

HWH® SYSTEM IDENTIFICATION *(Pictorial & Official Nomenclature)*

HWH® SPACEMAKER® SLIDE-OUT SYSTEMS

(Filename: ML17785_01_NOM_PR_SO.DOC) (Revision Date: 02FEB17-1)

Printable File: ► [ML17785_01_NOM_PR_SO.PDF](#)

RELATED INFORMATION:

► [HWH Slide-Out Web Site Home Page](#)

[ml156900_so.html](#)

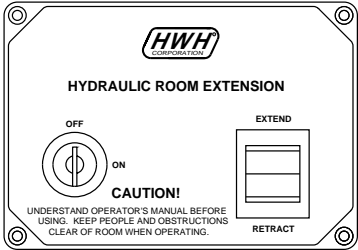
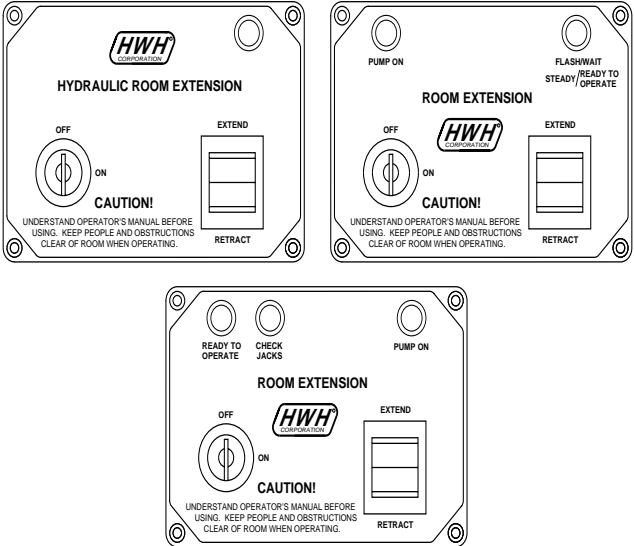
RELATED INFORMATION:

► [Slide-Out Style \(A or B\) Explanation](#)

[ml158331.PDF](#)

Slide-Out Control Panels	
BOM ABBR	► SpaceMaker® Slide-Out CONTROL PANELS
Slide-Out with Floor-Lift Systems	
HC	► Horizontal Platform Lift Cylinders (HC) (Used with USOHD to make a UPLO/HC)
VC	► Vertical Platform Lift Cylinders (VC) (Used with USOHD to make a UPLO/VC)
	► Floor Lift Assembly with Limit Switches
Slide-Out Mechanisms	
	► Aluminum
	► Canopy Lift System
CAP EXT	► Coach Cap (Front End) Extension (Rail Mechanism)
	► Dual-Direction Storage Slide
	► Engine Door Lift
5C	► Five Cylinder - In Coach Roof - Chariot Vans (MR411201)
4C	► Four Cylinder
GEN	► Generator Extension (GEN)
GD	► Guided (GD)
IC /FW	► In-Ceiling Full-Wall (IC/FW)
IFSO	► In-Floor Straight-Out (IF/SO)
IFLO	► In-Floor Level-Out (IFLO)
IFLSO	► In-Floor Level-Out or Straight-Out (IFLSO)
LA	► Lateral Arm (LA)
LA/TT	► Lateral Arm with Torsional Tube (LA/TT)
LILLO	► Level-In/Level-Out Floor (LILLO)
SLLO	► Level-Out Screw Left (SLLO)
SRLO	► Level-Out Screw Right (SRLO)
LOF	► Level-Out Floor (LOF)
LOF/P	► Level-Out Floor Pivotal (LOF/P)
PB	► Pivoting Beam (PB)
RAIL	► Rail with HWH® Synchronizing Cylinder (RAIL)
RAIL/RSV	► Rail with HWH® Rack Sensing Valve (RAIL/RSV)
RKY	(aka Newell® Phantom Suite® (aka Recky Room) (RKY))
1C	► Single Cylinder (1C)
SLIM	► Slimline (SLIM)
TD	► Train Drive (TD)
UFO	► Universal Flat-Out (UFO)
ULI/ULO	► Universal Level-In/Level-Out (ULI/ULO)
ULO	► Universal Level-Out (ULO) with Built-In Platform Lift Cylinders
ULO/FW	► Universal Level-Out Full-Wall (ULO/FW) with Built-In Platform Lift Cylinders
UPLO/HC	► Universal Platform Level-Out with Horizontal Platform Lift Cylinders (UPLO/HC)
UPLO/VC	► Universal Platform Level-Out with Vertical Platform Lift Cylinders (UPLO/VC)
USO	► Universal Straight-Out (USO)
USOHD	► Universal Straight-Out Heavy Duty (USOHD)
USOLD	► Universal Straight-Out Light Duty (USOLD)
VA	► Vertical Arm (VA)
VALOF	► Vertical Arm Level-Out Floor (VALOF)
X	► X-Slide (X)

"SpaceMaker® Slide-Out Control Panels"

Key Panel Common	Key Panel OEM-Specific
 <ul style="list-style-type: none"> • Most slide-outs are operated with this key panel. • Panel will work with the single-cylinder or multi-cylinder mechanisms. • Some vehicle manufacturers use their own switch or switch panel. <ul style="list-style-type: none"> • Key controls power to the rocker switch. • Rocker switch extends or retracts the room. 	 <ul style="list-style-type: none"> • Examples of various key panels. • Panel will work with the single-cylinder or multi-cylinder mechanisms. • Some vehicle manufacturers use their own switch or switch panel. <ul style="list-style-type: none"> • Key controls power to the rocker switch. • Rocker switch extends or retracts the room.

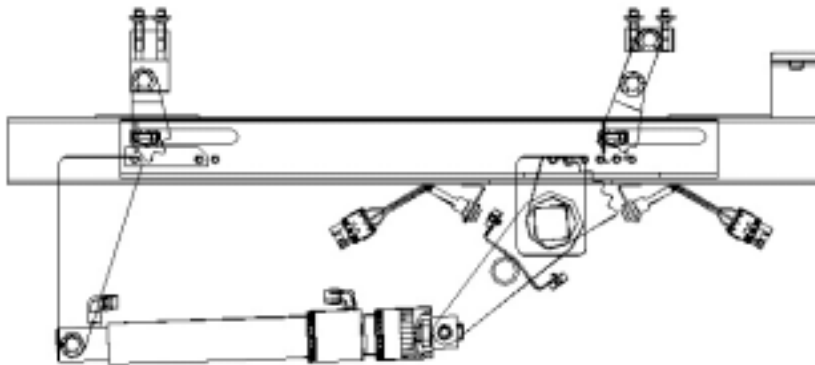
FLOOR LIFT SYSTEM

"Floor Lift Assembly with Limit Switches"

(NCR: SUBFLR LIFT ASY/KIT)

(Lifts coach floor, not platform under slide-out)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Parts Manual Page	Video	Production Status
			MR413950.PDF	N/A	



Emergency Retraction: MLXXXXX
OEMs Using Mechanism: Foretravel AP40954
LIFT is used with _____ Slide-Out mechanisms.

FLOOR LIFT SYSTEM

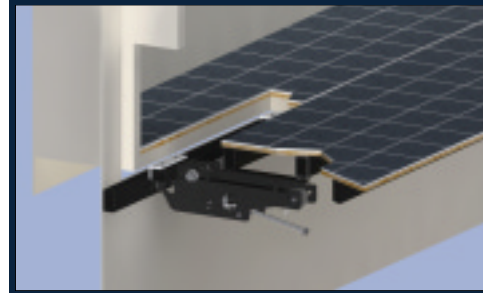
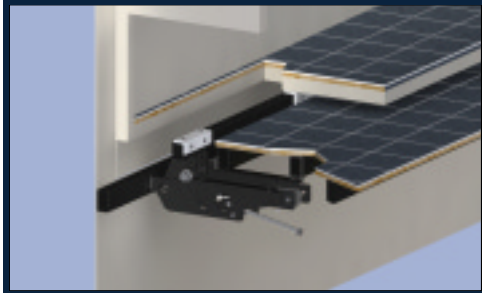
"Horizontal Platform Lift Cylinders (HC)"

SpaceMaker® Slide-Out FLOOR LIFT System

(NCR: LIFT PLAT MECH)

Lifts platform under slide-out.

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor			ML52624.PDF (No Spec. Sheet) PARTS MANUAL PAGES: XXXXX	N/A	Available for Production



Emergency Retraction: MLXXXXX

OEMs Using Mechanism: Newmar 2015/2016

Typically used with "USOHD" SLIDE-OUT MECHANISMS. (2015)

FLOOR LIFT SYSTEM

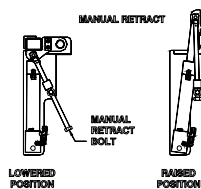
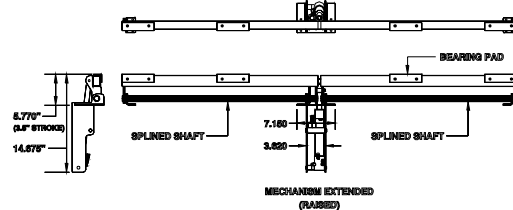
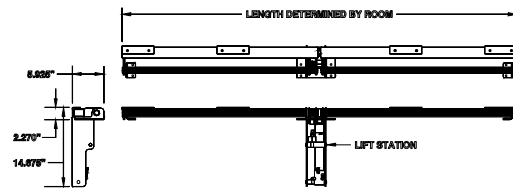
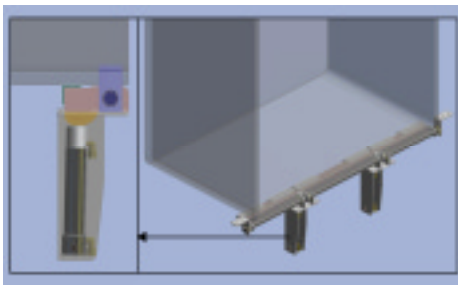
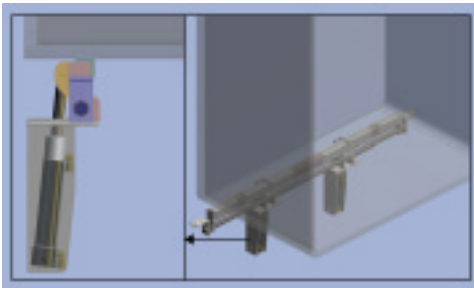
"Vertical Platform Lift Cylinders (VC)"

SpaceMaker® Slide-Out FLOOR LIFT System

(NCR: LIFT PLAT MECH)

Lifts platform under slide-out.

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Documents	Video	Production Status
Above Floor	1/2/3/4 Lift Cyl	B	ML43902 Brochure/Spec's MR414000 - 1CYL MR414005 - 2_CYL MR414010 - 3CYL MR414015 - 4CYL Parts Manual Pgs	ML43902B	Available for Production



Emergency Retraction: MLXXXXX

OEMs Using Mechanism: X

- Raises & lowers rooms.

Typically used with "USOHD" SLIDE-OUT MECHANISMS. (2015)

"Aluminum"

SpaceMaker® Hydraulic **Room** Slide-Out System

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
<p>Emergency Retraction: MLXXXXX OEMs Using Mechanism: Winnebago® 1999-2000 (AP19394)</p>					

"Canopy Lift System"

SpaceMaker® Hydraulic **Canopy** Slide-Out System

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
<p>Emergency Retraction: MLXXXXX OEMs Using Mechanism: X MR204677 – Ctrl Pnl</p>					

"Coach Cap (Front End) Extension"

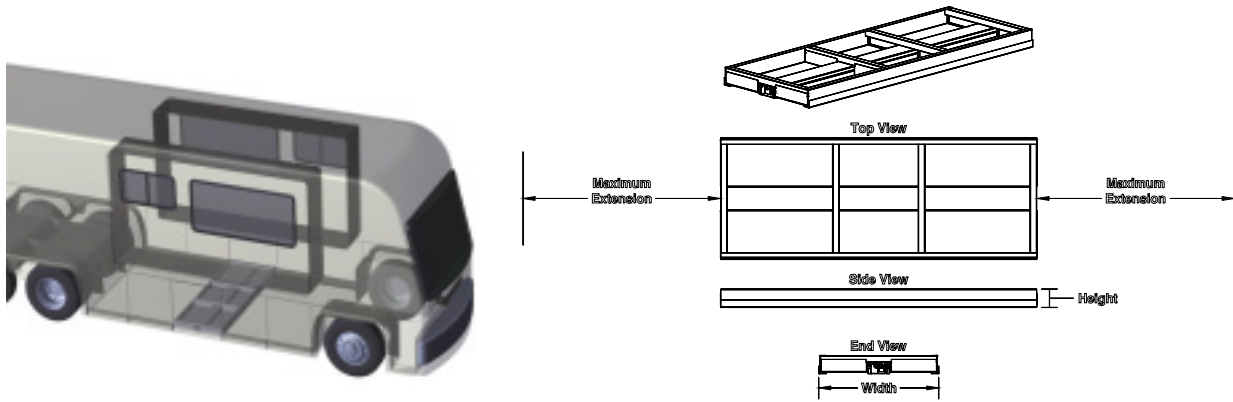
SpaceMaker® Hydraulic **Coach Cap** Slide System

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
<p>SEE ML37349 FOR PICTURE</p> <p>DUAL "RAIL" SLIDE-OUT</p> <p>Emergency Retraction: MLXXXXX OEMs Using Mechanism: X</p>					

"Dual-Direction Storage Slide"

SpaceMaker® Hydraulic Storage Slide-Out System

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Below Floor	2 Cylinders	A & B	ML38761.PDF	ML38761.WMV	Available for Production



Emergency Retraction: MLXXXXX
OEMs Using Mechanism: X

"Engine Door Lift"

SpaceMaker® Hydraulic Door Slide-Out System

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status

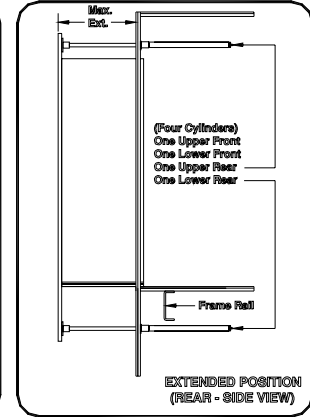
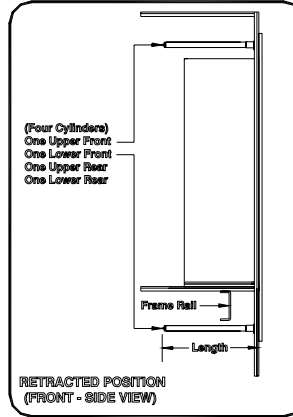
SEE [ML37349](#) FOR PICTURE (MP354885)

Emergency Retraction: MLXXXXX
OEMs Using Mechanism: Newmar (See [ML38929](#))

"Four Cylinder (4C)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)
 (Previous Name: "Hydraulic")

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above & Below Floor	4 Cylinders	A	ML23562.PDF	ML23562.WMV	Available for Production



Emergency Retraction: MLXXXXX

OEMs Using Mechanism: X

Two upper and two lower cylinders.

The two upper cylinders are located outside of the room.

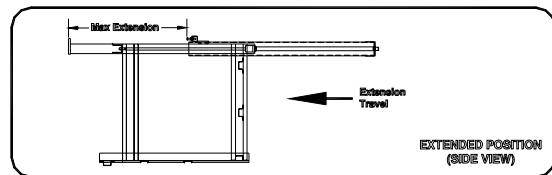
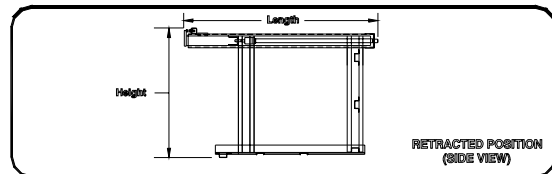
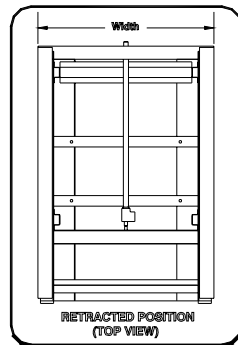
The two lower cylinders are located outside of the room below the frame rail.

Sync Cyl for smooth room operation.

"Generator Extension (GEN)"

SpaceMaker® Hydraulic Generator Slide-Out System

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
	1 Cylinder Or 2 Cylinder	A	ML23571.PDF	ML23571.WMV	Available for Production



Emergency Retraction: MLXXXXX

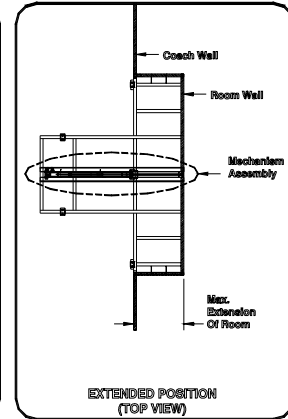
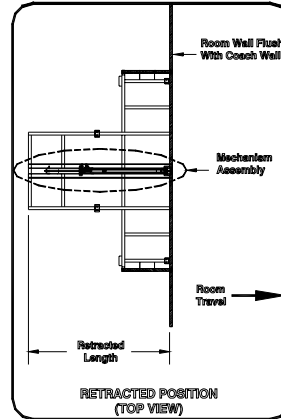
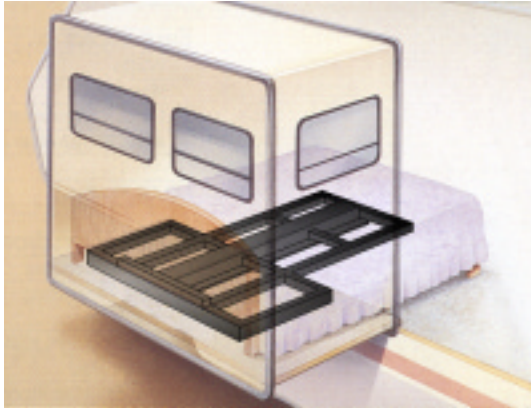
OEMs Using Mechanism: X

- Between frame rails extension w/one cylinder.
 Used primarily for generator slide-outs.

"Guided (GD)"

SpaceMaker® Hydraulic Room Slide-Out System
(with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	1 Cylinder	A	ML23569.PDF	ML23569	Available for Production



Emergency Retraction: MLXXXXX
OEMs Using Mechanism: X

- Above Floor RE w/one cylinder and horizontal sliding hat wrapper.
Used primarily for bed slide-outs and narrow rooms.

"In-Ceiling Full Wall (IC/FW)"

SpaceMaker® Hydraulic Room Slide-Out System
(Straight-Out or Level-In/Level-Out Floor)
(with HWH® Synchronizing Cylinder)

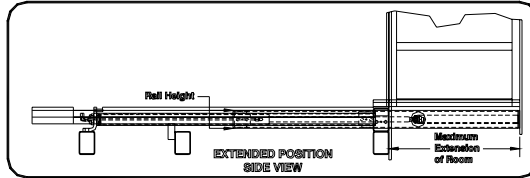
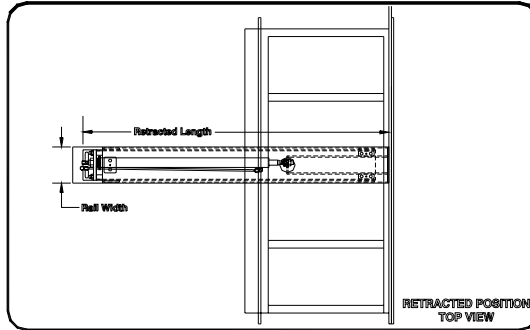
Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
In Ceiling Full Wall	4 Cylinders	A	ML39552 (No Spec. Sheet)	ML39552	Available for Production



Emergency Retraction: MLXXXXX
OEMs Using Mechanism: X

"In-Floor Level-Out (IFLO)"
 SpaceMaker® Hydraulic Room Slide-Out System
 (Previous Name: "In-Floor")

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
In Floor	1 Cylinder	A	ML23681B.PDF (Spec. Sheet)	infloor-offset.wmv	NOT CURRENT PRODUCTION

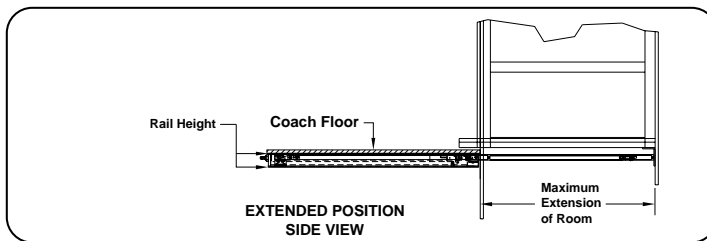
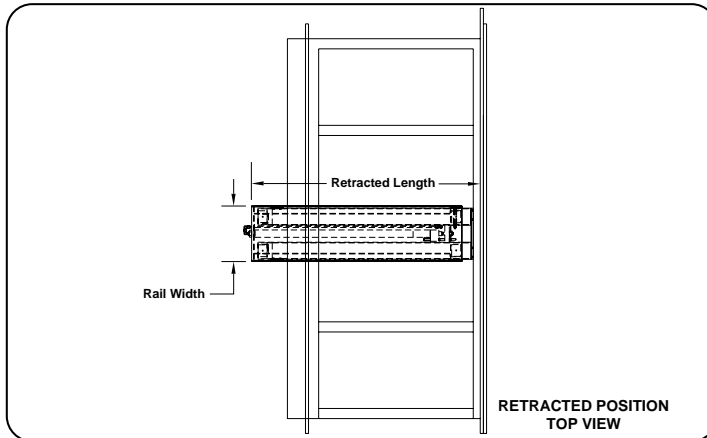


Emergency Retraction: MLXXXXX
OEMs Using Mechanism: X

- In Floor RE w/one cylinder and horizontal sliding tubes.
- Used primarily for bed slide-outs and narrow rooms.

"In-Floor Straight-Out (IFSO)"
 SpaceMaker® Hydraulic Room Slide-Out System
 (Previous Name: "In-Coach-Floor (ICF)")

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
In Floor	1 Cylinder	A	ML37180B	N/A	Available for Production



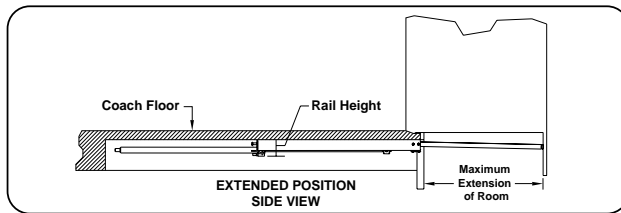
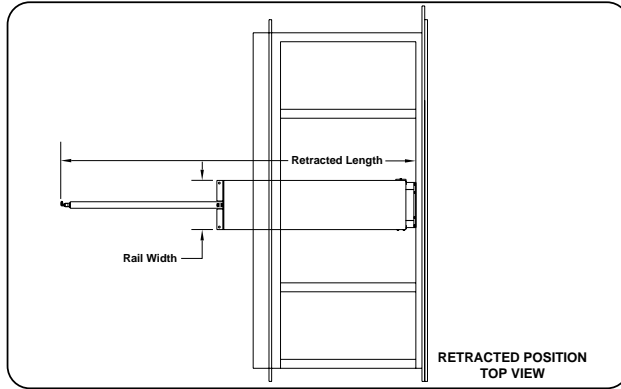
Emergency Retraction: MLXXXXX
OEMs Using Mechanism: X

"In-Floor Level-Out or Straight-Out (IFLSO)"

SpaceMaker® Hydraulic Room Slide-Out System

(Previous Name: "DB")

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's Parts Manual Page	Video	Production Status
In Floor		A	ML51794B.PDF (Spec. Sheet) MR411202 Parts Page	N/A	Available for Production

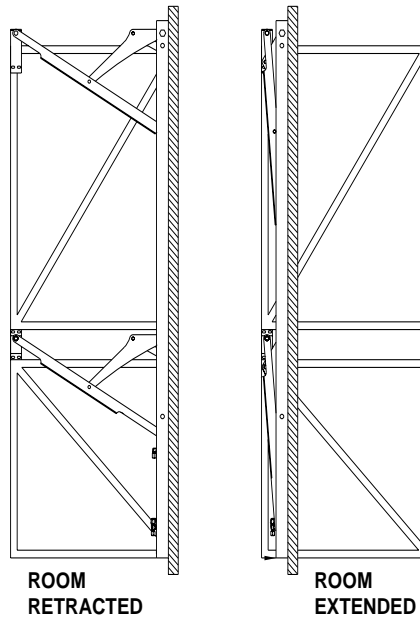


Emergency Retraction: MLXXXXX
OEMs Using Mechanism: X

"Lateral Arm (LA)"

SpaceMaker® Hydraulic Room Slide-Out System
(with HWH® Synchronizing Cylinder)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	2 Cylinders	A or B	N/A	N/A	NOT CURRENT PRODUCTION



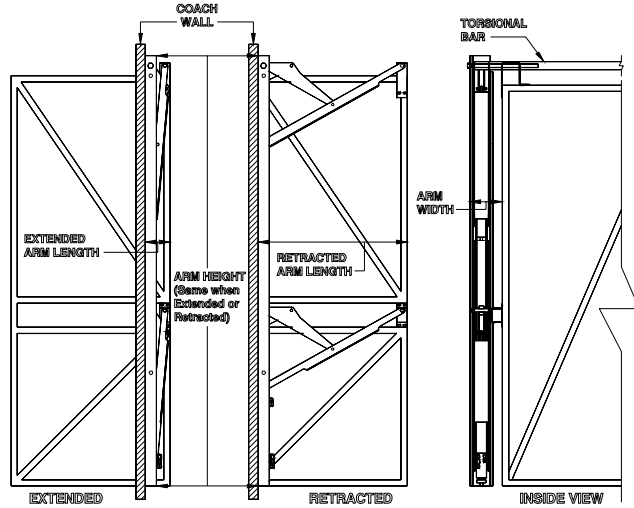
Emergency Retraction: MLXXXXX
OEMs Using Mechanism: X

- Above floor RE consisting of two folding arms.
- Arms collapse to low profile against the wall when the room is extended.
 - Sync Cyl for smooth room operation.
- Room cyl is extended when room is retracted.
- Room cyl is retracted when room is extended.

"Lateral Arm with Torsional Tube (LATT)"

SpaceMaker® Hydraulic Room Slide-Out System
(with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	2 Cylinders	B	ML26505.PDF	ML26505.WMV	NOT CURRENT PRODUCTION



Emergency Retraction: MLXXXXX

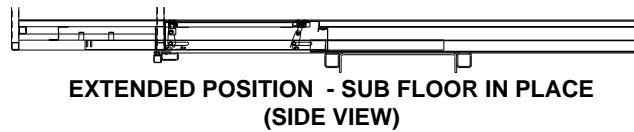
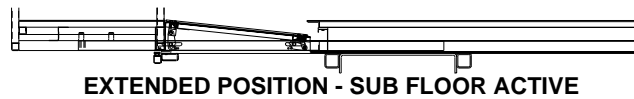
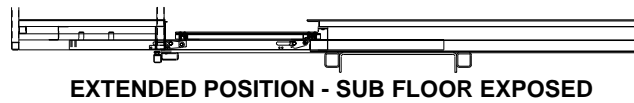
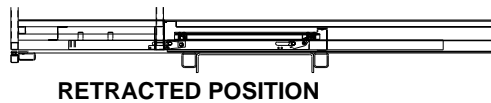
OEMs Using Mechanism: X

- Above floor RE consisting of two folding arms.
- Arms collapse to low profile against the wall when the room is extended.
- Uses a Torsional Tube located at top of room for smooth room operation.
 - Room cyl is extended when room is retracted.
 - Room cyl is retracted when room is extended.

"Level-In/Level-Out Floor (LILO)"

SpaceMaker® Hydraulic Room Slide-Out System
(with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Below Floor	2 Cylinders		ML23588B.PDF (Spec. Sheet)	ML23588	Available for Production



Emergency Retraction: MLXXXXX

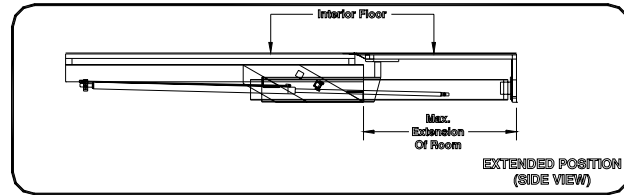
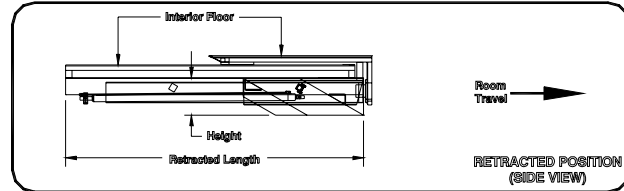
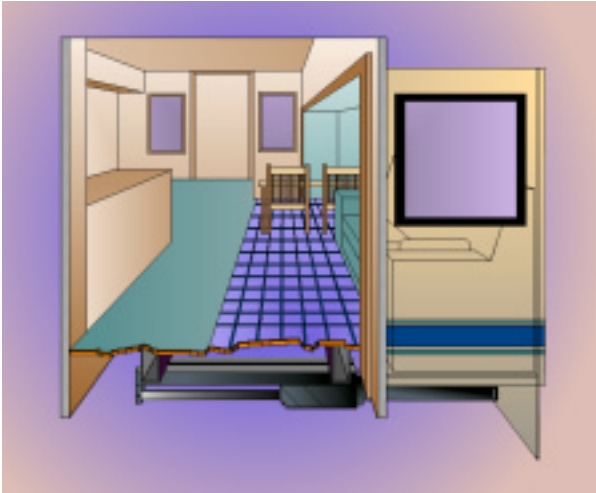
OEMs Using Mechanism: X

- A grouping of linkage, mechanisms, and cylinders extend and retract the room and the floor.

"Level-Out Screw Right (SRLO)"
"Level-Out Screw Left (SLLO)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)
 (Previous Name: "Flat Floor")

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Below Floor	2 Cylinders	A	ML23564.PDF	ML23564.WMV	Available for Production



Emergency Retraction: MLXXXXX

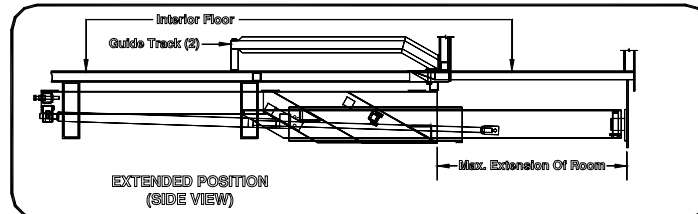
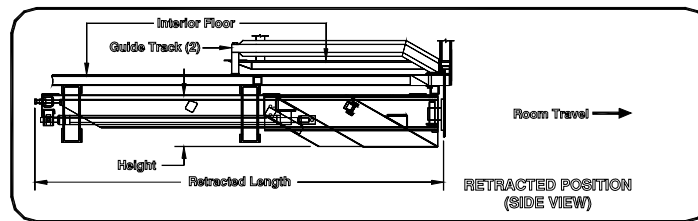
OEMs Using Mechanism: X

- Below floor RE w/two cylinders and horizontal sliding tubes.
 - Sync Cyl for smooth room operation.
 - Guided to level-out position at end of stroke.
 - Reusable Shipping Container Required C54148

"Level-Out Floor with Track (LOF)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)
 (with Guided Tracks)
 (Previous Name: "Level-Out Floor")

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Below Floor	2 Cylinders	A	ML37158B.PDF (Spec. Sheet)	N/A	Available for Production



Emergency Retraction: MLXXXXX

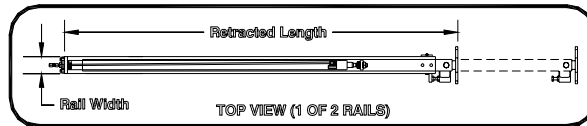
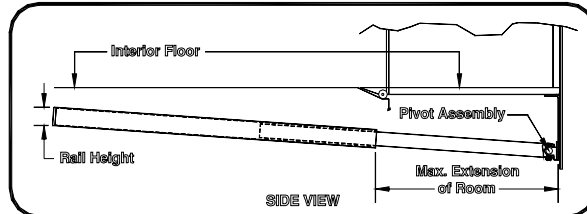
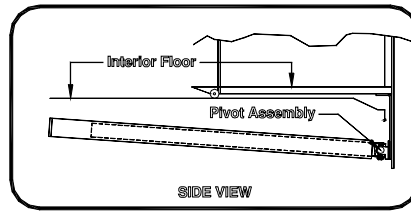
OEMs Using Mechanism: X

- Below floor RE w/two cylinders and horizontal sliding tubes.
 - Sync Cyl for smooth room operation.
 - Guided to level-out position at end of stroke.

"Level-Out Floor Pivotal (LOF/P)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)
 (with Pivot Brackets)
 (Previous Name: "Pivotal Level-Out Floor (PLOF)")

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Below Floor	2 Cylinders	A	ML37159B	N/A	Available for Production



Emergency Retraction: MLXXXXX

OEMs Using Mechanism: X

- Below floor RE w/two cylinders and horizontal sliding tubes.
- Uses sync cyl to make room operate smoothly.
- Pivot joint for level-out feature.

"Pivoting Beam (PB)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Below Floor		A	N/A	N/A	NOT CURRENT PRODUCTION

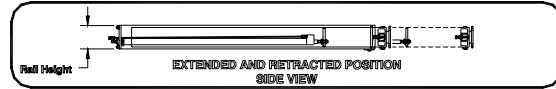
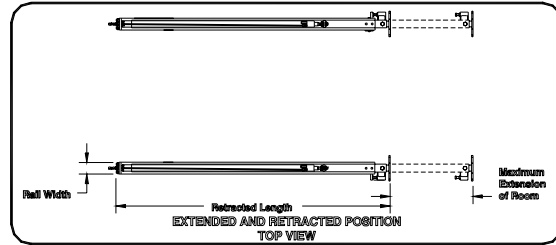
Emergency Retraction: MLXXXXX

OEMs Using Mechanism: X

"Rail with HWH® Synchronizing Cylinder (RAIL)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Below Floor	(2) 1-Cyl Mech's	A	ML23567	N/A	Available for Production



Emergency Retraction: MLXXXXX

OEMs Using Mechanism: X

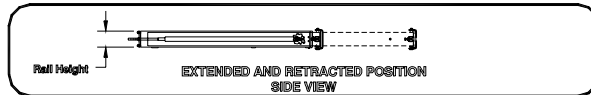
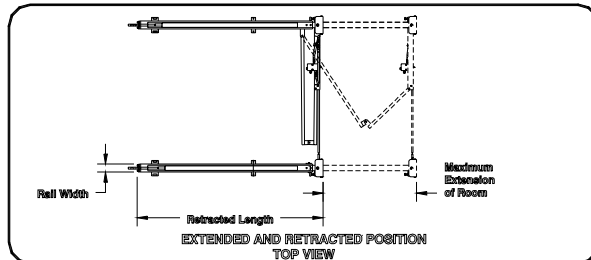
- Below floor RE w/two cylinders and horizontal sliding tubes.
- Uses the Sync Cylinder to make the room operate smoothly.
- Used for wider rooms.

"Rail with HWH® Rack Sensing Valve (RAIL/RSV)"

"Newell® Phantom Suite® (aka "Recky Room") (RKY)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Below Floor	(2) 1-Cyl Mech's	A	ML23568	ML50400.WMV (Recky)	NOT CURRENT PRODUCTION



Emergency Retraction: MLXXXXX

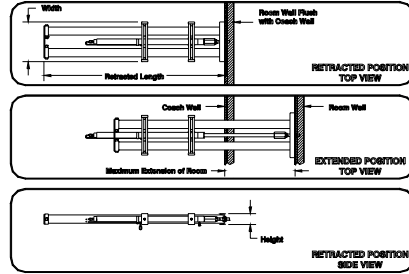
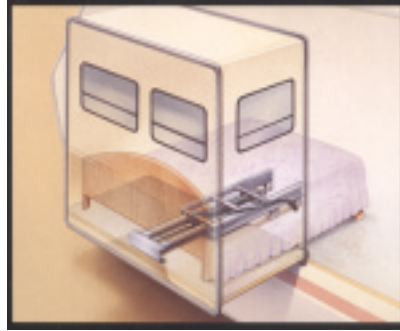
OEMs Using Mechanism: Newell®

- KEY FEATURES:**
- Below floor RE w/two cylinders and horizontal sliding tubes.
 - Rack Sensing Valve for smooth room operation.
 - Used for wider rooms.

"Single Cylinder (1C)"

SpaceMaker® Hydraulic Room Slide-Out System
(with Momentary Switch Control)
(Previous Name: "Hydraulic")

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor Below Floor	1 Cylinder	A	ML23570	N/A	NOT CURRENT PRODUCTION



Emergency Retraction: MLXXXXX

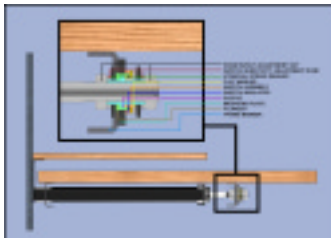
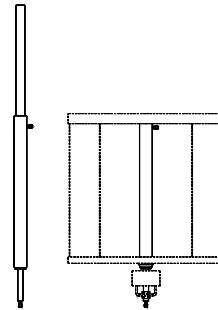
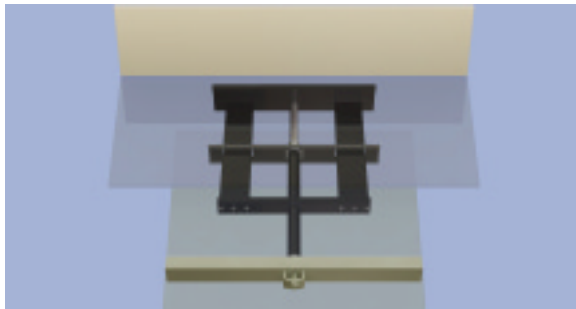
OEMs Using Mechanism: X

- Below Floor RE w/one cylinder and horizontal sliding tubes.
- Used primarily for bed slide-outs & narrow rooms.

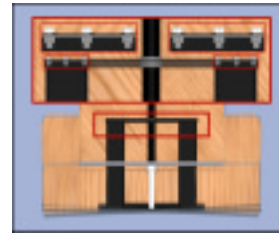
"Slimline (SLIM)"

SpaceMaker® Hydraulic Room Slide-Out System
(with Momentary Switch Control)
(Low Profile Mechanism)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Below Floor	1 Cylinder or 2 Cylinder	A	ML42942	ML42942	Available for Production



Picture - Side View w/Switch Cutaway
(hh95371.jpg)



Picture - Below Slide Looking Up
(hh95370.jpg)

Emergency Retraction: MLXXXXX

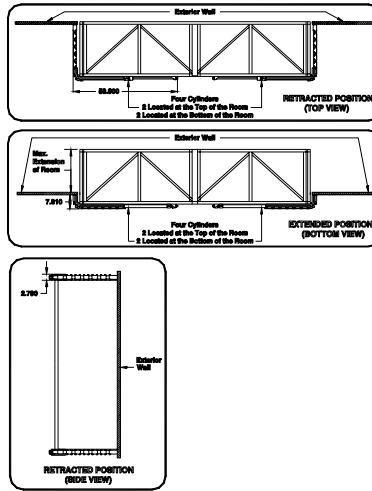
OEMs Using Mechanism: X

- Force Activated Switch

"Train Drive (TD)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	4 Cylinder	B	ML23561B.PDF	ML23561B.WMV	Available for Production



Emergency Retraction: MLXXXXX

OEMs Using Mechanism: X

- No Chain – Snap Ring Ling Assembly
- Two upper and two lower cylinders are attached directly to the room.
- All four cylinders are connected to the exterior wall of the coach each using multiple links that are joined together with pin and roller devices that are guided through channels.
 - Sync Cyl for smooth room operation.
- Room cyl is extended when room is retracted. • Room cyl is retracted when room is extended.

"Universal Flat-Out (UFO)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status

SEE [MR41.2687](#)

Emergency Retraction: MLXXXXX

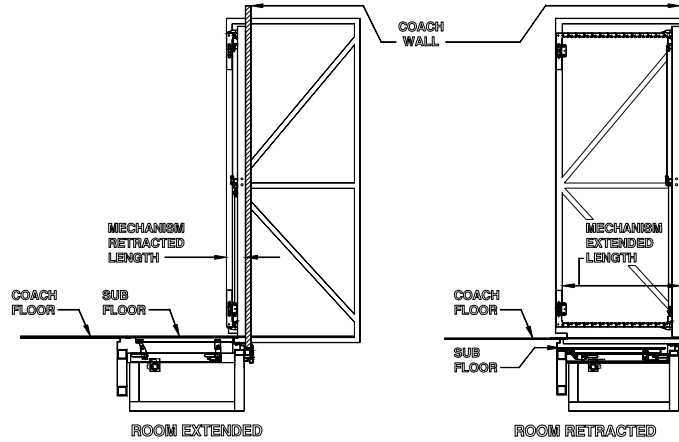
OEMs Using Mechanism: X

- Chain Links

"Universal Level-In/Level-Out (ULI/ULO)"

SpaceMaker® Hydraulic Room Slide-Out System
(with HWH® Synchronizing Cylinder)
(with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	2 Cylinder	B	ML32487.PDF	ML32487.WMV ML32487B.WMV	Available for Production

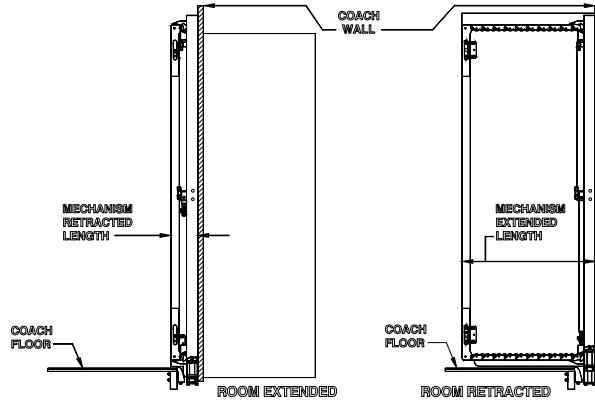
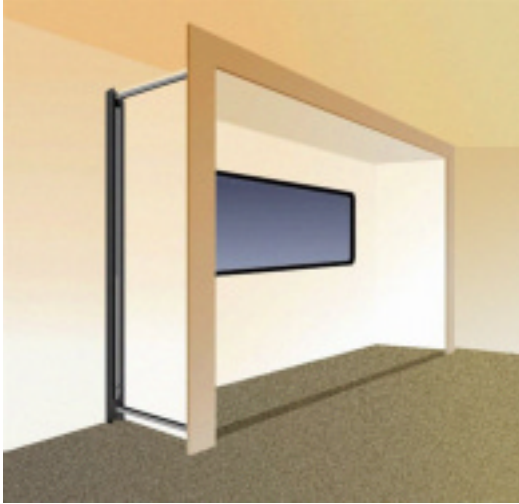


Emergency Retraction: MLXXXXX
OEMs Using Mechanism: X
• Chain Links

"Universal Level-Out (ULO) with Built-In Platform Lift Cylinders"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)
 (with **Built-In** Platform Lift Cylinders)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	2 Cylinder	B	ML32486.PDF Fema Brochure: ML42142.PDF	ML32486.WMV Install Video #1: ML32486B.WMV Install Video #2: ML32486C.WMV	Available for Production

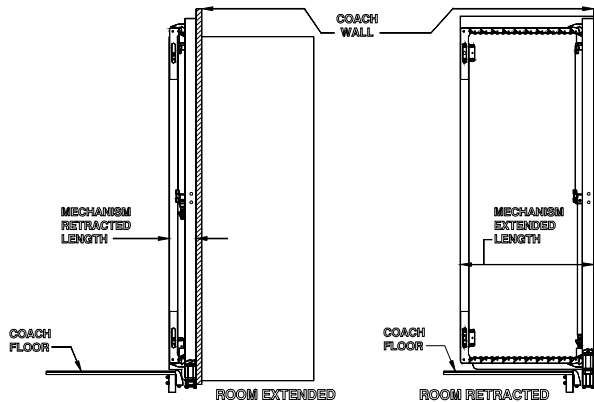
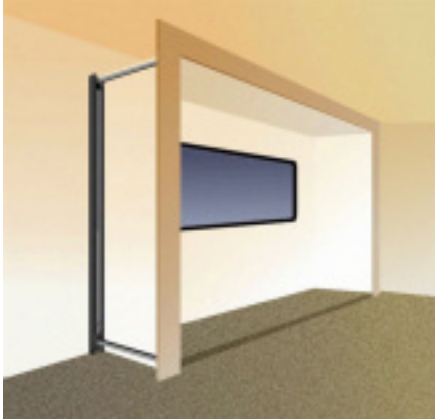


Emergency Retraction: MLXXXXX
OEMs Using Mechanism: X
 • Chain Links
 • Has built-in platform lift equipment

"Universal Level-Out Full-Wall (ULO/FW) with Built-In Platform Lift Cylinders"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)
 (with **Built-In** Platform Lift Cylinders)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor Full Wall	2 Cylinder	B	ML32486.PDF	ML50500.WMV	Available for Production



Emergency Retraction: MLXXXXX
OEMs Using Mechanism: X
 • Chain Links
 • Has built-in platform lift equipment
 (Same as Universal Level-Out (ULO) listed above - just a full-wall version.)

"Universal Platform Level-Out with Horizontal Platform Lift Cylinders (UPLO/HC)"

UPLO/HC = USOHD + HORIZONTAL PLATFORM LIFT CYLINDERS

SpaceMaker® Hydraulic Room Slide-Out

(with Horizontal Platform/Floor-Lift Cylinders)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
SEE USOHD	SEE USOHD	SEE USOHD	ML52624.PDF (No Spec. Sheet)	N/A	Available for Production

"UPLO/HC" = "USOHD" + HORIZONTAL PLATFORM LIFT CYLINDERS

"Universal Platform Level-Out with Vertical Platform Lift Cylinders (UPLO/VC)"

UPLO/VC = USOHD + VERTICAL PLATFORM LIFT CYLINDERS

SpaceMaker® Hydraulic Room Slide-Out

(with Vertical Platform/Floor-Lift Cylinders)

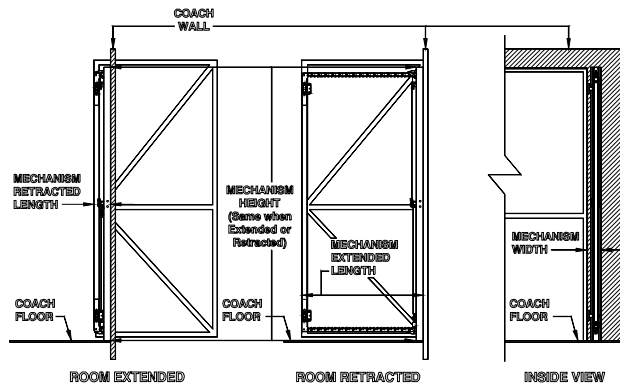
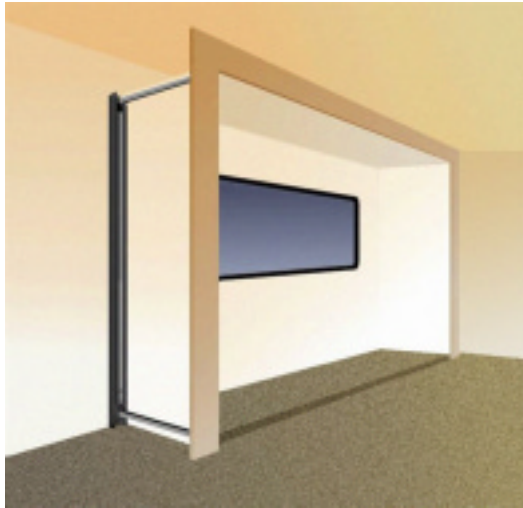
Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Documents	Video	Production Status
SEE USOHD	SEE USOHD	SEE USOHD	ML43902 Brochure/Spec's	ML43902B	Available for Production

"UPLO/VC" = "USOHD" + VERTICAL PLATFORM LIFT CYLINDERS

"Universal Straight-Out (USO)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	2 Cylinder	B	ML32485	ML32485	Available for Production



Emergency Retraction: MLXXXXX

- OEMs Using Mechanism: X**
- Chain Links
 - Used with PLATFORM/FLOOR LIFT SYSTEM.

"Universal Straight-Out Heavy Duty (USOHD)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	2 Cylinder	B	N/A	N/A	Available for Production

THIS IS A "USO" MECHANISM ONLY BIGGER.

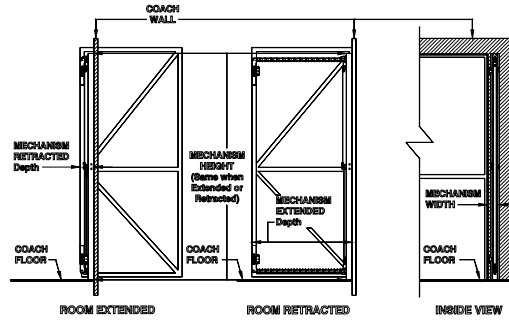
Emergency Retraction: MLXXXXX

- OEMs Using Mechanism: Newmar 54183/54184X**
- Chain Links
 - Used with PLATFORM/FLOOR LIFT SYSTEM. • Pat# 7717485

"Universal Straight-Out Light Duty (USOLD)"

SpaceMaker® Hydraulic Room Slide-Out System
(with HWH® Synchronizing Cylinder)
(with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	2 Cylinder	B	ML49187	ML32485	Available for Production



Emergency Retraction: MLXXXXX

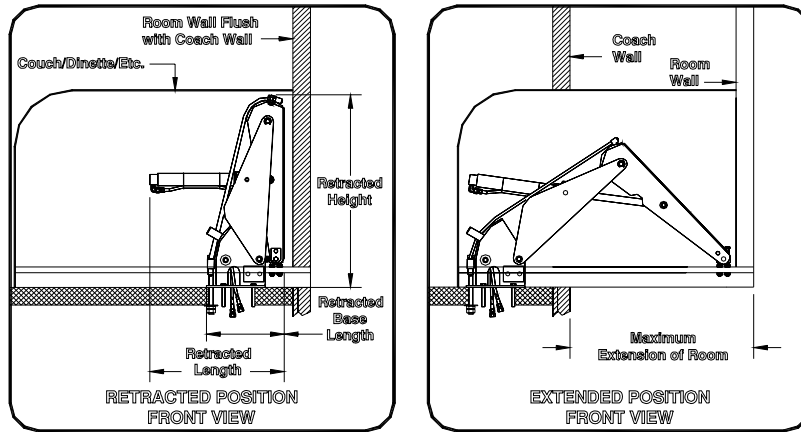
OEMs Using Mechanism: X

- Chain Links
- Used with PLATFORM/FLOOR LIFT SYSTEM.

"Vertical Arm (VA)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	2 Cylinder	A	ML23565B	ML23565	NOT CURRENT PRODUCTION



Emergency Retraction: MLXXXXX

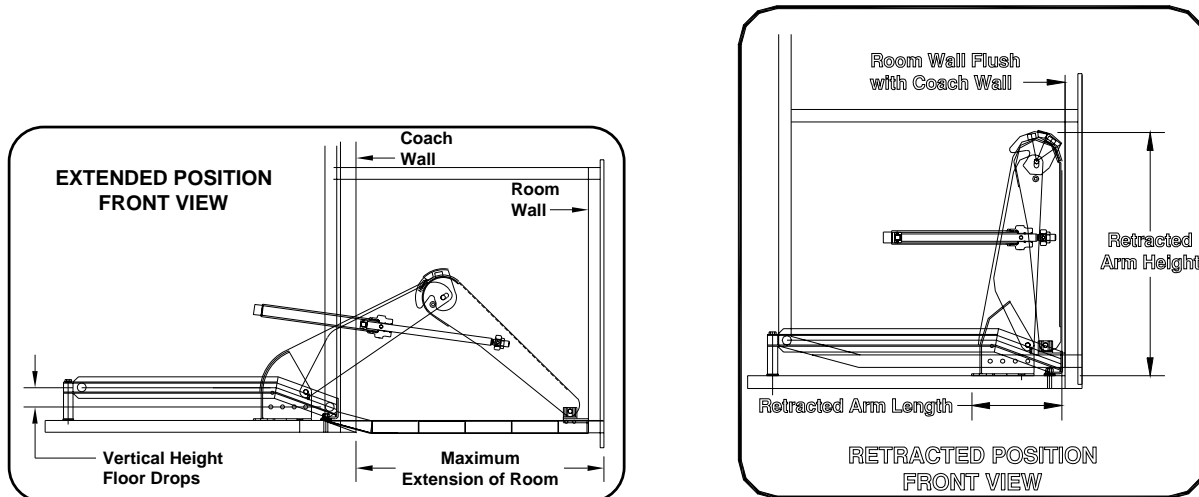
OEMs Using Mechanism: X

- Above floor RE consisting of two folding arms.
- Arms are hidden in a couch or dinette bench.
- Sync Cyl for smooth room operation.

"Vertical Arm Level-Out Floor (VALOF)"

SpaceMaker® Hydraulic Room Slide-Out System
 (with HWH® Synchronizing Cylinder)
 (with Momentary Switch Control)

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	2 Cylinder	A	ML23566B	ML23565	Available for Production



Emergency Retraction: MLXXXXX

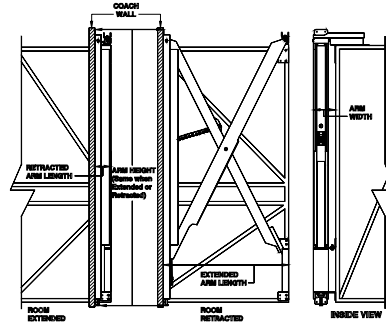
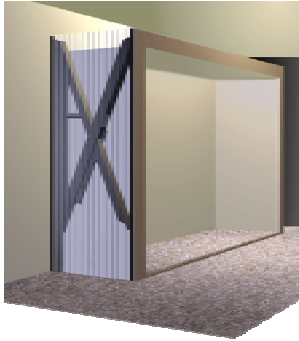
OEMs Using Mechanism: X

- Above floor RE consisting of two folding arms.
- Arms are hidden in a couch or dinette bench.
- Sync Cyl for smooth room operation.

"X-Slide (X)"

SpaceMaker® Hydraulic Room Slide-Out System
(with HWH® Synchronizing Cylinder)
(with Momentary Switch Control)
(Previous Name: "X-Arm")

Mechanism Location	Number of Ext. Cyl's	Style (A or B)	Brochure & Spec's	Video	Production Status
Above Floor	2 Cylinder	B	ML29639.PDF ML29639B.PDF (Spec. Sheet)	N/A	NOT CURRENT PRODUCTION



Emergency Retraction: MLXXXXX

OEMs Using Mechanism: X

- Chain Links
- Above floor RE consisting of two folding arms.
- Arms collapse to low profile against the wall when the room is extended.
 - Sync Cyl for smooth room operation.
- Room Cyl is extended when room is retracted.
- Room Cyl is retracted when room is extended.