

Type SBRU Ball Reducer gearbox

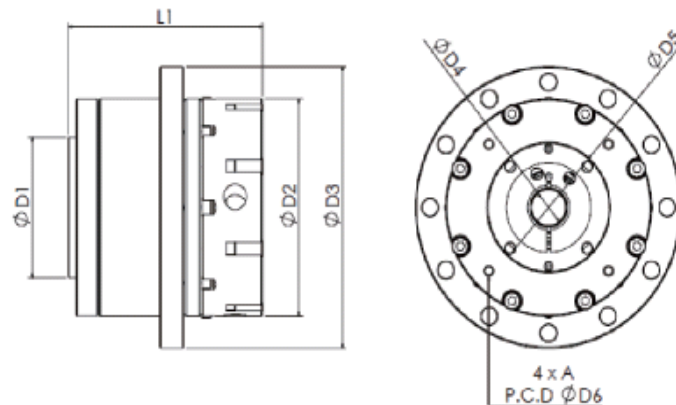
Technology – No gears. Speed reduction is due to non-slip, input torque induced, rolling of ball bearings in smooth accurate epicyclic tracks. Principles of operation can be viewed on several websites.

Standard ratios – 20 to 50/1 in one stage. In planetary, these ratios would require 2 stages of gearing. Contact us for non-listed ratios.

Features—This is our largest diameter rotating flange style reducer. This ball reducer provides inherent low “backlash” of less than ½ arc-min, relative quietness, and high external load carrying ability. Axial body length is shorter than all other reducer types. Specify this reducer for applications requiring smaller max backlash than available in planetary gearboxes of similar size.

This ball reducer can be **“backlash” (tightness) adjusted** with recommended tools and suggested procedures. Upon request, we will provide information for gearbox owners to adjust backlash or tightness at their own risk.

Application --The SBRU is designed for horizontal or vertical axis mounting. Standard circular output flange rotates in a “crossed axis” roller bearing for high loads, rigidity and exceptional compactness. A shaft or turntable can be integrated to the output flange. Standard input contemplates your servo motor.



Selected dimensions (mm)	SBRU110	SBRU130	SBRU200
D1 - rotating output flange	55	60	100
D2 – body diameter	85	104	165
D3 – mounting flange dia.	110	130	200
D4 - motor shaft input dia. (max)	14	14	22
D5 –motor pilot	50/ 60	50/ 60	110
D6 - motor square flange holes	70/ 75	70/ 75	145
L1 – overall length	80.25	83.25	91

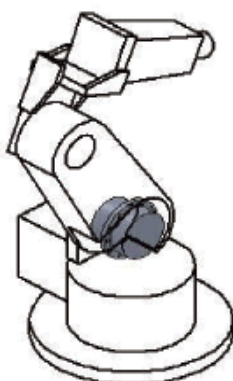
※Please contact us to verify dimension to fit your motor

Performances		Ratio	SBRU110	SBRU130	SBRU200
Nominal Output Torque	Lbf-in/ Nm	20	-	254 / 28.7	-
		30	-	185 / 20.9	809 / 91.4
		40	-	217 / 24.5	1249 / 141
		50	170 / 19.2	185 / 20.9	923 / 104
Max Acceleration Torque	Lbf-in/ Nm	20~50	3 times Nominal Output Torque		
Emergency Stop Torque (1)	Lbf-in/ Nm	20~50	3.4 times Nominal Output Torque		
Permissible Input Speed	rpm	20~50	3000	3000	3000
Standard Max Backlash	Arc- sec	20~50	30 arc - secs	30 arc - secs	30 arc - secs
Max Tilting moment-at flange face	Lb-in/ Nm	20~50	88 / 10	177 / 20	440 / 50
Max. radial force	Lbf/ N	20~50	111 / 495	379 / 1684	446 / 1984
Max. axial force	Lbf/ N	20~50	56 / 248	189 / 842	223 / 981
Rated life (3)	H	20~50	> 10,000		
Operating Temperature Range	°C	20~50	-10°C to +40°C ambient -- 90°C max operating case temperature		
Sound level	dB(A)	20~50	60	61	62
Lubrication		20~50	Lubricated for life (Synthetic Grease)		
Protection class		20~50	IP54		
Gearhead Inertia	kg-cm ²	20~50	0.42	0.56	0.26
Rigidity	Kgf*m/arc min	20-50	0.224	0.45	1.23
Weight	Kg	20-50	2.5	4.3	12.65
Min no-load torque to rotate (2)	Lbf-in/ Nm	20~50	2.3 / 0.25	2.8 / 0.31	7.8 / 0.88

- (1) For 1000 times max during life of gearhead
- (2) At 3000 rpm and 20 °C case temperature
- (3) At permissible input speed and Nominal Output Torque
- (4) Nominal efficiency is 85% at full rated load
- (5) All position mounting

How to Order – state SBRU size and ratio. Provide torque, speed, and dimensions of your motor. We provide selection assistance and suggestions upon request.

Typical SBRU Application:



6 Axis Robot