



Main Diagram

Table tblagvdocked			
Idx	Name	Data Type	Description
* Pk	AgvId	INT DEFAULT 0	AGV id
Idx	ResourceId	INT DEFAULT 0	Resource id
Indexes			
Type	Name	On	Description
Pk	pk_tblagvdocked	AgvId	
	ResourceId	ResourceId	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblaitoperation			
Idx	Name	Data Type	
* Pk	OpNo	INT	
* Pk	AltOpNo	INT	
Indexes			
Type	Name	On	
Pk	pk_tblaitoperation	OpNo, AltOpNo	
Unq	OpNo	OpNo	
Unq	AltOpNo	AltOpNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblaitoperationparameter			
Idx	Name	Data Type	
*	OpNo	INT	
*	ParameterNo	INT	
*	AltOpNo	INT	
*	AltParameterNo	INT	
	Circulation	VARCHAR(255)	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblautomaticorder			
Idx	Name	Data Type	Description
Idx	ResourceId	INT	Ressource id to check
	PNo	INT	get part number from message to produce this part
	LowLimit	INT	low limit
	HighLimit	INT	high limit
	MClass	INT	start and check by message class
	MNo	INT	start and check by message number
	WPNo	INT	work plan number to start
	BufNo	INT	buffer number to check
	Active	BOOLEAN DEFAULT false	active on/off
	Description	VARCHAR(255)	description of the automatic order
	NoOno	BOOLEAN DEFAULT false	If checked, just the Parts that are not planned for an order
	AutoOrderType	INT	1 = Cyclic Order fill Buffer ; 2= Cyclic Order empty Buffer; 10 = OrderStartes after Message;
* Pk	ID	INT	primary key
	ResourceIdSend	INT	resource id that send the message
	PNoChk	INT	part number to check
	Dispo	BOOLEAN DEFAULT false	start dispo on/off
Indexes			
Type	Name	On	Description
Pk	pk_tblautomaticorder	ID	
	ResourceId	ResourceId	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

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

Table tblbookedbufmsg			
Idx	Name	Data Type	Description
* Pk	resResource	INT	Resource that is booked for this Information
* Pk	EventPos	INT	unique number for PLC
Idx	ResourceId	INT DEFAULT 0	resource id
	BufNo	INT DEFAULT 0	buffer number
	BufPos	INT DEFAULT 0	buffer position
Indexes			
Type	Name	On	Description
Pk	pk_tblbookedbufmsg	resResource, EventPos	
	ResourceId	ResourceId	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblbox			
Idx	Name	Data Type	Description
* Pk	BoxPNo	INT	part number of the box
* Pk	BoxID	INT	id of the box
	ONo	INT	order number booked to box (not used)
	OPos	INT DEFAULT 0	order podition bokked to the box (not used)
	Full	BOOLEAN DEFAULT false	full or empty (not used)
Indexes			
Type	Name	On	Description
Pk	pk_tblbox	BoxPNo, BoxID	
	BoxID	BoxID	
	BoxPNo	BoxPNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblboxdef			
Idx	Name	Data Type	Description
* Pk	BoxPNo	INT	part number of the box
	Count	INT	count of the box
	PosCount	INT	psoltions in the box
	RowCount	INT DEFAULT 0	rows of the box
Indexes			
Type	Name	On	Description
Pk	pk_tblboxdef	BoxPNo	

Table tblboxdef				
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tblboxpos				
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_tblboxpos	BoxPos, BoxPNo, BoxId		
	BoxId	BoxId		
	BoxPNo	BoxPNo		
	PNo	PNo		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tblbuffer				
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 DEFAULT 0	sides of the buffer	
*	Rows	INT DEFAULT 0	rows of the buffer	
*	Columns	INT DEFAULT 0	columns of the buffer	
Indexes				
Type	Name	On	Description	
Pk	pk_tblbuffer	ResourceId, BufNo		
	ResourceId	ResourceId		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tblbufferpos				
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 chnage	
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	
	PNoGroup	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_tblbufferpos	ResourceId, BufNo, BufPos		
	BoxID	BoxID		
	PalletID	PalletID		
	ResourceId	ResourceId		
	PNo	PNo		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tblbuffertype				
Idx	Name	Data Type	Description	
* Pk	Type	INT		
	Description	VARCHAR(255)		
Indexes				
Type	Name	On	Description	
Pk	pk_tblbuffertype	Type		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tblcarrier				
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_tblcarrier	CarrierID		
	CarrierTypeID	CarrierTypeID		
	PNo	PNo		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				
Table tblcarrierdef				
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_tblcarrierdef	CarrierTypeID		
	PNo	PNo		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				

Table tblchartdef			
Idx	Name	Data Type	Description
* Pk	ChartNo	INT	chart number
	OpNo	INT	operation number where the chart is used
	Description	VARCHAR(255)	description which parameter is shown
	Parameter	INT	parameter number that will be shown
	UpperLimit	INT	parameter number that is an upper limit
	LowerLimit	INT	parameter number that is an lower limit
	Default	INT	parameter for default value
Indexes			
Type	Name	On	Description
Pk	pk_tblchartdef	ChartNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			
Table tblcustomer			
Idx	Name	Data Type	Description
* Pk	CNo	INT	customer number
	FirstName	VARCHAR(255)	first name
	LastName	VARCHAR(255)	surename
	Address	VARCHAR(255)	address
	Phone	VARCHAR(255)	phone number
	E-Mail	VARCHAR(255)	eMail
	Company	VARCHAR(255)	company name
Indexes			
Type	Name	On	Description
Pk	pk_tblcustomer	CNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			
Table tbldatatype			
Idx	Name	Data Type	
* Pk	ID	INT	
	Description	VARCHAR(255)	
	LengthByteCoDeSys	INT	
Indexes			
Type	Name	On	
Pk	pk_tbldatatype	ID	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			
Table tblerrorcodes			
Idx	Name	Data Type	
* Pk	ErrorId	INT	
	Description	VARCHAR(255)	
	Short	VARCHAR(255)	
Indexes			
Type	Name	On	
Pk	pk_tblerrorcodes	ErrorId	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			
Table tblfinorder			
Idx	Name	Data Type	Description
* Pk	ONo	INT	order number
	PlannedStart	DATETIME	planned start time
	PlannedEnd	DATETIME	planned end time
	Start	DATETIME	real start time
	End	DATETIME	real end time
	CNo	INT DEFAULT 0	customer number
	State	INT DEFAULT 0	current state
	Enabled	BOOLEAN DEFAULT false	enabled
	Release	DATETIME	release time
Indexes			
Type	Name	On	Description
Pk	pk_tblfinorder	ONo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			
Table tblfinorderpos			
Idx	Name	Data Type	Description
* Pk	ONo	INT	order number
* Pk	OPos	INT	order position
	PlannedStart	DATETIME	planned start
	PlannedEnd	DATETIME	planned end
	Start	DATETIME	real start
	End	DATETIME	real end
	WPNo	INT	work plan number
	StepNo	INT	step number
	MainOPos	INT DEFAULT 0	main order position if sub order
	State	INT DEFAULT 0	current state
Idx	ResourceID	INT	id of the next resource
	OpNo	INT DEFAULT 0	next operation number
	WONo	INT	work order number
	PNo	INT DEFAULT 0	part number to create
	subOrderBlocked	BOOLEAN DEFAULT false	available if sub order
	Error	BOOLEAN DEFAULT false	error number
Idx	OrderPNo	INT DEFAULT 0	part number shuoun on the current step
Indexes			
Type	Name	On	Description
Pk	pk_tblfinorderpos	ONo, OPos	
	ResourceID	ResourceID	
	OrderPNo	OrderPNo	
	ONo	ONo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			
Table tblfinstep			
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)	description
	OpNo	INT	operation number
	NextStepNo	INT	next step number
	FirstStep	BOOLEAN DEFAULT false	is this the first step?
	ErrorStepNo	INT	next step number if ended with error

Table tblfinstep				
Idx	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)	
	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	is this step active?	
Indexes				
Type	Name	On	Description	
Pk	pk_tblfinstep	StepNo, ONo, OPos		
	ResourceID	ResourceID		
	StaffId	StaffId		
	ONo	ONo		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				

Table tblfinstepparameter				
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	
* PK	ParameterNo	INT	parameter number	
	Parameter	VARCHAR(30)	parameter value	
*	ParameterType	INT DEFAULT 1	parameter type	
Indexes				
Type	Name	On	Description	
PK	pk_tblfinstepparameter	StepNo, ONo, OPos, ParameterNo		
	ONo	ONo		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				

Table tblinfo						
Idx	Name	Data Type	Description			
* Pk	Id	INT	ID			
*	Version	VARCHAR(8)				
*	Changed	TIMESTAMP ON UPDATE current_timestamp() DEFAULT current_timestamp()				
*	Detcription	VARCHAR(254)				
Indexes						
	Name	On	Description			
Pk	pk_tblinfo	Id				
Options						
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci						

Table tblmachinereport				
Idx	Name	Data Type	Description	
* PK	ResourceID	INT	resource id	
* PK	TimeStamp	DATETIME	date and time when the message was sent	
	AutomaticMode	BOOLEAN DEFAULT false	automatic active	
	ManualMode	BOOLEAN DEFAULT false	manual mode active	
	Busy	BOOLEAN DEFAULT false	busy active	
	Reset	BOOLEAN DEFAULT false	reset active	
	ErrorL0	BOOLEAN DEFAULT false	error L0 active	
	ErrorL1	BOOLEAN DEFAULT false	error L1 active	
	ErrorL2	BOOLEAN DEFAULT false	error L3 active	
* PK	ID	INT AUTO_INCREMENT	primary key	
Indexes				
Type	Name	On	Description	
Pk	pk_tblmachinereport	ResourceID, TimeStamp, ID		
	ID	ID		
	ResourceID	ResourceID		
Options				
ENGINE=InnoDB AUTO_INCREMENT=10127 DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				

Table tblmainterror				
Idx	Name	Data Type	Description	
* PK	ErrorNo	INT	error number	
	ErrorDesc	LONGTEXT	error description	
Indexes				
Type	Name	On	Description	
PK	pk_tblmainterror	ErrorNo		
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				

Table tblmainterrorlinks				
Idx	Name	Data Type	Description	
	ErrorNo	INT DEFAULT 0	error number	
	LinkType	INT DEFAULT 0	link type (1=picture; 2=video; 3=pdf)	
	LinkDesc	LONGTEXT	link description	
	Link	LONGTEXT	link	
Options				
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci				

Table tblmaintlinks			
Idx	Name	Data Type	Description
*	ErrorNo	INT	error number
*	SolutionNo	INT	solution number
	LinkType	INT	link type (1=picture; 2=video; 3=pdf)
	LinkDesc	LONGTEXT	link description
	Link	LONGTEXT	link
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblmaintsolutions				
Idx	Name	Data Type	Description	
* Pk	ErrorNo	INT DEFAULT 0	error number	
* Pk	SolutionNo	INT	solution number	

Table tblmaintsolutions			
	ModuleType	LONGTEXT	module type
	CauseDesc	LONGTEXT	cause description
	SolutionDesc	LONGTEXT	solution description
	Rating	INT	rating
Indexes			
Type	Name	On	Description
Pk	pk_tblmaintsolutions	ErrorNo, SolutionNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblmclasstype			
Idx	Name	Data Type	Description
* Pk	MClass	INT	message class
	Description	VARCHAR(255)	message class description
Indexes			
Type	Name	On	Description
Pk	pk_tblmclasstype	MClass	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblmrptype			
Idx	Name	Data Type	
* Pk	ID	INT	
	Description	VARCHAR(30)	
Indexes			
Type	Name	On	
Pk	pk_tblmrptype	ID	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblonoconfig			
Idx	Name	Data Type	Description
*	nextONo	INT	next order number
*	minONo	INT	minimal order number
*	maxONo	INT	maximum order number
*	Step	INT	step size
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci ROW_FORMAT=COMPACT			

Table tbloperation			
Idx	Name	Data Type	Description
* Pk	OpNo	INT	operation number
	Description	VARCHAR(255)	operation description
	Type	INT	1 = ressource function, 5 = Internal function like loop, start, wait
	Short	VARCHAR(30)	short description for operation
	SqlWrite	LONGTEXT	Querys to write after data after opend separated with ;
	Picture	VARCHAR(255)	picture path for icon
	String	VARCHAR(255)	free text (example: use as print text for QR Code)
Indexes			
Type	Name	On	Description
Pk	pk_tbloperation	OpNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tbloperationparameter			
Idx	Name	Data Type	Description
* Pk	OpNo	INT	operation number
* Pk	ParameterNo	INT	parameter number
	Description	VARCHAR(255)	parameter description
	DataType	INT DEFAULT 2	1 = Int; 2 = dInt (4Bytes); 3 = String
	LowLimit	INT DEFAULT 0	possible low limit
	HighLimit	INT DEFAULT 0	possible high limit
	ParameterType	INT	1 = Constant; 2 = Changable before Start ; 3 =runtime parameter
	Parameter	VARCHAR(30)	parameter value
	QueryryChooseParameter	LONGTEXT	SQL string to choose the parameter value
	ValueType	INT DEFAULT 1	1 =not defined, 2= Time[s], 3=PNo for internal calculations
	StringLength	INT DEFAULT 0	string length if DataType = 2 (normally = 30)
Indexes			
Type	Name	On	Description
Pk	pk_tbloperationparameter	OpNo, ParameterNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblorder			
Idx	Name	Data Type	Description
* Pk	ONo	INT	order number
	PlannedStart	DATETIME	planned start
	PlannedEnd	DATETIME	planned end
	Start	DATETIME	real start
	End	DATETIME	real end
	CNo	INT DEFAULT 0	customer number
	State	INT DEFAULT 0	current state
	Enabled	BOOLEAN DEFAULT false	enabled
	Release	DATETIME	release time
Indexes			
Type	Name	On	Description
Pk	pk_tblorder	ONo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblorderpos			
Idx	Name	Data Type	Description
* Pk	ONo	INT	order number
* Pk	OPos	INT	order position
	PlannedStart	DATETIME	planned start
	PlannedEnd	DATETIME	planned end
	Start	DATETIME	real start
	End	DATETIME	real end
	WPNo	INT	work plan number
Idx	StepNo	INT	step number
	MainOPos	INT DEFAULT 0	main order position if sub order
	State	INT DEFAULT 0	current state
Idx	ResourceID	INT	resource id
Idx	OpNo	INT DEFAULT 0	operation number
	WONo	INT	work order number
Idx	PNo	INT	part number to create
	subOrderBlocked	BOOLEAN DEFAULT false	available if sub order

Table tblorderpos			
	Error	BOOLEAN DEFAULT false	error number
Idx	OrderPNo	INT DEFAULT 0	part number shuown on the current step
Indexes			
Type	Name	On	Description
Pk	pk_tblorderpos	ONo, OPos	
	ResourceID	ResourceID	
	OrderPNo	OrderPNo	
	OpNo	OpNo	
	PNo	PNo	
	StepNo	StepNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblpallet			
Idx	Name	Data Type	Description
* Pk	PalletPNo	INT	part number of the pallet
* Pk	PalletID	INT	pallet id
	ONo	INT	order number that is booked to the pallet
	OPos	INT	order position that is booked to the pallet
	PNo	INT	part number that is booked to the pallet
Indexes			
Type	Name	On	Description
Pk	pk_tblpallet	PalletPNo, PalletID	
	PalletPNo	PalletPNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblpalletdef			
Idx	Name	Data Type	Description
* Pk	PalletPNo	INT	part number of the pallet
	Count	INT	count of the pallet
	PosCount	INT	positions on the pallet
Indexes			
Type	Name	On	Description
Pk	pk_tblpalletdef	PalletPNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblpalletpos			
Idx	Name	Data Type	Description
* Pk	PalletPNo	INT	part number of the pallet
* Pk	PalletID	INT	pallet id
* Pk	PalletPos	INT	pallet position
	ONo	INT	order number booked to the pallet position
	OPos	INT	order position booked to the pallet position
Idx	PNo	INT	part number booked to the pallet position
	PNoGroup	INT DEFAULT 0	group of part number that are posible to select
Indexes			
Type	Name	On	Description
Pk	pk_tblpalletpos	PalletPNo, PalletID, PalletPos	
	PalletPNo	PalletPNo	
	PNo	PNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

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

Table tblparametervaluetypes			
Idx	Name	Data Type	
* Pk	Type	INT	
	Description		VARCHAR(255)
	Feld1		VARCHAR(255)
Indexes			
Type	Name	On	
Pk	pk_tblparametervaluetypes	Type	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblparts			
Idx	Name	Data Type	Description
* Pk	PNo	INT	part number
	Description	VARCHAR(255)	part description
	Type	INT	Type of Part (raw part, productio part, ...)
	WPNo	INT DEFAULT 0	used workplan number
	Picture	VARCHAR(255)	used picture path
	BasePallet	INT DEFAULT 0	used base pallet part number
	MrpType	INT DEFAULT 1	1= no planning; 2= planneing demand (plan); 3= planning demand (start)
	SafetyStock	INT DEFAULT 0	minimum stock size for this part
	LotSize	INT DEFAULT 1	minimum lot size for this part
Idx	DefResourceId	INT DEFAULT 0	default location for this part
	Short	VARCHAR(30)	short description
Indexes			
Type	Name	On	Description
Pk	pk_tblparts	PNo	
	DefResourceId	DefResourceId	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblpartsreport			
Idx	Name	Data Type	Description
* Pk	ResourceID	INT	reported resource id
* Pk	TimeStamp	DATETIME	report time stamp
	PNo	INT	reported part number
Idx	ErrorID	INT	error id
* Pk	ID	INT AUTO_INCREMENT	primary key
Indexes			
Type	Name	On	Description
Pk	pk_tblpartsreport	ResourceID, TimeStamp, ID	
	ErrorID	ErrorID	

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

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

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

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

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

Table tblresource			
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_tblresource	ResourceID	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

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

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

Table tblservicetimetable			
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_tblservicetimetable	ID	

Table tblservicetimetable		
	SolutionID	SolutionID
	ResourceID	ResourceID
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

Table tblsqlquery			
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_tblsqlquery		MClass, MNo
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblsqlqueryparameter		
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_tblsqlqueryparameter	ParameterId, ParameterListId
	CoDeSysV3_Address	CoDeSysV3_Address
	ParameterId	ParameterId
	ParameterListId	ParameterListId
Options		
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci		

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

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

Table tblstep			
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	mNI] calculated air
	CompressedAirReal	INT DEFAULT 0	mNI] 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_tblstep	StepNo, ONo, OPos	
	ResourceID	ResourceID	
	StaffId	StaffId	
	StepNo	StepNo	
	ONo	ONo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblstepdef			
Idx	Name		Description
* PK	WPNo		work plan number
* PK	StepNo		step number
	Description		VARCHAR(255)
Idx	OpNo		operation number
	NextStepNo		INT DEFAULT 0
	FirstStep		BOOLEAN DEFAULT false
	ErrorStepNo		INT DEFAULT 0

Table tblstepdef			
Idx	NewPNo	INT DEFAULT 0	new part number after the step
	OpNoType	INT DEFAULT 1	operation number type (1=function; 2=program order)
	ResourceID	INT	resource id
	TransportTime	INT DEFAULT 0	transport time to these step
	ErrorStep	BOOLEAN DEFAULT false	true if it is an error step
	SqlWrite	LONGTEXT	Querys to write after data after opend separated with ;
	ElectricEnergyCalc	INT DEFAULT 0	[mWs] calculated electric energy
	CompressedAirCalc	INT DEFAULT 0	[mWs] measured electric energy
	WorkingTimeCalc	INT DEFAULT 0	calculated working time
	FreeString	VARCHAR(255)	free text
Indexes			
Type	Name	On	Description
Pk	pk_tblstepdef	WPNo, StepNo	
	ResourceID	ResourceID	
	OpNo	OpNo	
	WPNo	WPNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblstepparameter			
Idx	Name	Data Type	Description
* Pk	WPNo	INT	work plan number
	StepNo	INT	step number
	ONo	INT	order number
	OPos	INT	order position
	ParameterNo	INT	parameter number
	Parameter	VARCHAR(30)	parameter
	ParameterType	INT DEFAULT 1	parameter type
Indexes			
Type	Name	On	Description
Pk	pk_tblstepparameter	StepNo, ONo, OPos, ParameterNo	
	ONo	ONo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tblstepparameterdef			
Idx	Name	Data Type	Description
* Pk	WPNo	INT	work plan number
* Pk	StepNo	INT	step number
* Pk	ParameterNo	INT	parameter number
	Parameter	VARCHAR(30)	parameter
	ParameterType	INT	parameter type
	QueryChooseParameter	LONGTEXT	query to calculate this parameter
Indexes			
Type	Name	On	Description
Pk	pk_tblstepparameterdef	WPNo, StepNo, ParameterNo	
	WPNo	WPNo	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tbltextlist			
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 tbltopology			
Idx	Name	Data Type	Description
* Pk	SourceId	INT	source id
Idx	TargetId	INT	target id
* Pk	SourcePositionId	INT	source position
* Pk	ShuntId	INT	shunt id
Idx	TargetPositionId	INT	target position
Indexes			
Type	Name	On	Description
Pk	pk_tbltopology	SourceId, SourcePositionId, ShuntId	
	SourcePositionId	SourcePositionId	
	ShuntId	ShuntId	
	SourceId	SourceId	
	TargetId	TargetId	
	TargetPositionId	TargetPositionId	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

Table tbltopologytype			
Idx	Name	Data Type	
* Pk	ID	INT	
	TopologyName	VARCHAR(255)	
	Description	VARCHAR(255)	
	Picture	VARCHAR(255)	
	Branch	INT	
Indexes			
Type	Name	On	
Pk	pk_tbltopologytype	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 tblworkplandef			
Idx	Name	Data Type	Description
* Pk	WPNo	INT	work plan type
	Description	VARCHAR(255)	work plan description
	Type	INT DEFAULT 1	work plan type
Idx	Short	VARCHAR(30)	short description

Table tblworkplandef			
	PictureNo	INT	Picture number
	PNo	INT DEFAULT 0	Part Number for just work plans or transports
Indexes			
Type	Name	On	Description
Pk	pk_tblworkplandef	WFNo	
	Type	Type	
Options			
ENGINE=InnoDB DEFAULT CHARSET=utf8mb3 COLLATE=utf8mb3_general_ci			

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