# **1 Database Interface Access**

## 1.1 Overview

This application serves to extract production data directly from the PostgreSQL database independent of the MillMaster TOP Client. Data can be retrieved using Excel or PostgreSQL and then evaluated in an ERP system.



### 1.1.1 Views

### remote\_central\_units

This view allows access to data from the LZE central units. Each LZE has an ID. For each central unit, users can also see whether the unit is activated, what kind of central unit it is (LZE-V, LZE-III, Informator, etc.), its IP address, whether it is a network link machine, the machine type, how many spindles it has, and the exact time when data was last received.

Central_unit_id	Database identifier for the central unit. This value can be used to display o certain specific rows from remote_groups.					
Number	The number of the central unit					
Enabled	Indicates central units that have been activated or deactivated by the user.					
Central_unit_generation	The central unit's generation, e.g. Informator, LZE-II/III, LZE-V					
lp_address	The central unit's IP address					
ls_link	Indicates whether this central unit is a network link machine.					
Machine_type	Machine type, e.g. Murata 21 C					
Spindle_count	Number of spindles available on this machine.					
Last_data_received	Time when data was last received by this machine.					
Slip_factor	The slip factor is specified in the machine settings.					

#### remote\_groups

This view allows access to data for the active groups. The groups are uniquely assigned through the ID. The data include the article name and the name of the group that is processing the article, as well as the type of sensing head ("TK type") and the yarn count. The remote\_groups display information about the group's P and F operating modes. The p\_mode field is a Boolean flag that indicates whether P mode is activated. The f\_mode field shows the status of F mode, which can have various values when activated. The lot name can also be displayed, as well as the ID of the LZE and machine to which the group belongs. Other information available here includes the group's start and end dates, the group number, the group's current status, the sensing head type, and the first and last spindle that are part of a group.

Group_id	Database identifier for the group. This value can be used to query "monitor- ing", "classification" and "clearer setting data".				
Article_name	Name of the article for this group.				
Tk_generation	Sensing head type, e.g. Spectra, Zenit, Zenit+				
Yarn_count	Yarn count for this group				
P_mode	Indicates whether P is activated.				
F_mode	F mode, e.g. dark, bright - on/off				
Lot_name	Name of the lot				
Central_unit_id	Database identifier for the central unit. See remote_central_units.				
Machine_number	Machine number of the central unit				
Group_start	Group start date				
Group_end	Group end date or the date 12/31/9999 if the group is still in production.				
Tk_type	Sensing head type, e.g. Spectra 830				
State	Group status, e.g. in production, started, stopped, paused				
Group_number	Group number				
First_spindle	First spindle in the group				
Last_spindle	Last spindle in the group				
Production_time	Total time the group has spent in production and winding since its start date.				
Time_out_of_production	Total time the group has spent out of production since its start date.				
Time_paused	Total time the group has spent in production, but not winding, since its start date.				

### remote\_shifts

This view shows all shifts that are still stored in the database as shifts. These include active shifts as well as completed shifts that are not yet old enough to be marked as deleted and grouped into weeks. For each shift, the ID and the start and end time are displayed.

Shift_id	Database identifier for the shift. This value can be used to query "monitoring", "classification" and "clearer setting data".
Start	Shift start time
End	Shift end time

### remote\_articles

This view shows all available information about the articles that have been opened in MillMaster TOP.

Article_id	Database identifier for the article.
Name	Name of the article as displayed in MillMaster TOP.
Yarn_count	Yarn count of the article
carded	
combed	
Material	
blend	
Fiber_type	
Staple_length	
Twist	
Twist_direction	
enabled	Indicates whether an article is visible or not visible in MillMaster TOP.
created	Time stamp indicating when the user opened the article in MillMaster TOP.
Bobbin_length	
Cone_length	
Cone_type	
waxed	
yarn_count_display_unit	
Warp	
Knitting	

## 1.1.2 Functions

### remote\_classification\_data(shiftid, groupid)

This function requires a shift ID and a group ID. The data include the cut and uncut events per 100 km, as well as the fine class in which the event occurred. The resource key can be used to adapt an event to a D-, DSplice- or F-matrix, e.g. for a column that displays the resource key "ClassificationD", the other columns will then show a fine class from the D-matrix. The data are displayed in the matrix in the Data/Quality main menu.

#### shiftid

Database identifier for the shift. The value is displayed when a shift is selected in the remote\_shifts view.

#### groupid



Data of groups is only displayed when the selected views were in production.

Database identifier for the group. The value is displayed when a group is selected in the remote\_groups view.

Definition_id	Database identifier for the definition
Resource_key	Resource key for the matrix definition
Fine_class	Fine class of the matrix in which the event occurred, e.g. N0.1
Cut_relative100_km	Number of cuts in this fine class per 100 km
Uncut_relative100_km	Number of uncuts in this fine class per 100 km

### remote\_clearer\_settings(shiftid, groupid)

This function requires a shift ID and a group ID. The data show the clearer settings that can be edited. The resource key is used to show the data for each row that are currently stored for clearer setting/ classification. This makes it possible to read off the status of all clearer settings for all classification types, including the values, whether they are switched on or off, and the unit of measurement. In addition, each fine class for each classification is shown in its own data row with a corresponding resource key so that the user can see which classification contains which fine classes.

#### shiftid

Database identifier for the shift. The value is displayed when a shift is selected in the remote\_shifts view.

### groupid



Data of groups is only displayed when the selected views were in production.

Database identifier for the group. The value is displayed when a group is selected in the remote\_groups view.

Resource_key	Resource key for the definition; can be a DoubleSettingDefinition, StringSet- tingDefinition or ClassificationDefinition				
Fine_class Fine class of the matrix (only for classification resources; otherwise NUI					
Value	Setting value Clearing mode values for classification resources: None = no clearing Full = full clearing Upper = clearing of upper half Lower = clearing of lower half Cluster = cluster clearing				
ls_on	Displays the setting value. $(1 = on   0 = off)$				
Measure_unit	Associated unit of measurement				
modified	Time stamp indicating the last time the value was changed				

### remote\_monitoring\_data(shiftid, groupid)

This function requires a shift ID and a group ID. Each monitoring value has its own data row. The IPI values are included if IPI values are available and active. The data are displayed in the Data/Monitoring or Quality main menu.

#### shiftid

Database identifier for the shift. The value is displayed when a shift is selected in the remote\_shifts view.

### groupid



Data of groups is only displayed when the selected views were in production.

Database identifier for the group. The value is displayed when a group is selected in the remote\_groups view.

Definition_id	Database identifier for the definition			
Resource_key	Resource key for the definition			
Relative_100km	Monitoring value per 100 km			

### remote\_spindle\_monitoring\_data(shiftid, groupid)

This function requires a shift ID and a group ID. Each monitoring value has its own data row. The IPI values are included if IPI values are available and active. The data are displayed in the Analysis/Trend main menu.

Because spindle data are only stored for a certain period of time, older data may not be available.

#### shiftid

Database identifier for the shift. The value is displayed when a shift is selected in the remote\_shifts view.

#### groupid



Data of groups is only displayed when the selected views were in production.

Database identifier for the group. The value is displayed when a group is selected in the remote\_groups view.

Spindle_number	Spindle number		
Definition_id	Database identifier for the definition		
Resource_key	Resource key for the definition		
Relative_100km	Monitoring value per 100 km		

### remote\_get\_group\_custom\_parameter(groupid, fieldname)



An entry is required for the field value; otherwise no data can be displayed.

This function requires an active group ID and the field name. The field value is shown for the specified field name. The data are also displayed in the "Lot/Edit lot" or "Add lot" main menu

### groupid

	<ul> <li>The group must have user-defined values, otherwise no data can be displayed.</li> <li>Observe the following conditions for the entry:</li> <li>No empty string</li> <li>No line break</li> <li>No spaces</li> </ul>
--	--

Database identifier for the active group. The value is displayed when an active group is selected in the remote\_groups view.

### fieldname



An entry is required for the fieldname (name), otherwise no data can be displayed.

Name of the user-defined field. The data are also displayed in the "Settings/Custom field settings" menu.

fieldvalue

Value of the user-defined field

remote\_get\_group\_custom\_parameters(groupid)



An entry is required for the field value; otherwise no data can be displayed.

This function requires an active group ID. The field name is displayed. Each field name has its own value. The data are displayed in the main menu under "Settings/Custom field settings" and "Lot/Edit lot" or "Add lot".

### groupid

Database identifier for the active group. The value is displayed when an active group is selected in the remote\_groups view.

fieldname	Name of the user-defined field
fieldvalue	Value of the user-defined field

# 1.2 System Requirements

- 64 bit operating system with Windows 10 installed.
- MillMaster TOP Version 4.4 or higher installed.
- Option Database Interface is activated in menu System/Settings.
- IP address of Database Server known.
- Unrestricted access to port 5432 is set in the network when the connection from a workstation to the Database Server is to be used. Firewall settings are to be adjusted at the same time.

The user defines whether the Excel data on the Database Server are to be processed directly with the PostgeSQL database or separately on a workstation. In this case, install Excel previously in the respective environment. A connection to the Database Server must be installed in order to use a workstation.

# 1.3 Installing the PostgreSQL ODBC 32/64 Bit Driver

The driver can be downloaded from the PostgreSQL website.

- ✓ The PC is connected to the Internet.
- 1. Open a web browser, e.g. Internet Explorer.
- 2. Enter https://www.postgresql.org/ftp/odbc/versions/msi/ in the address bar.
- 3. Search for the ZIP file, e.g. psqlodbc.
- 4. Download the most recent version, e.g. psqlodbc\_11\_XX\_XXX.zip.
- 5. Extract the ZIP file.
- 6. Read the license terms and conditions in the Readme file.
- 7. Install the file.

# 1.4 Creating Data Source LoepfeBde for the Connection

- 1. Start Excel.
- 2. Open an empty worksheet.
- 3. Select tab «Data».
- 4. Select menu From Other Sources/From Microsoft Query.

File	Ho	ome	Insert	Page Layout	Formulas	Data	Review	View	ACROBAT		
From Access	From Web	From Text	From Oth Sources	er Existing Connections	New Query + Co	Show Que From Tabl Recent So	eries le Refr urces Al	esh	onnections operties lit Links		
1	A	Get Ext		From SQL Server Create a connection Table or PivotTabl From Analysis Ser	on to a SQL Ser le report. r <b>vices</b>	rver table.	Import data	into Excel a	as a		
3			L	Create a connection to a SQL Server Analysis Services cube. Import data into Excel as a Table or PivotTable report.							
4 5				From OData Data Feed Create a connection to an OData Data Feed. Import data into Excel as a Table or PivotTable report.							
7			L.	From XML Data Import Open or map a XML file into Excel.							
8 9				From Data Conne	ction Wizard						
10 11			Import data for an unlisted format by using the Data Connection Wizard and OLEDB.								
12 13				From Microsoft Query Import data for an unlisted format by using the Microsoft Query Wizard							
14				and ODBC. Function	onality is limite	eu for con	inpationity in	previous v	ersions.		

⇒ Window «Choose Data Source» opens.

- 5. Select tab «Databases».
- 6. Select «New Data Source».
- 7. Confirm with «OK».
  - ⇒ Window «Create New Data Source» opens.
- 8. In field 1, enter LoepfeBde.
- 9. In field 2, select, e.g., driver PostgreSQL Unicode(x64).
  - $\Rightarrow$  Check the driver installation when the driver cannot be selected.
- 10. In field 3, click «Connect...».

Create New Data Source	×
What name do you want to give your data source?	
1. LoepfeBde	
Select a driver for the type of database you want to access:	_
<ol> <li>PostgreSQL ANSI(x64)</li> <li>Click Connect and onter any information requested by the driver:</li> </ol>	<b>_</b>
3. <u>Connect</u>	
Select a default table for your data source (optional):	
4.	-
Save my user ID and password in the data source definition	
OK Cancel	
<ul> <li>⇒ Window «PostgreSQL Connection» opens.</li> <li>11. Database (Name): Enter LoepfeBde.</li> <li>12. Server: Enter the IP address of the local Database Server.</li> <li>13. Enter user name: remoteuser.</li> <li>14. Select SSL mode: disable.</li> <li>15. Port: Enter 5432.</li> <li>16. Password: Enter Remoteuser1.</li> </ul>	
PostgreSQL Connection ×	
Please supply any missing information required to connect.	
Database     LoepfeBde     SSL Mode     disable       Server     10.55.31.111     Port     5432       User Name     remoteuser     Password     ************************************	
Options       Connection       Manage DSN       OK	

17. Confirm with «OK».

 $\Rightarrow$  The window closes.

18. In field 4, select Standard Table optional.

19. Click the check box to save the user ID and password.

Create New Data Source X
What name do you want to give your data source?
1. LoepfeBde
Select a driver for the type of database you want to access:
2. PostgreSQL Unicode(x64)
Click Connect and enter any information requested by the driver:
3. <u>C</u> onnect
Select a default table for your data source (optional):
4.
Save my user ID and password in the data source definition
OK Cancel

20. Confirm with «OK».

⇒ Data source **LoepfeBde** is created in Excel.

Choose Data Source	×
Databases Qurvies OLAP Cubes	ОК
<new data="" source=""> Excel Files*</new>	Cancel
LoepfeBde MS Access Database* Visio Database Samples*	<u>B</u> rowse Options
	<u>D</u> elete
Se the Query Wizard to create/edit queries	

# 1.5 Importing Data Sources

The following data sources are available and are imported from the Tables.

- remote\_central\_units: Directory of all machines connected with MillMaster TOP
- remote\_groups: Directory of all spindle groups
- remote\_shifts: Directory of all shift periods since the first start of MillMaster TOP
- 1. Start Excel.
- 2. Open an empty worksheet.
- 3. Select tab «Data».
- 4. Select menu From Other Sources/From Microsoft Query.
  - ⇒ Window «Create New Data Source» opens.
- 5. Select tab «Databases».
- 6. Select data source LoepfeBde.
- 7. Click the check box to use the Query Wizard.

Choose Data Source	×
Databases Qurvies OLAP Cubes	ОК
<new data="" source=""> Excel Files* Loepfe8de</new>	Cancel
MS Access Database* Visio Database Samples*	<u>B</u> rowse Options
	<u>D</u> elete
☑ Use the Query Wizard to create/edit queries	

- 8. Confirm with «OK».
  - ⇒ Window «Query Wizard» opens.
- 9. Select Table remote\_central\_units.
- 10. Click > to determine Table columns.

Query Wizard - Choose Columns	×
What columns of data do you want to includ <u>A</u> vailable tables and columns:	le in your query?
Preview Now Options  11. Click «Next».	< <u>B</u> ack <u>N</u> ext > <b>Cancel</b>

- ⇒ Window «Query Wizard» opens.
- 12. Filter data when desired.
- 13. Click «Next».
- 14. Sort data when desired.
- 15. Click «Next».
- 16. If desired, click «Save Query...».
- 17. Click «Finish».

Query Wizard - Finish		×
<ul> <li>What would you like to do next?</li> <li></li></ul>		<u>S</u> ave Query
	G	
	< <u>B</u> ack Finish	Cancel

⇒ Window «Import Data» opens.

18. Select «Table».

19. Select «Existing worksheet:».

Import Data	?	×
Select how you want to view this data in	n your v	vorkbook.
= \$A\$1	1	
○ <u>N</u> ew worksheet		
Add this data to the Data Model		
Properties OK	(	Cancel

### 20. Confirm with «OK».

 $\Rightarrow$  Table remote\_central\_units is displayed.

central_unit_i	d 💌 numbei	r 💌 enabled 💌	central_unit_generation	ip_address 💌	is_link	🛛 machine_type 👘 💌	spindle_count 💌 la	ast_data_received 💌
	7	71	LZEIII	10.55.31.108	0	Murata 21C	4	18.07.2017 10:30
	1	11	LZEV	10.55.31.101	0	Schlafhorst ACX5/AC6	10	18.07.2017 10:30
	6	61	LZEV	10.55.31.107	0	Murata 21C	5	18.07.2017 10:30
	4	4 1	LZEV	10.55.31.104	0	Schlafhorst AC338	10	18.07.2017 10:30
	5	51	LZEV	10.55.31.105	0	Savio Orion/Polar	8	13.07.2017 15:30
	9	91	LZEV	10.55.31.110	0	Savio PulsarS	1	08.06.2017 14:20
	10	10 1	LZEV	10.55.31.113	0	Buero CSS	128	23.06.2017 14:55
	8	81	LZEIII	10.55.31.109	0	Savio Espero	8	18.07.2017 10:30
	2	21	Informator	10.55.31.102	0	Schlafhorst ACX5/AC6	10	18.07.2017 10:30
	3	31	LZEIII	10.55.31.103	0	Schlafhorst AC238	10	18.07.2017 10:30

Section: remote\_central\_units

Then import Tables remote\_groups and remote\_shifts with steps 2-20.

group_id 💌 a	article_name 🗾 💌	tk_generation	yarn_count 💌	p_mode 💌	f_mode 💌	lot_name 🗾
58 4	1-4	Zenit	50.8	0	Dark	andi
62 ti	ianxian J40K	Zenit	50.8	0	Dark	andi
16 A	ARTICLE1	ZenitPlus	50.8	0	Both	DefaultLot
24 A	ARTICLE1	ZenitPlus	50.8	1	Dark	DefaultLot
13 A	ARTICLE1	ZenitPlus	50.8	1	Dark	DefaultLot
14 C	CO NE30 TOP16	ZenitPlus	50.8	0	Off	DefaultLot
9 D	DefaultArticle	Zenit	1	0	Dark	DefaultLot
10 K	ABEL J.K	Zenit	1	0	Both	PAKISTAN
23 N	VIKE TEST 2017	ZenitPlus	101.6	0	Off	MIKE TEST 2017

Section: remote\_groups

shift_id 💌	start 💌	end 💌		
3	29.05.2017 14:00	29.05.2017 22:00		
5	02.06.2017 06:00	02.06.2017 14:00		
7	08.06.2017 14:00	08.06.2017 22:00		
8	09.06.2017 06:00	09.06.2017 14:00		
114	12.07.2017 06:00	12.07.2017 14:00		
12	12.06.2017 06:00	12.06.2017 14:00		
14	13.06.2017 06:00	13.06.2017 14:00		
16	13.06.2017 14:00	13.06.2017 22:00		
210	14.08.2017 06:00	14.08.2017 14:00		
214	16.08.2017 06:00	16.08.2017 14:00		
19	14.06.2017 06:00	14.06.2017 14:00		
118	13.07.2017 06:00	13.07.2017 14:00		

Section: remote\_shifts

# 1.6 Importing Data

The following data can be imported:

- Classification: remote\_classification\_data (shift\_id, group\_id)
- Settings: remote\_clearer\_settings (shift\_id, group\_id)
- Monitoring: remote\_monitoring\_data (shift\_id, group\_id)
- Monitoring: remote\_spindle\_monitoring\_data (shift\_id, group\_id)
- Custom parameters: remote\_get\_group\_custom\_parameter(groupid, fieldname) or remote\_get\_group\_custom\_parameters(groupid)



Take the parameters for shift\_id and group\_id from the respective columns of Tables remote\_shifts and remote\_groups.

Example for monitoring data:

- 1. Start Excel.
- 2. Open an empty workbook.
- 3. Select the «Data» tab.
- 4. Select the From Other Sources / From Microsoft Query menu item.
  - ⇒ The «Choose Data Source» window opens.
- 5. Select the LoepfeBde data source.
- 6. Tick the checkbox to use the query wizard.
- 7. Confirm with «OK».
  - ⇒ The «Query Wizard» window opens.
- 8. Select a table, e.g. remote\_groups.
- 9. Press the > button.
  - ⇒ The selected columns are displayed in «Columns in your query».
- 10. Press «Next».
- 11. Press «Save query...» if desired.
- 12. Press «Finish».
  - ⇒ The «Import Data» window opens.

Import Data	?	×
Select how you want to view this data in y           Image: Select how you want to view this data in y           Image: Select how you want to perform to perform the text of tex of text of text of text of tex of tex of text of tex of text	our w	orkbook.
= \$A\$1	<b>6</b>	
<u>N</u> ew worksheet		
Add this data to the Data Model		
Properties OK	C	ancel

- 13. Press «Properties...»
  - ⇒ The «Connection Properties» window opens.
- 14. Select the «Definition» tab.
- 15. Enter text in the "Command text" field, e.g. SELECT \* FROM remote\_monitoring\_data(3,2) (Example for custom parameters: SELECT \* FROM remote\_get\_group\_custom\_parameter(groupid, "fieldname"))

Connection Properti	es	?	$\times$
Connection <u>n</u> ame: O Descr <u>i</u> ption:	Query from LoepfeBde		
Usa <u>q</u> e <u>D</u> efinitio	n		
Connection type:	Database Query		
Connection <u>f</u> ile:		<u>B</u> rowse.	
Connection <u>s</u> tring:	Always use connection file DRIVER={PostgreSQL Unicode(x64)};DATABASE=LoepfeBde;SERVER=10.55.3; 5432;UID=remoteuser;;SSLmode=disable;ReadOnly=0;Protocol=7.4;FakeOid 0;ShowOidColumn=0;RowVersioning=0;ShowSystemTables=0;=Fetch= 100;UnknownSizes=0;MaxVarcharSize=255;MaxLongVarcharSize=8190;Debt 0;CommLog=0;UseDeclareFetch=0;TextAsLongVarchar=1;UnknownsAsLong	1.43;PORT= dindex= ug= Varchar=	<b>^</b>
	Save password		_
Command type:	SQL		$\sim$
Co <u>m</u> mand text:	SELECT * FROM remote_monitoring_data(3,2);		
Excel Services:	Authentication Settings		
Edit Query	Parameters Export Connection File		
	ОК	Cano	el

16. Confirm with «OK».

⇒ The «Import Data» window opens.

Import Data	?	×		
Select how you want to view this data in	your w	orkbook.		
=SAS1	•			
○ <u>N</u> ew worksheet				
Add this data to the Data Model				
Properties OK	C	ancel		

- 17. Confirm with «OK».
- 18. Enter the password.
- 19. Confirm with «OK».
- ⇒ The remote\_monitoring\_data (3, 2) table is displayed. The table contains all monitoring entries for machine 3, group 1, from the shift of May 29, 2017, from 2:00 to 10:00 p.m.

definition_id 💌	resource_key	🛛 relative100_km 💌
12001	MonitoringCutSummaryTotalCuts	268
12002	MonitoringCutSummaryDCuts	13
12003	MonitoringCutSummaryFCuts	251
12004	MonitoringCutSummaryPCuts	4
12005	MonitoringNsltNepCuts	0
12006	MonitoringNsltShortCuts	4
12007	MonitoringNsltLongCuts	9
12008	MonitoringNsltThinCuts	0
12009	MonitoringDSpliceSplices	392
12010	MonitoringDSpliceSpliceCuts	0

Excerpt: remote\_monitoring\_data

Notes on the monitoring data example:

- The data reflects the information from MillMaster TOP.
- With the Monitoring view for the selected shift.
- The data in the resource\_key column correspond to the Monitoring view.

Loepfe		PerfaultArticle-DefaultLot- Zenit Count: 142 Spindks: 1-3 25:05.2017	Ma. 3- 61 E Ne (Cotton) F. Derk/Bright I 1402	Shift 29.05.2017 14:00 29.05.2017 72:00	VNC		flaterance / 100 km (scaled)
Data	> Data > Monitoring						6
Dashboard	Cuts	Foreign Matter	A	larms			
Monitoring	Total Cuts 2	227 F Cuts Dark	150 N	SLT Startup	0		
Quality	D Cuts	108 F Cuts Bright	1'936 0	ff Count	0		
	P Cuts 2	33	0 57	hort Cluster	0		
Settings LZE/INF	L'antes		te	ong Cluster	0		
Group Settings	NSIT		n	hin Cluster	0		
Analysis	Nen Cuts		S2	ev	0		
Deporte	Short Cuts	33	F	Cluster	0		
The process	Long Cuts	75	F	Startup	66		
Lab Trends	Thin Cuts	0	P	Startup	0		
Management		_	-7	areas .			
Articles	Off Count						
CONTRACTOR CONTRACTOR	Off Count Cuts +	0					
Liearer settings	Short Off Count Cuts -	0					
Lot	Short Off Count Cuts -	0					
Planning board							
System	Cluster	Special					
Diagnosis A	Short Cluster Cuts	0 Bunch Cuts	0				
	Long Cluster Cuts	0 DBunch Cuts	0				
Settings	This cluster cuts	System	440				
	[	=				i.	
	Splices					Production	
	Splices 3	257	10.			Wound Length	12 km
	Splice Cuts Splice Repetitions	440				Produced Amount Babbins	0.5 kg

 The Monitoring view in MillMaster TOP is set to "per 100 km". In the example, about 12 km are wound, and the following conversions are made: Total Cuts 2227/(100/12) = 267.33 (rounded to 268) D Cuts 108/(100/12) = 12.96 (rounded to 13) F Cuts 2086/(100/12) = 250.32 (rounded to 251) P Cuts 33/(100/12) = 3.96 (rounded to 4)

Cuts	
Total Cuts	2'227
D Cuts	108
F Cuts	2'086
P Cuts	33

# 1.7 Application pgAdmin4

The pgAdmin4 application from PostgreSQL can be used to access the database directly. Excel is not required for this application.

The following data sources are available and are imported.

- remote\_central\_units: Directory of all machines connected with MillMaster TOP
- remote\_groups: Directory of all spindle groups
- remote shifts: Directory of all shift periods since MillMaster TIP was first started

The following data can be imported:

- Classification: remote\_classification\_data (shift\_id, group\_id)
- Settings: remote\_clearer\_settings (shift\_id, group\_id)
- Monitoring: remote\_monitoring\_data (shift\_id, group\_id)
- Monitoring: remote\_spindle\_monitoring\_data (shift\_id, group\_id)

#### Downloading and installing the pgAdmin4 application

- ✓ The PC is connected to the Internet.
- 1. Open a web browser.
- 2. Enter https://www.postgresql.org/ftp/pgadmin/pgadmin4/ in the address bar.
- 3. Download the current version of pgadmin4 for Windows.
- 4. Install the file, following the instructions in the wizard.
- 5. Finish the installation.

### Using the pgAdmin4 application

- Start the pgadmin4v1 application, with the Windows Start button or in Windows Explorer: c:\program files (x86)\pgAdmin 4\v1\runtime\pgAdmin4.exe
  - $\Rightarrow$  The application opens.
- In the *Quick Links* menu, select «Add New Server» or select Object\Create\Server... from the menu bar.
- 3. Select the «General» tab.
- 4. Enter the name, e.g. Loepfe MMTOP.
- 5. Select the "Servers" server group.
- 6. Connect now? Tick the checkbox to establish a connection right away.
- 7. Select the «Connection» tab.
- 8. Enter the host name for MillMaster Server, e.g. TOP customer name01.
- 9. Enter "5432" for the port.
- 10. Enter "LoepfeBde" for the maintenance database.
- 11. Enter "remoteuser" for the username.
- 12. Enter "Remoteuser1" for the password.
- 13. If necessary, tick the checkbox to save your settings.
- 14. Do not edit the Role field!
- 15. For "SSL mode", select "disable".
- 16. Select the «Advanced» tab.
- 17. Enter the MillMaster Server IP address for the host address, e.g. 192.168.7.1.
- 18. Confirm your changes with «Save».
  - ⇒ The application's directory structure appears, e.g. Servers/Name/Databases/LoepfeBde.

🗣 pgAdmin 4	
🕼 pgAdmin 4	File 🗸
A Browser	
🖮 🗐 Servers (2)	
🖨 ष Loepfe MMTOP	
🖨 😑 Databases (2)	
🕀 间 LoepfeBde	

- 19. Mark "LoepfeBde" in the browser.
- 20. Right-click to open «Query Tool...»
- 21. In the **«LoepfeBde on remoteuser@loepfeBde»** menu, enter text on line 1, e.g. *Select \* From remote\_central\_units.*
- 22. Confirm by pressing **«F5**».
  - $\Rightarrow~$  The list of machines is displayed on the **«Data Output»** tab.

# 1.8 FAQ

Question: Is Excel mandatory to read out the data?

Reply: No, Open Office or a product compatible with the PostgreSQL ODBC is sufficient.

Question: Can the data be read and used on a PC on which MillMaster TOP is not installed?

Reply: Yes, a database and a MillMaster TOP Client are not required on the PC but a connection to the Database Server must be present.

Question: Where are the data of the database Tables from MillMaster TOP stored?

Reply: The entries in the Table lines are assigned to various MillMaster TOP menus and can be viewed in various views.

Question: Where are the article, lot or plan data stored in the database?

Reply: The data are stored in MillMaster TOP in the data in Monitoring, Quality and Settings. The Database interface access option does not replace the MillMaster TOP client.

Question: Can the Database access replace MillMaster TOP?

Reply: No, The Database interface access option does not replace the MillMaster TOP client.

Question: Can the effort required in Sections 3 and 4 be reduced?

Reply: Yes, when the Excel Macro function and programming are used, the effort can be reduced to just a few mouse clicks and the data created exported to ERP systems or other databases.

Question: If the connection between PostgreSQL ODBC Driver and the MillMasterPro database cannot be created?

Reply: There can be many reasons for this and these depend on the existing IT infrastructure and the configuration of the PC or Server used. Request support from the IT Administrator. The following error messages can be displayed:

Microsoft Que	19	
A	could not connect to server: Cannot a Is the server running on hos TCP/NP connections on port	ussign requested address (0x00002741/10049) at "192.168.1.255" and accepting 54327
	ок	2

MS Query error message

- Check the activation of the Database interface option in MillMaster TOP
- Check the data in the Connection window
- Check the IP address of the PC with the MillMaster TOP database
- It must be possible to "ping" the database Server, both as IP address and PC name
- An entry may be necessary in the Host file (\Windows\System32\drivers\etc)

# localhost name resolution is handled within DNS itself.
# 127.0.0.1 localhost
# ::1 localhost
[IP Adresse des Servers] [Name des Servers]

localhost

- Check the Firewall settings
- Make sure Port 5432 is available unrestricted and exclusive in both directions
- An entry may possibly be required in the file pg\_hba.conf in the PostgreSQL Server directory



host entry

Question: Can changes be made directly in the database?

Reply: No, database access is Read only. Changes damage the database and make it unusable.

## Setting up Port 5432

Create Port 5432 in the «Firewall with advanced security».

1. Select New Rule ....

<b></b>
•
•

### 2. Select Rule Type.

🔗 New Inbound Rule Wizard						
Rule Type						
Select the type of firewall rule to cr	reate.					
Steps:						
Rule Type	What type of rule would you like to create?					
Protocol and Ports						
Action	O Program					
Profile	Hule that controls connections for a program.					
Name	Port     Rule that controls connections for a TCP or UDP port.					
	O Predefined:					
	AllJoyn Router					
	Rule that controls connections for a Windows experience.					
	○ Custom					
	Custom rule.					
	< <u>B</u> ack <u>N</u> ext > Cance	el				

#### 3. Select Protocols and Ports.

i New Inbound Rule Wizard						
Protocol and Ports						
Specify the protocols and ports to which this rule applies.						
Steps:						
Rule Type	Does this rule apply to TCP or U	DP?				
Protocol and Ports	<u>Т</u> СР					
Action	o <u>u</u> dp 🖓					
Profile						
Name	Does this rule apply to all local p	orts or specific local ports?				
	All local ports					
	Specific local ports:	5432				
		Example: 80, 443, 5000-5010				
		< Back Next > Cance	2			

### 4. Select Action.

Prew Inbound Rule Wizard						
Action						
Specify the action to be taken when a connection matches the conditions specified in the rule.						
Steps:						
Rule Type	What action should be taken when a connection matches the specified conditions?					
Protocol and Ports						
Action	This includes connections that are protected with IPsec as well as those are not.					
Profile	Allow the connection if it is secure.					
Name	C Flore the generation in this secure.          This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.         Customize         Block the connection         Security            Block the connection                  Block the connection  Block the connection					

#### 5. Select Profile.



#### 6. Enter the name.

1	Pww Inbound Rule Wizard						
N	Name						
Specify the name and description of this rule.							
S	eps:						
۲	Rule Type						
۲	Protocol and Ports						
۲	Action						
۲	Profile		Name:	TCDE 433			
۲	Name		Loepre Millimaster TOP PostGreSQL TO	N			
			Description (optional):	<u> </u>			
				< <u>B</u> ack <u>F</u> inish Cancel			

7. Confirm with Finish.

Question: Who provides support for further questions?

Reply: Loepfe Customer Support and Services Team is available via E-Mail service@loepfe.com for MillMaster TOP and the data structure. For the postgreSQL OBDC Driver under www.postgresql.org.

# 1.9 Annex

**Classification Definitions** 

ID	Resource Key	Name
11001 11004 11007	ClassificationD	D Matrix
11002 11005	ClassificationDSplice	D Splice Matrix
11003 11006 11008	ClassificationF	F Matrix
11009	ClassificationP	P Matrix

# **Monitoring Definitions**

ID	Resource Key	Name
12001	MonitoringCutSummaryTotalCuts	TotalCuts
12002	MonitoringCutSummaryDCuts	D Cuts
12003	MonitoringCutSummaryFCuts	F Cuts
12004	MonitoringCutSummaryPCuts	P Cuts
12005	MonitoringNsltNepCuts	Nep Cuts
12006	MonitoringNsltShortCuts	Short Cuts
12007	MonitoringNsItLongCuts	Long Cuts
12008	MonitoringNsltThinCuts	Thin Cuts
12009	MonitoringDSpliceSplices	Splices
12010	MonitoringDSpliceSpliceCuts	Splice Cuts
12011	MonitoringDSpliceSpliceRepetitions	Splice Rep.
12012	MonitoringOffCountOffCountCutsPlus	OffCount Cuts +
12013	MonitoringOffCountOffCountCutsMinus	OffCount Cuts -
12014	MonitoringOffCountShortOffCountCutsPlus	Short OffCount Cuts +
12015	MonitoringOffCountShortOffCountCutsMinus	Short OffCount Cuts -
12016	MonitoringClusterShortClusterCuts	Short Cluster Cuts
12017	MonitoringClusterLongClusterCuts	Long Cluster Cuts
12018	MonitoringClusterThinClusterCuts	Thin Cluster Cuts
12019	MonitoringFCutsDark	F Cuts Dark
12020	MonitoringFCutsBright	F Cuts Bright
12021	MonitoringFClusterCutsDark	F Cluster Cuts Dark
12022	MonitoringFClusterCutsBright	F Cluster Cuts Bright
12023	MonitoringFDarkEvents Monitoring	F Dark Events
12024	MonitoringFBrightEvents Monitoring	F Bright Events
12025	MonitoringLabPackSfidCutsPlus	SFI/D Cuts +
12026	MonitoringLabPackSfidCutsMinus	SFI/D Cuts –
12027	MonitoringLabPackVcvCutsPlus	VCV Cuts +
12028	MonitoringLabPackVcvCutsMinus	VCV Cuts -

ID	Resource Key	Name
12029	MonitoringLabPackDifferenceSfi	Difference SFI/D
12030	MonitoringLabPackDifferenceVcv	Difference VCV
12031	MonitoringLabPackVarianceLike	Variance Like
12032	MonitoringSpecialBunchCuts	Bunch Cuts
12033	MonitoringSpecialUpperYarnCuts	Upper Yarn Cuts
12034	MonitoringPSetsSet1	P Set 1
12035	MonitoringPSetsSet2	P Set 2
12036	MonitoringPSetsSet3	P Set 3
12037	MonitoringPSetsSet4	P Set 4
12038	MonitoringPSetsSet5	P Set 5
12039	MonitoringPSetsSet6	P Set 6
12040	MonitoringPSetsSet7	P Set 7
12041	MonitoringPSetsSet8	P Set 8
12042	MonitoringPSetsSet9	P Set 9
12043	MonitoringAlarmsNsltStartup	NSLT
12044	MonitoringAlarmsOffCount	OffCount
12045	MonitoringAlarmsShortOffCount	Short OffCount
12046	MonitoringAlarmsShortCluster	Short Cluster
12047	MonitoringAlarmsLongCluster	Long Cluster
12048	MonitoringAlarmsThinCluster	Thin Cluster
12049	MonitoringAlarmsSfid	SFI/D
12050	MonitoringAlarmsVcv	VCV
12051	MonitoringAlarmsFCluster	F Cluster
12052	MonitoringAlarmsFStartup	F
12053	MonitoringAlarmsPStartup	Р
12054	MonitoringPClassTotalCuts	Total Cuts
12055	MonitoringTextileOffLimitsTotalNumber	Total
12056	MonitoringTextileOffLimitsThreshold1	Threshold 1
12057	MonitoringTextileOffLimitsThreshold2	Threshold 2
12058	MonitoringTextileOffLimitsThreshold3	Threshold 3

ID	Resource Key	Name
12059	MonitoringTextileOffLimitsThreshold4	Threshold 4
12060	MonitoringTextileOffLimitsThreshold5	Threshold 5
12061	MonitoringClassAlertTotalNumber	Total
12062	MonitoringClassAlertThreshold1	Threshold 1
12063	MonitoringClassAlertThreshold2	Threshold 2
12064	MonitoringClassAlertThreshold3	Threshold 3
12065	MonitoringClassAlertThreshold4	Threshold 4
12066	MonitoringClassAlertThreshold5	Threshold 5
12067	MonitoringClassAlertThreshold6	Threshold 6
12068	MonitoringClassAlertThreshold7	Threshold 7
12069	MonitoringClassAlertThreshold8	Threshold 8
12070	MonitoringIpiAlarmTotalNumber	Total
12071	MonitoringIpiAlarmNeps	Neps
12072	MonitoringIpiAlarmThick	Thick
12073	MonitoringIpiAlarmThin	Thin
12074	MonitoringIpiAlarmSmall	Small
12075	MonitoringIpiAlarm2Minus4cm	2 – 4
12076	MonitoringIpiAlarm4Minus8cm	4 – 8
12077	MonitoringIpiAlarm8Minus20cm	8 – 20
12078	MonitoringIpiAlarm20Minus70cm	20 – 70
12079	MonitoringIpiSurveyedLength	Monitoring IPI Length
12080	MonitoringIpiDiameterNeps Neps	Neps
12081	MonitoringIpiDiameterThick	Thick
12082	MonitoringIpiDiameterThin	Thin
12083	MonitoringIpiDiameterSmall	Small

ID	Resource Key	Name
12084	MonitoringIpiLength2Minus4cm	2 – 4
12085	MonitoringIpiLength4Minus8cm	4 – 8
12086	MonitoringIpiLength8Minus20cm	8 – 20
12087	MonitoringIpiLength20Minus70cm	20 – 70
12088	MonitoringLengthWoundLength	Wound Length
12089	MonitoringSfiD	SFI/D
12090	MonitoringVcv	VCV
12091	MonitoringSfi	SFI
12092	MonitoringDClassTotalCuts	Total D Class Cuts
12093	MonitoringDSpliceClassTotalCuts	Total D Splice Class Cuts
12094	MonitoringFClassTotalCuts	Total F Class Cuts
12097	MonitoringSystemAlarms	System
12098	MonitoringSystemCuts	System
12099	MonitoringDClassTotalNotClassifiedCuts	Unclassified
12100	MonitoringDSpliceClassTotalNotClassifiedCuts	Total Cuts (unclassified)
12101	MonitoringDClassTotalClassifiedCuts	Classified
12102	MonitoringDSpliceClassTotalClassifiedCuts	Total Cuts (classified)
120103	MonitoringProducedAmount	Produced Amount

# **Double Setting Definitions**

ID	Resource Key	Name
4002	DoubleSettingClearerSettings AcceptedPilotsNumber	
4003	DoubleSettingClearerSettingsAdjustState	
8002	DoubleSettingClearerSettings ClassAlarmA1Active	A1
8003	DoubleSettingClearerSettings ClassAlarmA1EventLimit	A1 Limit
8004	DoubleSettingClearerSettings ClassAlarmA1ThresholdId	
8005	DoubleSettingClearerSettings ClassAlarmA2Active	A2
8006	DoubleSettingClearerSettings ClassAlarmA2EventLimit	A2 Limit
8007	DoubleSettingClearerSettings ClassAlarmA2ThresholdId	
8008	DoubleSettingClearerSettings ClassAlarmA3Active	A3
8009	DoubleSettingClearerSettings ClassAlarmA3EventLimit	A3 Limit
8010	DoubleSettingClearerSettings ClassAlarmA3ThresholdId	
8011	DoubleSettingClearerSettings ClassAlarmA4Active	A4
8012	DoubleSettingClearerSettings ClassAlarmA4EventLimit	A4 Limit
8013	DoubleSettingClearerSettings ClassAlarmA4ThresholdId	
8001	DoubleSettingClearerSettings ClassAlarmAction	Action
8014	DoubleSettingClearerSettings ClassAlarmB1Active	B1
8015	DoubleSettingClearerSettings ClassAlarmB1EventLimit	B1 Limit
8016	DoubleSettingClearerSettings ClassAlarmB1ThresholdId	
8017	DoubleSettingClearerSettings ClassAlarmB2Active	B2
8018	DoubleSettingClearerSettings ClassAlarmB2EventLimit	B2 Limit
8019	DoubleSettingClearerSettings ClassAlarmB2ThresholdId	
8020	DoubleSettingClearerSettings ClassAlarmB3Active	B3
8021	DoubleSettingClearerSettings ClassAlarmB3EventLimit	B3 Limit
8022	DoubleSettingClearerSettings ClassAlarmB3ThresholdId	
8023	DoubleSettingClearerSettings ClassAlarmB4Active	B4
8024	DoubleSettingClearerSettings ClassAlarmB4EventLimit	B4 Limit
8025	DoubleSettingClearerSettings ClassAlarmB4ThresholdId	
8026	DoubleSettingClearerSettings ClassAlarmC1Active	C1

ID	Resource Key	Name
8027	DoubleSettingClearerSettings ClassAlarmC1EventLimit	C1 Limit
8028	DoubleSettingClearerSettings ClassAlarmC1ThresholdId	
8029	DoubleSettingClearerSettings ClassAlarmC2Active	C2
8030	DoubleSettingClearerSettings ClassAlarmC2EventLimit	C2 Limit
8031	DoubleSettingClearerSettings ClassAlarmC2ThresholdId	
8032	DoubleSettingClearerSettings ClassAlarmC3Active	C3
8033	DoubleSettingClearerSettings ClassAlarmC3EventLimit	C3 Limit
8034	DoubleSettingClearerSettings ClassAlarmC3ThresholdId	
8035	DoubleSettingClearerSettings ClassAlarmC4Active	C4
8036	DoubleSettingClearerSettings ClassAlarmC4EventLimit	C4 Limit
8037	DoubleSettingClearerSettings ClassAlarmC4ThresholdId	
8038	DoubleSettingClearerSettings ClassAlarmD1Active	D1
8039	DoubleSettingClearerSettings ClassAlarmD1EventLimit	D1 Limit
8040	DoubleSettingClearerSettings ClassAlarmD1ThresholdId	
8041	DoubleSettingClearerSettings ClassAlarmD2Active	D2
8042	DoubleSettingClearerSettings ClassAlarmD2EventLimit	D2 Limit
8043	DoubleSettingClearerSettings ClassAlarmD2ThresholdId	
8044	DoubleSettingClearerSettings ClassAlarmD3Active	D3
8045	DoubleSettingClearerSettings ClassAlarmD3EventLimit	D3 Limit
8046	DoubleSettingClearerSettings ClassAlarmD3ThresholdId	
8047	DoubleSettingClearerSettings ClassAlarmD4Active	D4
8048	DoubleSettingClearerSettings ClassAlarmD4EventLimit	D4 Limit
8049	DoubleSettingClearerSettings ClassAlarmD4ThresholdId	
8050	DoubleSettingClearerSettings ClassAlarmEActive	E
8051	DoubleSettingClearerSettings ClassAlarmEEventLimit	E Limit
8052	DoubleSettingClearerSettingsClassAlarmEThresholdId	
8053	DoubleSettingClearerSettings ClassAlarmFActive	F
8054	DoubleSettingClearerSettings ClassAlarmFEventLimit	F Limit
8055	DoubleSettingClearerSettings ClassAlarmFThresholdId	

ID	Resource Key	Name
8056	DoubleSettingClearerSettings ClassAlarmGActive	G
8057	DoubleSettingClearerSettings ClassAlarmGEventLimit	G Limit
8058	DoubleSettingClearerSettings ClassAlarmGThresholdId	
8059	DoubleSettingClearerSettings ClassAlarmH1Active	H1
8060	DoubleSettingClearerSettings ClassAlarmH1EventLimit	H1 Limit
8061	DoubleSettingClearerSettings ClassAlarmH1ThresholdId	
8062	DoubleSettingClearerSettings ClassAlarmH2Active	H2
8063	DoubleSettingClearerSettings ClassAlarmH2EventLimit	H2 Limit
8064	DoubleSettingClearerSettings ClassAlarmH2ThresholdId	
8065	DoubleSettingClearerSettings ClassAlarmI1Active I1	11
8066	DoubleSettingClearerSettings ClassAlarmI1EventLimit	I1 Limit
8067	DoubleSettingClearerSettings ClassAlarmI1ThresholdId	
8068	DoubleSettingClearerSettings ClassAlarmI2Active	12
8069	DoubleSettingClearerSettings ClassAlarmI2EventLimit	I2 Limit
8070	DoubleSettingClearerSettings ClassAlarmI2ThresholdId	
4004	DoubleSettingClearerSettings DAbsBase	
2003	DoubleSettingClearerSettings DChannelClearing	Clearing
2007	DoubleSettingClearerSettings DChannelDL	DL
2005	DoubleSettingClearerSettings DChannelDS	DS
2008	DoubleSettingClearerSettings DChannelLL	
2006	DoubleSettingClearerSettings DChannelLS	LS
2009	DoubleSettingClearerSettings DChannelMinusD	-D
2010	DoubleSettingClearerSettings DChannelMinusL	-L
2004	DoubleSettingClearerSettings DChannelN	Ν
2120	DoubleSettingClearerSettings DChannelNsltStartupAlarmLimit	Alarm Limit
2011	DoubleSettingClearerSettings DChannelNsItStartupRepetitions	Rep. NSLT Startup

ID	Resource Key	Name
2012	DoubleSettingClearerSettings DClassClearing	Clearing
2129	DoubleSettingClearerSettings FClusterBrightAlarmLimit	Alarm Limit
2079	DoubleSettingClearerSettings FClusterBrightClearing	Clearing
2081	DoubleSettingClearerSettings FClusterBrightFaults	Faults
2080	DoubleSettingClearerSettings FClusterBrightObsLength	Obs. Length
2082	DoubleSettingClearerSettings FClusterBrightRepetitions	Repetitions
2128	DoubleSettingClearerSettings FClusterDarkAlarmLimit	Alarm Limit
2075	DoubleSettingClearerSettings FClusterDarkClearing	Clearing
2077	DoubleSettingClearerSettings FClusterDarkFaults	Faults
2076	DoubleSettingClearerSettings FClusterDarkObsLength	Obs. Length
2078	DoubleSettingClearerSettings FClusterDarkRepetitions	Repetitions
7001	DoubleSettingClearerSettings FClusterRepetitions	Rep. F Cluster
2071	DoubleSettingClearerSettings FConfigurationBrightClearing	Clearing Bright
2070	DoubleSettingClearerSettings FConfigurationDarkClearing	Clearing Dark
2073	DoubleSettingClearerSettings FConfigurationFOrganicFilter	Organic Filter
2131	DoubleSettingClearerSettings FConfigurationFStartupAlarmLimit	Alarm Limit
2072	DoubleSettingClearerSettings FConfigurationFStartupRep	Rep. F Startup
4005	DoubleSettingClearerSettings Ff1BasBase	
4006	DoubleSettingClearerSettings Ff2BasBase	
4007	DoubleSettingClearerSettings FfCoefficientBright	
4008	DoubleSettingClearerSettings FfCoefficientDark	
2139	DoubleSettingClearerSettings FOffColorAlarmLimit	Alarm Limit
2137	DoubleSettingClearerSettings FOffColorBrightLimit	Bright Limit
2135	DoubleSettingClearerSettingsFOffColorClearing	Clearing
2136	DoubleSettingClearerSettings FOffColorDarkLimit	Dark Limit
2138	DoubleSettingClearerSettings FOffColorObsLength	Obs. Length
6026	DoubleSettingClearerSettings IpiAlarm20Minus70cmDifferenceMi- nus	Length 20 - 70 cm

ID	Resource Key	Name
6025	DoubleSettingClearerSettings IpiAlarm20Minus70cmDifferencePlus	Length 20 - 70 cm
6024	DoubleSettingClearerSettings IpiAlarm20Minus70cmThreshold	Length 20 - 70 cm
6017	DoubleSettingClearerSettings IpiAlarm2Minus4cmDifferenceMinus	Length 2 - 4 cm
6016	DoubleSettingClearerSettings IpiAlarm2Minus4cmDifferencePlus	Length 2 - 4 cm
6015	DoubleSettingClearerSettings IpiAlarm2Minus4cmThreshold	Length 2 - 4 cm
6020	DoubleSettingClearerSettings IpiAlarm4Minus8cmDifferenceMinus	Length 4 - 8 cm
6019	DoubleSettingClearerSettings IpiAlarm4Minus8cmDifferencePlus	Length 4 - 8 cm
6018	DoubleSettingClearerSettings IpiAlarm4Minus8cmThreshold	Length 4 - 8 cm
6023	DoubleSettingClearerSettings IpiAlarm8Minus20cmDifferenceMinus	Length 8 - 20 cm
6022	DoubleSettingClearerSettings IpiAlarm8Minus20cmDifferencePlus	Length 8 - 20 cm
6021	DoubleSettingClearerSettings IpiAlarm8Minus20cmThreshold	Length 8 - 20 cm
6001	DoubleSettingClearerSettings IpiAlarmGroupAction	Action
6005	DoubleSettingClearerSettings IpiAlarmNepsDifferenceMinus	Neps
6004	DoubleSettingClearerSettings IpiAlarmNepsDifferencePlus	Neps
6003	DoubleSettingClearerSettings IpiAlarmNepsThreshold	Neps
6014	DoubleSettingClearerSettings IpiAlarmSmallDifferenceMinus	Small
6013	DoubleSettingClearerSettings IpiAlarmSmallDifferencePlus	Small
6012	DoubleSettingClearerSettings IpiAlarmSmallThreshold	Small
6002	DoubleSettingClearerSettings IpiAlarmSpindleAction	Action
6008	DoubleSettingClearerSettings IpiAlarmThickDifferenceMinus	Thick
6007	DoubleSettingClearerSettings IpiAlarmThickDifferencePlus	Thick
6006	DoubleSettingClearerSettings IpiAlarmThickThreshold	Thick
6011	DoubleSettingClearerSettings IpiAlarmThinDifferenceMinus	Thin
6010	DoubleSettingClearerSettings IpiAlarmThinDifferencePlus	Thin
6009	DoubleSettingClearerSettings IpiAlarmThinThreshold	Thin
2124	DoubleSettingClearerSettings LongClusterAlarmLimit	Alarm Limit
2045	DoubleSettingClearerSettings LongClusterClearing	Clearing
2046	DoubleSettingClearerSettings LongClusterDiameter	Diameter
2049	DoubleSettingClearerSettings LongClusterFaults	Faults

ID	Resource Key	Name
2047	DoubleSettingClearerSettings LongClusterLength	Length
2048	DoubleSettingClearerSettings LongClusterObsLength	Obs. Length
2050	DoubleSettingClearerSettings LongClusterRepetitions	Repetitions
2130	DoubleSettingClearerSettings NepClusterAlarmLimit	Alarm Limit
2115	DoubleSettingClearerSettings NepClusterClearing	Clearing
2116	DoubleSettingClearerSettings NepClusterDiameter	Diameter
2118	DoubleSettingClearerSettings NepClusterFaults	Faults
2117	DoubleSettingClearerSettings NepClusterObsLength	Obs. Length
2119	DoubleSettingClearerSettings NepClusterRepetitions	Repetitions
2121	DoubleSettingClearerSettings OffCountAlarmLimit	Alarm Limit
2025	DoubleSettingClearerSettings OffCountClearing	Clearing
2028	DoubleSettingClearerSettings OffCountCoarse	Coarse
2029	DoubleSettingClearerSettings OffCountFine	Fine
2027	DoubleSettingClearerSettings OffCountMinusDiaDiff	- DiaDiff
2030	DoubleSettingClearerSettings OffCountObsLength	Obs. Length
2026	DoubleSettingClearerSettings OffCountPlusDiaDiff	+ DiaDiff
2031	DoubleSettingClearerSettings OffCountRepetitions	Repetitions
2026	DoubleSettingClearerSettings OffLimitsAlarmAction	Action
2031	DoubleSettingClearerSettings OffLimitsAlarmSet1Active	Active
5003	DoubleSettingClearerSettings OffLimitsAlarmSet1Definition	Monitoring
5017	DoubleSettingClearerSettingsOffLimitsAlarmSet1LowerThreshold	Lower Limit
5004	DoubleSettingClearerSettings OffLimitsAlarmSet1Threshold	Limit
5005	DoubleSettingClearerSettings OffLimitsAlarmSet2Active	Active
5006	DoubleSettingClearerSettings OffLimitsAlarmSet2Definition	Monitoring
5018	DoubleSettingClearerSettings OffLimitsAlarmSet2LowerThreshold	Lower Limit
5007	DoubleSettingClearerSettings OffLimitsAlarmSet2Threshold	Limit
5008	DoubleSettingClearerSettings OffLimitsAlarmSet3Active	Active
5009	DoubleSettingClearerSettings OffLimitsAlarmSet3Definition	Monitoring
5019	DoubleSettingClearerSettings OffLimitsAlarmSet3LowerThreshold	Lower Limit
5010	DoubleSettingClearerSettings OffLimitsAlarmSet3Threshold	Limit

ID	Resource Key	Name
5011	DoubleSettingClearerSettings OffLimitsAlarmSet4Active	Active
5012	DoubleSettingClearerSettings OffLimitsAlarmSet4Definition	Monitoring
5020	DoubleSettingClearerSettings OffLimitsAlarmSet4LowerThreshold	Lower Limit
5013	DoubleSettingClearerSettings OffLimitsAlarmSet4Threshold	Limit
5014	DoubleSettingClearerSettings OffLimitsAlarmSet5Active	Active
5015	DoubleSettingClearerSettings OffLimitsAlarmSet5Definition	Monitoring
5021	DoubleSettingClearerSettings OffLimitsAlarmSet5LowerThreshold	Lower Limit
5016	DoubleSettingClearerSettings OffLimitsAlarmSet5Threshold	Limit
2134	DoubleSettingClearerSettings OffStandardBobbinLimitTextile CutA- larmLimit	Limit
2133	DoubleSettingClearerSettings OffStandard BobbinLimitYarn- BreaksInProcent	Average Yarn Breaks
2084	DoubleSettingClearerSettings PConfigurationClearing	Clearing
2113	DoubleSettingClearerSettings PConfigurationLimit	Limit
2132	DoubleSettingClearerSettings PConfigurationPStartupAlarmLimit	Alarm Limit
2085	DoubleSettingClearerSettings PConfigurationPStartupRep	Rep. P Startup
2114	DoubleSettingClearerSettings PConfigurationRefLength	Ref. Length
2150	DoubleSettingClearerSettings PCurve_Point0	0 cm
2151	DoubleSettingClearerSettings PCurve_Point0p5	0.5 cm
2152	DoubleSettingClearerSettings PCurve_Point1	1 cm
2153	DoubleSettingClearerSettings PCurve_Point1p5	1.5 cm
2154	DoubleSettingClearerSettings PCurve_Point2	2 cm
2155	DoubleSettingClearerSettings PCurve_Point3	3 cm
2156	DoubleSettingClearerSettings PCurve_Point4	4 cm
2157	DoubleSettingClearerSettings PCurve_Point6	7 cm
2158	DoubleSettingClearerSettings PCurve_Point8	8 cm
4001	DoubleSettingClearerSettings PilotsNumber	
2126	DoubleSettingClearerSettings SfidAlarmLimit	Alarm Limit
2057	DoubleSettingClearerSettings SfidClearing	Clearing
2061	DoubleSettingClearerSettings SfidMinusLimit	- Limit
2062	DoubleSettingClearerSettings SfidObsLength	Obs. Length

ID	Resource Key	Name
2060	DoubleSettingClearerSettings SfidPlusLimit	+ Limit
2058	DoubleSettingClearerSettings SfidReference	Reference
2063	DoubleSettingClearerSettings SfidRepetitions	Repetitions
2123	DoubleSettingClearerSettings ShortClusterAlarmLimit	Alarm Limit
2039	DoubleSettingClearerSettings ShortClusterClearing	Clearing
2040	DoubleSettingClearerSettings ShortClusterDiameter	Diameter
2043	DoubleSettingClearerSettings ShortClusterFaults	Faults
2041	DoubleSettingClearerSettings ShortClusterLength	Length
2042	DoubleSettingClearerSettings ShortClusterObsLength	Obs. Length
2044	DoubleSettingClearerSettings ShortClusterRepetitions	Repetitions
2122	DoubleSettingClearerSettings ShortOffCountAlarmLimit	Alarm Limit
2032	DoubleSettingClearerSettings ShortOffCountClearing	Clearing
2035	DoubleSettingClearerSettings ShortOffCountCoarse	Coarse
2036	DoubleSettingClearerSettingsShortOffCountFine	Fine
2034	DoubleSettingClearerSettings ShortOffCountMinusDiaDiff	- DiaDiff
2037	DoubleSettingClearerSettings ShortOffCountObsLength	Obs. Length
2033	DoubleSettingClearerSettings ShortOffCountPlusDiaDiff	+ DiaDiff
2038	DoubleSettingClearerSettings ShortOffCountRepetitions	Repetitions
2021	DoubleSettingClearerSettings SpliceChannelCheckLength	Check Length
2013	DoubleSettingClearerSettings SpliceChannelClearing	Clearing
2017	DoubleSettingClearerSettings SpliceChannelDL	DL
2015	DoubleSettingClearerSettings SpliceChannelDS	DS
2018	DoubleSettingClearerSettings SpliceChannelLL	LL
2016	DoubleSettingClearerSettings SpliceChannelLS	LS
2019	DoubleSettingClearerSettings SpliceChannelMinusD	-D
2020	DoubleSettingClearerSettings SpliceChannelMinusL	-L
2014	DoubleSettingClearerSettings SpliceChannelN	N
2022	DoubleSettingClearerSettings SpliceClassClearing	Clearing
2051	DoubleSettingClearerSettings ThinClusterAlarmLimit	Alarm Limit
2052	DoubleSettingClearerSettings ThinClusterClearing	Clearing

ID	Resource Key	Name
2055	DoubleSettingClearerSettings ThinClusterDiameter	Diameter
2053	DoubleSettingClearerSettings ThinClusterFaults	Faults
2054	DoubleSettingClearerSettings ThinClusterLength	Length
2056	DoubleSettingClearerSettings ThinClusterObsLength	Obs. Length
2056	DoubleSettingClearerSettings ThinClusterRepetitions	Repetitions
2024	DoubleSettingClearerSettings UpperYarnLimit	Limit
2023	DoubleSettingClearerSettings UpperYarnMonitoring	Monitoring
2127	DoubleSettingClearerSettings VcvAlarmLimit	Alarm Limit
2064	DoubleSettingClearerSettings VcvClearing	Clearing
2066	DoubleSettingClearerSettings VcvMinusLimit	- Limit
2067	DoubleSettingClearerSettings VcvObsLength	Obs. Length
2065	DoubleSettingClearerSettings VcvPlusLimit	+ Limit
2068	DoubleSettingClearerSettings VcvRepetitions	Reference
3001	DoubleSettingClearerSettings YarnCount	Repetitions
3003	DoubleSettingClearerSettings YarnCountThreadCount	SFI/D
3002	DoubleSettingClearerSettings YarnCountUnit	Yarn Count

# **String Setting Definitions**

ID	Resource Key	Name
2001	StringSettingClearerSettingsPropertiesName	Article Name
2002	StringSettingClearerSettingsDescription	Description
9001	StringSettingClearerSettingsMaterial	Material

