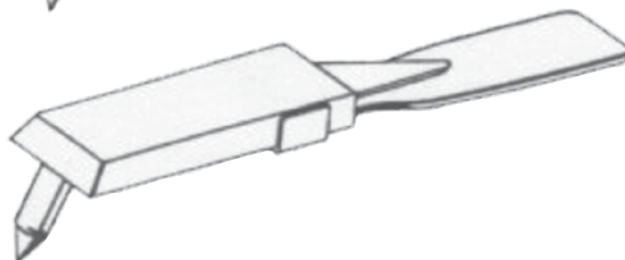
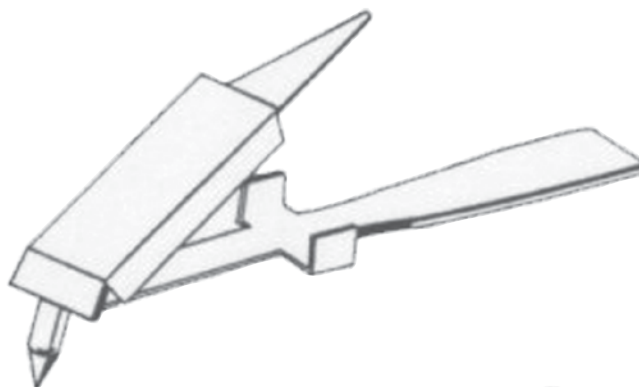
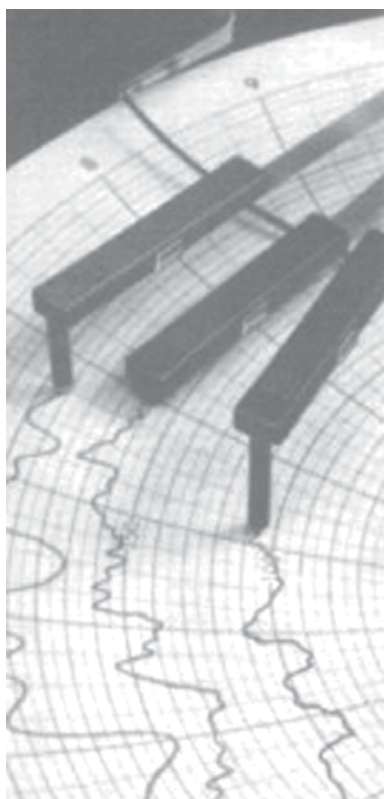


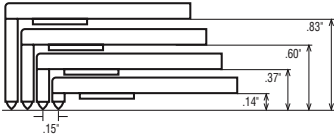
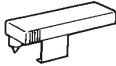
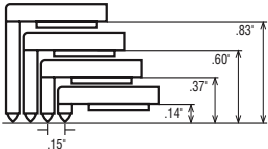


Since 1964

CHART RECORDERS AND PENS CATALOG



Universal Disposable Marking Systems

Description	To Fit	Key	Size	Per Pack	Color	Order By Number
Universal Series 39 Temperature Operating Range: -20°F to 135°F 	Circular Chart	 MP 012P	0.014" nib	6 pens	Black Red Blue Green Purple	MP MP MP MP MP 82-39-0101-06 82-39-0102-06 82-39-0103-06 82-39-0104-06 82-39-0105-06
			0.370" nib	6 pens	Black Red Blue Green Purple	MP MP MP MP MP 82-39-0201-06 82-39-0202-06 82-39-0203-06 82-39-0204-06 82-39-0205-06
			0.600" nib	6 pens	Black Red Blue Green Purple	MP MP MP MP MP 82-39-0301-06 82-39-0302-06 82-39-0303-06 82-39-0304-06 82-39-0305-06
			0.830" nib	6 pens	Black Red Blue Green Purple	MP MP MP MP MP 82-39-0401-06 82-39-0402-06 82-39-0403-06 82-39-0404-06 82-39-0405-06
Universal Series 60 Temperature Operating Range: -20°F to 135°F 	Circular Chart	 MP 012P	0.014" nib	6 pens	Black Red Blue Green Purple	MP MP MP MP MP 82-39-0011-06 82-39-0012-06 82-39-0013-06 82-39-0014-06 82-39-0015-06
			0.370" nib	6 pens	Black Red Blue Green Purple	MP MP MP MP MP 82-39-0021-06 82-39-0022-06 82-39-0023-06 82-39-0024-06 82-39-0025-06
			0.600" nib	6 pens	Black Red Blue Green Purple	MP MP MP MP MP 82-39-0031-06 82-39-0032-06 82-39-0033-06 82-39-0034-06 82-39-0035-06
			0.830" nib	6 pens	Black Red Blue Green Purple	MP MP MP MP MP 82-39-0041-06 82-39-0042-06 82-39-0043-06 82-39-0044-06 82-39-0045-06

Universal Disposable Marking Systems

Line Pens for Scanner Processed Charts

Series 72™ and 79™ Scannable Pens are designed to produce consistently clean, scannable charts.

- Broader line width assures reliable scanner processing
- Exclusive Graphic Controls inks virtually eliminate skips and estimations
- Hi Range or Lo Range ink insures a solid, scannable trace in all types of climates

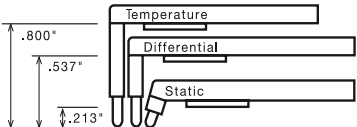
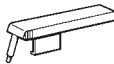
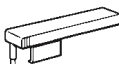
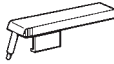
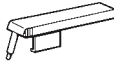
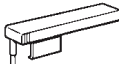
Fine Line Pens for Integrator Processed Charts

Series 72™ and 79™ Fine Line Pens for Integrators offer performance advantages to gas industry companies that process their charts manually

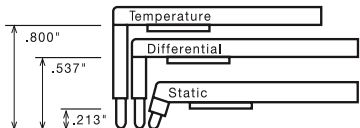
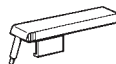
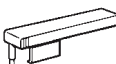
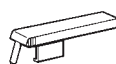
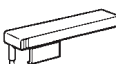
- Fine-point pen tips for more sharply defined lines
- Thinner lines allow integrator operators to trace the flow of gas more accurately

Universal Series 72™ and 79™

These Universal Series disposable pens are used primarily with instrumentation found in the gas flow measurement industry. Pen arrays can be calibrated to a 15 minute time tag (0.090") between Differential and Static pens on the Zero line of a 24 hour chart.

Description	To Fit	Key	Size	Per Pack	Color	Order By Number
Series 72™ and 79™ Broad Line Pens 						
Array "A" Static Measurement	Barton, Rockwell 3-Pen recorders	 MP 016P	0.213" nib	6 pens	Black/LO MP	82-72-0151-06
Array "A" Differential Measurement					Blue/LO MP	82-72-0153-06
Array "A" Temperature Measurement					Black/Hi MP	82-72-0161-06
					Blue/Hi MP	82-72-0163-06
		 MP 025P	0.537" nib	6 pens	Red/LO MP	82-79-0253-06
					Red/Hi MP	82-79-0163-06
			0.800" nib	6 pens	Scan	
					Green/Lo MP	82-79-0454-06
					Green/Hi MP	82-79-0464-06
					NonScan	
					Green/Lo MP	82-79-145N-06
					Green/Hi MP	82-79-146N-06
Array "B" Temperature Measurement	American Meter, Foxboro, Green/LO Mercury 3-Pen Recorders	 MP 016P	0.237" nib	6 pens	Scan	
					MP	82-72-0154-06
					Green/Lo MP	82-72-0164-06
					NonScan	
					Green/Lo MP	82-72-115N-06
					Green/Hi MP	82-72-116N-06
Array "B" Static Measurement		 MP 016P	0.505" nib	6 pens	Scan	
					Black/LO MP	82-72-0251-06
					Blue/LO MP	82-72-0253-06
					Black/Hi MP	82-72-0261-06
					Blue/Hi MP	82-72-0263-06
Array "B" Temperature Measurement		 MP 025P	0.800" nib	6 pens	Scan	
					Red/Lo MP	82-79-0452-06
					Red/Hi MP	82-79-0462-06

Universal Disposable Marking Systems

Description	To Fit	Key	Size	Per Pack	Color	Order By Number
Series 72™ and 79™ Broad Line Pens  Array "A" Static Measurement Array "A" Differential Measurement Array "A" Temperature Measurement	Barton, Rockwell 3-Pen recorders	 MP 016P	0.213" nib	6 pens	Black/LO MP	82-72-3151-06
					Blue/LO MP	82-72-3153-06
					Black/Hi MP	82-72-3161-06
		 MP 025P	0.537" nib	6 pens	Red/LO MP	82-79-3352-06
					Red/Hi MP	82-79-3362-06
			0.800" nib	6 pens	Green/Lo MP	82-79-3454-06
Array "A" Temperature Measurement					Green/Hi MP	82-79-3464-06
Array "B" Temperature Measurement	American Meter, Foxboro, Mercury 3-Pen Recorders	 MP 016P	0.213" nib	6 pens	Green/Lo MP	82-72-3154-06
					Green/Hi MP	82-72-3164-06
Array "B" Static Measurement			0.505" nib	6 pens	Black/LO MP	82-72-3251-06
					Blue/LO MP	82-72-3253-06
					Black/Hi MP	82-72-3261-06
					Blue/Hi MP	82-72-3263-06
Array "B" Differential Measurement		 MP 025P			Red/Hi MP	82-79-3462-06

***Note:** Ink Temperature Operating Ranges - HI Temp Ink optimal range + 20°F to 120°F, Lo Temp optimal Range -40°F to 90°F
 Single Temp Ink Optimal Range +35°F to 100°F

Replacement Pens Arms Put Disposable Pens To Work for You

Replacement Pen Arms allow you to quickly convert a recorder needing constant attention to a cost efficient, easy to maintain disposable pen writing system.

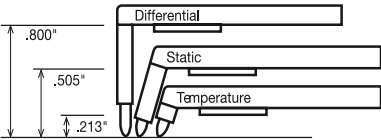
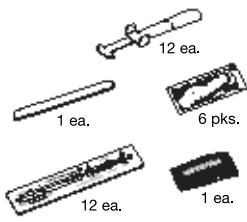
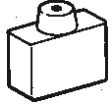
Designed specifically to mate with the most popular and technically advanced disposable pen, the Series 39, these replacement arms make conversion a snap. By simply pressing the pen down on the arm, snapp in the hinge, a tight lock-up is achieved for precise tip registration and lateral pen stability. Also each pen arm has been individually engineered to fit specific model recorder. This assures that you have no difficulty replacing the arm on your recorder.

If you have a recorder for which no replacement pen arm has been manufactured, use the Pen Arm Conversion Kit. This kit allows you to convert twelve existing pen arms to accept Series 39 disposable pens.

CHART RECORDERS & PENS



Universal Disposable Marking Systems

Description	To Fit	Key	Size	Per Pack	Color	Order By Number
Universal Series 76 	Strip Chart Recorders	 MP 011P	.300" nib .510" nib .720" nib .930" nib	3 pens	Red Blue Green Purple	MP 82-76-1002-03 MP 82-76-2003-03 MP 82-76-3004-03 MP 82-76-4006-03
Universal Series 77	Strip Chart Recorders	See Series 76 above. MP 025P	.300" nib .510" nib .720" nib .930" nib	3 pens	Red Blue Green Purple	MP 82-77-1002-03 MP 82-77-2003-03 MP 82-77-3004-03 MP 82-77-4006-03
Universal Pen Arm Kit Permits on-site retrofitting of virtually any style original equipment pen arm without the need to replace the complete pen arm.	Circular Chart Recorders	 MP 030	-	1 Kit/Pack: 12 Pen Arm Clips, 6 Pks. Urethane Adhesive, 1 Stirring Stick, Instructions, 12 Templates		MP 80-09-0180-01
Universal Ink Cartridges Fast Drying	-	 MP 021P	2.6cc	4 Cartridges	Black Red Blue Green Purple	MP 81-10-0341-04 MP 81-10-0342-04 MP 81-10-0343-04 MP 81-10-0344-04 MP 81-10-0346-04
Slow Drying	-	 MP 021P	2.6cc	4 Cartridges	Black Red Blue Green Purple	MP 81-10-0011-04 MP 81-10-0012-04 MP 81-10-0013-04 MP 81-10-0014-04 MP 81-10-0016-04
Fast Drying	-	 MP 022P	2.6cc	4 Cartridges	Black Red Blue Green Purple	MP 81-10-0071-04 MP 81-10-0072-04 MP 81-10-0073-04 MP 81-10-0074-04 MP 81-10-0076-04
Slow Drying	-	 MP 022P	2.6cc	4 Cartridges	Black Red Blue Green Purple	MP 81-10-0021-04 MP 81-10-0022-04 MP 81-10-0023-04 MP 81-10-0024-04 MP 81-10-0026-04
Fast Drying	-	 MP 023P	2.6cc	4 Cartridges	Black Red Blue Green Purple	MP 81-10-0191-04 MP 81-10-0192-04 MP 81-10-0193-04 MP 81-10-0194-04 MP 81-10-0196-04

Recorder Charts

Charts are listed by recorder manufacturer. All charts are original manufacturer brand or a replacement that meets or exceeds original specifications. Please call if you don't see what you need. New charts are added daily.

Partlow 10" Charts: 100/box, 1.5# wt/unit, Sold By: BOX

Part #	Chart #	Range	Rotation	Time
002-025-02	A112F	20 to 100	standard	24 hr
002-025-04	A112F	20 to 100	standard	7 day
002-034-01	A122F	120 to 220	standard	12 hr
002-034-02	A122F	120 to 220	standard	24 hr
002-036-02	A217F	-30 to 170	standard	24 hr
002-036-04	A217F	-30 to 170	standard	7 day
002-045-01	A1:218F	to 120psi	standard	12hr
002-045-02	A1:218F	to 120psi	standard	24 hr
002-050-01	A223F	30 to 230	standard	12 hr
002-050-02	A223F	30 to 230	standard	24 hr
002-050-04	A223F	30 to 230	standard	7 day
002-051-01	R223F	30 to 230	reverse	12hr
002-051-02	R223F	30 to 230	reverse	24 hr
002-053-03	A225F	50 to 250	standard	12 hr
002-053-03	A225F	50 to 250	standard	24 hr
002-056-01	A1:316F	30 to 160	standard	4 hr
002-056-02	A1:316F	30 to 160	standard	24 hr
002-056-04	A1:316F	30 to 160	standard	12 hr
002-058-01	A322F	-30 to 220	standard	24 hr
002-063-01	A435F	0 to 350	standard	24 hr
002-065-03	A445F	100 to 450	standard	24 hr
002-069-01	A1:518F	30 to 180	standard	24 hr
002-070-04	R1:518F	30 to 180	reverse	7 day
002-070-01	R1:518F	30 to 180	reverse	12 hr
002-072-02	A1:527F	120 to 270	standard	24 hr
002-093-01	RA1956F	30 to 180	reverse	12 hr
002-093-02	RA1956F	30 to 180	reverse	24 hr
002-093-05	RA1956F	30 to 180	reverse	7 day

Partlow 4000 Charts: 100/box, 1.3# wt/unit, Sold By: BOX

Part #	Chart #	Time
002-101-02	120-220	12 hr
002-138-01	0-200	24 hr
002-138-02	0-400	24 hr
002-138-06	0-200	7 day
002-138-19	0-200	12 hr
002-138-24	0-100	12 hr
002-138-25	0-100	24 hr
002-138-26	0-100	7 day
002-138-28	80-180	12 hr
002-138-30	60-180	24 hr
002-138-31	30-230	12 hr
002-138-32	30-230	24 hr
002-138-34	30-230	7 day
002-138-36	230-30	24 hr
002-138-49	30-180/RG032	24 hr
002-138-52	30-180/RG032	7 day
002-138-55	180-30/RG033	24 hr
002-138-58	180-30/RG033	7 day
002-138-72	60-180/0-120 psi	24 hr
002-138-74	120-220	12 hr
002-138-76	50-200/0-150psi	24 hr
002-138-77	30-180	12 hr
002-138-78	30-180	24 hr
002-138-80	180-30	24 hr
002-138-83	0-300	24 hr
002-138-88	30-230/0-100	24 hr
002-138-93	0-200/3.0-3.8	24 hr
002-144-07	210-30/8-3.5	24 hr

Dickson Charts:

100/box, 1.3# wt/unit,
Sold By: BOX

Part #	Time
830 design 4	12 hr

Honeywell 12" Recorder Charts:

100/box, 1.5# wt/unit, Sold By: BOX

Part #	Time
13077	8 hr
24001660-001	24 hr
24001660-010	24 hr
24001660-116	24 hr
24001660-625	24 hr

Anderson 12" Recorder Charts: 100/box, 1.5# wt/unit, Sold By: BOX

Part #	Range	Time
2943-A7	0-200	24 hr
41367	30 to 230	24 hr
41371	0 to 5,000#	24 hr
41368	30 to 230	24 hr
	0 to 100#	
41369	120 to 220	12 hr
41800-A5	0-200	rev. 7 day
41847	30-230	rev. 7 day
	30 to 100	
41847	30-220 Retarded	12 hr
32804-A12	136 to 220 Retarded	12 hr
Al-1648	-40/0/70	rev.7 day

CHART RECORDERS & PENS



Recorder Charts (cont'd)

Taylor 12" Charts: 100/box, 1.8# wt/unit, Sold By: BOX

Part #	Range	Time
OP102	0-30	24 hr
OP105	50-150	24 hr
OP118	70-200	24 hr
OP129	0-150	24 hr
OP134A136	50-130	24 hr
OP136	0-225	24 hr
OP153	30-230	24 hr
OP181	100-200	24 hr
OP189	60-180	24 hr
OP327	0-150/0-200	24 hr
OP407	25-220 Retarded	24 hr
OP410	30-230	24 hr
OP501	0-100	24 hr
OP503	20-22-	24 hr
OP503A	20-220/0-100psi	24 hr
OP504	100-270	24 hr
OP520	50-180	24 hr
OP520A	50-180/0-100psi	24 hr
OP527	50-200	24 hr
OP534	120-230	24 hr
OP761	0-75	24 hr
OP842	0-70	24 hr
OP914	50-200	24 hr
OP1204	25-220 Retarded	7 day
OP1254	20-220	7 day
OP1501	0-30	7 day
OP1506	30-230	12 hr
OP1515	0-150	12 hr
OP1600	25-220 Retarded	12 hr
OP1603	30 Hg-10 psi	12 hr
OP1651	100-210 Retarded	12 hr
OP1657	30-220 Retarded	12 hr
OP1660	125-230	12 hr
OP1664	100-270	12 hr
OP1672A	127-220 Retarded	12 hr
OP1669	80-220	12 hr
OP1664	20-220	12 hr
OP1672A	20-220/0-100psi	12 hr
OP1674	120-215 Retarded	12 hr
OP1680A	50-180/0-100psi	12 hr
OP3222	0-500	24 hr
OP3320	0-250	24 hr
OP3402	0-100/0-200	24 hr
OP3418	0-200	24 hr
OP3502	0-100	24 hr
OP3517	0-100/0-200	24 hr
OP3604	0-50	24 hr
OP5042	0-400	24 hr
OP6054	100-300	24 hr
OP6260	50-250	24 hr
OP7020	0-250	7 day
OP8418	0-200	7 day

Taylor 12" Charts: (cont'd)

Part #	Range	Time
OP21175	0-225/4-8	24 hr
OP68100	0-60	24 hr
OP69102	0-80	24 hr

Taylor 10" Charts: 100/box, 1.5# wt/unit, Sold By: BOX

Part #	Range	Time
500P1267-6	0-300/0-600	24 hr
500P1267-10	0-150/30-230	24 hr
500P1267-11	4-8/30-230	24 hr
500P1267-29	30-230/0-100	24 hr
500P1267-34	0-50/150/250	12 hr
500P1225-1	0-100	24 hr
500P1225-3	0-100	12 hr
500P1225-4	0-80	24 hr
500P1225-7	0-200	24 hr
500P1225-25	30-80	12 hr
500P1225-26	30-180	24 hr
500P1225-27	30-180	12 hr

Partlow 10" Charts: 100/box, 1.5# wt/unit, Sold By: BOX

Part #	Chart #	Range	Rotation	Time
002-025-02	A112F	20 to 100	standard	24 hr
002-025-04	A112F	20 to 100	standard	7 day
002-034-01	A122F	120 to 220	standard	12 hr
002-034-02	A122F	120 to 220	standard	24 hr
002-036-02	A217F	-30 to 170	standard	24 hr
002-036-04	A217F	-30 to 170	standard	7 day
002-045-01	A1:218F	to 120psi	standard	12 hr
002-045-02	A1:218F	to 120psi	standard	24 hr
002-050-01	A223F	30 to 230	standard	12 hr
002-050-02	A223F	30 to 230	standard	24 hr
002-050-04	A223F	30 to 230	standard	7 day
002-051-01	R223F	30 to 230	reverse	12 hr
002-051-02	R223F	30 to 230	reverse	24 hr
002-053-03	A225F	50 to 250	standard	12 hr
002-053-03	A225F	50 to 250	standard	24 hr
002-056-01	A1:316F	30 to 160	standard	4 hr
002-056-02	A1:316F	30 to 160	standard	24 hr
002-056-04	A1:316F	30 to 160	standard	12 hr
002-058-01	A322F	-30 to 220	standard	24 hr
002-063-01	A435F	0 to 350	standard	24 hr
002-065-03	A445F	100 to 450	standard	24 hr
002-069-01	A1:518F	30 to 180	standard	24 hr
002-070-04	R1:518F	30 to 180	reverse	7 day
002-070-01	R1:518F	30 to 180	reverse	12 hr
002-072-02	A1:527F	120 to 270	standard	24 hr
002-093-01	RA1956F	30 to 180	reverse	12 hr
002-093-02	RA1956F	30 to 180	reverse	24 hr
002-093-05	RA1956F	30 to 180	reverse	7 day

CHART RECORDERS & PENS

Disposable Pens and Bulk Ink

Universal Felt-Tip Disposable Pens

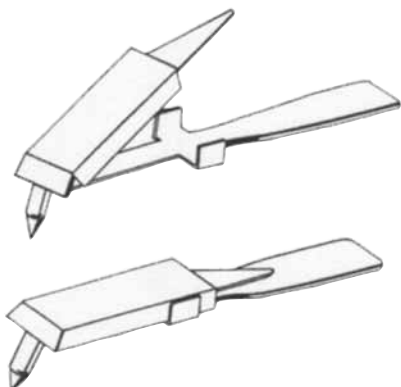
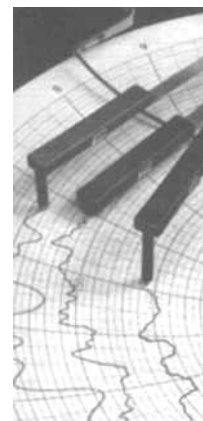
Easy to use... they don't clog, skip, or blot, and write equally well at temperatures from -20°F to 140°F. Almost 2,000 feet of recording from one pen! Eliminate the chore-- and the mess-- of inking! The line quality is excellent. Use disposable cartridges to fit your circular chart recorder pens. Measure the length from bottom of arm to chart. Lengths are .14", .037", .083" - 6 per package. Fits a wide variety of flat pen arms. Or ask about retrofitting your original pen arm to felt-tips. **INK COLOURS: Black, Red, Blue, Green, and purple**

Partlow Pen Kits and Disposable Cartridges

These fit the Partlow line of recorders. Illustration shows how these cartridge- pen assemblies are installed. Kit includes arm and pen quantities shown. Disposable pens can be purchased separately as replacements.

Replacement Kits

Part #	Pen and Arms Kit Replaces	Pens Included	Sold By
404	Acc.376 - RF, RDW, RDWET TRDW, TRLW, RFT recorders	5 red	PACK
404B	Acc.376B - RFC recorder	5 red	PACK
404C	Acc.376A - RFH, J718A recorders	5 red and 5 green	PACK
404D	Acc.376C - ER, ET, ERC, ETC, EV EVC,RFH-J673, RFH-J755, RFH-J700	5 red -30 to 170	PACK standard
404E	Same as 404D except with green pens instead of red	5 green to 120psi	PACK standard
404F	Dual models - ER__Pr, ET__Pr	5 red and 5 green	PACK



Disposable Pens

Part #	Colour Nib	Length	Packaging	Sold By
60500401	Green	0.14"	5/pk	PACK
60500402	Red, for 4000	0.37"	5/pk	PACK
60500403	Red	0.14"	5/pk	PACK
60500404	Red	0.60"	5/pk	PACK

Taylor Disposable Pens

Model #	Replacement	Description
All 12"	155S175-3	Red#1
	155S175-4	Blue#1
	155S175-5	Red#2
	155S175-6	Blue#2
	155S175-8	Purple#3
10" Model Er/c	500S1150-1	Red
	500S1150-2	Green
	500S1150-3	Blue

Bulk Ink

Bulk ink comes in 1, 16 or 32 oz. containers. Available in Black, Green, Red, Blue, and Purple.

Fast Dry (FD) - Humid Conditions
+30°F to +100°F

Medium Dry (MD) - Standard Use
+10°F to +110°F

Slow Dry (SD) - Hot, Dry Conditions
-15°F to +130°F

Low temp (LT) - Non-Freeze, Cold Conditions, wide range use
-30°F to +140°F



Product Line Card

Supply House to the Processing Industries Since 1964

Harco partners with leading manufacturers in the industry to bring you an innovative range of sanitary and hygienic processing equipment and supplies. With experience in design, manufacturing and support, our partners are selected for their quality, reliability, and advanced products.

