C8*	C9*	C10*	C11*
	70	M5×0.8P	≤14/≤16	34	50	7	60	18.5	116.5	14	81.5

NDR064 Series

Parameter

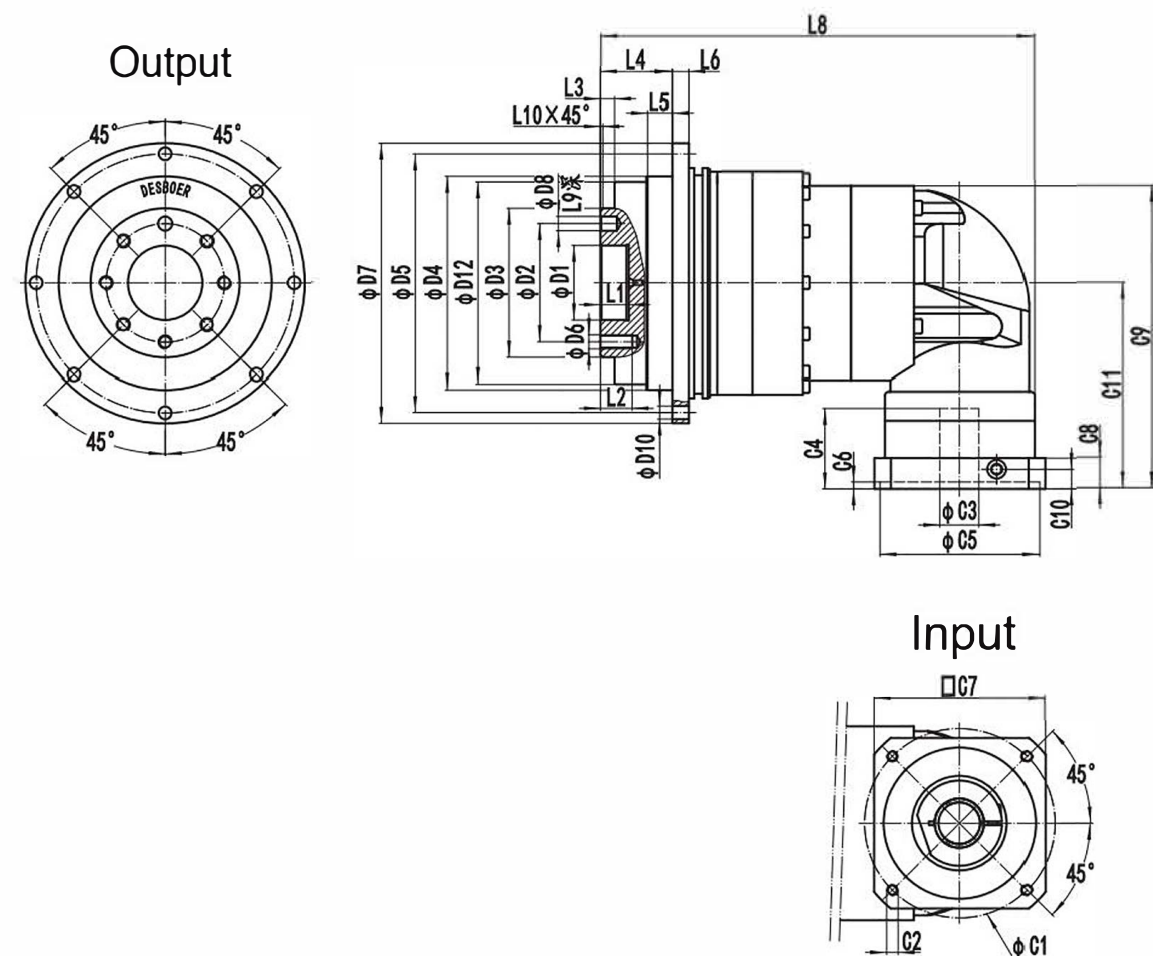
Gearbox performance data

Segment number		Single segment						
Ratio	i	4	5	7	10	14	20	
Rated output torque	Nm	45	55	45	35	35	35	
Emergency stop torque	Nm	Three times of Maximum Output Torque						
Rated input speed	rpm	5000						
Max input speed	rpm	10000						
Ultraprecise backlash	arcmin	-						
Precise backlash	arcmin	≤4						
Standard backlash	arcmin	≤6						
Torsional rigidity	Nm/arcmin	13						
Max. bending moment	Nm	125						
Max. axial force	N	1050						
Service Life	hr	30000 (15000 under continuous operation)						
Efficiency	%	≥95%						
Weight	kg	2.1						
Operating Temperature	℃	-10℃ ~ +90℃						
Lubrication		Synthetic grease						
Protection Class		IP64						
Mounting Position		All directions						
Noise Level (N1=3000rpm,Non-Loaded)	dB (A)	≤63						
Rotary inertia	kg · cm ²	0.35					0.07	

★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$
▲ Measured in the shaft center when the flange speed is 100rpm

*Dimensions based on servo-motor,please contact us for custom made order.

NDR064Series



(Unit: mm)

NDR064	D1	D2	D3	D4	D5	D6	D7	D8	D10		D12
	20	31.5	40	64	79	7-M5×0.8P	86	5	8-4.5		63.2
	L1	L2	L3	L4	L5	L6	L8	L9		L10	
	8	8	3	19.5	7	4	132.5	6		0.5	
	C1*	C2*	C3*	C4*	C5*	C6*	C7*	C8*	C9*	C10*	C11*
	46	M4×0.7P	≤12	30	30	3.5	48	19.5	108.25	13.25	74

*Dimensions based on servo-motor, please contact us for custom made order.

NDR064 Series

Parameter

Gearbox performance data

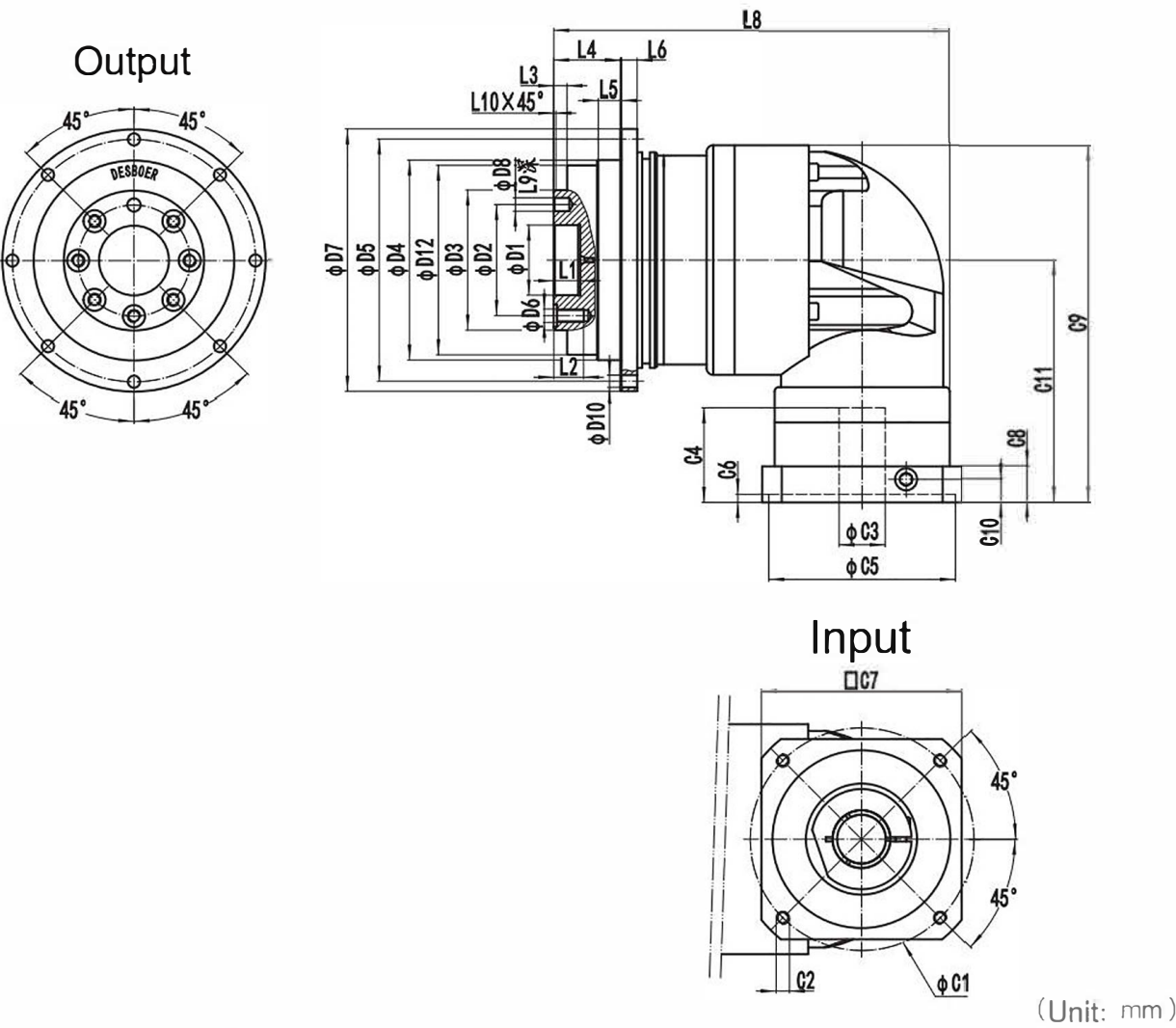
Segment number		Double segment							
Ratio	i	25	35	40	50	70	100	140	200
Rated output torque	Nm	55	45	45	55	45	35	-	-
Emergency stop torque	Nm	Three times of Maximum Output Torque							
Rated input speed	rpm	5000							
Max input speed	rpm	10000							
Ultraprecise backlash	arcmin	-							
Precise backlash	arcmin	≤7							
Standard backlash	arcmin	≤9							
Torsional rigidity	Nm/arcmin	13							
Max. bending moment	Nm	125							
Max. axial force	N	1050							
Service Life	hr	30000 (15000 under continuous operation)							
Efficiency	%	≥92%							
Weight	kg	1.9							
Operating Temperature	°C	-10°C ~ +90°C							
Lubrication		Synthetic grease							
Protection Class		IP64							
Mounting Position		All directions							
Noise Level (N1=3000rpm, Non-Loaded)	dB (A)	≤63							
Rotary inertia	kg·cm²	0.09							

★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$

▲ Measured in the shaft center when the flange speed is 100rpm

NDR090 Series

Parameter



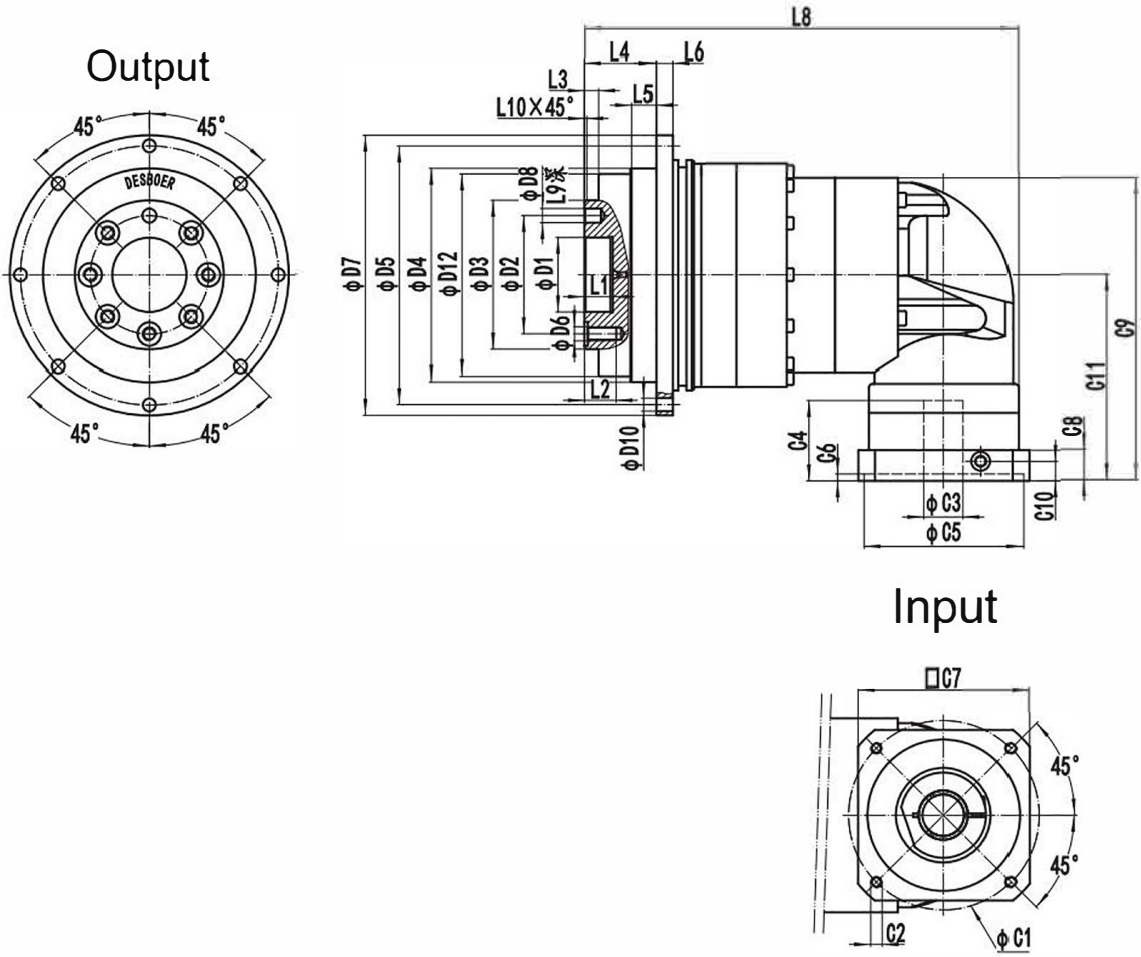
Gearbox performance data

Segment number		Single segment						
Ratio	i	4	5	7	10	14	20	
Rated output torque	Nm	120	150	130	95	130	95	
Emergency stop torque	Nm	Three times of Maximum Output Torque						
Rated input speed	rpm	4000						
Max input speed	rpm	8000						
Ultraprecise backlash	arcmin	≤2						
Precise backlash	arcmin	≤4						
Standard backlash	arcmin	≤6						
Torsional rigidity	Nm/arcmin	31						
Max. bending moment	Nm	235						
Max. axial force	N	2850						
Service Life	hr	30000 (15000 under continuous operation)						
Efficiency	%	≥95%						
Weight	kg	5.9						
Operating Temperature	℃	-10℃ ~ +90℃						
Lubrication		Synthetic grease						
Protection Class		IP64						
Mounting Position		All directions						
Noise Level (N1=3000rpm,Non-Loaded)	dB (A)	≤65						
Rotary inertia	kg · cm²	2.25			1.87			

★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$
▲ Measured in the shaft center when the flange speed is 100rpm

*Dimensions based on servo-motor,please contact us for custom made order.

NDR090 Series



(Unit: mm)

NDR090	D1	D2	D3	D4	D5	D6	D7	D8	D10	D12	
	31.5	50	63	90	109	7-M6×1P	118	6	8-5.5	89.2	
	L1	L2	L3	L4	L5	L6	L8	L9		L10	
	12	13.5	6	30	10	7	163	7		1	
	C1*	C2*	C3*	C4*	C5*	C6*	C7*	C8*	C9*	C10*	C11*
	70	M5×0.8P	≤14/≤16	34	50	8	60	19	128.25	14	81.5

NDR090 Series
Parameter

Gearbox performance data

Segment number		Double segment							
Ratio	i	25	35	40	50	70	100	140	200
Rated output torque	Nm	150	130	120	150	130	95	130	95
Emergency stop torque	Nm	Three times of Maximum Output Torque							
Rated input speed	rpm	4000							
Max input speed	rpm	8000							
Ultraprecise backlash	arcmin	≤4							
Precise backlash	arcmin	≤7							
Standard backlash	arcmin	≤9							
Torsional rigidity	Nm/arcmin	31							
Max. bending moment	Nm	235							
Max. axial Force	N	2850							
Service Life	hr	30000 (15000 under continuous operation)							
Efficiency	%	≥92%							
Weight	kg	4.5							
Operating Temperature	℃	- 10℃ ~ +90℃							
Lubrication		Synthetic grease							
Protection Class		IP64							
Mounting Position		All directions							
Noise Level (N1=3000rpm,Non-Loaded)	dB (A)	≤65							
Rotary inertia	kg · cm²	0.35						0.31	

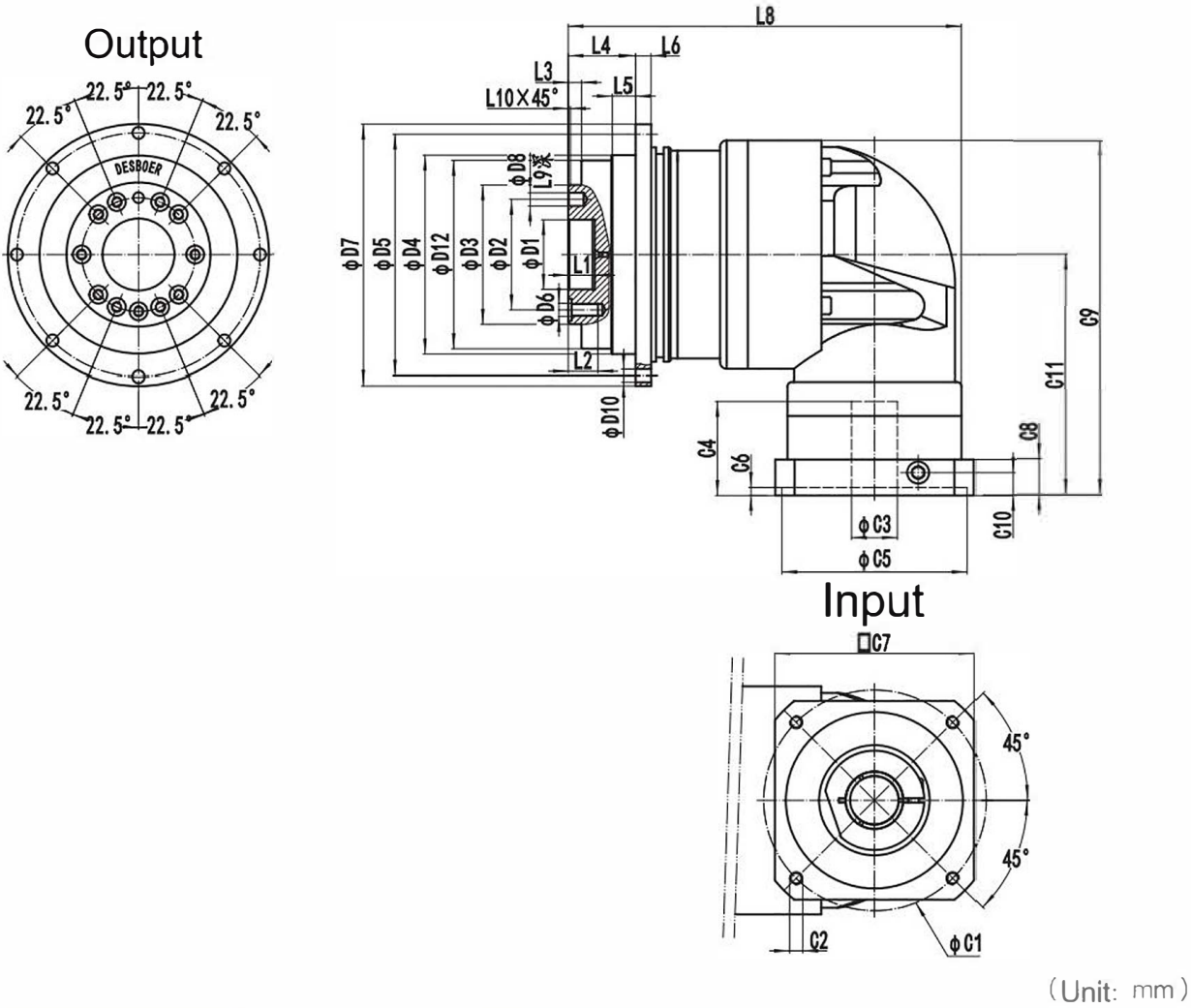
★ Maximum Output Torque T_{2B}=60% × T_{2NOT}
▲ Measured in the shaft center when the flange speed is 100rpm

*Dimensions based on servo-motor,please contact us for custom made order.

NDR110Series

NDR110 Series
Parameter

Gearbox
performance data

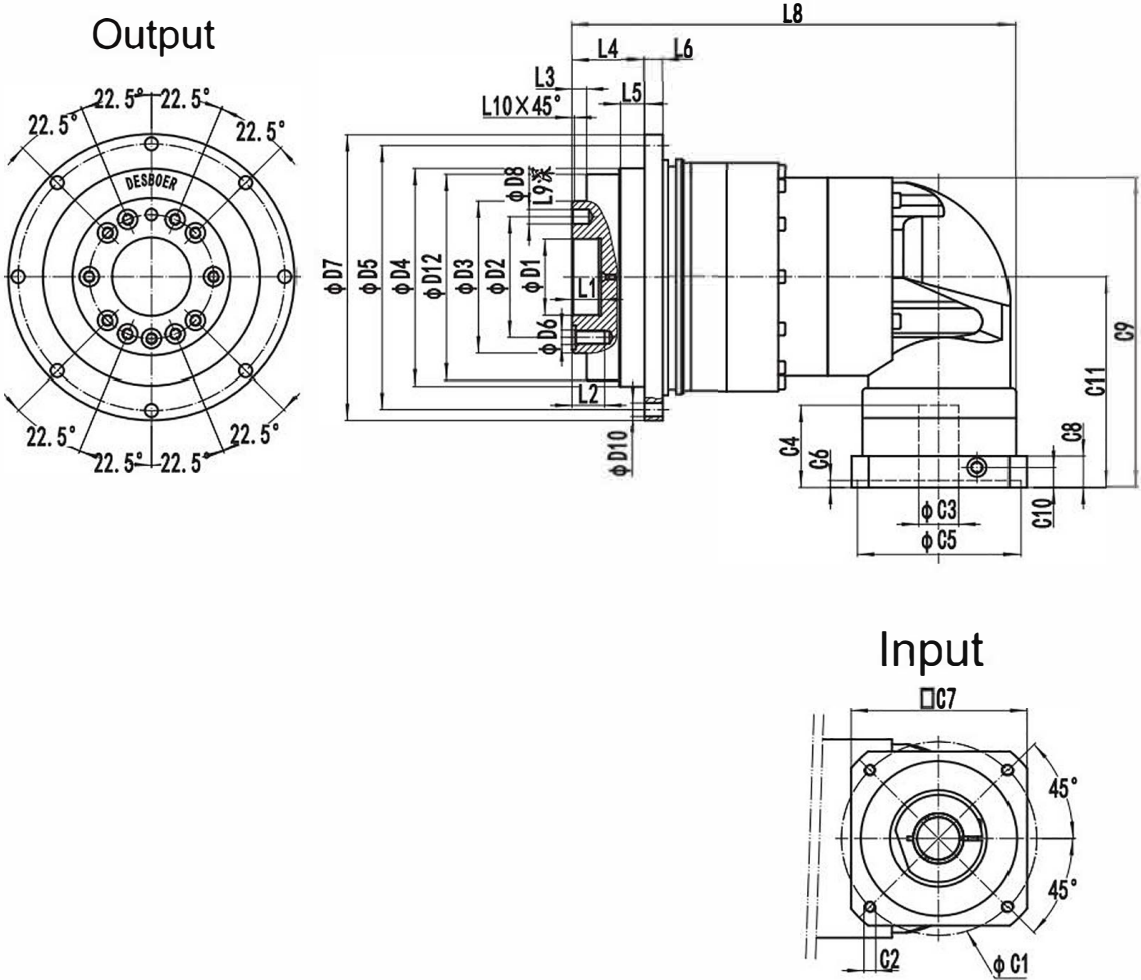


Segment number		Single segment					
Ratio	i	4	5	7	10	14	20
Rated output torque	Nm	250	310	280	210	280	210
Emergency stop torque	Nm	Three times of Maximum Output Torque					
Rated input speed	rpm	4000					
Max input speed	rpm	8000					
Ultraprecise backlash	arcmin	≤2					
Precise backlash	arcmin	≤4					
Standard backlash	arcmin	≤6					
Torsional rigidity	Nm/arcmin	82					
Max. bending moment	Nm	430					
Max. axial force	N	2990					
Service Life	hr	30000 (15000 under continuous operation)					
Efficiency	%	≥95%					
Weight	kg	10.5					
Operating Temperature	℃	-10℃ ~ +90℃					
Lubrication		Synthetic grease					
Protection Class		IP64					
Mounting Position		All directions					
Noise Level (N1=3000rpm,Non-Loaded)	dB (A)	≤68					
Rotary inertia	kg · cm²	6.84			6.25		

- ★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$
- ▲ Measured in the shaft center when the flange speed is 100rpm

*Dimensions based on servo-motor,please contact us for custom made order.

NDR110Series



(単位: mm)

NDR110	D1	D2	D3	D4	D5	D6	D7	D8	D10		D12
	40	63	80	110	135	11-M6×1P	145	6	8-5.5		109.2
	L1	L2	L3	L4	L5	L6	L8	L9			L10
	12	13.5	6	29	10	8	217.5	7			1
	C1*	C2*	C3*	C4*	C5*	C6*	C7*	C8*	C9*	C10*	C11*
	90	M6×1P	≤19/≤24	40	70	6	80	19.5	166.5	14	107.5

NDR110 Series

Parameter

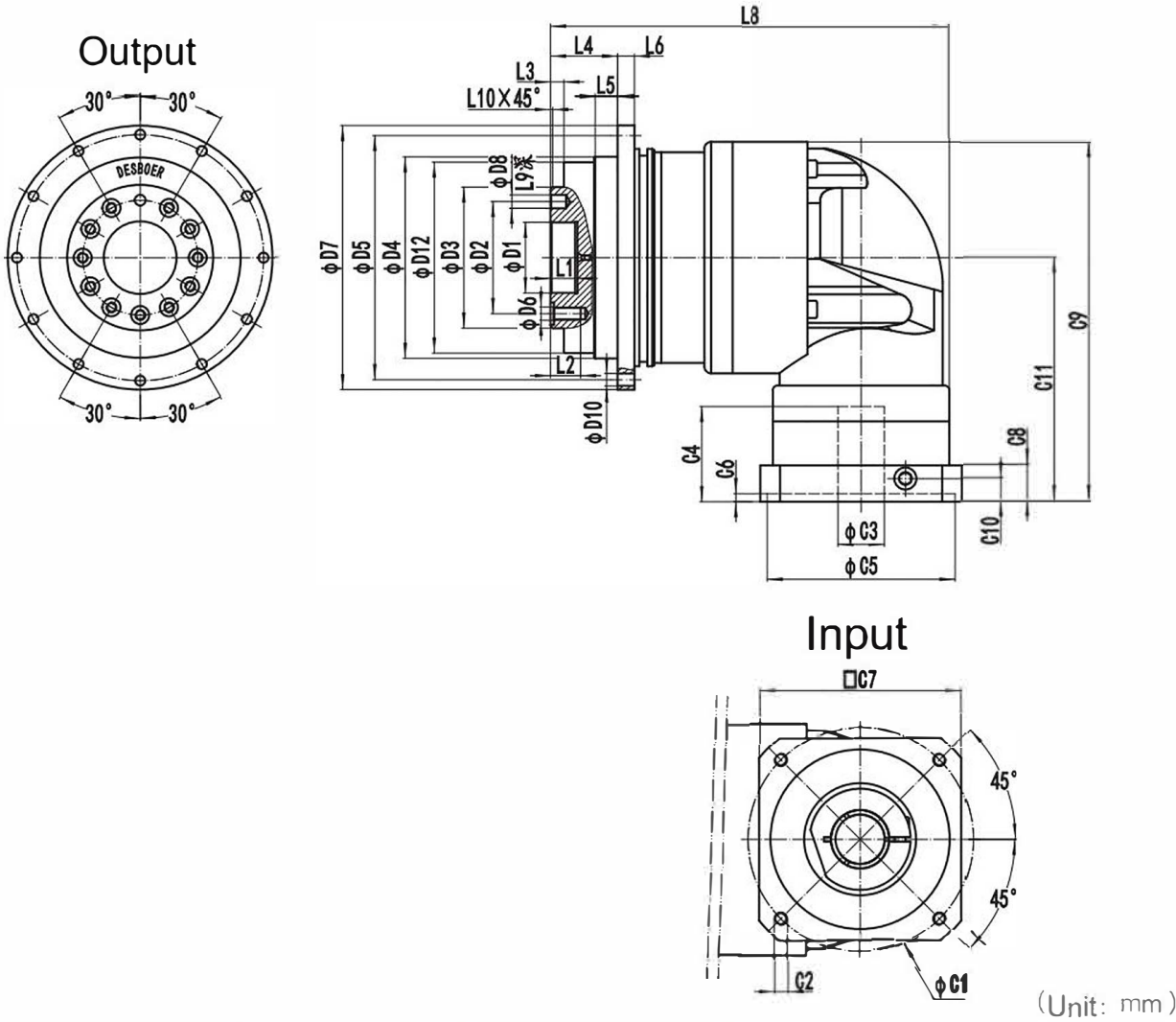
Gearbox performance data

Segment number		Double segment							
Ratio	i	25	35	40	50	70	100	140	200
Rated output torque	Nm	310	280	250	310	280	210	280	210
Emergency stop torque	Nm	Three times of Maximum Output Torque							
Rated input speed	rpm	4000							
Max input speed	rpm	8000							
Ultraprecise backlash	arcmin	≤4							
Precise backlash	arcmin	≤7							
Standard backlash	arcmin	≤9							
Torsional rigidity	Nm/arcmin	82							
Max. bending moment	Nm	430							
Max. axial force	N	2990							
Service Life	hr	30000 (15000 under continuous operation)							
Efficiency	%	≥92%							
Weight	kg	9.8							
Operating Temperature	℃	-10℃ ~ +90℃							
Lubrication		Synthetic grease							
Protection Class		IP64							
Mounting Position		All directions							
Noise Level (N1=3000rpm,Non-Loaded)	dB (A)	≤68							
Rotary inertia	kg·cm²	2.25				1.87			

- ★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$
- ▲ Measured in the shaft center when the flange speed is 100rpm

*Dimensions based on servo-motor,please contact us for custom made order.

NDR140 Series



NDR140	D1	D2	D3	D4	D5	D6	D8	D8	D10		D12
	50	80	100	140	168	11—M8×1.25P	179	8	12—6.6		139.2
	L1	L2	L3	L4	L5	L6	L8	L9		L10	
	12	17	6	38	14.6	10	263.5	7		1	
	C1*	C2*	C3*	C4*	C5*	C6*	C7*	C8*	C9*	C10*	C11*
	165	M10×1.5P	≤42	60	130	6	142	22.5	245.5	15	164.5

Parameter

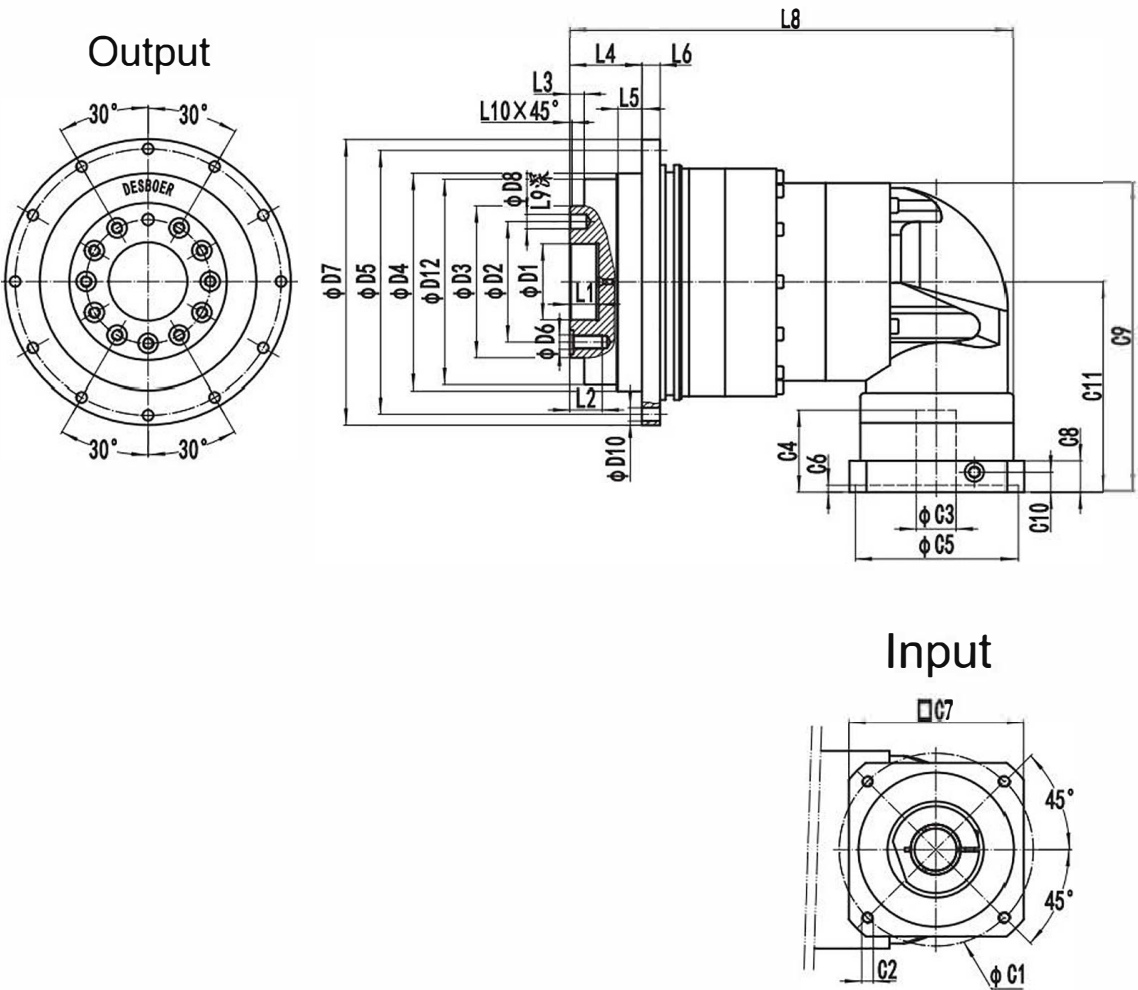
Gearbox performance data

Segment number		Single segment					
Ratio	i	4	5	7	10	14	20
Rated output torque	Nm	530	620	520	420	520	420
Emergency stop torque	Nm	Three times of Maximum Output Torque					
Rated input speed	rpm	3000					
Max input speed	rpm	6000					
Ultraprecise backlash	arcmin	≤2					
Precise backlash	arcmin	≤4					
Standard backlash	arcmin	≤6					
Torsional rigidity	Nm/arcmin	151					
Max. bending moment	Nm	1300					
Max. axial force	N	10590					
Service Life	hr	30000 (15000 under continuous operation)					
Efficiency	%	≥95%					
Weight	kg	21.9					
Operating Temperature	℃	-10℃ ~ +90℃					
Lubrication		Synthetic grease					
Protection Class		IP64					
Mounting Position		All directions					
Noise Level (N1=3000rpm,Non-Loaded)	dB (A)	≤70					
Rotary inertia	kg · cm²	23.4				21.8	

★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$
▲ Measured in the shaft center when the flange speed is 100rpm

*Dimensions based on servo-motor,please contact us for custom made order.

NDR140 Series



(Unit: mm)

NDR140	D1	D2	D3	D4	D5	D6	D7	D8	D10		D12
	50	80	100	140	168	11-M8×1.25P	179	8	12-6.6		139.2
	L1	L2	L3	L4	L5	L6	L8	L9		L10	
	12	17	6	38	14.6	10	269.5	7		1	
	C1*	C2*	C3*	C4*	C5*	C6*	C7*	C8*	C9*	C10*	C11*
	130	M8×1.25P	≦35	50	110	6	115	20	209	13.5	134

NDR140 Series

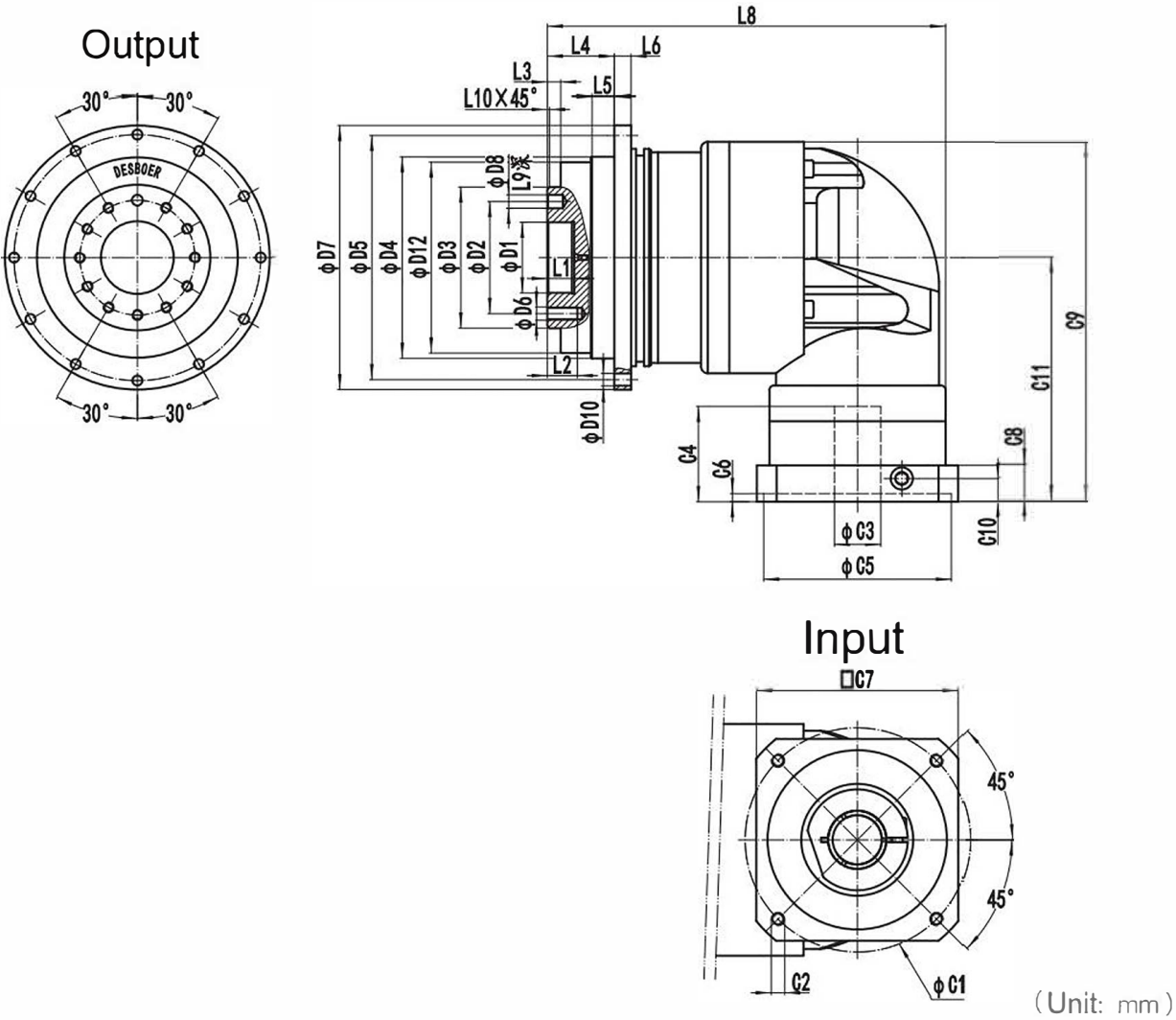
Parameter

Gearbox performance data

Segment number		Double segment							
Ratio	i	25	35	40	50	70	100	140	200
Rated output torque	Nm	620	520	530	620	520	420	520	420
Emergency stop torque	Nm	Three times of Maximum Output Torque							
Rated input speed	rpm	3000							
Max input speed	rpm	6000							
Ultraprecise backlash	arcmin	≤4							
Precise backlash	arcmin	≤7							
Standard backlash	arcmin	≤9							
Torsional rigidity	Nm/arcmin	151							
Max. bending moment	Nm	1300							
Max. axial force	N	10590							
Service Life	hr	30000 (15000 under continuous operation)							
Efficiency	%	≥92%							
Weight	kg	20.1							
Operating Temperature	℃	-10℃ ~ +90℃							
Lubrication		Synthetic grease							
Protection Class		IP64							
Mounting Position		All directions							
Noise Level (N1=3000rpm,Non-Loaded)	dB (A)	≤70							
Rotary inertia	kg·cm²	6.84				6.25			

- ★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$
- ▲ Measured in the shaft center when the flange speed is 100rpm

*Dimensions based on servo-motor,please contact us for custom made order.



NDR200	D1	D2	D3	D4	D5	D6	D7	D7	D10		D12
	80	125	160	200	233	11—M10 × 1.5P	247	10	12—9		199.2
	L1	L2	L3	L8	L5	L6	L8	L9		L10	
	16	22.5	8	50	15	12	334.5	10		1	
	C1*	C2*	C3*	C4*	C5*	C6*	C7*	C8*	C9*	C10*	C11*
	215	M12 × 1.75P	≦55	85	180	6	190	29	316	20.75	213.5

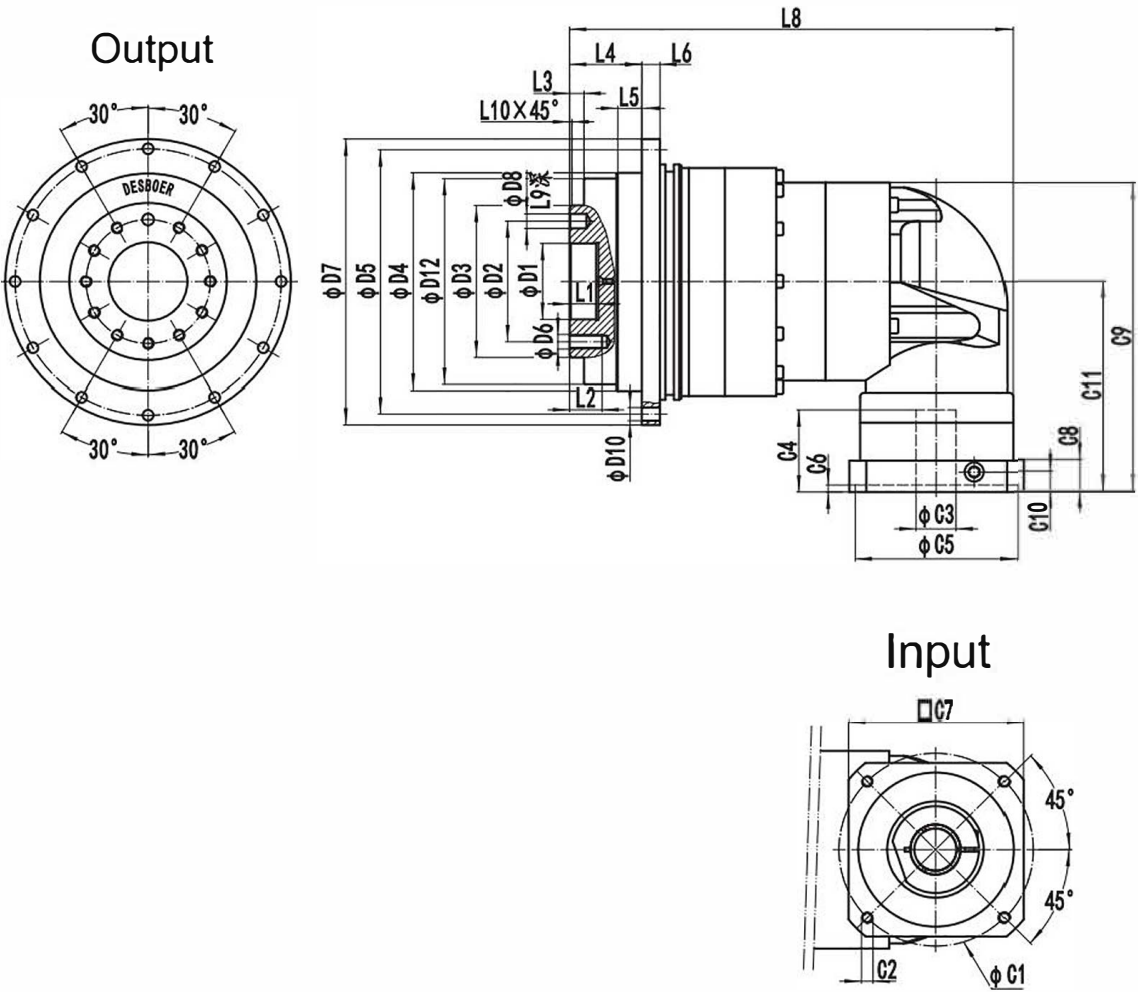
Gearbox performance data

Segment number		Single segment					
Ratio	i	4	5	7	10	14	20
Rated output torque	Nm	1040	1140	1040	850	1040	850
Emergency stop torque	Nm	Three times of Maximum Output Torque					
Rated input speed	rpm	3000					
Max input speed	rpm	6000					
Ultraprecise backlash	arcmin	≤2					
Precise backlash	arcmin	≤4					
Standard backlash	arcmin	≤6					
Torsional rigidity	Nm/arcmin	440					
Max. bending moment	Nm	3064					
Max. axial force	N	16660					
Service Life	hr	30000 (15000 under continuous operation)					
Efficiency	%	≥95%					
Weight	kg	50.9					
Operating Temperature	°C	-10°C ~ +90°C					
Lubrication		Synthetic grease					
Protection Class		IP64					
Mounting Position		All directions					
Noise Level (N1=3000rpm,Non-Loaded)	dB (A)	≤72					
Rotary inertia	kg · cm²	68.9				65.6	

★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$
▲ Measured in the shaft center when the flange speed is 100rpm

*Dimensions based on servo-motor,please contact us for custom made order.

NDR200 Series



(Unit: mm)

NDR200	D1	D2	D3	D4	D5	D6	D7	D8	D10		D12
	80	125	160	200	233	11-M10×1.5P	247	10	12-9		199.2
	L1	L2	L3	L4	L5	L6	L5	L9		L10	
	16	22.5	8	50	15	12	333.5	10		1	
	C1*	C2*	C3*	C4*	C5*	C6*	C7*	C8*	C9*	C10*	C11*
	165	M10×1.5P	≦42	60	130	6	142	23	269.5	15	164.5

*Dimensions based on servo-motor,please contact us for custom made order.

Parameter

Gearbox performance data

Segment number		Double segment							
Ratio	i	25	35	40	50	70	100	140	200
Rated output torque	Nm	1140	1040	1040	1140	1040	850	1040	850
Emergency stop torque	Nm	Three times of Maximum Output Torque							
Rated input speed	rpm	3000							
Max input speed	rpm	6000							
Ultraprecise backlash	arcmin	≤4							
Precise backlash	arcmin	≤7							
Standard backlash	arcmin	≤9							
Torsional rigidity	Nm/arcmin	440							
Max. bending moment	Nm	3064							
Max. axial force	N	16660							
Service Life	hr	30000 (15000 under continuous operation)							
Efficiency	%	≥92%							
Weight	kg	45.4							
Operating Temperature	℃	- 10℃ ~ +90℃							
Lubrication		Synthetic grease							
Protection Class		IP64							
Mounting Position		All directions							
Noise Level (N1=3000rpm,Non-Loaded)	dB (A)	≤72							
Rotary inertia	kg · cm²	23.4				21.8			

★ Maximum Output Torque $T_{2B}=60\% \times T_{2NOT}$
▲ Measured in the shaft center when the flange speed is 100rpm