

TECHNOLOGY FOR THE WELDER'S WORLD.

# FreedomDrive™

## Push-Pull System



[www.binzel-abicor.com](http://www.binzel-abicor.com)

# FreedomDrive™ - Push-Pull System

## Features & Benefits

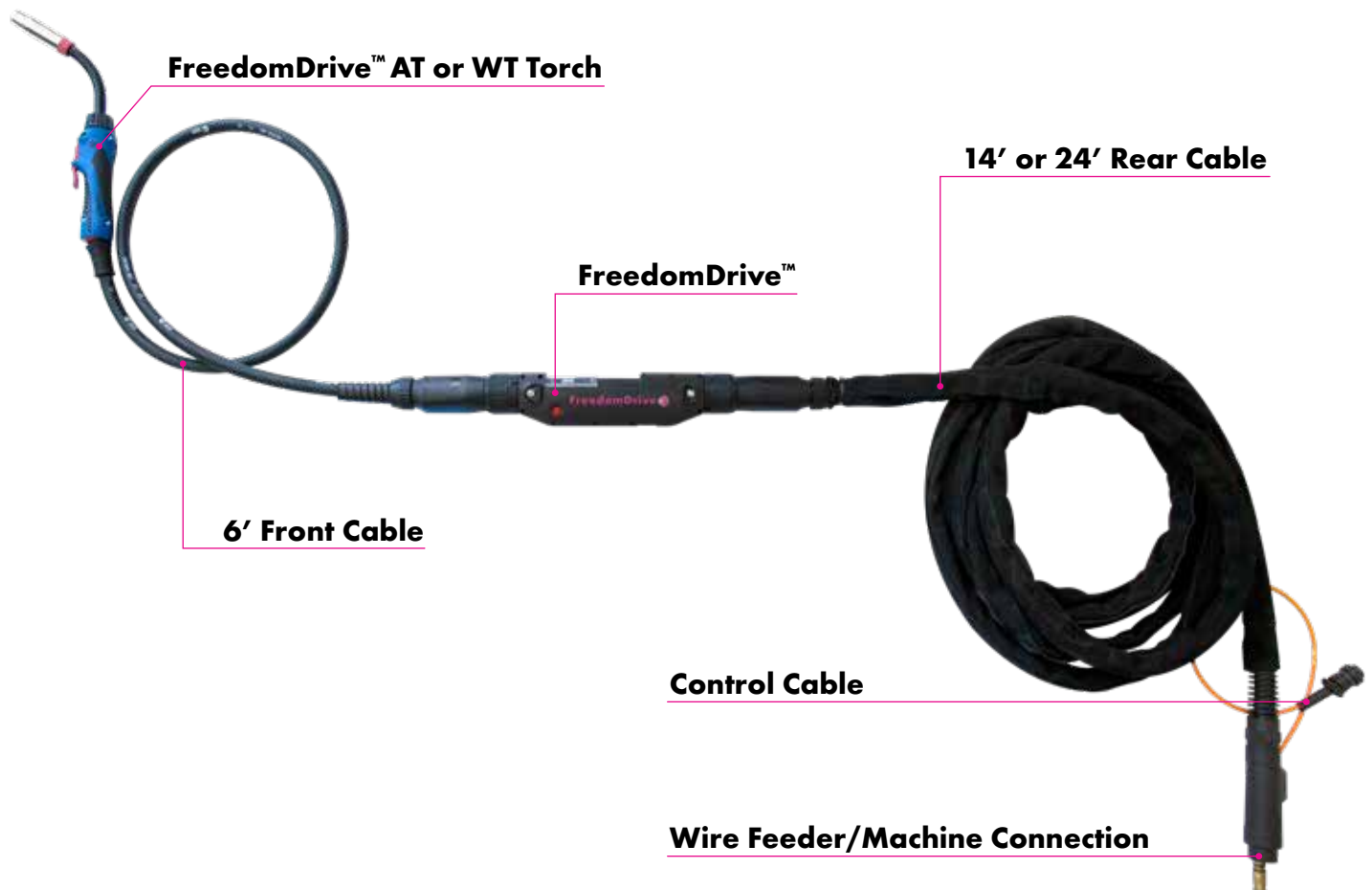
The FreedomDrive™ push-pull system is designed to free the welder of the typical heavy, bulky handheld push-pull torch; giving the welder a more comfortable, reliable, and efficient way to weld in push-pull applications.

The FreedomDrive™ utilizes an assist drive ~6' downstream of our lightweight AT and WT MIG guns. The assist drive is powered directly from select push-pull ready power sources or by a separate ABICOR BINZEL power control box. In either case, the assist motor attempts to feed slightly faster than the main wire feeder, which places tension on the weld wire through the rear cable assembly, allowing wires to be fed over longer distances than a typical push only MIG gun.

### Features & Benefits

- Uses the same handle & consumables as the popular ABIMIG® AT/WT MIG guns
- 20' and 30' options give the welder the freedom to move around the work site as needed
- Industry-proven reliability of the drive motor and gearbox provides consistent wire feeding
- Improved access to tight spaces by relocating the bulky drive components from the handle to 6' down the cable
- Internal routing of the gas, water, power, and control wires means reduced snagging when positioning the cable
- Up to 55% reduction in weight and improved ergonomics when compared to competitive push-pull and spool guns

### Full System Breakdown



# FreedomDrive™ - Push-Pull System Technical Data

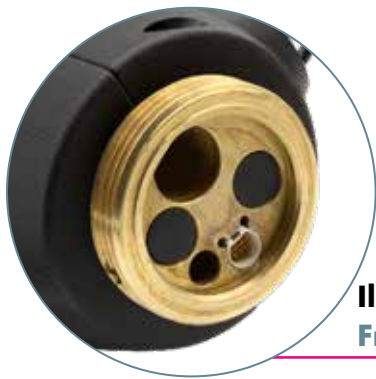
## Product-Specific MIG Gun Data According to EN 60974-7

Torch Type	Type of Cooling	Load*		Duty Cycle	Wire $\varnothing$
		CO2	M21		
<b>AT355</b>	Air	340A	320A	60%	0.8 - 1.6mm
<b>WT440</b>	Liquid	500A	450A	100%	0.8 - 1.6mm

*\*For pulse welding, reduce rating by 35%*



# FreedomDrive™ - Push-Pull System System Overview

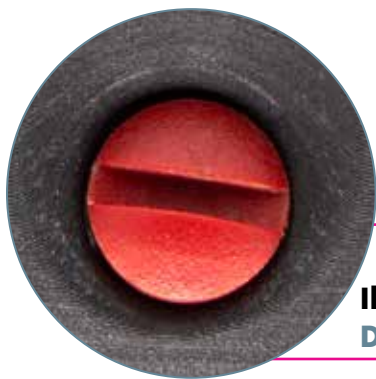


**Illustration 1:**  
Front End Interface

**Illustration 2:**  
Clear Slide Cover



**Illustration 3:**  
Dual Drive Rolls



**Illustration 6:**  
Drive Roll Tension Release Knob



**Illustration 1:**  
Front End Interface

Internal power, control wires, gas, and water ports mate w/Freedom-Drive AT or WT specific MIG guns.

**Illustration 2:**  
Clear Slide Cover

The slide cover is molded from transparent poly-carbonate for durable and impact resistant protection.

**Illustration 3:**  
Dual Drive Rolls

Dual drive rolls utilize pre-set spring tension to provide automatic, consistent and reliable feeding. They are electrically isolated to eliminate micro-arcing.



# FreedomDrive™ - Push-Pull System

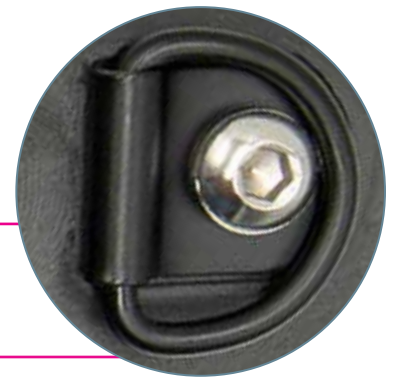
## System Overview



**Illustration 4:**  
**Incher Button**



**Illustration 5:**  
**Back End Interface**



**Illustration 7:**  
**D-Rings**

**Illustration 4:**  
**Incher Button**

Allows for wire feeding at the drive during setup.

**Illustration 5:**  
**Back End Interface**

Provides a secure connection to the rear cable, with internal routing of the power, control wires, gas, and water.

**Illustration 6:**  
**Drive Roll Tension Release Knob**

Open and close the drive rolls with ease using the supplied tip wrench.

**Illustration 7:**  
**D-Rings**

Can be used to hang or secure the FreedomDrive where you need it.

# FreedomDrive™ - Push-Pull System

## Ordering Chart for Complete System

FD	AT	3	- 20	- 6	35	A	- B
Model	Type	Amps	Length	Neck Angle	Wire Size	Wire Type	Back End/WFS (Wire Feed Speed Control)
<b>Model</b> FD - FreedomDrive	<b>Type</b> AT - Air-Cooled WT - Water-Cooled	<b>Amps</b> 3 - 310A (Air-Cooled Only) 4 - 450A (Water-Cooled Only) <sup>1</sup> 5 - 540A (Water-Cooled Only)	<b>Length</b> 20 - 20' 30 - 30'	<b>Neck Angle</b> 6 - 60° (Air-Cooled Only) 5 - 50° (Water-Cooled Only)	<b>Wire Size</b> 35 - .035" 45 - .045"-.047" 62 - .062"	<b>Wire Type</b> A - Aluminum (5xxx Series) S - Steel	<b>Back End/WFS</b> B* - Abicor Binzel Euro (No WFS) L - Lincoln 7-Pin (WFS in Handle) K - Lincoln 12-Pin (WFS in Handle) M** - Miller 10-Pin (WFS in Handle) L1 - Lincoln 7-Pin (WFS in FreedomDrive) K1 - Lincoln 12-Pin (WFS in FreedomDrive) M1** - Miller 10-Pin (WFS in FreedomDrive)
							<b>Wire Type</b>

\*The ABICOR BINZEL version torch adapts to any conventional push wire feeder via a wire feeder adaptor kit (where required), and requires power control box 284.0660. Both items must be ordered separately.

\*\*Fits Millermatic 252, 255, 350P (Not "350P Aluminum" model), 355, XMT, XR Control, & XR Alumafeed

<sup>1</sup>450 model is not recommended for Aluminum

# FreedomDrive™ Torches - AT & WT

## Features & Benefits

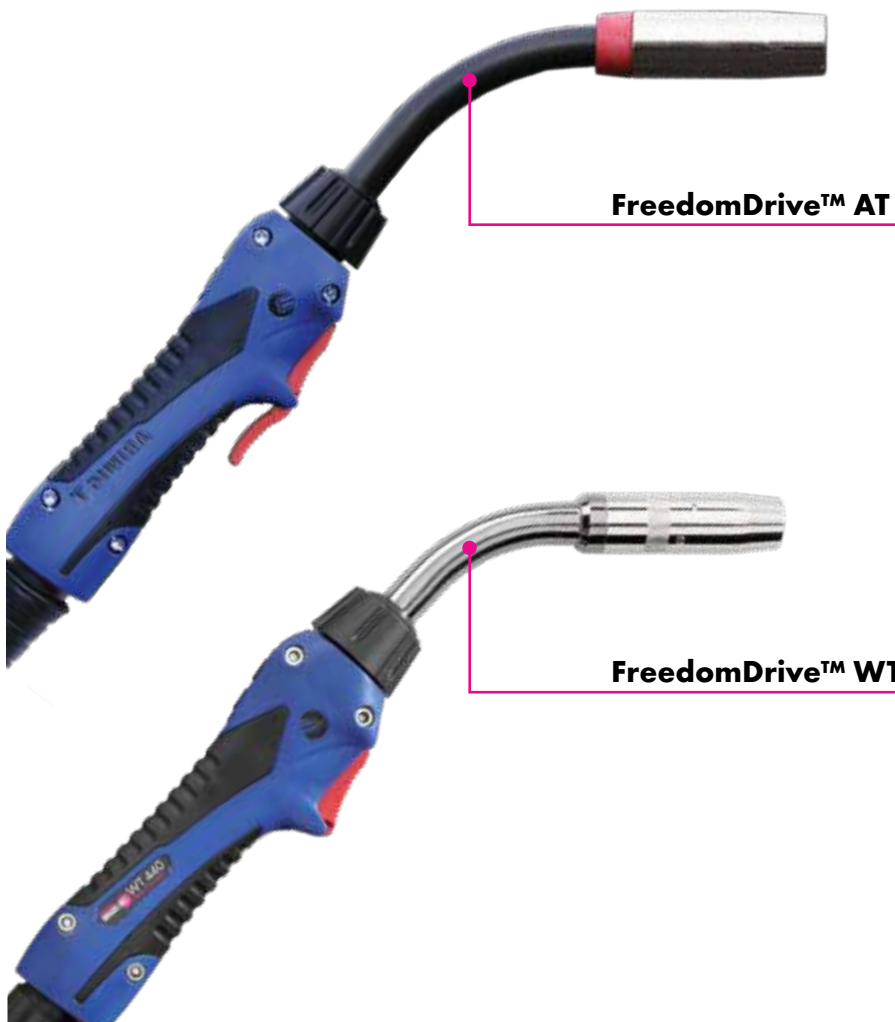
The air-cooled and water-cooled MIG guns from ABICOR BINZEL make the welder's life easier by reducing strain and increasing productivity.

The 'T' interface system allows for rotating necks with angles and alignments that are matched to the actual welding job. The necks can be quickly switched out for easy maintenance and improved accessibility.

With our lightweight Bikox® cable, ergonomic molded handle, ball-socket cable strain relief, rotating necks, and extended trigger, getting comfortable on the job is now easier than ever.

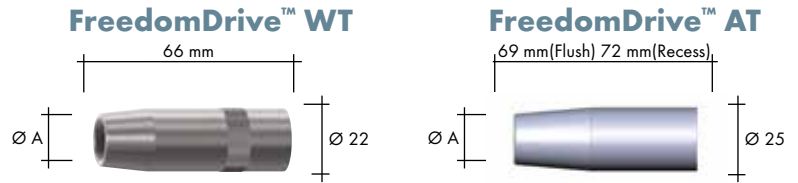
### Features & Benefits

- 6' lightweight Bikox or water-cooled cable
- Ball-socket handle joint for unmatched wrist flexibility and comfort
- Uses the same handle & consumables as the popular ABIMIG® AT/WT MIG guns
- Improved access to tight spaces with the use of additional neck length and angle options
- Customizable for any job with easy-to-change, 360° rotatable necks, with multiple, special lengths and angles



# FreedomDrive™ Torches - AT & WT

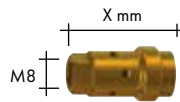
## Wear Parts



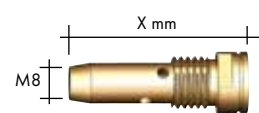
### Gas nozzle including spatter protection

	Ø A		Ø A	
Cylindrical	Ø 18	145.0745	-	-
Conical	Ø 14.5	145.D092 <sup>1</sup>	-	-
Conical	Ø 12	145.0746	-	-
Conical Recess	-	-	Ø 12	145.D025
Conical Recess	-	-	Ø 16	145.D026
Conical Recess	-	-	Ø 19	145.D021
Conical Flush	-	-	Ø 14.5	145.D023
Conical Flush	-	-	Ø 16	145.D022

### FreedomDrive™ WT



### FreedomDrive™ AT



### Contact tip holder

	X		X	
Brass	26	142.0252.5	52	H3T-8-C
	28	142.0253.5 <sup>1</sup>	-	-
	31	142.0243.5	-	-

### FreedomDrive™ WT

#### M8

### FreedomDrive™ AT

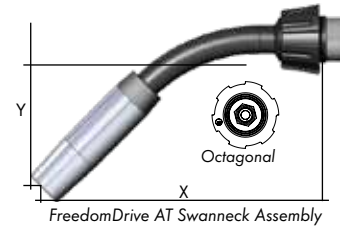
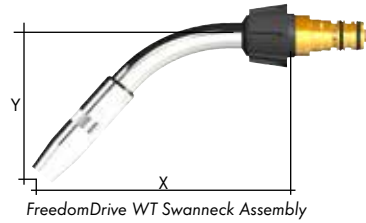
#### M8

### Contact tips (10 pcs.)

E-Cu <sup>1</sup> Standard Copper	Ø 0.8 (.030")		140.0114	140.0114	140.0114
	Ø 0.9 (.035")		140.0214	140.0214	140.0214
	Ø 1.0 (.040")		140.0313	140.0313	140.0313
	Ø 1.2 (.045")		140.0442	140.0442	140.0442
	Ø 1.4 (.052")		140.0533	140.0533	140.0533
	Ø 1.6 (.062")		140.0587	140.0587	140.0587
E-Cu for Al Standard Copper for Aluminum	Ø 0.8 (.030")		141.0033	141.0033	141.0033
	Ø 0.9 (.035")		141.0043	141.0043	141.0043
	Ø 1.0 (.040")		141.0008	141.0008	141.0008
	Ø 1.2 (.045")		141.0075	141.0075	141.0075
	Ø 1.4 (.052")		141.0055	141.0055	141.0055
	Ø 1.6 (.062")		141.0022	141.0022	141.0022
CuCrZr Heavy Duty Copper	Ø 0.8 (.030")		140.0117	140.0117	140.0117
	Ø 0.9 (.035")		140.0217	140.0217	140.0217
	Ø 1.0 (.040")		140.0316	140.0316	140.0316
	Ø 1.2 (.045")		140.0445	140.0445	140.0445
	Ø 1.4 (.052")		140.0536	140.0536	140.0536
	Ø 1.6 (.062")		140.0590	140.0590	140.0590
Silver-Plated Heavy Duty Copper Silver-plated	Ø 0.8 (.030")		147.0117	147.0117	147.0117
	Ø 0.9 (.035")		147.0217	147.0217	147.0217
	Ø 1.0 (.040")		147.0316	147.0316	147.0316
	Ø 1.2 (.045")		147.0445	147.0445	147.0445
	Ø 1.4 (.052")		147.0536	147.0536	147.0536
	Ø 1.6 (.062")		147.0590	147.0590	147.0590



# FreedomDrive™ Torches - AT & WT Wear Parts



Standard Swannecks		FreedomDrive WT	x*	y*	FreedomDrive AT	x*	y*
Standard Neck		788.0005	145	85	014.0570	165	110
Optional Swannecks**	Angle	FreedomDrive WT	x*	y*	FreedomDrive AT	x*	y*
Short	60°	-	-	-	014.H538	123	103
Long	45°	-	-	-	014.H494	350	95
Long	50°	788.0068	185	85	-	-	-
Long	60°	788.0074	165	105	-	-	-
Extra Long	45°	-	-	-	014.H500	500	95
Extra Long	50°	788.0076	350	85	-	-	-
Flex	180°	-	-	-	014.H515	246	-

\*Note: x and y measurement in mm.

\*\*Note: Purchased separately; requires new front cable liner.

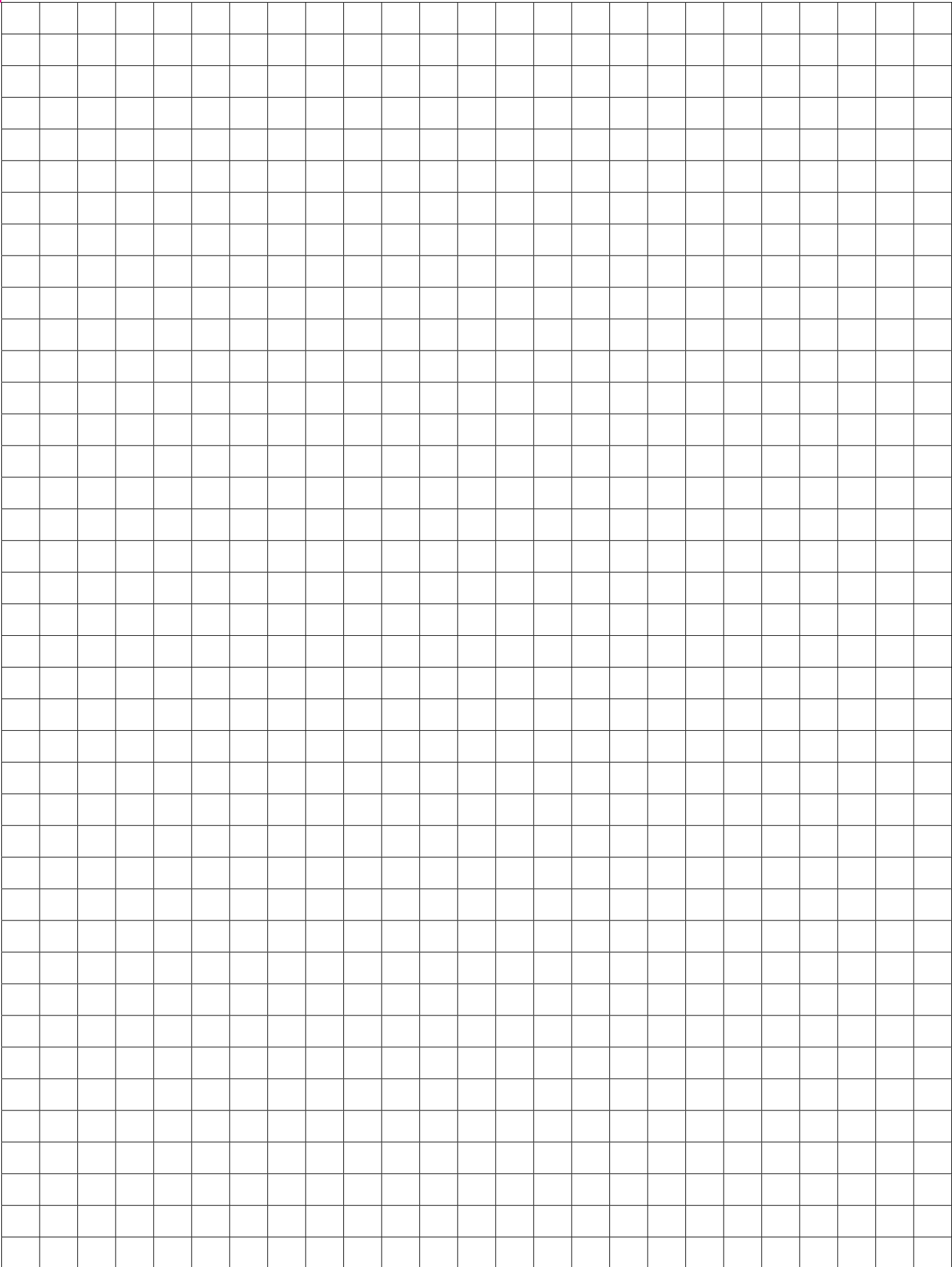
Rear Cable Liners	Liner Type	Wire Size	For 20' Euro	For 20' Direct	For 30' Euro	For 30' Direct
	PA Liner	.030" - .035"	128.0050	128.0050	128.0051	128.0051
		.045" - .062"	128.0053	128.0053	128.0054	128.0054
 *Direct	Steel Liner	.035" - .045"	124.9042	SI-3545-17PT	124.9015	SI-3545-28PT
		.052" - .062"	124.9043	SI-5262-17PT	124.9037	SI-5262-28PT
 *Euro						

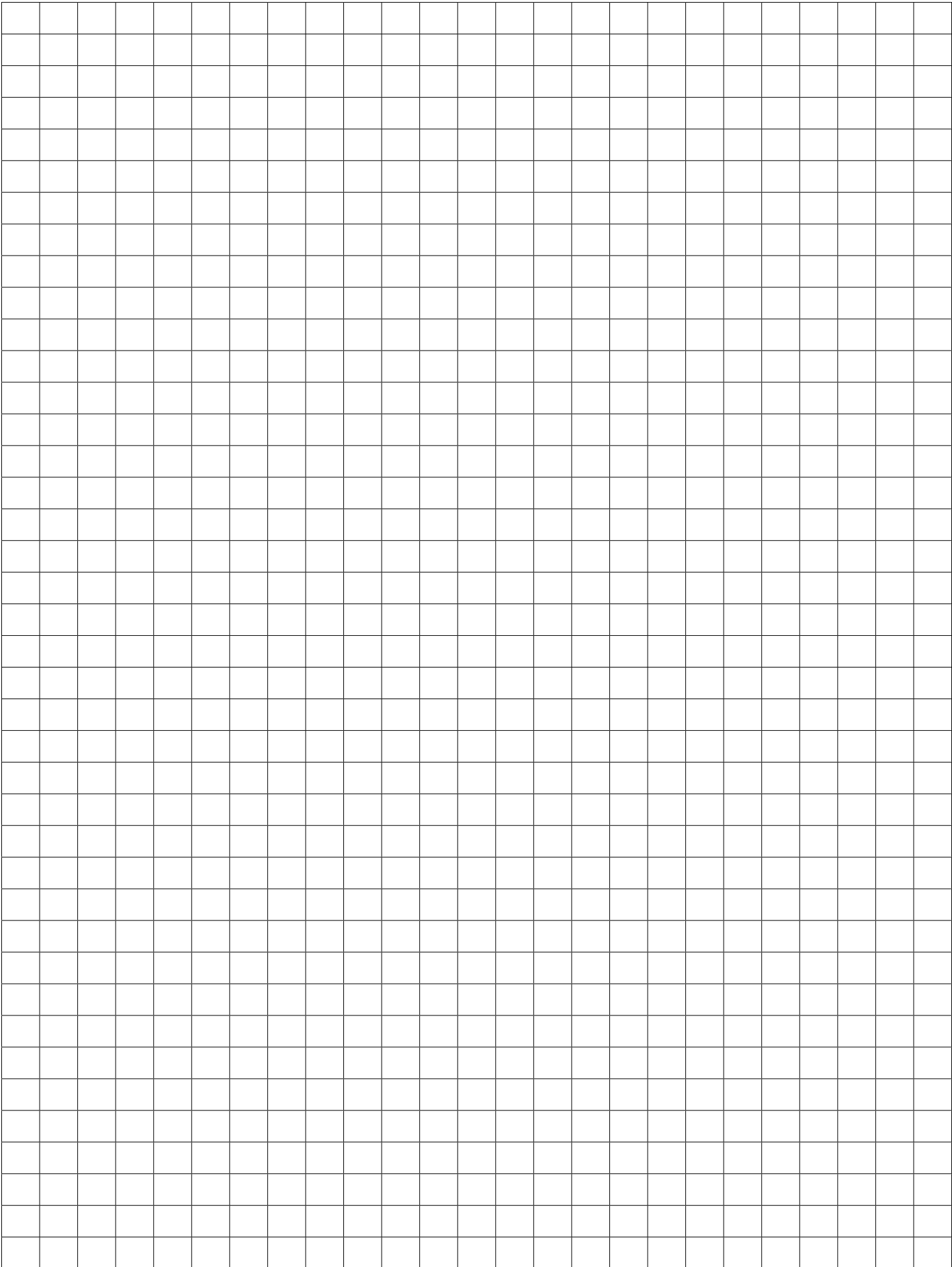
Front Cable Liners	Liner Type	Wire Size	Part Number
	Combi PA Liner	.030" - .035"	128.0083
		.045" - .062"	128.0084
	Steel Liner	.035" - .045"	SI-3545-17PT
		.052" - .062"	SI-5262-17PT

Drive Rolls	Type	Wire Size	Part Number
	U-Groove	.030" - .035"	093.0012.1
	U-Groove	.047" - .062"	093.0013.1
	Knurled*	.030" - .062"	093.0014.1

\*Recommend to use in conjunction with one grooved drive roll.

Tools	Type	Part Number
	Liner Marking Tool	284.2356
	Tip Wrench	191.0001







ABICOR BINZEL USA, Inc.  
650 Medimmune Court, Suite 110  
Frederick, MD 21703  
Phone: 800.542.4867  
Fax: 301.846.4497  
E-Mail: [customerservice@abicorusa.com](mailto:customerservice@abicorusa.com)

[www.binzel-abicor.com](http://www.binzel-abicor.com)