# CABLES & ACCESSORIES FOR WASTE MANAGEMENT



### **About Us**



SAB North America is a focused supplier for the automation, aerospace, food and beverage, waste management, high temperature, and robotics industries, providing cable and thermocouple solutions that meet, exceed, and set new standards in the flexible cable market. In addition to flexible cable products, we offer an extensive inventory of high-quality cable accessories, including cord grips, grounding glands and other accessories that complement our flexible control and automation cables.

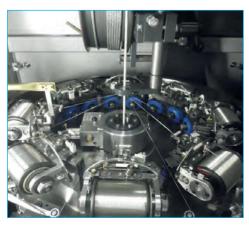
Whatever the need may be, look to SAB North America for Special Cables that can, for example, help minimize maintenance costs and increase productivity, reduce downtime, and solve specific problems. Here is a small sample of some of the challenges that Special Cables from SAB North America can help address:

- Hybrid designs for multiple functions
- Harsh environments
- Difficult applications
- Industry-specific requirements

Equipment OEMs must have complete certainty that the cables they choose are suitable for their design. SAB North America provides a wide variety of safe, reliable flexible, continuous flex, or torsional cables for use in waste management equipment. It doesn't matter if you are looking for compensating and extension cables for waste, gas heat exchangers, or high temperature systems, festoon cables for conveyor belts or waste incineration plants, reeling cables for crane applications, or Besilen® silicone cables for sorting plants, SAB has a solution. Along with our cables, SAB's temperature measurement product range includes mineral insulated thermocouples, plug connectors or temperature sensors for use in waste incineration plants and compost works.

Whether you're a valued distribution partner, an automation house, an integrator, or a contractor to the waste management industry, rest assured that our cables are reliable to maximize production efficiencies. SAB brings world class performance & 75 years of ingenuity to the table.

SAB's level of speed and service as a supplier is unmatched.







### SAB Advantage...We make it Easy

- Engineering & technical assistance
- Cut to length with no cut charges
- Prepaid freight within US for orders over \$2,500
- Specialty cable designs (1500 ft minimum)

- No minimum on orders from stock
- Free drop shipments (no surcharges)
- 24-hour shipments from stock
- Cord Grips for securing and grounding cables



## For a Variety of Applications

## **Waste Water**



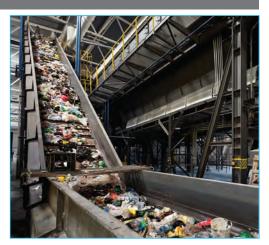




## Recycling







## Waste Disposal (Sorting/Automation/Incineration)







### FLEXIBLE POWER & CONTROL CABLES

Applications Include: Pump Motor, Electrical Panels, Conveyor Systems, Fan Motors, Lighting, and Processing Equipment.



Waste Water
Recycling
Waste Disposal





### Features:

- Flexible for easy installation
- Flexible stranding
- Oil resistant jacket

- NFPA 79 compliant
- Abrasion and notch resistant
- Easy to strip conductors

### **Suggested Cables:**

- CC 600 & CC 600 CY (UR/CSA/CE) Flexible, Unshielded & Braid Shielded, Oil Resistant PVC Control Cable
- CC 600 P & CC 600 CP (UR/CSA/CE) Flexible, Unshielded & Braid Shielded, Notch Resistant PUR Control Cable







### CONTINUOUS FLEX CABLES

<u>Applications Include:</u> Cable Tracks, Continuous Flex Sorters, Automated Robots, High Speed Packaging Lines, and UV Applications for Municipal Wastewater

CSA AWM I/II A/B 90°C 600V FT1 FT2 €€



Waste Water Recycling Waste Disposal



D-VIERSEN · S 200 12 x 1.5 mm<sup>2</sup> €



### Features:

- Applications requiring alternate bending or continuous motion
- Small outer diameter

- Small bending radius
- Flexible at low temperature

- S 960 & S 960 CY (UR/CSA/CE) Unshielded & Braid Shielded, Oil Resistant PVC Cable
- S 200 & S 200 C (CE) TPE/PUR Unshielded & Braid Shielded Cable, Extreme Temperatures, & Tight Bending Radius
- S 980 P & S 980 CP (UR/CSA/CE) Unshielded & Braid Shielded, Oil Resistant PUR Cable
- S 900 & S 900 P (UR/VDE/CE) PVC & PUR Single Conductor, Tight Bend Radius for Confined Areas









### FLEXIBLE TRAY CABLES

Applications Include: Waste Robotics Integration, Waste Handling Processes, Balers, Sorters, Pump Motors, Industrial Shredders, Conveyor Systems and Control Systems.

FT4 OR AWM I/II A/B 90C 1000V FT4 RoHS CE

Waste Water Recycling **Waste Disposal** 





### **Features**

- Flexible for easier installation
- Oil resistant meeting UL Oil Res I and II
- Submersible pump (14 AWG ≥ 3 thru 7 cond.)

AWM I/II A/B 90C 1000V FT4 RoHS €

- Sunlight resistance
- UL TC-ER for exposed runs
- NFPA 79 compliant

### **Suggested Cables:**

TR 600 S & TR 600 S CY (UL TC-ER/CSA-TC/CE) - UV & Oil Resistant Flexible Cable, Shielded & Unshielded







### FLEXIBLE VFD CABLES

Applications Include: VFD Drive to Control Pump Motors, Pump Stations, and Aeration Turbine.



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### Features:

- Flexible tinned copper strands, class K
- Engineered to suppress the noise issues associated with VFD drives
- XLPE insulation offers improved capacitance for longer installations
- Oil Res I & II
- NFPA 79 compliant
- Heavy-duty jacket for harsh environments

- VFD XLPE TR (UL/CSA/CE) 4c Power with Overall Shield
- VFD Combo XLPE (UL/CSA/CE) 4c Power Plus Shielded Pair for Brake or Sensor
- VFD XLPE Auto TR (UL/CSA/CE) 4c Power with Overall Shield for Continuous Flexing
- VFD XLPE Lean (UL/CSA/CE) 4c Power with Overall Shield with Reduced Diameter









### FESTOON & REELING CABLES

<u>Applications Include:</u> Transport Systems, Overhead Cranes, Festoon Systems, Pendant & Reeling Systems, Conveyor Belts, Waste Incinerating Plants, Water Treatment Plants.

D-VIERSEN · Festoon 715 P 18 G 2.5 mm² **( €** 



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⊲VDE⊳⊲HAR⊳ H07VVH6-F 12G1.5 mm² (€

717 P Highflex 4 G 2.5 mm² C €

### Features:

- Flexible stranding Class 5
- Continuous flex

- Oil resistance
- Flame retardant

### **Suggested Cables:**

- H05VVH6-F (VDE/HAR/CE)- Flat festoon cable with black numbered cores, 500 V, 70°C, CE
- H07VVH6-F (VDE/HAR/CE)- Flat festoon cable with black numbered cores, 750 V, 70°C, CE
- Festoon 715 P (CE)- PUR cable for flexible application in festoon systems
- Festoon 716 CP (CE)- PUR cable with overall copper screen for flexible application in festoon systems
- DR 730 P Highflex (UR/CE)- PUR cable used for heavy reeling applications







### TORSIONAL CABLES

Applications Include: Robotics Sorters, Balers, Robotic Palletizing, Material Handling

## 80°C 600V CSA AWM I/II A/B 80°C 600V FT1 FT2 CE

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### Features:

- Designed for torsional movement up to ± 450°/0.5 m (tested)
- Conductor bare copper flexible strands class 6

 Chemical resistance: good against acids, alkaline, solvents, hydraulic liquids, etc.

### **Suggested Cables:**

■ RT 123 (UR/CSA/CE) - TPE/PUR Torsional and Continuous Flex Cable for ± 450° / 1/2 m Available Shielded and Unshielded









### DATA & SENSOR CABLES

Applications Include: Signal Lights, Stop Switches, and Instrumentation

CSA TYPE CMG or AWM I/II A/B 105°C 300V FT4

D-VIERSEN · LIYY 32x0.25mm² (€

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### Features:

- 26 AWG to 16 AWG data/communication cables
- good EMC characteristics

- Small outer diameter
- Small bending radius

### **Suggested Cables:**

- DC 105, DC 105 C, & DC 105 TP (UL PLTC, ITC, CMG)(CSA/CE)- Flexible Multi-Conductor & Paired Cable, Shielded & Unshielded, PVC
- DC 300 DS & DC 300 TP (UR/CSA) Flexible Multi-Conductor & Paired Cable, Shielded & Unshielded, PVC
- LiYY, LiYCY, & LiYCY TP (VDE/CE) General Purpose, Multi-Conductor and Twisted Pair, Shielded & Unshielded, PVC







### FLEXIBLE INDUSTRIAL BUS & ETHERNET CABLES

Depending on the application we are able to offer today Industrial Ethernet Cables CAT 5, CAT 6 and CAT 7 cables for flexible, continuous flexible and thermal stress and as reeling and USB for robot cables as special construction.

D-VIERSEN · S PB 634 2x0.34mm<sup>2</sup> C€



Waste Water Recycling Waste Disposal



### Features:

Available with PLTC rating for use in tray

601-0222 🔼 AWM Style 2655 80°C 300V

- CATLine is a available for continuous flex & torsion/robotic applications
- Resistance to extreme temperatures.

- CAT 5e, CAT 6, CAT 6A, or CAT 7A
- USB 2.0 and 3.0 versions also available.
- Profinet: Type A, B, & C

- Profinet/CAT5 Cables for Type A, B, & C Applications Plus Torsion and Reeling (UL/CSA)
- DeviceNet™ Cables for Flexible, Continuous Flex, and Torsion Applications (UL/CSA)
- Profibus Cables for Flexible, Continuous Flex, Torsion, and Outdoor Applications. Halogen-Free (UL/CSA)
- CATLine 5e, 6, 6A, 7A Cables for Continuous Flex, Torsion, Reeling, and High Temperature Applications (UL/CSA)









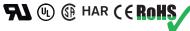
### **EUROPEAN STANDARDIZED CABLES**

Applications Include: Recommended for use in dry, humid or moist environments, Pump Motors, Lighting, and Fan Motors.



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### Features:

- Flexible for easier installation
- Can be routed around tight bends and fit into confined spaces
- Tri-rated hook-up wire

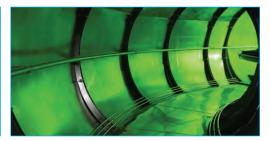
- Chemical resistant for washdowns
- Rubber Cordage per European Standards

### **Suggested Cables:**

- H05V-K/MTW/TEW (UL/CSA/HAR/VDE/CE) Harmonized 300/500 Volt Hook-Up Wire
- H07V-K/MTW/TEW (UL/CSA/HAR/VDE/CE) Harmonized 450/750 Volt Hook-Up Wire
- H07RN-F (HAR/CE) Harmonized 450/750 Volt Neoprene Heavy Duty Multi-Conductor Cable







### FLEXIBLE HIGH TEMPERATURE CABLE

Applications Include: Glass Recycling Plants, Industrial Recycling Plants for Metals, Shredders, Grinders and Industrial Rubber Powderizers



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### Features:

- Halogen-free
- Resist temperatures as low as -50°C
- UL/cUL recognized

Resist high temperatures ups to 180°C for continuous operation and up to 250°C for short periods.

- SC 600 HDTR (UR/CSA/CE) Heavy-Duty, Tear Resistant Silicone Multi-Conductor Cable, Shielded Available
- Besilen® single conductor and jacketed cables with fiber-glass braiding and steel wire armoring
- ZKBi Besilen® ignition cable gas torches
- BiAF/GL Besilen® insulated strands with fiber-glass braiding
- BiHF-J Besilen® insulated strands with Besilen® outer jacket
- BiHFP-J BiHF with steel wire armoring for mechanical protection









### FLEXIBLE SERVO CABLES

Applications Include: Robots for sorting, controls for water flow, and palletizers



Waste Water Recycling Waste Disposal



### Features:

- Available in position or feedback versions with copper screen (0.6/1 kV or overall)
- Halogen-free versions

- Good chemical resistance
- Long operating life
- Suitable for use in cable tracks

### **Suggested Cables:**

- SL 863 C (UR/CE) Braid Shielded Servo Motor Cables for Stationary Applications, PVC
- SL 834 C (UR/CSA/CE) Braid Shielded Servo Motor Cable for Continuous Flex, PUR
- SL 841 C (UR/CSA/CE) Braid Shielded Composite Servo Motor Cable with Pairs for Continuous Flex, PUR
- SL 839 C & SL 843 C (UR/CE) Braid Shielded Servo Motor Cables for Resolver/Encoder, PUR







### **COMPENSATION & EXTENSION CABLES**

**Applications Include:** Waste gas heat exchangers, high temperature facilities



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### Features:

- Heat resistant up to +250°C
- Besilen® insulated cables

- Fiber-glass braiding
- Steel wire armoring

- A 11 LR, A 11-4 LR, A 11 DR with fiber-glass braiding and steel wire armoring
- Available for Type T, Type K, Type J, Type L, Type N, Type E, Type R, Type S, Type B thermocouples









### **CORD GRIPS & ACCESSORIES**

Secure & Protect your Cable

Liquid tight seal, fast and easy installation, wide clamping range, multi-purpose applications, easy handling.

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	Technical data:	
Protection type:	IP 68 - 5 Bar NEMA 4X	
Temperature range: permanent: intermittent:	-20°C to +100°C -30°C to +150°C	
Flammability:	V2 (according to UL 94)	

Waste Water Recycling Waste Disposal

### **CG 100 POLYAMIDE CORD GRIPS**

Dome cap, black or gray available in NPT, PG, or metric thread

Liquid tight seal, fast and easy installation, wide clamping range, multi-purpose applications, easy handling.





### **CG 200 POLYAMIDE CORD GRIPS**

Flex cap, black or gray available in NPT, PG, or metric thread

Strain relief gland offers maximum protection against conductor fatigue caused by flexing cables



### CG 300 NICKEL PLATED BRASS CORD GRIPS

Available in NPT, PG, or metric thread

Impact resistant, suitable for industrial applications, water tight, corrosion resistant.





### CG 350 STAINLESS STEEL CORD GRIPS

Available in NPT, PG, or metric thread and SS 303 or SS 316

Impact resistant, suitable for industrial applications, water tight, corrosion resistant.



### **EMC-2 GROUNDING CORD GRIPS**

Nickel plated brass EMC cable gland available in NPT, PG, or metric thread

EMC-2 is a nickel plated brass strain relief with integral grounding springs in the gland.

### **Features:**

- One Direction Installation
- Affordable
- Nickel Plated Brass with Tinned Copper Springs

### **EMC-4 GROUNDING CORD GRIPS**

Nickel plated brass, EMC cable gland, vibration proof, available in NPT, PG, or metric thread

EMC-4 is a nickel plated brass strain relief with integral grounding springs in the gland that will allow the cable to move without damage to the shield.

### **Features:**

- Bi-directional Installation
- Great Anti-Vibration Mechanisms
- Nickel Plated Brass with Tinned Copper Springs

### **Accessories & Fittings**





## **Production possibilities**

### Flexible cables and wires "Made in Germany"

As a leading manufacturer we develop and produce cables for industrial purposes.

Our wide range of materials offer a lot of possibilities for your individual product requirement.

The following survey shows an extract of our production possibilities:



Manufacturer of temperature sensors for industrial applications with 75 years of experience!

- mineral insulated thermocouples
- / mineral insulated resistance thermometers
- √ temperature sensors
- mobile high voltage measuring technology
- √ temperature sensors for vehicle testing







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