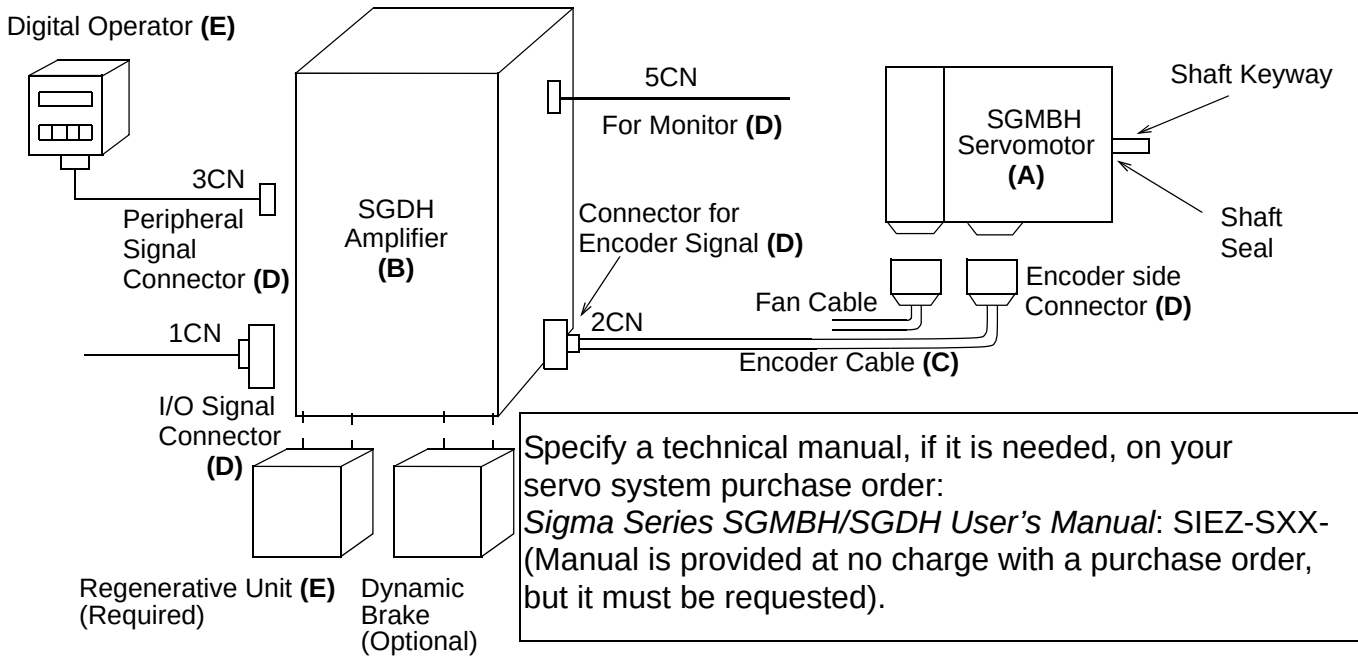
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Selecting Your SGMBH Sigma Servo System

First, select the Sigma servomotor suited for your application using SigmaSize: the Yaskawa servomotor sizing software, available at no charge. (Request SigmaSize software via e-mail, at: literature@yaskawa.com).
Use the diagram below to locate and identify the components of your system. Each item is letter-coded and cross-referenced in the option tables on the following pages.

System Configuration



Specify a technical manual, if it is needed, on your servo system purchase order:
Sigma Series SGMBH/SGDH User's Manual: SIEZ-SXX-
(Manual is provided at no charge with a purchase order, but it must be requested).

Model Number Designation

SGMBH - 2B D C A 6 1

Sigma Servomotor Type
- SGMBH

Rated Output
- 2B: 22.0kW (30hp)
- 3Z: 30.0kW (40hp)
- 3G: 37.0kW (50hp)
- 4E: 45.0kW (60hp)
- 5E: 55.0kW (74hp)

Power Supply
- D: 400 VAC Series

Encoder Specifications
- C: 17-Bit Incremental Encoder
- 2: 17-Bit Absolute Encoder

Design
- A: Standard (Revision)

Specifications
- 6: Flange, straight shaft with key and tap (Up to 45kW)
- L: Foot mount, straight shaft with key and tap (55kW only)

Accessories
- 1: None
- C: $24V_{DC}$ Brake (22+30 Kw Only)
- S: Shaft Seal
- E: Brake and Shaft Seal

Servomotor & Amplifier Selection

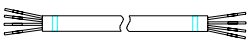
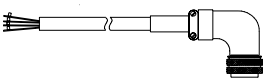
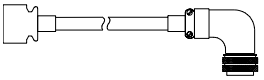
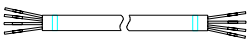
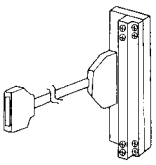
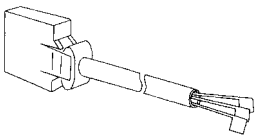
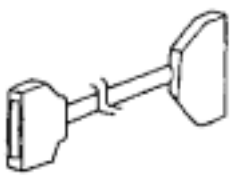
Use the table below to select the appropriate SGMBH Sigma servomotor and amplifier
(Refer to the motor model # designation on the previous page specifying the available modification to motor construction/features.).

Description	Peak Torque (in•lb)	Rated Torque (in•lb)	Motor Inertia (in•lb•s^2 x 10^{-3})	Motor MODEL # **(A)**	Amplifier MODEL # **(B)*** Analog/Digital Input SGDH-	Regenerative Unit	Motor and Amplifier Item Class
400V 3-Phase 17-Bit Incremental Encoder Straight Shaft with Keyway 2000rpm maximum MS Connectors	2480	1240	525	SGMBH-2BDCA61	2BDE	JUSP-RA12	Non-Stock
				SGMBH-2BDCA6C			
	3380	1690	685	SGMBH-3ZDCA61	3ZDE	JUSP-RA13	
				SGMBH-3ZDCA6C			
	4170	2090	1230	SGMBH-3GDCA61	3GDE	JUSP-RA14	
	5060	2530	1336	SGMBH-4EDCA61	4EDE	JUSP-RA15	
	6120	3100	1750	SGMBH-5EDCAL1	5EDE	JUSP-RA16	

Note: 24V$_{DC}$ brakes for SGMBH Sigma servomotors are standard. Contact a local source for 24V$_{DC}$ power supplies.
* External regenerative units are required.
Consult factory for availability of 37KW, 45KW, and 55KW motors with holding brakes.

Pre-wired Cable Selection

Use the table below to select pre-wired cables for your SGMBH Sigma servomotor.

Cable Description **(C)**		Motor Size (kW)	Part Number		Comments	Item Class
			Without Brake	With Brake		
Recommended Power Cable ***		22	4×6AWG	4×6AWG 2×14AWG	Based on 30°C ambient temperature — —	Source Locally
		30	4×4AWG	4×4AWG 2×14AWG		
		37	4×2AWG	4×2AWG 2×14AWG		
		45, 55	4×1AWG	4×1AWG 2×12AWG		
SGMBH Fan Power Cable		All	B1E-□□(A)**		Use following key to specify cable length (last digit of part #): 03: 3m 05: 5m 10: 10m 15: 15m 20: 20m	Stock*
			B1CE-□□(A)**			
Encoder Cable (incremental or absolute)			JZSP-CMP22-□□(A)**		Use following key to specify cable length (last digit of part #): 03: 3m 05: 5m 10: 10m (standard) 15: 15m 20: 20m	
Encoder Cable Only for solder connections (up to 50m)			JZSP-CMP29 - _ _		Use following key tospecify cable length (last digit of part #): 20: 20m 50: 50m	
Input/Output 1CN Cable & Transition Terminal lock			JUSP-TA50P		35mm DIN rail mountable; the cable length is 0.5m.	
Input/Output 1CN Cable with Pigtail Leads			JZSP-CKI01-□(A)**		Use following key to specify cable length (last digit of part #): 1: 1m (standard) 2: 2m 3: 3m	
Input/Output 1CN Cable Cable with Female D-Sub output Connector****			JZSP-CKI0D-□□		Use following key to specify cable length (last two digits of the part number): D50: 0.5m 01: 1m (standard) 02: 2m 03: 3m	

* Standard cable lengths are Stock items; non-standard cable lengths are Limited Stock items.

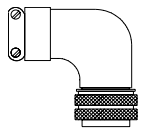
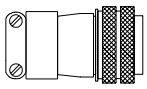
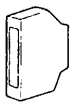
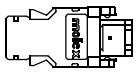
** This part of the cable number is the revision level. Cable revision can change and is independent of this catalog's reprinting.

*** Connectors for power cable should be ring terminals sourced locally by the customer, based on the motor power terminal block screw size given in the dimension pages.

**** 50 Pin Female D-Sub output connector mates to customer supplied third party terminal block. (e.g., Wago #289-449, Weidmuller #919658, Phoenix #2283647, Amphenol/Sine #20-51039, and many others).

Connector Selection

Use the table below to select mating connectors for your SGMBH Sigma servomotor.

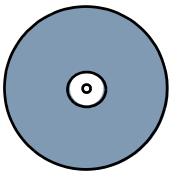
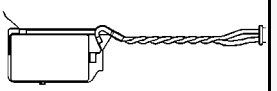
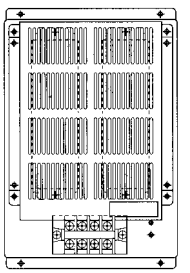
Connector Description **(D)**		Motor Size (kW)	Part Number	Comments	Item Class
MS Connector for Motor Fan*		All	MS3106B18-10S	Straight-type connector	Stock
			MS3108B18-10S	L-type connector	
			MS3057-10A	Cable clamp	
MS Connector for Encoder Cable (incremental or absolute encoder)			MS3106B20-29S	Straight-type connector	
			MS3108B20-29S	L-type connector	
			MS3057-12A	Cable clamp	
1CN Mating Connector			JZSP-CKI9	Can use 1CN for analog speed and torque monitor service checks.	
2CN Encoder Mating Connector			JZSP-CMP9-1	—	
3CN Peripheral Mating Connector	—		YSC-1	—	
5CN Connector and 1m Cable with Pigtails	—		DE9404559	—	

* Choose either a straight or L-type connector and the associated cable clamp for a complete assembly. For example, L-type connector MS3108B18-10S is compatible with cable clamp MS3057-10A. MS connectors listed in this table are non-environmental.

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Peripheral Device Selection

Use the table below to select peripheral devices for your SGMBH Sigma servomotor.

Component **(E)**		Part Number	Description	Item Class
Hand-held Digital Operator Panel		JUSP-OP02A-1 and JUSP-CM500-1	Portable unit with lm adapter cable for Sigma II.	Stock
SigmaWin+ Software		JZSP-WP0001	Minimum Recommended System Requirements Pentuim 200 MHz, 64MB RAM, 200MB hard drive, CDROM Drive, RS-232 or RS-422 port, Screen rsolution 800x600 w/ 256 colors, and Windows 95,98,NT4.0,2000,ME. (Windows XP planned)	
Absolute Encoder Battery		JZSP-BA01	3.6V, 1000mAh (Lithium Battery)	
Software Interface Cable	—	YS-12	Pre-wired 2.0m cable with 9-pin connector	
Optional Dynamic Brake Unit for 22kW and 30kW amplifiers		JUSP-DB03	—	Non-Stock
Optional Dynamic Brake Unit for 37kW amplifier		JUSP-DB04		
Optional Dynamic Brake Unit for 45kW amplifiers		JUSP-DB05		
Dynamic Brake Resistor Unit for 55kW amplifiers		JUSP-DB06		

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