CONVUM

SGP-BFL(Palletizer Buffer Flange Set)Instruction Manual

Thank you for purchasing the SGP-BFL (Palletizer Buffer Flange Set). We appreciate your continued support. Please read this instruction manual carefully before use and keep it in a safe place for future reference.

Safety Precautions and Warnings

・The precautions described in this manual are intended to ensure the safe and proper use of our products and to prevent personal injury and property damage.

・The precautions are classified into three categories, "Danger," "Warning," and "Caution," according to the severity and immediacy of personal injury or property damage that may result from improper handling.

⚠ Danger ・・・ If the product is handled incorrectly, there is an imminent risk of death or serious injury.

⚠ Warning・・・ If the product is handled incorrectly, there is a risk of death or serious injury.

⚠ Caution・・・ If handled incorrectly, there is a risk of injury or property damage.

【Precautions for Use】

⚠ Danger

・Do not use this product for purposes other than its intended use.

⚠ Warning

・Provide an appropriate safety design to prevent accidents caused by a decrease in vacuum pressure due to a power failure or a failure of the compressed air supply.If the palletizer connected to this product loses its suction force, the workpiece being transported may fall, resulting in injury to personnel or damage to machinery and equipment. Therefore, take sufficient safety measures to prevent the workpiece from falling.

・Install the product securely so that the connection does not become loose. If the product is not installed securely, it may come off, resulting in injury or damage to equipment.

・Never disassemble or modify this product.

⚠ Caution

・Apply a thread-locking agent to threaded connections as necessary to prevent them from loosening.

・When pressing the palletizer against a workpiece, make sure that the applied force and speed do not place excessive loads on the palletizer or the Buffer Flange Set.

【Maintenance and Inspection Procedures】

・Before performing maintenance or servicing, make sure that compressed air is not being supplied and that the power to externally connected equipment is turned off.

・Periodically check the threaded connections for looseness.

2. Specifications

The Buffer Flange Set is effective when the workpiece to be handled by the palletizer is tilted.

The Buffer Flange Set can accommodate workpiece inclination up to a total angle of 10° .

Compatible robot manufacturers and robot models vary depending on the type, as shown in the table below (pages 2-3).

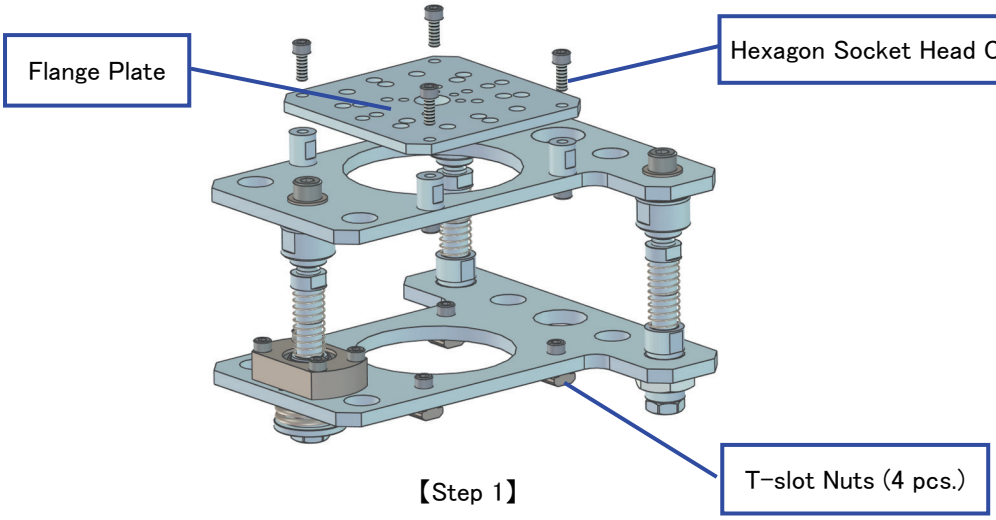
Type	Manufacturer	Model	Payload (kg)	Flange Mounting P.C.D.	Mounting Thread	Positioning Pin Hole
SGP-BFL-A	Common	-	-	P.C.D.31.5	4-M5	φ5
	Kawasaki Heavy Industries, Ltd.	RS030N	30.0	P.C.D.80	6-M8	2-φ8
		RS050N	50.0			
		RS080N	80.0			
		RD080N	80.0			
	Toshiba Corporation	TVM1500	10.0	P.C.D.50	4-M6	φ6
		TVM1200	15.0			
		TVM900	20.0			
	FANUC CORPORATION	M-710iC/50T	50.0	P.C.D.100	10-M8	φ8
		M-710iC/50S	50.0			
		M-710iC/50H	50.0			
		M-710iC/50E	50.0			
		M-710iC/70T	70.0			
		R-1000iA/80F	80.0			
		R-1000iA/80H	80.0			
		R-1000iA/100F	100.0			
	DENSO CORPORATION	VLA-4025	40.0			
		VLA-6022	60.0			
	Mitsubishi Electric Corporation	RV-35F	35.0	P.C.D.80	6-M8	2-φ8
		RV-50F	50.0			
		RV-70F	70.0			
	YASKAWA Electric Corporation	MOTOMAN-GP35L	35.0			
		MOTOMAN-GP50L	50.0			
		MOTOMAN-GP88L	88.0			
		MOTOMAN-MH50II-35	35.0			
		MOTOMAN-MH50II	50.0			
		MOTOMAN-MH80II	80.0			
	Universal Robots	UR3	3.0	P.C.D.50	4-M6	
		UR5	5.0			
		UR10	10.0			

SGP-BFL-B	Kawasaki Heavy Industries, Ltd.	RS010N	10.0	P.C.D.40	4-M6	φ6
		RS010L	10.0	P.C.D.63		
		RS015X	15.0			
		RS020N	20.0			
	DENSO CORPORATION	VM-6083	13.0	P.C.D.40		
		VM-60B1	13.0			
		VMB-2515	25.0			
		VMB-2518	25.0			
	FANUC CORPORATION	M-10iA/10M	10.0			
		M-10iA/10MS	10.0			
		M-20iA/20M	20.0		7-M6	
		M-20iA/35M	35.0			
		M-20iA/20MT	20.0			
		M-20iA/35MT	35.0			
		M-20iB/25	25.0			
		M-20iB/25C	25.0			
		M-20iB/35S	35.0			
		M-710iC/45M	45.0	P.C.D.90	10-M10	φ10
		M-710iC/50	50.0			
		M-710iC/70	70.0			
	Toshiba Corporation	TV1000H	10.0	P.C.D.40	4-M6	φ6
	Mitsubishi Electric Corporation	RV-13FR(M)(C)	13.0			
		RV-13FRL(M)(C)	13.0			
		RV-13F(M)(C)	13.0			
		RV-13FL(M)(C)	13.0			
		RV-20FR(M)(C)	20.0			
		RV-20F(M)(C)	20.0			
	YASKAWA Electric Corporation	MOTOMAN-HP20F	20.0			
		MOTOMAN-MH50II-20	20.0			

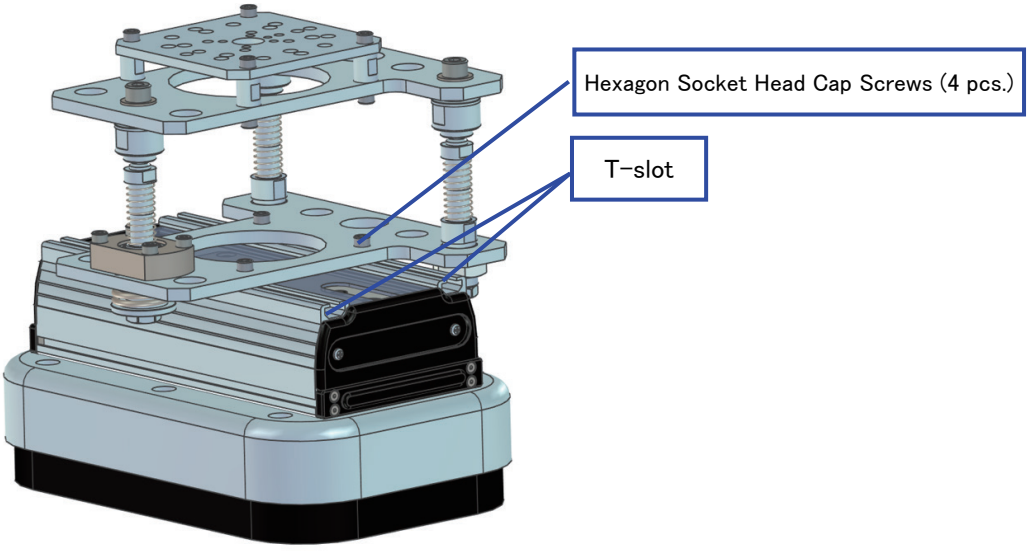
Compatible Robots by Manufacturer (Updated December 2021)

3-1.Installation and Connection (Type: SGP-H-190X250-CRT30 / SGP-H-250X350-CRT30)

1. Remove the four hexagon socket head cap screws securing the flange plate.
2. Install the flange plate onto the robot.
3. Insert the T-slot nuts of the Buffer Flange Set into the two T-slots of the SGP, and tighten the hexagon socket head cap screws. Install the Buffer Flange Set approximately at the longitudinal center of the SGP.
4. Assemble the flange plate mounted on the robot and the Buffer Flange Set using the four hexagon socket head cap screws. Tighten the bolts securely to prevent them from loosening.



【Step 1】



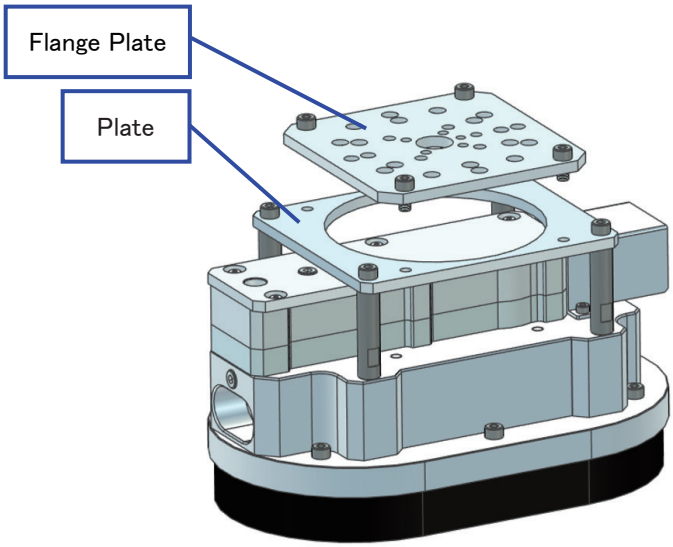
【Step 2】

3-2.Installation and Connection(Type: SGP-H2*-150X250-CRT30)

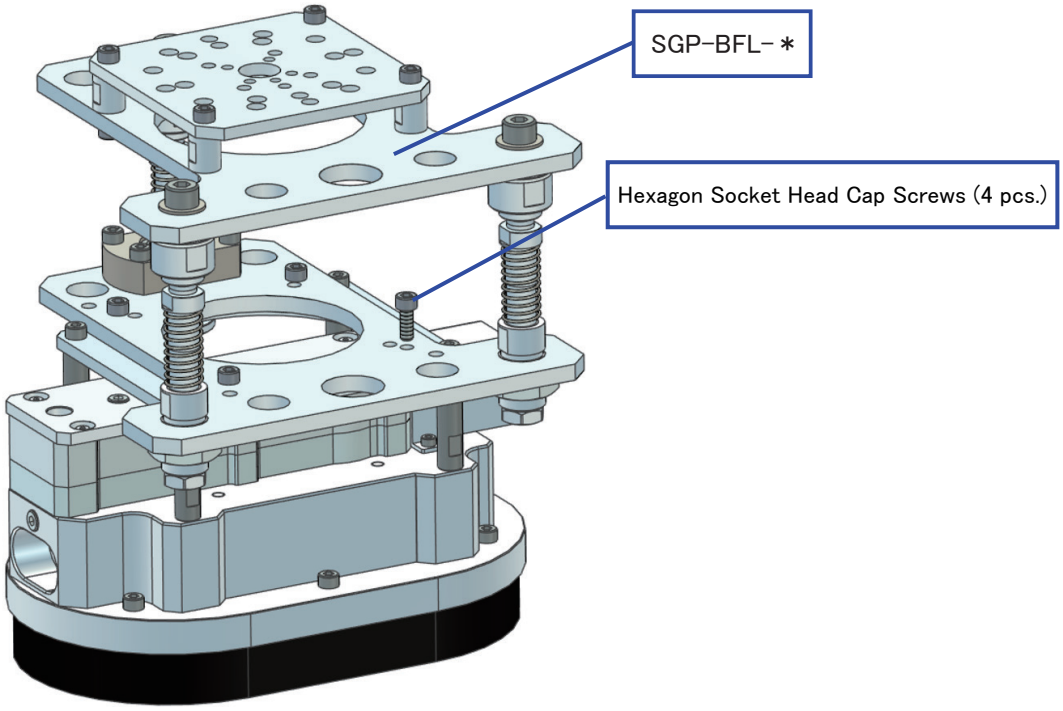
Remove the four hexagon socket head cap screws securing the flange plate, and then remove the flange plate.

Align the plate holes of the SGP-H2 with the connection holes of the SGP-BFL, and securely tighten the four hexagon socket head cap screws to prevent them from loosening.

Refer to Steps 1 and 2 in Section 3-1.



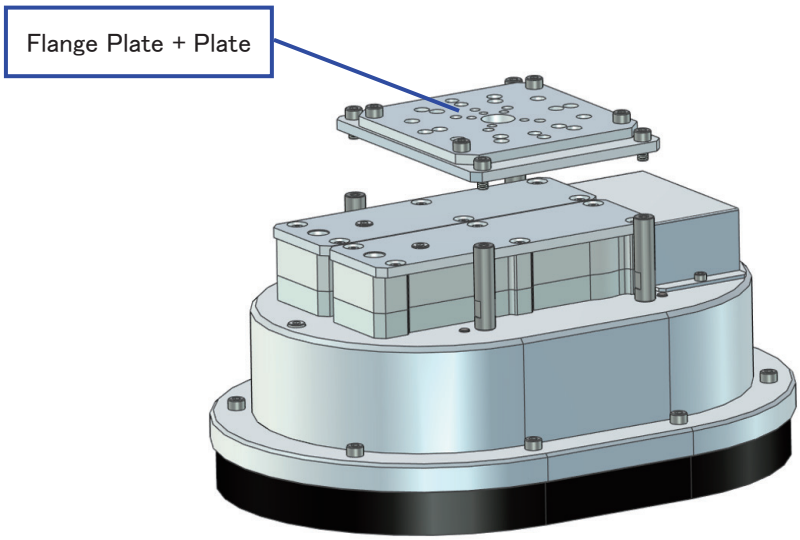
【Step 1】



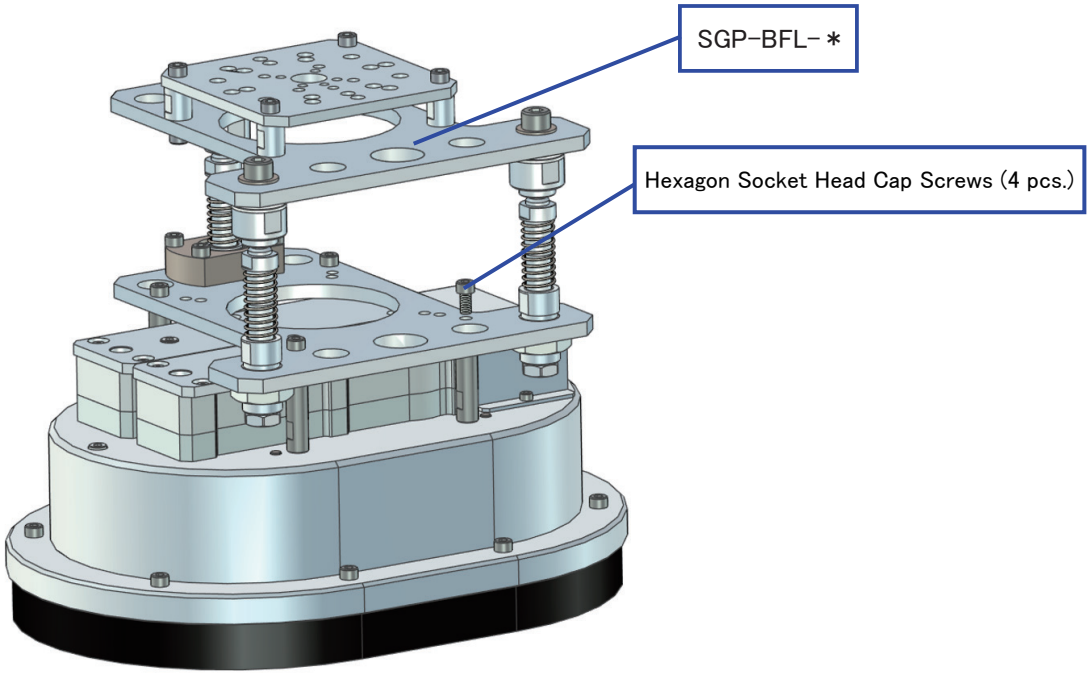
【Step 2】

3-3.Installation and Connection(Type: SGP-H2*-250X350-CRT30)

1. Remove the four hexagon socket head cap screws securing the plate, and then remove the flange plate and plate.
2. Align the support post holes of the SGP-H2 with the connection holes of the SGP-BFL, and securely tighten the four hexagon socket head cap screws to prevent them from loosening.
3. Refer to Steps 1 and 2 in Section 3-1.



【Step 1】



【Step 2】

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