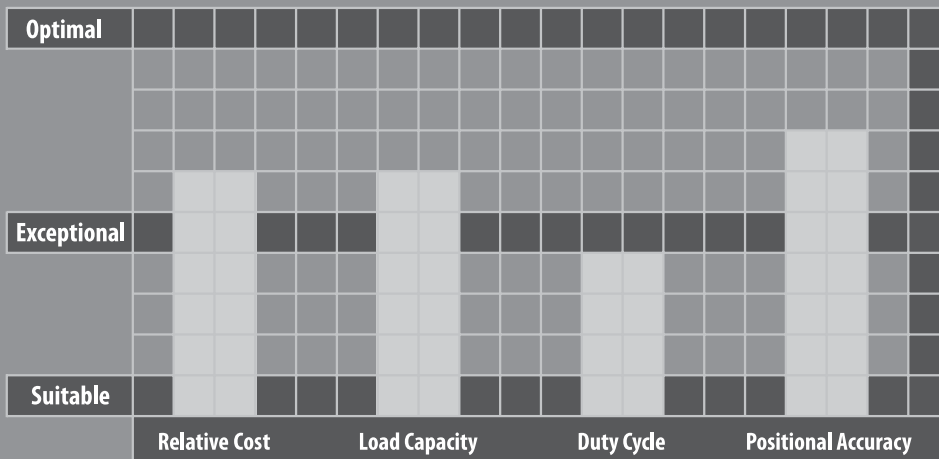


# STH SERIES

The STH is an excellent fit for mid-range index table applications that require high accuracy, flexible mounting and a large hollow shaft. This product sets the standard for rotary positioning performance of large inertia loads at an exceptional value. The STH comes with backlash as low as 2 arc-min and indexing accuracy down to  $\pm 60$  arc-sec. With a large cross roller bearing, the STH can achieve a max tilting moment load capacity of 200Nm and a maximum radial load of 5000N—a perfect match for mid-size steel or aluminum tables as well as end of arm tooling

The STH utilizes NIDEC-SHIMPO's modular design concept by integrating a VRL070 or EVL070 planetary gearbox at the input section. This allows the STH to achieve reduction ratios from 12:1 to 400:1. Motor mounting is easy with our vast selection of mounting plates. The 85mm hollow shaft provides clearance for wiring, tubing or ball screws to be passed through to effectors, fillers or any other active machinery. Contact us if you need assistance upgrading from legacy mechanical camming devices or pneumatics.

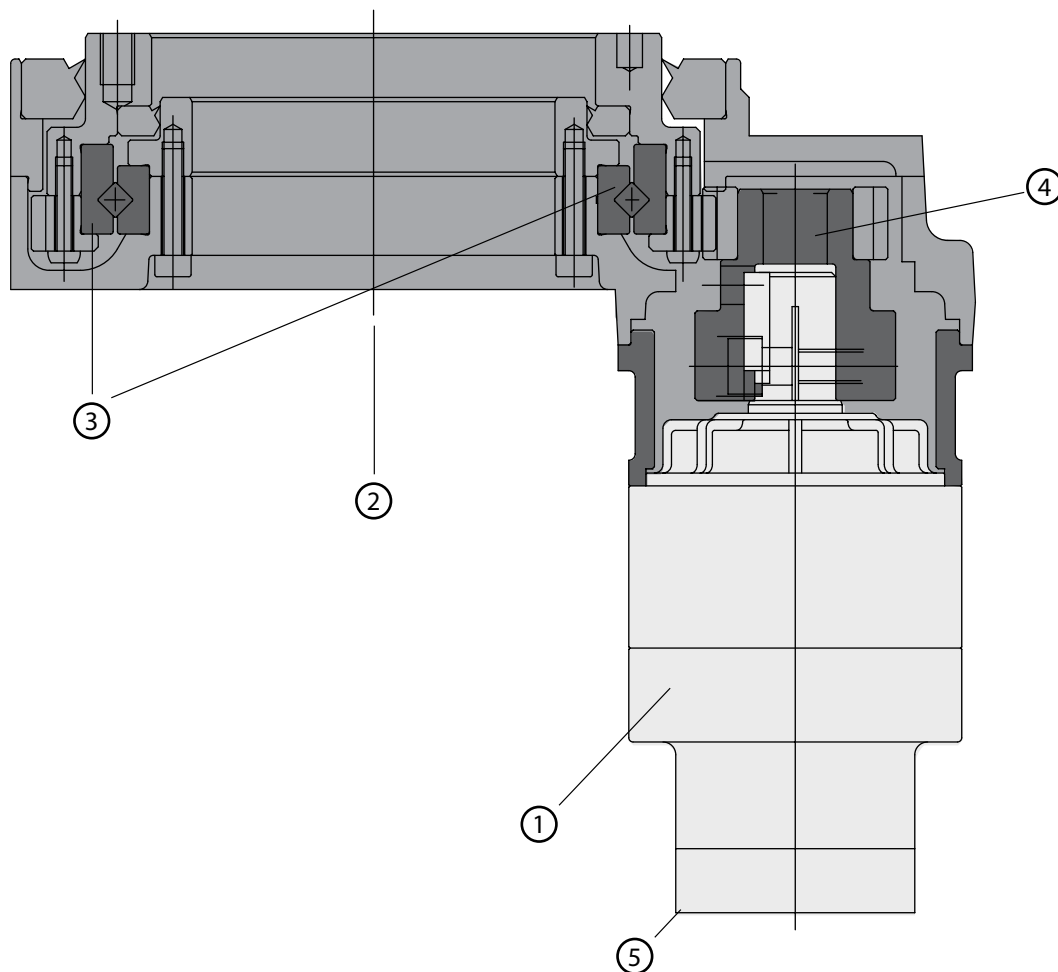




### STH SERIES

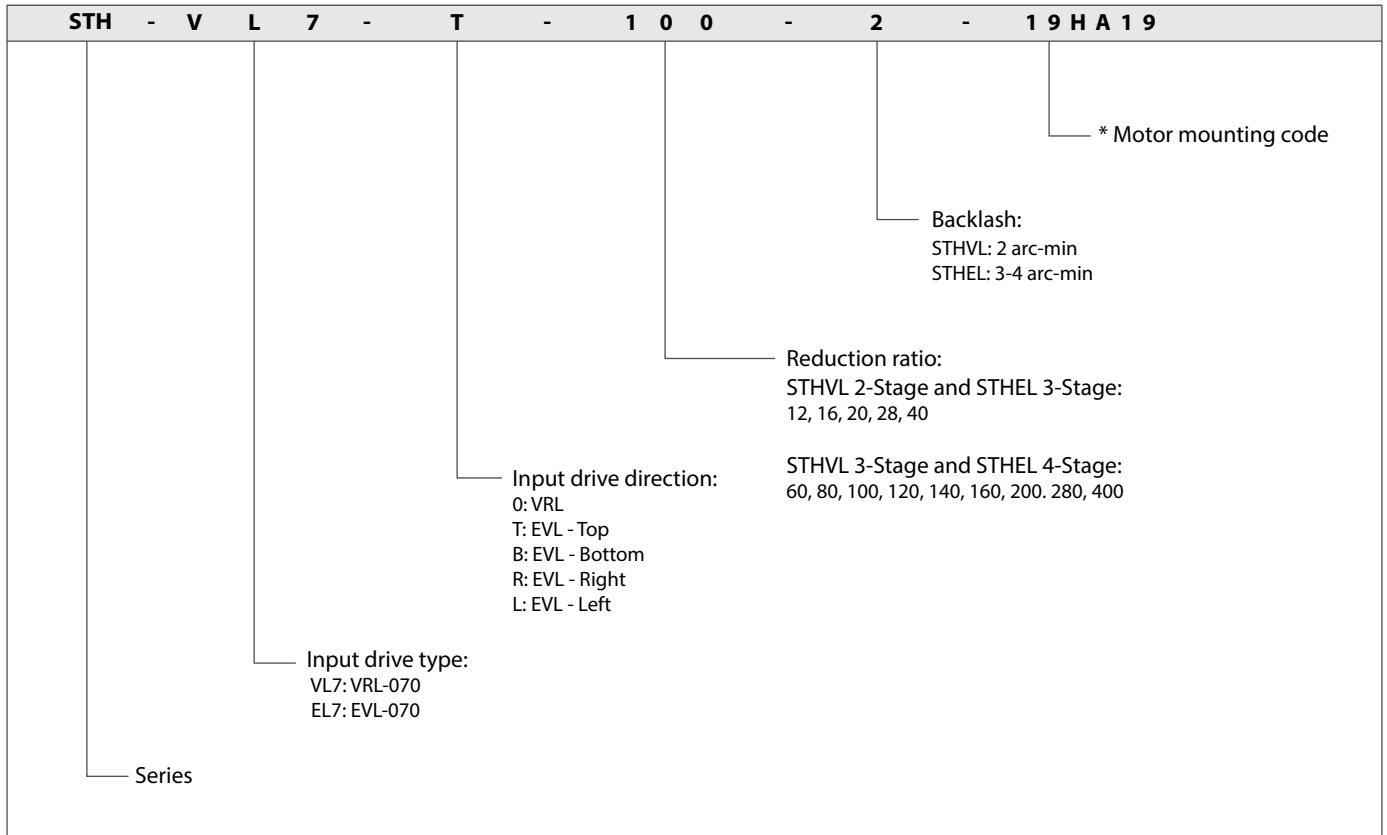
- 85mm pass through hole allows pass through of air lines, wiring or other peripheral components
- $\leq 2$  arc-min backlash with  $\pm 60$  arc-sec indexing accuracy
- Reduction ratios from 12:1 up to 400:1
- 5000N radial load capacity, ideal for mid-range index table applications
- Broad range of mounting adapters offer a simple, precise attachment to any motor
- Maintenance-free solution that is lubricated for life. High performance grease allows flexible mounting in any orientation
- Assembled in the USA with immediate delivery

## STH Series Features



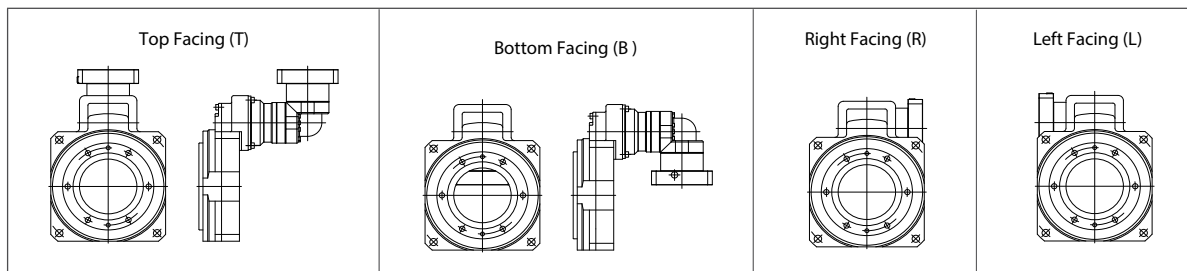
- ① VRL070 or EVL070 input section for ratios up to 400:1
- ② 85 mm hollow bore diameter
- ③ Heavy duty cross-roller bearing
- ④ 4:1 output gear
- ⑤ Optimized motor mounting system with active centering on motor pilot guarantees alignment of motor

## STH Series Model Code



\* Motor mounting code varies depending on the motor. Contact us to configure the code.

### Input Drive Direction (EL7 Detail)



## STHVL7 2-Stage & 3-Stage Specifications

Frame Size	STHVL7								
	Units	Notes	2-Stage					3-Stage	
<b>Stage</b>									
<b>Ratio</b>	--	*1	12:1	16:1	20:1	28:1	40:1	60:1	80:1
Nominal Torque	[Nm]	*2	65	85	85	85	68	68	85
Maximum Acceleration Torque	[Nm]	--	126	170	170	170	133	133	170
Emergency Stop Torque	[Nm]	--	240	240	240	240	240	240	240
Nominal Input Speed	[rpm]	--	3000					3000	
Maximum Input Speed	[rpm]	--	6000					6000	
Maximum Axial Load	[N]	--	4000					4000	
Maximum Radial Load	[N]	--	5000					5000	
Maximum Tilting Moment Load	[Nm]	--	200					200	
Maximum Surface Runout	[mm]	--	0.070					0.070	
Moment of Inertia ( $\leq \varnothing 8$ )	[kgcm <sup>2</sup> ]	*3	1.109	0.640	0.426	0.240	0.143	0.094	0.076
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	*3	1.189	0.715	0.509	0.318	0.227	0.179	0.152
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	*3	1.399	0.925	0.709	0.528	0.427	0.389	0.372
Efficiency	[%]	--	86	86	90	90	90	86	86
Maximum Torsional Backlash	[arc-min]	--	$\leq 2$					$\leq 2$	
Accuracy	[arc-sec]	--	$\pm 60$					$\pm 60$	
Torsional Stiffness	[Nm/arc-min]	--	7.6					7.6	
Noise Level	[dB]	--	72	72	65	65	65	65	65
Maximum Ambient Temperature	$^{\circ}\text{C}$	--	0-40					0-40	
Permitted Housing Temperature	$^{\circ}\text{C}$	--	90					90	
Protection Class	--	*4	IP54 (IP65)					IP54 (IP65)	
Weight	[kg]	--	7.6					7.8	

\*1) Contact SIT S.p.A. for special ratios

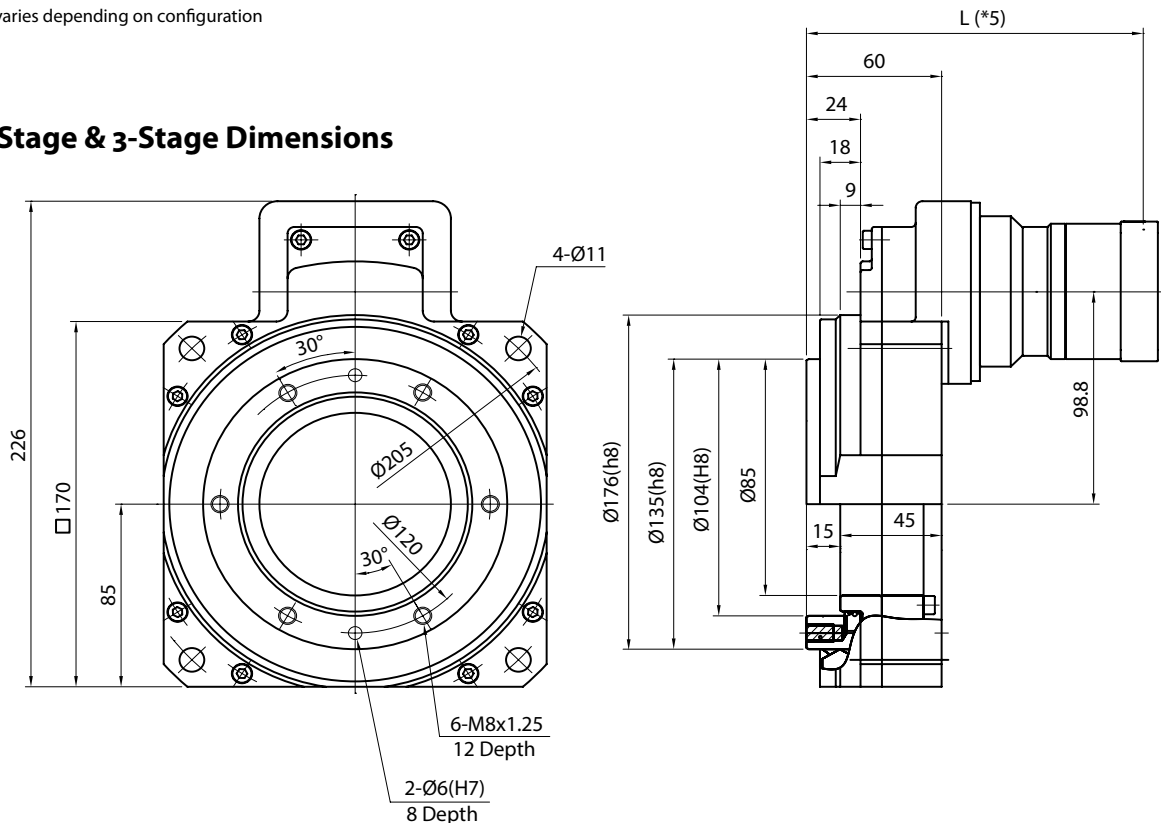
\*2) At nominal input speed, service life is 20,000 hours

\*3) Measured at input shaft

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

\*5) L dimension varies depending on configuration

## STHVL7 2-Stage & 3-Stage Dimensions



## STHVL7 3-Stage Specifications

Frame Size	STHVL7								
Stage	Units	Notes	3-Stage						
Ratio	--	*1	100:1	120:1	140:1	160:1	200:1	280:1	400:1
Nominal Torque	[Nm]	*2	85	68	85	85	85	85	68
Maximum Acceleration Torque	[Nm]	--	170	133	170	170	170	170	133
Emergency Stop Torque	[Nm]	--	240	240	240	240	240	240	240
Nominal Input Speed	[rpm]	--	3000						
Maximum Input Speed	[rpm]	--	6000						
Maximum Axial Load	[N]	--	4000						
Maximum Radial Load	[N]	--	5000						
Maximum Tilting Moment Load	[Nm]	--	200						
Maximum Surface Runout	[mm]	--	0.070						
Moment of Inertia ( $\leq \varnothing 8$ )	[kgcm <sup>2</sup> ]	*3	0.067	0.059	0.060	0.054	0.052	0.051	0.050
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	*3	0.144	0.140	0.137	0.135	0.133	0.132	0.131
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	*3	0.364	0.350	0.357	0.345	0.343	0.342	0.341
Efficiency	[%]	--	86	86	86	86	86	86	86
Maximum Torsional Backlash	[arc-min]	--	$\leq 2$						
Accuracy	[arc-sec]	--	$\pm 60$						
Torsional Stiffness	[Nm/arc-min]	--	7.6						
Noise Level	[dB]	--	65	65	65	65	65	65	65
Maximum Ambient Temperature	$^{\circ}\text{C}$	--	0-40						
Permitted Housing Temperature	$^{\circ}\text{C}$	--	90						
Protection Class	--	*4	IP54 (IP65)						
Weight	[kg]	--	7.8						

\*1) Contact SIT S.p.A. for special ratios

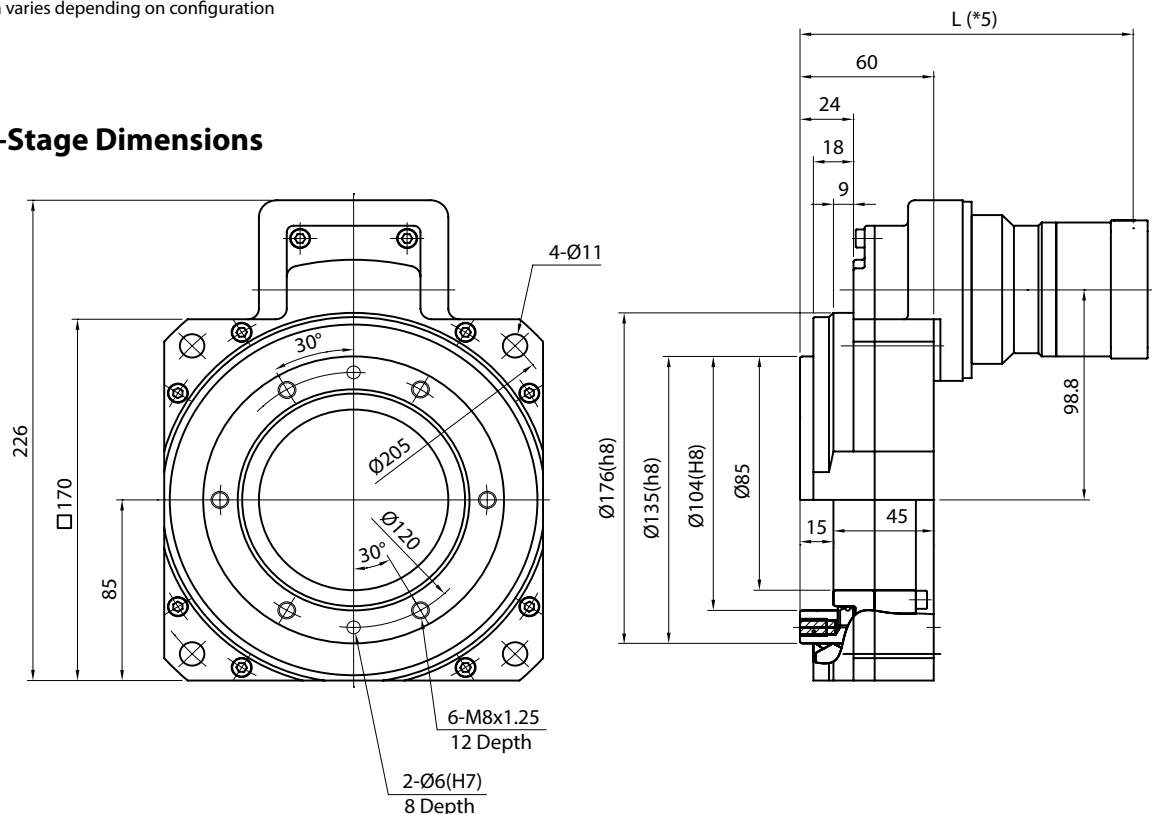
\*2) At nominal input speed, service life is 20,000 hours

\*3) Measured at input shaft

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

\*5) L dimension varies depending on configuration

## STHVL7 3-Stage Dimensions



## STHEL7 2-Stage & 3-Stage Specifications

Frame Size	STHEL7								
	Units	Notes	2-Stage					3-Stage	
<b>Ratio</b>	--	*1	12:1	16:1	20:1	28:1	40:1	60:1	80:1
Nominal Torque	[Nm]	*2	43	58	84	85	61	61	85
Maximum Acceleration Torque	[Nm]	--	86	115	152	170	122	122	170
Emergency Stop Torque	[Nm]	--	180	234	240	240	204	240	240
Nominal Input Speed	[rpm]	--	3000					3000	
Maximum Input Speed	[rpm]	--	6000					6000	
Maximum Axial Load	[N]	--	4000					4000	
Maximum Radial Load	[N]	--	5000					5000	
Maximum Tilting Moment Load	[Nm]	--	200					200	
Maximum Surface Runout	[mm]	--	0.070					0.070	
Moment of Inertia ( $\leq \varnothing 8$ )	[kgcm <sup>2</sup> ]	*3	1.280	0.811	0.597	0.412	0.314	0.112	0.093
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	*3	1.355	0.886	0.672	0.487	0.389	0.157	0.138
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	*3	1.544	1.075	0.862	0.676	0.578	--	--
Efficiency	[%]	--	84	84	88	88	88	84	84
Maximum Torsional Backlash	[arc-min]	--	$\leq 8$					$\leq 8$	
Accuracy	[arc-sec]	--	$\pm 60$					$\pm 60$	
Torsional Stiffness	[Nm/arc-min]	--	7.6					7.6	
Noise Level	[dB]	--	72	72	65	65	65	65	65
Maximum Ambient Temperature	$^{\circ}\text{C}$	--	0-40					0-40	
Permitted Housing Temperature	$^{\circ}\text{C}$	--	90					90	
Protection Class	--	*4	IP54 (IP65)					IP54 (IP65)	
Weight	[kg]	--	8.0					7.8	

\*1) Contact SIT S.p.A. for special ratios

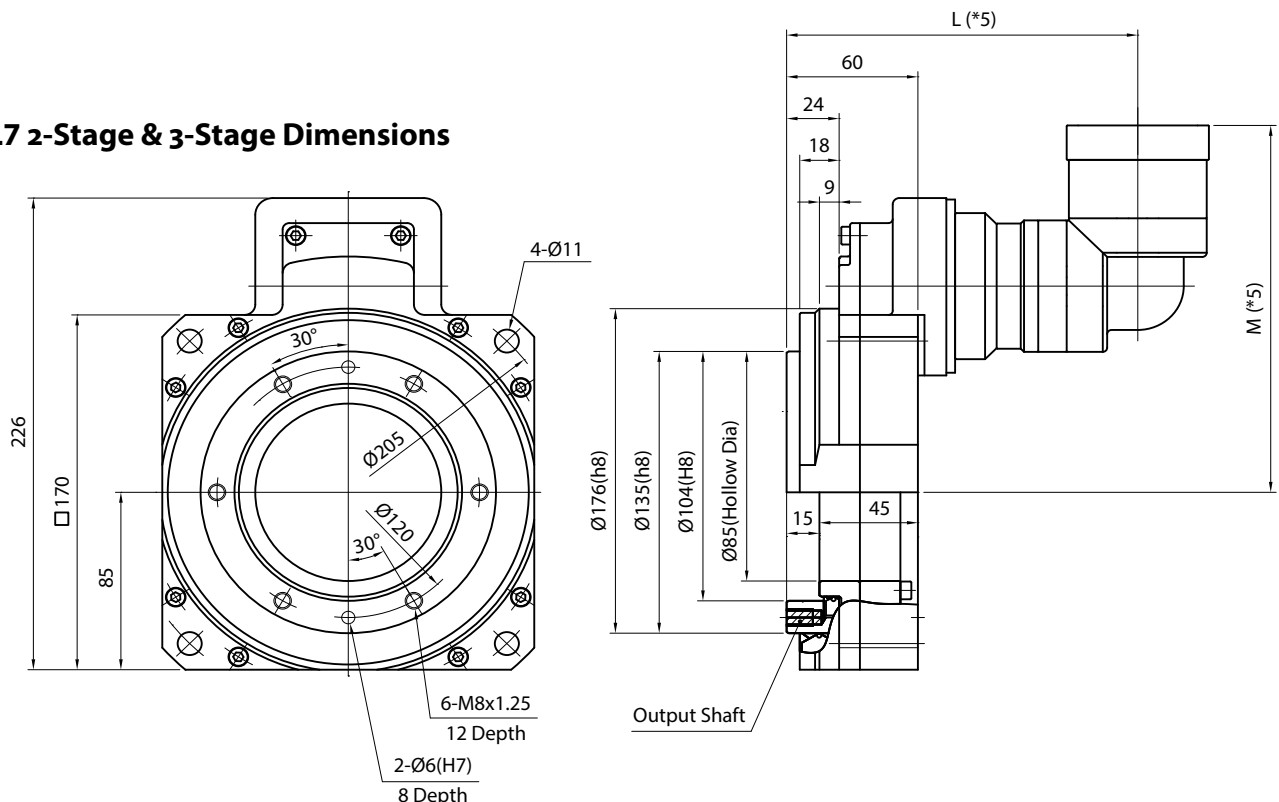
\*2) At nominal input speed, service life is 20,000 hours

\*3) Measured at input shaft

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

\*5) L and M dimension varies depending on configuration

## STHEL7 2-Stage & 3-Stage Dimensions



## STHEL7 3-Stage Specifications

Frame Size	STHEL7								
Stage	Units	Notes	3-Stage						
<b>Ratio</b>	--	*1	100:1	120:1	140:1	160:1	200:1	280:1	400:1
Nominal Torque	[Nm]	*2	85	61	85	85	85	85	61
Maximum Acceleration Torque	[Nm]	--	170	122	170	170	170	170	122
Emergency Stop Torque	[Nm]	--	240	240	240	240	240	240	240
Nominal Input Speed	[rpm]	--	3000						
Maximum Input Speed	[rpm]	--	6000						
Maximum Axial Load	[N]	--	4000						
Maximum Radial Load	[N]	--	5000						
Maximum Tilting Moment Load	[Nm]	--	200						
Maximum Surface Runout	[mm]	--	0.070						
Moment of Inertia ( $\leq \varnothing 8$ )	[kgcm <sup>2</sup> ]	*3	0.085	0.072	0.077	0.066	0.064	0.063	0.062
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	*3	0.129	0.116	0.122	0.111	0.108	0.106	0.106
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	*3	--	--	--	--	--	--	--
Efficiency	[%]	--	84	84	84	84	84	84	84
Maximum Torsional Backlash	[arc-min]	--	$\leq 8$						
Accuracy	[arc-sec]	--	$\pm 60$						
Torsional Stiffness	[Nm/arc-min]	--	7.6						
Noise Level	[dB]	--	65	65	65	65	65	65	65
Maximum Ambient Temperature	$^{\circ}\text{C}$	--	0-40						
Permitted Housing Temperature	$^{\circ}\text{C}$	--	90						
Protection Class	--	*4	IP54 (IP65)						
Weight	[kg]	--	7.8						

\*1) Contact SIT S.p.A. for special ratios

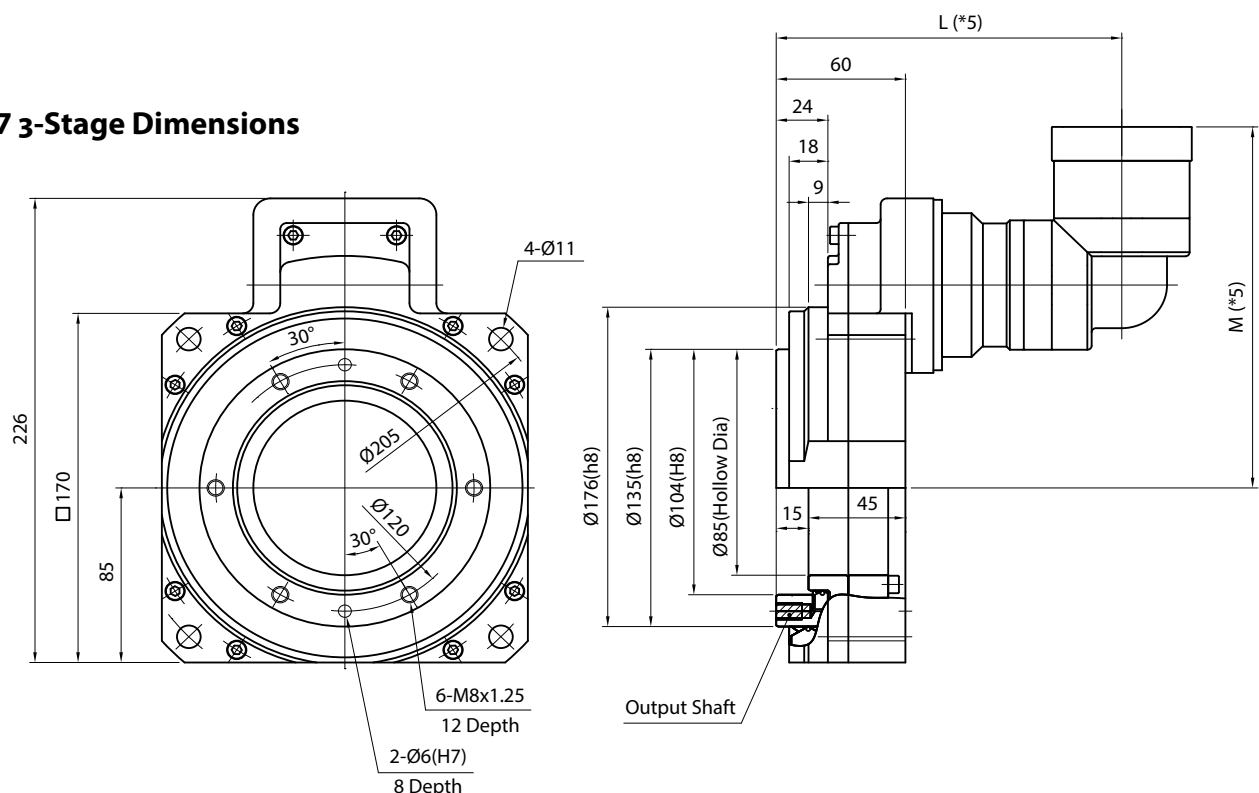
\*2) At nominal input speed, service life is 20,000 hours

\*3) Measured at input shaft

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

\*5) L and M dimension varies depending on configuration

## STHEL7 3-Stage Dimensions

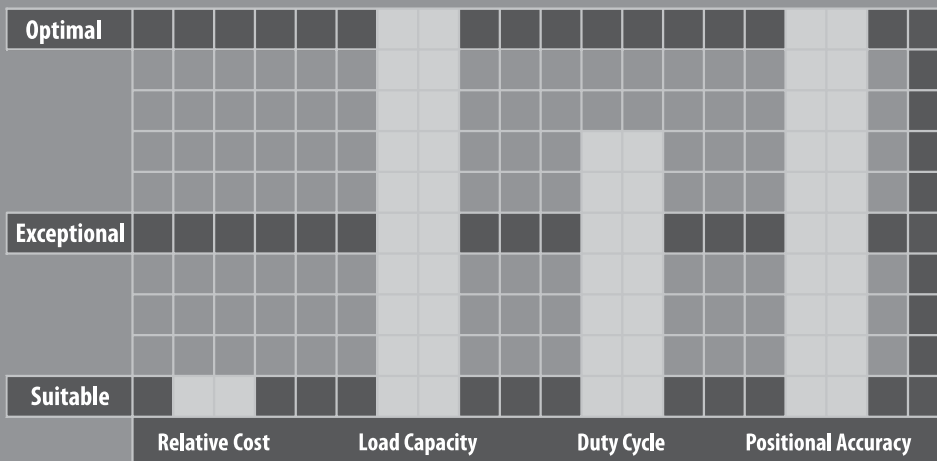




# STR SERIES

With factory automation equipment using servo systems, overall machine performance can be greatly affected if critical elements are not considered during the design phase. Factors, such as backlash can cause premature wear, vibration, inefficiency, poor rigidity and control instability. Long settling times can affect productivity and positioning accuracy. The STR series is our ultra high precision solution that addresses these concerns and offers proven mechanical reliability.

This versatile solution features programmable output motions with low-wear rolling contact. Larger inertia load transmission is achieved with internal cam ratio reduction while maintaining powerful torque with less motor horsepower. The STR's unique no-backlash preloaded mechanism improves the overall dynamics to force output motions to a new level of rigidity and accurate servo controller performance. The compact design reduces footprint while offering high speed rotation with large bending moment capacity.

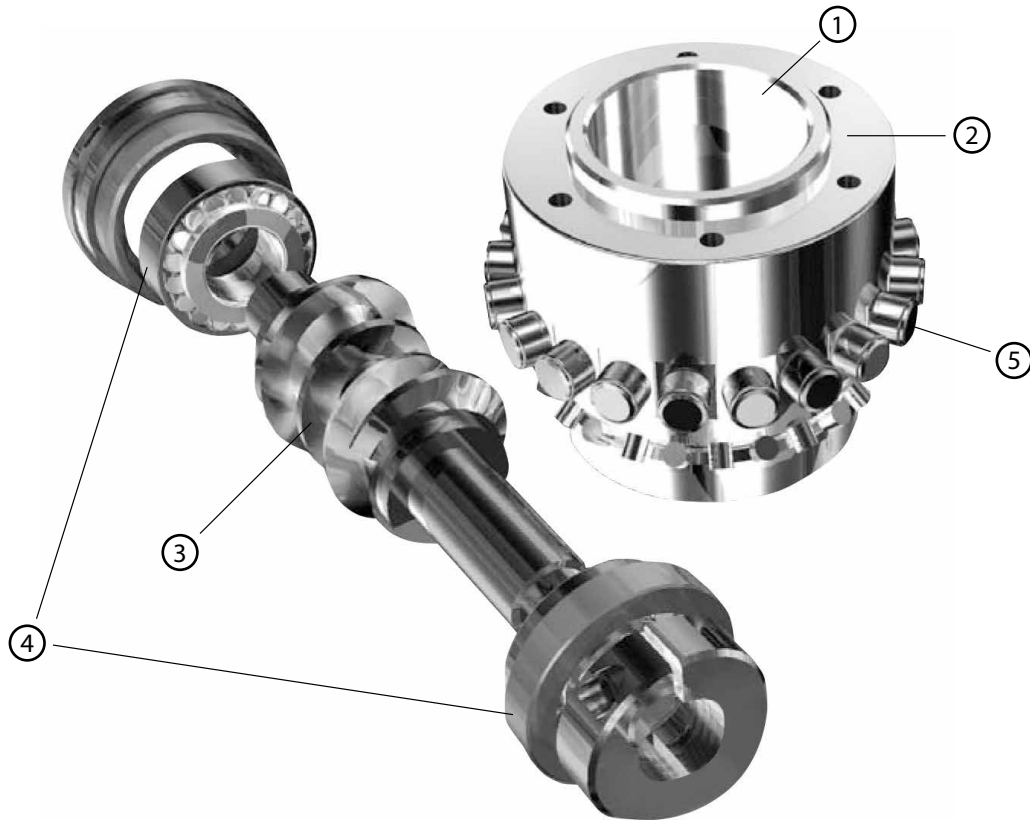




## STR SERIES

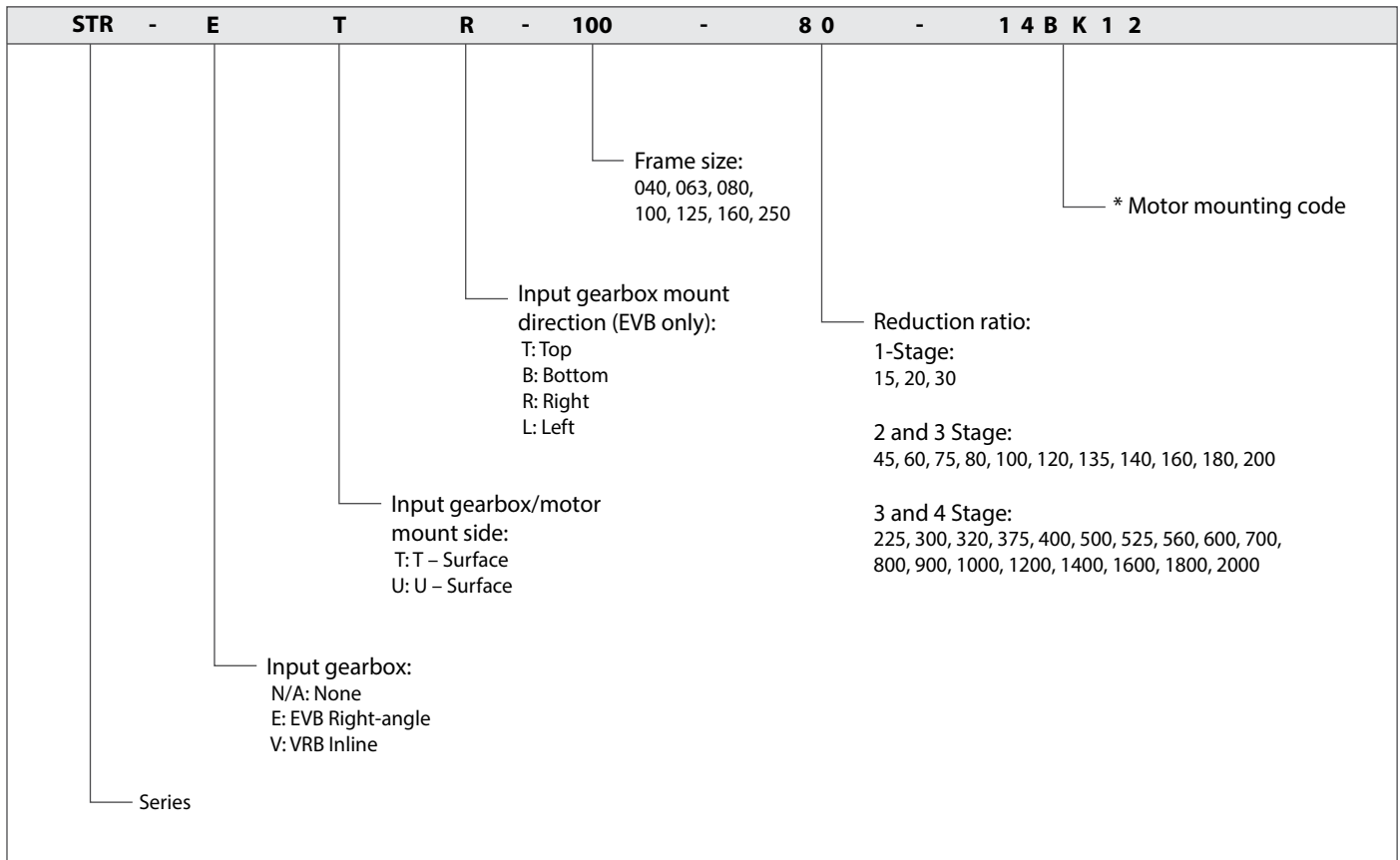
- Zero Backlash – a unique preload mechanism to completely eliminate backlash and deliver motion that is true to input commands
- Highest level of positioning accuracy and runout accuracy, which is difficult to attain with other gearing technologies. Exceptional with direction reversing applications
- Output shaft is a solid piece cross roller bearing designed for durability against axial and radial loads
- Compatible with nearly any servomotor
- Reduction ratios up to 2000:1 are possible using a planetary primary stage
- Lightweight, compact aluminum alloy housing for minimal footprint
- Excellent fit for rotary pick and place applications, large dial tables and robotic joints
- Maintenance free solution using grease lubrication, can be mounted in any position

## STR Series Features



- ① Oversized hollow output shaft
- ② Turret with integral cross-roller bearing
- ③ Globoidal cam
- ④ Tapered roller bearings
- ⑤ Needle roller cam followers

## STR Series Model Code



\* Motor mounting code varies depending on the motor.

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

Frame Size	040V					
			1-Stage	2-Stage		
Stage						
Ratio	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> x10 <sup>-4</sup> ]	*3	0.292	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	--	0.082	0.06	0.053
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <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)			

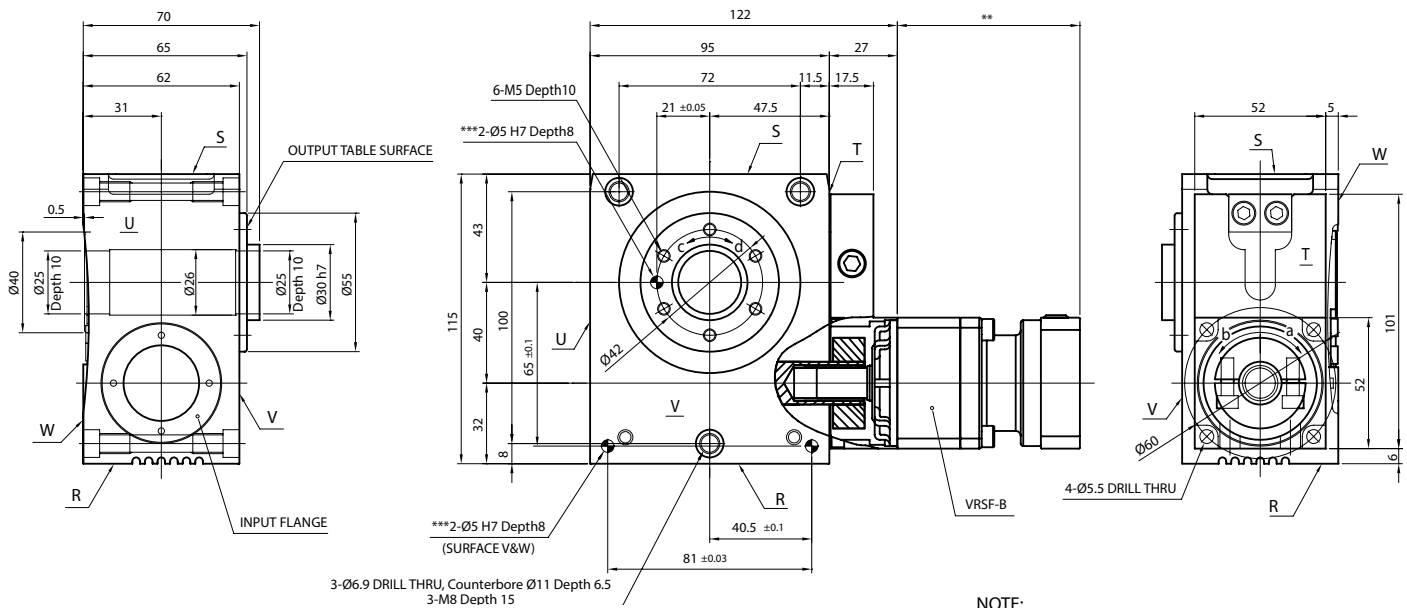
\*1) At nominal input speed

\*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 SIT S.P.A. for more details and our food grade options

## STR 040 Dimensions with VRSF-B



NOTE:

\*\* For VRSF B-Frame dimensions refer VRSF section

\*\*\* Optional

ROTATION:

a=d

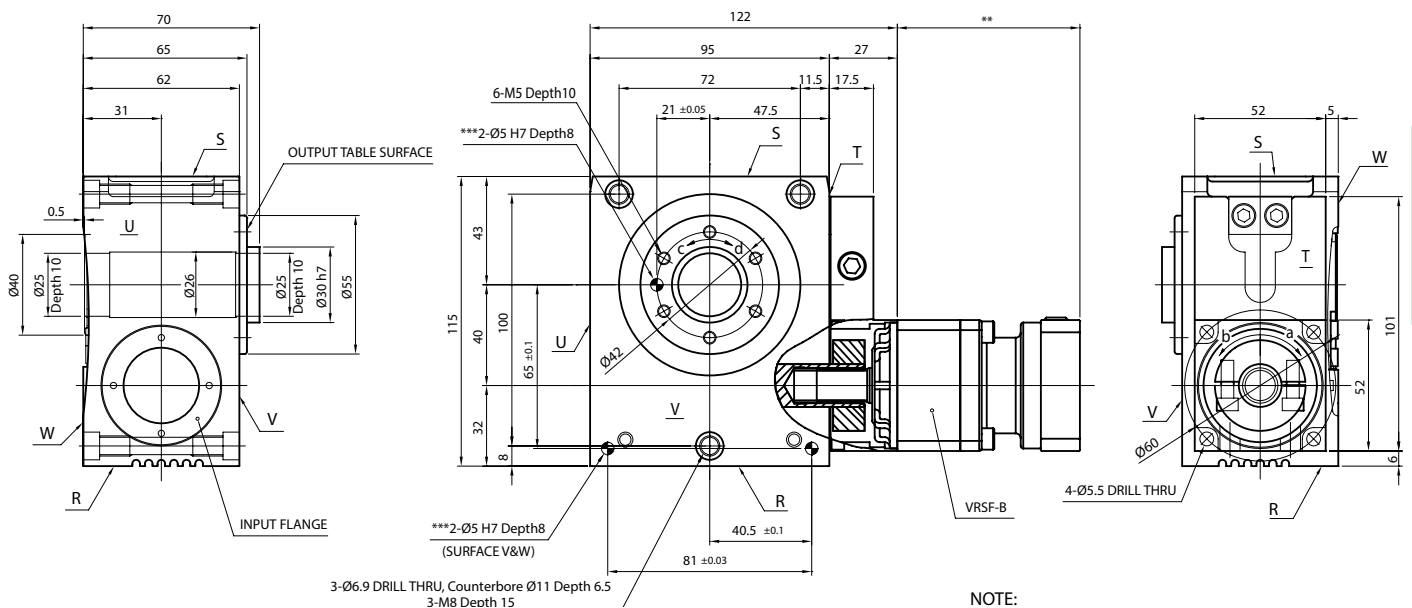
a=c (upon special request)

## 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 SIT S.P.A. for more details and our food grade options

## STR 040 Dimensions with VRSF-B



NOTE:  
 \*\* For VRSF B-Frame dimensions refer VRSF section  
 \*\*\* Optional

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

STR

## STR o63V 1-Stage and 2-Stage Specifications with VRB o6o

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> ×10 <sup>-4</sup> ]	*3	0.862	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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 SIT S.P.A. for more details and our food grade options

## STR o63V 2-Stage and 3-Stage Specifications with VRB o6o

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> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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 SIT S.P.A. 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> x10 <sup>-4</sup> ]	*3	---	---	---	---	---	---	---	---
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <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> x10 <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> x10 <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)							

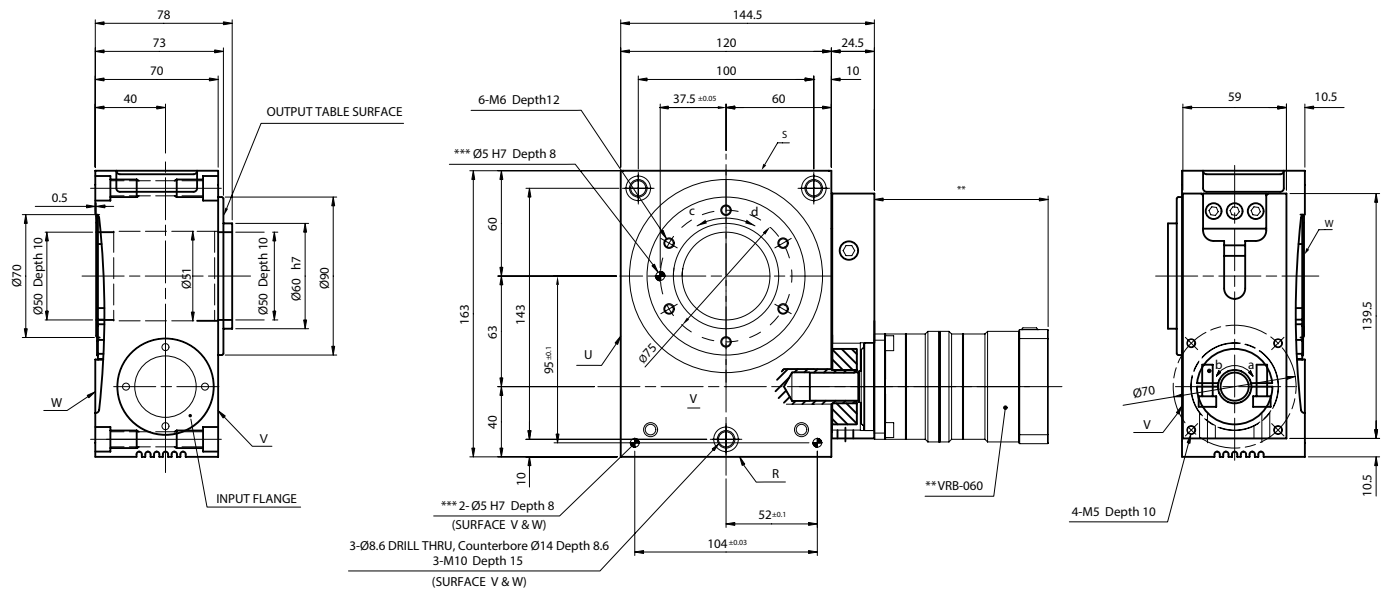
\*1) At nominal input speed

\*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 SIT S.P.A. for more details and our food grade options

## STR o63 Dimensions with VRB o60



NOTE:

\*\* For VRB-o60 dimensions refer VRB section

\*\*\* Optional

ROTATION:

a=d

a=c (upon special request)



## STR o63E 1-Stage and 2-Stage Specifications with EVB o6o

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 SIT S.P.A. for more details and our food grade options

## STR o63E 2-Stage and 3-Stage Specifications with EVB o6o

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

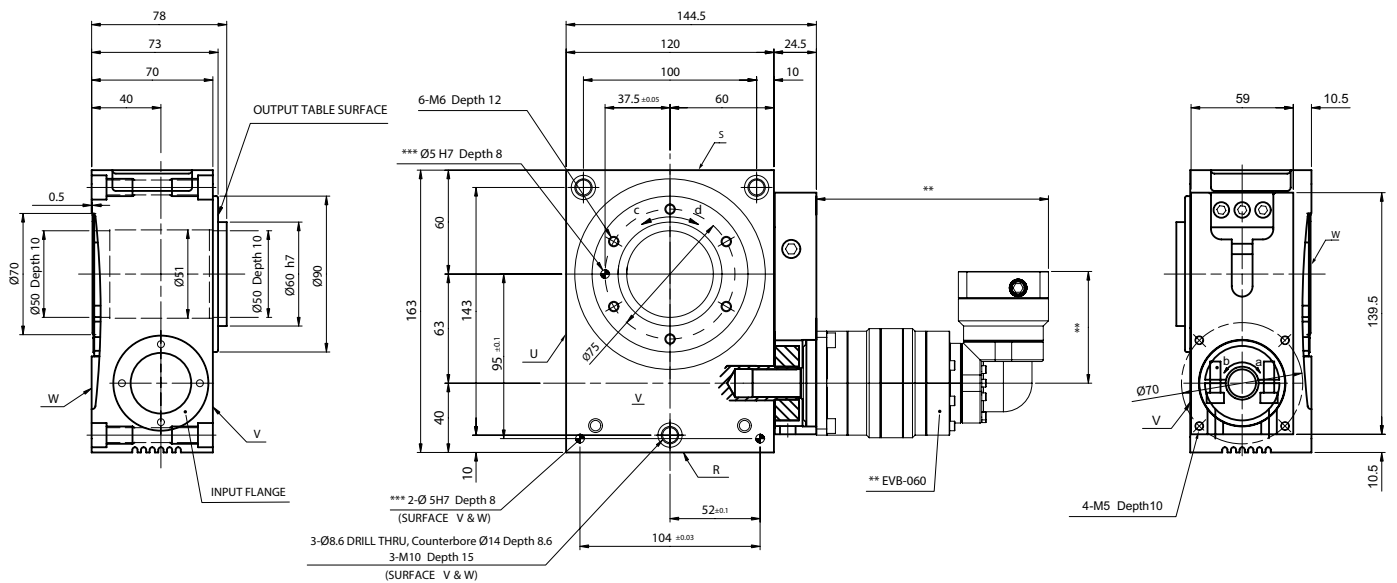
\*4) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details and our food grade options

## STR o63E 3-Stage Specifications with EVB o60

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> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <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> x10 <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> x10 <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 SIT S.P.A. for more details and our food grade options

## STR o63 Dimensions with EVB o60



**NOTE:**  
 \*\* For EVB-o60 dimensions refer EVB section  
 \*\*\* Optional

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



## STR o80V 1-Stage and 2-Stage Specifications with VRB o60

Frame Size	080V									
			1-Stage		2-Stage					
Stage	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 SIT S.P.A. for more details and our food grade options

## STR o80V 2-Stage and 3-Stage Specifications with VRB o60

Frame Size	080V									
			2-Stage		3-Stage					
Stage	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

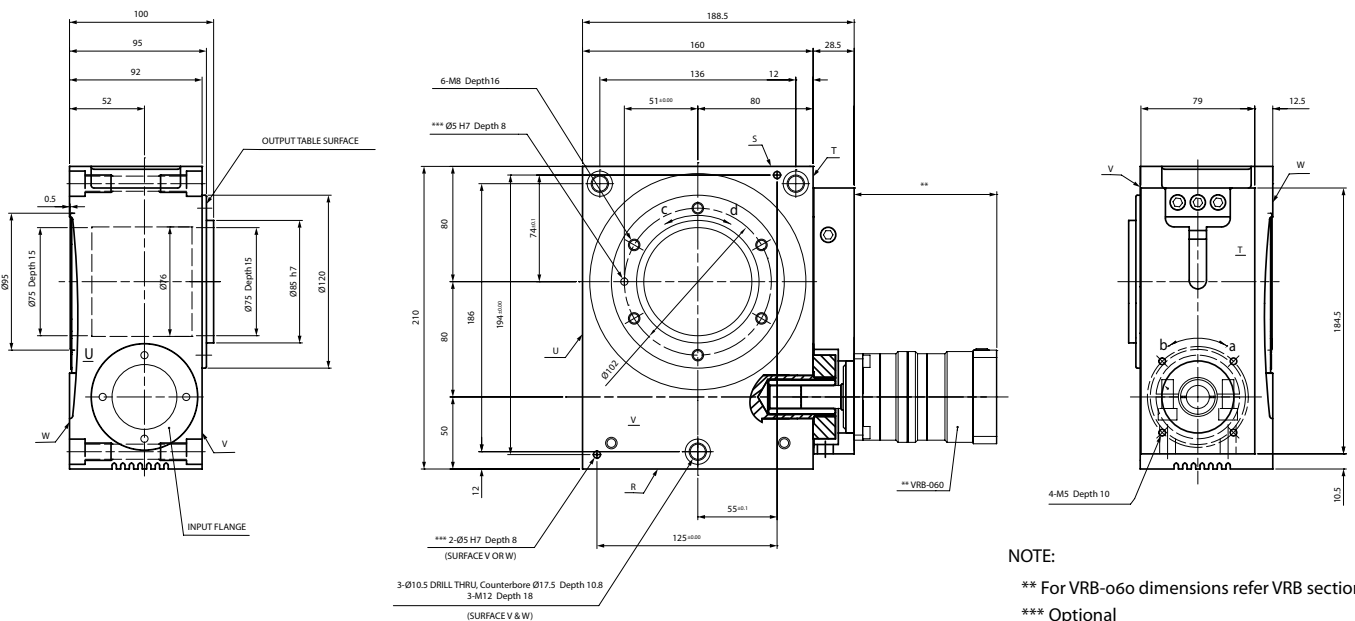
\*4) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details and our food grade options

## STR 080V 3-Stage Specifications with VRB 060

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> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <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> x10 <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> x10 <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 SIT S.P.A. for more details and our food grade options

## STR 080V Dimensions with VRB 060



## 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 SIT S.P.A. 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

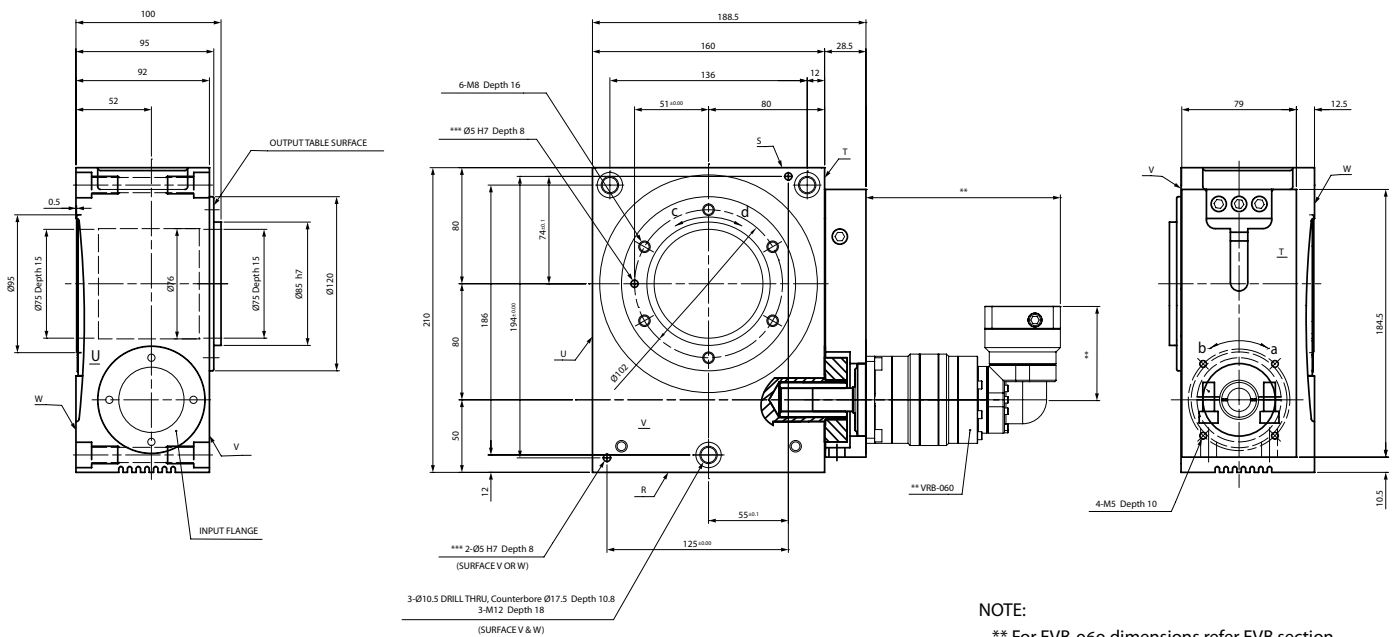
\*4) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details and our food grade options

## 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> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.069	0.078	0.069	0.069	0.069	0.069	0.069	0.069
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <sup>-4</sup> ]	*3	0.114	0.123	0.114	0.114	0.113	0.113	0.113	0.113
Reflected Inertia (≤Ø 19)	[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]	--	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 SIT S.P.A. for more details and our food grade options

## STR o8oE Dimensions with EVB o6o



NOTE:  
 \*\* For EVB-o6o dimensions refer EVB section  
 \*\*\* Optional

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

## 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> ×10 <sup>-4</sup> ]	*3	8.687	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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 SIT S.P.A. 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> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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> ×10 <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

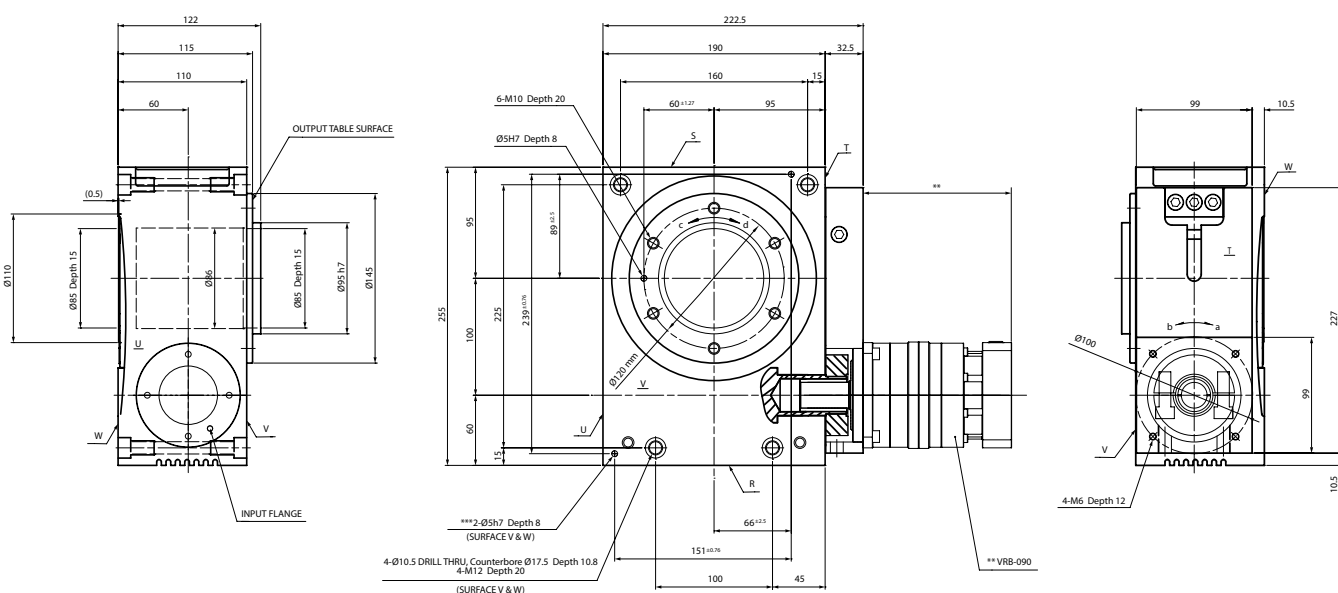
\*4) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details and our food grade options

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

Frame Size	100V										
	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	330
Acceleration Torque	[Nm]	--	565	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	0.2
Nominal Input Speed	[rpm]	*2	3000	3000	3000	3000	3000	3000	3000	3000	3000
Maximum Input Speed	[rpm]	*2	6000	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	0.121	0.142	0.120	0.120	0.119	0.119	0.119	0.119	0.119
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ·x10 <sup>-4</sup> ]	*3	0.272	0.292	0.272	0.272	0.272	0.272	0.272	0.272	0.272
Reflected Inertia (≤Ø 19)	[kg·m <sup>2</sup> ·x10 <sup>-4</sup> ]	*3	0.722	0.732	0.712	0.712	0.712	0.712	0.712	0.712	0.712
Reflected Inertia (≤Ø 28)	[kg·m <sup>2</sup> ·x10 <sup>-4</sup> ]	*3	2.622	2.722	2.622	2.622	2.622	2.622	2.622	2.622	2.622
Backlash	[arc-min]	--	0	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	10
Weight	[kg]	--	25.7	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	3724
Maximum Radial Load	[N]	--	3109	3109	3109	3109	3109	3109	3109	3109	3109
Maximum Tilting Moment Load	[Nm]	--	284	284	284	284	284	284	284	284	284
Efficiency	[%]	--	74	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 SIT S.P.A. for more details and our food grade options

## STR 100 Dimensions with VRB 090



**NOTE:**

- \*\* For VRB-090 dimensions refer VRB section
- \*\*\* 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> ×10 <sup>-4</sup> ]	*3	8.687	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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 SIT S.P.A. 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> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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> ×10 <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

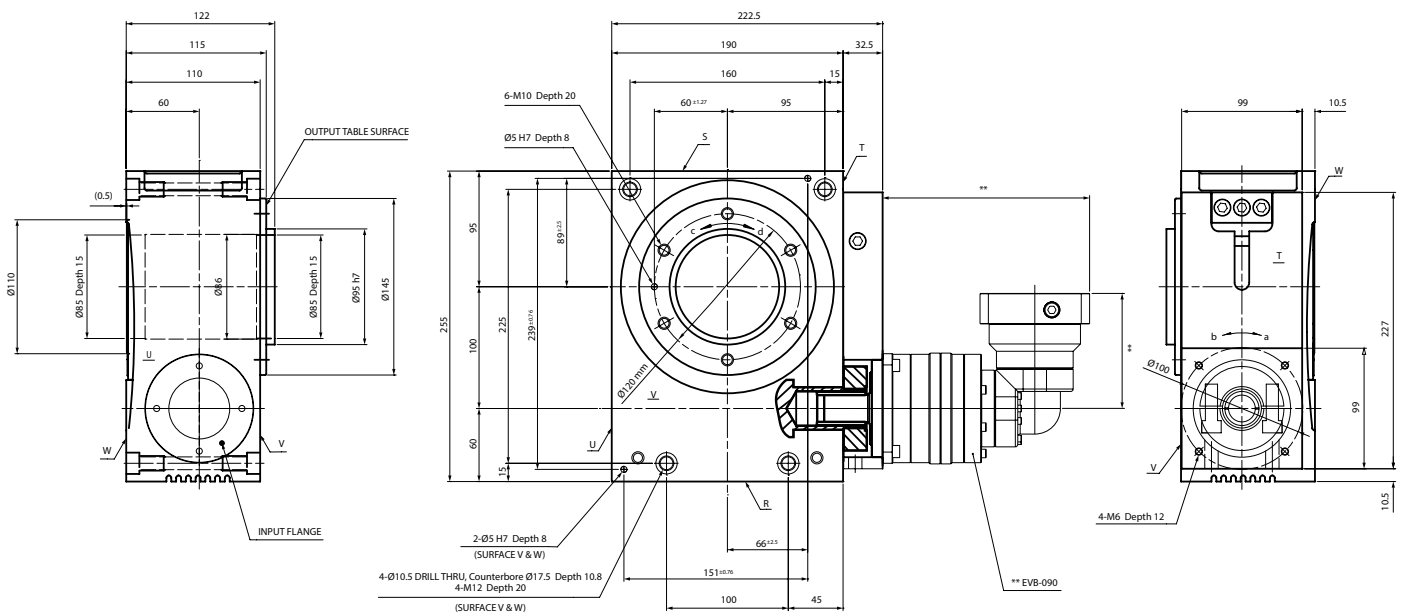
\*4) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details and our food grade options

## 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> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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> ×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]	--	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 SIT S.P.A. for more details and our food grade options

## STR 100 Dimensions with EVB 090



NOTE:

\*\* For EVB-090 dimensions refer EVB section

\*\*\* Optional

ROTATION:

a=d

a=c (upon special request)

## 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> ×10 <sup>-4</sup> ]	*3	14.85	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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 SIT S.P.A. 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> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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> ×10 <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

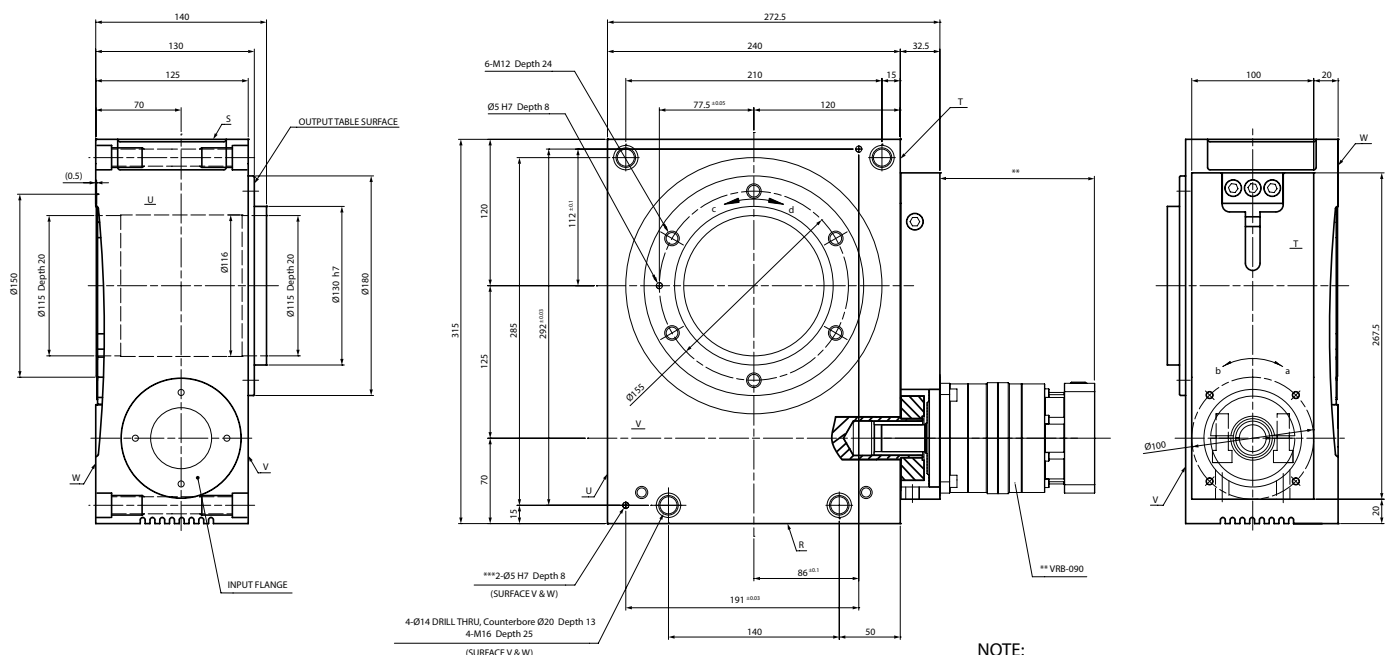
\*4) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details and our food grade options

## 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> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <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> x10 <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> x10 <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> x10 <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 SIT S.P.A. for more details and our food grade options

## STR 125 Dimensions with VRB 090



NOTE:

\*\* For VRB-090 dimensions refer VRB section

\*\*\* Optional

ROTATION:

a=d

a=c (upon special request)

## 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 SIT S.P.A. 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

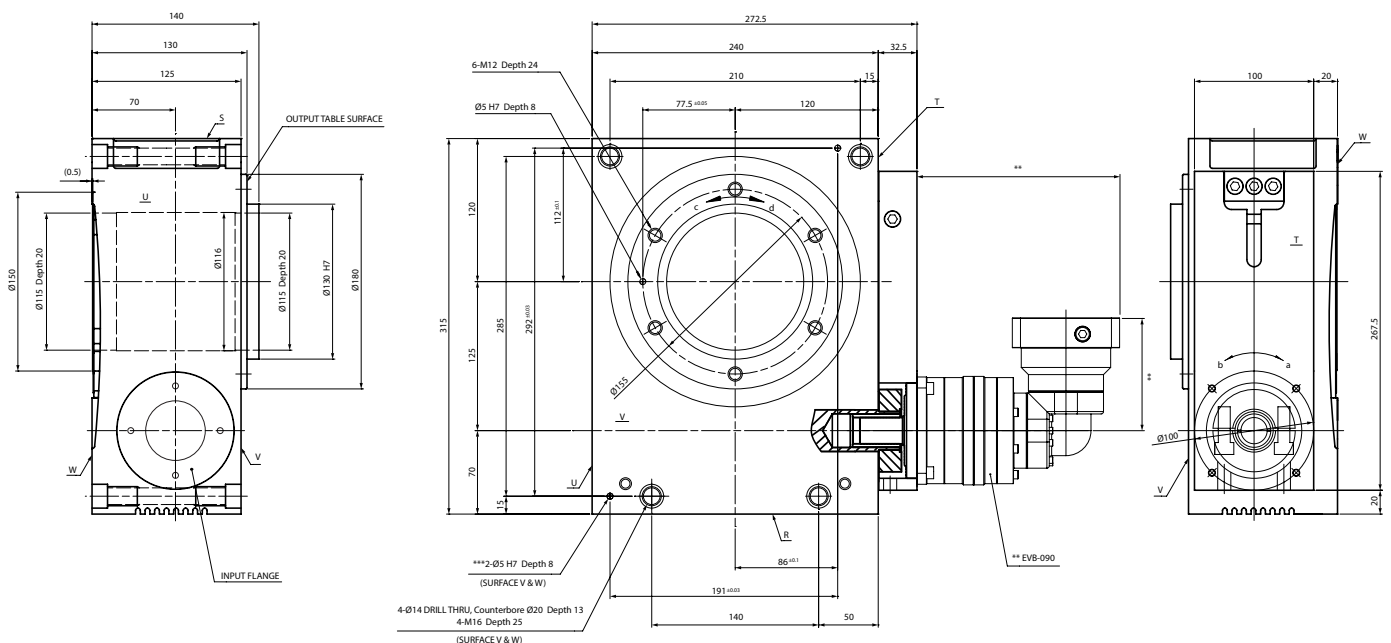
\*4) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details and our food grade options

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

Frame Size	125E									
	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> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 8)	[kg-m <sup>2</sup> x10 <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> x10 <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> x10 <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> 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]	--	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 SIT S.P.A. for more details and our food grade options

## STR 125 Dimensions with EVB 090



NOTE:  
 \*\* For VRB-115 dimensions refer VRB section  
 \*\*\* 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> ×10 <sup>-4</sup> ]	*3	46.99	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 19)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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 SIT S.P.A. 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> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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> ×10 <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

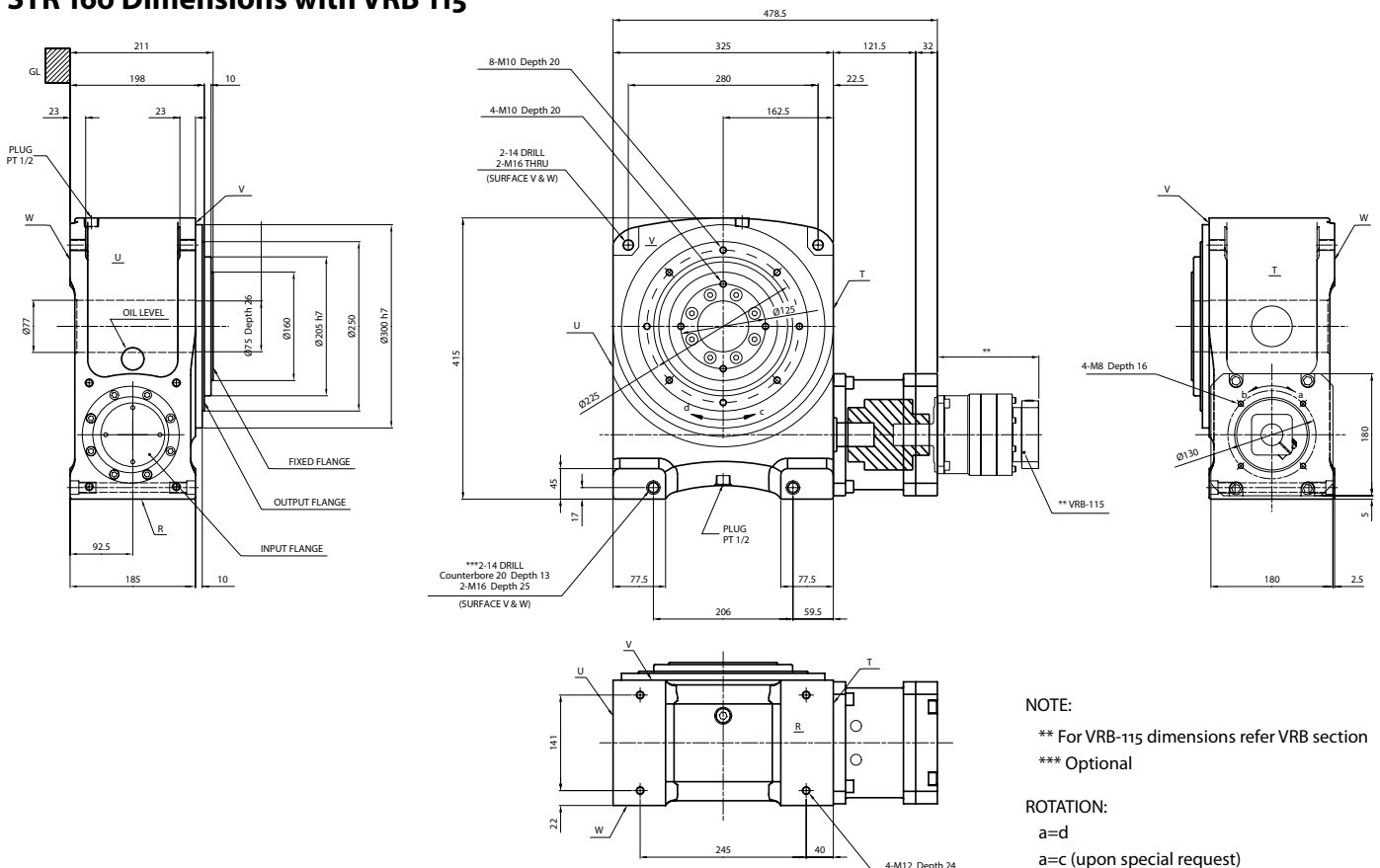
\*4) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details and our food grade options

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

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

- \*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 SIT S.P.A. for more details and our food grade options

## STR 160 Dimensions with VRB 115



STR



## 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> ×10 <sup>-4</sup> ]	*3	46.99	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 19)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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 SIT S.P.A. 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> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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> ×10 <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

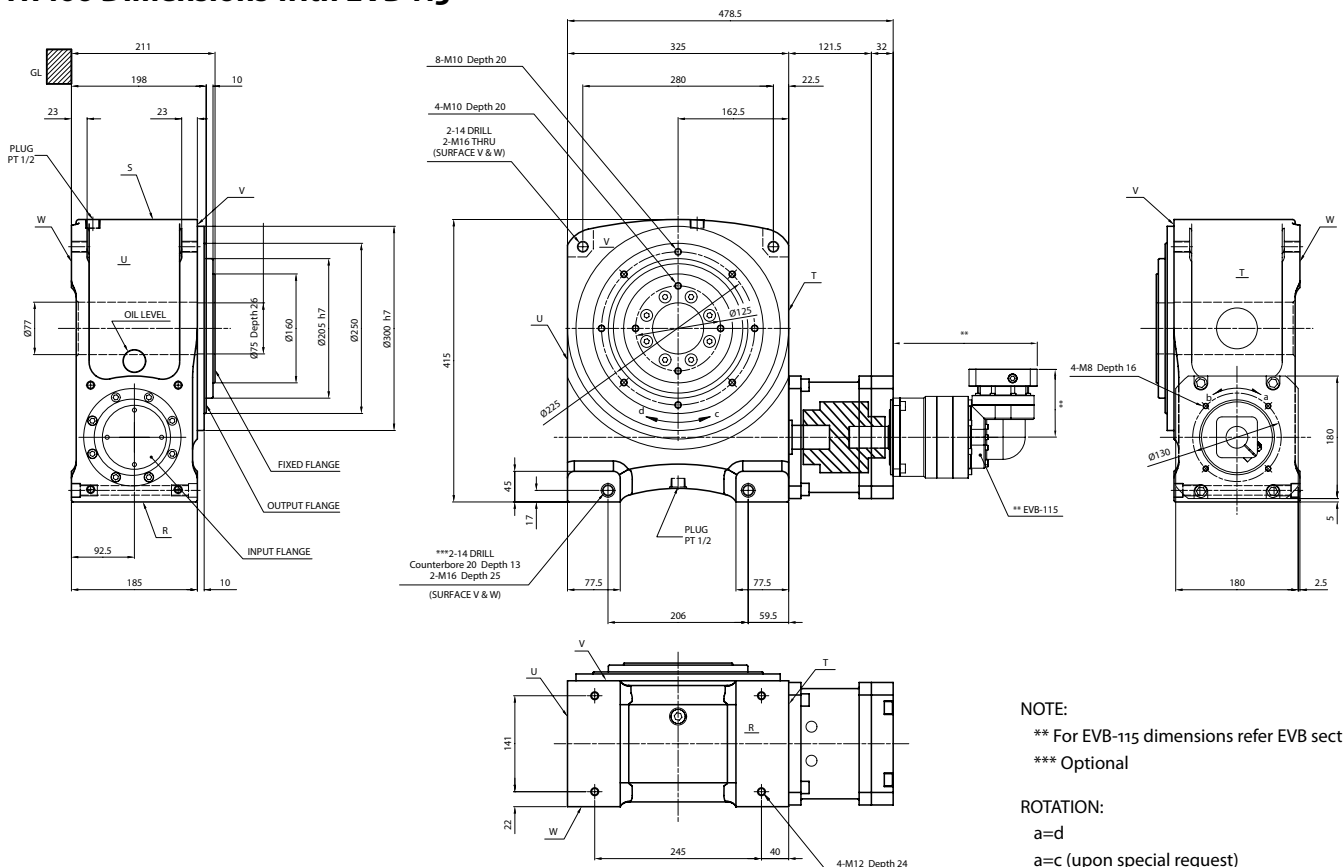
\*3) At input shaft

\*4) IP65 (wash-down) is available as an option. Contact SIT S.P.A. 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> x10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg-m <sup>2</sup> x10 <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> x10 <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> x10 <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> 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]	--	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 SIT S.P.A. for more details and our food grade options

**STR 160 Dimensions with EVB 115**


NOTE:  
 \*\* For EVB-115 dimensions refer EVB section  
 \*\*\* Optional

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

STR

## 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> ×10 <sup>-4</sup> ]	*3	430.0	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 28)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 38)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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 SIT S.P.A. 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> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 28)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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> ×10 <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

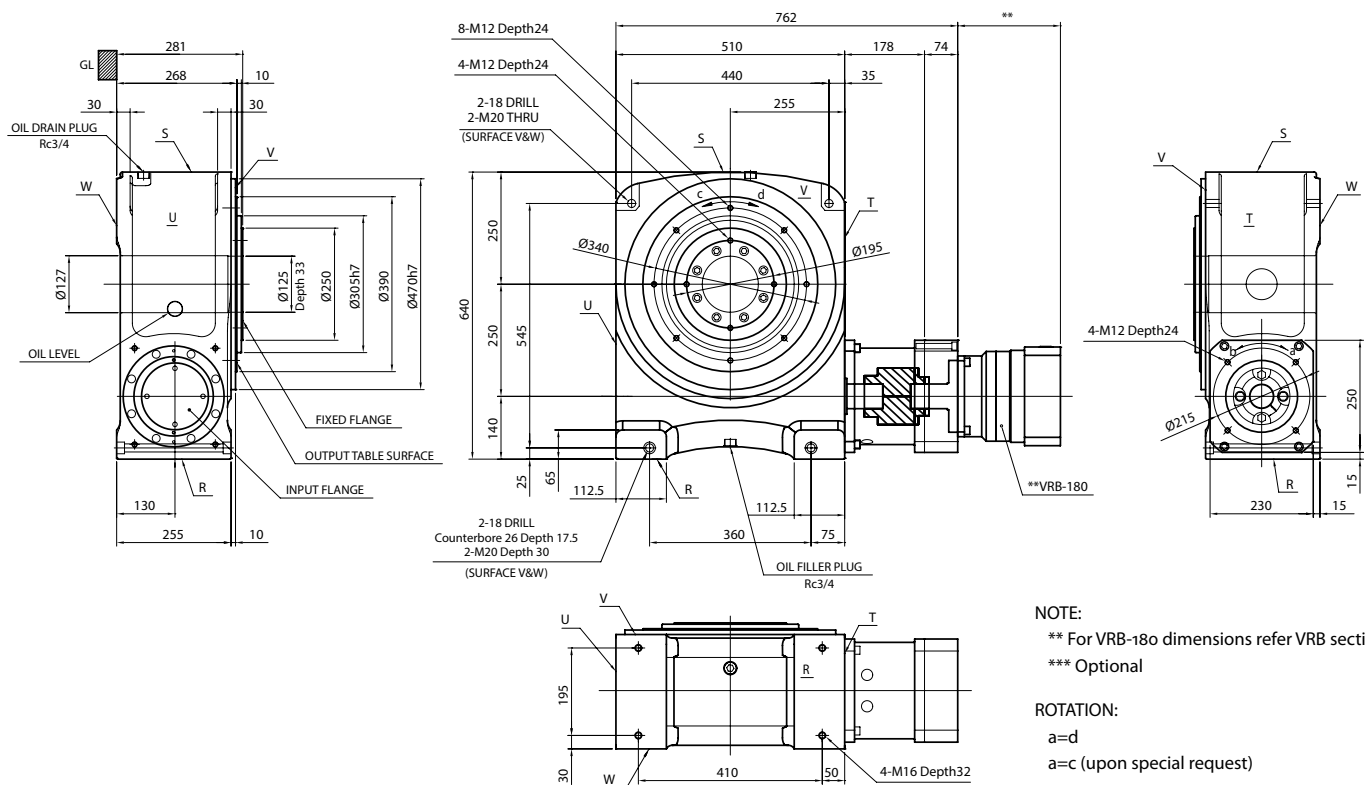
\*4) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details and our food grade options

## 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 SIT S.P.A. for more details and our food grade options

## STR 250 Dimensions with VRB 180



STR

## 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> ×10 <sup>-4</sup> ]	*3	430.041	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 19)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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 SIT S.P.A. 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> ×10 <sup>-4</sup> ]	*3	--	--	--	--	--	--	--	--
Reflected Inertia (≤Ø 14)	[kg·m <sup>2</sup> ×10 <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> ×10 <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> ×10 <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> ×10 <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

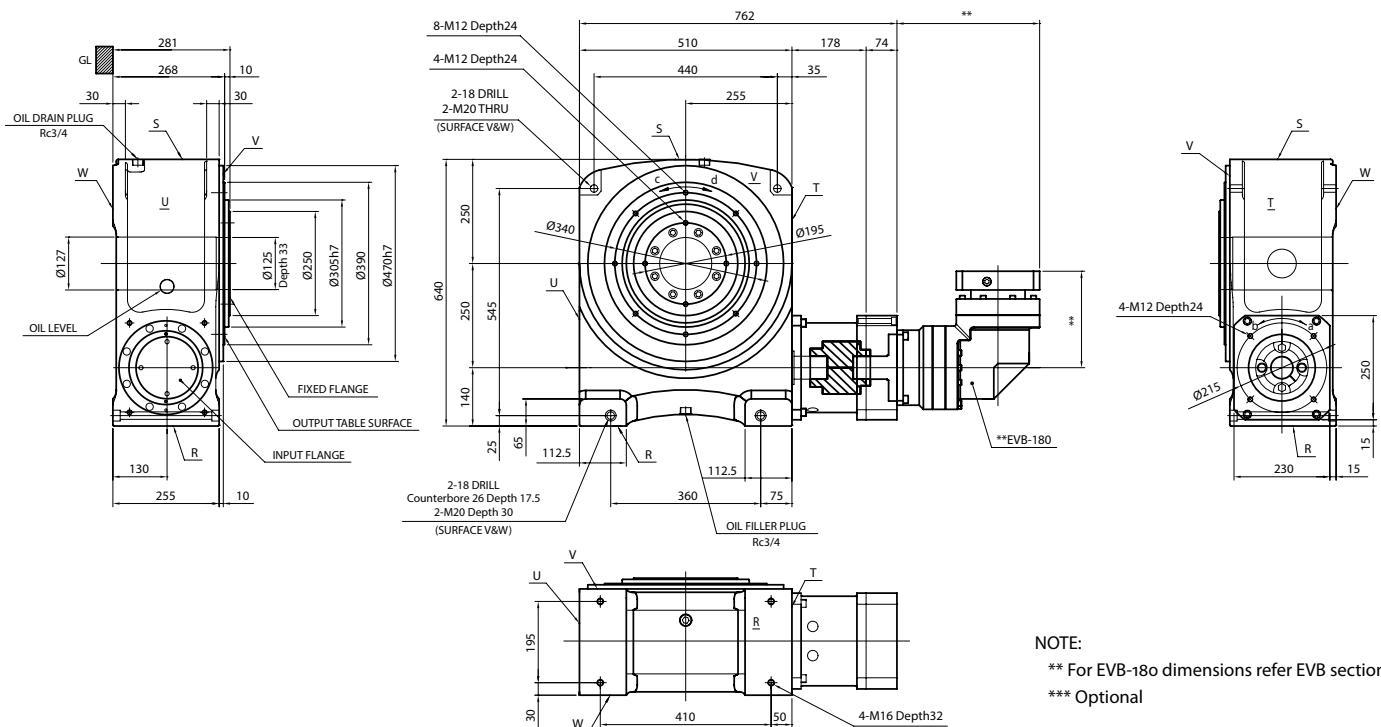
\*4) IP65 (wash-down) is available as an option. Contact SIT S.P.A. for more details and our food grade options

## 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 SIT S.P.A. for more details and our food grade options

## STR 250 Dimensions with EVB 180



STR