

# PRODUCT DATA

## PULSE Data Manager — Type 7767A, B, C, D

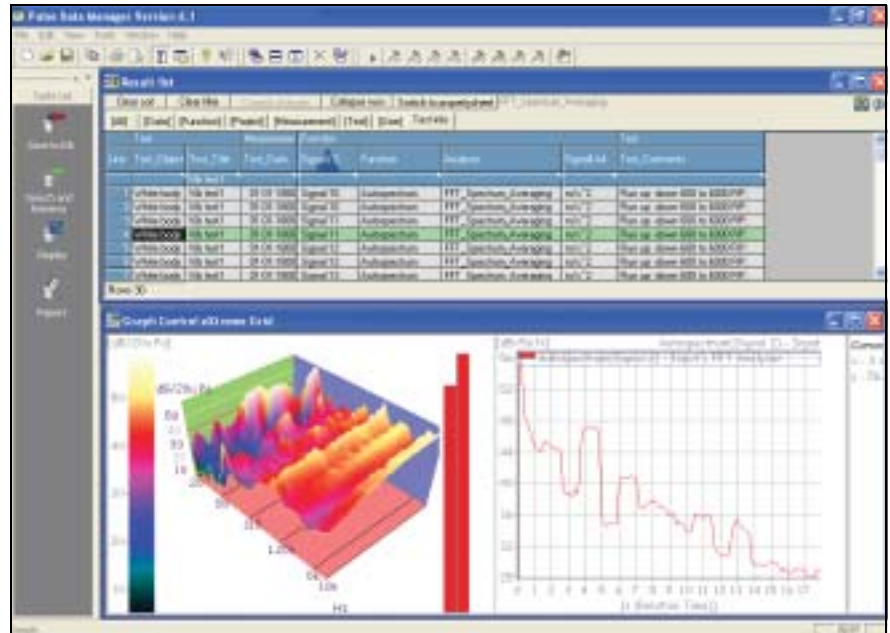
*PULSE Data Manager is a family of data management solutions that enables measurements from PULSE™ or any of its applications to be labelled with any kind of information (meta-data) and saved to a database. The measurement data can then be searched for and retrieved intuitively for display, comparison or reporting via a range of query options. Based around Microsoft® SQL databases, PULSE Data Manager streamlines data handling, test documentation and archiving for PULSE. The software can run independently or from within PULSE and integrates with PULSE WorkFlow Manager Type 7756.*

### USES

- Management of measurement data and analysis results across entire test organisation
- Saving labelled measurement data from PULSE and its applications into a database
- Searching for and retrieving stored measurement data from a database for display, evaluation, comparison and reporting

### FEATURES

- Type 7767A: Single-user license using a local, standard database with predefined structure
- Types 7767B, C, D: Multiple user licenses allow creation of a customised database for storage of PULSE measurement data
- Supports MSDE (Type 7767A) and Microsoft® SQL Server 2000 databases
- Save and label multichannel, multi-analysis results as a single-click operation
- Flexible data search and retrieval using intelligent queries and multiple search criteria with meta-data fields
- Drag and drop graphical displays of measurement and analysis results, and overlay curves for data comparison
- Advanced display functionality including 3D waterfall displays and meta-data-based legends
- Simple, intuitive reporting using Microsoft® Word templates
- Live reports in Microsoft® Word using drag and drop – change displays, colours, legends, axis scaling, cursors, etc., in the report
- Data stored in XML data format
- Storage of related files using a file farm
- Integrates with PULSE WorkFlow Manager for a complete testing solution
- Runs as a stand-alone application without PULSE or fully integrated in PULSE
- Runs under Windows® 2000 and XP
- Automation possible using Visual Basic® for Applications



7767 A-D

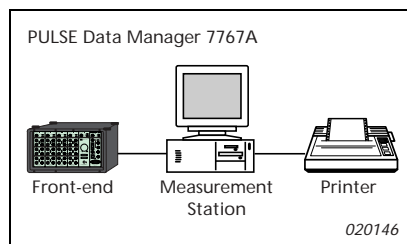
# Introduction

When you have used PULSE for measurement and analysis, you often have large quantities of high-quality data – and you will need to manage this data. This involves documenting the data so that there is a record of what was measured (Test Object), how it was measured (Test Setup) and any other pertinent information such as the person who performed the measurement. This information is known collectively as meta-data, data about data.

Having documented your data, placing it in a database provides the most efficient means of storing it. And with properly labelled data, retrieving it from the database or sharing it with other users (Fig. 2) on a network is then a simple matter. Using a database also has the advantage that you can combine old and new data sets into reports, comparing and illustrating exactly what you need and eliminating the need for large paper archives of reports.

PULSE Data Manager Type 7767 (PDM) provides all the tools necessary for efficiently managing your data – whether storing, finding, combining, post-processing or reporting. And to make things even easier, personalised settings can be stored for easier overview of the data.

**Fig. 1**  
Example of single-system, single-user setup

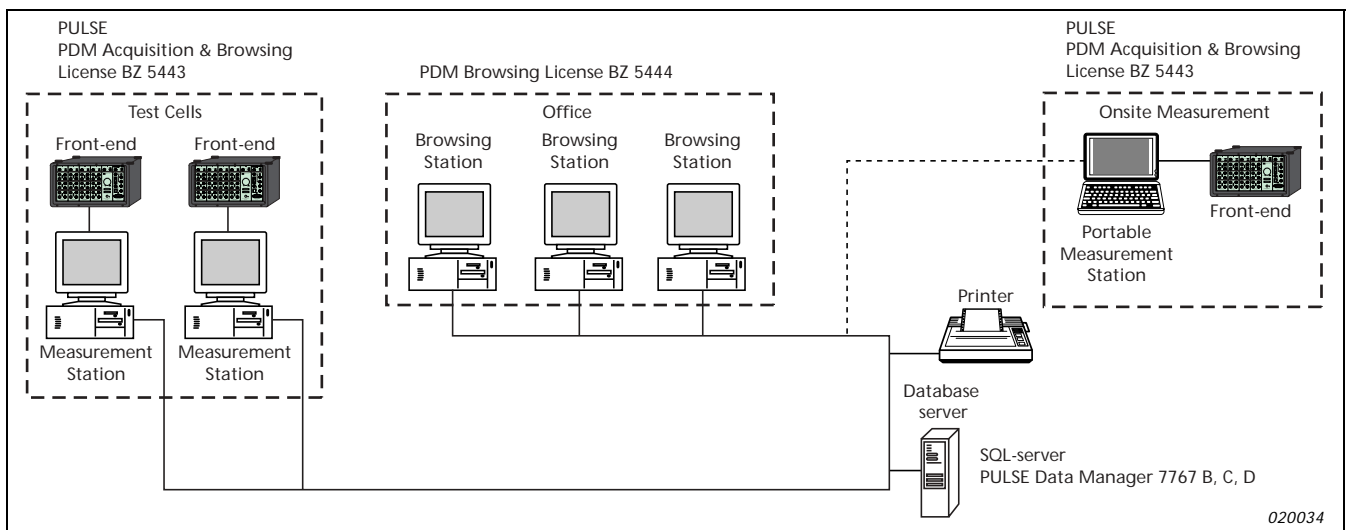


**Type 7767 A** is a single-system, single-user license for organisations with a single PULSE system. With a predefined database installed locally for immediate use, it includes tools for saving, labelling, searching, retrieving, displaying and reporting PULSE measurement data. Type 7767 A can, of course, be upgraded to a multiple user license.

**Types 7767 B, C and D** are licenses for up to 5, 10 and 25 users, respectively. These multiple user licenses include a configuration tool that allows you to design one or more databases to suit your company requirements, with meta-data of your own choice, on a Microsoft® SQL Server 2000. Tools are also provided for the creation of your own report templates.

As well as running as an independent application, outside PULSE, PDM can also be incorporated in PULSE projects and operated from the PULSE task bar.

**Fig. 2** Example of a system setup with 3 PULSE acquisition systems and 3 “office” systems for post-analysis and reporting

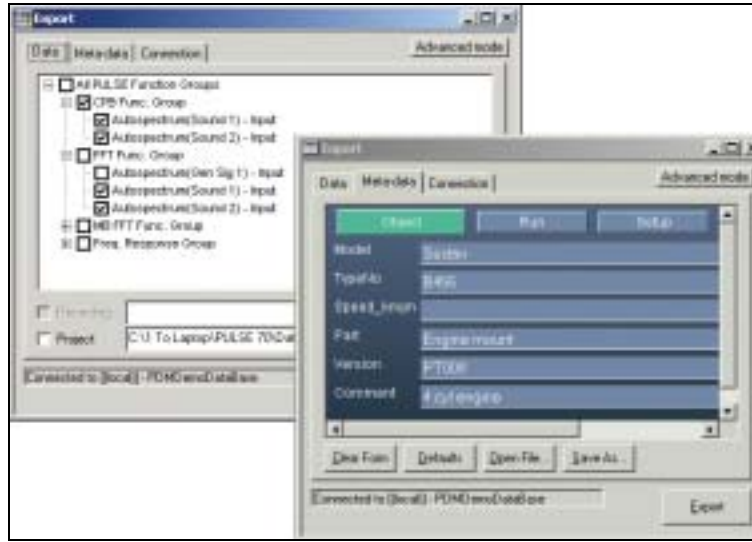


---

## Saving Data in the Database

---

**Fig. 3**  
*Labelling and saving data in the database*



After you have made a measurement and analysed the results with PULSE, the Save to DB task (see Fig. 3) allows you to save selected data in the database. You simply select the data to save by checking the type (time or spectral) and named functions.

The next step is to label the data (with meta-data). The measurements can be annotated and labelled with any information on operator, location, test type, model, etc.

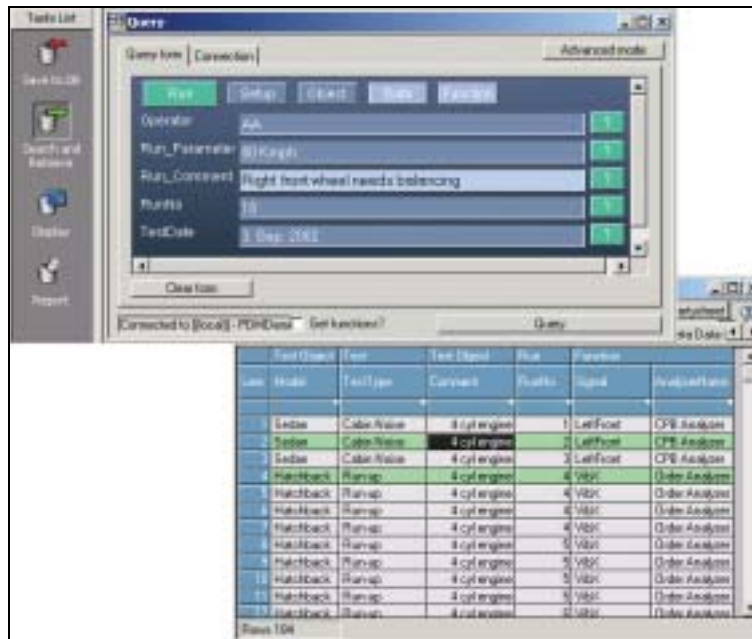
Saving the data is a single-click operation, even with large amounts of data with many analyzers and many channels.

---

## Searching the Database and Retrieving Data

---

**Fig. 4**  
*Clicking on the question mark buttons calls up lists of meta-data values that you can use to define your database search*



PDM includes a Search and Retrieve task that allows you to find and retrieve data. With correctly labelled data, you can, for example, search for and retrieve all measurements made over time at a specific measurement point on all vehicles of a specified type.

Searches use the same meta-data as the Save to DB task, and can be saved in a query list for future use. You can also define or edit queries in SQL.

The data returned by a query is shown in a tabular Result List, with meta-data fields (see Fig. 4). Once retrieved, you can sort data according to any combination of the meta-data fields. You can also filter the results of a query according to the content of the

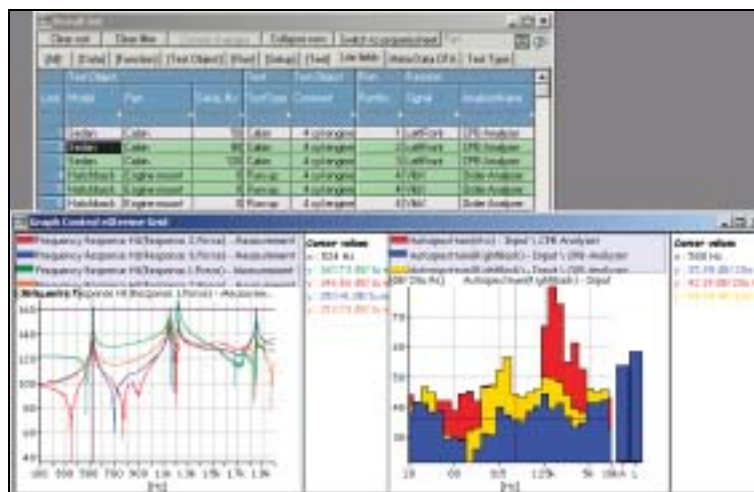
fields, either by selecting from a drop-down list or by entry of a combination of text strings, numbers and operators such as <, >, AND or OR.

---

## Displaying Data

---

**Fig. 5**  
Display data by dragging and dropping from the Result List



Display results by dragging and dropping any retrieved data from the Result List into a display (or report, see below). The display can be divided into up to 25 graph areas, each of which can hold one or more sets of data, allowing easy comparison of data. Each graph area can be set up independently, for example, to display curves, 3D plots, etc.

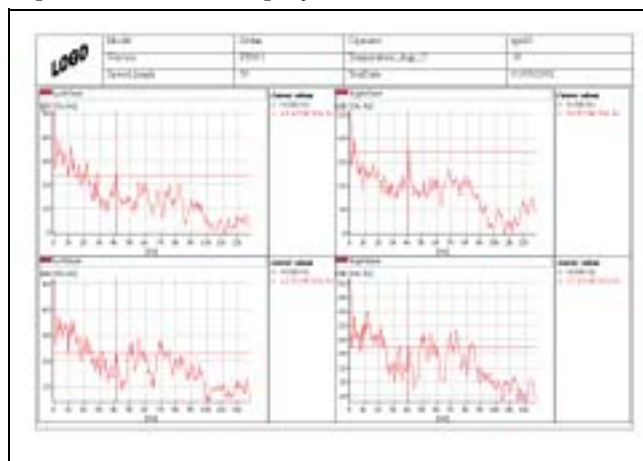
---

## Reporting

---

**Fig. 6**  
Word document with live displays and cursors

### Reports with Live Displays



The ability to use PULSE Data Manager to create live reports in Microsoft® Word, allows you to work with acquired data in a dynamic way. PDM allows you to drag and drop data into live displays in Word, with active cursors and cursor values as well as full access to the graph properties and options. These allow you, for example, to change axis-scaling, colours or annotation. You can also add more curves to a report at a later date, so you don't have to recreate the entire report – simply open an existing report and add more data to it.

**Fig. 7**  
*Generating a report with Types 7767B, C, D*



With Types 7767B, C and D, you can also define report templates using a special toolbar that allows you to select the meta-data to be shown and the displays to be used. You can then select the desired results and click on Generate report to automatically add them to a selected Microsoft® Word template complete with meta-data, ready for printing. A number of predefined Word report templates are provided.

---

## Specifications – PULSE Data Manager Type 7767A

Includes everything required for a single-user system

### OPERATING SYSTEM

Microsoft® Windows® 2000 and XP\*

### SOFTWARE FORMAT

Microsoft® ActiveX™ Components embeddable directly in a PULSE project, an Internet browser or their own dedicated component container

### TOOLS INCLUDED

- Save to database
- Search and retrieve data
- Data display
- Drag and drop reporting
- Database maintenance and field editor

### DATA STORAGE

XML data format

**Any other file types:** Binary format

### DATABASE

**Database Type:** Microsoft® MSDE

**Optional Database Type:** SQL Server 2000 Standard Edition

**Data Capacity:** 2 GB

**Number of Users:** 1

**Search Options:**

Searches on all meta-data fields  
 Via user-defined SQL queries

### REPORTING

Via Microsoft® Word

---

## Specifications – PULSE Data Manager Type 7767B, C, D

Types 7767B, C, and D are licenses for up to 5, 10 and 25 users, respectively

### OPERATING SYSTEM

Microsoft® Windows® 2000 and XP\*

### SOFTWARE FORMAT

Microsoft® ActiveX® Components embeddable directly in a PULSE project, an Internet browser or their own dedicated component container

### TOOLS INCLUDED

- Database creation and configuration
- Save to database
- Search and retrieve data
- Data display
- Report design
- Report generation
- Database maintenance and field editor

### DATA STORAGE

XML data format

**Any other file types:** Binary format

### DATABASE

**Database Types:** Microsoft® SQL Server 2000 Standard Edition, multi-table relational

**Data Capacity:** Hardware dependent

**Number of Users:** Dependent on Type 7767 license or SQL data server, whichever is smaller

**Search Options:**

Searches on all meta-data fields  
 Via user-defined SQL queries

### REPORTING

Via Microsoft® Word

Template generator included in browsing license

---

\* Windows NT® not supported

# Ordering Information

Overview of PULSE Data Manager products

	PULSE Data Manager – Single System – Single User	PULSE Data Manager – B: 5 User – C: 10 User – D: 25 User	MORE TEST SYSTEMS PDM Acquisition and Browsing License – Single User	MORE OFFICE USERS PDM Browsing License – Single User
<b>TOOLS PROVIDED</b>	Type 7767 A	Type 7767 B, C, D	+ BZ 5443	+ BZ 5444
Save PULSE Data to Database	✓	✓	✓	–
Search and Retrieve	✓	✓	✓	✓
Drag and Drop Reporting	✓ Predefined Word Templates	✓	✓	✓
Automatic Report Generation	–	✓	✓	✓
Database Maintenance	✓	✓	✓	✓
<b>DESIGN TOOLS</b>				
Report Design	–	✓	✓	✓
Database Creation and Configuration	–	✓	–	–
<b>DATABASE</b>				
MSDE SQL database	Included	Sample database included	–	–
MS SQL Server 2000 Standard Edition	Optional	Required	–	–

## Single-user System

Type 7767 A PULSE Data Manager, Single-user license, includes all necessary tools

### OPTIONS

BZ 5445

Upgrade to MS SQL Server 2000 Standard Edition

7767 B SI3

Software installation and configuration (required for upgrade)

## Multi-user System

Type 7767 B PULSE Data Manager, 5-user license  
 Type 7767 C PULSE Data Manager, 10-user license  
 Type 7767 D PULSE Data Manager, 25-user license  
**requiring**  
 7767 B SI3 Software Installation and Configuration, 6 hours  
 7767 C SI3 Software Installation and Configuration, 10 hours  
 7767 D SI3 Software Installation and Configuration, 18 hours

### OPTIONS

BZ 5443 PDM Acquisition and Browsing license  
 BZ 5444 PDM Browsing license

### ACCESSORIES

BZ 5445 5-user MS SQL Server 2000 Standard Edition  
 BZ 5446 10-user MS SQL Server 2000 Standard Edition  
 BZ 5447 25-user MS SQL Server 2000 Standard Edition

7767-MS1 Software Maintenance and Upgrade Agreement

### LICENSE CONTENT

Type 7767 B, C, D PULSE Data Manager contains:

1 × BZ 5443  
 Database creation tool

Each additional user requires 1 × BZ 5443 or 1 × BZ 5444

**BZ 5443 Acquisition and Browsing license contains:**

BZ 5444  
 Save to database tool

**BZ 5444 PDM Browsing license contains:**

Data search and retrieval tools  
 Data displays  
 Report creation tools  
 License control

### SAMPLE INSTALLATIONS

**3 Users including 2 PULSE systems and one office browsing station – licenses required:**

1 × Type 7767 B PULSE Data Manager  
 1 × BZ 5445 5-user MS SQL Server 2000 Standard Edition  
 1 × 7767 B SI3 Software installation and configuration  
 1 × BZ 5443 Acquisition and browsing license  
 1 × BZ 5444 Browsing license

**18 Users including 5 PULSE systems and 13 office browsing stations – licenses required:**

1 × Type 7767 D PULSE Data Manager  
 1 × BZ 5447 25-user MS SQL Server 2000 Standard Edition  
 1 × 7767 D SI3 Software installation and configuration  
 4 × BZ 5443 Acquisition and browsing license  
 13 × BZ 5444 Browsing licenses

### TRADEMARKS

Microsoft, Windows, Windows NT, Visual Basic and ActiveX are registered trademarks of Microsoft Corporation in the United States and/or other countries

Brüel & Kjær reserves the right to change specifications and accessories without notice.