Terra Tu

Technical

Graphics

& Media

D₂T
V
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V

Classic PORSCHE 911

Porsche 911 Parts and Technical Reference Catalog

2002 Edition

Parts and Technical Ref

STODD

IMPORTED C

Logan Clutch Corporation®

Clutch Save

| Counter | Thread | Machine | LO / HI | Operator | Define |
| Serial | Check | Cycle | Shift | ID | Mode |

| Auxiliary | RH / LH | Stock | LO / HI | Tooling | Job |
| Outputs | Thread | Deplete | Stop | Counters | Number |

Reset
On Off
7 8 9 0
SHIFT
4 5 6
ENTER
1 2 3

Digital Specialty Chemicals, Inc.

DSC

PH₂
PH₂

Organophosphorus
- Phosphine ligands
- Chiral Phosphine ligands
- Phosphonate esters
- Phosphonic acids and derivatives
- Phosphorylating Agents

Silanes
Boronic Acids
nthesis

Catalog 99-00A

2003 CATALOG

FP FLUID POWER CONNECTION

Products. Systems. Solutions. Made Simple

FLUID POWER CONNECTION
Products. Systems. Solutions. Made Simple

Air Preparation
Pneumatic Cylinders
Pneumatic Valves
Fluid Connectors
Hydraulic Power Units

APPLIED

To contact your neare

Airflex®
Clutches & Brakes

EAT•N

Catalog 800A

Technical Publishing Services

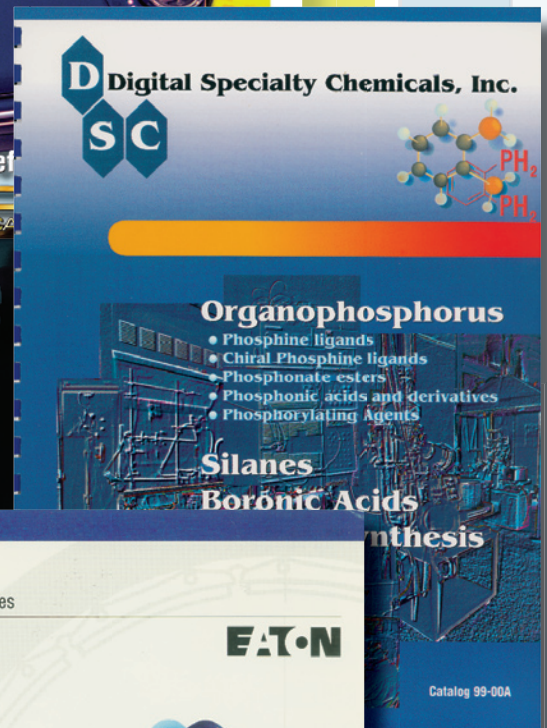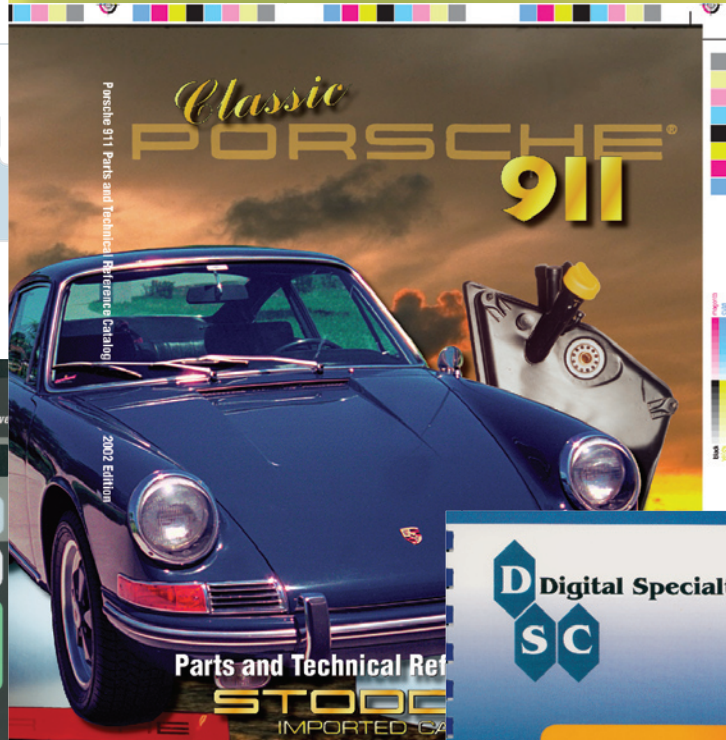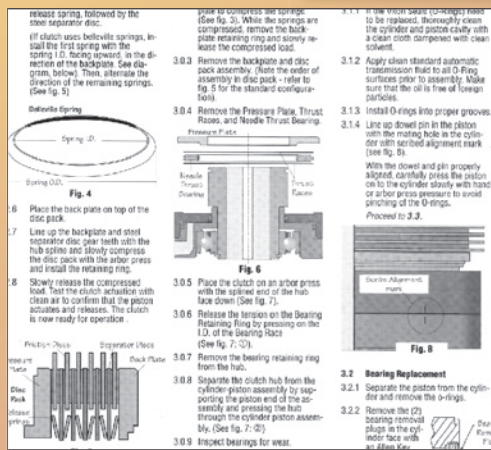# Terra Tu
Technical
Graphics
& Media

Technical Publishing Services

Terra Tu has been providing quality publishing services to companies of all sizes since 1985. We have specialized in producing print and digital materials for products and services that present a challenge due to their technical nature. We have been successful at integrating this information into consumable documents that are clear and easy to understand.
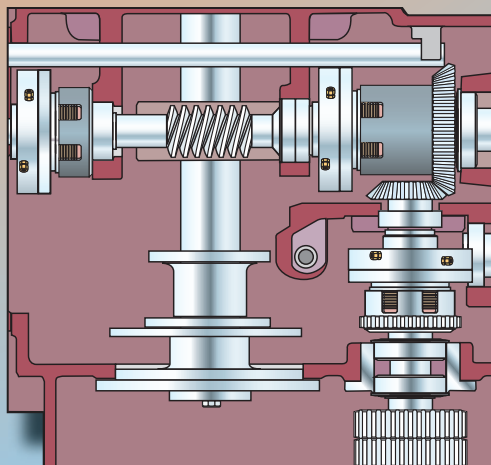
Whether your company has an in-house publishing department, uses an agency or preferred printer, you can benefit from these creative services offered by Terra Tu. Teamwork is the key to better products at better prices.

Technical Writing

Photography

Technical Illustrations

Database Publishing

2200 Edgerton Road, University Heights, OH 44118

Voice: (216) 932-1232   Fax: (216) 932-1211   www.terratu.com
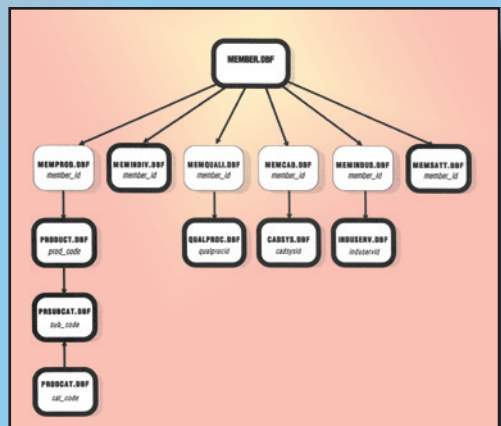
Technical Writing

We can assist your staff in the writing of technical bulletins, collateral material, catalogs, and web-based material. Whether your needs are for entire documents or minor editing, Terra Tu can be a valuable resource.

Software Manuals

Logan Clutch Corporation / CS 2000®

This manufacturer of industrial clutches and brakes found good business in retrofitting the mechanical clutches in vintage screw machines with their hydraulic and pneumatic versions. This increased the productivity of those machines considerably. An opportunity arose to provide automation to those same machines, making them competitive with modern offerings at a fraction of the cost.

The CS 2000® was designed to provide CNC functions by precisely managing the clutches in the screw machines. Terra Tu was given a prototype unit to document its software functions and create a user manual that machine operators could easily understand and use as both a setup guide and quick reference for machine-side use. In the course of this project, we were able to assist the designer in trouble-shooting the software and give valuable feedback about the ease of access to the control functions. This unit became successful, and became an option offered by companies in the business of rebuilding and retrofitting vintage machinery.

User Manuals

Lincoln Electric Corporation / SP-100®

A new welder aimed at the home workshop, the SP-100® needed a manual that consumers would be willing to read before attempting to use the unit. Terra Tu was given an early production model, and worked with Lincoln Electric's technical documentation department to write, illustrate and lay out the manual for this unit.

We had to disassemble the welder to document the process of replacing its consumables and servicing broken or worn parts. We were given no prior instruction on how to go about this, and had to determine the easiest way to undertake these tasks. This resulted in two manuals; one for servicing and maintenance and one to help the home user replenish the welder's supplies.

Brochures

Functional Products Incorporated / Tackifier Selection Guide

Functional Products Incorporated makes additives for lubricants and greases. Their line includes several products with similar qualities that are best differentiated by suitability for particular applications. By getting the PhDs to explain these qualities, a product selection guide was created that presented these differences in a concise, consumable way. One benefit of teaming with a technically astute "outsider" is that difficult concepts can be made understandable in a shorter period of time.

Comprehensive Graphics Services

Technical Illustrations

With over 30 years' experience in creating technical illustrations, and over 15 years' experience in creating these illustrations digitally, your artwork will present your products attractively and effectively.
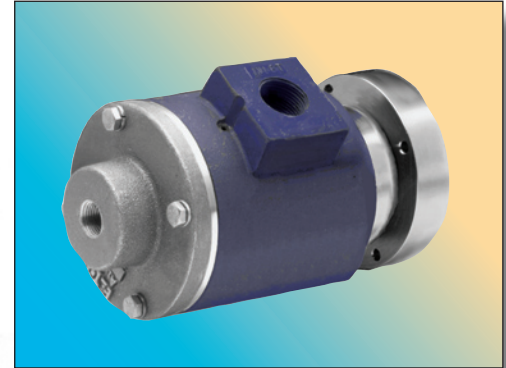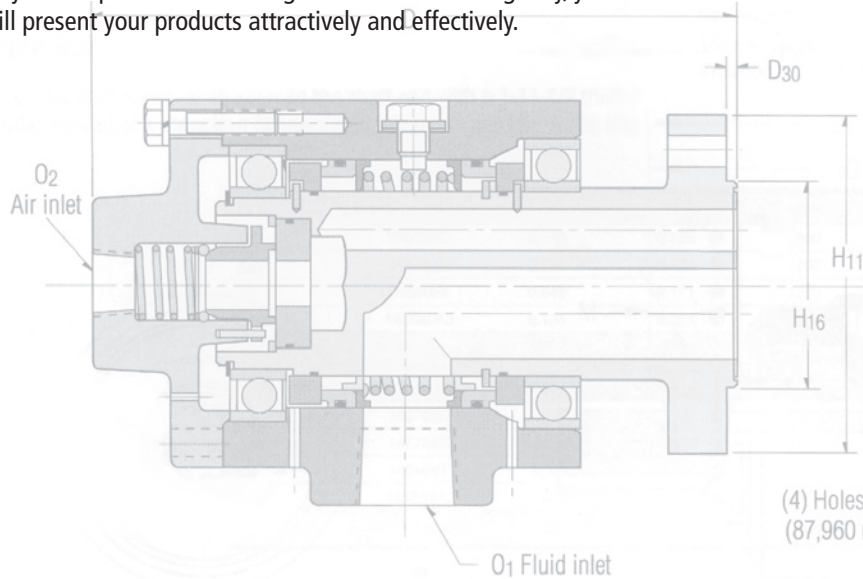
This illustration was created for Eaton Corporation's Airflex Division using the underlying 2D CAD drawing as a reference. Illustrations can be created from actual parts, CAD files, and general descriptions of components.

Location and Product Photography

Complete photographic services are offered at a reasonable cost to augment the creation of your materials. We shoot in 35 mm, 6x6 cm, and digital formats to provide the best quality output for your documents, displays and web sites.

After adding some impressive production capabilities, Digital Specialty Chemicals, Inc. wanted to show it off in their trade show displays and brochures. The image at left was photographed with medium format 6x6 cm to allow sharp enlargements for their display.

Graphics for Web Sites

We can optimize graphics for quick downloading to the slowest connections, helping to make sure that your prospects don't leave your site before they get the picture!

Of course, we can also program your web site. Coordinated graphics and text content are used to present your products and services in the most logical, yet engaging manner.
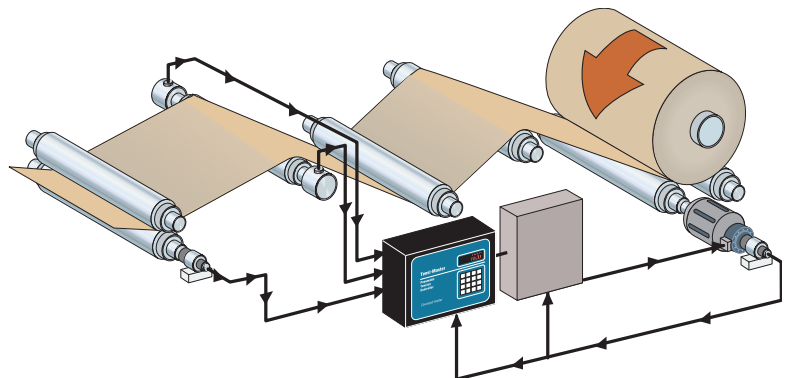
Database Publishing Applications

Complex and unique documents can be published with minimal intervention by staff. Once set up, the cost of publishing these materials is dramatically reduced, allowing quickly recovery of development costs. Terra Tu fully supports almost all database formats.

Complex alphabetization and sorts are automated.

Graphics are scaled and positioned automatically.

Complex text formatting is automatically applied.

Formulae are typeset as text for better quality and consistent appearance

*If this layout was done manually, it would have required over 1 1/2 person hours **per page**. Our custom publishing program was able to lay out the entire document of over 12,000 product listings in **under 4 hours** without requiring any manual adjustments!*

Cost-Effective Solutions

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 use to both evaluate their options and execute a system that suited their needs.

The solution we provided integrated their complex FoxPro® data structure (right) with their layout application via Crystal Reports®. Our implementation made it possible to publish the various sections of their Manufacturing Guides simply by clicking on icons, then opening the resultant document for final output and printing.
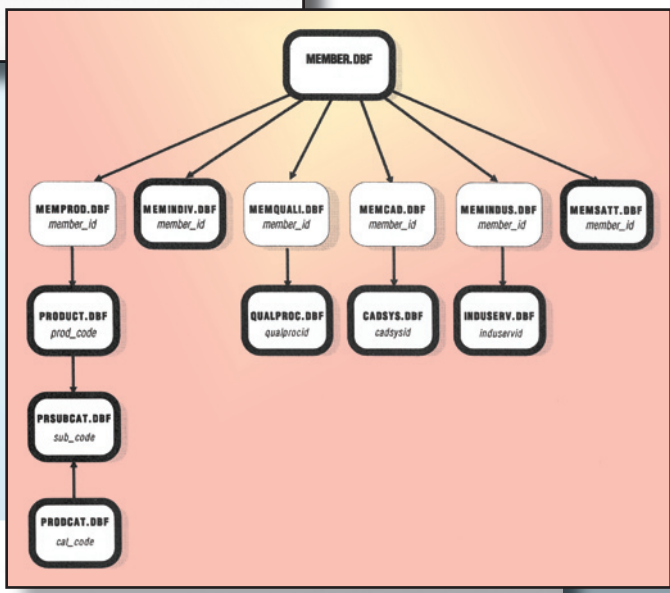
Alphabetical List of TMA Member Companies

A.J.R. Industries, Inc.
117 Gordon Street
Elk Grove Village, IL 60007-1182
Phone: (847) 439-0380
Fax: (847) 439-0230
  Year Founded: 1965
  TMA member since: 1965
  Primary SIC Code: 3544
  Secondary SIC Code: 3728
  Number of Employees: 32
  Sq. Ft. Plant: 22000
Large capacity - CNC Jig boring &
CNC Machining centers, CNC turning,
custom precision machined parts &
precision assemblies, assembly of
hardware, thermal fit of liners and line

Molding
  Molding: Plastic
Molds & Die Cast Dies
  Molds: Plastic Injection
Related Services
  Prototypes: Rapid
  Tool Grinding
Quality Processes:
  FDA / GMP
  Mil Spec
CAD Systems:
  AutoCAD
  Other
Industries Served:
  Medical / Healthcare

John J. Amann, President
Robert A. Amann, V.P.-Mktg. Mgr.
David F. Amann, V.P.-Sales Mgr.
Products & Services:
  Metal Forming
    Springs: Other than coil
    Stampings: Electronic
    Stampings: Metal
    Stampings: Multislide
    Stampings: Small
    Wire Forming
Industries Served:
  Consumer Products
  Electronics / Electric
  Manufacturing / Industrial

Year Founded: 1990
TMA member since: 1990
Primary SIC Code: 3599
Secondary SIC Code: 3469
Number of Employees: 60
Sq. Ft. Plant: 35000
Contract manufacturing - assemblies
of mechanical components.
Engineering services including:
automated assembly systems (design
& build), metal stamping and wire
forming tooling (design & build).

Kaz Jaslikowski, V. P. Engr.
Robert Nellemann, V. P. Mktg

Products & Services:
  Metal Forming

Creative Layouts

Our strength is in the integration of complex information with attractive, easily consumable presentations. Our layouts strictly follow your corporate identity guidelines. If desired, we can assist you in creating a look and feel that can be applied to all of your documents and web presentations.

Dual Narrow VC Elements – Dimensional Data
Form VC-502   Sizes 11.5 to 42

English	lb•in @ 75 psi	Dimensions in inches	D2	D3	D25	G	H2	H4	H7	L No.	L Dia.	O3 No.	O3 Size	Q (Deg)	V	W No.	W Width
11.5VC500	142112	54000	12.75	0.23	0.56	19.625	18.875	11.63	18.88	16	0.375	2	0.31	11.25	0.56	16	11.63
14VC500	142114	78400	12.69	0.31	0.56	23.500	22.500	14.22	22.25	8	0.500	4	0.38	22.50	0.56	16	11.57
16VC600	142115	130000	15.19	0.31	0.56	25.500	24.375	16.22	24.38	12	0.500	4	0.38	15.00	0.69	16	13.81
20VC600	142116	186000	15.19	0.31	0.56	29.500	28.375	20.22	28.38	12	0.500	4	0.38	15.00	0.69	20	13.81
24VC650	142117	270000	15.94	0.39	0.63	34.000	32.750	24.22	32.50	16	0.625	4	0.50	11.25	0.59	24	14.75
28VC650	142118	364000	15.94	0.39	0.63	38.000	36.750	28.22	36.50	16	0.625	4	0.50	11.25	0.59	28	14.75
33VC650	142119	510000	15.94	0.47	0.69	44.625	43.125	33.22	43.25	18	0.750	4	0.63	15.00	0.59	32	14.75
37VC650	142120	640000	15.94	0.47	0.69	48.625	47.125	37.22	47.25	20	0.750	4	0.63	9.00	0.59	36	14.75
42VC650	142121	760000	15.94	0.47	0.69	53.625	52.125	42.22	52.25	24	0.750	4	0.63	7.50	0.59	40	14.75

Size	① Part Number	② M, Torque Rating	D2	D3	D25	③ G	H2	H4	H7	L ④ No.	L Dia.	O3 ⑤ No.	O3 Size	Q (Deg)	V	W No.	W Width
11.5VC500	142112	6100	324	6	14	498.5	479.4	295	479	16	9.5	2	8	11.25	14	16	295
14VC500	142114	8860	322	8	14	596.9	571.5	361	565	8	12.7	4	10	22.50	14	16	294
16VC600	142115	14700	386	8	14	647.7	619.1	412	619	12	12.7	4	10	15.00	17	16	351
20VC600	142116	21000	386	8	14	749.3	720.7	514	721	12	12.7	4	10	15.00	17	20	351
24VC650	142117	30500	405	10	16	863.6	831.9	615	826	16	15.9	4	13	11.25	15	24	375
28VC650	142118	41100	405	10	16	965.2	933.5	717	927	16	15.9	4	13	11.25	15	28	375
33VC650	142119	57600	405	12	18	1133.5	1095.4	844	1099	18	19.1	4	16	15.00	15	32	375
37VC650	142120	72300	405	12	18	1235.1	1197.0	945	1200	20	19.1	4	16	9.00	15	36	375
42VC650	142121	85900	405	12	18	1362.1	1324.0	1072	1327	24	19.1	4	16	7.50	15	40	375

SI | N•m @ 5,2 bar | Dimensions in millimeters

7

Good design sells!

Today, technical products are marketed using the same sophisticated methods as many consumer goods. The challenge is to present the relevant and required information in an attractive and effective format that engages the reader.

Over decades, Terra Tu has come up with designs that accomplish this objective without obscuring critical content. We enjoy the challenge of making your products and services attractive to your prospective customers and clients.

The same design considerations that lead to ease of use and clear communications in print media are given to CD-ROM database applications and web sites. Our underlying principle is that customers and clients will choose the sources that save them time and effort.

Meeting the challenges

Eaton Corporation's **Airflex Division** chose Terra Tu to make the move to a digitally produced catalog in 1989. They needed clean digital illustrations based on CAD files, and at the same time, they wanted to include both U.S. and European values in their data tables. We were able to create an effective, clean layout design that is still in use today (above).

When creating Applied Industrial Technologies' **Fluid Power Connection** catalog, we were given the manufacturer's data sheets to create an order form (right). The data sheets were 3 pages, and used discreet criteria for selecting products. By assessing the data, we were able to reduce this to a single, easy-to-use form without losing the ability to order a single product.

Cylinder Configurator

Stainless Steel Cylinders — NFPA Tie Rod Style

Medium Duty NFPA Pneumatic Cylinders
In addition to our off-the-shelf units, these cylinders can be supplied in a wide variety of styles to meet your needs. Our configurator shows your options and how to specify a part number for your custom cylinder.

Parker Schrader Bellows
Stainless Steel Cylinders
- Withstands Caustic Washdown
- USDA & FDA Compliant Coating
- Ideal for Corrosive Environments
- 150 psi Air Service
- NPTF Ports
- Small Male Rod End, UNF Thread

Part Number: U14A

Select Bore Size		Select Head Cushion			Select Cap Cushion			Select Stroke Length	
Bore	Code	Non-Cushioned	Head Cushioned		Non-Cushioned	Head Cushioned		Length (in.)	Code
1 1/4	1.25	(Blank)	C		(Blank)	C		2	2.00
1 1/2	1.50							4	4.00
2	2.00							6	6.00
2 1/2	2.50							8	8.00
3 1/4	3.25							10	10.00
4	4.00							12	12.00

Select Mounting Style

NFPA	Description	Code
MS4 or MS6 (1.25" Bore)	Side Tapped	FSA
MP1 or MP7 (1.25" Bore)	Head Rectangular Flange	JSA
MF2	Cap Rectangular Flange	HSA
MP3 (1.5" Bore)	Cap Fixed Clevis	BESA
MP3 (1.125" Bore)	Cap Fixed Clevis	BBSA

NFPA Mounting Style Reference

Example:
To specify a cylinder with the following parameters:
- Bore of 1 1/2"
- Cushion on Head End
- Cap Rectangular Flange
- Non-cushioned Cap End
- Stroke of 2"

Ask for part number
1.50CHSAU14A2.00

How To Order:
To order your custom cylinder, follow these easy steps.
1. Configure your cylinder using the above procedures.
2. Call your local Fluid Power service center at 1-877-279-2799 to place your order.

44

Visit Us On-line: www.fluidpowerconnection.com   Fluid Power Connection.

Economy Through Synergy

When we design your documents, we plan ahead. If your publication will need frequent updating, we support standardized data formats such as SGML and XML, as well as a variety of database publishing solutions. If you will be making your publication available on CD or via the Internet, we fully support PDF and can implement HTML versions to minimize the effort required to
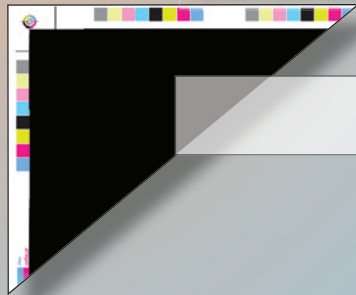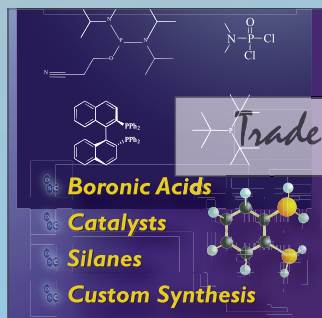
Print Media

* Web & Offset Press
* Quick Print
* Docutech® Output

* Color Copies
* Laser Prints
* PDF Documents

CD & DVD Publishing

* CD Catalog Design
* Database Applications
* PDF Catalogs

* Media CDs & DVDs
* Disc Duplication
* Disc Replication

Trade Show Displays

* Full Color Graphics
* Photo Enlargements
* Back-lit Images

* Table-top Displays
* Free-standing Units
* Shipping Containers

Web Site Publishing

* Graphics for Web
* Site Design, Creation & Maintenance
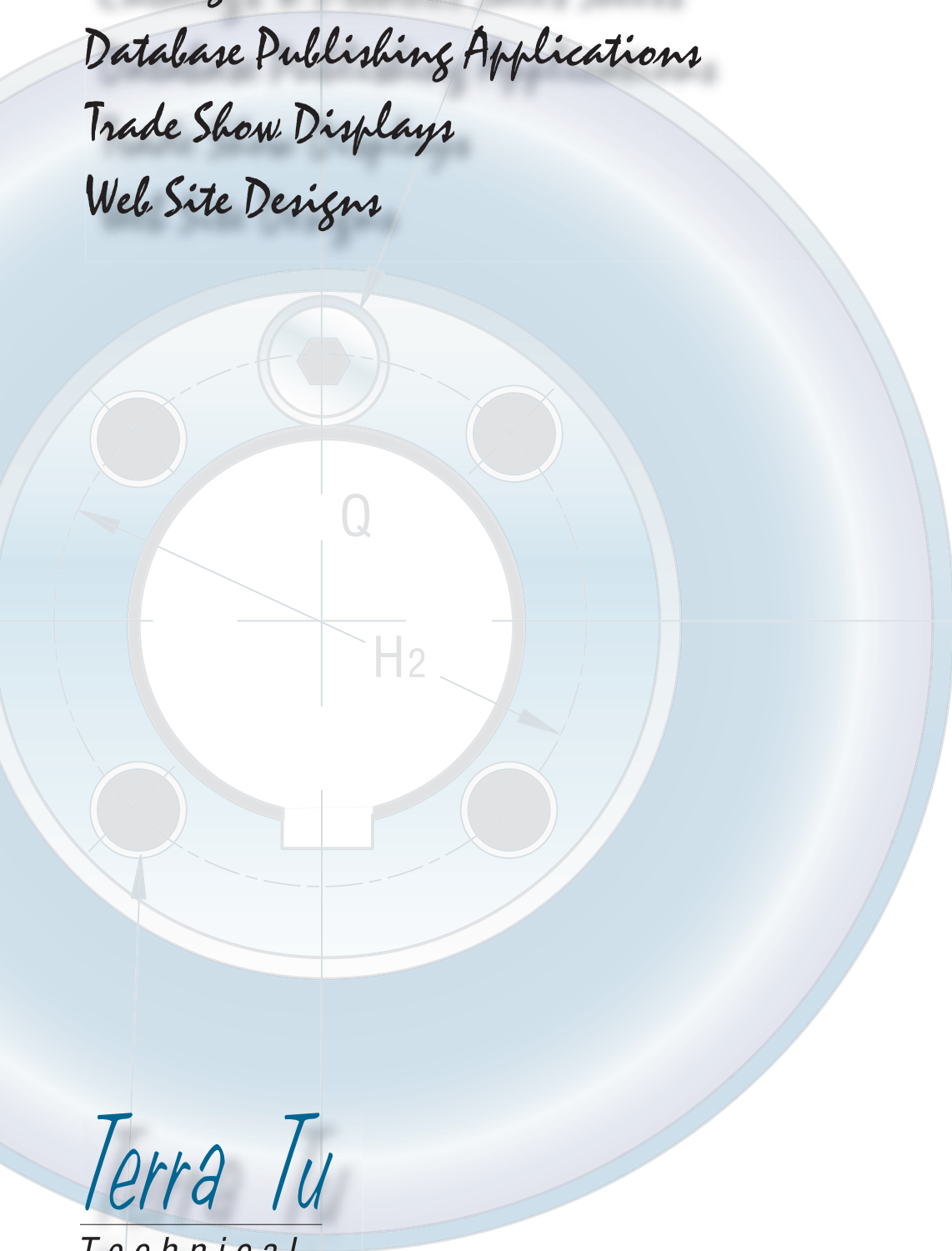* Live Database Implementations

Expertise in the creation of:

Technical Manuals

Catalogs & Product Sales Sheets

Database Publishing Applications

Trade Show Displays

Web Site Designs

O4

Q

H2

H6

V

Terra Tu

Technical

Graphics

& Media