FATH® + **flowsort**
MODULAR SORTING SYSTEMS

FLOWSORT SORTING SYSTEMS

Intralogistics reinvented – modular, simple, scalable

+

- Sorting performance: 2,500–6,000 products per hour

- Plug & Play Easy integration in conveyor systems saves planning and installation time

- Gentle transport: Redirection of products in "Flow" - no abrupt braking or excessive mechanical force

- Scalability Sorting systems can be easily expanded at any time

- Modularity: innovative standard modules for maximum flexibility

HIGHLIGHTS

The Flowsort product portfolio consists of standardized sorting modules. With just three different modules - Single Line Diverter, Double Line Diverter and ZigZag Diverter - many different use cases can be addressed - with a single underlying system. All Flowsort sorting modules harmonize with all other intralogistics systems and technologies. They are easy to install, both in terms of hardware as well as for the software connection.

The conceptual design ensures a high degree of scalability and offers a completely new level of flexibility: Sorting performance and layout can be adjusted to meet current requirements at any time. Even retrofitting existing intralogistics systems can be easily implemented with Flowsort. And all this comes in a fresh and modern design! The "Flow" ensures that

the sorted material is diverted particularly gently, without abrupt braking or mechanical force. This makes Flowsort sorting systems suitable even for fragile goods.

The energy consumption of the modules is very low due to the operation with 24 V motors. This enables energy savings and benefits the environment. Designed and manufactured in The Netherlands, Flowsort sorting modules are very robust and ensure reliable operation of the automatic sorting system.

FLEXIBLE & SYSTEM-INDEPENDENT

The solution to current intralogistics challenges

In the distribution sector, smaller decentralized distribution centers are increasingly needed to ensure fast deliveries in conurbations. New automation technologies are needed to meet this challenge. Flowsort sorting modules are straightforward, flexible, quick to install, system independent and highly scalable. This makes the Flowsort modules perfect for streamlining intralogistics processes and setting up smaller distribution centers.
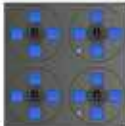
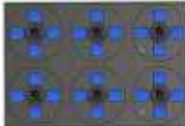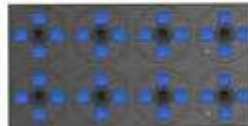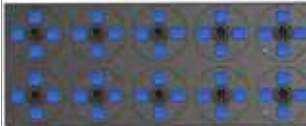**FATH®** + **flowsort** MODULAR SORTING SYSTEMS

SLD = Single Line Diverter
DLD = Double Line Diverter

The SLD (single row) and DLD (double row) are high-speed sorters that can be incorporated into any conveyor system. Flow is a modular system that you can configure according to your needs. For example, when you need a 3-row system, you connect an SLD (1-row) and a DLD (2-row) together - all plug & play.
The SLD and DLD can each be ordered to the millimetre in the widths described below. This means that they can be easily and precisely installed in almost all conveyor systems.

The following widths are available:
• 400 – 450 mm
• 600 – 650 mm
• 800 – 850 mm
• 1000 -1050 mm

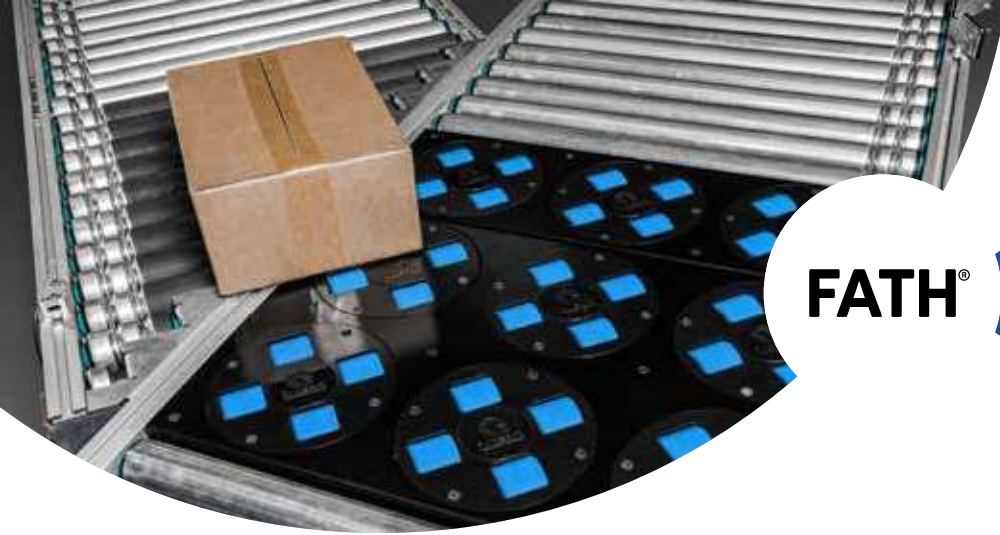|	400-450 mm	600 - 650 mm	800 - 850 mm	1000 - 1050 mm
SLD **(1 row)**	(2 sorter discs)	(3 sorter discs)	(4 sorter discs)	(5 sorter discs)
DLD **(2 rows)**	(4 sorter discs)	(6 sorter discs)	(8 sorter discs)	(10 sorter discs)

ZZ= "ZigZag" Diverter

The ZZ-Diverter is a high-speed sorter in which the deflection discs are arranged in a zigzag line.
This design allows the sorting of small packages with a size of at least 80x80mm.

The following widths are available:
• 400 mm
• 600 mm
• 800 mm
• 1000 mm
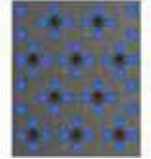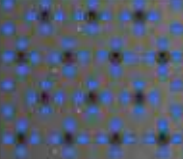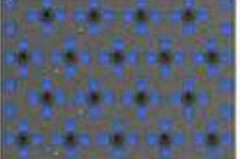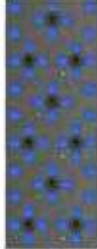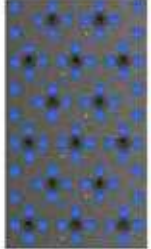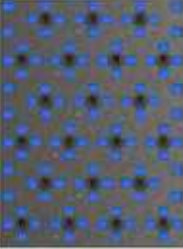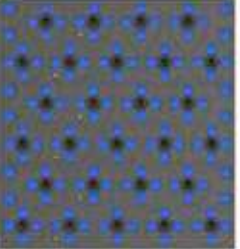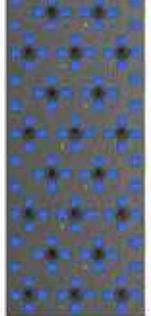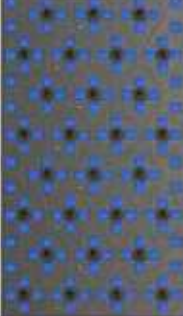
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	400 mm	600 mm	800 mm	1000 mm
ZZ **(2 rows)**	(3 sorter discs)	(6 sorter discs)	(9 sorter discs)	(12 sorter discs)
ZZ **(4 rows)**	(6 sorter discs)	(12 sorter discs)	(18 sorter discs)	(24 sorter discs)
ZZ **(6 rows)**	(9 sorter discs)	(18 sorter discs)	(27 sorter discs)	(36 sorter discs)
ZZ **(8 rows)**	(12 sorter discs)	(24 sorter discs)	(36 sorter discs)	(48 sorter discs)
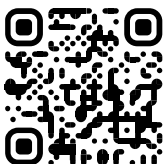
Would you like to learn more about
Flowsort Sorting systems?

diverter.fath24.com

FLOWSORT® SINGLE LINE DIVERTER SLD

DESCRIPTION	For automated sorting of objects with a minimum size of 150 x 150 mm (e.g boxes, containers, cartons, envelopes, etc.) Easy and fast integration in all common conveyor systems Sorts in flow without abrupt movements, thus making it suitable also for sensitive goods Maximum layout flexibility due to stepless outfeed angles - 90° to +90° Plug & Play integration into all common PLC systems Retrofitting and scaling possible at any time Maximum sorting capacity: 6000 pieces / hour, depending on size of transported goods
MATERIAL	Rollers: Plastic TPU ≈ 70 Shore Case: Steel
SURFACE	Case: Laquered
COLOR	Rollers: Blue Case: Black
OPERATING VOLTAGE / FREQUENCY	24 V DC
PACK QUANTITY	1 piece
TIP	All widths between 400 - 450 mm, 600 - 650mm, 800 - 850 and 1000 - 1050 mm available
CONTROL	1 control card per row: Standard I/O via M8 connector Supported protocols: Profinet, Ethernet I/P, Modbus/TCP or EtherCAT
MAX. MASS CONVEYED GOOD (KG)	35 kg
MIN. MASS CONVEYED GOOD (KG)	0.05 kg
SPEED	Rotating speed: 180°/ 0.35 s Max. conveying speed: 1.5 m/s

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FLOWSORT® SINGLE LINE DIVERTER SLD

Version	B [mm]	b [mm]	Weight [kg]	Part #
2 sorter discs	433	400	20.5	SLD400-200
	438	410	20.5	SLD410-200
	443	420	20.5	SLD420-200
	448	430	20.5	SLD430-200
	453	440	20.5	SLD440-200
	463	450	20.5	SLD450-200
3 sorter discs	633	600	28.5	SLD600-200
	638	610	28.5	SLD610-200
	643	620	28.5	SLD620-200
	648	630	28.5	SLD630-200
	653	640	28.5	SLD640-200
	663	650	28.5	SLD650-200
4 sorter discs	833	800	36.0	SLD800-200
	838	810	36.0	SLD810-200
	843	820	36.0	SLD820-200
	848	830	36.0	SLD830-200
	853	840	36.0	SLD840-200
	863	850	36.0	SLD850-200
5 sorter discs	1033	1000	43.5	SLD1000-200
	1038	1010	43.5	SLD1010-200
	1043	1020	43.5	SLD1020-200
	1048	1030	43.5	SLD1030-200
	1053	1040	43.5	SLD1040-200
	1063	1050	43.5	SLD1050-200

FLOWSORT® DOUBLE LINE DIVERTER DLD

DESCRIPTION	For automated sorting of objects with a minimum size of 150 x 150 mm (e.g boxes, containers, cartons, envelopes, etc.) Easy and fast integration in all common conveyor systems Sorts in flow without abrupt movements, thus making it suitable also for sensitive goods Maximum layout flexibility due to stepless outfeed angles - 90° to +90° Plug & Play integration into all common PLC systems Retrofitting and scaling possible at any time Maximum sorting capacity: 6000 pieces / hour, depending on size of transported goods
MATERIAL	Rollers: Plastic TPU ≈ 70 Shore Case: Steel
SURFACE	Case: Laquered
COLOR	Rollers: Blue Case: Black
OPERATING VOLTAGE / FREQUENCY	24 V DC
PACK QUANTITY	1 piece
TIP	All widths between 400 - 450 mm, 600 - 650mm, 800 - 850 and 1000 - 1050 mm available
CONTROL	1 control card per row: Standard I/O via M8 connector Supported protocols: Profinet, Ethernet I/P, Modbus/TCP or EtherCAT
MAX. MASS CONVEYED GOOD (KG)	35 kg
MIN. MASS CONVEYED GOOD (KG)	0.05 kg
SPEED	Rotating speed: 180°/ 0.35 s Max. conveying speed: 1.5 m/s

FLOWSORT® DOUBLE LINE DIVERTER DLD

Version	B [mm]	b [mm]	Weight [kg]	Part #
4 sorter discs	433	400	36.0	DLD400-400
	438	410	36.0	DLD410-400
	443	420	36.0	DLD420-400
	448	430	36.0	DLD430-400
	453	440	36.0	DLD440-400
	453	450	36.0	DLD450-400
6 sorter discs	633	600	50.0	DLD600-400
	638	610	50.0	DLD610-400
	643	620	50.0	DLD620-400
	648	630	50.0	DLD630-400
	653	640	50.0	DLD640-400
	663	650	50.0	DLD650-400
8 sorter discs	833	800	62.0	DLD800-400
	838	810	62.0	DLD810-400
	843	820	62.0	DLD820-400
	848	830	62.0	DLD830-400
	853	840	62.0	DLD840-400
	863	850	62.0	DLD850-400
10 sorter discs	1033	1000	74.0	DLD1000-400
	1038	1010	74.0	DLD1010-400
	1043	1020	74.0	DLD1020-400
	1048	1030	74.0	DLD1030-400
	1053	1040	74.0	DLD1040-400
	1063	1050	74.0	DLD1050-400

FLOWSORT® ZICZAC DIVERTER ZZ

|	
DESCRIPTION	For automated sorting of objects with a minimum size of 80 x 80 mm (e.g boxes, containers, cartons, envelopes, etc.) Easy and fast integration in all common conveyor systems Sorts in flow without abrupt movements, thus making it suitable also for sensitive goods Maximum layout flexibility due to stepless outfeed angles - 90° to + 90° Plug & Play integration into all common PLC systems Retrofitting and scaling possible at any time Maximum sorting capacity: 6000 pieces / hour, depending on size of transported goods
MATERIAL	Rollers: Plastic TPU ≈ 70 Shore Case: Steel
SURFACE	Case: Laquered
COLOR	Rollers: Blue Case: Black
OPERATING VOLTAGE / FREQUENCY	24 V DC
PACK QUANTITY	1 piece
CONTROL	1 homing sensor per row 1 control card per row: Standard I/O via M8 connector Supported protocols: Profinet, Ethernet I/P, Modbus/TCP or EtherCAT
MAX. MASS CONVEYED GOOD (KG)	35 kg
MIN. MASS CONVEYED GOOD (KG)	0.05 kg
SPEED	Rotating speed: 180°/ 0.35 s Max. conveying speed: 1.5 m/s

Version	B [mm]	b [mm]	L [mm]	Weight [kg]	Part #
2 rows, 3 sorter discs	426	400	373.2	36.0	ZZ400-2
4 rows, 6 sorter discs	426	400	719.6	70.0	ZZ400-4
6 rows, 9 sorter discs	426	400	1066	105.0	ZZ400-6
8 rows, 12 sorter discs	426	400	1412	140.0	ZZ400-8
2 rows, 6 sorter discs	626	600	373.2	51.0	ZZ600-2
4 rows, 12 sorter discs	626	600	719.6	100.0	ZZ600-4
6 rows, 18 sorter discs	626	600	1066	150.0	ZZ600-6
8 rows, 24 sorter discs	626	600	1412	200.0	ZZ600-8
2 rows, 9 sorter discs	826	800	373.2	72.0	ZZ800-2
4 rows, 18 sorter discs	826	800	719.6	140.0	ZZ800-4
6 rows, 27 sorter discs	826	800	1066	210.0	ZZ800-6
8 rows, 36 sorter discs	826	800	1412	280.0	ZZ800-8
2 rows, 12 sorter discs	1026	1000	371.2	80.0	ZZ1000-2
4 rows, 24 sorter discs	1026	1000	719.6	158.0	ZZ1000-4
6 rows, 36 sorter discs	1026	1000	1066	230.0	ZZ1000-6
8 rows, 48 sorter discs	1026	1000	1412	310.0	ZZ1000-8

3

ELECTRIC MOTOR FOR FLOWSORT® DIVERTERS

MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Durable casing Low energy consumption M8 - 4 Pin connector
OPERATING VOLTAGE / FREQUENCY	24 V DC
OPERATING CURRENT	2,5 A - 3,5 A
OPERATING TEMPERATURE	–10 °C – + 40 °C
IP RATING	IP54
PACK QUANTITY	1 piece
POWER OUTPUT	40 - 50 W
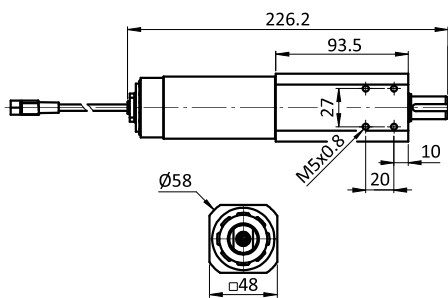
Version	Weight [kg]	Part #
Drive motor for conveyor roller	1.3	**E000001**
Control motor for disc module	1.3	**E000002**

CONTROL UNIT CONVEYLINX-AI2 FOR FLOWSORT® DIVERTERS

MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Control of up to 2 motors and 2 sensors Supported protocols: Profinet, ethernet I/P, modbus/TCP, etherCAT Product tracking data handling for easier PLC programming Completely programmable and configurable M8 female connector for connecting npn- or pnp phototransistors, M8 male connetor for connecting motors Durable casing
OPERATING VOLTAGE / FREQUENCY	24 V DC
IP RATING	IP54
PACK QUANTITY	1 piece

	Weight [kg]	Part #
	0.2	E000003

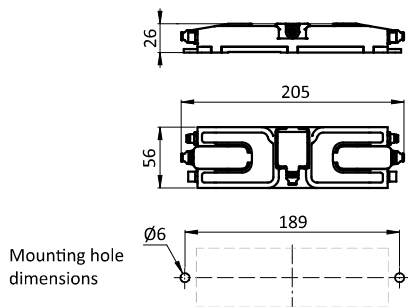## CONTROL UNIT MOTIONLINX-AI FOR FLOWSORT® DIVERTERS

MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Control of up to 2 motors and 2 sensors, Supported protocols: EtherCAT M8 female connector for connecting npn- or pnp phototransistors, M8 male connetor for connecting motors Motor error detection Adustable accelaration and decelaration Durable casing
OPERATING VOLT-AGE / FREQUENCY	24 V DC
IP RATING	IP54
PACK QUANTITY	1 piece

26
205
56
Ø6
189
Mounting hole dimensions

	Weight [kg]	Part #
	0.2	**E000004**

INDUCTIVE POSITION SENSOR FOR FLOWSORT® DIVERTERS
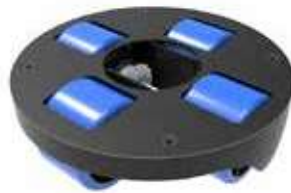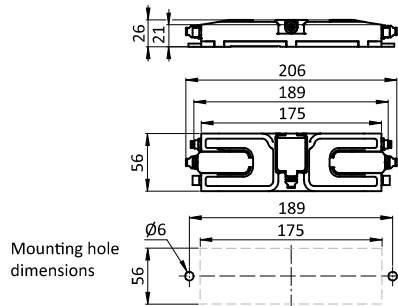
MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Ready-to-use position sensor M12 thread for fastening and positioning Without connection cable
PACK QUANTITY	1 piece

Weight [g]	Part #
27	**E000005**

WHEEL DRIVE ASSEMBLY FOR FLOWSORT® DIVERTERS

|	
MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Ready to use wheel drive assembly
MATERIAL	Cover Plate: Steel Frame: Plastic POM Rollers: Plastic TPU Bevel gear: Plastic POM
SURFACE	Cover plate: Laquered
COLOR	Frame: Black Rollers: Blue
PACK QUANTITY	1 piece

Mounting hole dimensions

Weight [g]	Part #
930	**S000003**

PULLEY DRIVE ASSEMBLY FOR FLOWSORT® DIVERTERS
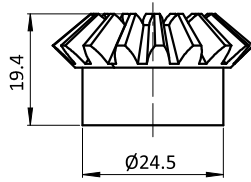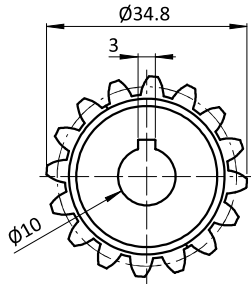
MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Ready to install pulley drive assembly Compound of pulleys, bevel gear and axles
MATERIAL	Large Pulley: Aluminum Small pulley: Steel Bevel gear: Plastic POM Hollow axles: Steel
PACK QUANTITY	1 piece
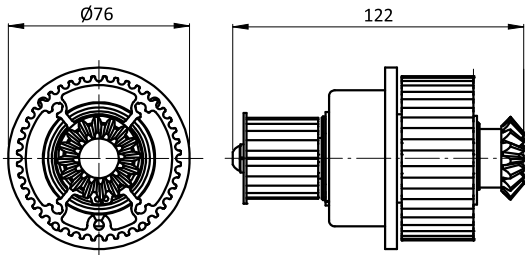
Weight [g]	Part #
810	S000004

BEVEL GEAR FOR FLOWSORT® DIVERTERS

MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Bevel Gear with Ø 10 mm diameter for drive of conveyor rollers, With keyway 3 x 3 mm
MATERIAL	Plastic POM
PACK QUANTITY	1 piece

Ø34.8
3
Ø10
19.4
Ø24.5

Weight [g]	Part #
11	**I000005**

TIMING BELT TENSIONER ELEMENT FOR FLOWSORT® DIVERTERS

MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Ready to use belt tensioner element
MATERIAL	Tensioning unit: Steel Tensioner pulley: Aluminum
PACK QUANTITY	1 piece

Version	Weight [g]	Part #
Timing Belt Tensioner Element	144	**S000023**

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TIMING BELT TENSIONER ELEMENT REVERS FOR FLOWSORT® DIVERTERS

|	
MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Ready to use belt tensioner element
MATERIAL	Tensioning unit: Steel Tensioner pulley: Aluminum
PACK QUANTITY	1 piece

Weight [g]	Part #
148	S000027

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CONTROL BELT FOR FLOWSORT® DIVERTERS

MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Belt for direction control
PACK QUANTITY	1 piece

Length=325 / HTD5M

9
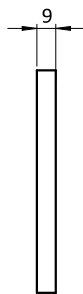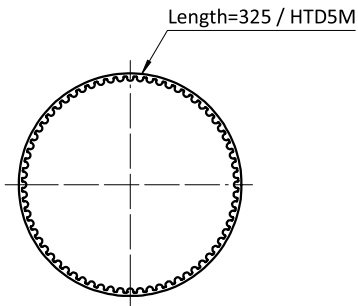
Weight [g]	Part #
11	V000005

TRANSMISSION BELT DIRECTION CONTROL FOR FLOWSORT® DIVERTERS

MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Transmission belt for control pulses for wheel drive assembly
PACK QUANTITY	1 piece

Length=630 / HTD5M

9
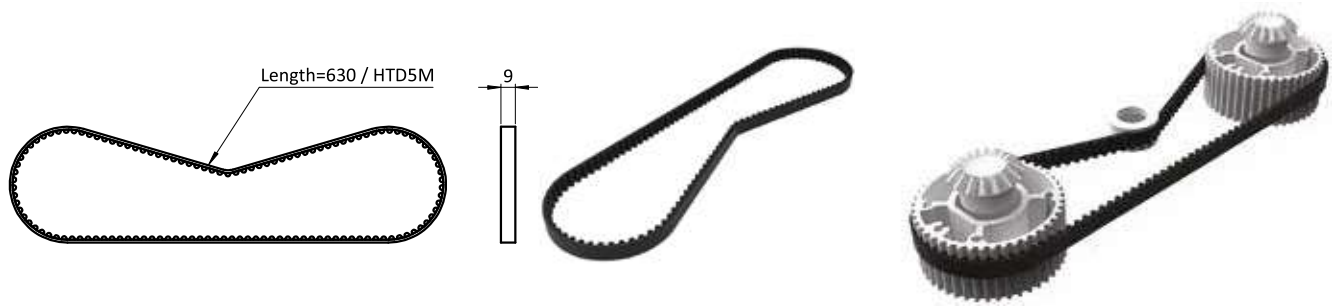
Weight [g]	Part #
21	V000029

DRIVE BELT FOR FLOWSORT® DIVERTERS

MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Timing belt for motion control
PACK QUANTITY	1 piece

Length=265 / HTD5M

9

Weight [g]	Part #
10	**V000028**

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TRANSMISSION BELT WHEEL DRIVE FOR FLOWSORT® DIVERTERS

MODEL	Compatible with SLD, DLD and ZZ diverters
DESCRIPTION	Transmission belt for wheel drive
PACK QUANTITY	1 piece

Length=515 / HTD5M

9

Weight [g]	Part #
19	**V000047**