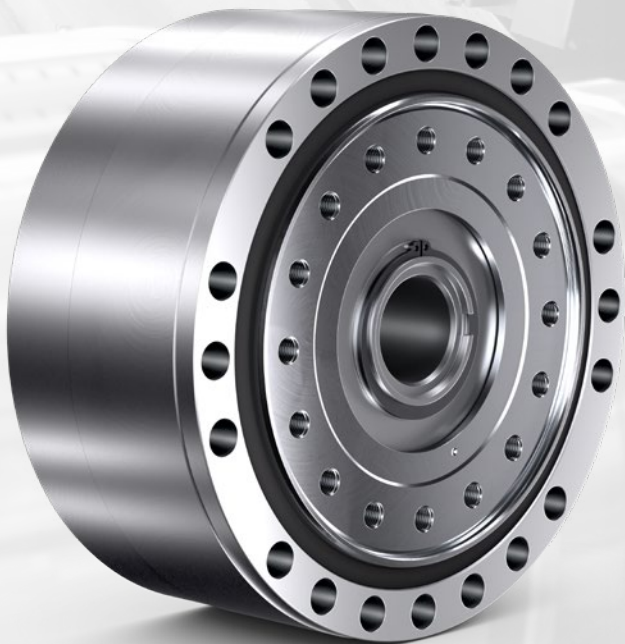


Sumitomo Drive Technologies



FINE CYCLO B-SERIES
PRECISION GEARS

FINE CYCLO B-SERIES

Precise. Compact. Durable.

We are continuously working to further develop our gearbox solutions in order to provide the best possible performance for your application. With the B-Series, we present the consistent next generation and the official successor to the proven A-Series, designed to meet the increasing demands of modern precision applications.

The new B-Series delivers a significant performance increase compared to the A-Series. In key areas such as acceleration torque, stiffness, and torque density, it clearly outperforms its predecessor while at the same time approaching the performance level of higher-positioned series. This results in a noticeable gain in dynamics and robustness—without compromising precision or reliability.

A key feature of the B-Series is its modular design concept. Various output configurations as well as a wide range of motor-side interfaces and adapters allow flexible integration with many different motor types—often without any customer-specific modifications. This significantly reduces integration effort and shortens time-to-market.

In short, the B-Series offers more performance, more flexibility, and more application possibilities—while maintaining a competitive cost structure compared to the A-Series. It has been specifically developed to ensure a future-proof replacement for existing A-Series applications while simultaneously opening up new fields of use.

Thanks to characteristics such as zero mechanical backlash, high torsional stiffness, compact design, and high torque density, the B-Series is ideally suited for a wide range of applications—from automation and handling systems to machine tools and demanding positioning and special-purpose machines—wherever precision and dynamics are critical.

For further details, technical data, and available variants, please visit the B-Series product page.

	Ratio				
	29	59	89	119	179
B15	•	•	•	•	
B25	•	•	•	•	
B35	•	•	•	•	
B45	•	•	•	•	•



Type F4C:
get insights



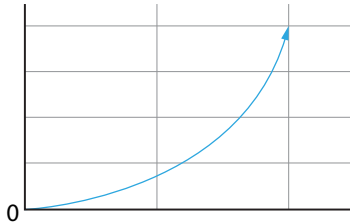
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FROM INSIGHT TO INNOVATION

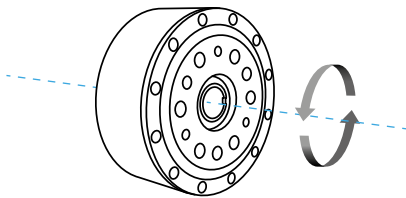
Customer-Driven Engineering

Developed around what machine builders value most: compact packaging, high dynamics, high stiffness, fast availability, and efficient integration. A standardized interface concept and performance-focused design help you build precise, robust axes with less engineering effort.



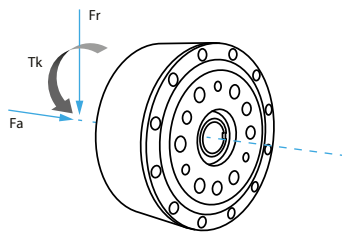
High Acceleration Torque

High acceleration torque supports demanding motion profiles with fast start-stop performance—perfect for indexing, handling, packaging, and high-dynamic positioning tasks.



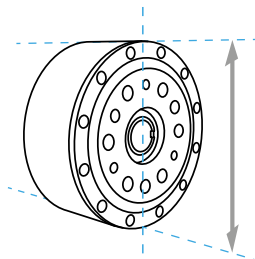
Extended Input Speed Capability

Higher permissible input speeds enable extremely dynamic axis movements and allow efficient use of modern high-speed servo motors.



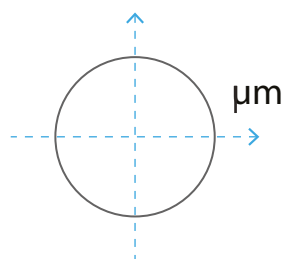
Excellent Tilting Torque Capacity

Built to stay stable under demanding external loads. High tilting torque capacity enhances rigidity and positioning stability—ideal for rotary tables, indexing units, and applications with significant cantilever forces.



Compact Size

The compact outer diameter supports space-saving machine concepts and highly integrated axis designs without compromising rigidity or service life.



Extraordinary Precise Output Runouts

Ultra-precise output runout supports highly accurate positioning and stable machining processes.

THE RIGHT SOLUTION FOR EVERY APPLICATION

B-Series Variants

The portfolio covers compact, “plug and play” gearbox units as well as gearbox kits, enabling optimal integration into a wide range of machine concepts. Both variants combine zero mechanical backlash, high stiffness and overload capacity, providing reliable performance for precise, dynamic motion control.



FC-B “KIT-Type”

Precision Engineered for Total Design Freedom

The FC-B gearbox kit focuses on the core function of precise torque transmission while enabling maximum flexibility for customer-specific machine concepts. It supports application-specific integration concepts where interfaces, bearings, and surrounding structures are individually defined by the machine builder.

- Cost-efficient precision gearbox kit
- Maximum design freedom for custom machine concepts
- Extreme stiffness and peak torque capability
- Zero mechanical backlash for high positioning accuracy
- Ideal for dynamics and customised solutions surrounding

The smart choice for flexible machine designs with uncompromising precision.



F4C-B “Main Bearing Type”

Compact Precision Meets Maximum Performance

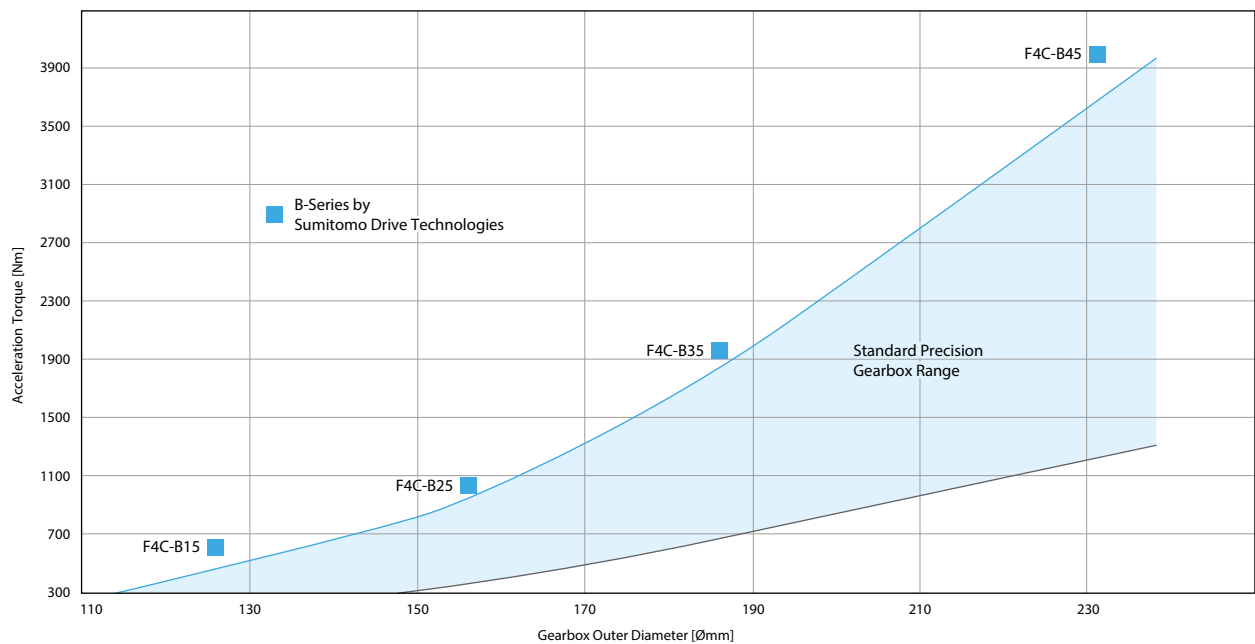
The F4C-B gearbox with integrated main bearings is the perfect all-round solution for demanding automation applications. Its compact, sealed design combines outstanding precision with impressive robustness.

- Compact, plug-and-play precision gearbox
- Zero mechanical backlash for precise motion transmission and high positioning accuracy
- High stiffness and overload capacity
- Compact and completely sealed design
- Ideal for versatile automation applications

The ideal choice when precision, reliability and compactness matter most.

SETTING NEW STANDARDS

Superior Acceleration Torque

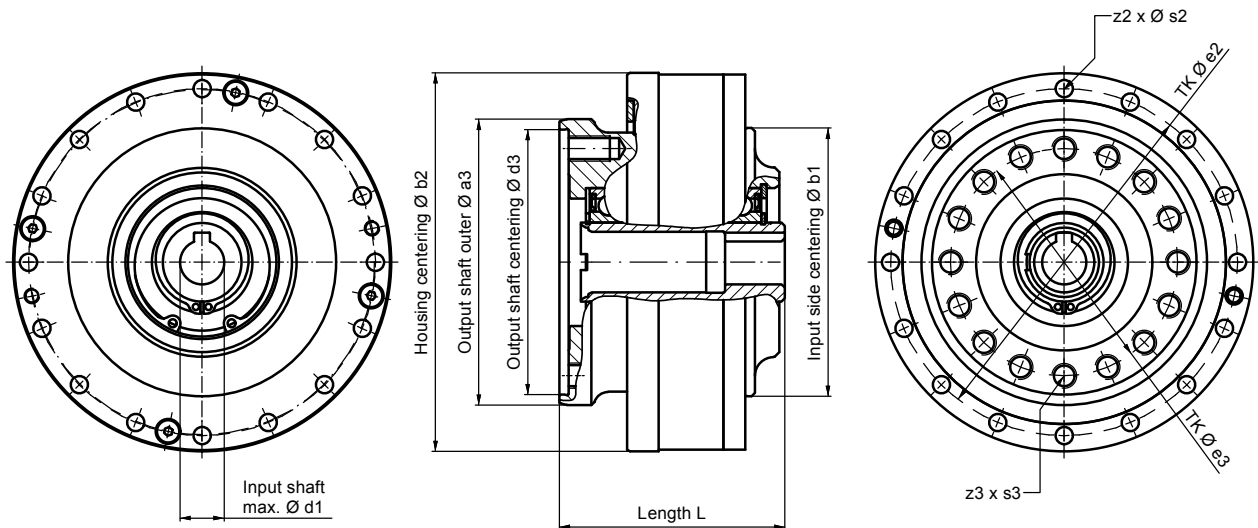


Size	Type	NOMINAL OUTPUT TORQUE T_{2n} @ 600rpm [Nm]	MAX. ACCELERATION AND DECELERATION TORQUE T_{2a} [Nm]	PEAK TORQUE FOR EMERGENCY STOP T_{2max} [Nm]
B15	F4C	306	417 613	834 1226
B25	F4C	591	883 1029	1766 2058
B35	F4C	1080	1717 1960	3434 3920
B45	F4C	2066	3189 4000	6378 8000

Size	PERMISSIBLE INPUT SPEED n_{imax} [rpm]	PERMISSIBLE INPUT SPEED n_i 50% ED [rpm]	PERMISSIBLE INPUT SPEED n_i 100% ED [rpm]
B15	6400	5600	2800
B25	5490	4200	2100
B35	4330	3300	1650
B45	3500	2600	1300

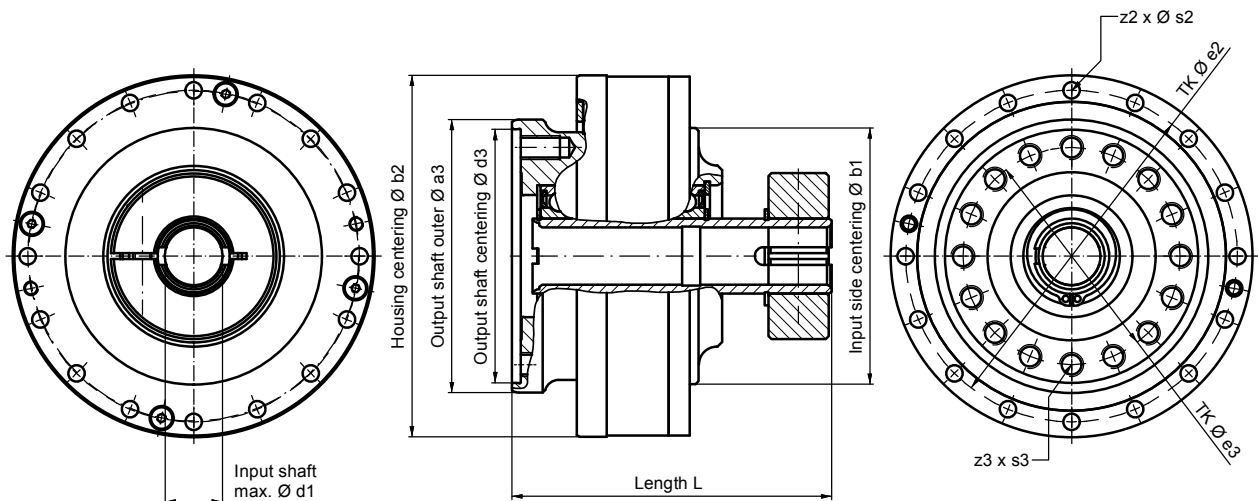
B-SERIES (FC-B)

Dimensions



FC-B Keyway

Size	L	$\varnothing b2$ h7	$\varnothing e2$	z2	$\varnothing s2$	$\varnothing b1$ h7	$\varnothing d3$ H7	$\varnothing e3$	z3	s3	$\varnothing a3$	$\varnothing d1$ max.	Mass
FC-	[mm]	[mm]	[mm]		[mm]	thread	[mm]	[mm]		thread	[mm]	[mm]	[kg]
B15	71,5	120	110	16	5,5	85	84	72	16	M8	90,6	14	3,5
B25	81,3	147	135	16	6,6	110	106	90	18	M8	114,6	19	6
B35	93,5	184	168	16	9	135	133	110	18	M10	140,6	24	11,4
B45	109	220	202	18	9	170	167	140	18	M12	174,6	35	19,4

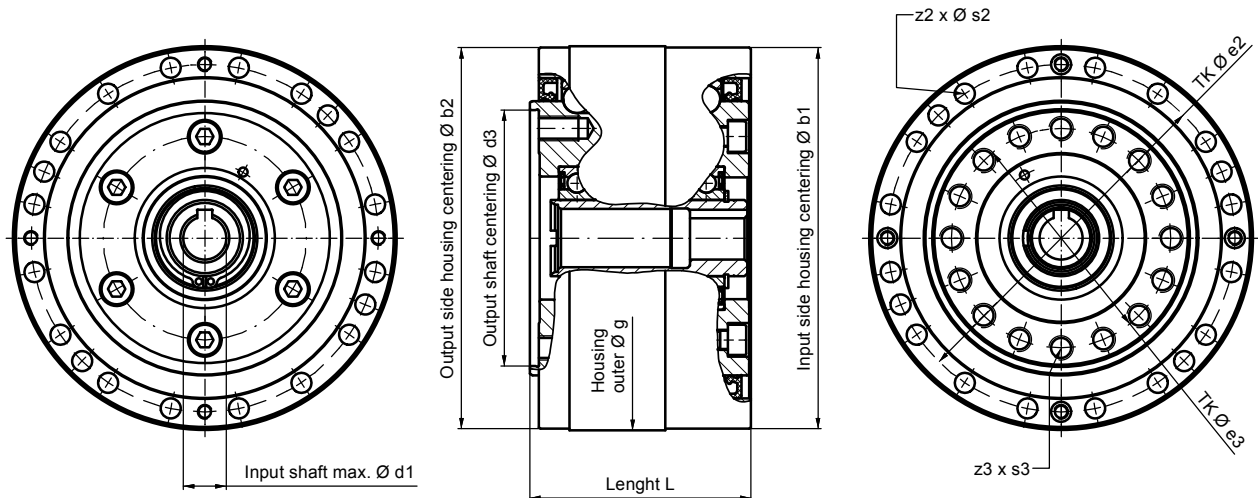


FC-B Clampring

Size	L	$\varnothing b2$ h7	$\varnothing e2$	z2	$\varnothing s2$	$\varnothing b1$ h7	$\varnothing d3$ H7	$\varnothing e3$	z3	s3	$\varnothing a3$	$\varnothing d1$ max.	Mass
FC-	[mm]	[mm]	[mm]		[mm]	thread	[mm]	[mm]		thread	[mm]	[mm]	[kg]
B15	106,1	120	110	16	5,5	85	84	72	16	M8	90,6	19	3,6
B25	114	147	135	16	6,6	110	106	90	18	M8	114,6	24	6,2
B35	127	184	168	16	9	135	133	110	18	M10	140,6	32	11,6
B45	150	220	202	18	9	170	167	140	18	M12	174,6	38	20

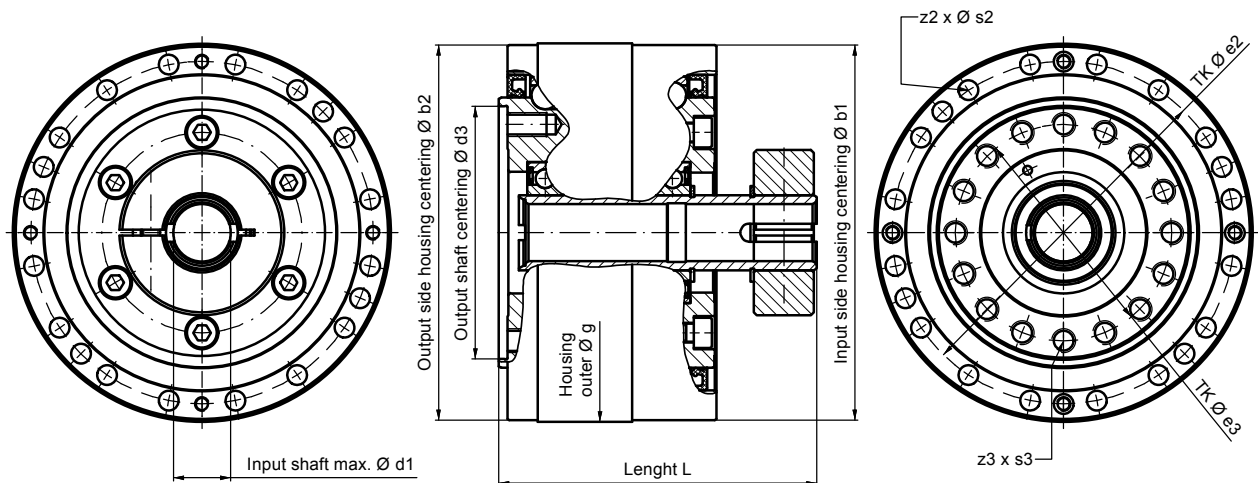
B-SERIES (F4C-B)

Dimensions



F4C-B Keyway

Size	L	$\varnothing g$	$\varnothing b2$ h7	$\varnothing e2$	z2	$\varnothing s2$	$\varnothing b1$ h7	$\varnothing d3$ H7	$\varnothing e3$	z3	s3	$\varnothing d1$ max.	Mass
F4C-	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]	[mm]	thread	[mm]	[mm]	[kg]
B15	72,5	126	125	114	20	6,6	125	84	72	16	90,6	14	3,5
B25	83,1	156	155	142	22	9	155	106	90	18	114,6	19	6
B35	93,5	186	185	171	18	9	185	133	110	18	140,6	24	11,4
B45	108,5	231	230	210	18	13,5	230	167	140	16	174,6	35	19,4



F4C-B Clampring

Size	L	$\varnothing g$	$\varnothing b2$ h7	$\varnothing e2$	z2	$\varnothing s2$	$\varnothing b1$ h7	$\varnothing d3$ H7	$\varnothing e3$	z3	s3	$\varnothing d1$ max.	Mass
F4C-	[mm]	[mm]	[mm]	[mm]		[mm]	[mm]	[mm]		thread	[mm]	[mm]	[kg]
B15	106	126	125	114	20	6,6	125	84	72	16	M8	19	5
B25	114	156	155	142	22	9	155	106	90	18	M8	24	8,6
B35	127	186	185	171	18	9	185	133	110	18	M10	32	14,3
B45	149,5	231	230	210	18	13,5	230	167	140	16	M12	38	24,9



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