

# STR-SERIES

The STR provides a solution for ultra-high precision, obtaining accuracies up to 20 arc-seconds. The STR allows an application to reach negligible backlash, maintain exceptional rigidity, and maximize control stability so that the desired output motion can be easily achieved. The design is truly a unique concept, utilizing a full contact screw-like transmission for high-efficiency and elimination of wear. The unit provides maximum compactness using orthogonal axes and includes a large hollow shaft for flexibility.

The STR will most often incorporate either an inline (VRB) or right-angle (EVB) reducer to achieve an additional reduction and simplify the connection to your servo motor. It is available in a number of housing sizes, and it can handle extremely large moment loads. The STR is an ideal fit for any automation or custom material handling integrator that requires the precision, rigidity, and repeatability that this servo rotary indexer can offer.

Optimal	■	■	■	■	■	■	■	■	■	10
	■	■	■	■	■	■	■	■	■	9
	■	■	■	■	■	■	■	■	■	8
Exceptional	■	■	■	■	■	■	■	■	■	7
	■	■	■	■	■	■	■	■	■	6
	■	■	■	■	■	■	■	■	■	5
Suitable	■	■	■	■	■	■	■	■	■	4
	■	■	■	■	■	■	■	■	■	3
	■	■	■	■	■	■	■	■	■	2
	■	■	■	■	■	■	■	■	■	1
	Unit Cost	Load Capacity	Duty Cycle	Positional Accuracy						

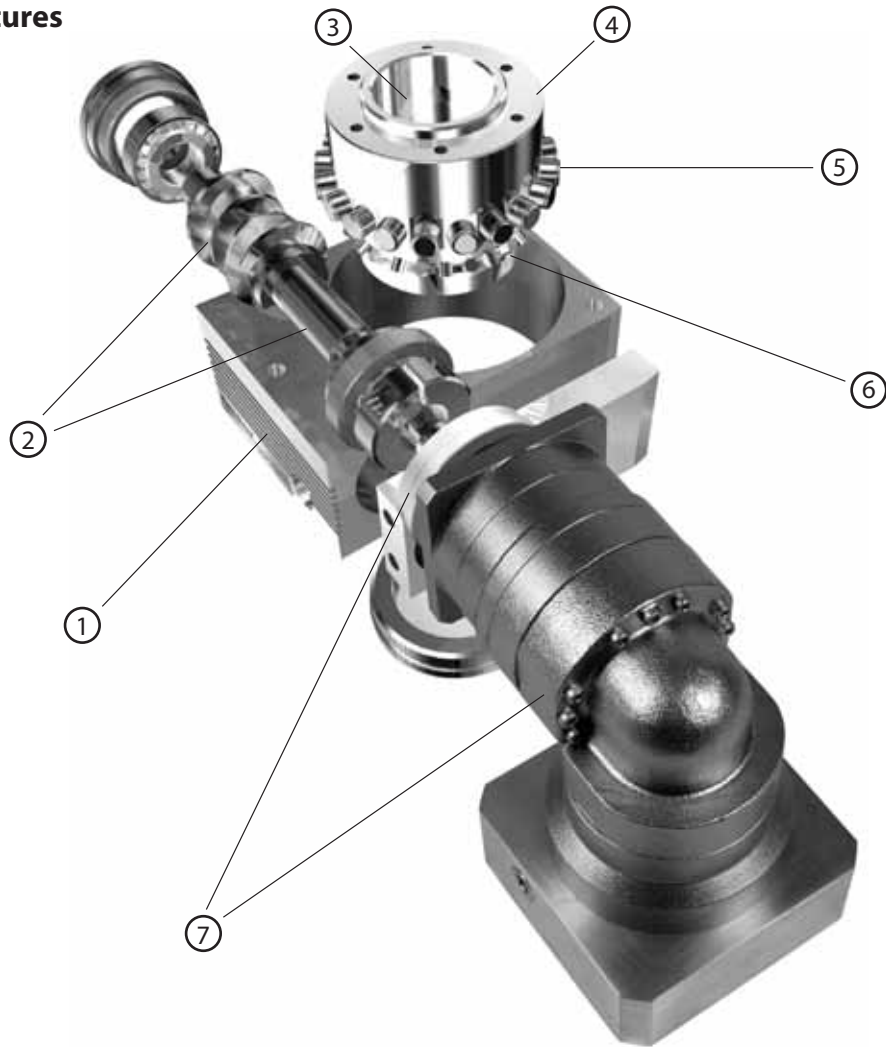


### STR-SERIES

- Compatible with nearly any servo motor
- High output torque, high rigidity, high moment loads
- Large variety of reduction ratios to choose from
- Zero backlash, with precision as tight as 20 arc-secs
- Large hollow shaft design allows use of air lines or wiring
- Multiple ratios to match application requirements

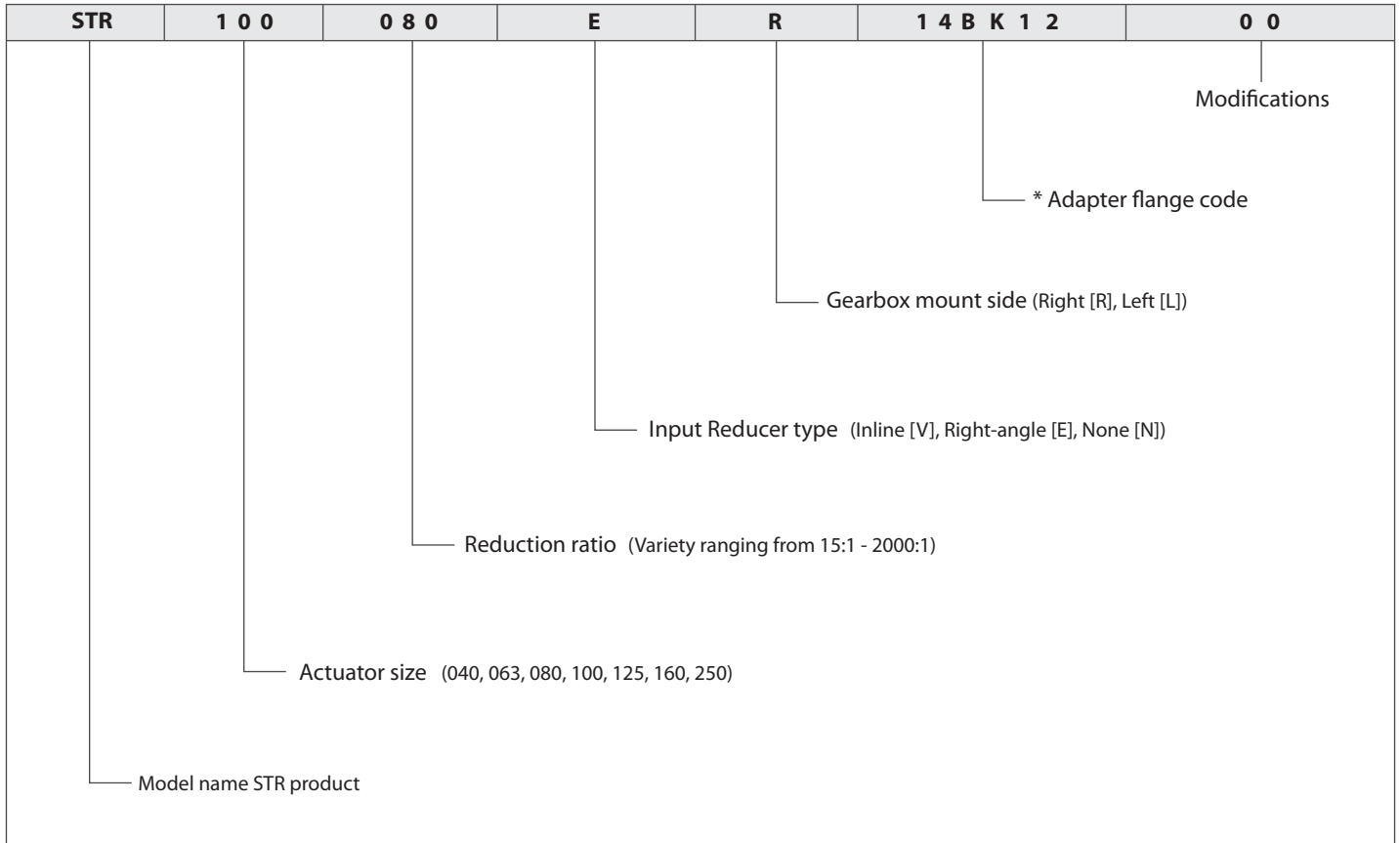
# STR-SERIES Rotary indexer

## STR-Series – Features



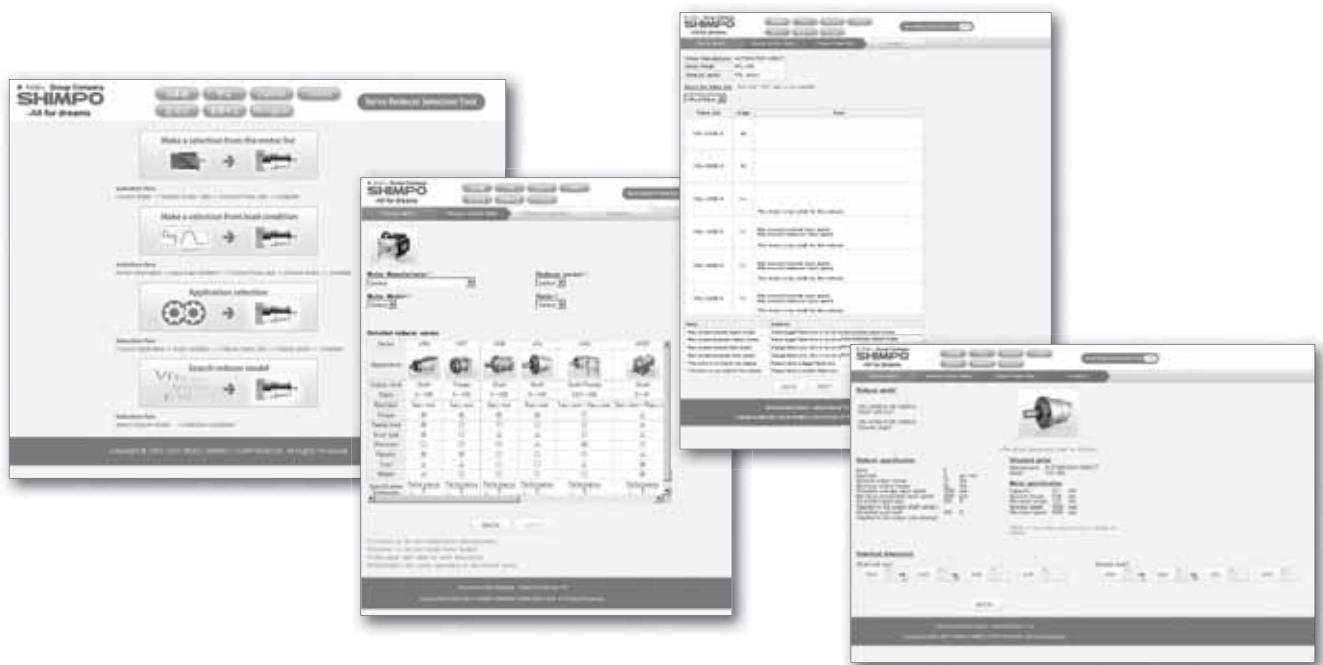
- ① Housing constructed from aluminum alloy
- ② Special worm input shaft providing screw like transmission
- ③ Hollow-bore output shaft
- ④ Output shaft
- ⑤ Cam roller followers
- ⑥ Cross-roller bearing
- ⑦ Direct connection to VRB or EVB planetary reducer

## STR-Series – Model Code



\*1) Adapter flange code  
Adapter flange code varies depending on the motor.

**Contact us for additional information or refer to our online reducer selection tool.**  
Selection tool [www.nidec-shimpo.co.jp/selection/eng](http://www.nidec-shimpo.co.jp/selection/eng)



# STR-SERIES Rotary indexer

## STR-040V – 1-Stage and 2-Stage Specifications with VRSF-B

Frame Size	040V					
			1-Stage		2-Stage	
<b>Stage</b>						
<b>Ratio</b>	Units	Notes	15	45	75	135
Nominal Torque	[Nm]	*1	27	27	27	27
Acceleration Torque	[Nm]	--	58	58	58	58
No Load Torque	[Nm]	*1	0.5	0.2	0.2	0.2
Nominal Input Speed	[rpm]	*2	900	2700	3000	3000
Maximum Input Speed	[rpm]	*2	3000	5000	5000	5000
Reflected Inertia (Single)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.292	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	0.082	0.06	0.053
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	0.151	0.131	0.121
Backlash	[arc-min]	--	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5	≤ 1.5		
Angular Repeatability Accuracy	[arc-min]	--	± 0.2	± 0.2		
Surface Runout	[µm (max)]	--	10	10	10	10
Weight	[kg]	--	2.5	3.2	3.2	3.2
Maximum Axial Load	[N]	--	999	999	999	999
Maximum Radial Load	[N]	--	669	669	669	669
Maximum Tilting Moment Load	[Nm]	--	33	33	33	33
Efficiency	[%]	--	80	76	76	76
Protection Class	--	*4	IP54 (IP65)			

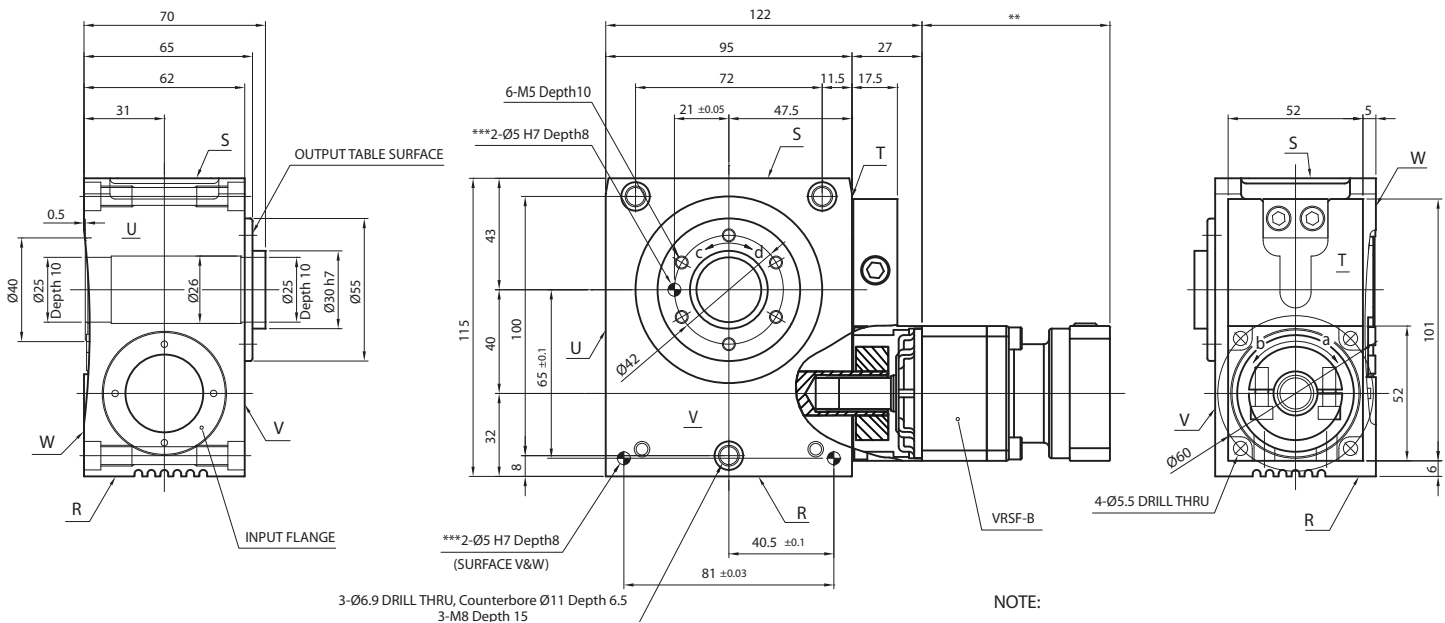
\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-040 Dimensions with VRSF-B

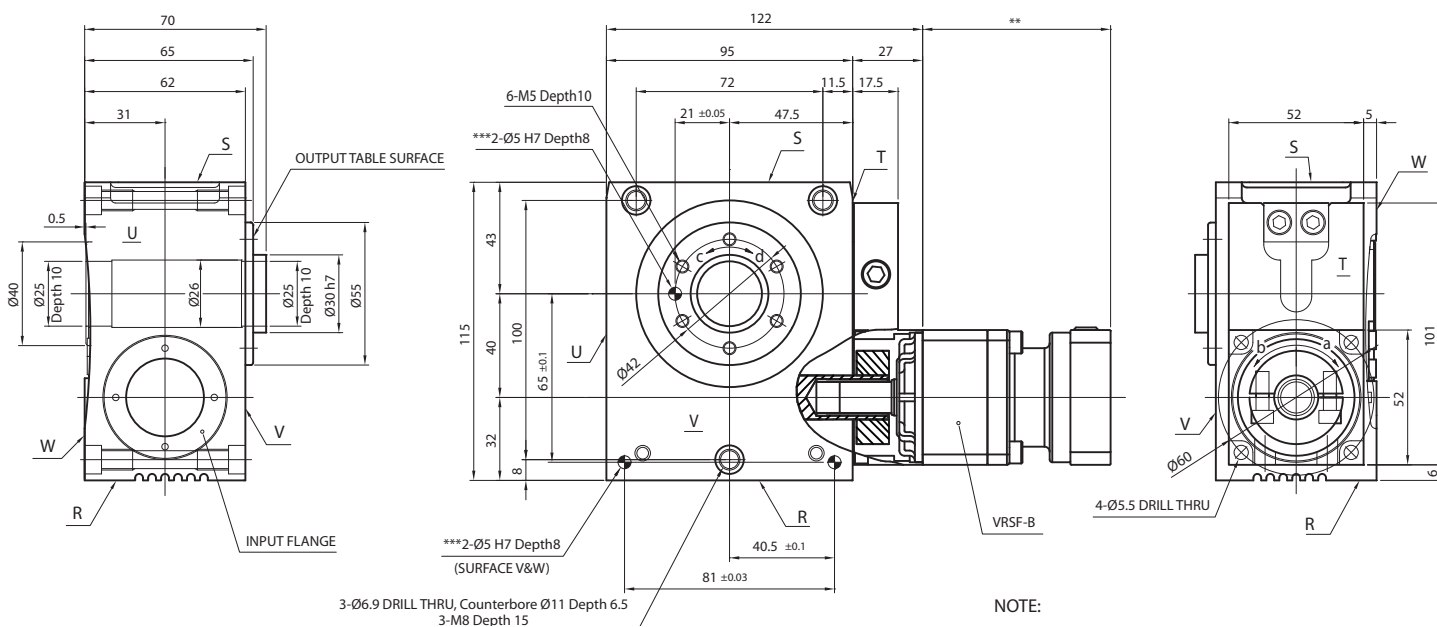


## STR-040V – 3-Stage Specifications with VRSF-B

Frame Size	040V					
Stage	3-Stage					
Ratio	Units	Notes	225	300	375	525
Nominal Torque	[Nm]	*1	27	27	27	27
Acceleration Torque	[Nm]	--	58	58	58	58
No Load Torque	[Nm]	*1	0.1	0.1	0.1	0.1
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	5000	5000	5000	5000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.058	0.057	0.057	0.053
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.131	0.131	0.131	0.121
Backlash	[arc-min]	--	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5			
Angular Repeatability Accuracy	[arc-min]	--	± 0.2			
Surface Runout	[µm (max)]	--	10	10	10	10
Weight	[kg]	--	3.4	3.4	3.4	3.4
Maximum Axial Load	[N]	--	999	999	999	999
Maximum Radial Load	[N]	--	669	669	669	669
Maximum Tilting Moment Load	[Nm]	--	33	33	33	33
Efficiency	[%]	--	72	72	72	72
Protection Class	--	*4	IP54 (IP65)			

- \*1) At nominal input speed
- \*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- \*3) At input shaft
- \*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-040 Dimensions with VRSF-B



NOTE:  
 \*\* Refer to page 22, for VRSF B-Frame dimensions  
 \*\*\* Optional

ROTATION:  
 a=d  
 a=c (upon special request)

## STR-063V – 1-Stage and 2-Stage Specifications with VRB-060

Frame Size	063V									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	69	69	69	69	69	69	69	69
Acceleration Torque	[Nm]	--	129	129	129	129	129	129	129	129
No Load Torque	[Nm]	*1	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nominal Input Speed	[rpm]	*2	800	2400	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	3000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.862	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.142	0.097	0.079	0.070	0.064	0.061	0.059
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.222	0.172	0.162	0.152	0.142	0.142	0.142
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.432	0.382	0.362	0.362	0.352	0.352	0.342
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.0	≤ 1.0						
Angular Repeatability Accuracy	[arc-min]	--	± 0.1	± 0.1						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	5.6	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Maximum Axial Load	[N]	--	1657	1657	1657	1657	1657	1657	1657	1657
Maximum Radial Load	[N]	--	1359	1359	1359	1359	1359	1359	1359	1359
Maximum Tilting Moment Load	[Nm]	--	79	79	79	79	79	79	79	79
Efficiency	[%]	--	82	78	78	78	78	78	78	78
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-063V – 2-Stage and 3-Stage Specifications with VRB-060

Frame Size	063V									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	69	69	69	69	69	69	69	69
Acceleration Torque	[Nm]	--	129	129	129	129	129	129	129	129
No Load Torque	[Nm]	*1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.058	0.057	0.059	0.056	0.055	0.057	0.051	0.055
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.142	0.142	0.142	0.132	0.132	0.142	0.132	0.132
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.342	0.352	0.362	0.352	0.352	0.362	0.342	0.352
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.0	≤ 1.0						
Angular Repeatability Accuracy	[arc-min]	--	± 0.1	± 0.1						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Maximum Axial Load	[N]	--	1657	1657	1657	1657	1657	1657	1657	1657
Maximum Radial Load	[N]	--	1359	1359	1359	1359	1359	1359	1359	1359
Maximum Tilting Moment Load	[Nm]	--	79	79	79	79	79	79	79	79
Efficiency	[%]	--	78	74	74	74	74	74	74	74
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-o63V – 3-Stage Specifications with VRB-o60

Frame Size	063V									
Stage	3-Stage									
Ratio	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	69	69	69	69	69	69	69	69
Acceleration Torque	[Nm]	--	129	129	129	129	129	129	129	129
No Load Torque	[Nm]	*1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	---	---	---	---	---	---	---	---
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.051	0.055	0.051	0.051	0.051	0.051	0.051	0.051
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.132	0.132	0.132	0.132	0.132	0.132	0.132	0.132
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.342	0.352	0.342	0.342	0.342	0.342	0.342	0.342
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.0							
Angular Repeatability Accuracy	[arc-min]	--	± 0.1							
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Maximum Axial Load	[N]	--	1657	1657	1657	1657	1657	1657	1657	1657
Maximum Radial Load	[N]	--	1359	1359	1359	1359	1359	1359	1359	1359
Maximum Tilting Moment Load	[Nm]	--	79	79	79	79	79	79	79	79
Efficiency	[%]	--	74	74	74	74	74	74	74	74
Protection Class	--	*4	IP54 (IP65)							

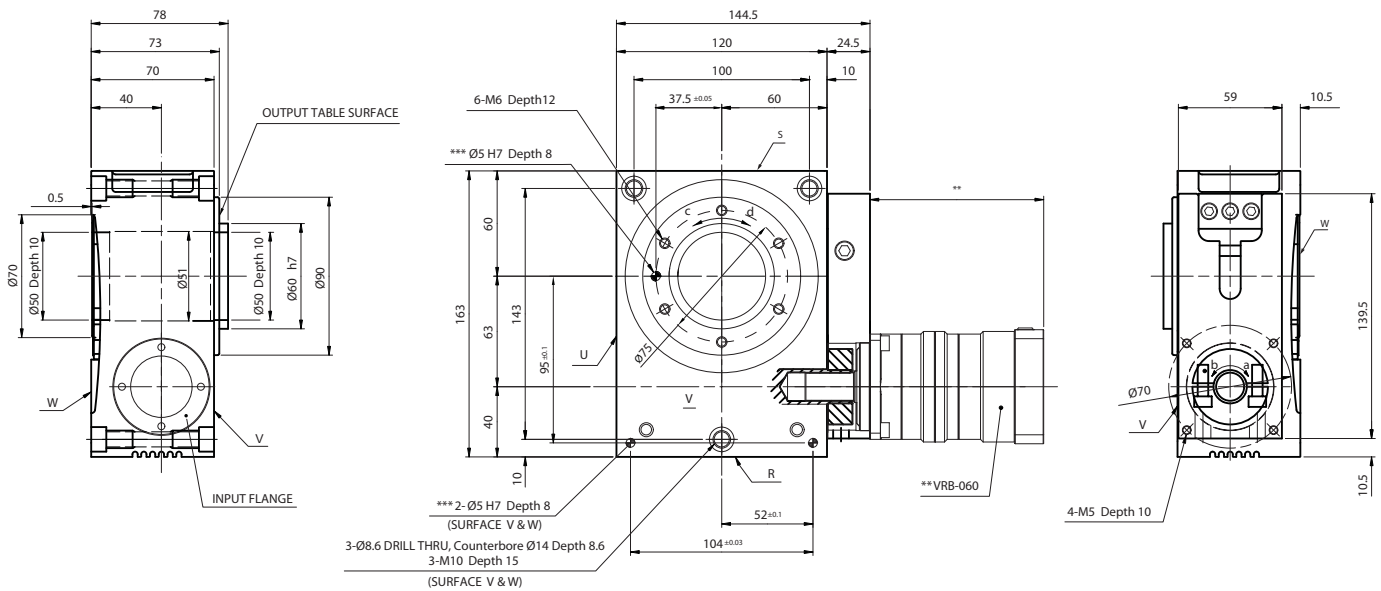
\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-o63 Dimensions with VRB-o60



NOTE:

\*\* Refer to page 92, for VRB-o60 dimensions

\*\*\* Optional

ROTATION:

a=d

a=c (upon special request)



## STR-063E – 1-Stage and 2-Stage Specifications with EVB-060

Frame Size	063E									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	69	69	69	69	69	69	69	69
Acceleration Torque	[Nm]	--	129	129	129	129	129	129	129	129
No Load Torque	[Nm]	*1	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Nominal Input Speed	[rpm]	*2	800	2400	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	3000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.862	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.311	0.266	0.248	0.239	0.234	0.230	0.228
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.386	0.341	0.323	0.314	0.309	0.305	0.303
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.575	0.53	0.513	0.504	0.498	0.495	0.493
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.0	≤ 1.0						
Angular Repeatability Accuracy	[arc-min]	--	± 0.1	± 0.1						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	5.6	7.4	7.4	7.4	7.4	7.4	7.4	7.4
Maximum Axial Load	[N]	--	1657	1657	1657	1657	1657	1657	1657	1657
Maximum Radial Load	[N]	--	1359	1359	1359	1359	1359	1359	1359	1359
Maximum Tilting Moment Load	[Nm]	--	79	79	79	79	79	79	79	79
Efficiency	[%]	--	82	74	74	74	74	74	74	74
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-063E – 2-Stage and 3-Stage Specifications with EVB-060

Frame Size	063E									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	69	69	69	69	69	69	69	69
Acceleration Torque	[Nm]	--	129	129	129	129	129	129	129	129
No Load Torque	[Nm]	*1	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.227	0.073	0.079	0.071	0.071	0.077	0.062	0.07
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.302	0.118	0.124	0.116	0.115	0.122	0.106	0.115
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.491	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.0	≤ 1.0						
Angular Repeatability Accuracy	[arc-min]	--	± 0.1	± 0.1						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	7.4	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Maximum Axial Load	[N]	--	1657	1657	1657	1657	1657	1657	1657	1657
Maximum Radial Load	[N]	--	1359	1359	1359	1359	1359	1359	1359	1359
Maximum Tilting Moment Load	[Nm]	--	79	79	79	79	79	79	79	79
Efficiency	[%]	--	74	70	70	70	70	70	70	70
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-o63E – 3-Stage Specifications with EVB-o6o

Frame Size	063E									
Stage	3-Stage									
Ratio	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	69	69	69	69	69	69	69	69
Acceleration Torque	[Nm]	--	129	129	129	129	129	129	129	129
No Load Torque	[Nm]	*1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.061	0.07	0.061	0.061	0.061	0.061	0.061	0.061
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.106	0.115	0.106	0.106	0.105	0.105	0.105	0.105
Reflected Inertia (≤Ø 19)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.0							
Angular Repeatability Accuracy	[arc-min]	--	± 0.1							
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Maximum Axial Load	[N]	--	1657	1657	1657	1657	1657	1657	1657	1657
Maximum Radial Load	[N]	--	1359	1359	1359	1359	1359	1359	1359	1359
Maximum Tilting Moment Load	[Nm]	--	79	79	79	79	79	79	79	79
Efficiency	[%]	--	70	70	70	70	70	70	70	70
Protection Class	--	*4	IP54 (IP65)							

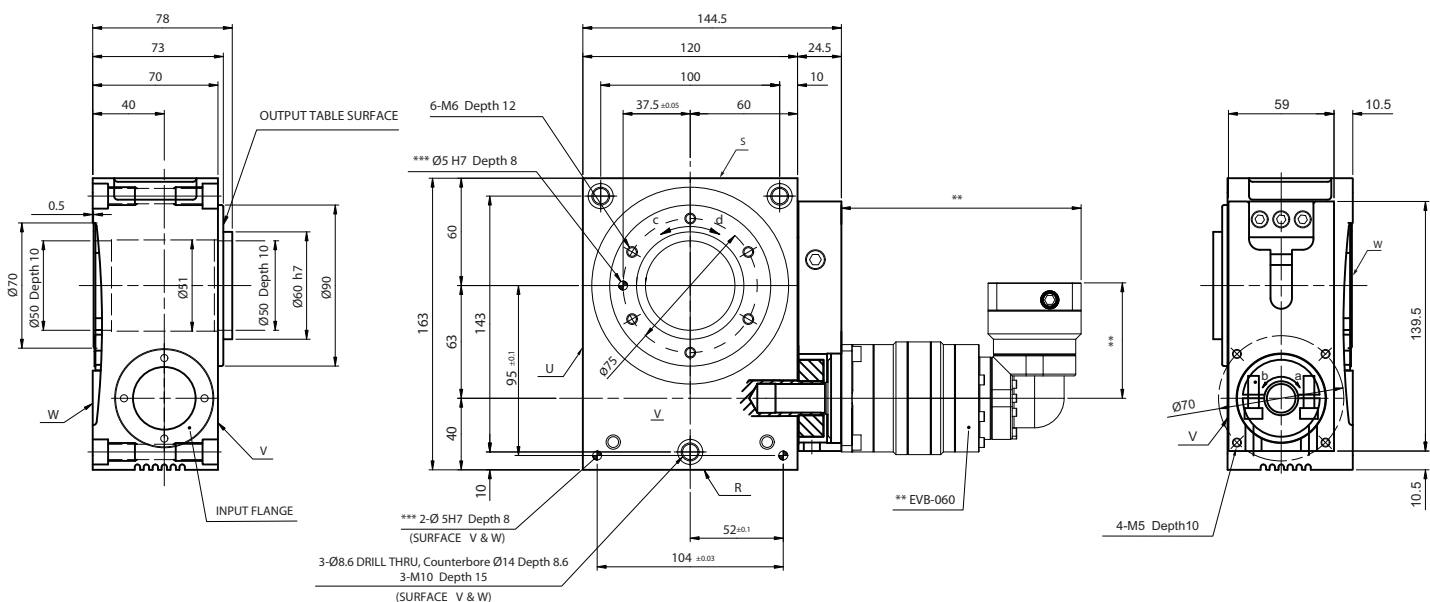
\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-o63 Dimensions with EVB-o6o



NOTE:

\*\* Refer to page 290, for EVB-o6o dimensions

\*\*\* Optional

ROTATION:

a=d

a=c (upon special request)

## STR-o8oV – 1-Stage and 2-Stage Specifications with VRB-o6o

Frame Size	080V									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	113	113	113	113	113	113	113	113
Acceleration Torque	[Nm]	--	202	202	202	202	202	202	202	202
No Load Torque	[Nm]	*1	1.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nominal Input Speed	[rpm]	*2	700	2100	2800	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	2500	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	3.066	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.148	0.103	0.085	0.076	0.070	0.067	0.065
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.228	0.178	0.168	0.158	0.148	0.148	0.148
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.438	0.388	0.368	0.368	0.358	0.358	0.348
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	11.6	13.0	13.0	13.0	13.0	13.0	13.0	13.0
Maximum Axial Load	[N]	--	3302	3302	3302	3302	3302	3302	3302	3302
Maximum Radial Load	[N]	--	2819	2819	2819	2819	2819	2819	2819	2819
Maximum Tilting Moment Load	[Nm]	--	210	210	210	210	210	210	210	210
Efficiency	[%]	--	80	76	76	76	76	76	76	76
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-o8oV – 2-Stage and 3-Stage Specifications with VRB-o6o

Frame Size	080V									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	113	113	113	113	113	113	113	113
Acceleration Torque	[Nm]	--	202	202	202	202	202	202	202	202
No Load Torque	[Nm]	*1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.064	0.063	0.065	0.062	0.061	0.063	0.057	0.061
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.148	0.148	0.148	0.138	0.138	0.148	0.138	0.138
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.348	0.358	0.368	0.358	0.358	0.368	0.348	0.358
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	13.0	13.2	13.2	13.2	13.2	13.2	13.2	13.2
Maximum Axial Load	[N]	--	3302	3302	3302	3302	3302	3302	3302	3302
Maximum Radial Load	[N]	--	2819	2819	2819	2819	2819	2819	2819	2819
Maximum Tilting Moment Load	[Nm]	--	210	210	210	210	210	210	210	210
Efficiency	[%]	--	76	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-o8oV – 3-Stage Specifications with VRB-o6o

Frame Size	080V									
Stage	3-Stage									
Ratio	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	113	113	113	113	113	113	113	113
Acceleration Torque	[Nm]	--	202	202	202	202	202	202	202	202
No Load Torque	[Nm]	*1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.057	0.061	0.057	0.057	0.057	0.057	0.057	0.057
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.138	0.138	0.138	0.138	0.138	0.138	0.138	0.138
Reflected Inertia (≤Ø 19)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.348	0.358	0.348	0.348	0.348	0.348	0.348	0.348
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7							
Angular Repeatability Accuracy	[arc-min]	--	± 0.08							
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
Maximum Axial Load	[N]	--	3302	3302	3302	3302	3302	3302	3302	3302
Maximum Radial Load	[N]	--	2819	2819	2819	2819	2819	2819	2819	2819
Maximum Tilting Moment Load	[Nm]	--	210	210	210	210	210	210	210	210
Efficiency	[%]	--	72	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

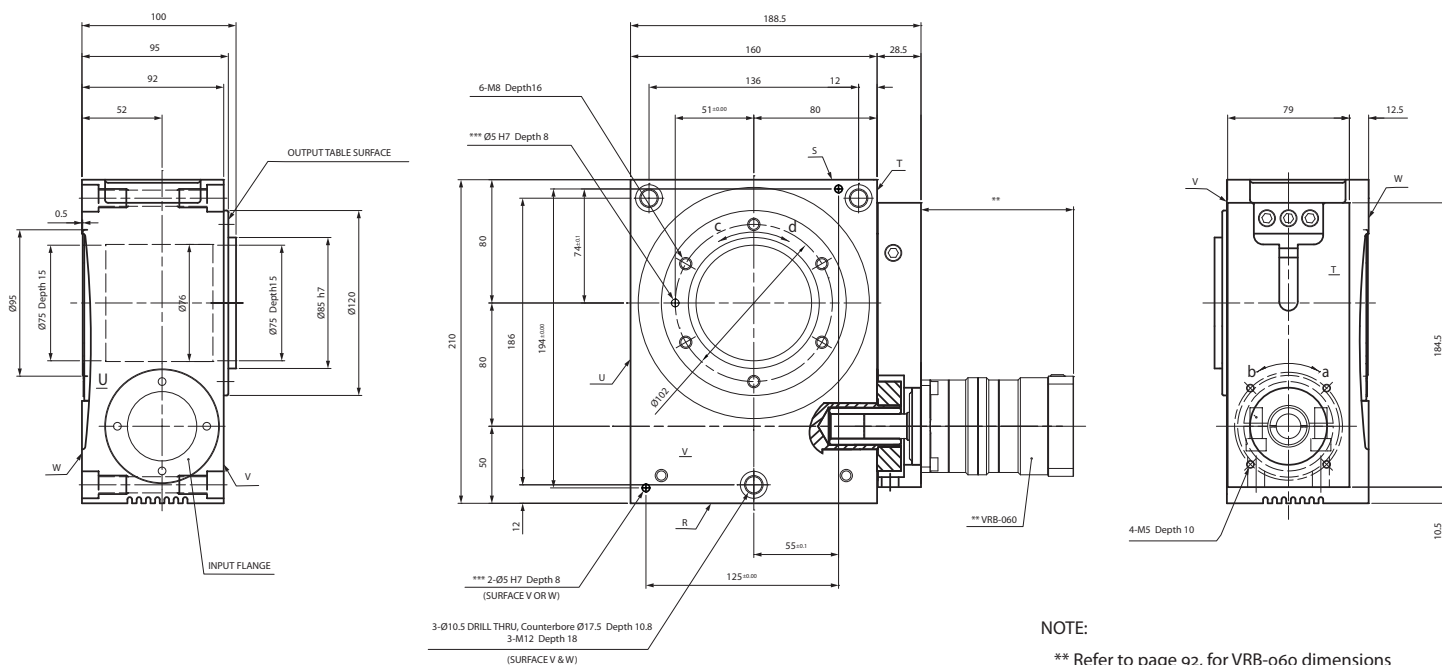
\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-o8oV Dimensions with VRB-o6o



NOTE:

\*\* Refer to page 92, for VRB-o6o dimensions

\*\*\* Optional

ROTATION:

a=d

a=c (upon special request)

## STR-o8oE – 1-Stage and 2-Stage Specifications with EVB-o6o

Frame Size	080E									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	113	113	113	113	113	113	113	113
Acceleration Torque	[Nm]	--	202	202	202	202	202	202	202	202
No Load Torque	[Nm]	*1	1.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Nominal Input Speed	[rpm]	*2	700	2100	2800	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	2500	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	3.066	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.319	0.274	0.256	0.247	0.242	0.238	0.236
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.394	0.349	0.331	0.322	0.317	0.313	0.311
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.583	0.538	0.521	0.512	0.506	0.503	0.501
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	11.6	13.4	13.4	13.4	13.4	13.4	13.4	13.4
Maximum Axial Load	[N]	--	3302	3302	3302	3302	3302	3302	3302	3302
Maximum Radial Load	[N]	--	2819	2819	2819	2819	2819	2819	2819	2819
Maximum Tilting Moment Load	[Nm]	--	210	210	210	210	210	210	210	210
Efficiency	[%]	--	80	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-o8oE – 2-Stage and 3-Stage Specifications with EVB-o6o

Frame Size	080E									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	113	113	113	113	113	113	113	113
Acceleration Torque	[Nm]	--	202	202	202	202	202	202	202	202
No Load Torque	[Nm]	*1	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.235	0.081	0.087	0.079	0.079	0.085	0.070	0.078
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.310	0.126	0.132	0.124	0.123	0.130	0.114	0.123
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.499	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	13.4	13.2	13.2	13.2	13.2	13.2	13.2	13.2
Maximum Axial Load	[N]	--	3302	3302	3302	3302	3302	3302	3302	3302
Maximum Radial Load	[N]	--	2819	2819	2819	2819	2819	2819	2819	2819
Maximum Tilting Moment Load	[Nm]	--	210	210	210	210	210	210	210	210
Efficiency	[%]	--	72	68	68	68	68	68	68	68
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-o8oE – 3-Stage Specifications with EVB-o6o

Frame Size	080E									
Stage	3-Stage									
Ratio	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	113	113	113	113	113	113	113	113
Acceleration Torque	[Nm]	--	202	202	202	202	202	202	202	202
No Load Torque	[Nm]	*1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤∅ 8)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.069	0.078	0.069	0.069	0.069	0.069	0.069	0.069
Reflected Inertia (≤∅ 14)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.114	0.123	0.114	0.114	0.113	0.113	0.113	0.113
Reflected Inertia (≤∅ 19)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7							
Angular Repeatability Accuracy	[arc-min]	--	± 0.08							
Surface Runout	[μm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
Maximum Axial Load	[N]	--	3302	3302	3302	3302	3302	3302	3302	3302
Maximum Radial Load	[N]	--	2819	2819	2819	2819	2819	2819	2819	2819
Maximum Tilting Moment Load	[Nm]	--	210	210	210	210	210	210	210	210
Efficiency	[%]	--	68	68	68	68	68	68	68	68
Protection Class	--	*4	IP54 (IP65)							

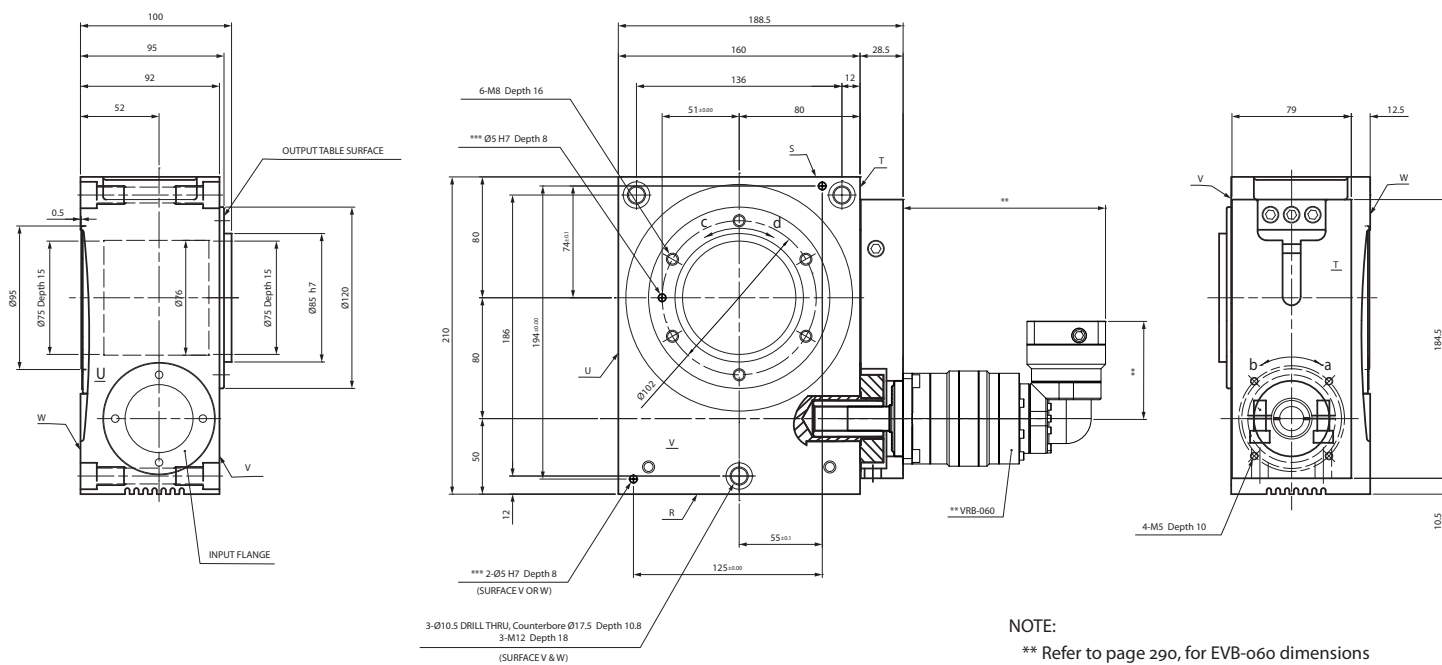
\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-o8oE Dimensions with EVB-o6o



STR

## STR-100V – 1-Stage and 2-Stage Specifications with VRB-090

Frame Size	100V									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	330	330	330	330	330	330	330	330
Acceleration Torque	[Nm]	--	565	565	565	565	565	565	565	565
No Load Torque	[Nm]	*1	2.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Nominal Input Speed	[rpm]	*2	600	1800	2400	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	2000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	8.687	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.742	0.512	0.422	0.382	0.342	0.332	0.312
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	1.222	0.972	0.882	0.842	0.812	0.792	0.782
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	3.222	3.022	2.922	2.822	2.822	2.822	2.822
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	21.5	25.2	25.2	25.2	25.2	25.2	25.2	25.2
Maximum Axial Load	[N]	--	3724	3724	3724	3724	3724	3724	3724	3724
Maximum Radial Load	[N]	--	3109	3109	3109	3109	3109	3109	3109	3109
Maximum Tilting Moment Load	[Nm]	--	284	284	284	284	284	284	284	284
Efficiency	[%]	--	82	78	78	78	78	78	78	78
Protection Class	IP54 (IP65)									

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-100V – 2-Stage and 3-Stage Specifications with VRB-090

Frame Size	100V									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	330	330	330	330	330	330	330	330
Acceleration Torque	[Nm]	--	565	565	565	565	565	565	565	565
No Load Torque	[Nm]	*1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.152	0.172	0.152	0.142	0.162	0.122	0.142
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.312	0.302	0.322	0.302	0.302	0.312	0.272	0.292
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.772	0.742	0.762	0.742	0.732	0.752	0.722	0.732
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	2.822	2.722	2.822	2.722	2.722	2.722	2.622	2.722
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	25.2	25.7	25.7	25.7	25.7	25.7	25.7	25.7
Maximum Axial Load	[N]	--	3724	3724	3724	3724	3724	3724	3724	3724
Maximum Radial Load	[N]	--	3109	3109	3109	3109	3109	3109	3109	3109
Maximum Tilting Moment Load	[Nm]	--	284	284	284	284	284	284	284	284
Efficiency	[%]	--	78	74	74	74	74	74	74	74
Protection Class	IP54 (IP65)									

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

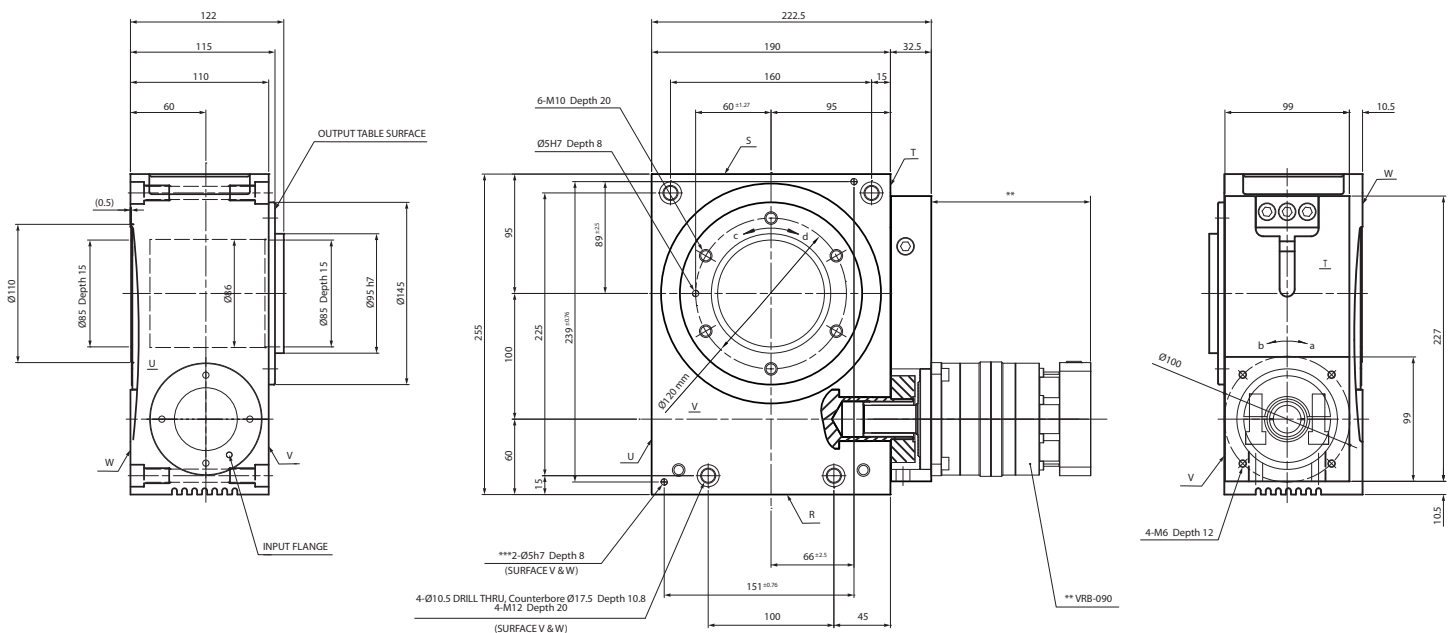
\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-100V – 1-Stage and 3-Stage Specifications with VRB-090

Frame Size	100V									
			3-Stage							
Stage	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	330	330	330	330	330	330	330	330
Acceleration Torque	[Nm]	--	565	565	565	565	565	565	565	565
No Load Torque	[Nm]	*1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.121	0.142	0.120	0.120	0.119	0.119	0.119	0.119
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.272	0.292	0.272	0.272	0.272	0.272	0.272	0.272
Reflected Inertia (≤Ø 19)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.722	0.732	0.712	0.712	0.712	0.712	0.712	0.712
Reflected Inertia (≤Ø 28)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	2.622	2.722	2.622	2.622	2.622	2.622	2.622	2.622
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7							
Angular Repeatability Accuracy	[arc-min]	--	± 0.08							
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7
Maximum Axial Load	[N]	--	3724	3724	3724	3724	3724	3724	3724	3724
Maximum Radial Load	[N]	--	3109	3109	3109	3109	3109	3109	3109	3109
Maximum Tilting Moment Load	[Nm]	--	284	284	284	284	284	284	284	284
Efficiency	[%]	--	74	74	74	74	74	74	74	74
Protection Class	IP54 (IP65)									

- \*1) At nominal input speed
- \*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- \*3) At input shaft
- \*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-100 Dimensions with VRB-090



**NOTE:**

- \*\* Refer to page 98, for VRB-090 dimensions
- \*\*\* Optional

**ROTATION:**

- a=d
- a=c (upon special request)



## STR-100E – 1-Stage and 2-Stage Specifications with EVB-090

Frame Size	100E									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	330	330	330	330	330	330	330	330
Acceleration Torque	[Nm]	--	565	565	565	565	565	565	565	565
No Load Torque	[Nm]	*1	2.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Nominal Input Speed	[rpm]	*2	600	1800	2400	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	2000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	8.687	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	2.132	1.912	1.822	1.782	1.752	1.732	1.722
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	2.462	2.242	2.152	2.112	2.082	2.062	2.052
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	4.592	4.372	4.282	4.232	4.202	4.192	4.182
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	21.5	26.6	26.6	26.6	26.6	26.6	26.6	26.6
Maximum Axial Load	[N]	--	3724	3724	3724	3724	3724	3724	3724	3724
Maximum Radial Load	[N]	--	3109	3109	3109	3109	3109	3109	3109	3109
Maximum Tilting Moment Load	[Nm]	--	284	284	284	284	284	284	284	284
Efficiency	[%]	--	82	74	74	74	74	74	74	74
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-100E – 2-Stage and 3-Stage Specifications with EVB-090

Frame Size	100E									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	330	330	330	330	330	330	330	330
Acceleration Torque	[Nm]	--	565	565	565	565	565	565	565	565
No Load Torque	[Nm]	*1	1.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.362	0.402	0.352	0.342	0.392	0.272	0.342
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	1.712	0.432	0.482	0.422	0.422	0.472	0.352	0.422
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	2.042	0.622	0.672	0.612	0.612	0.662	0.532	0.612
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	4.172	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	26.6	25.9	25.9	25.9	25.9	25.9	25.9	25.9
Maximum Axial Load	[N]	--	3724	3724	3724	3724	3724	3724	3724	3724
Maximum Radial Load	[N]	--	3109	3109	3109	3109	3109	3109	3109	3109
Maximum Tilting Moment Load	[Nm]	--	284	284	284	284	284	284	284	284
Efficiency	[%]	--	74	70	70	70	70	70	70	70
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

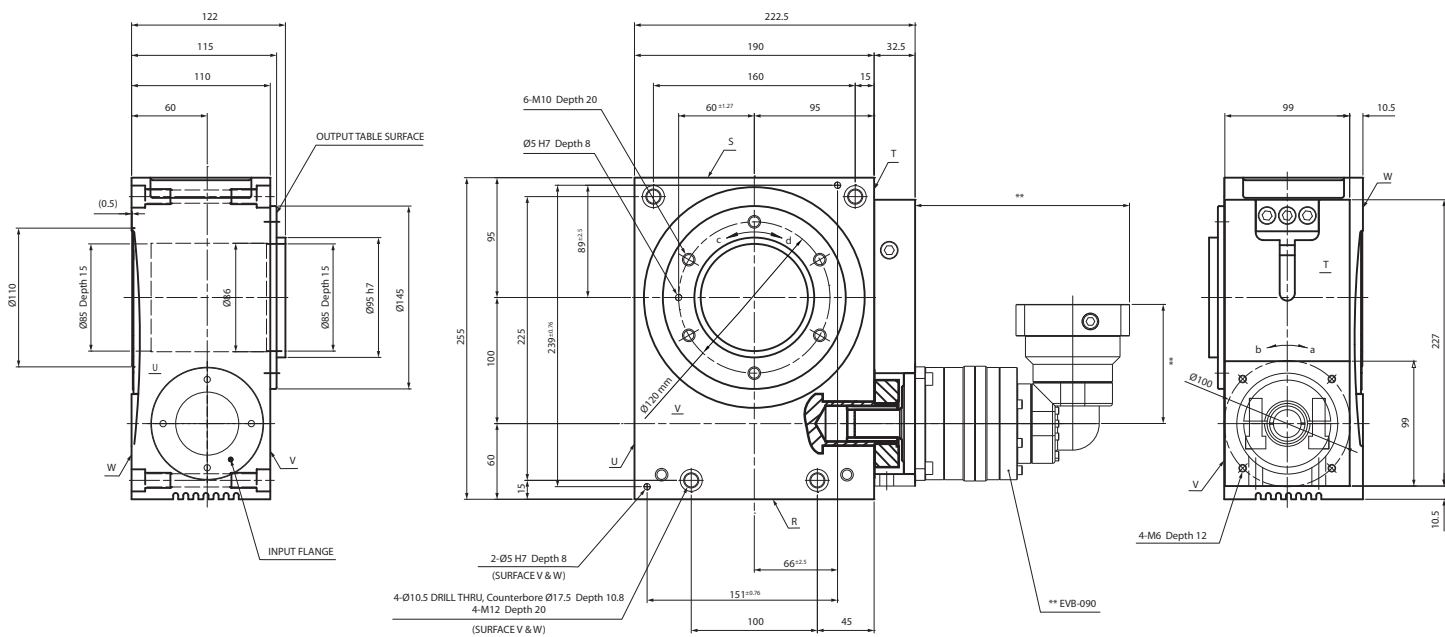
\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-100E – 3-Stage Specifications with EVB-090

Frame Size	100E									
Stage	3-Stage									
Ratio	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	330	330	330	330	330	330	330	330
Acceleration Torque	[Nm]	--	565	565	565	565	565	565	565	565
No Load Torque	[Nm]	*1	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.272	0.342	0.272	0.272	0.272	0.272	0.272	0.272
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.342	0.412	0.342	0.342	0.342	0.342	0.342	0.342
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.532	0.602	0.532	0.532	0.532	0.532	0.532	0.532
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7							
Angular Repeatability Accuracy	[arc-min]	--	± 0.08							
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
Maximum Axial Load	[N]	--	3724	3724	3724	3724	3724	3724	3724	3724
Maximum Radial Load	[N]	--	3109	3109	3109	3109	3109	3109	3109	3109
Maximum Tilting Moment Load	[Nm]	--	284	284	284	284	284	284	284	284
Efficiency	[%]	--	70	70	70	70	70	70	70	70
Protection Class	--	*4	IP54 (IP65)							

- \*1) At nominal input speed
- \*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- \*3) At input shaft
- \*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-100 Dimensions with EVB-090



NOTE:  
 \*\* Refer to page 296, for EVB-090 dimensions  
 \*\*\* Optional

ROTATION:  
 a=d  
 a=c (upon special request)

STR

## STR-125V – 1-Stage and 2-Stage Specifications with VRB-090

Frame Size	125V									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	548	548	548	548	548	548	548	548
Acceleration Torque	[Nm]	--	939	939	939	939	939	939	939	939
No Load Torque	[Nm]	*1	3.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Nominal Input Speed	[rpm]	*2	600	1800	2400	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	1600	4800	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	14.85	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.757	0.527	0.437	0.397	0.357	0.347	0.327
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	1.237	0.987	0.897	0.857	0.827	0.807	0.797
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	3.237	3.037	2.937	2.837	2.837	2.837	2.837
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	36.3	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Maximum Axial Load	[N]	--	8178	8178	8178	8178	8178	8178	8178	8178
Maximum Radial Load	[N]	--	7452	7452	7452	7452	7452	7452	7452	7452
Maximum Tilting Moment Load	[Nm]	--	764	764	764	764	764	764	764	764
Efficiency	[%]	--	80	76	76	76	76	76	76	76
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-125V – 2-Stage and 3-Stage Specifications with VRB-090

Frame Size	125V									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	548	548	548	548	548	548	548	548
Acceleration Torque	[Nm]	--	939	939	939	939	939	939	939	939
No Load Torque	[Nm]	*1	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.167	0.187	0.167	0.157	0.177	0.137	0.157
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.327	0.317	0.337	0.317	0.317	0.327	0.287	0.307
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.787	0.757	0.777	0.757	0.747	0.767	0.737	0.747
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	2.837	2.737	2.837	2.737	2.737	2.737	2.637	2.737
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	40.0	40.5	40.5	40.5	40.5	40.5	40.5	40.5
Maximum Axial Load	[N]	--	8178	8178	8178	8178	8178	8178	8178	8178
Maximum Radial Load	[N]	--	7452	7452	7452	7452	7452	7452	7452	7452
Maximum Tilting Moment Load	[Nm]	--	764	764	764	764	764	764	764	764
Efficiency	[%]	--	76	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

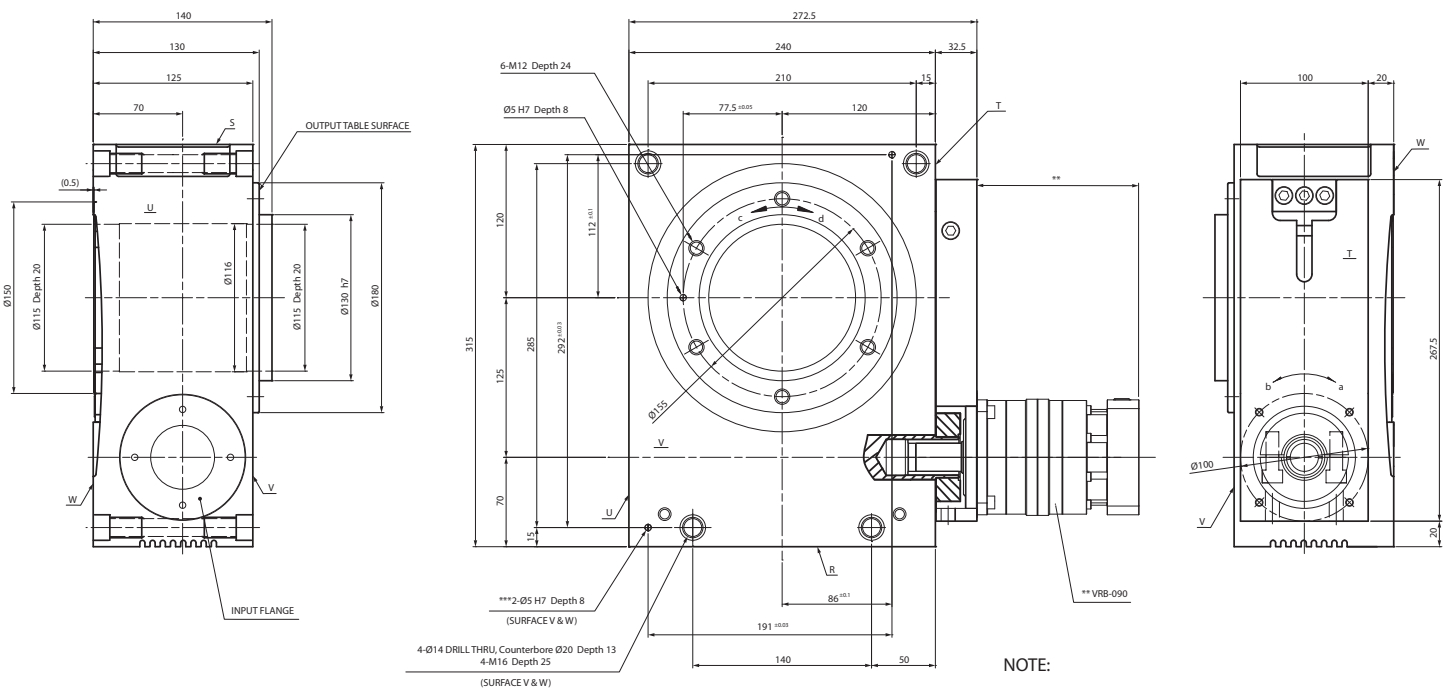
\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-125V – 3-Stage Specifications with VRB-090

Frame Size	125V									
Stage	3-Stage									
Ratio	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	548	548	548	548	548	548	548	548
Acceleration Torque	[Nm]	--	939	939	939	939	939	939	939	939
No Load Torque	[Nm]	*1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.136	0.157	0.135	0.135	0.134	0.134	0.134	0.134
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.287	0.307	0.287	0.287	0.287	0.287	0.287	0.287
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.737	0.747	0.727	0.727	0.727	0.727	0.727	0.727
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	2.637	2.737	2.637	2.637	2.637	2.637	2.637	2.637
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7							
Angular Repeatability Accuracy	[arc-min]	--	± 0.08							
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5
Maximum Axial Load	[N]	--	8178	8178	8178	8178	8178	8178	8178	8178
Maximum Radial Load	[N]	--	7452	7452	7452	7452	7452	7452	7452	7452
Maximum Tilting Moment Load	[Nm]	--	764	764	764	764	764	764	764	764
Efficiency	[%]	--	72	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

- \*1) At nominal input speed
- \*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- \*3) At input shaft
- \*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-125 Dimensions with VRB-090



NOTE:

- \*\* Refer to page 98, for VRB-090 dimensions
- \*\*\* Optional

ROTATION:

- a=d
- a=c (upon special request)

STR

## STR-125E – 1-Stage and 2-Stage Specifications with EVB-090

Frame Size	125E									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	548	548	548	548	548	548	548	548
Acceleration Torque	[Nm]	--	939	939	939	939	939	939	939	939
No Load Torque	[Nm]	*1	3.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Nominal Input Speed	[rpm]	*2	600	1800	2400	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	1600	4800	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	14.85	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	2.147	1.927	1.837	1.797	1.767	1.747	1.737
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	2.477	2.257	2.167	2.127	2.097	2.077	2.067
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	4.607	4.387	4.297	4.247	4.217	4.207	4.197
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	36.3	41.4	41.4	41.4	41.4	41.4	41.4	41.4
Maximum Axial Load	[N]	--	8178	8178	8178	8178	8178	8178	8178	8178
Maximum Radial Load	[N]	--	7452	7452	7452	7452	7452	7452	7452	7452
Maximum Tilting Moment Load	[Nm]	--	764	764	764	764	764	764	764	764
Efficiency	[%]	--	80	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-125E – 2-Stage and 3-Stage Specifications with EVB-090

Frame Size	125E									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	548	548	548	548	548	548	548	548
Acceleration Torque	[Nm]	--	939	939	939	939	939	939	939	939
No Load Torque	[Nm]	*1	1.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.377	0.417	0.367	0.357	0.407	0.287	0.357
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	1.727	0.447	0.497	0.437	0.437	0.487	0.367	0.437
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	2.057	0.637	0.687	0.627	0.627	0.677	0.547	0.627
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	4.187	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7	≤ 0.7						
Angular Repeatability Accuracy	[arc-min]	--	± 0.08	± 0.08						
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	41.4	40.7	40.7	40.7	40.7	40.7	40.7	40.7
Maximum Axial Load	[N]	--	8178	8178	8178	8178	8178	8178	8178	8178
Maximum Radial Load	[N]	--	7452	7452	7452	7452	7452	7452	7452	7452
Maximum Tilting Moment Load	[Nm]	--	764	764	764	764	764	764	764	764
Efficiency	[%]	--	72	68	68	68	68	68	68	68
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

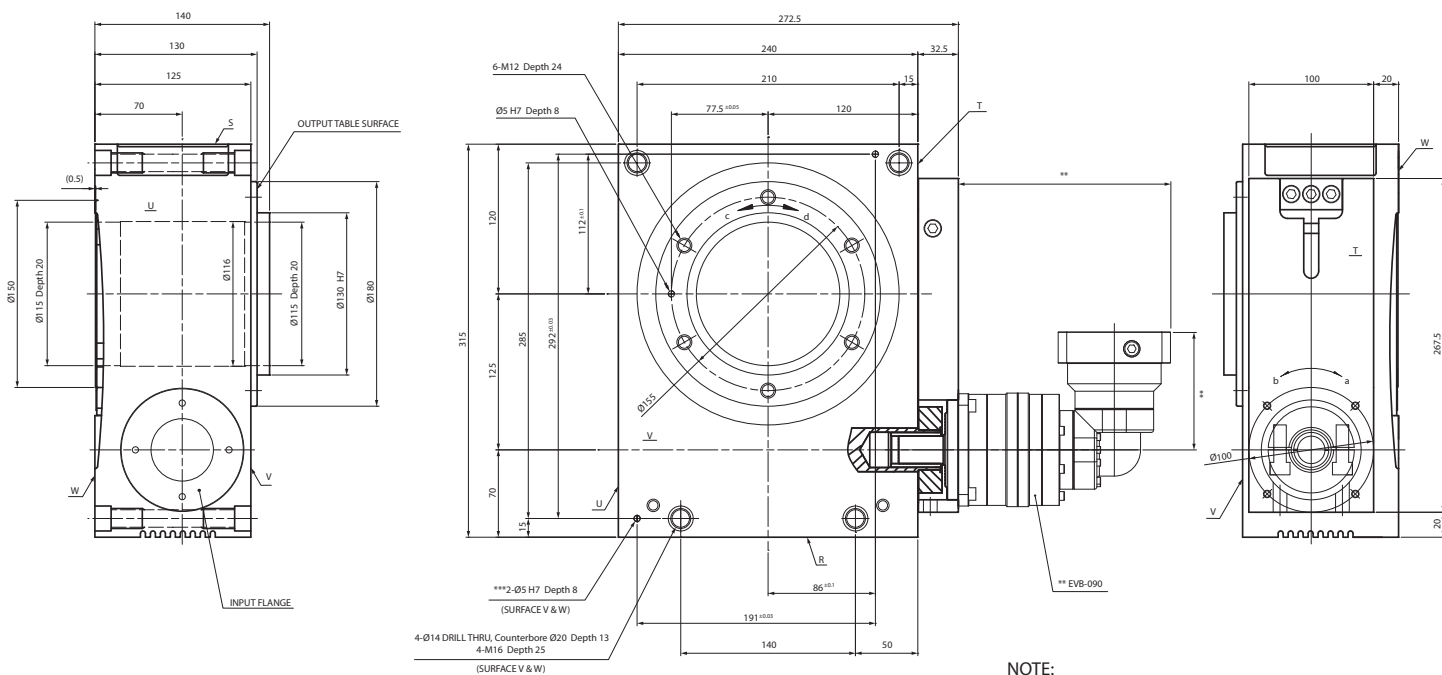
\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-125E – 3-Stage Specifications with EVB-090

Frame Size	125E									
Stage	3-Stage									
Ratio	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	548	548	548	548	548	548	548	548
Acceleration Torque	[Nm]	--	939	939	939	939	939	939	939	939
No Load Torque	[Nm]	*1	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.287	0.357	0.287	0.287	0.287	0.287	0.287	0.287
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.357	0.427	0.357	0.357	0.357	0.357	0.357	0.357
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	0.547	0.617	0.547	0.547	0.547	0.547	0.547	0.547
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 0.7							
Angular Repeatability Accuracy	[arc-min]	--	± 0.08							
Surface Runout	[µm (max)]	--	10	10	10	10	10	10	10	10
Weight	[kg]	--	40.7	40.7	40.7	40.7	40.7	40.7	40.7	40.7
Maximum Axial Load	[N]	--	8178	8178	8178	8178	8178	8178	8178	8178
Maximum Radial Load	[N]	--	7452	7452	7452	7452	7452	7452	7452	7452
Maximum Tilting Moment Load	[Nm]	--	764	764	764	764	764	764	764	764
Efficiency	[%]	--	68	68	68	68	68	68	68	68
Protection Class	--	*4	IP54 (IP65)							

- \*1) At nominal input speed
- \*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- \*3) At input shaft
- \*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-125 Dimensions with EVB-090



NOTE:  
 \*\* Refer to page 296, for EVB-090 dimensions  
 \*\*\* Optional

ROTATION:  
 a=d  
 a=c (upon special request)

## STR-160V – 1-Stage and 2-Stage Specifications with VRB-115

Frame Size	160V									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	1165	1165	1165	1165	1165	1165	1165	1165
Acceleration Torque	[Nm]	--	1888	1888	1888	1888	1888	1888	1888	1888
No Load Torque	[Nm]	*1	6.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Nominal Input Speed	[rpm]	*2	500	1500	2000	2500	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	1000	3000	4000	5000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	46.99	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	3.417	2.117	1.717	1.417	1.217	1.117	1.097
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	5.417	4.217	3.717	3.417	3.317	3.217	3.117
Reflected Inertia (≤Ø 38)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	13.12	12.12	11.12	11.12	11.12	11.12	11.12
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5	≤ 1.5						
Angular Repeatability Accuracy	[arc-min]	--	± 0.15	± 0.15						
Surface Runout	[µm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	126	134	134	134	134	134	134	134
Maximum Axial Load	[N]	--	17170	17170	17170	17170	17170	17170	17170	17170
Maximum Radial Load	[N]	--	7283	7283	7283	7283	7283	7283	7283	7283
Maximum Tilting Moment Load	[Nm]	--	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3
Efficiency	[%]	--	80	76	76	76	76	76	76	76
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-160V – 2-Stage and 3-Stage Specifications with VRB-115

Frame Size	160V									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	1165	1165	1165	1165	1165	1165	1165	1165
Acceleration Torque	[Nm]	--	1888	1888	1888	1888	1888	1888	1888	1888
No Load Torque	[Nm]	*1	1.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.547	0.597	0.517	0.497	0.557	0.407	0.487
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	1.097	0.977	1.037	0.947	0.937	0.997	0.857	0.927
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	3.117	2.917	3.017	2.917	2.917	2.917	2.817	2.817
Reflected Inertia (≤Ø 38)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	11.12	11.12	11.12	11.12	11.12	11.12	10.12	11.12
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5	≤ 1.5						
Angular Repeatability Accuracy	[arc-min]	--	± 0.15	± 0.15						
Surface Runout	[µm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	134	135	135	135	135	135	135	135
Maximum Axial Load	[N]	--	17170	17170	17170	17170	17170	17170	17170	17170
Maximum Radial Load	[N]	--	7283	7283	7283	7283	7283	7283	7283	7283
Maximum Tilting Moment Load	[Nm]	--	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3
Efficiency	[%]	--	76	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

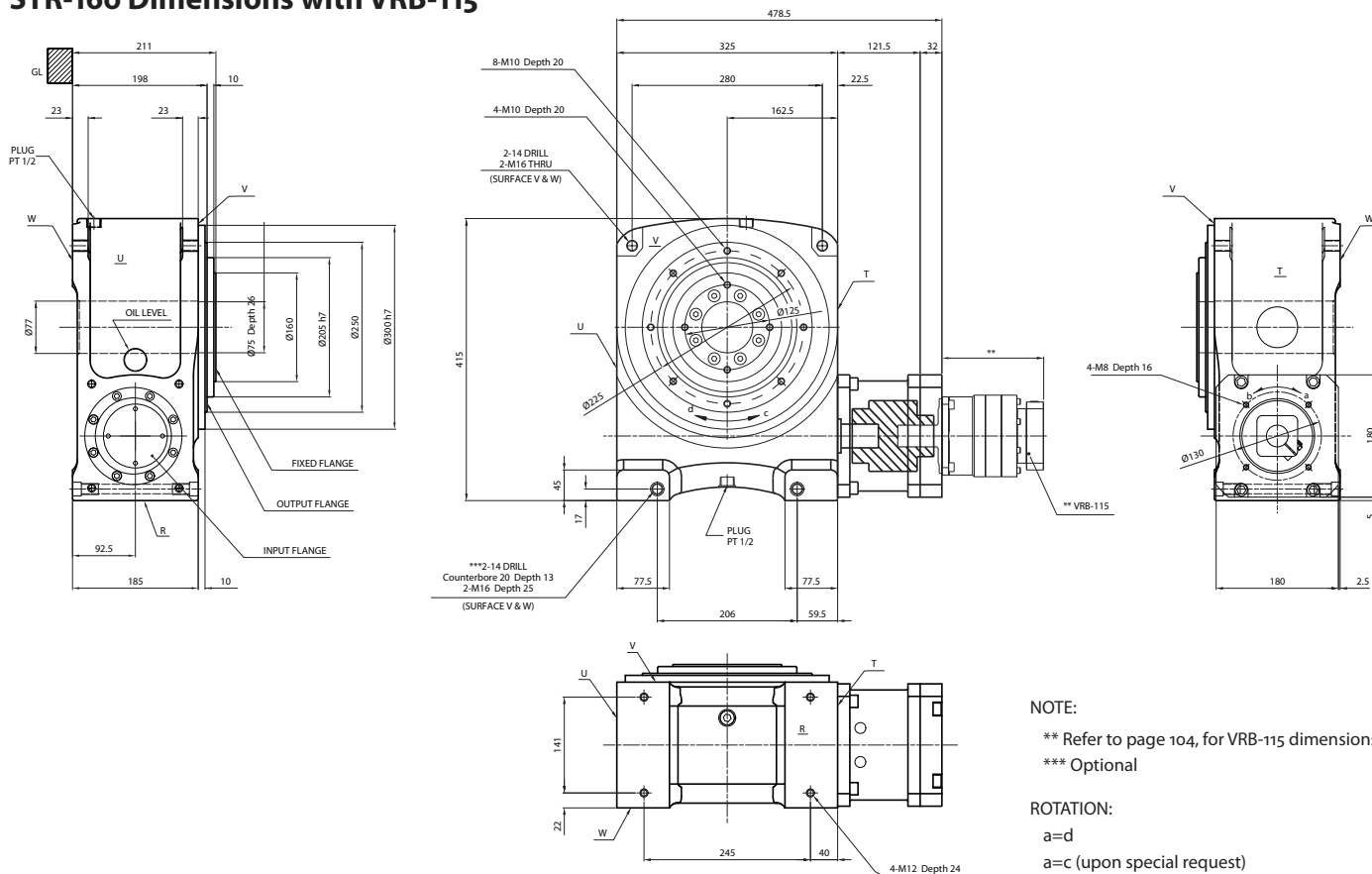
\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-160V – 3-Stage Specifications with VRB-115

Frame Size	160V									
Stage	3-Stage									
Ratio	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	1165	1165	1165	1165	1165	1165	1165	1165
Acceleration Torque	[Nm]	--	1888	1888	1888	1888	1888	1888	1888	1888
No Load Torque	[Nm]	*1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.397	0.487	0.397	0.397	0.397	0.397	0.387	0.387
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.847	0.917	0.847	0.847	0.847	0.847	0.847	0.847
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	2.817	2.817	2.817	2.817	2.817	2.817	2.817	2.817
Reflected Inertia (≤Ø 38)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	10.12	11.12	10.12	10.12	10.12	10.12	10.12	10.12
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5							
Angular Repeatability Accuracy	[arc-min]	--	± 0.15							
Surface Runout	[µm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	135	135	135	135	135	135	135	135
Maximum Axial Load	[N]	--	17170	17170	17170	17170	17170	17170	17170	17170
Maximum Radial Load	[N]	--	7283	7283	7283	7283	7283	7283	7283	7283
Maximum Tilting Moment Load	[Nm]	--	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3
Efficiency	[%]	--	72	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

- \*1) At nominal input speed
- \*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- \*3) At input shaft
- \*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-160 Dimensions with VRB-115



NOTE:  
 \*\* Refer to page 104, for VRB-115 dimensions  
 \*\*\* Optional

ROTATION:  
 a=d  
 a=c (upon special request)



## STR-160E – 1-Stage and 2-Stage Specifications with EVB-115

Frame Size	160E									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	1165	1165	1165	1165	1165	1165	1165	1165
Acceleration Torque	[Nm]	--	1888	1888	1888	1888	1888	1888	1888	1888
No Load Torque	[Nm]	*1	6.6	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Nominal Input Speed	[rpm]	*2	500	1500	2000	2500	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	1000	3000	4000	5000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	46.99	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	6.857	5.607	5.137	4.887	4.767	4.667	4.607
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	8.457	7.197	6.727	6.477	6.357	6.257	6.197
Reflected Inertia (≤Ø 38)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	15.53	14.27	13.81	13.55	13.43	13.34	13.28
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5	≤ 1.5						
Angular Repeatability Accuracy	[arc-min]	--	± 0.15	± 0.15						
Surface Runout	[µm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	126	137	137	137	137	137	137	137
Maximum Axial Load	[N]	--	17170	17170	17170	17170	17170	17170	17170	17170
Maximum Radial Load	[N]	--	7283	7283	7283	7283	7283	7283	7283	7283
Maximum Tilting Moment Load	[Nm]	--	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3
Efficiency	[%]	--	80	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-160E – 2-Stage and 3-Stage Specifications with EVB-115

Frame Size	160E									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	1165	1165	1165	1165	1165	1165	1165	1165
Acceleration Torque	[Nm]	--	1888	1888	1888	1888	1888	1888	1888	1888
No Load Torque	[Nm]	*1	2.2	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	2.367	2.577	2.317	2.297	2.517	1.987	2.277
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	4.577	2.697	2.907	2.647	2.627	2.847	2.317	2.607
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	6.167	4.817	5.027	4.767	4.757	4.977	4.447	4.737
Reflected Inertia (≤Ø 38)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	13.24	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5	≤ 1.5						
Angular Repeatability Accuracy	[arc-min]	--	± 0.15	± 0.15						
Surface Runout	[µm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	137	136	136	136	136	136	136	136
Maximum Axial Load	[N]	--	17170	17170	17170	17170	17170	17170	17170	17170
Maximum Radial Load	[N]	--	7283	7283	7283	7283	7283	7283	7283	7283
Maximum Tilting Moment Load	[Nm]	--	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3
Efficiency	[%]	--	72	68	68	68	68	68	68	68
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-160E – 3-Stage Specifications with EVB-115

Frame Size	160E									
Stage	3-Stage									
Ratio	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	1165	1165	1165	1165	1165	1165	1165	1165
Acceleration Torque	[Nm]	--	1888	1888	1888	1888	1888	1888	1888	1888
No Load Torque	[Nm]	*1	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	6000	6000	6000	6000	6000	6000	6000
Reflected Inertia (Single)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	1.977	2.267	1.977	1.967	1.967	1.967	1.967	1.967
Reflected Inertia (≤Ø 19)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	2.307	2.597	2.307	2.297	2.297	2.297	2.297	2.297
Reflected Inertia (≤Ø 28)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	4.437	4.727	4.427	4.427	4.427	4.427	4.427	4.427
Reflected Inertia (≤Ø 38)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5							
Angular Repeatability Accuracy	[arc-min]	--	± 0.15							
Surface Runout	[μm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	136	136	136	136	136	136	136	136
Maximum Axial Load	[N]	--	17170	17170	17170	17170	17170	17170	17170	17170
Maximum Radial Load	[N]	--	7283	7283	7283	7283	7283	7283	7283	7283
Maximum Tilting Moment Load	[Nm]	--	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3	1216.3
Efficiency	[%]	--	68	68	68	68	68	68	68	68
Protection Class	--	*4	IP54 (IP65)							

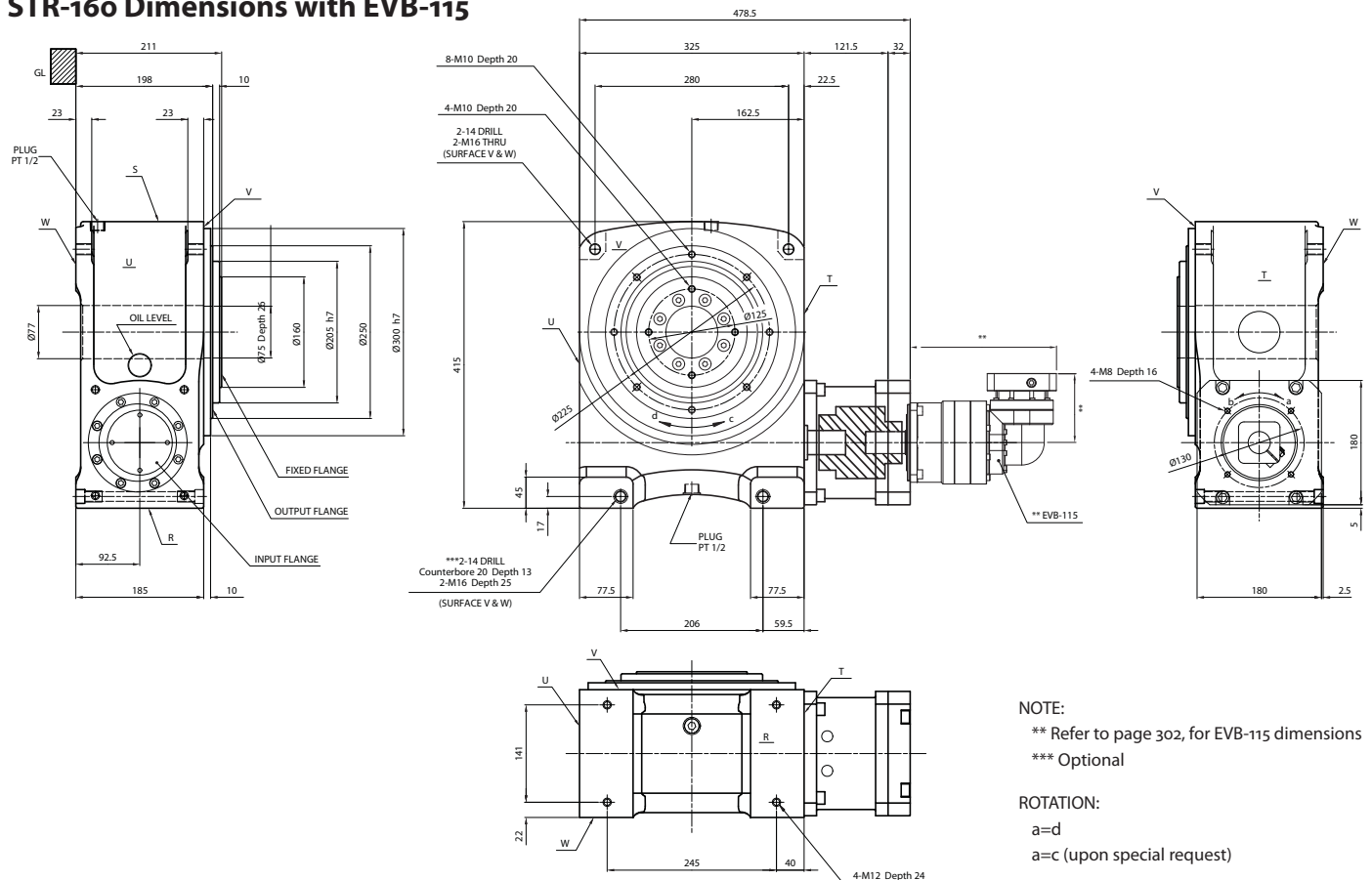
\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-160 Dimensions with EVB-115



## STR-250V – 1-Stage and 2-Stage Specifications with VRB-180

Frame Size	250V									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	4006	4006	4006	4006	4006	4006	4006	4006
Acceleration Torque	[Nm]	--	6072	6072	6072	6072	6072	6072	6072	6072
No Load Torque	[Nm]	*1	14.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Nominal Input Speed	[rpm]	*2	400	1500	1500	1500	1500	1500	1500	1500
Maximum Input Speed	[rpm]	*2	800	3000	3000	3000	3000	3000	3000	3000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	430.0	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 38)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	45.08	29.08	23.08	19.08	17.08	16.08	15.08
Reflected Inertia (≤Ø 48)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	67.08	51.08	45.08	42.08	39.08	38.08	37.08
Reflected Inertia (≤Ø 65)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	131.1	111.1	101.1	101.1	100.1	98.08	98.08
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5	≤ 1.5						
Angular Repeatability Accuracy	[arc-min]	--	± 0.15	± 0.15						
Surface Runout	[µm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	383	419	419	419	419	419	419	419
Maximum Axial Load	[N]	--	38051	38051	38051	38051	38051	38051	38051	38051
Maximum Radial Load	[N]	--	11165	11165	11165	11165	11165	11165	11165	11165
Maximum Tilting Moment Load	[Nm]	--	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6
Efficiency	[%]	--	80	76	76	76	76	76	76	76
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-250V – 2-Stage and 3-Stage Specifications with VRB-180

Frame Size	250V									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	4006	4006	4006	4006	4006	4006	4006	4006
Acceleration Torque	[Nm]	--	6072	6072	6072	6072	6072	6072	6072	6072
No Load Torque	[Nm]	*1	2.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Nominal Input Speed	[rpm]	*2	1500	1500	1500	1500	1500	1500	1500	1500
Maximum Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	5.775	6.475	5.475	5.275	5.975	4.275	5.175
Reflected Inertia (≤Ø 38)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	15.08	13.08	14.08	13.08	13.08	14.08	12.08	13.08
Reflected Inertia (≤Ø 48)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	37.08	35.08	36.08	35.08	35.08	36.08	34.08	35.08
Reflected Inertia (≤Ø 65)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	97.08	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5	≤ 1.5						
Angular Repeatability Accuracy	[arc-min]	--	± 0.15	± 0.15						
Surface Runout	[µm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	419	420	420	420	420	420	420	420
Maximum Axial Load	[N]	--	38051	38051	38051	38051	38051	38051	38051	38051
Maximum Radial Load	[N]	--	11165	11165	11165	11165	11165	11165	11165	11165
Maximum Tilting Moment Load	[Nm]	--	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6
Efficiency	[%]	--	76	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

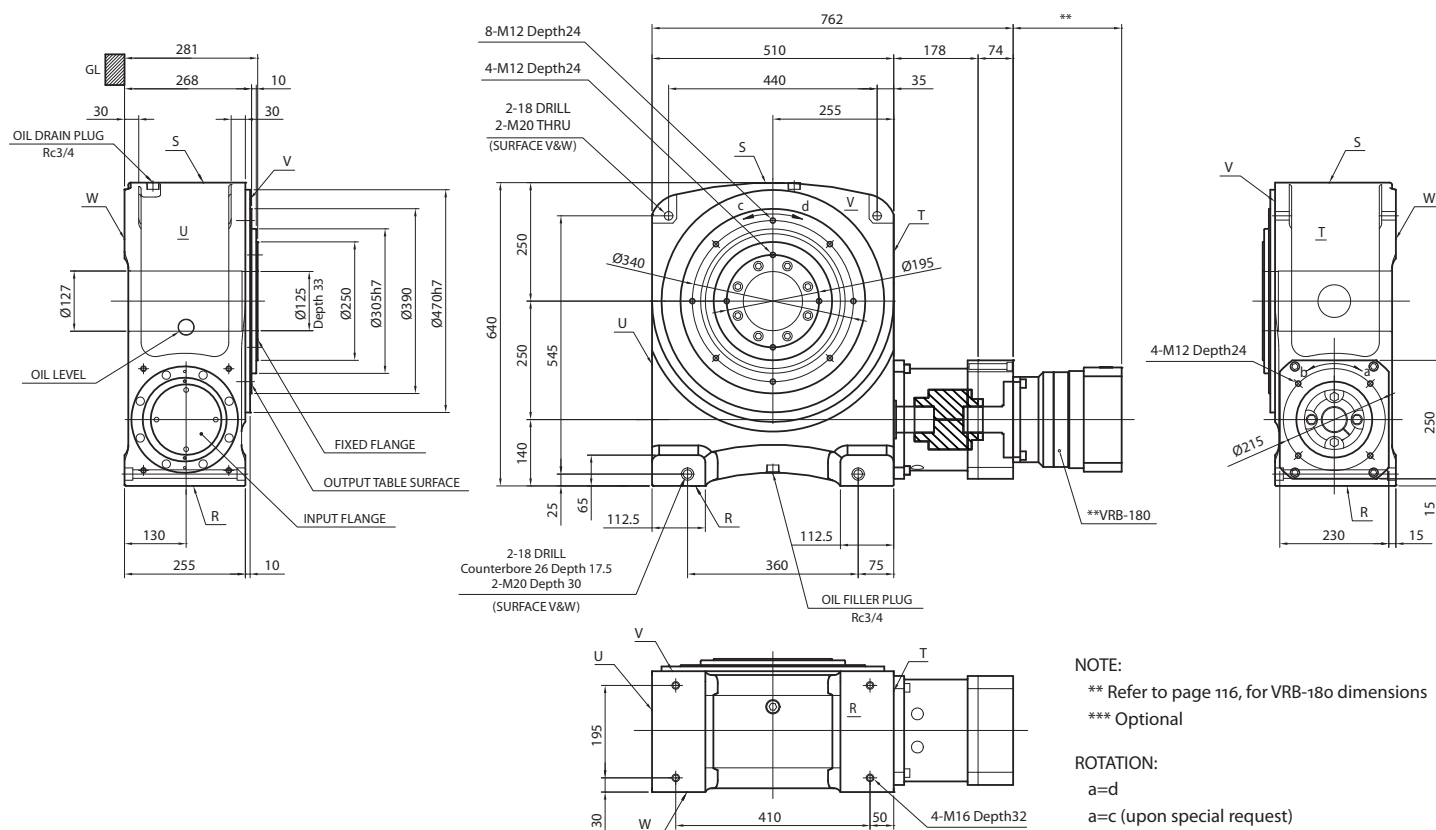
\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-250V – 3-Stage Specifications with VRB-180

Frame Size	250V									
Stage	3-Stage									
Ratio	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	4006	4006	4006	4006	4006	4006	4006	4006
Acceleration Torque	[Nm]	--	6072	6072	6072	6072	6072	6072	6072	6072
No Load Torque	[Nm]	*1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Nominal Input Speed	[rpm]	*2	1500	1500	1500	1500	1500	1500	1500	1500
Maximum Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	4.275	5.075	4.175	4.175	4.175	4.175	4.175	4.175
Reflected Inertia (≤Ø 38)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	12.08	13.08	12.08	12.08	12.08	12.08	12.08	12.08
Reflected Inertia (≤Ø 48)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	34.08	35.08	34.08	34.08	34.08	34.08	34.08	34.08
Reflected Inertia (≤Ø 65)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5							
Angular Repeatability Accuracy	[arc-min]	--	± 0.15							
Surface Runout	[µm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	420	420	420	420	420	420	420	420
Maximum Axial Load	[N]	--	38051	38051	38051	38051	38051	38051	38051	38051
Maximum Radial Load	[N]	--	11165	11165	11165	11165	11165	11165	11165	11165
Maximum Tilting Moment Load	[Nm]	--	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6
Efficiency	[%]	--	72	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

- \*1) At nominal input speed
- \*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- \*3) At input shaft
- \*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-250 Dimensions with VRB-180



## STR-250E – 1-Stage and 2-Stage Specifications with EVB-180

Frame Size	250E									
Stage			1-Stage	2-Stage						
Ratio	Units	Notes	20	60	80	100	120	140	160	180
Nominal Torque	[Nm]	*1	4006	4006	4006	4006	4006	4006	4006	4006
Acceleration Torque	[Nm]	--	6072	6072	6072	6072	6072	6072	6072	6072
No Load Torque	[Nm]	*1	14.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
Nominal Input Speed	[rpm]	*2	400	1500	1500	1500	1500	1500	1500	1500
Maximum Input Speed	[rpm]	*2	800	3000	3000	3000	3000	3000	3000	3000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	430.041	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	94.785	78.795	72.965	69.815	67.505	66.345	65.675
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	129.675	113.675	107.875	104.675	102.375	101.175	100.535
Reflected Inertia (≤Ø 38)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	215.275	199.275	193.475	190.275	187.975	186.775	186.175
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5	≤ 1.5						
Angular Repeatability Accuracy	[arc-min]	--	± 0.15	± 0.15						
Surface Runout	[µm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	383	432	432	432	432	432	432	432
Maximum Axial Load	[N]	--	38051	38051	38051	38051	38051	38051	38051	38051
Maximum Radial Load	[N]	--	11165	11165	11165	11165	11165	11165	11165	11165
Maximum Tilting Moment Load	[Nm]	--	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6
Efficiency	[%]	--	80	72	72	72	72	72	72	72
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-250E – 2-Stage and 3-Stage Specifications with EVB-180

Frame Size	250E									
Stage			2-Stage	3-Stage						
Ratio	Units	Notes	200	300	320	400	500	560	600	700
Nominal Torque	[Nm]	*1	4006	4006	4006	4006	4006	4006	4006	4006
Acceleration Torque	[Nm]	--	6072	6072	6072	6072	6072	6072	6072	6072
No Load Torque	[Nm]	*1	11.5	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Nominal Input Speed	[rpm]	*2	1500	1500	1500	1500	1500	1500	1500	1500
Maximum Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	12.565	13.165	12.225	12.055	12.665	11.405	11.905
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	65.355	21.355	21.955	21.015	20.845	21.455	20.185	20.695
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	100.215	26.175	26.775	25.835	25.665	26.275	25.015	25.515
Reflected Inertia (≤Ø 38)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	185.775	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5	≤ 1.5						
Angular Repeatability Accuracy	[arc-min]	--	± 0.15	± 0.15						
Surface Runout	[µm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	432	419	419	419	419	419	419	419
Maximum Axial Load	[N]	--	38051	38051	38051	38051	38051	38051	38051	38051
Maximum Radial Load	[N]	--	11165	11165	11165	11165	11165	11165	11165	11165
Maximum Tilting Moment Load	[Nm]	--	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6
Efficiency	[%]	--	72	68	68	68	68	68	68	68
Protection Class	--	*4	IP54 (IP65)							

\*1) At nominal input speed

\*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher

\*3) At input shaft

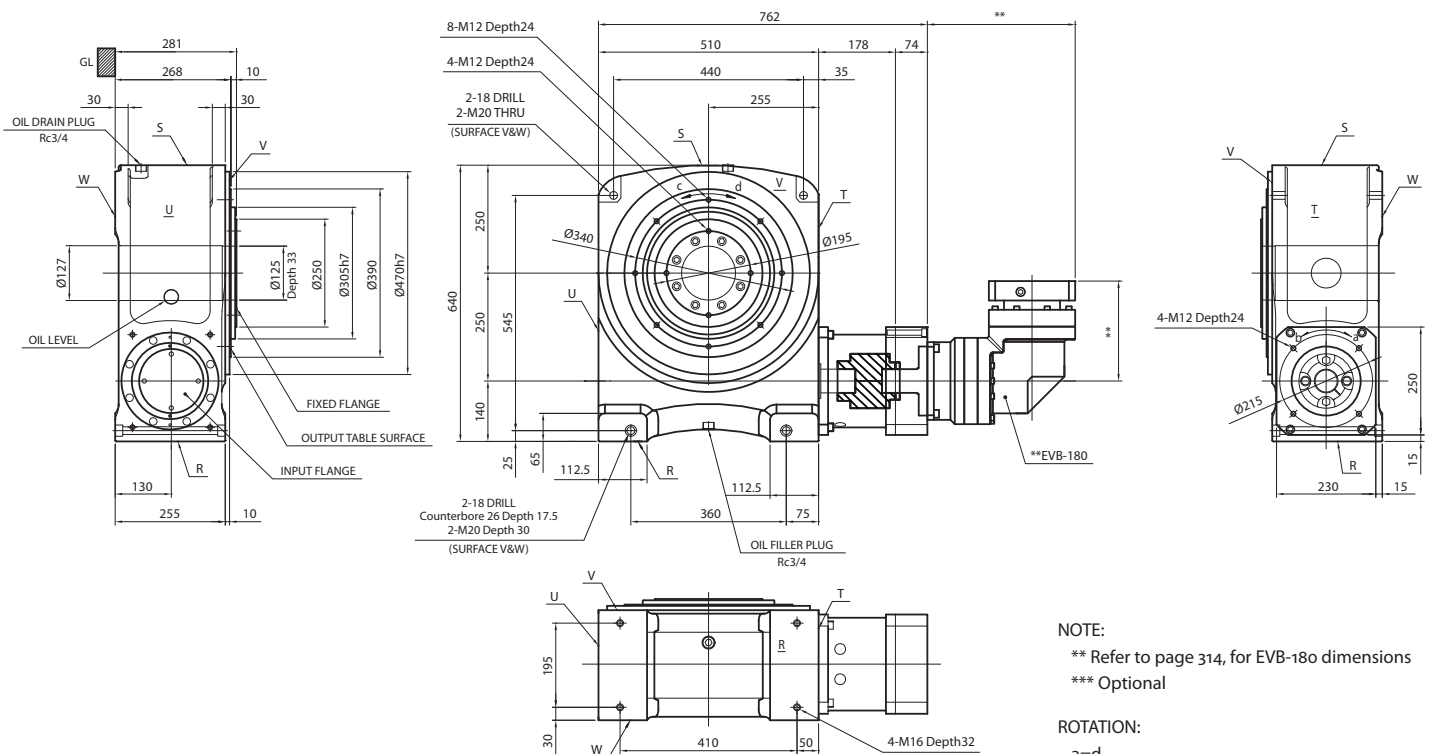
\*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-250E – 3-Stage Specifications with EVB-180

Frame Size	250E									
Stage	3-Stage									
Ratio	Units	Notes	800	900	1000	1200	1400	1600	1800	2000
Nominal Torque	[Nm]	*1	4006	4006	4006	4006	4006	4006	4006	4006
Acceleration Torque	[Nm]	--	6072	6072	6072	6072	6072	6072	6072	6072
No Load Torque	[Nm]	*1	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Nominal Input Speed	[rpm]	*2	1500	1500	1500	1500	1500	1500	1500	1500
Maximum Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000
Reflected Inertia (Single)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	11.315	11.835	11.275	11.255	11.235	11.225	11.225	11.215
Reflected Inertia (≤Ø 19)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	20.105	20.625	20.065	20.035	20.025	20.015	20.005	20.005
Reflected Inertia (≤Ø 28)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	24.925	25.445	24.885	24.855	24.845	24.835	24.825	24.825
Reflected Inertia (≤Ø 38)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Backlash	[arc-min]	--	0	0	0	0	0	0	0	0
Angular Transmission Accuracy	[arc-min]	--	≤ 1.5							
Angular Repeatability Accuracy	[arc-min]	--	± 0.15							
Surface Runout	[µm (max)]	--	20	20	20	20	20	20	20	20
Weight	[kg]	--	419	419	419	419	419	419	419	419
Maximum Axial Load	[N]	--	38051	38051	38051	38051	38051	38051	38051	38051
Maximum Radial Load	[N]	--	11165	11165	11165	11165	11165	11165	11165	11165
Maximum Tilting Moment Load	[Nm]	--	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6	2478.6
Efficiency	[%]	--	68	68	68	68	68	68	68	68
Protection Class	--	*4	IP54 (IP65)							

- \*1) At nominal input speed
- \*2) Speeds are at the actuator input. Limits when used with additional gearbox are higher
- \*3) At input shaft
- \*4) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

## STR-250 Dimensions with EVB-180



NOTE:  
 \*\* Refer to page 314, for EVB-180 dimensions  
 \*\*\* Optional

ROTATION:  
 a=d  
 a=c (upon special request)

STR