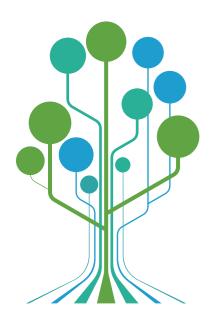


**Dynamic Audio Solutions** 

## BrainCore<sup>™</sup>

Technology Inside





# **BrainCore**<sup>TM</sup>

BrainCore<sup>™</sup> is an innovative core application technology researched and developed by Audiocenter, devoted to Audiocenter active DSP-controlled loudspeakers with supreme performance and high reliability.

With its advanced technology and scientific methodology, BrainCore™ analyses and processes the input signal, DSP module, Class D amplifier and loudspeaker optimally, achieving smooth transitions between the LF and HF,excellent frequency response and audio reproduction even at high levels of SPL.



#### ● Innovative ETE™ Waveguide Technology

The innovative ETE™ waveguide technology realizes the perfect joint of frequency response, which provides the accurate horizontal coverage and ensures the well-balanced, clear and clean sound for the system.

#### Innovative Phycal<sup>™</sup> (Physical calibration) Technology

The innovative  $\mathsf{Phycal}^\mathsf{TM}$  (Physical calibration) technology improves the coverage of vertical acoustic beam.

#### Customized ProDriver

Audiocenter customized driver to ensure high-quality audio output and dynamic sound performance.



#### Elegant Outlook

Streamlined cabinet design makes L series column system blended into various styles of applications easily.





#### Class D Amplifier

Adopting multi-channel digital amplifier with switching power supply and built-in DSP, the system can work stably and efficiently, ensuring high quality sound performance.

#### Advanced Cooling System

Moulded large heatsink improves the cooling efficiency, and ensure higher reliability of the system.



#### Built-in Bluetooth

Built-in bluetooth supports a variety of Bluetooth devices access. It's stable and reliable transmission to get true sound reproduction.

#### Plug and Play, Easy Set Up

A lot of considerations were taken into account when Audiocenter R&D teams design the L series accessories for easy and quick set up. Three different system packages are available to meet the demands of different applications.



#### • Unique Physical Acoustics Design

CNC made cabinet of excellent wood, customized drivers together with unique physical acoustics design provide very clear and clean sound.

#### ● Innovative FTF<sup>™</sup> Technology in LF Driver

The innovative FTF™ technology in LF driver makes the cabinet with the three-order band-pass filter. By coupling the system continually and overlaying the multiple resonances, the LF efficiency is improved significantly.





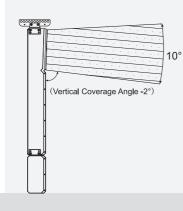
## L65+L65A Column System

L65+L65A system is a compact multi-purpose active DSP column system, consisting of a passive full-range column speaker L65 and a multi-channel digital power amplifier L65A with switching power supply and built-in DSP.

L65 passive full-range column speaker is built with 6pcs 5" customized Audiocenter ferrite drivers and 4pcs 1" customized Beyma ferrite drivers. The drivers are designed with sophisticated measurement and arranged elaborately by physical calibration technology Phycal<sup>™</sup> to improve vertical acoustic beam coverage. The ETE™ waveguide system developed by Audiocenter forms cylindrical wave, then couples continually, working together with customized horn design to realize the perfect joint of frequency response, which provides the accurate horizontal coverage and ensures the well-balanced, clear and clean sound. L65 can meet the reinforcement application in different venues and complex space.

L65A multi-channel digital power amplifier with switching power supply and built-in DSP is attached to the bottom of L65 and used together with L65 to meet the different requirements of various applications.

L65+L65A column system is flyable with customized flying frame. It can also be pole mounted. It can be used as main P.A or as side fill, delay etc according to different applications.



## \_SUGGESTED APPLICATION















#### \_SPECIFICATION

Active DSP-controlled Column Speaker System 75Hz-20KHz

Frequency Response (-6dB anechoic chamber)

Maximum Calculated

SPL/1M

LF Driver Customized Audiocenter ferrite driver, 6pcs

5" drivers

134dB

**HF Driver** Customized Beyma ferrite driver, 4pcs 1" drivers 110°

**Horizontal Coverage** Angle(Symmetrical)

10° Vertical Coverage Angle(Symmetrical)

DSP

Processor 96KHz signal sampling frequency, 24bit precision

Controlled by DSP Crossover

Class D amplifier

1400W Power

20Hz-20KHz(±0.5dB) Frequency Response

Intermodulation Distortion <0.05% **Total Harmonic Distortion** 

Protection DC protection, short circuit protection,

overheat protection, input overload protection, output overload protection, soft startup protection, overvoltage protection, undervoltage protection

**Cooling System** Fans + air convection

Output / Input

2×Combo (NEUTRIK® female XLR & Mono jack Signal Input

6,35), 1×RCA

1×NEUTRIK® male XLR Signal Output Amplifier Output Link L65 1×NEUTRIK® NL4MP Column Input Link L65-A 1×NEUTRIK® NL4MP

Power Input / Output Power connector

Cabinet

Working Voltage

**Cabinet Material** CNC made of excellent wood **Pole Mount** Φ35mm (0/10° adjustable)

Black is standard and default color, Consult with **Cabinet Color** Audiocenter sales team for other customized colors

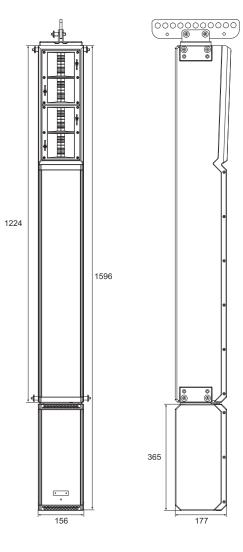
100-130V/60Hz or 220-240V/50Hz

Dimension(W×H×D)

L65 156×1224×177mm L65A 156×365×177mm 1596mm Height for 1pc L65

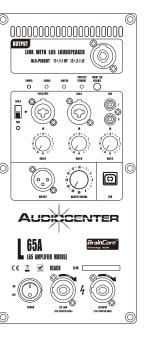
+1pc L65A **Net Weight** 

L65 18Kg L65A 5Kg



#### \_BACK PANEL







## **Bluetooth**



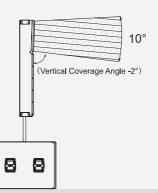
## L65+L65S Column System

system consisting of a passive full-range column speaker L65 and an active DSP controlled compact single 18" subwoofer L65S.

L65 passive full-range column speaker is built with 6pcs 5" customized Audiocenter ferrite drivers and 4pcs 1" customized Beyma ferrite drivers. The drivers are designed with sophisticated measurement and arranged elaborately by physical calibration technology Phycal™ to improve vertical acoustic beam coverage. The ETE™ waveguide system developed by Audiocenter forms cylindrical wave, then couples continually, working together with customized horn design to realize the perfect joint of frequency response, which provides the accurate horizontal coverage and ensures the well-balanced, clean and clear sound. L65 can meet the reinforcement application in different venues and complex space.

customized Audiocenter ferrite driver and very powerful Class D amplifier module. L65S is with built-in Bluetooth that supports multiple signal inputs.

L65+L65S is a plug and play column system with easy set up. The presets are made with a lot of testing. The system can be put in various applications.



## \_SUGGESTED APPLICATION

















L65+L65S system is a compact multi-purpose active DSP column

L65S is an active DSP controlled compact subwoofer with one 18"

#### \_SPECIFICATION

Active DSP-controlled Column Speaker System

Frequency Response 40Hz-20KHz

(-6dB anechoic chamber) **Maximum Calculated** 

SPL/1M

Subwoofer Customized Audiocenter ferrite driver, 1pcs

134dB

LF Driver Customized Audiocenter ferrite driver, 6pcs

5" drivers

110°

**HF Driver** Customized Beyma ferrite driver, 4pcs 1" drivers

**Horizontal Coverage** Angle(Symmetrical)

**Vertical Coverage** 10°

Angle(Symmetrical)

DSP

96KHz signal sampling frequency, 24bit precision Processor

Controlled by DSP Crossover

Class D amplifier

Power

3600W

20Hz-20KHz(±0.5dB) Frequency Response

Intermodulation Distortion <0.05% **Total Harmonic Distortion** 

Protection DC protection, short circuit protection,

> overheat protection, input overload protection, output overload protection, soft startup protection, overvoltage protection, undervoltage protection

Cooling System Fans + air convection

Output / Input

2×Combo (NEUTRIK® female XLR & Mono jack Signal Input 6.35), 1×Bluetooth

1×NEUTRIK® male XLR Signal Output 1×NEUTRIK® NL4MP Amplifier Output Link L65 Column Input Link L65S 1×NEUTRIK® NL4MP Power Input 3 pin power socket

100-130V/60Hz or 220-240V/50Hz **Working Voltage** 

Cabinet

**Cabinet Material** CNC made of excellent wood L65 Pole Mount Φ35mm (0/10° adjustable) L65S Pole Mount M20 base Φ35mm

**Cabinet Color** Black is standard and default color. Consult with Audiocenter sales team for other customized colors

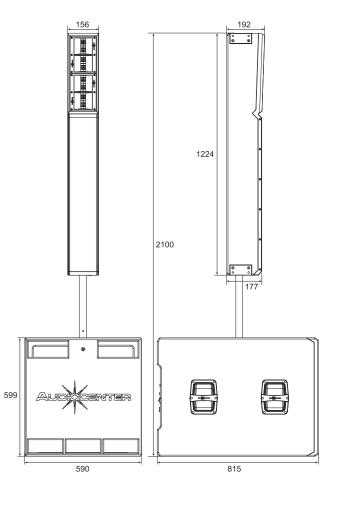
Dimension(W×H×D)

156×1224×177mm 590×599×815mm L65S Height for 1pc L65+1pc 2100mm

L65S+Pole

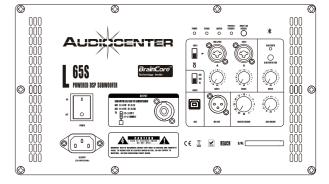
**Net Weight** 

L65 18Kg L65S 54Kg



#### \_BACK PANEL







## **Bluetooth**



## L83+L65S Column System

L83+L65S system is a compact multi-purpose active DSP column system consisting of a passive full-range column speaker L83 and an active DSP controlled compact single 18" subwoofer L65S.

L83 passive full-range column speaker is with 8pcs 3" neodymium full-range drivers. The drivers in L83 are arranged by elaborate calculation and Phycal<sup>™</sup> technology to improve the coverage of vertical beam. With elaborate acoustic design, same drives in the cabinet work as one integrative full range speaker system, which can achieve perfect joint of frequency response and excellent sound performace.L83 can meet the applications in different venues and complex space.

L65S is an active DSP controlled compact subwoofer with one 18" customized Audiocenter ferrite driver and very powerful Class D amplifier module. L65S is with built-in Bluetooth that supports multiple signal inputs.

L83+L65S is a plug and play column system with easy set up. The presets are made with a lot of testing. The system can be put in various applications.

## \_SUGGESTED APPLICATION

















#### \_SPECIFICATION

Active DSP-controlled Column Speaker System

Frequency Response 42Hz-20KHz

(-6dB anechoic chamber)

**Maximum Calculated** SPL/1M

Subwoofer

Customized Audiocenter ferrite driver, 1pcs

20°

132dB

Mid-high Driver Customized Audiocenter neodymium full-range

driver, 8pcs 3" drivers

**Horizontal Coverage** 

Angle(Symmetrical) **Vertical Coverage** 

Angle(Symmetrical)

DSP

Processor 96KHz signal sampling frequency, 24bit precision

Controlled by DSP Crossover

Class D amplifier

Power 3000W

20Hz-20KHz(±0.5dB) Frequency Response

Intermodulation Distortion <0.05% **Total Harmonic Distortion** < 0.05%

Protection DC protection, short circuit protection,

> overheat protection, input overload protection, output overload protection, soft startup protection, overvoltage protection, undervoltage protection

Cooling System Fans + air convection

Output / Input

Signal Input 2×Combo (NEUTRIK® female XLR & Mono jack

6.35), 1×Bluetooth

1×NEUTRIK® male XLR Signal Output 1×NEUTRIK® NL4MP Amplifier Output Link L83 1×NEUTRIK® NL4MP Column Input Link L65S Power Input 3 pin power socket

**Working Voltage** 100-130V/60Hz or 220-240V/50Hz

Cabinet

**Cabinet Material** CNC made of excellent wood L83 Pole Mount Φ35mm (0/10° adjustable)

L65S Pole Mount M20 base Φ35mm

Black is standard and default color. Consult with **Cabinet Color** Audiocenter sales team for other customized colors

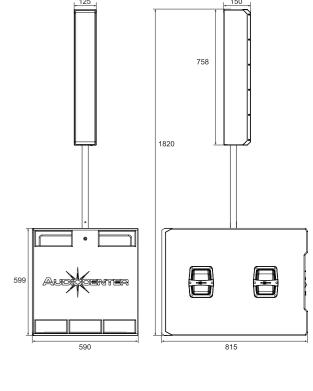
Dimension(W×H×D)

125×758×150mm L65S 590×599×815mm Height for 1pc L83+1pc 1820mm

L65S+Pole

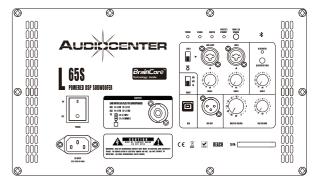
**Net Weight** 

L83 5Kg L65S 54Kg



### BACK PANEL











## L43+L83S Column System

L43+L83S system is a compact multi-purpose active DSP column system consisting of a passive full-range column speaker L43 and an active DSP controlled dual 12" subwoofer L83S.

L43 passive full-range column speaker is with 4pcs 3" neodymium full-range drivers. The drivers in L43 are arranged by elaborate calculation and Phycal<sup>™</sup> technology to improve the coverage of vertical beam. With elaborate acoustic design, same drives in the cabinet work as one integrative full range speaker system, which can achieve perfect joint of frequency response and excellent sound performace.L43 can meet the applications in different venues and complex space.

L83S is an active DSP controlled compact subwoofer with 2pcs 12" customized Audiocenter ferrite drivers and Class D amplifier module. The system works efficiently and has built-in Bluetooth that supports multiple signal inputs.

L83S has been carefully tested. With elaborate acoustic design, innovative FTF™ LF driver design and extensive testing, the cabinet is with three-order band-pass filter. By coupling the system continually and overlaying the resonances, the LF efficiency is improved significantly.

L43+L83S is a plug and play column system with easy set up. The presets are made with a lot of testing. The system can be put in various applications.

## \_SUGGESTED APPLICATION















### \_SPECIFICATION

Active DSP-controlled Column Speaker System 42Hz-20KHz

Frequency Response

(-6dB anechoic chamber) **Maximum Calculated** 

SPL/1M

Customized Audiocenter ferrite driver, 2pcs Subwoofer

12" driver

100°

20°

128dB

Mid-high Driver Customized Audiocenter neodymium full-range

driver, 4pcs 3" drivers

**Horizontal Coverage** Angle(Symmetrical)

**Vertical Coverage** 

Angle(Symmetrical)

DSP

Processor 96KHz signal sampling frequency, 24bit precision

Crossover Controlled by DSP

Class D amplifier

Power 2500W

Frequency Response 20Hz-20KHz(±0.5dB)

Intermodulation Distortion < 0.05%**Total Harmonic Distortion** 

Protection DC protection, short circuit protection,

overheat protection, input overload protection, output overload protection, soft startup protection, overvoltage protection, undervoltage protection

**Cooling System** Fans + air convection

Output / Input

Signal Input 2×Combo (NEUTRIK® female XLR & Mono jack

6.35), 1×Bluetooth Signal Output 1×NEUTRIK® male XLR Amplifier Output Link L43 1×NEUTRIK® NL4MP Column Input Link L83S 1×NEUTRIK® NL4MP Power Input 3 pin power socket

**Working Voltage** 100-130V/60Hz or 220-240V/50Hz

Cabinet

**Cabinet Material** CNC made of excellent wood L43 Pole Mount Φ35mm (0/10° adjustable) L83S Pole Mount M20 base Φ35mm

**Cabinet Color** Black is standard and default color. Consult with Audiocenter sales team for other customized colors

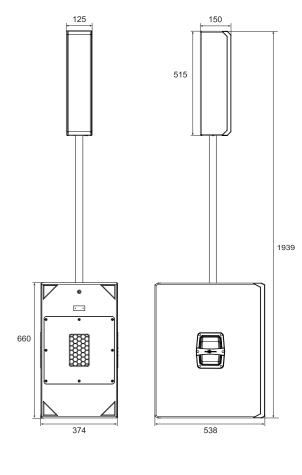
Dimension(W×H×D)

L43 125×515×150mm L83S 374x660x538mm Height for 1pc L43+1pc 1709mm

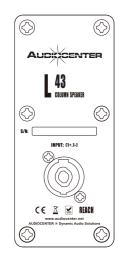
L83S+Pole

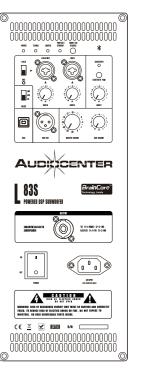
**Net Weight** 

L43 3.5Kg L83S 32Kg



### BACK PANEL









## L83+L83S Column System

L83+L83S system is a compact multi-purpose active DSP column system consisting of a passive full-range column speaker L83 and an active DSP controlled dual 12" subwoofer L83S.

L83 passive full-range column speaker is with 8pcs 3" neodymium full-range drivers. The drivers in L83 are arranged by elaborate calculation and Phycal™ technology to improve the coverage of vertical beam. With elaborate acoustic design, same drives in the cabinet work as one integrative full range speaker system, which can achieve perfect joint of frequency response and excellent sound performace.L83 can meet the applications in different venues and complex space.

L83S is an active DSP controlled compact subwoofer with 2pcs 12" customized Audiocenter ferrite drivers and Class D amplifier module. The system works efficiently and has built-in Bluetooth that supports multiple signal inputs.

L83S has been carefully tested. With elaborate acoustic design, innovative FTF™ LF driver design and extensive testing, the cabinet is with three-order band-pass filter. By coupling the system continually and overlaying the resonances, the LF efficiency is improved significantly.

L83+L83S is a plug and play column system with easy set up. The presets are made with a lot of testing. The system can be put in various applications.

## SUGGESTED APPLICATION















#### SPECIFICATION

Type Active DSP-controlled Column Speaker System

Frequency Response 42Hz-20KHz

(-6dB anechoic chamber)

Maximum Calculated

SPL/1M

Subwoofer Customized Audiocenter ferrite driver, 2pcs

12" driver

100°

131dB

Mid-high Driver Customized Audiocenter neodymium full-range

driver, 8pcs 3" drivers

Horizontal Coverage
Angle(Symmetrical)

Vertical Coverage
Angle(Symmetrical)

) 20°

DSP

**Processor** 96KHz signal sampling frequency, 24bit precision

Crossover Controlled by DSP

Class D amplifier

Power 2500W

Frequency Response 20Hz-20KHz(±0.5dB)

 $\begin{array}{ll} \mbox{Intermodulation Distortion} & < \!\! 0.05\% \\ \mbox{Total Harmonic Distortion} & < \!\! 0.05\% \\ \end{array}$ 

**Protection** DC protection, short circuit protection,

overheat protection, input overload protection, output overload protection, soft startup protection, overvoltage protection, undervoltage protection

Cooling System Fans + air convection

Output / Input

Signal Input 2×Combo (NEUTRIK® female XLR & Mono jack

**Working Voltage** 100-130V/60Hz or 220-240V/50Hz

Cabinet

Cabinet Material

CNC made of excellent wood

L83 Pole Mount

Φ35mm (0/10° adjustable)

L83S Pole Mount M20 base Φ35mm

Cabinet Color

Black is standard and default color. Consult with
Audiocenter sales team for other customized colors

Dimension(W×H×D)

 L83
 125×758×150mm

 L83S
 374x660x538mm

 Height for 1pc L83+1pc
 1896mm

L83S+Pole Net Weight

**L83** 5Kg **L83S** 32Kg

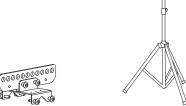
758

#### BACK PANEL





## ACCESSORIES



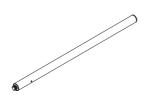




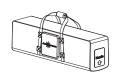
Three-feet stand Bearing 80KG



L65+L65S Pole L83+L83S/L65S Pole (Length 400mm) (Length 600mm)



L43+L83S Pole (Length 900mm)







L65S/L83S Protection bag (with wheel)

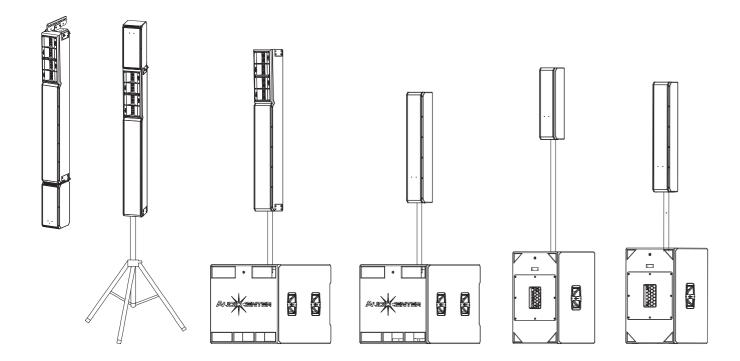


L65+L65A Flightcase (For 2 pcs L65, 2 pcs L65A and 2sets Flying kits) with 100mm wheels



L83+L83S Flightcase (For 1 pcs L83, 1pcs L83S and 1 pole) with 100mm wheels

### **INSTALLATIONS**



## ■ L Series Active DSP-controlled Column Speaker System Specifications

SPECIFICATIONS		L65+L65A Column System	L65+L65S Column System	L83+L65S Column System	L43+L83S Column System	L83+L83S Column System	
Туре		Active DSP-controlled Column Speaker System					
Frequency Response (-6dB anechoic chamber)		75Hz-20KHz	40Hz-20KHz	42Hz-20KHz	42Hz-20KHz	42Hz-20KHz	
Horizontal Coverage Angle (Symmetrical)		110°	110°	100°	100°	100°	
Vertical Coverage Angle (Symmetrical)		10°	10°	20°	20°	20°	
Maximum Calculated SPL/1M	Continuous	128dB	128dB	126dB	122dB	125dB	
	Program	131dB	131dB	129dB	125dB	128dB	
	Peak	134dB	134dB	132dB	128dB	131dB	
Drivers	HF	Customized Beyma ferrite driver, 4pcs 1" drivers		1	1	1	
	Mid-high	1	1	Customized Audiocenter Neodymium full-range driver, 8pcs 3" drivers	Customized Audiocenter Neodymium full-range driver, 4pcs 3" drivers	Customized Audiocenter Neodymium full-range driver, 8pcs 3" drivers	
	LF	Customized Audiocenter fe	errite driver, 6pcs 5" drivers /				
	Subwoofer	1	Customized Audiocenter fe	errite driver, 1pcs 18" drivers   Customized Audiocenter ferrite driver, 2pcs 12" d			
Signal Input Connector		2×Combo NEUTRIK® (female XLR &Mono jack 6.35), 1×RCA	2×Combo NEUTRIK® (female XLR & Mono jack 6.35), 1×Bluetooth				
Signal Output Connector		1×NEUTRIK® male XLR					
Power Input Connector		Power connector	3 pin power socket				
Power Output Connector		Power connector	1				
Working Voltage		100V-130V/60Hz or 220V-240V/50Hz					

DSP					
Processor	96KHz signal sampling frequency, 24bit precision				
Crossover and Slope	Controlled by DSP				

AMPLIFIER							
Amplifier	Class D						
Peak Power	1400W	3600W	3000W	2500W	2500W		
Frequency Response (1W 8Ω 1ch)	20Hz-20KHz(±0.5dB)						
Intermodulation Distortion	odulation Distortion		<0.05%				
Total Harmonic Distortion (20Hz-20KHz, half power)	<0.05%						
Cooling	Fans + air convection						
Protection	DC protection / Short circuit protection / Overheat protection / Output overload protection / Soft startup protection / Overvoltage protection / Undervoltage protection						

CABINET							
Cabinet		CNC made of excellent wood					
Pole Mount		1	Column speaker with Φ 35 mm (0/10 ° adjustable), subwoofer with M20 pole mount Φ 35 mm				
Optional Accessories		Flying kit,Three-feet stand,pole,Hand bag,Protection bag,Flightcase					
Dimensions (W×H×D)	Column speaker	156×1224×177mm	156×1224×177mm	125×758×150mm	125×515×150mm	125×758×150mm	
	L65A	156×365×177mm	1	1	/	/	
	Subwoofer	1	590×599×815mm	590×599×815mm	374x660x538mm	374x660x538mm	
	Height for whole system set up	1596mm	2100mm	1820mm	1939mm	1896mm	
Net Weight		L65 18Kg/L65A 5Kg	L65 18Kg/L65S 54Kg	L83 5Kg/L65S 54Kg	L43 3.5Kg/L83S 32Kg	L83 5Kg/L83S 32Kg	
Technical Support and After-sales Service		Global application support team					

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