

Main Diagram

Table tbdiagdocked		
Idx	Name	Data Type
* Pk	AgvId	INT DEFAULT 0
Idx	ResourceId	INT DEFAULT 0
Indexes		
Type	Name	On
Pk	pk_tbdiagdocked	AgvId
	ResourceId	ResourceId
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbailtoperation		
Idx	Name	Data Type
* Pk	OpNo	INT
* Pk	AiltOpNo	INT
Indexes		
Type	Name	On
Pk	pk_tbailtoperation	OpNo, AiltOpNo
Ung	OpNo	OpNo
Unq	AiltOpNo	AiltOpNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbailtoperationparameter		
Idx	Name	Data Type
*	OpNo	INT
*	ParameterNo	INT
*	AiltOpNo	INT
*	AiltParameterNo	INT
	Ciaculation	VARCHAR(255)
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbiautomaticorder		
Idx	Name	Data Type
Idx	ResourceId	INT
	PNo	INT
	LowLimit	INT
	HighLimit	INT
	MClass	INT
	MNo	INT
	WPNo	INT
	BufNo	INT
	Active	BOOLEAN DEFAULT false
	Description	VARCHAR(255)
	NoNo	BOOLEAN DEFAULT false
	AutoOrderType	INT
* Pk	ID	INT
	ResourceIdSend	INT
	PNCkh	INT
	Dispo	BOOLEAN DEFAULT false
Indexes		
Type	Name	On
Pk	pk_tbiautomaticorder	ID
	ResourceId	ResourceId
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbialautoordertype		
Idx	Name	Data Type
* Pk	ID	INT
	Description	VARCHAR(255)
Indexes		
Type	Name	On
Pk	pk_tbialautoordertype	ID
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbibookedbufmsg		
Idx	Name	Data Type
* Pk	resResource	INT
* Pk	EventPos	INT
Idx	ResourceId	INT DEFAULT 0
	BufNo	INT DEFAULT 0
	BufPos	INT DEFAULT 0
Indexes		
Type	Name	On
Pk	pk_tbibookedbufmsg	resResource, EventPos
	ResourceId	ResourceId
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbibox		
Idx	Name	Data Type
* Pk	BoxPNo	INT
* Pk	BoxID	INT
	ONO	INT
	OPos	INT DEFAULT 0
	Full	BOOLEAN DEFAULT false
Indexes		
Type	Name	On
Pk	pk_tbibox	BoxPNo, BoxID
	BoxID	BoxID
	BoxPNo	BoxPNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbiboxdef		
Idx	Name	Data Type
* Pk	BoxPNo	INT
	Count	INT
	PosCount	INT
	RowCount	INT DEFAULT 0
Indexes		
Type	Name	On
Pk	pk_tbiboxdef	BoxPNo

Table tbiboxdef

Options

ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci

Table tbiboxpos

Idx	Name	Data Type	Description
* Pk	BoxPos	INT	position in the box
* Pk	BoxPNo	INT	part number of the box
* Pk	BoxId	INT	id of the box
	ONO	INT	order number booked to box position
	OPos	INT	order position booked to box position
Idx	PNo	INT	part number booked to box position
	PNoGroup	INT DEFAULT 0	group which part a possible in the Box

Indexes

Type	Name	On	Description
Pk	pk_tbiboxpos	BoxPos, BoxPNo, BoxId	
	BoxId	BoxId	
	BoxPNo	BoxPNo	
	PNo	PNo	

Options

ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci

Table tbibuffer

Idx	Name	Data Type	Description
* Pk	ResourceId	INT	resource id of the buffer
* Pk	BufNo	INT	number of the buffer
	Description	VARCHAR(255)	buffer description
	Type	INT	buffer type (1 = storage; 2 = fifo; 3 = stack; 10 = to AGV; 11 = from AGV; 12 = from to AGV)
	BeltNo	INT	number of the belt if available
*	Sides	INT	sides of the buffer
*	Rous	INT DEFAULT 0	rrous of the buffer
*	Columns	INT DEFAULT 0	columns of the buffer

Indexes

Type	Name	On	Description
Pk	pk_tbibuffer	ResourceId, BufNo	
	ResourceId	ResourceId	

Options

ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci

Table tbibufferpos

Idx	Name	Data Type	Description
* Pk	ResourceId	INT DEFAULT 0	resource id
* Pk	BufNo	INT DEFAULT 0	buffer number
* Pk	BufPos	INT DEFAULT 0	buffer position
Idx	PNo	INT DEFAULT 0	part number
	ONO	INT DEFAULT 0	booked order number
	OPos	INT DEFAULT 0	booked order position
	Type	INT DEFAULT 0	buffer type (1 = storage; 2 = fifo; 3 = stack; 10 = to AGV; 11 = from AGV; 12 = from to AGV)
	Zone	INT DEFAULT 0	group which parts can be booked to this buffer position
	Quantity	INT DEFAULT 0	quantity of this part number (normally not used)
	QuantityMax	INT DEFAULT 0	max. quantity (normally not used)
	TimeStamp	DATETIME	when was the last change
Idx	PalletID	INT DEFAULT 0	id of the pallet if it is a pallet
Idx	BoxID	INT DEFAULT 0	id of the box if it is a box
	PNGroup	INT DEFAULT 0	group of parts that are possible to book by the user
	Booked	BOOLEAN DEFAULT false	true if the position is booked for a future operation

Indexes

Type	Name	On	Description
Pk	pk_tbibufferpos	ResourceId, BufNo, BufPos	
	BoxID	BoxID	
	PalletID	PalletID	
	ResourceId	ResourceId	
	PNo	PNo	

Options

ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci

Table tbibuffertype

Idx	Name	Data Type	Description
* Pk	Type	INT	
	Description	VARCHAR(255)	

Indexes

Type	Name	On	Description
Pk	pk_tbibuffertype	Type	

Options

ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci

Table tbicarrier

Idx	Name	Data Type	Description
* Pk	CarrierID	INT	id of the carrier
Idx	CarrierTypeID	INT	part number of the carrier
	ONO	INT	order number that is booked to carrier
	OPos	INT	order position that is booked to carrier
Idx	PNo	INT	part number that is booked to carrier
	PNoGroup	INT DEFAULT 0	group of partnumber that is possible to book
*	LastResource	INT DEFAULT 0	last resource id
*	LastPosition	INT DEFAULT 0	last stopper position
	Reporting	DATETIME	date and time of the last reporting

Indexes

Type	Name	On	Description
Pk	pk_tbicarrier	CarrierID	
	CarrierTypeID	CarrierTypeID	
	PNo	PNo	

Options

ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci

Table tbicarrierdef

Idx	Name	Data Type	Description
* Pk	CarrierTypeID	INT	type id of the carrier normally equal to PNo
Idx	PNo	INT	part number of the carrier
	Count	INT	count of the carrier
	PosCount	INT	not used

Indexes

Type	Name	On	Description
Pk	pk_tbicarrierdef	CarrierTypeID	
	PNo	PNo	

Options

ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci

Table tbichartdef		
Idx	Name	Data Type
* PK	ChartNo	INT
	OpNo	INT
	Description	VARCHAR(255)
	Parameter	INT
	UpperLimit	INT
	LowerLimit	INT
	Default	INT
Indexes		
Type	Name	On
PK	pk_tbichartdef	ChartNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbicustomer		
Idx	Name	Data Type
* PK	CNo	INT
	FirstName	VARCHAR(255)
	LastName	VARCHAR(255)
	Address	VARCHAR(255)
	Phone	VARCHAR(255)
	E-Mail	VARCHAR(255)
	Company	VARCHAR(255)
Indexes		
Type	Name	On
PK	pk_tbicustomer	CNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbidatastype		
Idx	Name	Data Type
* PK	ID	INT
	Description	VARCHAR(255)
	LengthByteCodeSys	INT
Indexes		
Type	Name	On
PK	pk_tbidatastype	ID
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbierrorcodes		
Idx	Name	Data Type
* PK	ErrorId	INT
	Description	VARCHAR(255)
	Short	VARCHAR(255)
Indexes		
Type	Name	On
PK	pk_tbierrorcodes	ErrorId
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbifinorder		
Idx	Name	Data Type
* PK	ONO	INT
	PlannedStart	DATETIME
	PlannedEnd	DATETIME
	Start	DATETIME
	End	DATETIME
	CNo	INT DEFAULT 0
	State	INT DEFAULT 0
	Enabled	BOOLEAN DEFAULT false
	Release	DATETIME
Indexes		
Type	Name	On
PK	pk_tbifinorder	ONO
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbifinorderpos		
Idx	Name	Data Type
* PK	ONO	INT
* PK	OPos	INT
	PlannedStart	DATETIME
	PlannedEnd	DATETIME
	Start	DATETIME
	End	DATETIME
	WPNo	INT
	StepNo	INT
	MainPos	INT DEFAULT 0
	State	INT DEFAULT 0
Idx	ResourceID	INT
	OpNo	INT DEFAULT 0
	HONo	INT
	PNo	INT DEFAULT 0
	subOrderBlocked	BOOLEAN DEFAULT false
	Error	BOOLEAN DEFAULT false
Idx	OrderPNo	INT DEFAULT 0
Indexes		
Type	Name	On
PK	pk_tbifinorderpos	ONO, OPos
	ResourceID	ResourceID
	OrderPNo	OrderPNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbifinstep		
Idx	Name	Data Type
	WPNo	INT
* PK	StepNo	INT
* PK	ONO	INT
* PK	OPos	INT
	Description	VARCHAR(255)
	OpNo	INT
	NextStepNo	INT
	FirstStep	BOOLEAN DEFAULT false
	ErrorStepNo	INT
Indexes		
Type	Name	Description
PK	pk_tbifinstep	WPNo, OPos
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbifinstep		
Idx	NewPNo	INT
	PlannedStart	DATETIME
	PlannedEnd	DATETIME
	Start	DATETIME
	End	DATETIME
	OPOType	INT
Idx	ResourceID	INT
	TransportTime	INT DEFAULT 0
	ErrorStep	BOOLEAN DEFAULT false
	ElectricEnergyCalc	INT DEFAULT 0
	ElectricEnergyReal	INT DEFAULT 0
	CompressedAirCalc	INT DEFAULT 0
	CompressedAirReal	INT DEFAULT 0
	FreeString	VARCHAR(255)
Idx	StaffId	INT DEFAULT 0
	ErrorRetVal	INT DEFAULT 0
*	Active	BOOLEAN
Indexes		
Type	Name	On
PK	pk_tbifinstep	StepNo, ONo, OPos
	ResourceID	ResourceID
	StaffId	StaffId
	ONo	ONo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbifinstepparameter		
Idx	Name	Data Type
	WPNo	INT
* PK	StepNo	INT
* PK	ONo	INT
* PK	OPos	INT
* PK	ParameterNo	INT
	Parameter	VARCHAR(30)
	ParameterType	INT DEFAULT 1
Indexes		
Type	Name	On
PK	pk_tbifinstepparameter	StepNo, ONo, OPos, ParameterNo
	ONo	ONo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbilinfo		
Idx	Name	Data Type
* PK	Id	INT
*	Version	VARCHAR(8)
*	Changed	TIMESTAMP ON UPDATE current_timestamp() DEFAULT current_timestamp()
*	Description	VARCHAR(254)
Indexes		
Type	Name	On
PK	pk_tbilinfo	Id
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbimachinereport		
Idx	Name	Data Type
* PK	ResourceID	INT
* PK	TimeStamp	DATETIME
	AutomaticMode	BOOLEAN DEFAULT false
	ManualMode	BOOLEAN DEFAULT false
	Busy	BOOLEAN DEFAULT false
	Reset	BOOLEAN DEFAULT false
	ErrorL0	BOOLEAN DEFAULT false
	ErrorL1	BOOLEAN DEFAULT false
	ErrorL2	BOOLEAN DEFAULT false
* PK	ID	INT AUTO_INCREMENT
Indexes		
Type	Name	On
PK	pk_tbimachinereport	ResourceID, TimeStamp, ID
	ID	ID
	ResourceID	ResourceID
Options		
ENGINE=InnoDB AUTO_INCREMENT=10127 DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbimainterror		
Idx	Name	Data Type
* PK	ErrorNo	INT
	ErrorDesc	LONGTEXT
Indexes		
Type	Name	On
PK	pk_tbimainterror	ErrorNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbimainterrorlinks		
Idx	Name	Data Type
	ErrorNo	INT DEFAULT 0
	LinkType	INT DEFAULT 0
	LinkDesc	LONGTEXT
	Link	LONGTEXT
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbimaintlinks		
Idx	Name	Data Type
*	ErrorNo	INT
*	SolutionNo	INT
	LinkType	INT
	LinkDesc	LONGTEXT
	Link	LONGTEXT
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbimaintsolutions		
Idx	Name	Data Type
* PK	ErrorNo	INT DEFAULT 0
* PK	SolutionNo	INT

Table tbimaintsolutions		
ModuleType	LONGTEXT	module type
CauseDesc	LONGTEXT	cause description
SolutionDesc	LONGTEXT	solution description
Rating	INT	rating
Indexes		
Type	Name	On
PK	pk_tbimaintsolutions	ErrorNo, SolutionNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbimclasstype		
Idx	Name	Data Type
* PK	MClass	INT
	Description	VARCHAR(255)
Indexes		
Type	Name	On
PK	pk_tbimclasstype	MClass
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbimrptype		
Idx	Name	Data Type
* PK	ID	INT
	Description	VARCHAR(30)
Indexes		
Type	Name	On
PK	pk_tbimrptype	ID
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbionoconfig		
Idx	Name	Data Type
*	nextONo	INT
*	minONo	INT
*	maxONo	INT
*	Step	INT
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci ROW_FORMAT=COMPACT		
Table tbloperation		
Idx	Name	Data Type
* PK	OpNo	INT
	Description	VARCHAR(255)
	Type	INT
Short	Short	VARCHAR(30)
Sqlwrite	Sqlwrite	LONGTEXT
Picture	Picture	VARCHAR(255)
String	String	VARCHAR(255)
Indexes		
Type	Name	On
PK	pk_tbloperation	OpNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbloperationparameter		
Idx	Name	Data Type
* PK	OpNo	INT
* PK	ParameterNo	INT
	Description	VARCHAR(255)
	DataType	INT DEFAULT 2
LouLimit	LouLimit	INT DEFAULT 0
HighLimit	HighLimit	INT DEFAULT 0
ParameterType	ParameterType	INT
Parameter	Parameter	VARCHAR(30)
QuerryChooseParameter	QuerryChooseParameter	LONGTEXT
ValueType	ValueType	INT DEFAULT 1
StringLength	StringLength	INT DEFAULT 0
Indexes		
Type	Name	On
PK	pk_tbloperationparameter	OpNo, ParameterNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbborder		
Idx	Name	Data Type
* PK	ONO	INT
	PlannedStart	DATETIME
	PlannedEnd	DATETIME
Start	Start	DATETIME
End	End	DATETIME
CNo	CNo	INT DEFAULT 0
State	State	INT DEFAULT 0
Enabled	Enabled	BOOLEAN DEFAULT false
Release	Release	DATETIME
Indexes		
Type	Name	On
PK	pk_tbborder	ONO
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbborderpos		
Idx	Name	Data Type
* PK	ONO	INT
* PK	OPos	INT
	PlannedStart	DATETIME
	PlannedEnd	DATETIME
Start	Start	DATETIME
End	End	DATETIME
WPN	WPN	INT
StepNo	StepNo	INT
MainPos	MainPos	INT DEFAULT 0
State	State	INT DEFAULT 0
ResourceID	ResourceID	INT
OpNo	OpNo	INT DEFAULT 0
HONO	HONO	INT
PNO	PNO	BOOLEAN DEFAULT false
subOrderBlocked	subOrderBlocked	available if sub order

Table tbilorderpos				
Idx	Name	Error		
Idx	OrderPNo	BOOLEAN DEFAULT false INT DEFAULT 0		
Indexes				
Type	Name	On		
PK	pk_tbilorderpos	ONo, OPos ResourceID		
	ResourceID	ResourceID		
	OrderPNo	OrderPNo		
	OpNo	OpNo		
	PNo	PNo		
	StepNo	StepNo		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tbipallet				
Idx	Name	Data Type		
* Pk	PalletPNo	INT		
* Pk	PalletID	INT		
	ONo	INT		
	OPos	INT		
	PNo	INT		
Indexes				
Type	Name	On		
PK	pk_tbipallet	PalletPNo, PalletID		
	PalletPNo	PalletPNo		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tbipalletdef				
Idx	Name	Data Type		
* Pk	PalletPNo	INT		
	Count	INT		
	PosCount	INT		
Indexes				
Type	Name	On		
PK	pk_tbipalletdef	PalletPNo		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tbipalletpos				
Idx	Name	Data Type		
* Pk	PalletPNo	INT		
* Pk	PalletID	INT		
* Pk	PalletPos	INT		
	ONo	INT		
	OPos	INT		
Idx	PNo	INT		
	PNoGroup	INT DEFAULT 0		
Indexes				
Type	Name	On		
PK	pk_tbipalletpos	PalletPNo, PalletID, PalletPos		
	PalletPNo	PalletPNo		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tbiparametertypes				
Idx	Name	Data Type		
* Pk	Type	INT		
	Description	VARCHAR(255)		
Indexes				
Type	Name	On		
PK	pk_tbiparametertypes	Type		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tbiparametervaluetypes				
Idx	Name	Data Type		
* Pk	Type	INT		
	Description	VARCHAR(255)		
	Feld1	VARCHAR(255)		
Indexes				
Type	Name	On		
PK	pk_tbiparametervaluetypes	Type		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tbiparts				
Idx	Name	Data Type		
* Pk	PNo	INT		
	Description	VARCHAR(255)		
	Type	INT		
	WPNo	INT DEFAULT 0		
	Picture	VARCHAR(255)		
	BasePallet	INT DEFAULT 0		
	MrpType	INT DEFAULT 1		
	SafetyStock	INT DEFAULT 0		
	LotSize	INT DEFAULT 1		
Idx	DefResourceId	INT DEFAULT 0		
	Short	VARCHAR(30)		
Indexes				
Type	Name	On		
PK	pk_tbiparts	PNo		
	DefResourceId	DefResourceId		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tbipartsreport				
Idx	Name	Data Type		
* Pk	ResourceID	INT		
* Pk	TimeStamp	DATETIME		
	PNo	INT		
Idx	ErrorID	INT		
* Pk	ID	INT AUTO_INCREMENT		
Indexes				
Type	Name	On		
PK	pk_tbipartsreport	ResourceID, TimeStamp, ID		
	ErrorID	ErrorID		

Table tbipartsreport

ID
Options
ENGINE=InnoDB AUTO_INCREMENT=1192 DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci

Table tbipartstype

Idx	Name	Data Type
* Pk	Type	INT
	Description	VARCHAR(255)
Indexes		
Type	Name	On
Pk	pk_tbipartstype	Type
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbipictype

Idx	Name	Data Type
* Pk	Type	INT
	Description	VARCHAR(255)
Indexes		
Type	Name	On
Pk	pk_tbipictype	Type
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbipnogroup

Idx	Name	Data Type
* Pk	Id	INT
* Pk	PNo	INT
Indexes		
Type	Name	On
Pk	pk_tbipnogroup	Id, PNo
	Id	Id
	PNo	PNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbipnogroupdef

Idx	Name	Data Type
* Pk	Id	INT
	Description	VARCHAR(255)
Indexes		
Type	Name	On
Pk	pk_tbipnogroupdef	Id
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbiresource

Idx	Name	Data Type	Description
* Pk	ResourceID	INT	resource id
	ResourceName	VARCHAR(255)	resource name
	Description	VARCHAR(255)	resource description
	PicType	INT	used PLC type (1 = CoDeSys, 2 = Siemens)
	IP	VARCHAR(15)	ip address
	Picture	VARCHAR(255)	path to picture
	ParallelProcessing	BOOLEAN DEFAULT false	true if parallel processes are possible
	Automatic	BOOLEAN DEFAULT false	true if automatic is active (?)
	WebPage	VARCHAR(255)	linked webpage
	DefaultBrowser	BOOLEAN DEFAULT false	true if the default browser of the System should be used
	TopologyType	INT DEFAULT 1	topology of the station
	AGV	BOOLEAN DEFAULT false	true if it is an agv
	ResourceType	INT DEFAULT 0	resource type
	OpcUaEndpoint	VARCHAR(32)	OPC UA Endpoint
	OpcUaNodeId	VARCHAR(128)	OPC UA node id
Indexes			
Type	Name	On	Description
Pk	pk_tbiresource	ResourceID	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tbiresourceoperation

Idx	Name	Data Type	Description
* Pk	ResourceID	INT	resource id
* Pk	OpNo	INT	operation number
	WorkingTime	INT	default working time
	OffsetTime	INT DEFAULT 0	defult offset time if parallel processing is possible
	ElectricEnergy	INT DEFAULT 0	default electric energy consumption
	CompressedAir	INT DEFAULT 0	default air consumption
Indexes			
Type	Name	On	Description
Pk	pk_tbiresourceoperation	ResourceID, OpNo	
	ResourceID	ResourceID	
	OpNo	OpNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tbiresourcetype

Idx	Name	Data Type
	Type	INT
	Description	VARCHAR(32)
Indexes		
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbiservicetimetable

Idx	Name	Data Type	Description
* Pk	ID	INT AUTO_INCREMENT	service id
Idx	ResourceID	INT DEFAULT 0	resource id for service
	Description	VARCHAR(255)	service description
Idx	SolutionID	INT DEFAULT 0	id for instruction documents
	Duration	INT DEFAULT 0	duration time in seconds
	nextService	DATETIME	time and date for next service
	repetition	INT DEFAULT 0	1 = daily; 2 = weekly; 3 = monthly; 4 = yearly
	OperatingTime	INT DEFAULT 0	in seconds to service if 0 then not recommend
	LimitToOperationTime	INT DEFAULT 0	operation time in seconds greater than calculated (chk in OpEnd)
Indexes			
Type	Name	On	Description
Pk	pk_tbiservicetimetable	ID	

Table tbiservicetimetables		
SolutionID		SolutionID
ResourceID		ResourceID
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		
Table tbisqlquery		
Idx	Name	Data Type
* Pk	MClass	INT
* Pk	MNo	INT
	SqlString	LONGTEXT
	QueryParameterList	INT DEFAULT 0
	AnswerParameterList	INT DEFAULT 0
	Description	VARCHAR(255)
	Short	VARCHAR(255)
	MaxRecords	INT DEFAULT 1
Indexes		
Type	Name	On
PK	pk_tbisqlquery	MClass, MNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbisqlqueryparameter		
Idx	Name	Data Type
* Pk	ParameterId	INT
* Pk	ParameterListId	INT
	ParameterName	VARCHAR(255)
	Type	INT DEFAULT 0
	StringLength	INT DEFAULT 0
Idx	CoDeSysV3_Address	INT DEFAULT 0
	Step7_Address	INT DEFAULT 0
Indexes		
Type	Name	On
Pk	pk_tbisqlqueryparameter	ParameterId, ParameterListId
	CoDeSysV3_Address	CoDeSysV3_Address
	ParameterId	ParameterId
	ParameterListId	ParameterListId
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbisqlqueryparameterlist		
Idx	Name	Data Type
* Pk	ParameterListId	INT
	ParameterListName	VARCHAR(255)
Indexes		
Type	Name	On
Pk	pk_tbisqlqueryparameterlist	ParameterListId
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbliststates		
Idx	Name	Data Type
* Pk	State	INT
	Description	VARCHAR(255)
	Short	VARCHAR(4)
Indexes		
Type	Name	On
Pk	pk_tbliststates	State
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tblistep			
Idx	Name	Data Type	Description
	WPNo	INT	work plan number
* Pk	StepNo	INT	step number
* Pk	ONo	INT	order number
* Pk	OPos	INT	order position
	Description	VARCHAR(255)	step description
	OpNo	INT	operation number
	NextStepNo	INT	next step number
	FirstStep	BOOLEAN DEFAULT false	true if first step
	ErrorStepNo	INT	next step number if ended with error
	NewPNo	INT	new part number after the step
	PlannedStart	DATETIME	planned start
	PlannedEnd	DATETIME	planned end
	Start	DATETIME	real start
	End	DATETIME	real end
	OpNoType	INT	operation number type (1=function; 2=program order)
Idx	ResourceID	INT	resource id
	TransportTime	INT DEFAULT 0	transport time to the resource
	ErrorStep	BOOLEAN DEFAULT false	is this a error step
	ElectricEnergyCalc	INT DEFAULT 0	[mWs] calculated electric energy
	ElectricEnergyReal	INT DEFAULT 0	[mWs] measured electric energy
	CompressedAirCalc	INT DEFAULT 0	mNl] calculated air
	CompressedAirReal	INT DEFAULT 0	mNl] measured air
	FreeString	VARCHAR(255)	free text (example: use as print text for QR Code)
Idx	StaffId	INT DEFAULT 0	staff id from worker
	ErrorRetVal	INT DEFAULT 0	error return value set from PLC
*	Active	BOOLEAN DEFAULT true	true if the step is active
Indexes			
Type	Name	On	Description
Pk	pk_tblistep	StepNo, ONo, OPos	
	ResourceID	ResourceID	
	StaffId	StaffId	
	StepNo	StepNo	
	ONo	ONo	
Options			

Table tblstepdef			
Idx	Name	Data Type	Description
* Pk	WPNo	INT	work plan number
* Pk	StepNo	INT	step number
	Description	VARCHAR(255)	step description
Idx	OpNo	INT	operation number
	NextStepNo	INT DEFAULT 0	next step number
	FirstStep	BOOLEAN DEFAULT false	true if first step
	ErrorStepNo	INT DEFAULT 0	next step number if ended with error

Table tblistepdef		
Idx	NewPNo	INT DEFAULT 0
	OpNoType	INT DEFAULT 1
	ResourceID	INT
	TransportTime	INT DEFAULT 0
	ErrorStep	BOOLEAN DEFAULT false
	SqlLite	LONGTEXT
	ElectricEnergyCalc	INT DEFAULT 0
	CompressedAirCalc	INT DEFAULT 0
	WorkingTimeCalc	INT DEFAULT 0
	FreeString	VARCHAR(255)
Indexes		
Type	Name	On
PK	pk_tblistepdef	WPNNo, StepNo
	ResourceID	ResourceID
	OpNo	OpNo
	WPNNo	WPNNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tblistepparameter		
Idx	Name	Data Type
	WPNNo	INT
* PK	StepNo	INT
* PK	ONo	INT
* PK	OPos	INT
* PK	ParameterNo	INT
	Parameter	VARCHAR(30)
*	ParameterType	INT DEFAULT 1
Indexes		
Type	Name	On
PK	pk_tblistepparameter	StepNo, ONo, OPos, ParameterNo
	ONo	ONo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tblistepparameterdef		
Idx	Name	Data Type
* PK	WPNNo	INT
* PK	StepNo	INT
* PK	ParameterNo	INT
	Parameter	VARCHAR(30)
	ParameterType	INT
	QueryChooseParameter	LONGTEXT
Indexes		
Type	Name	On
PK	pk_tblistepparameterdef	WPNNo, StepNo, ParameterNo
	WPNNo	WPNNo
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tblistextlist		
Idx	Name	Data Type
	ListID	INT DEFAULT 0
	ListPos	INT DEFAULT 0
	Description	VARCHAR(255)
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbitopology		
Idx	Name	Data Type
* PK	SourceId	INT
Idx	TargetId	INT
* PK	SourcePositionId	INT
* PK	ShuntId	INT
Idx	TargetPositionId	INT
Indexes		
Type	Name	On
PK	pk_tbitopology	SourceId, SourcePositionId, ShuntId
	SourcePositionId	SourcePositionId
	ShuntId	ShuntId
	SourceId	SourceId
	TargetId	TargetId
	TargetPositionId	TargetPositionId
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbitopologytype		
Idx	Name	Data Type
* PK	ID	INT
	TopologyName	VARCHAR(255)
	Description	VARCHAR(255)
	Picture	VARCHAR(255)
	Branch	INT
Indexes		
Type	Name	On
PK	pk_tbitopologytype	ID
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tblusercontrol		
Idx	Name	Data Type
* PK	UserLevel	INT
	RoleName	VARCHAR(255)
	Description	VARCHAR(255)
	Password	VARCHAR(255)
Indexes		
Type	Name	On
PK	pk_tblusercontrol	UserLevel
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tbliworkplandef		
Idx	Name	Data Type
* PK	WPNNo	INT
	Description	VARCHAR(255)
	Type	INT DEFAULT 1
Idx	Short	VARCHAR(30)
Indexes		
Type	Name	Description
	WPNNo	work plan type
	Description	work plan description
	Type	work plan type
	Short	short description

Table tbworkplandef	
PictureNo	INT
PNo	INT DEFAULT 0
Indexes	
Type	Name
PK	pk_tbworkplandef
	Type
Options	
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci	

Table tbworkplantype	
Idx	Name
* PK	Type
	Description
Indexes	
Type	Name
PK	pk_tbworkplantype
Options	
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci	