

# Wire and Cable Solutions for the Pulp and Paper Industry



# Maximum performance delivered reliably



**P**aper manufacturing is a machine-intensive process that demands rugged, reliable operation at every step from the woodyard to shipment of finished products. Whether you need an exceptionally rugged cable for pulping operations, a cable to withstand solvents and chemicals in the bleaching steps, or simply high-performance wire and cable for protected control boxes, look to Alpha Wire for the best matches to your specific application needs:

- High temperatures
- UV exposure
- Steam and water
- Oil, chemical, and solvents (especially bleach)
- Abrasion
- EMI
- Flexing

## Solutions for machine builders: Helping design in reliability

Today's pulp and paper processing machines are larger, faster, more costly, and more capable—all of which place greater demands for reliable operation in a challenging environment. Designing equipment to stand up to harsh conditions while maintaining electrical and mechanical performance calls for Alpha Wire's cable and wire which offers the rugged durability required to ensure maximum uptime.

Alpha Wire provides reliable, high-quality wire and cable to handle even the most extreme environments of pulp and paper manufacturing. Our servo and VFD cables provide consistent performance, while maintaining the signal integrity and EMI resistance needed for precision machine operation. Alpha also offers a full range of flex cable to meet the motion needs of everything from Cartesian systems to multi-axis robots.

## Solutions for paper manufacturers: MRO made easier and simpler

Pulp and paper processing equipment requires regular maintenance to maximize uptime and reduce the likelihood of unexpected downtime.

In the event maintenance or repair is necessary, we know that every minute counts, so you can rely on Alpha Wire for high performance products and unmatched service without compromise or excuse.

- **Large in-stock inventory offering a variety of conductor counts, sizes, insulation, jacketing, and shielding options**
- **Small and large put-ups available**
- **Fast shipping—usually same day**
- **Custom cable designs made easy with the Cable Design Center™**

## Cables for any extreme

Our range of cables spans the needs of pulp and paper equipment from debarking through final trim and packaging. Whether your application needs to stand up to rigorous extremes—abrasion, chemicals, temperature, and motion—or is inside a protected cable box, Alpha Wire has a cable for your exact needs.



Xtra-Guard Performance Cables	Cable Family	Advantages	Applicable Ratings
<b>High-Performance</b>	Xtra-Guard 1	High-performance cable for general-purpose applications Oil resistant (Oil Res. I)	300 V: UL CM, VW-1; CSA CMG, FT4 600 V: UL MTW, VW-1; CSA AWM I/II A/B, FT4
<b>Advanced temperature and chemical performance</b>	Xtra-Guard 4	-50°C to +125°C Resists oils, solvents, and chemicals Low-temperature flexibility TPE jacket	300 V: UL PLTC; CSA AWM I/II A/B, FT1 600 V: UL TC; CSA AWM I/II A/B, FT1
<b>Maximum temperature and chemical performance</b>	Xtra-Guard 5	-80°C to +200°C Resists chemicals, solvents, acids, fuels, and water Low-temperature flexibility FEP jacket	UL CMP; CSA CMP, FT6
<b>High-Flex</b>	Xtra-Guard Continuous Flex Data (86000 Series)	6 million flex cycles PVC jacket	UL CM; CSA CMG, FT4
	Xtra-Guard Torsional Flex (87000 Series)	1 million flex cycles TPE insulation, polyurethane jacket	UL AWM 20234; CSA AWM I/II A/B, FT1
<b>Industrial Ethernet</b>	Xtra-Guard IE	Cat 5e with industrial grade jacket for hazardous environments	FT1
Alpha Wire Industrial Series	Cable Family	Advantages	Applicable Ratings
<b>Stationary</b>	Series M	PVC jacket Oil resistant (Oil Res. I)	UL TC-ER; CSA FT4
<b>Minimal Flex</b>	Series P	TPE jacket Improved oil and chemical resistance (Oil Res. I/II)	UL TC-ER; CSA FT4
<b>High-Flex</b>	Series XM	12 million flex cycles Oil resistant (Oil Res. I) Shielded or unshielded	UL TC-ER; CSA FT4
	Series F	20 million flex cycles Improved oil and chemical resistance (Oil Res. I/II)	UL TC-ER, C(UL) CIC; CSA FT4
<b>Servomotors/ Drives</b>	Series SF	TPE jacket Enhanced flexibility for easy installation and routing Improved oil and chemical resistance (Oil Res. I/II) With or without brake/ground pairs	UL TC-ER; CSA FT4
<b>VFD Systems</b>	Series V	Oil resistant (Oil Res. I) Low capacitance for extended runs XLPE insulation for improved dielectric properties Excellent corona resistance Uniform geometry for reduced common-mode current	UL TC-ER; CSA FT4

### 1 Drives

Series V VFD Cable  
Series XM Flexible Control Cable  
Flexible Motor Supply Cable

### 2 Dry-End Controls

Xtra-Guard 1 Cable  
Hook-Up Wire

### 3 Network

Xtra-Guard IE Cable

### 4 Wet-End Controls

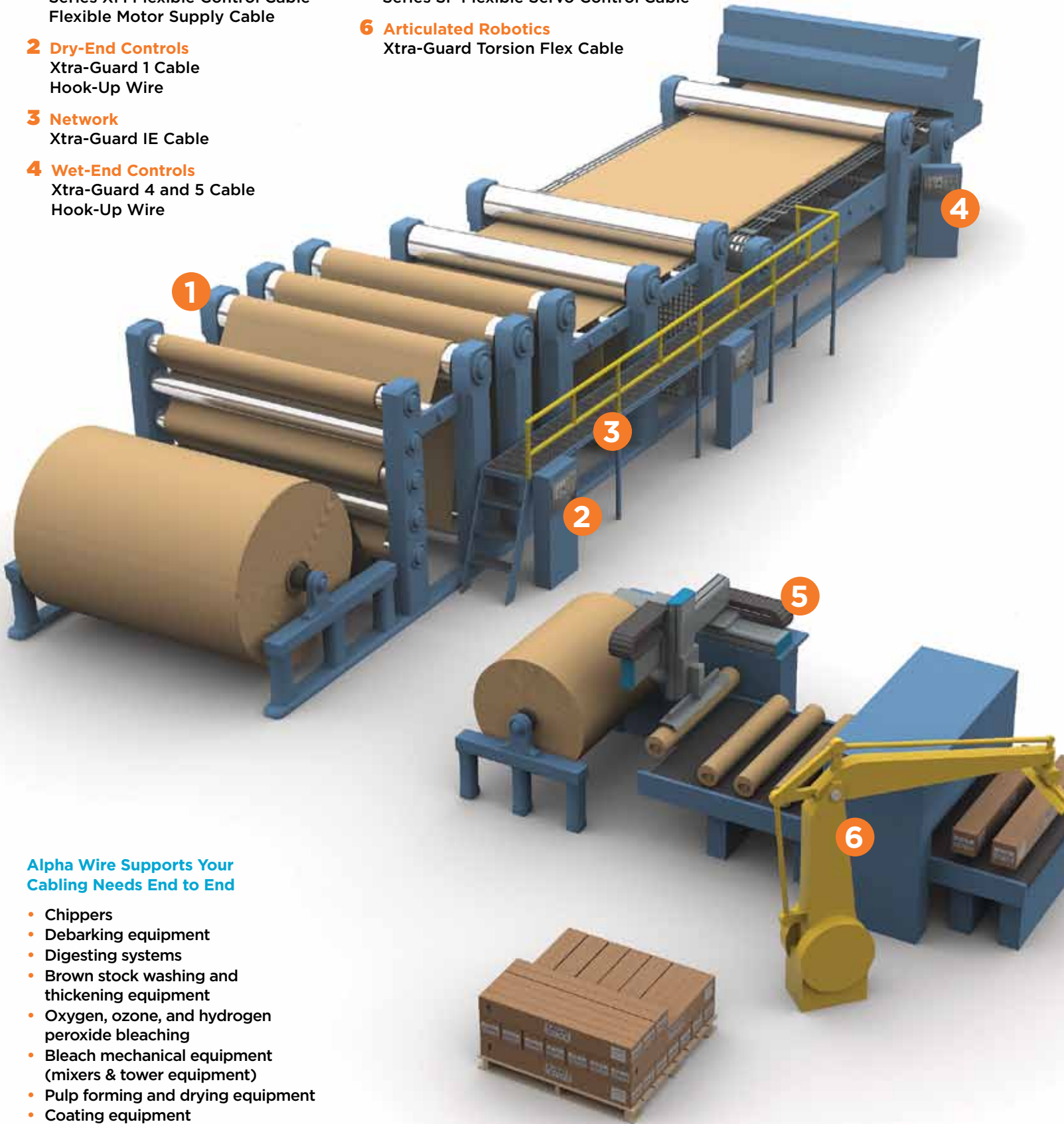
Xtra-Guard 4 and 5 Cable  
Hook-Up Wire

### 5 Cartesian Robotics

Xtra-Guard Continuous Flex Cable  
Series SF Flexible Servo Control Cable

### 6 Articulated Robotics

Xtra-Guard Torsion Flex Cable



### Alpha Wire Supports Your Cabling Needs End to End

- Chippers
- Debarking equipment
- Digesting systems
- Brown stock washing and thickening equipment
- Oxygen, ozone, and hydrogen peroxide bleaching
- Bleach mechanical equipment (mixers & tower equipment)
- Pulp forming and drying equipment
- Coating equipment
- Dryers and drying systems
- Size presses
- Finishing and calendering equipment



## Hook-up wire to hook up anything

From the high abrasion resistance of our cross-linked PVC wire to the wide temperature range of XLPE wire, we have the hook-up wire for any pulp and paper need. As an alternative to XLPE, our new EcoWire Plus wire offers resistance of fluids, solvents, and chemicals in a thin-wall construction that is up to 45% smaller in diameter and 40% lighter.



Hook-Up Wire	Temperature Range	Advantages	Applicable Ratings
<b>XL-PVC</b>	-55°C to +105°C	Better abrasion and cut-through resistance than standard PVC Improved temperature and solder iron resistance	UL AWM 3317; CSA REW; MIL-W-16878
<b>XLPE</b>	-55°C to +125°C	Higher temperature rating than PVC	UL AWM 3266; CSA CL1252; MIL-W-16878
<b>EcoWire Plus</b>	-40°C to +110°C	Up to 45% smaller diameter and 40% lighter than XLPE alternatives Fully recyclable Resistant to hazardous fluids	ISO 6722

## Superior protection and wire management

Protect wire, cables, and connectors with our FIT heat-shrink tubing and rugged sleeving.



FIT Heat-Shrink Tubing	FIT Family	Advantages	Applicable Ratings
<b>Flame-Retardant Irradiated Polyolefin</b>	FIT-221V FIT-321V	Available in 2:1 and 3:1 shrink ratios Low shrink temp Passes UL VW-1 flame test	UL VW-1
<b>High-Temperature and Chemical Resistance</b>	FIT-500	Excellent chemical resistance Widest temperature range at -75°C to +260°C	
<b>Dual-Wall Polyolefin for Additional Sealing</b>	FIT-750	Bonding, adhesive lined 2:1 heat-shrink tubing Permanent water and corrosion protection	UL VW-1
FIT Rugged Sleeving	FIT Family	Advantages	Applicable Ratings
<b>Advanced Chemical Resistance Expandable Sleeving</b>	GRP-170	-70°C to +200°C Resists acids, bases, solvents, and fuels Flame resistant	UL 94V-0
<b>Extreme Performance Sleeving</b>	GRP-200	-70°C to +280°C Resists virtually all chemicals and UV rays Flame resistant	

## The cables you trust. The service you deserve.

Every application is critical and cable failure is not an option when the performance of your equipment and the safety of your personnel are paramount. Specify Alpha wire, cable, and accessories for your demanding applications, since the integrity of your system is only as robust as the products you use.

## Superior availability

Alpha offers cables from stock in most sizes and constructions, in both small and large put-ups, so you can order it when you need it. Our products are available for same-day shipment, eliminating long lead times.

## Service and support, second-to-none

Selecting the correct cable for your unique application is essential to overall system reliability, performance, and safety. So we make it easy for you select the right Alpha cable for your specific application. Our online resources include a wire and cable selection guide, technical information, full product catalog, and a distributor locator to make it easy to select and get the cable you need. Can't find what you're looking for? Design the cable to your specification. It's easy, just visit **[www.alphawire.com](http://www.alphawire.com)**!

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