

Terra Tu

Technical
Graphics
& Media



Acme Refining Scrap Iron & Metal Co.

3357 S. Justine Avenue
Chicago, IL 60608-6332
Phone: (773) 523-4500
Fax: (773) 523-7283
Year Founded: 1974
TMA member since: 1976
Primary SIC Code: 3341
Number of Employees: 75

Contacts:
Iris Baron
Larry Barron

Products and Services
Services & Training
Reclamation / Recycling (Scrap) Services

Industries Served:
Manufacturing / Industrial
(See ad on page 70)

Apollo Machine & Mfg. Company

7617 N. Parkside
Skokie, IL 60077-2633
Phone: (847) 677-6444
Fax: (847) 677-3040
TMA member since: 1984
Primary SIC Code: 3599
Number of Employees: 1

Products and Services
Machinery
CNC Turning Centers

Atherton Machinery Div., Race Industrial

2100 S. Wolf Road
Des Plaines, IL 60018-1996
Phone: (847) 298-0500
Fax: (847) 635-8976
Year Founded: 1964
TMA member since: 1975
Primary SIC Code: 5084
Number of Employees: 8
Sq. Ft. Plant: 75000

Contacts:
Robert C. Atherton, Chairman
Jerry Ogden

Products and Services
CNC Machine Tools

Beverly Manufacturing Co.

19600 Northstar Ct.
Tinley Park, IL 60477-5393
Phone: (708) 429-0800
Fax: (708) 429-4120
<http://www.beverlytomasregister.com>
Year Founded: 1965
TMA member since: 1977
Primary SIC Code: 3469
Secondary SIC Code: 3544
Number of Employees: 22
Sq. Ft. Plant: 32000

stainless and spring steel and aluminum
Presses to 300 ton.

Contacts:
Bill Anderson, Tool Engr.
Felix Widlack, President
Tim Widlack, Vice President

Products and Services
Design Services
Computer Aided Design
Die Design & Engineering

Dies:
Dies: Blanking
Dies: Cutting
Dies: Deep Drawing
Dies: Notching & Punching
Dies: Progressive
Dies: Punching
Dies: Stamping
Dies: Form
Dies: In-House Toolroom

Finishing Services
Deburring
Vapor Depressing
Grinding
Grinding: Carbide
Grinding: Surface
Machining
EDM: Wire
Milling: CNC
Metal Forming:
Coining
Stampings: Aluminum
Stampings: Automotive
Stampings: Electronic
Stampings: Large
Stampings: Long Run
Stampings: Metal
Stampings: Small
Stampings: Spring Steel

Parker / Schrader Bellows Steel Cylinder Mounting Kits

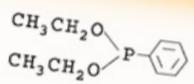
Complete selection of mounting hardware. Just match rod thread or pin size for the right part the first time.

Part Numbers	Series	Pin Size (in.)	Thread Size (in.)	Weight (lbs.)	List Price	Your Price
Red Clevis						
FP930206	5040	1/2	1/2-20	0.75	\$37.40	\$35.94
FP930207	5042	3/4	3/4-16	0.75	\$43.10	\$40.84
FP930300	5084	1	1-14	0.75	\$59.70	\$56.72
Pist Pin						
FP930205	5036	1/2	1/2	0.50	\$9.30	\$11.11
FP930206	5038	3/4	3/4	0.50	\$11.70	\$18.25
FP930207	5040	1	1	0.50	\$17.10	\$18.25
Knuckle						
FP930205	5036	1/2	1/2-20	1.00	\$34.40	\$25.08
FP930206	5038	3/4	3/4-16	1.00	\$41.80	\$33.86
FP930207	5040	1	1-14	1.30	\$53.10	\$50.44
Eye Bracket						
FP930205	5036	1/2	1/2	0.90	\$41.40	\$44.58
FP930206	5038	3/4	3/4	0.90	\$48.80	\$51.58
FP930207	5040	1	1	1.00	\$67.90	\$63.50
Clevis Bracket						
FP940214	6035	1/2	1/2	0.90	\$70.50	\$75.53
FP940215	6036	3/4	3/4	0.90	\$76.30	\$78.20
FP940216	6037	1	1	1.00	\$114.20	\$136.99

Parker / Schrader Bellows Steel Cylinder Repair Kits

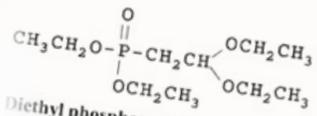
Factory seal kits offer the right seal every time. Kits provide all the seals necessary to resal either the rod or the piston assembly.

Part Numbers	Series	Baro Size (in.)	Description	Rod Dia. (in.)	Weight (lb.)	List Price	Your Price
FP940207	AK321015	1/2	Red Guard Carriage	0.50	2.0	\$54.41	\$48.25
FP940208	AK321016	3/4	Red Guard Carriage	0.63	2.0	\$55.75	\$53.75
FP940209	AK321017	1	Red Guard Carriage	0.80	2.0	\$62.55	\$59.95
FP940210	AK321018	1 1/4	Red Guard Carriage	1.00	2.5	\$82.76	\$78.26
FP940211	AK321019	1 1/2	Red Guard Carriage	1.25	2.5	\$105.29	\$132.48
FP940212	AK321020	1 3/4	Red Guard Carriage	1.50	2.5	\$155.76	\$200.75
FP940213	AK321021	2	Red Guard Carriage	2.00	3.0	\$236.59	\$330.75
FP940214	AK321022	2 1/4	Red Guard Carriage	2.50	4.0	\$381.12	\$523.50
FP940215	AK321023	2 3/4	Red Guard Carriage	3.00	4.5	\$490.00	\$660.00
FP940216	AK321024	3	Red Guard Carriage	3.50	5.0	\$610.00	\$820.00



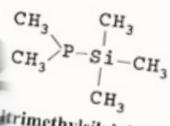
[1638-86-4]

Diethyl phenylphosphonite, 99%
Diethoxyphenylphosphine
Phenylphosphonous acid diethyl ester
F.W. 198.20
b.p. 64°/0.7mm



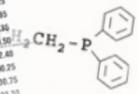
[7598-61-0]

Diethyl phosphonoacetaldehyde diethyl acetal, 95%
F.W. 254.26
b.p. 146-149°/14mm



[26464-99-3]

Trimethylsilylphosphine



[5055-11-8]

Diphenyl-β-chloroethylphosphine
2-Chloroethylidiphenylphosphine

Content Management and Database Publishing Services

Cost-effective Solutions

Technical products often have time-sensitive information that creates a challenge for companies to keep their communications up-to-date in today's fast-paced consumer environment. Large product selections or with pricing tied to volatile resources make it burdensome and expensive to update user manuals, catalogs and web sites as frequently as the market demands. This burdens tech support and other staff without generating sufficient additional sales. To address this, systems and services to make information management and publishing more efficient have grown in popularity.

Content Management Systems (CMS) store descriptions, pricing and other product details in a database, making it easier for staff to keep this information current. There are several commercial CMS products on the market, and while they offer excellent management options, most are designed for a much larger volume of information than small to medium-sized companies require. This may create the impression that the CMS approach is unsuitable for those with limited needs or budgets, but all that is needed is to scale the application for managing a smaller data set. Our approach is to create the CMS using the office applications that your staff already know and use, reducing high initial product costs and the need for extensive training.

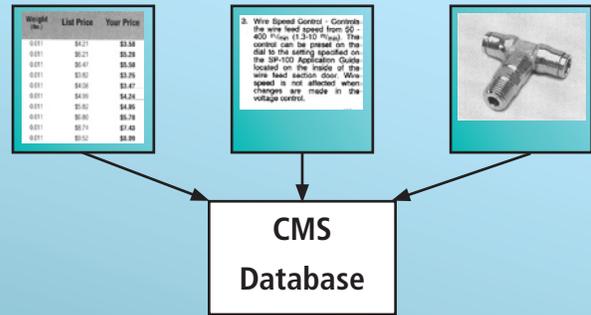
Our **Database Publishing** solutions tie CMS product information directly to the applications used to create documents. Documents requiring frequent updating, complex formatting and multi-format presentations can be maintained and published with minimal input from staff, and using previously validated data reduces the overall workload and increases accuracy.

Terra Tu has provided database applications and publishing services for over 20 years. We can provide your company with the tools to easily maintain your product information, allowing you to publish your documents more frequently, with predictable costs and shorter production time. Savings realized by using our systems and services quickly recover the development costs.

We Offer:

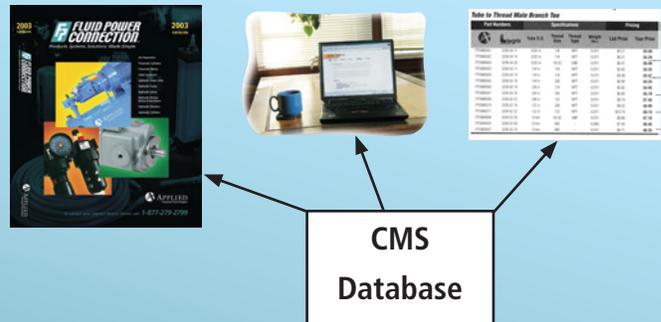
- * CMS database design and development
- * Database publishing program development
- * Training and support
- * Print and web design and implementation
- * A complete range of publishing services

Content Management Systems



Content Management Systems (CMS) provide an easily maintained integrated database for your product information. CMS solutions from Terra Tu are based on office applications that your staff use daily, reducing the need for special training. Our easy-to-follow user manuals provide step-by-step instructions for maintaining your database and using the CMS.

Database Publishing Systems



Database Publishing uses the CMS as the primary source for producing and updating your catalogs, web sites and other communications. Our systems are designed to allow your staff to quickly and easily generate content and materials for use by your publication designers. Some solutions can create documents directly from the CMS with little or no additional user involvement.

Proven Results

Users of our publishing systems have experienced

- * Easier management of product information
- * Faster publishing turn-around times
- * Significantly reduced publishing costs

Chicago's Tooling & Manufacturing Association has been serving regional industries since the early 1900s. Their legacy database had been ported from their mainframe computer to a PC network, and they desired an automated publishing system based on commercially available software. Terra Tu was chosen to develop this system because our experience in database development as well as publishing allowed us to evaluate their options and create the best-suited system for their needs. The solution we provided allowed their staff to publish the various sections of their Manufacturing Guides simply by clicking on icons.

Digital Specialty Chemicals' catalog has over 12,000 formulations aimed at professional chemists. The page layouts contain terms and formulae that would be difficult for a graphic designer to set and proof-read. A database maintained by their expert chemists was used as the source for our automated publishing process, assuring accuracy and efficiency.

685	(-)-(R)-N,N-Dimethyl-1-[(R)-1',2-bis(diphenylphosphino)ferrocenyl]ethylamine <chem>C_{26}H_{37}FeNP_2</chem> FW 625.52 mp 140°	
740	(-)-(R)-N,N-Dimethyl-1-[(S)-1',2-bis(diphenylphosphino)ferrocenyl]ethylamine [74311-56-1] <chem>C_{26}H_{37}FeNP_2</chem> FW 625.52 mp 143-144° [α] _D ²⁵ -350° (C=0.5 in chloroform)	
923	(+)-(S)-N,N-Dimethyl-1-[(R)-1',2-bis(diphenylphosphino)ferrocenyl]ethylamine [55650-59-4] <chem>C_{26}H_{37}FeNP_2</chem> FW 625.52 mp 138-142° [α] _D ²⁵ +350° (C=0.5 in chloroform)	
101	Dimethyl[bis(methylthio)methyl] phosphonate [61779-87-1] <chem>C_2H_{12}O_2PS_2</chem> FW 216.25 bp 72°/0.05mm n _D ²⁰ 1.5212	
602	3,3-Dimethyl-1-butenylboronic acid, 97% <chem>C_6H_{12}BO_2</chem> FW 127.97 <chem>(CH_3)_2CCH=CH(B(OH)_2)</chem>	

Complex text formatting is automatically applied.

Complex alphabetization and sorts are automated.

Graphics are scaled and positioned automatically.

Done manually, this layout required over 1 1/2 hours per page. Our database publishing solution was able to lay out the entire book with over 12,000 product listings in under 4 hours without requiring any manual input!

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Additional Benefits

The Fluid Power division of Applied Industrial Products was in need of a products catalog, but the commercial Content Management System that Applied would use for all their divisions was still being developed. Terra Tu was brought in to create the original 500 page catalog with the idea that their CMS would be available for subsequent publications. The catalog was completed on-time and on-budget, and the result was that the Fluid Power division became profitable within two months of its introduction.

Since the catalog contained prices for its thousands of products it was necessary to update the catalog the following year, but their CMS was still unavailable. Because Terra Tu undertakes most technical products publications with applications compatible with custom programming, we were able to revise the catalog by writing programs to update their pricing from the office applications used by their staff to manage their product information. The revision was completed much faster and at a far lower cost than a manual process could provide.

Let us bring speed and economy to your technical publications!

Brass Push To Connect Fittings Tube to Thread Male Branch Tee

Tee Fittings

Tube to Thread Male Branch Tee

Part Numbers		Specifications				Pricing	
legris	Tube O.D.	Thread Size	Thread Type	Weight (lbs.)	List Price	Your Price	
FF3986561	3228 04 11	5/32 in	1/8 NPT	0.011	\$4.21	\$3.58	
FF3986562	3228 04 14	5/32 in	1/4 NPT	0.011	\$6.21	\$5.28	
FF3986564	3228 04 20	5/32 in	10-32 UNF	0.011	\$6.47	\$5.50	
FF3986563	3228 56 11	1/4 in	1/8 NPT	0.011	\$3.82	\$3.25	
FF3986564	3228 56 14	1/4 in	1/4 NPT	0.011	\$4.08	\$3.47	
FF3986565	3228 56 18	1/4 in	3/8 NPT	0.011	\$4.99	\$4.24	
FF3986566	3228 60 14	3/8 in	1/4 NPT	0.011	\$5.82	\$4.95	
FF3986567	3228 60 18	3/8 in	3/8 NPT	0.011	\$6.80	\$5.78	
FF3986568	3228 60 22	3/8 in	1/2 NPT	0.011	\$8.74	\$7.43	
FF3986570	3228 62 18	1/2 in	3/8 NPT	0.011	\$9.52	\$8.00	
FF3986571	3228 62 22	1/2 in	1/2 NPT	0.011	\$10.74	\$9.13	
FF3986408	3228 03 20	3 mm	10-32 UNF	0.011	\$9.86	\$7.79	
FF3986405	3228 03 09	3 mm	M3	-	0.009	\$7.59	\$6.45
FF3986407	3228 03 19	3 mm	M5	-	0.011	\$9.71	\$8.25



Male Run Tee

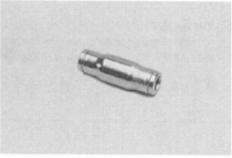
Part Number	Specifications				Pricing		
legris	Tube O.D.	Thread Size	Thread Type	Weight (lbs.)	List Price	Your Price	
FF3986403	3223 04 20	5/32 in	10-32 UNF	0.008	\$6.67	\$5.67	
FF3986411	3223 04 11	5/32 in	1/8 NPT	0.008	\$4.65	\$3.96	
FF3986402	3223 04 14	5/32 in	1/4 NPT	0.008	\$6.41	\$5.45	
FF3986543	3223 56 11	1/4 in	1/8 NPT	0.008	\$3.82	\$3.25	
FF3986545	3223 56 14	1/4 in	1/4 NPT	0.008	\$4.08	\$3.47	
FF3986546	3223 56 18	1/4 in	3/8 NPT	0.008	\$4.99	\$4.24	
FF3986547	3223 60 14	3/8 in	1/4 NPT	0.008	\$6.54	\$5.56	
FF3986548	3223 60 18	3/8 in	3/8 NPT	0.008	\$7.19	\$6.11	
FF3986549	3223 60 22	3/8 in	1/2 NPT	0.008	\$9.00	\$7.85	
FF3986550	3223 62 14	1/2 in	3/8 NPT	0.008	\$7.58	\$6.44	
FF3986552	3223 62 22	1/2 in	1/2 NPT	0.008	\$10.74	\$9.13	
FF3986402	3223 03 09	3 mm	M3	-	0.009	\$8.47	\$7.20
FF3986403	3223 03 19	3 mm	M5	-	0.011	\$8.05	\$6.85
FF3986404	3223 03 20	3 mm	10-32 UNF	0.008	\$3.65	\$3.10	



Tube to Tube Fittings

Straight Union

Part Numbers		Specifications		Pricing	
legris	Tube O.D.	Weight (lbs.)	List Price	Your Price	
FF3986567	3226 04 00	5/32 in	0.004	\$7.40	\$2.84
FF3986568	3226 56 00	1/4 in	0.004	\$2.59	\$2.29
FF3986569	3226 60 00	3/8 in	0.004	\$3.82	\$3.25
FF3986590	3226 62 00	1/2 in	0.004	\$6.34	\$5.39
FF3984544	3226 03 00	3 mm	0.004	\$5.12	\$4.35



APPLIED Industrial Technologies Call your local service center to order: 1-877-279-2799

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Fluid Connectors

Expertise in the creation of:

- * Information management applications
- * Data reporting tools
- * Automated publishing solutions

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