

Derwent  
Top 100  
Global  
Innovator  
2020

# Drive Solution

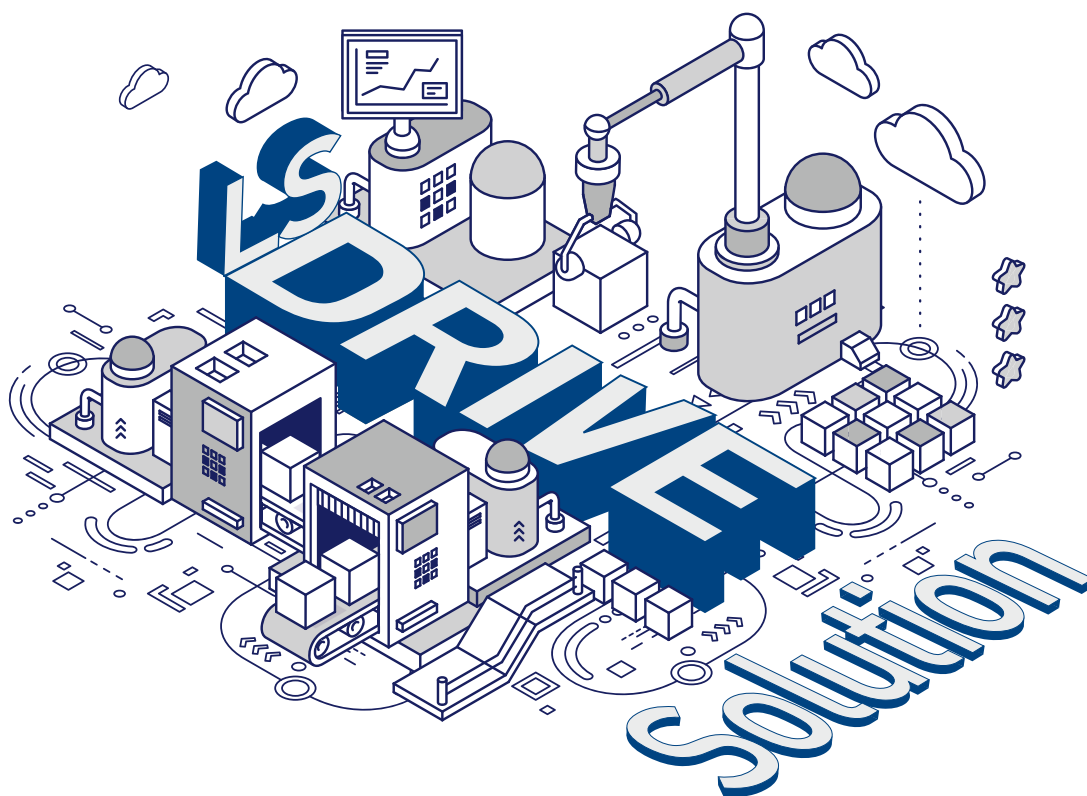
## Low-Voltage Drive

iE5 / M100 / iG5A / G100 / S100 / H100 / iS7 / iV5

**LS**<sup>★</sup>**ELECTRIC**

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# Leading Innovation, Creating Tomorrow

## Realization of innovative energy saving with LS Drive Solution.

40%

Supplies 40% of the drives distributed in Korea

LS Drive is a control component that brings about energy saving as it controls the rotation speed of motors with changing power frequency.

LS, a leading company that first introduced a universal drive in Korea, has both obtained a lot of certificates on high-efficiency drives and produces more than 40% of the drives supplied in Korea.

LS offers an optimal solution for high efficiency and energy saving solution in various industries with the iG5A, the best-selling(3 mil.) general purpose product; the iS7, the representing LS standard line-up; the S100/H100/G100, the innovative new 100 series. Additionally, it has a medium-voltage drive that is capable of handling capacity up to 12.5MVA. It is carving out new spaces in the high value-added market such as power generation, shipbuilding, marine, cement, metal and power plant industries. With our solutions, LS was ranked top in KS-QEI (Korean Standard – Quality Excellence Index) in the area of customer satisfaction for 4 years in a row from 2013.

LS is taking a leap from the domestic leader in the drive market to a global leader and expanding the overseas market by developing differentiated products for each country and application and pursuing continuous activities for customer satisfaction.

# Fulfilling the ultimate convenience with the optimal automation environment

LS provides our customers with the best solution with a configured automation environment, ranging from various unit machineries to large-scale process control.



## Total Solution

LS offers a total solution instead of merely selling devices. We provide an optimal solution for our customers with our product competitiveness and delivery performance in various areas, including fans, pumps, compressors, conveyors, winding machines and extruders. With LS drives, you will meet with a new experience of increased productivity, improved product quality and reduced maintenance cost.

## For Purchase to Maintenance With our Experts

You may receive specialized support from purchase to maintenance with our global LS network organization. Our experts will accompany you for purchase, installation, test (trial) run and maintenance.



## LS Global Network

We have 96 special agents, 62 specialty stores, 22 authorized service depots and 4 tech-shops in Korea, offering quick and convenient services for our customers.

We have a corporation all over the world, including China, Japan, Vietnam, U.S.A, U.A.E and the Netherlands, and have 224 partners in 77 countries.

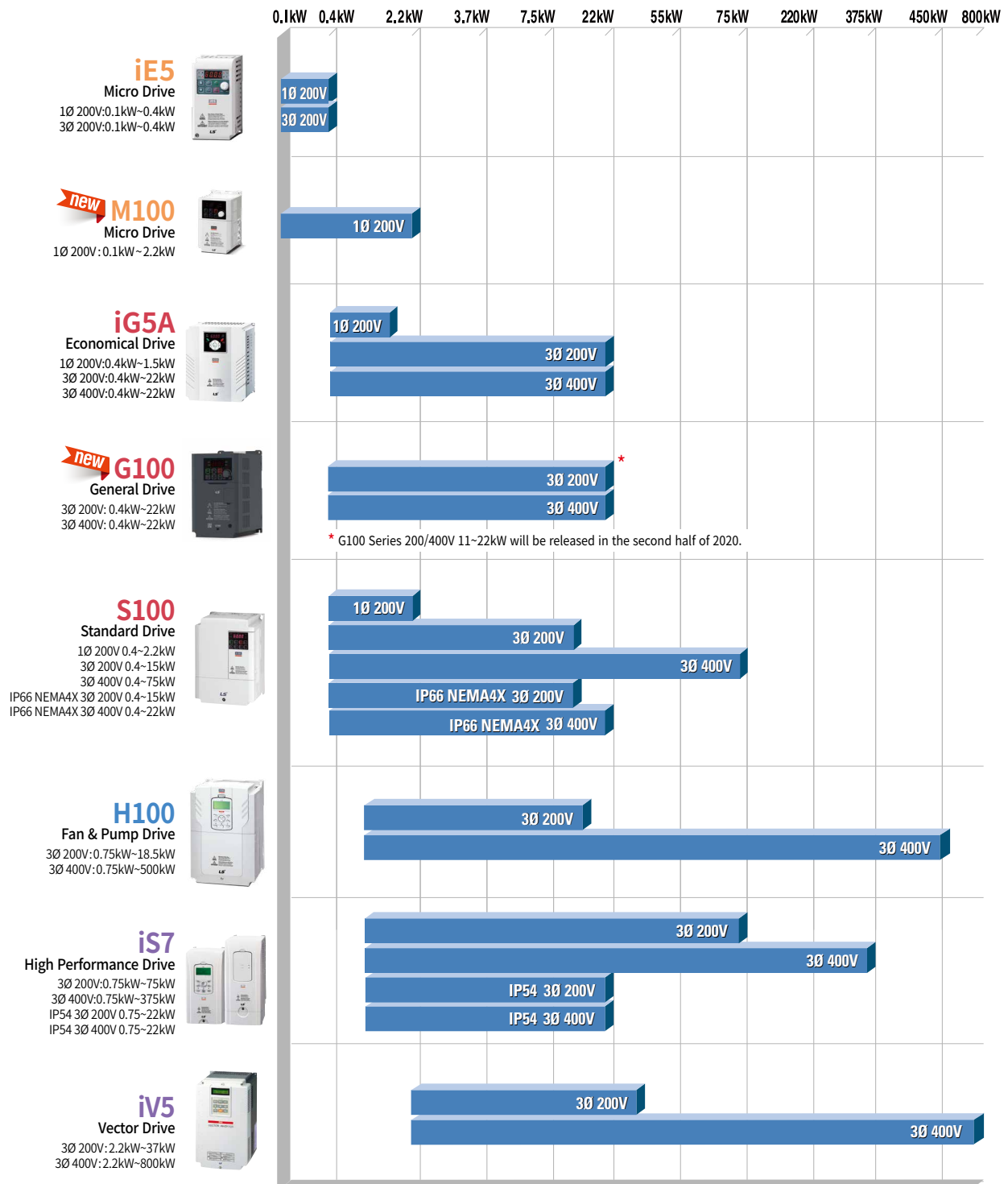
- ① General Drive G100 **new**
- ② Micro Drive M100 **new**
- ③ Standard Drive S100
- ④ Micro Drive iE5
- ⑤ Economical Drive iG5A
- ⑥ Fan/Pump-only Drive H100



- ⑦ Standard Drive S100 (NEMA4X IP66)
- ⑧ Fan/Pump-only Drive H100
- ⑨ High-Performance Standard Drive iS7
- ⑩ Standard Drive S100
- ⑪ Vector Drive iV5

# LS Drive at a Glance

LS Drive is characterized by its user-convenience interface, accurate and flexible control, and various functions. LS Drive Series with varied capacities and excellent function will be an optimal option for your company's competitiveness.



# No.1 Drive in Korea! Why do you choose LS Drive?

From 1983 to the present, LS ELECTRIC has won the honor of being ranked 1st in the domestic market share, as well as 1st place in Korean quality satisfaction for 4 consecutive years\*, and 9 consecutive years\*\* in the Derwent Top 100 global innovators. LS ELECTRIC has established itself as a leading company in Korea by standing shoulder-to-shoulder with global companies with the new technology, experience and expertise gained through continuous investment in R&D.

## LS Drive – Main Features



**Energy Saving**



**Product Options**



**Easy to Buy**



**Convenient Installation & Test Run**



**Fast & Convenient A/S**

\* From 2013 to 2016, LS ELECTRIC had was selected as the No. 1 company in the Korean quality satisfaction survey hosted by the ministry of trade, industry and energy and the Korea standards association.

\*\* From 2012 to 2020, LS ELECTRIC has was selected as the derwent Top 100 global innovators by the world's leading academic information service company, 'Clarivate analytics'.

## LS Drive Comparison Table



Series Name		iE5	M100		iG5A	G100	
			Standard I/O	Advanced I/O			
<b>Voltage &amp; Capacity</b>		1Ø 200~230V 0.1~0.4kW 3Ø 200~230V 0.1~0.4kW	1Ø 200~240V 0.1~2.2kW		1Ø 200~230V 0.4~1.5kW 3Ø 200~230V 0.4~22kW 3Ø 380~480V 0.4~22kW	3Ø 200V 0.4~22kW [CT] 3Ø 400V 0.4~22kW [CT]	
<b>Control Mode</b>	V/F	○	○		○	○	
	Slip Compensation	-	○		○	○	
	Sensorless Vector	-	○		○	○	
	Sensored Vector	-	-		-	-	
<b>Overload Capacity</b> *CT; Constant Torque *VT; Variable Torque *HD; Heavy Duty *ND; Normal Duty		Rated current 150%/1min	Rated current 150%/1min		Rated current 150%/1min	CT(HD): Rated current 150%/1min VT(ND): Rated current 120%/1min	
<b>Input Terminal</b>	<b>Multifunction</b>	5 points(P1~P5)	3 points(P1~P3)	5 points(P1~P5)	8 points(P1~P8)	5 points(P1~P5)	
	<b>Analog(Voltage)</b>	1 point(0~10V or 4~20mA)	1 point(0~10V)	1 point(0~10V)	1 point(-10~10V)	1 point(-10~10V)	
	<b>Analog(Current)</b>		-	1 point(4~20mA)	1 point(0~20mA)	1 point(0~20mA)	
	<b>Pulse</b>		-	-	-	-	
<b>Output Terminal</b>	<b>Relay</b>	1 point(A/B/C)	1 point(A/B/C)	2 points(A/B/C, A/C)	1 point(A/B/C)	2 points(A/B/C, A/C)	
	<b>Open Collector</b>	-	1 point	-	1 point	-	
	<b>Analog</b>	1 point(0~10V)	1 point(0~10V)	1 point(0~10V)	1 point(0~10V)	1 point(0~10V)	
<b>Dynamic Braking Unit</b>		-	Built-in: 1.5~2.2kW		Built-in	Built-in	
<b>EMC Filter</b>		-	Built-in (C2)		-	Built-in: 3Ø 400V 0.4~22kW (C3)	
<b>DC Reactor</b>		-	-		Option: 11~22kW	Option: 11~22kW	
<b>Communications (*: Under Development)</b>	<b>Industry Ethernet</b>	EtherNet IP/Modbus TCP(1Port)	-	-	-	-	
		EtherNet IP/Modbus TCP(2Port)	-	-	-	○	
		PROFINET	-	-	-	-	
		Modbus TCP(1Port)	-	-	-	-	
		CC-Link IE	-	-	-	-	
		RAPIEnet	-	-	-	-	
	<b>FieldBus</b>	RAPIEnet+	-	-	-	-	○
		DeviceNet	-	-	-	-	-
		Profibus-DP	-	-	-	-	○
		CANopen	-	-	-	-	○
		CC-Link	-	-	-	-	-
		Modbus RTU	○(Comm. Type built-in)	○(Comm. Type built-in)	○(Built-in)	○(Built-in)	
	<b>Motion</b>	Fnet, Rnet	-	-	-	-	
		LS INV 485	-	○(Comm. Type built-in)	○(Built-in)	○(Built-in)	
		EtherCAT	-	-	-	-	
		<b>BAS (Building Automation)</b>	BACnet/IP	-	-	-	-
BACnet/MSTP	-		-	-	-		
Lonworks	-		-	-	-		
MetaSys N2	-		-	-	-		
<b>Other Options</b>		-	Remote cable(1/2/3/5m), Remote keypad		Remote cable(1/2/3/5m), Remote keypad, Conduit	Remote cable(1/2/3/5m), Remote keypad, Conduit	
<b>Certification</b>		KC, CE, UL, cUL, C-Tick	KC, CE, UL, cUL		KC, CE, UL, cUL, C-Tick	KC, CE, UL, cUL	
<b>Enclosure Type</b>		IP20	IP20		IP20 UL type 1(Conduit option)	IP20 UL type 1(Conduit option)	











S100			H100	iS7	iV5
Standard I/O	Multiple I/O	30~75kW I/O			
1Ø 200~240V 0.4~2.2kW [CT] 3Ø 200~240V 0.4~15kW [CT] 3Ø 380~480V 0.4~75kW [CT]			3Ø 200~240V 0.75~18.5kW 3Ø 380~480V 0.75~90kW 3Ø 380~500V 110~500kW	3Ø 200~230V 0.75~75kW [CT] 3Ø 380~480V 0.75~375kW [CT]	3Ø 200~230V 2.2~37kW 3Ø 380~480V 2.2~800kW DC input type 380~480V 5.5~500kW
○			○	○	-
○			○	○	-
○			-	○	○
-			-	○	○
CT(HD): Rated current 150%/1min VT(ND): Rated current 120%/1min			VT(ND) - 0.75~90kW: 120%/1min - 110~500kW: 110%/1min	CT(HD): Rated current 150%/1min VT(ND): Rated current 110%/1min	Rated current 150%/1min
5 points(P1~P5)	7 points(P1~P7)	7 points(P1~P7)	7 points(P1~P7)	8 points(P1~P8)	7 points(P1~P7), 4 points(FX,RX,BX,RST)
1 point(-10~10V)	1 point(-10~10V)	1 point(-10~10V)	1 point(-10~10V)	1 point(-10~10V)	3 points(-10V~10V, 0~20mA, NTC)
1 point(4~20mA)	1 point(4~20mA)	1 point(4~20mA)	1 point(0~20mA)	1 point(0~20mA)	
-	1 point(0~32kHz)	1 point(0~32kHz)	1 point(0~32kHz)	-	4 points(Encoder signal)
1 point(A/B/C)	1 point(A/B/C)	2 v(A/B/C, A/C)	5 points(A/B/C, A/C, A/C, A/C, A/C)	2 points(A/B/C, A/C)	3 points(A/B/C, A/C, A/C)
1 point	1 point	1 point	1 point	1 point	3 points(Encoder signal, Multifunction)
1 point(0~10V or 0~20mA)	1 point(0~10V or 0~20mA)	2 points(0~10V or 0~20mA)	2 points(0~10V or 0~20mA)	2 points(0~10V, 0~20mA)	2 points(-10V~10V)
Built-in: 0.4~22kW Option: 30~75kW			Built-in: 0.75~30kW Option: 37~500kW	Built-in: 0.75~22W Option: 30~375kW	Built-in: 2.2~22kW Option: 30~800kW
Built-In option: 1Ø 200V 0.4~2.2kW (C2) Built-In option: 3Ø 400V 0.4~4.0kW (C3) Built-in: 3Ø 400V 5.5~75kW (C3)			Built-in: 3Ø 400V 0.75~500kW (C3)	Built-in: 3Ø 200/400V 0.75~7.5kW (C2) 3Ø 200/400V 11~22kW (C3)	-
Built-in: 3Ø 400V 30~75kW			Built-in: 3Ø 400V 37~500kW	Built-in: 3Ø 200V 0.75~22kW 3Ø 400V 0.75~220kW	Option: 3Ø 200V 30/37kW 3Ø 400V 30~800kW
○			-	○	-
-			○*	○	-
○			-	○	-
-			-	-	-
-			-	○	-
-			-	○	-
-			○*	○	-
-			-	○	○
○			-	○	○
○			-	○	-
-			-	○	○
○(Built-in)			○(Built-in)	○(Built-in)	○
-			-	○	-
○(Built-in)			○(Built-in)	○(Built-in)	○(Built-in)
○			-	-	-
-			○*	-	-
-			○(Built-in)	-	-
-			○(Built-in)	○	-
-			○(Built-in)	-	-
-			○(Built-in)	-	-
Extention I/O, Remote cabel(1/2/3/5m), Remote keypad, Flange, Conduit			Extention I/O, Remote cabel(2/3m), Flange, Conduit, Disconnect switch	PLC, Extention I/O, Safety(Built-In option), Synchronous, Position, Binary input, Encoder, 24V Encoder, Remote cable(2/3m)	ELIO, Sin/Cos encoder, Sin/Cos_Endat encoder, Synchronous, Extention I/O, Remote cable(2/3/5m)
KC, CE, UL, cUL, Safety			KC, CE, UL, cUL, [Marin] ABS, BV, CCS, DNV/GL, KR, LR, NK, RINA, RS	KC, CE, UL, cUL, Safety, C-Tick [Marin] ABS, BV, DNV, KR	KC, CE, UL, cUL
0.4~75kW: IP20, UL Type 1(Conduit option) 0.4~22kW: IP66(Indoor use only)			0.75~185kW: IP20 220~500kW: IP00 0.75~500kW: UL Type 1 (Conduit option)	200V Class 0.75~22kW, 400V Class 0.75~75kW : IP21 (UL Type 1(Conduit option)) 200V Class 30~75kW, 400V Class 90~375kW : IP00 (200V Class 30~75kW, IP20(Conduit option)) 0.75~22kW : IP54(UL Type 12)	IP00

# Guide to LS Drive Options








The table below is to guide you in searching for products that are appropriate for your business and load among a wide range of LS drive products. For further information, please contact LS.

Application		Type				Torque		Drive Series						
		Friction Load	Gravity Load	Fluid Load	Inertia Load	CT	VT	M100	G100	S100	H100	iS7	iV5	
 HVAC Refrigerator	Fan			●			●	Optimal	Optimal	Optimal	Optimal	Optimal		
	Pump			●			●	Optimal	Optimal	Optimal	Optimal	Optimal		
	Compressor			●		●		Optimal	Optimal	Optimal	Optimal	Optimal		
 Metals & Materials Management	Fan			●			●	Optimal	Optimal	Optimal	Optimal	Optimal		
	Pump			●			●	Optimal	Optimal	Optimal	Optimal	Optimal		
	Compressor			●		●		Optimal	Optimal	Optimal	Optimal	Optimal		
	Conveyor	●				●		Optimal	Optimal	Optimal	Optimal	Optimal		
	Press				●	●		Optimal	Optimal	Optimal	Optimal	Optimal		
	Winder (Drawing Machine)				●	●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Winder (Stranding Machine)				●	●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Hoist (Hoist)		●			●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Hoist (Trolley, Gantry)	●				●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Synchronized Position Control (Grinder)	●			●	●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Synchronized Position Control (Automatic Lathe)	●			●	●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
 Elevator & Escalator	E/L (High Speed)		●			●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	E/L (Low Speed)		●			●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Synchronized Position Control (Door Open/Close)	●				●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Escalator	●				●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Multistory Parking Space		●			●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
 Textiles	Fan			●			●	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Pump			●			●	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Compressor			●		●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Spinning Machine (Threading & Spinning)				●	●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Winder (Weaving)				●	●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Winder (Knitting)				●	●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Washing & Drying (Washer & Dryer)			●	●	●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Printing					●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Extruder	●				●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Hoist (Hoist)		●			●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
Hoist (Trolley, Gantry)	●				●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal		
 Plastic & Rubber	Fan / Blower			●			●	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Pump			●			●	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Compressor			●		●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Conveyor	●				●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Mixer			●		●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Extruder	●				●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Screw & Vibration Feeder				●	●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Injection Molding	●				●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Winder				●	●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal
	Hoist (Hoist)		●			●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	Hoist (Gantry, Trolley)					●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
	 Energy	Fan			●			●	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal
Pump				●			●	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
Compressor				●		●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
Conveyor		●				●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
Hoist (Hoist)			●			●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
Hoist (Gantry, Trolley)						●		Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	
High-capacity Fan & Pump (Power Generation Industry)				●			●	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	

Optimal    Suitable

Description	Reason(s) for Choosing the Product
<p>It refers to a HVAC system related to heating, ventilation and air-conditioning, and its primary purpose is to control the building or factory's temperature and humidity.</p> <p>A refrigerator requires diverse analogue inputs and contact outputs for constant temperature control.</p>	<ul style="list-style-type: none"> <li>● H100</li> </ul> <p>As a drive exclusive for HVAC, it has exclusive functions applied to Fan/ Pump, including a reservation function, advanced PID, Master/Follower and so forth.</p> <p>iS7 extended IO may be used for multifunction and analogue I/O extension.</p>
<p>Metals are composed of ID/FD Fan/Pump for cooling from the stages of transferring raw materials (conveyor or hoist), casting and winding.</p>	<ul style="list-style-type: none"> <li>● iS7 / iV5 / iG5A / iC5</li> </ul> <p>Unlike other load types, the load of metals is larger, heavier and greater in tension. Thus, products that are equipped with sensor-less and sensed vector control as well as helper roll and winding control are needed.</p> <p>Hoist is used for load transfer also needs products that are easier to ensure torque.</p>
<p>It is a power device used to transport persons or cargo, which consists of a (ultra) high-speed unit for passengers, (medium) low-speed unit for passengers, a unit for view; for hospital; for cargo; for vehicles and dumbwaiter.</p> <p>It requires a high noise level.</p>	<ul style="list-style-type: none"> <li>● iV5 / iV5L / iS7</li> </ul> <p>Sensor-less and sensed vector mode for powerful torque control and E/L-only S/W are provided as a default.</p> <p>In case of iV5, optimal drive is realized with an exclusive position control-based function.</p>
<p>There are a wide range of processes, including threading, drawing, yarn dyeing, warping, beaming, weaving (loom), inspecting gray goods, refining, reducing, washing, dyeing and stenter process, so various loads ranging from the low-end load to high-end load of winders and twisters exist.</p> <p>Corrosion resistance and waterproof are required as there are a lot of high temperature and humidity environments.</p>	<ul style="list-style-type: none"> <li>● For VT load: iP5A / H100</li> <li>● For CT load: iS7 / iV5 / iV5L</li> <li>● For low-capacity load: S100 / iG5A</li> </ul> <p>Products that meet various process features may be chosen.</p> <p>In particular, iS7, S100 built-in with S/W exclusive for winders uses WEB PID for precise winding. All products are applied with PCB Conformal Coating.</p>
<p>There are processes such as injection molding to create a model by melting raw materials or winding the produced artificial thread and printed films.</p> <p>A part of injection molding is mixed with servo system for use, and it requires an accurate position control or torque control.</p>	<ul style="list-style-type: none"> <li>● iS7 / S100 / iG5A</li> </ul> <p>iS7 installed with S/W exclusive for winders along with synchronization and position control is one of the representative products. S100 built-in with S/W only for winders is also used.</p> <p>It is recommended to use iG5A or equivalent for small-capacity helper roll and conveyor.</p>
<p>HVAC load is the major part of Energy, and the load of ID/FD Fan/Pump applied for power generation industry and the load that goes along with the high efficiency system in the local environment are the main components.</p>	<ul style="list-style-type: none"> <li>● iP5A / H100 / iS7</li> </ul> <p>We recommend inverter products that have obtained a certificate of high efficiency.</p> <p>iS7 may be used to partially respond to CT load.</p> <p>Without a separate controller, a built-in PID is capable of controlling pressure and flow.</p>

# Guide to LS Drive Options

Application		Type				Torque		Drive Series					
		Friction Load	Gravity Load	Fluid Load	Inertia Load	CT	VT	M100	G100	S100	H100	iS7	iV5
 Marin	Fan			●			●	■	■		■	■	
	Pump			●			●						
	Compressor			●		●			■	■			
	Conveyor	●				●			■	■			
	Winch (Hoist)		●			●						■	■
	Winch (Gantry, Trolley)	●				●							
	Hoist (Hoist)		●			●				■			■
	Hoist (Gantry, Trolley)					●			■				■
 Food & Beverage	Fan			●			●	■	■		■	■	
	Pump			●			●						
	Compressor			●		●			■	■			
	Conveyor	●				●			■	■			
	Mixer			●		●			■				
	Extruder	●				●				■			
	Packing Machine (Synchronization, Position Control)	●				●						■	■
	Cutting Machine (Synchronization, Position Control)	●				●						■	■
	Labeling Machine (Synchronization, Position Control)	●				●						■	■
	Hoist (Hoist)		●			●				■			■
	Hoist (Gantry, Trolley)					●			■				■
	 Pulp & Paper	Fan			●			●	■	■		■	■
Agitator Pump				●			●		■	■			
Compressor				●		●			■	■			
Winder (Fixed Contact Control)					●	●						■	■
Roller Drum					●	●						■	■
Drying Machine		●					●			■			■
Coating Machine		●				●						■	■
Slitter		●				●				■			■
Hoist (Hoist)			●			●						■	■
Hoist (Gantry, Trolley)						●			■				■
 Mining		Fan			●			●	■	■		■	■
	Pump			●			●						
	Compressor			●		●			■	■			
	Conveyor	●				●			■	■			
	Crusher / Drill Machine	●				●							
	Excavators												
	Crane (Hoist)		●			●				■			■
	Crane (Gantry/Trolley, Rotating/Turning)	●				●				■			■
	Hoist (Hoist)		●			●						■	■
	Hoist (Gantry, Trolley)					●			■				■
 Oil & Gas Chemical	Fan (Blower)			●			●	■	■		■	■	
	Oil & Rod Pump			●			●		■	■			
	Compressor			●		●			■	■			
	Conveyor	●				●			■	■			
	Mixer			●		●			■			■	
	Extruder					●				■			■
 Crane & Hoist	Crane (Hoist)		●			●						■	■
	Crane (Gantry/Trolley, Rotating/Turning)	●				●						■	■
	Hoist (Hoist)		●			●						■	■
	Hoist (Gantry, Trolley)					●						■	■
	Automatic Warehouse (Lift)		●			●						■	■
	Automatic Garage (Gantry)	●				●						■	■
 Water & Wastewater	Fan			●			●	■	■		■	■	
	Pump			●			●		■	■			
	Compressor			●		●	●		■	■			
	Mixer			●		●			■	■			

■ Optimal    ■ Suitable

Description	Reason(s) for Choosing the Product
<p>When the distributed control system was introduced in 1990s, automated processes were realized in various systems, including automatic and power control of generators; ballast and pump motors for cargo; and valve control. As IMO environmental regulation came into effect, the needs for auto control and energy efficiency have been accelerated.</p> <p>The classification system such as ABS (USA) /BV (France) /DNV (Norway) /LR (USA) /RINA (Italy) is required.</p>	<ul style="list-style-type: none"> <li>● iS7 / iP5A</li> </ul> <p>These products that have obtained the certificate of classification are included in a lineup, which are gradually applied in the shipping industry.</p> <p>Based on the classification, the products have satisfied the power and environmental requirements necessary for ship installation. Also, there are reference cases of applying the products for merchant ships and marine cranes.</p>
<p>High-performance IP products with a high-pressure jet function for washing are required for food sanitation and contamination prevention.</p> <p>Furthermore, customers prefer Decentralized Drives and there is growing demand for drives with functions such as accurate positioning and synchronizing of packing machines, labeling machines and conveyors.</p>	<ul style="list-style-type: none"> <li>● iS7(IP54) / S100(IP66)</li> </ul> <p>General load is applicable to ensure water and dust resistance.</p>
<p>In general, it is a load with smaller tension when compared with steel so precise control and fast responsiveness are needed. In most cases, it is fabricated as a System Drive (AFE + DC-type inverter).</p> <p>Wood or raw materials that have completed primary operation are chemically treated to produce paper, artificial fiber and etc.</p>	<ul style="list-style-type: none"> <li>● iS7 / iV5(DC Input Type)</li> </ul> <p>DC input-type inverter products or any product with a DC input function may be applied.</p>
<p>Anti-environment properties such as explosion, dust and water resistance are needed, and higher reliability with application of a long-distance line is required.</p> <p>In case of excavators operated underground, the drive with higher performance and reliability to respond to high-torque, heavy duty load is required.</p>	<ul style="list-style-type: none"> <li>● iS7</li> </ul> <p>The product was applied to cases such as subway construction, submarine tunnel and underground line construction, and high-powered devices with torque-synchronized operation are applicable.</p> <p>With our experiences in drive application to various power and user environmental settings, air-conditioning, pump and hoist units are applicable.</p>
<p>High-capacity power and long-distance line application are needed when applied to large plants. The product should be highly reliable when it comes to risk including fire accidents as large-capacity products are applied for air-conditioning, pump and production.</p>	<ul style="list-style-type: none"> <li>● iS7 / H100</li> </ul> <p>We have reference cases in the field of petrochemical and oil refining industry, and we offer various options and large-capacity products with the Drive System-applied technologies.</p>
<p>3 basic operation modes include Hoist, Gantry and Trolley, and there is an additional function, Boom up/down, for marine cranes.</p> <p>Although features required for inverters differ according to the operation mode, they generally transport heavy cargo. Thus, it is recommended to use sensor-less and sensed vector mode.</p>	<ul style="list-style-type: none"> <li>● iS7 / iV5 / S100</li> </ul> <p>We recommend a lineup of products with sensor-less and sensed vector control functions that make it easier to ensure torque as heavy load is expected.</p>
<p>Harmful gases generated upon sewage treatment should be prevented (coating), and it is HVAC App that generally requires a low level of THD. (AFE, Low Harmonic Drive)</p>	<ul style="list-style-type: none"> <li>● iP5A / H100</li> </ul> <p>A lineup of inverter products exclusively for HVAC system can be applied to all water treatment industry.</p>



### Safety Instructions

- For your safety, please read user's manual thoroughly before operating.
- Contact the nearest authorized service facility for examination, repair, or adjustment.
- Please contact qualified service technician when you need maintenance. Do not disassemble or repair by yourself!
- Any maintenance and inspection shall be performed by the personnel having expertise concerned.



- According to The WEEE Directive, please do not discard the device with your household waste.



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