

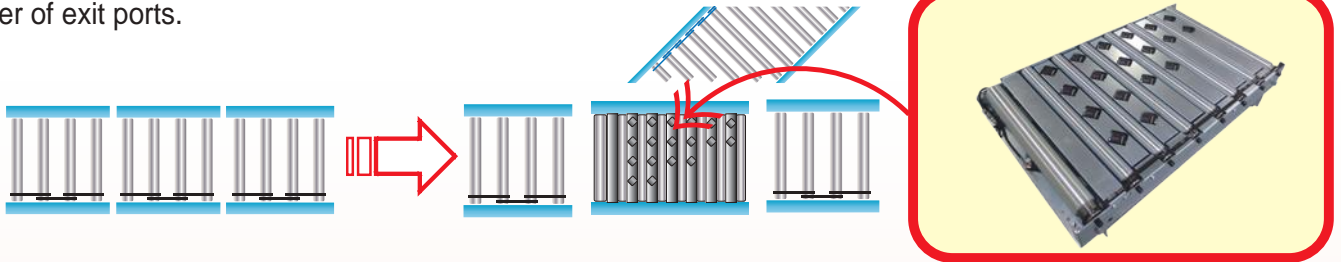
NEW Pop-Up Diverter

Evolving new age of production and intralogistics
MDR Type Material Handling
ITOH DENKI's original technology combining its expertise in motor and control.



Ease of design × optimum cost × clean

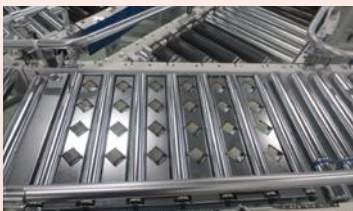
Simplifies design: Just snap in the pop up diverter in the bridge between conveyors in accordance with required throughput and number of exit ports.



Modular design facilitates the installation without additional engineering.
Extremely low profile with no pneumatic structure creates clean, quiet environment.

Reduces the total cost of system deployment

«Diverting»



Scalable design meeting required throughput.

«Sorting»



Achieves sorting of multiple products by adding pop up diverters.

«Merging»



Achieves complex sorting by combining divert and merge applications.

«Multi-layer line»



Low profile design allows multi-layer lines.

Product designation / Dimensions

Model Example : POP-D-L45D-60N-A1 (Divert Left 45 degree / size A)

POP-D- ① ② - ③ ④ - ⑤ ⑥

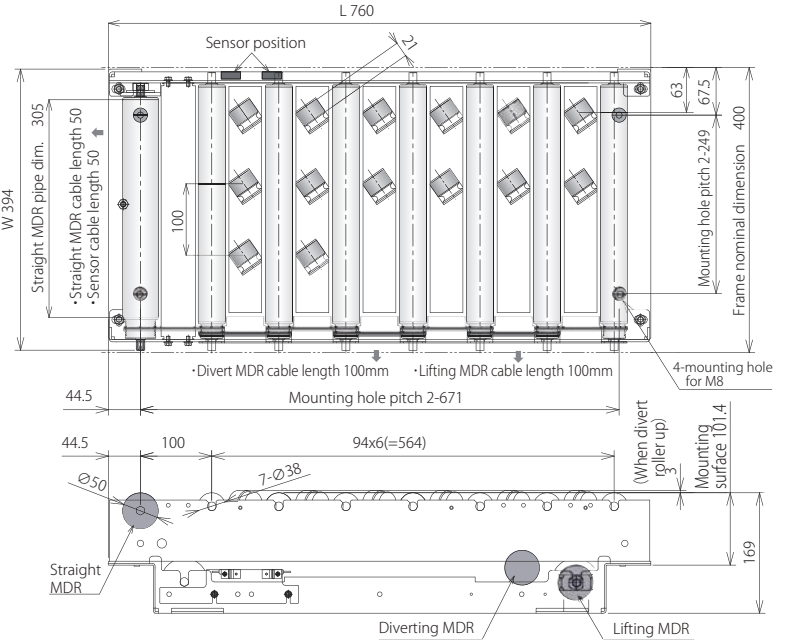
- ① Divert direction
L ... Divert left
R ... Divert right
- ② Divert angle
30D ... 30 degrees
45D ... 45 degrees
- ③ Speed(m/min)
60
- ④ Signal type selection
N ... NPN input/output *1
P ... PNP input/output *2
- ⑤ Size(mm)
A: 394mm wide x 760mm long
B: 494mm wide x 760mm long
C: 594mm wide x 760mm long
D: 694mm wide x 760mm long
- ⑥ Type
1

*1 NPN input/output driver card / up/down sensor included
*2 PNP input/output driver card / up/down sensor included

Load Size and Weight

Size	Min. size ~ Max. size	Max. Load Weight
A	W300 × L300mm ~ W300 × L650mm	30kg
B	W300 × L300mm ~ W400 × L650mm	
C	W300 × L300mm ~ W500 × L650mm	
D	W300 × L300mm ~ W600 × L650mm	

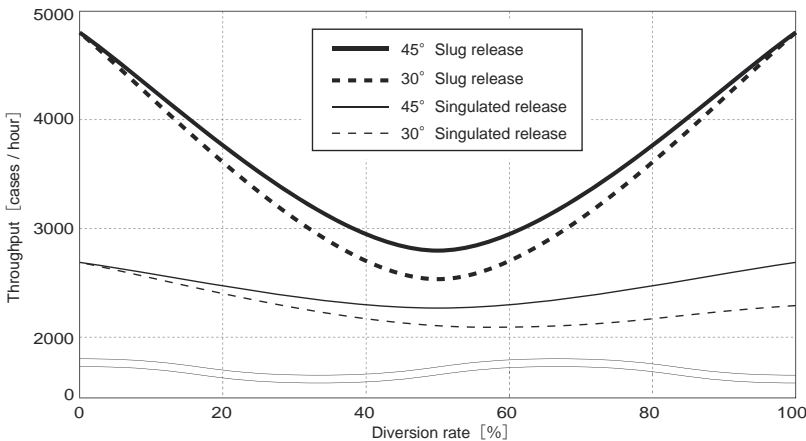
※Size and weight are for reference, as the load conditions vary
※Certain type of load may not be transferred properly depending on the bottom flatness.



Standard accessories:

- Motor driver cards: 2 x CB 016 for MDR for straight transfer and divert
1 x CBR-306F for lifting MDR
 - Proximity sensor detecting top and bottom end of wheels
 - 4 sets of M8-20 bolt and M8 nut for mounting the pop up diverter and driver cards
- Note: Dedicated stay to mount the pop up diverter to conveyor frame is optional.

Transfer Throughput



Operating conditions

- 60m/min transfer speed: Size D type
- 30kg corrugated board box 360mm wide x 360mm long
- Divert is done from the upstream conveyor, where multiple totes are accumulated.

※The data in the graph is for reference only and is not to guarantee.
※Slug release data is based on the control of up and downstream conveyors done by idLinX.
※Throughput may vary depending on load size, material, bottom flatness and transfer speed.

Specifications

Pop-up diverter unit specifications

Roller diameter	φ50mm	
Diverting roller	Size	φ39.5mm
	Material	Urethane 90SH
Size	Width(W)	394, 494, 594, 694mm
	Length (L) straight direction	760mm
Mechanism height	169mm (with diverting roller up : 172mm)	
Transfer speed	Straight	Approx 60m/min
	Diversion	Approx 90m/min
Lifting stroke	3mm	
Drive power	24VDC±10	
Ambient temperature	0 ~ 40°C (No freezing)	
Ambient humidity	< 90%RH (No condensation)	
Atmosphere	No corrosive gas	
Vibration	0.5G or below	
Installed location	Indoor	
Tilt of the mounting surface	5/1000 or below	
Lifting sensor	Current consumption	15mA or below
	Output	Maximum inrush current: 100mA Applied voltage: 30VDC or less (between output and 0V) Residual voltage: 2VDC or less (100mA inrush current)
(Roller btm sensor SN-S / Roller top sensor SN-R)	Output motion	ON when detecting the position
	Cable	Outer dia. φ 3mm 0.15m ² 3 wires

CB-016□6 / CBR-306F□ ※□=N (NPN in/out or P (PNP in/out)

Power voltage	24VDC±10%	
Rated voltage	24VDC	
Static current	0.03A	
Starting current	4.0A	
Wire dia.	Pwr connector (CN1)	0.50~1.5mm ² (AWG:20~14) Note
	Cntrl connector (CN2)	0.08~0.5mm ² (AWG:28~20) Note
Motor rotation from drive input	15msec or below	
Protection function	Miss-wiring protection / Integral 6.3A fuse	
Thermal protection	95°C for circuit board, 105°C for motor	
Current limit	4A	
Ambient temperature	0~40°C (No freezing)	
Ambient humidity	90%RH or below (No condensation)	
Atmosphere	No corrosive gas	
Vibration	0.5G or below	
Installed location	Indoor	

Note) Conforming wire to the included connectors

PCB side	Power connector	734-162 (WAGO) (MAX:10A)
	Control connector	733-365 (WAGO) (MAX: 4A)
Wiring side	Power conn. (CN1)	734-102 (WAGO) (MAX:10A)
	Control conn. (CN2)	733-105 (WAGO) (MAX: 4A)

Product Weight

Size	Weight
Size A	46kg
Size B	49kg
Size C	51kg
Size D	54kg



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