RELIANCE ELECTRIC

February, 2013

VZ7000

for DC Motor

Digital DC Servo Drive

The VZ7000 DC drive is an integrated digital DC motor controller introducing the advanced power module technology.

VZ7000 allows ensures compatibility between AC and DC motor drive through software reconfiguration, leaving the existing hardware intact.

These features enable structural phase transition of your work environment.
Step 1: Only SCR or thyristor is replaced with VZ7000DC, and a DC motor remains available.
Step 2: VZ7000AC software update is configured, and an AC motor is implemented instead of a DC motor.

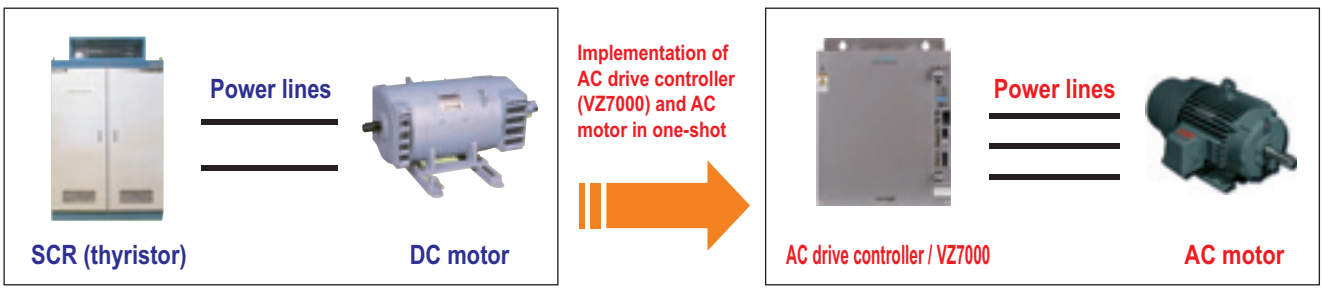
Declining demand for DC motors

As DC motors have continued a downward trend over the last two decades, most manufacturers have halted production of DC motors.
Although it is hard to find DC replacement components including SCR (thyristors), transistors and control boards, Reliance Electric is making every effort to provide engineering maintenance and support wherever possible.

Existing facility issues

- Mechanical systems problems frequently occur due to age related deterioration and long use.
- SCR (thyristors) have been discontinued and offered no active support.
- It takes long to restart production operations in the event of a breakdown, resulting in an extended downtime and productivity decreases.
- Few technical engineers have specialized expertise and knowledge in DC motors.

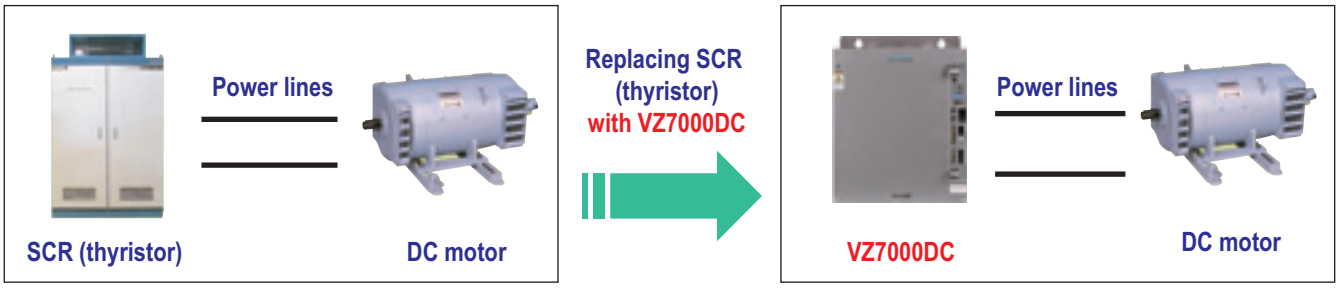
Reliance's traditional strategic plan for our customers



Concerns and issues

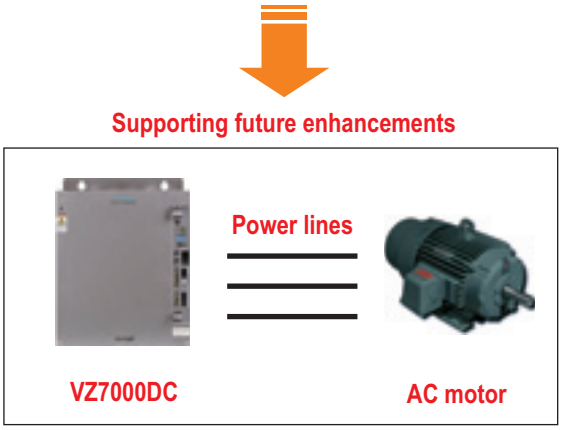
- Since it is difficult to obtain discontinued DC motors and SCR (thyristors), the whole system needs to be replaced with an AC drive controller and AC motor.
- The motor replacement requires some extended downtime due to an extensive electrical and mechanical work.
- The wide range of tasks involves huge costs.

Reliance's new strategic plan with VZ7000DC



Benefits

- The DC motor currently being used remains available.
- Operational efficiency and effectiveness will be obtained because of the advanced device (VZ7000AC).
- Existing equipment cabling can be reused if the existing condition is adequate for the intended use, which will shorten the duration of the task and reduce operational costs.
- In the event of a DC motor breakdown, it can be replaced with an AC motor, with drive hardware (VZ7000) intact.



【*VZ7000DC Standard Specifications*】

Drive model				UDC								
				7007	7022	7055	701A	701E	702B	703Z	704E	706Z
Motor*			400V	7.5kW	22kW	55kW	110kW	150kW	220kW	300kW	450kW	600kW
			200V	3.7kW	11kW	30kW	55kW	75kW	110kW	150kW	220kW	300kW
Input	Main power circuit		-	DC250 ～ 750V								
	Control circuit		-	AC85-264V single phase, or DC120-370V / 1.4-0.7A								
Output	Standard	Rated current	A	22	56	140	265	353	530	706	1059	1412
		Maximum current (1 min)	A	33	84	210	333	504	666	1008	1512	2016
		Maximum current (3 sec)	A	44	112	280	530	706	1060	1412	2118	2824
		Carrier frequency	KHz	4								
Control method			-	Integrated digital control through IPM-based PWM chopper circuit								
Speed Regulation	Control range		-	1:2000 (analog command) / 1:8000 (digital command)								
	Speed variance	Load disturbance	%	±0.0125 (load:0-100%)								
		Input voltage variation	%	±0.0125								
		Ambient temp range	%	±0.1 (analog command) /±0.0125 (digital command)								
	Speed regulator response		rad/sec	1256								
	Accelerator / decelerator		-	0.01–120 sec Linear acceleration and deceleration S-curve acceleration and deceleration								

* The motor capacity is intended only as reference and may not be applied to the actual operating mode.
You may need to specify the motor current within the rated current range for the unit.

⚠ The information contained in the operating instructions is important for safe and reliable operation. Carefully read and thoroughly understand the entire document before attempting to set up and operating the device.
Failure to follow the operating instructions may result in poor performance of the device or even cause injury or property damage

Reliance Electric Limited http://www.reliance-electric.co.jp

Head Office
3-2, Fukuura 2-chome, Kanazawa-ku, Yokohama, Japan 236-8641
Phone 045(701)1770 FAX 045(783)7486

Yokohama Sales Office
3-2, Fukuura 2-chome, Kanazawa-ku, Yokohama, Japan 236-8641
Phone 045(791)3115 FAX 045(785)0276

Osaka Sales Office
4-17, Nishi-Nakajima, 7-chome, Yodogawa-ku, Osaka, Japan 532-0011
Phone 06(6889)5715 FAX 06(6889)5788