

Curtain Motor  
**Powerful**



Powerful G



Powerful NX



Powerful 4P

Features outstanding durability and reliability in a variety of applications.

Motor Types

Motor	Power Voltage	Operating Voltage	Operating Pattern
Powerful 4P	AC100V, AC220V	AC100V, AC220V	This motor can be used on all kinds of windows, and is popular for relatively large curtains and darkroom shades in conference rooms, audiovisual rooms, and gymnasiums.
Powerful NX	AC100V	DC 24V	
Powerful4P-HM	AC100V, AC220V	AC100V, AC220V	This high-output motor operates in 1/2 speed of the Powerful 4P and features overrun prevention and braking functions. It is suitable for curtains require stopping in accurate position.
Powerful NX-HM	AC100V	DC 24V	
Powerful G4P	AC100V	AC100V	Output of this motor is higher than Powerful 4P motor. Suitable when curtains exceeds allowable load for Powerful 4P.
Powerful GNX	AC100V	DC 24V	

Motor Specification

Items	Powerful4P	Powerful NX		Powerful4P-HM		Powerful NX-HM		PowerfulG4P		Powerful GNX	
		AC100V, AC220V	AC100	AC100V, AC220V	AC100	AC100	AC100	AC100	AC100	AC100	
Power voltage	V	AC100V, AC220V	AC100	AC100V, AC220V	AC100	AC100	AC100	AC100	AC100	AC100	AC100
Frequency	Hz	50 60	50 60	50 60	50 60	50 60	50 60	50 60	50 60	50 60	50 60
Power current	A	Below0.85 Below0.75	Below0.85 Below0.75	Below0.85 Below0.75	Below0.85 Below0.75	Below0.85 Below0.75	Below0.85 Below0.75	Below1.2 Below1.2	Below1.2 Below1.2	Below1.2 Below1.2	Below1.2 Below1.2
Power consumption	W	Below80 Below75	Below80 Below75	Below80 Below75	Below80 Below75	Below80 Below75	Below80 Below75	Below120 Below120	Below120 Below120	Below120 Below120	Below120 Below120
Operating voltage	V	Same as power		DC24		Same as power		DC24		Same as power	
Operating current	mA	Same as power		37		Same as power		37		Same as power	
No. of revolution	R.P.M.	108 132	108 132	52 64	52 64	55 67	55 67	55 67	55 67	55 67	55 67
Rated torque	NE <sub>m</sub>	1.8 1.8	1.8 1.8	3.6 3.6	3.6 3.6	3.9 3.9	3.9 3.9	3.9 3.9	3.9 3.9	3.9 3.9	3.9 3.9
Break torque	NE	- -	- -	0.6 0.6	0.6 0.6	- -	- -	- -	- -	- -	- -
Time rating	Min.	5		5		5		5		5	
Overheating protection operating temperature	°C	120		120		120		120		120	
Weight of main body	kg	1.7		2.0		1.7		2.0		3.5	
Opening/closing time	CM2000	5	4	5	4	9	7	9	7	-	-
	New Delac Rail	5	4	5	4	9	7	9	7	-	-
	Supertrac	5	4	5	4	9	7	9	7	7.5	6
	Theatrac	3	2.5	3	2.5	5	4	5	4	5	4
Maximum curtain weight	CM2000	30		30		-		-		-	
	New Delac Rail	30		30		-		-		-	
	Supertrac	80		80		Straight 80		Straight 80		80	
	Theatrac	80		80		Slope 15° 20° 30° 45°		Slope 15° 20° 30° 45°		80	
Maximum rail length	CM2000	4		4		-		-		-	
	New Delac Rail	10		10		-		-		-	
	Supertrac	20		20		10		10		20	
	Theatrac	20		20		20		20		20	

Maximum curtain weight is for Two Way Draw. In addition, it may slightly differ depending on circumstances of wiring.  
Maximum curtain weight for Powerful4P-HM and Powerful NX-HM is for One Way Draw.

Available Types

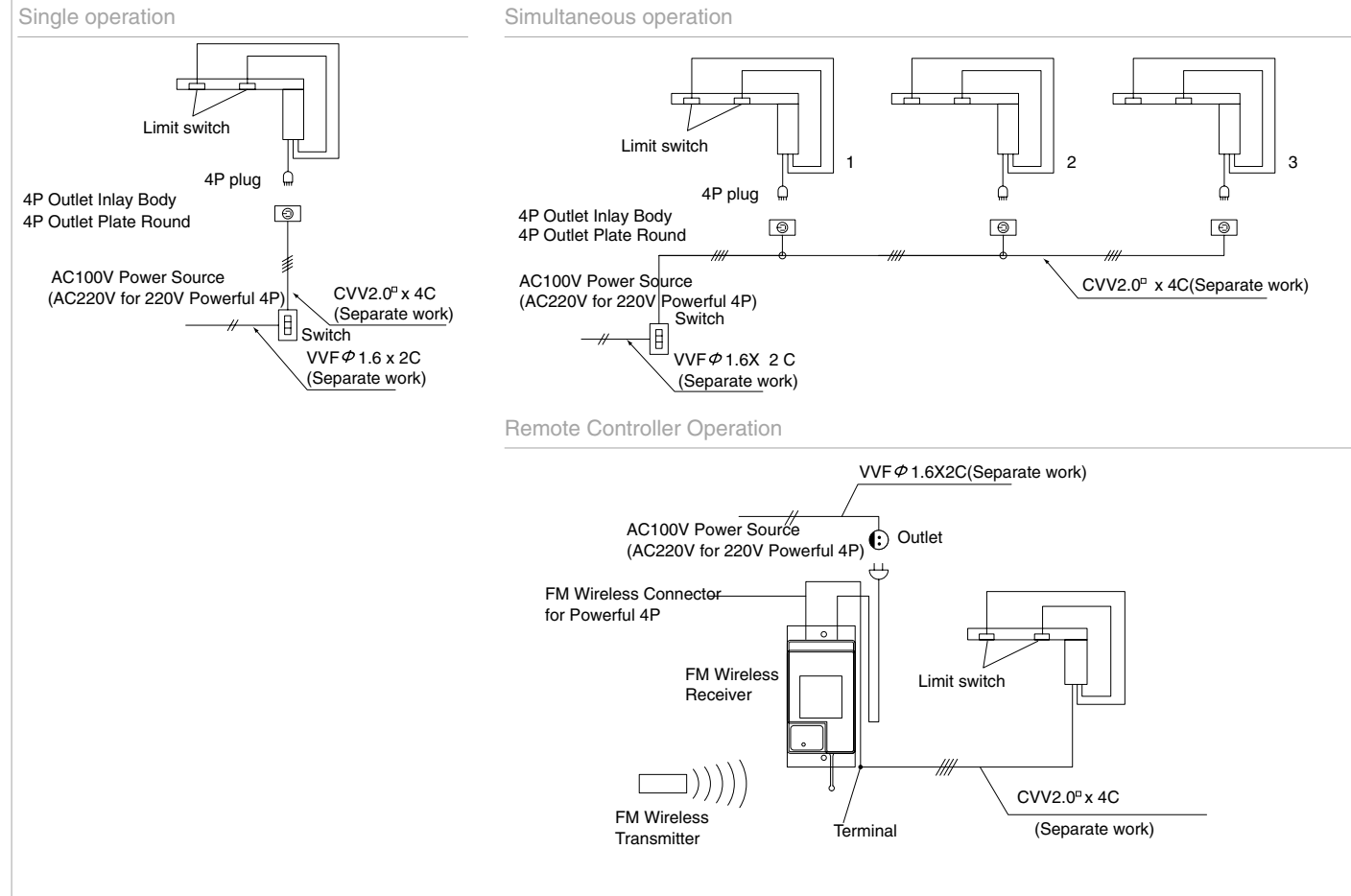
Curtain Rail Product Name	Installation Type	Power transmission method	Motor								
			Powerful4P, Powerful NX		Powerful4P-HM, Powerful NX-HM		PowerfulG4P, Powerful GNX				
			Curtain Weight	Rail Weight	Curtain Weight	Rail Weight	Curtain Weight	Rail length			
CM2000	Straight	Kepler cord	One Way Draw 20kg								
	Curve		Two Way Draw 30kg								
	Overall curve		One Way Draw 8kg	4m Note) one side is 4 m for rail cross.							
New Delac	Straight	Wire type	One Way Draw 10kg								
	Overlap Rail		Two Way Draw 6kg								
	Motor embedded in ceiling		30kg	10m							
Supertrac	Straight	Wire type	80kg	20m	80kg	10m	80kg	20m			
	Curve		1 part curve 50kg	10m	1 part curve 70kg	10m					
	Overall Curve		1 part curve 30kg	10m	1 part curve 50kg	10m					
Theatrac	Straight	Wire Type									
	Skylight				Slope angle 45	Curtain weight 15kg	For 10m Powerful NX-HM				
					45	12kg					
Theatrac	Straight	Wire Type									
	Sloped Window				Slope angle 15°	Curtain weight 16kg	10m				
					20°	13kg					
			30°	10kg							
Theatrac	Straight	Wire Type									
	Arch				Overall arch 10kg	5m					
Theatrac	Straight	Wire Type	80kg	20m	100kg	20m	120kg	20m			
	Overlap Rail										
	Motor embedded in ceiling										

Maximum curtain weight is for Two Way Draw. In addition, Maximum curtain weight for Powerful 4P-HM and Powerful NX-HM slope is for One Way Draw

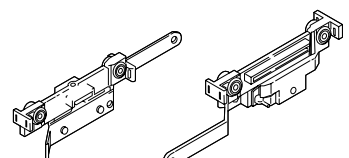
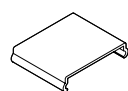
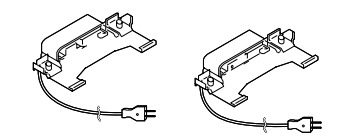
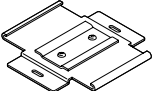
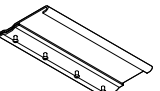
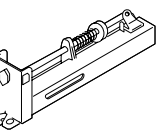
## Operation Method

Operating Options	Operating Method
Single operation	Operate 1 motor with 1 switch.
Operation from two locations	Operate 2 motors with 2 switches.
Simultaneous operation	Operate several motors with 1 switch.
Simultaneous operation	Operate several motors simultaneously and independently.
Remote Control	Operate motor with remote controller transmitter.

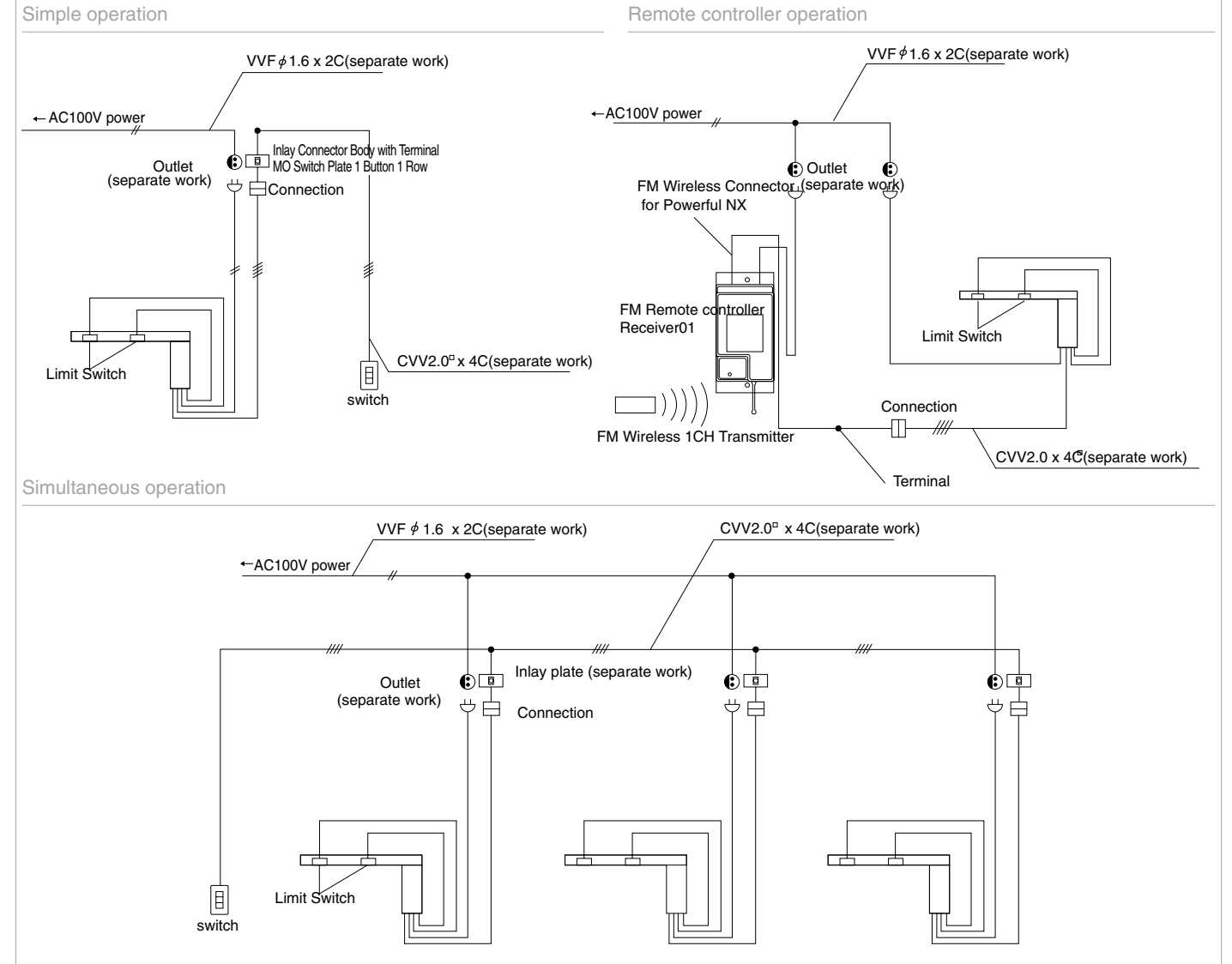
## Motor Wiring Diagram (For Powerful 4P)



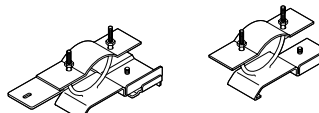
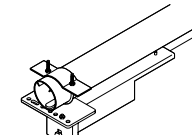
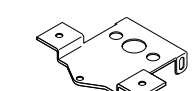
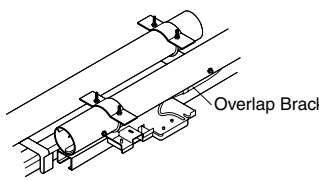
## Component Parts for Powerful

<p><b>Master Roller</b> A Master Roller exerts pressure accurately on the limit switch with guide rollers that secure performance of a Master Roller.</p> <p>(Right Master Roller): Assembling is simple and easy as each end of wire is individually fixed into position.</p> <p>(Left Master Roller): Even after the wire is set, Master Roller Left can be freely fixed at a position aligned to the right Master Roller.</p>		<p><b>Cord Clip</b> Realizes smooth insertion and attachment of the limited switch cords to the rail.</p> 
<p><b>Limit Switch A</b> <b>Limit Switch B</b></p> <p>Positioning can be easily adjusted after installation. Durability is assured with a micro-switch capable of withstanding up to 5A.</p> <p>Select Limit Switch A or B according to your installation measurement.</p> <p>Limit Switch A: One-way Draw (up to 5 m), Two-way Draw (up to 10 m)</p> <p>Limit Switch B: One-way Draw (5 to 10 m), Two-way Draw (10 to 20 m)</p>		<p><b>Overlap Bracket</b> Use Overlap Bracket when overlapping rails.</p> 
<p><b>OT Splice</b> External joint that can securely fasten rail. Make sure to use this OT Splice for jointing rail.</p>		<p><b>Adjuster</b> Simply turn the round nut with fingers to adjust wire tension.</p> <p>Enables rollers to be extracted or inserted even after its installation.</p> <p>Simplifies wire-threading process.</p> 

## Motor wiring diagram(For Powerful NX)

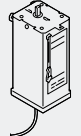
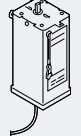


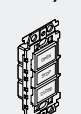








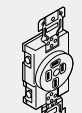
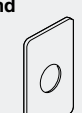
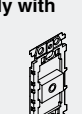




## Component Parts for Powerful

<p><b>Hanger Pipe Bracket</b> Bracket specially designed to suspend rails under pipes. When installing Pulley or Adjuster under pipe, use Hanger Pipe Installation Aids. (for Supertrac and Theatrac)</p> 	<p><b>Hanger Pipe Installation Aids</b> Special fixture to secure Pulley Set, Adjuster, or Master Bracket under pipe. (for Supertrac and Theatrac)</p> 
<p><b>Attachment No.1 for Powerful</b> A Bracket to install a motor in ceiling recess. (for Supertrac and New Delac)</p> 	<p><b>Overlap Bracket</b> Secure overlapping section by making passage holes and fastening with bolts at two locations.</p> 

Curtain Motor Powerful 4P and Switch Price

※ Dimension is indicated in the unit of mm. (Unit: Yen)

Product name	Item No.	Box Quantity	Box Price
<b>Powerful 4P(4P plug attached)</b> ※Cord length 0.6m 220V  (W80 x H170 x D70)	00510208	1 piece	55,500
<b>Powerful 4PHM(4P plug attached)</b> ※Cord length 0.6m 220V  (W80 x H170 x D70)	00510232	1 piece	55,500
<b>MO Open Switch (3 Buttons) B (without cord)</b> OPEN: Contact Point A STOP: Contact Point B CLOSE: Contact Point A  (W73 x H123 x D46)	00510278	1 piece	3,800
<b>MO Open Switch (3 Buttons) B (with cord)</b> ※Power cord length 5m ※Operating cord length 5m OPEN: Contact Point A STOP: Contact Point B CLOSE: Contact Point A  (W73 x H123 x D46)	00510273	1 piece	6,400
<b>MO Inlay Switch (3 Buttons) B</b> OPEN: Contact Point A STOP: Contact Point B CLOSE: Contact Point A  (W73 x H123 x D46)	00510276	1 piece	2,400
<b>MO Switch Plate 3 Button 1 Row</b>  (W70 x H120)	00510265	1 piece	300
<b>MO Switch Plate 3 Button 2 Row</b>  (W116 x H120)	00510264	1 piece	400
<b>MO Switch Plate 3 Button 3 Row</b>  (W162 x H120)	00510263	1 piece	700
<b>MO Switch Plate 3 Button 4 Rows</b>  (W208 x H120)	00510262	1 piece	1,100
<b>MO Switch Plate 3 Button 5 Rows</b>  (W254 x H120)	00510261	1 piece	1,500

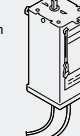



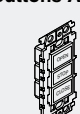





Product name	Item No.	Box Quantity	Box Price
<b>4P Outlet Open</b>  (55 x H55 x D33)	00510272	1 piece	700
<b>4P Outlet Inlay Body</b>  (W70 x H120)	00510271	1 piece	700
<b>4P Outlet Plate Round</b>  (W70 x H120)	00510260	1 piece	300
<b>Inlay Connector Body with Terminal</b>  (W70 x H120)	00510266	1 piece	1,000
<b>MO Switch Plate 1 Button 1 Row</b>  (W70 x H120)	00510259	1 piece	300
<b>FM Wireless Transmitter 01</b> (*1) (*2)  (W52 x H109 x D14)	02390029	1 piece	60,000
<b>FM Wireless Receiver 01</b> (*1) (*2)  (W78 x H170 x D46)	02390028	1 piece	36,000
<b>FM Wireless Connector for Powerful 4P</b> (*1)  *Cord length:0.7m	02390013	1 piece	3,000

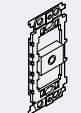
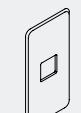



(\*1) Environment temperature for FM Wireless Transmitter and Receiver use is between -10 to 60 C.  
FM Wireless Receiver 01 is required when using FM Wireless Transmitter 01.  
When connecting FM Wireless Receiver to Powerful 4P, use FM Wireless Connector for Powerful 4P.

(\*2) FM Wireless Transmitter 01 is certified as Specified Power-saving Instrument, meeting standard based on Japan Radio Law. Please refer to your local agent whether it adapts to local regulations.

Curtain Motor Powerful NXand USwitch Price

※ Dimension is indicated in the unit of mm. (Unit: Yen)

Product name	Item No.	Box Quantity	Box Price
<b>Powerful NX(Connector attached)</b> ※ Power cord length 0.6m ※ Operating cord length 0.7m  (W80 x H210 x D70)	00510217	1 piece	60,000
<b>MO Open Switch (3 Buttons) A without cord)</b> ※ Power cord length 0.6m ※ Operating cord length 0.7m  (W80 x H210 x D70)	00510218	1 piece	60,000
<b>MO Open Switch (3 Buttons) A (without cord)</b> OPEN: Contact Point A STOP: Contact Point A CLOSE: Contact Point A  (W73 x H123 x D46)	00510279	1 piece	3,800
<b>MO Open Switch (3 Buttons) A (with cord)</b> OPEN: Contact Point A STOP: Contact Point A CLOSE: Contact Point A  (W73 x H123 x D46)	00510274	1 piece	6,400
<b>MO Inlay Switch 3 Buttons A</b> OPEN: Contact Point A STOP: Contact Point A CLOSE: Contact Point A  (W73 x H123 x D46)	00510277	1 piece	2,400
<b>MO Switch Plate 3 Button 1 Row</b>  (W70 x H120)	00510265	1 piece	300
<b>MO Switch Plate 3 Button 2 Row</b>  (W116 x H120)	00510264	1 piece	400
<b>MO Switch Plate 3 Button 3 Row</b>  (W162 x H120)	00510263	1 piece	700
<b>MO Switch Plate 3 Button 4 Row</b>  (W208 x H120)	00510262	1 piece	1,100
<b>MO Switch Plate 3 Button 5 Row</b>  (W254 x H120)	00510261	1 piece	1,500

Product name	Item No.	Box Quantity	Box Price
<b>Inlay Connector Body with Terminal</b>  (W70 x H120)	00510266	1 piece	1,000
<b>MO Switch Plate 1 Button 1 Row</b>  (W70 x H120)	00510259	1 piece	300
<b>FM Wireless Transmitter 01</b> (*1) (*2)  (W52 x H109 x D14)	02390029	1 piece	60,000
<b>FM Wireless Receiver 01</b> (*1) (*2)  (W78 x H170 x D46)	02390028	1 piece	36,000
<b>FM Wireless Connector for Powerful NX</b> (*1)  *Cord length 0.7m	02390013	1 piece	3,000

Environment temperature for FM Wireless Transmitter and Receiver use is between -10 to 60Deg C.FM Wireless Receiver 01 is required when using FM Wireless Transmitter 01.  
When connecting FM Wireless Receiver to Powerful NX, use FM Wireless Connector for Powerful NX.

FM Wireless Transmitter 01 is certified as Specified Power-saving Instrument, meeting standard based on Japan Radio Law. Please refer to your local agent whether it adapts to local regulations.