How to build a workbook for planning and inventory analysis

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December 24, 2017

Purpose

The purpose of this is to either monthly or quarterly to create a workbook with which you can have information available for planning and inventory analysis.

You may have a tableau report or other tool created already, but I would still recommend you run through this exercise at least once to understand where a lot of our data resides.

Steps to build the workbook

Step 1 Forward looking forecast

We start by identifying parts you are interested in. In the following example we will work purchased parts with forecasted demand. Here we will use tcode Z_MRP_LIST.

Step 2: Backwards looking consumption

Run tcode MC.9 for the prior 12 months. This tells about inventory behaviors such as stock levels, turns by part number, consumption, usage frequency, etc.

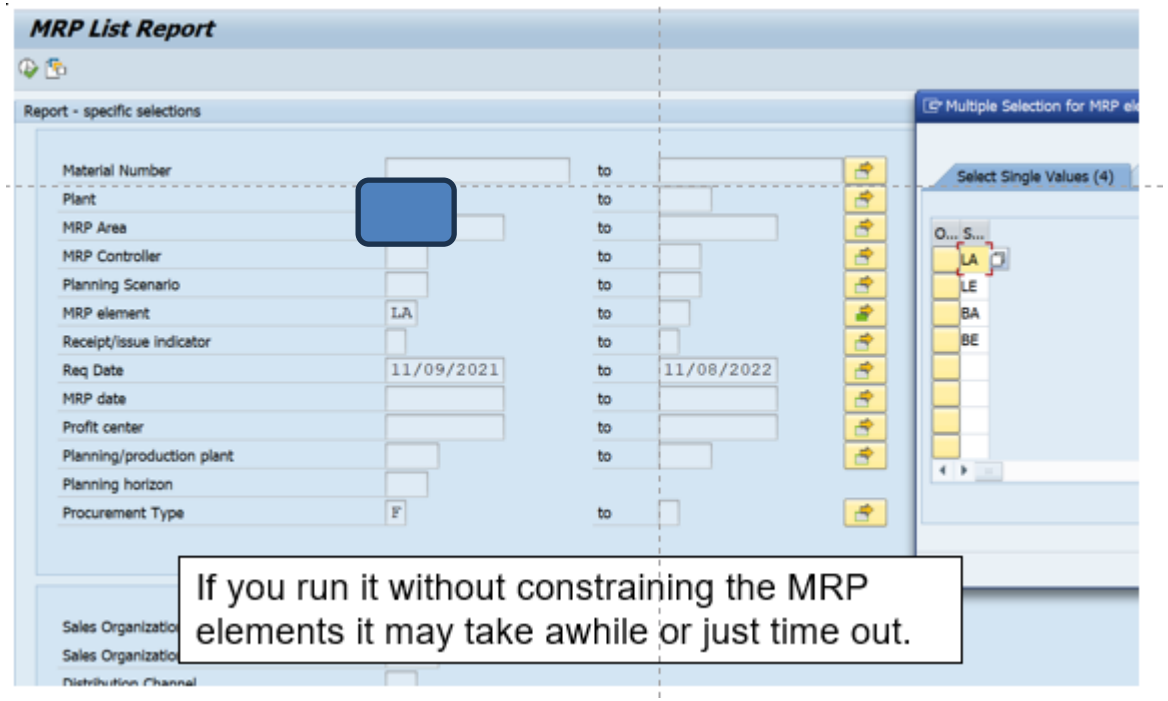
Step 3: Materials master data

Run MARC and/or MMUSERS. Here will get information on price, lot size, buffers, etc.

Step 4: Run MRP Monitor for segmentation. Key segments can vary, but we will always use ABC (financial valuation), XYZ (part variation) and HIJ (frequency of picks or usage).

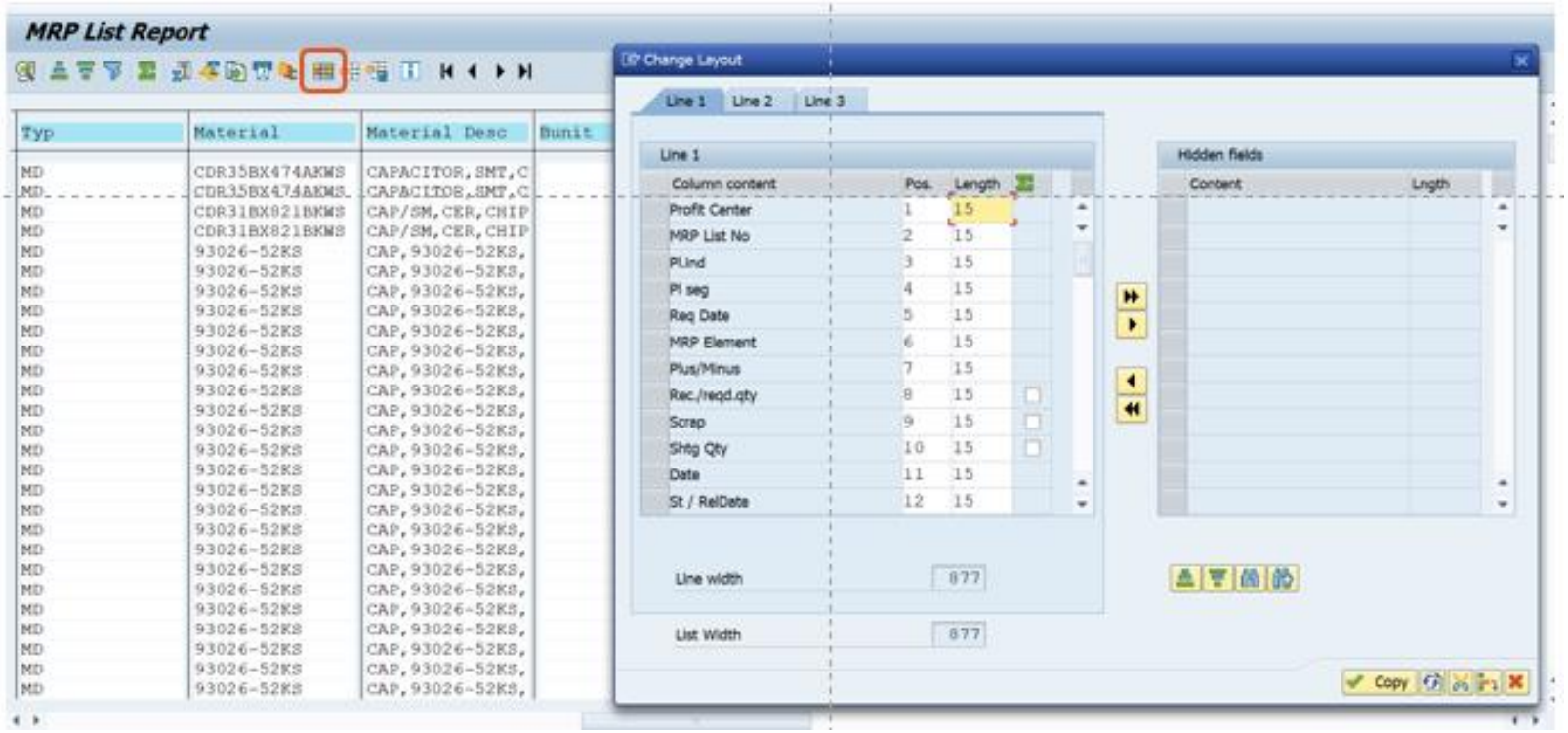
Forward looking forecast (mrp_list)

MRP_LIST is an extract of MRP by site and MRP Area. If I want to see what the external supply for an MRP Area, I populate Plant, MRP Area, MRP Elements LA, LE, BA, BE, procurement type “F” and date range and execute. It takes a little while to run, but I have run complex plants for three-year windows in less than an hour.



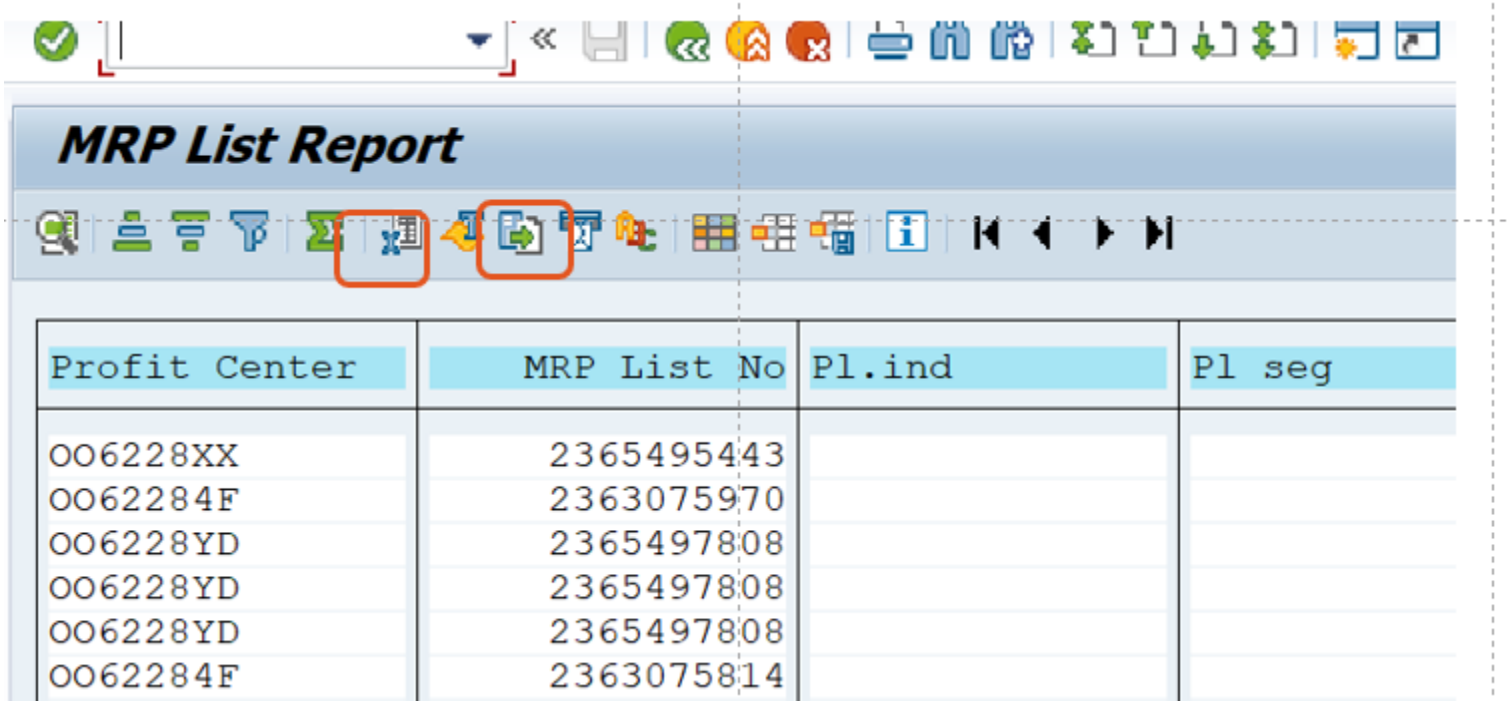
Output

My list default layout includes 52 elements, but you can make the listing smaller by changing the layout and saving it as something else. See highlighted icon.



Exporting MRP_LIST

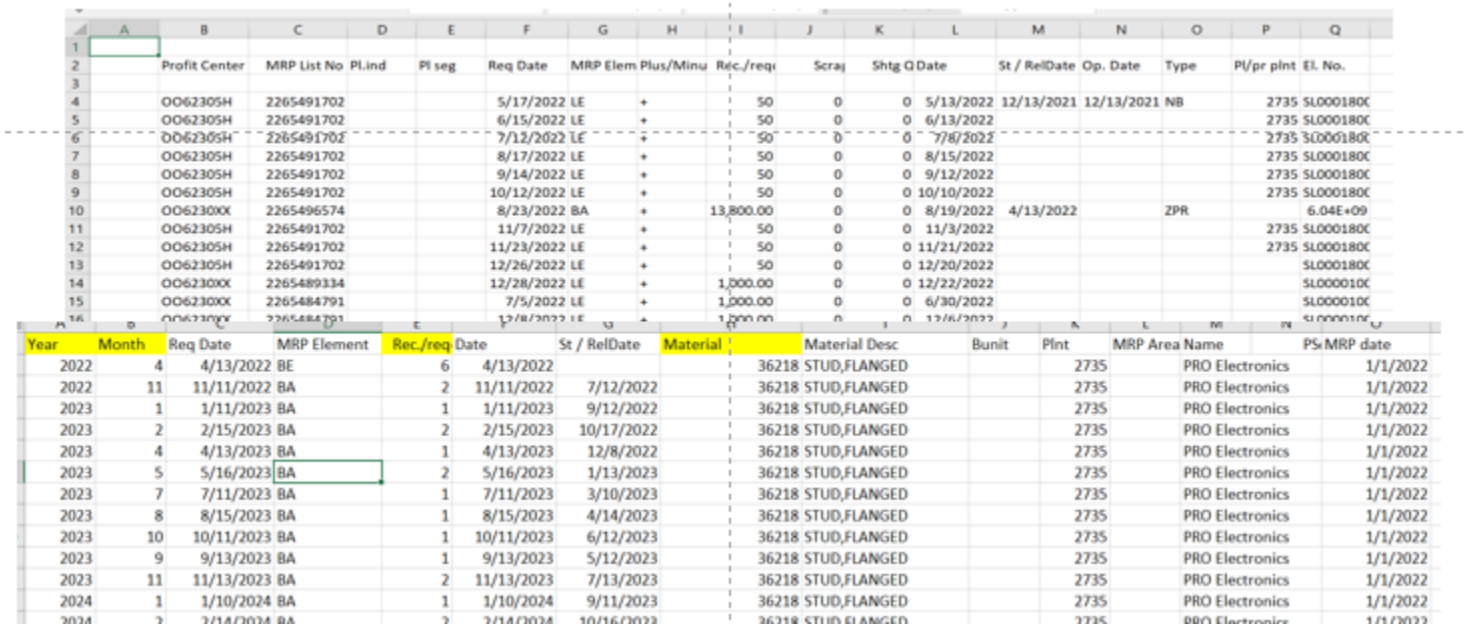
If you run MRP_LIST and hit the first (excel) icon it will go into excel. If you select the second icon it will give you text file options.



Text Extract

It looks like the first view when I run it and extract it. The second view is how it looks when I clean it up. To make analytics easier, I add year and month columns.

The columns in yellow are often the most interesting, also note even though I ran it by request, the MRP date is still available on the right side.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1																	
2		Profit Center	MRP List No	Pl.ind	Pl seg	Req Date	MRP Elem	Plus/Minu	Rec./req	Scra	Shtg Q	Date	St / RelDate	Op. Date	Type	Pl/pr plnt	El. No.
3																	
4		OO62305H	2265491702			5/17/2022	LE	+	50	0	0	5/13/2022	12/13/2021	12/13/2021	NB	2735	SL000180(
5		OO62305H	2265491702			6/15/2022	LE	+	50	0	0	6/13/2022				2735	SL000180(
6		OO62305H	2265491702			7/12/2022	LE	+	50	0	0	7/8/2022				2735	SL000180(
7		OO62305H	2265491702			8/17/2022	LE	+	50	0	0	8/15/2022				2735	SL000180(
8		OO62305H	2265491702			9/14/2022	LE	+	50	0	0	9/12/2022				2735	SL000180(
9		OO62305H	2265491702			10/12/2022	LE	+	50	0	0	10/10/2022				2735	SL000180(
10		OO6230XX	2265496574			8/23/2022	BA	+	13,800.00	0	0	8/19/2022	4/13/2022		ZPR		6.04E+09
11		OO62305H	2265491702			11/7/2022	LE	+	50	0	0	11/3/2022				2735	SL000180(
12		OO62305H	2265491702			11/23/2022	LE	+	50	0	0	11/21/2022				2735	SL000180(
13		OO62305H	2265491702			12/26/2022	LE	+	50	0	0	12/20/2022					SL000180(
14		OO6230XX	2265489334			12/28/2022	LE	+	1,000.00	0	0	12/22/2022					SL000010(
15		OO6230XX	2265484791			7/5/2022	LE	+	1,000.00	0	0	6/30/2022					SL000010(
16		OO6230XX	2265484791			12/8/2022	LE	+	1,000.00	0	0	12/6/2022					SL000010(

Year	Month	Req Date	MRP Element	Rec./req	Date	St / RelDate	Material		Material Desc	Bunit	Plnt	MRP Area	Name	PS	MRP date
2022	4	4/13/2022	BE	6	4/13/2022			36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2022	11	11/11/2022	BA	2	11/11/2022	7/12/2022		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	1	1/11/2023	BA	1	1/11/2023	9/12/2022		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	2	2/15/2023	BA	2	2/15/2023	10/17/2022		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	4	4/13/2023	BA	1	4/13/2023	12/8/2022		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	5	5/16/2023	BA	2	5/16/2023	1/13/2023		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	7	7/11/2023	BA	1	7/11/2023	3/10/2023		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	8	8/15/2023	BA	1	8/15/2023	4/14/2023		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	10	10/11/2023	BA	1	10/11/2023	6/12/2023		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	9	9/13/2023	BA	1	9/13/2023	5/12/2023		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	11	11/13/2023	BA	2	11/13/2023	7/13/2023		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2024	1	1/10/2024	BA	1	1/10/2024	9/11/2023		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2024	2	2/14/2024	BA	2	2/14/2024	10/16/2023		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022

Using it for projecting monthly receipts

Adding cost to it allows you to use it for monthly inventory projections or allows you to quickly quantity the values of exceptions messages, by putting it into a pivot table.

STOs for GOS plants are included and are part of the BE MRP element.

If you get “crooked” numbers in specific when you sum it up, look for things like blanket orders (qty=999,999) and other oddities. To fin these numbers, I will take the quantities by month and convert them to $, then I will graph the dollars by month. If you always bring in $10 million in components but see a month in the future where you are bringing in $110 million, you probably have a crooked number.

You may some formatting work to do depending on how you export it. And remember SAP does not always download parts numbers in the same format screen to screen so you often must fix that.

Inventory Analytics

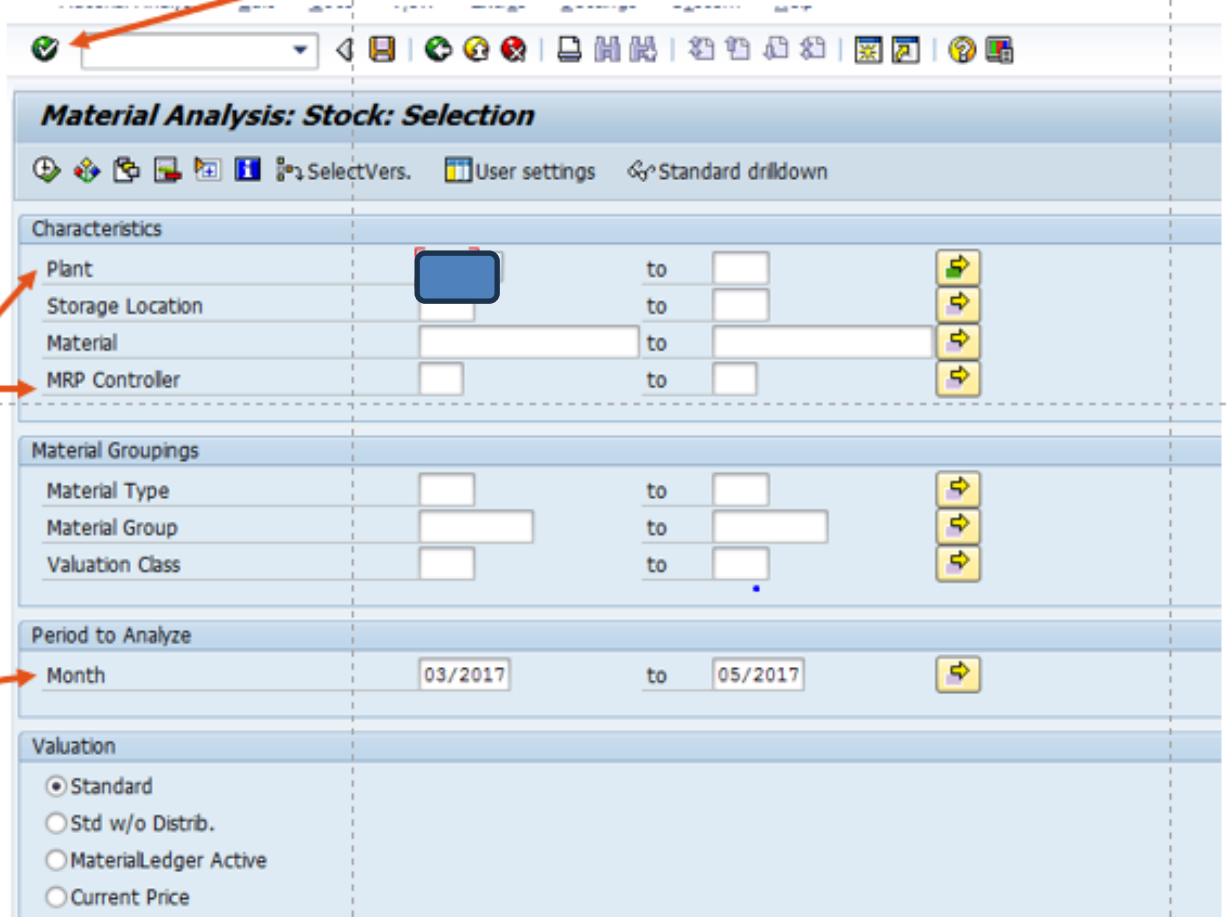
- MC.9 is a standard method of doing inventory analysis in SAP.
- Information on number of times an item is used, the quantity used, and the type of consumption (planned or unplanned) can be built into standard extracts.
- Questions that the standard inventory screens can help answer include:
- What is my consumption history?
- This can help you determine how many days/weeks/months on hand you have. It can help you determine you ABCXYZ based on usage.
- When did I last receive and item? When did I last consume and item?
- A last receipt or consumption long ago may indicate excess and potential obsolescence.
- What are my inventory turns? Days of Coverage based on consumption?

INVENTORY ANALYTICS

For items that get put to a stock location, MC.9 can help you determine the vitality and trends of your inventory.

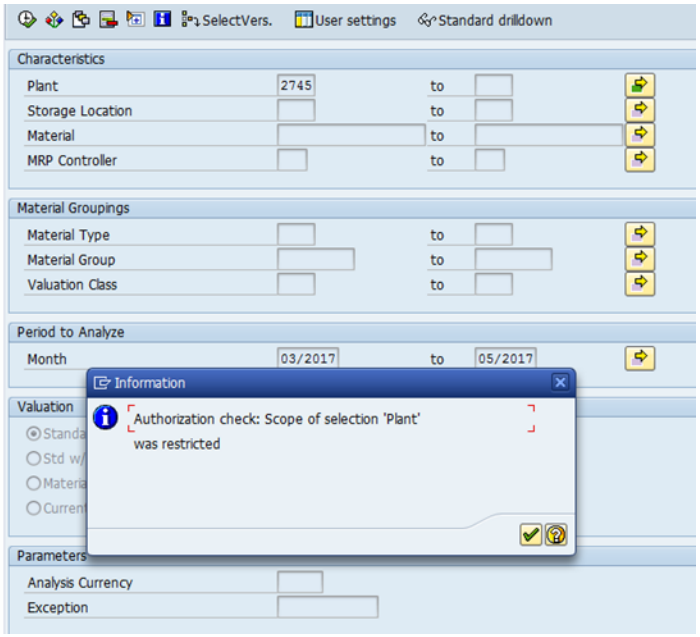
You can run it by MRP controller, wide open by plant, or by any other maintained value listed on the selection screen.

MC.9 always defaults to the last 90 days for a date range, but you can modify that just by changing the date range.



Inventory Analytics

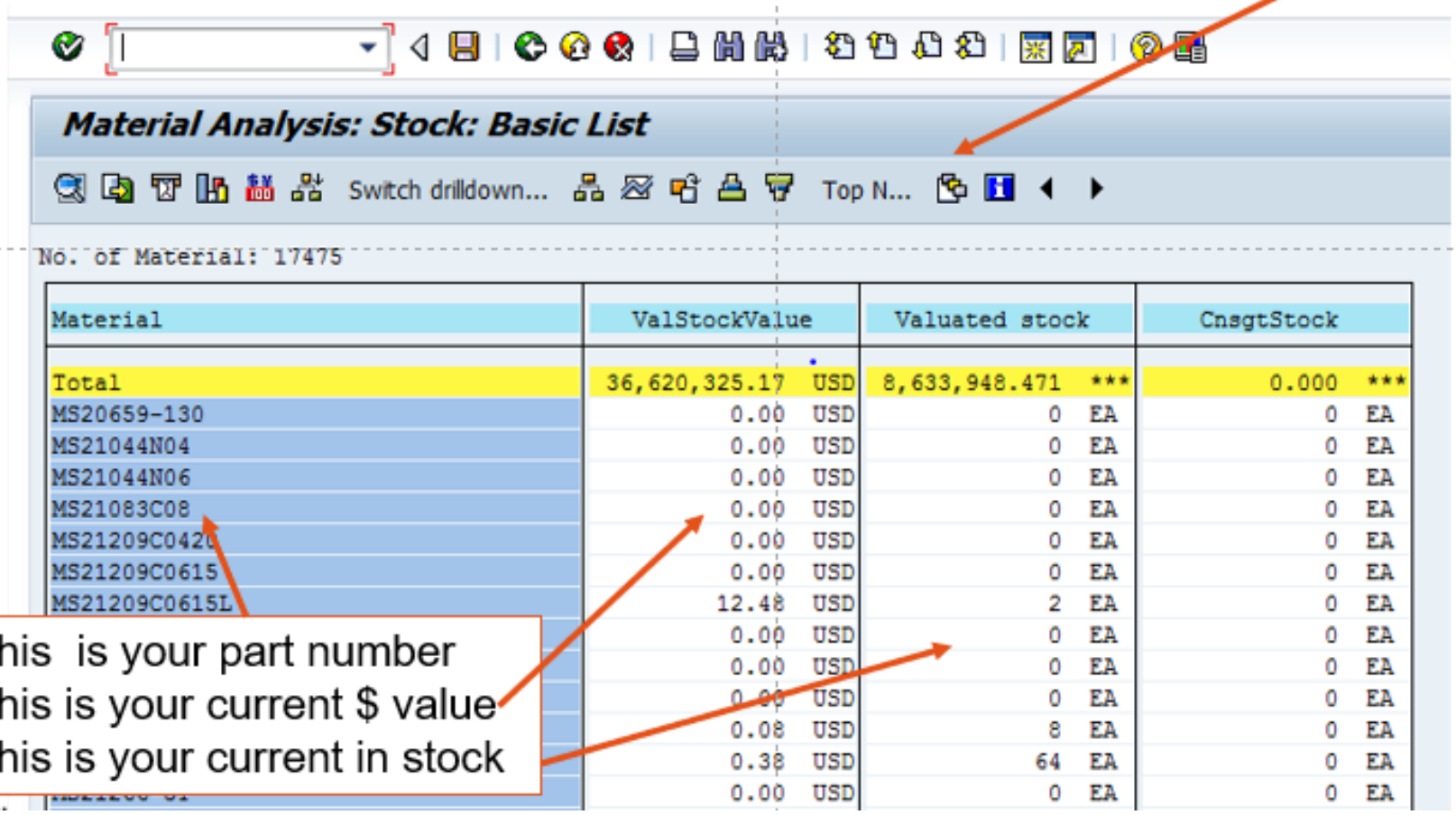
If this screen pops up, just hit the green check mark and move through it.



INVENTORY ANALYTICS

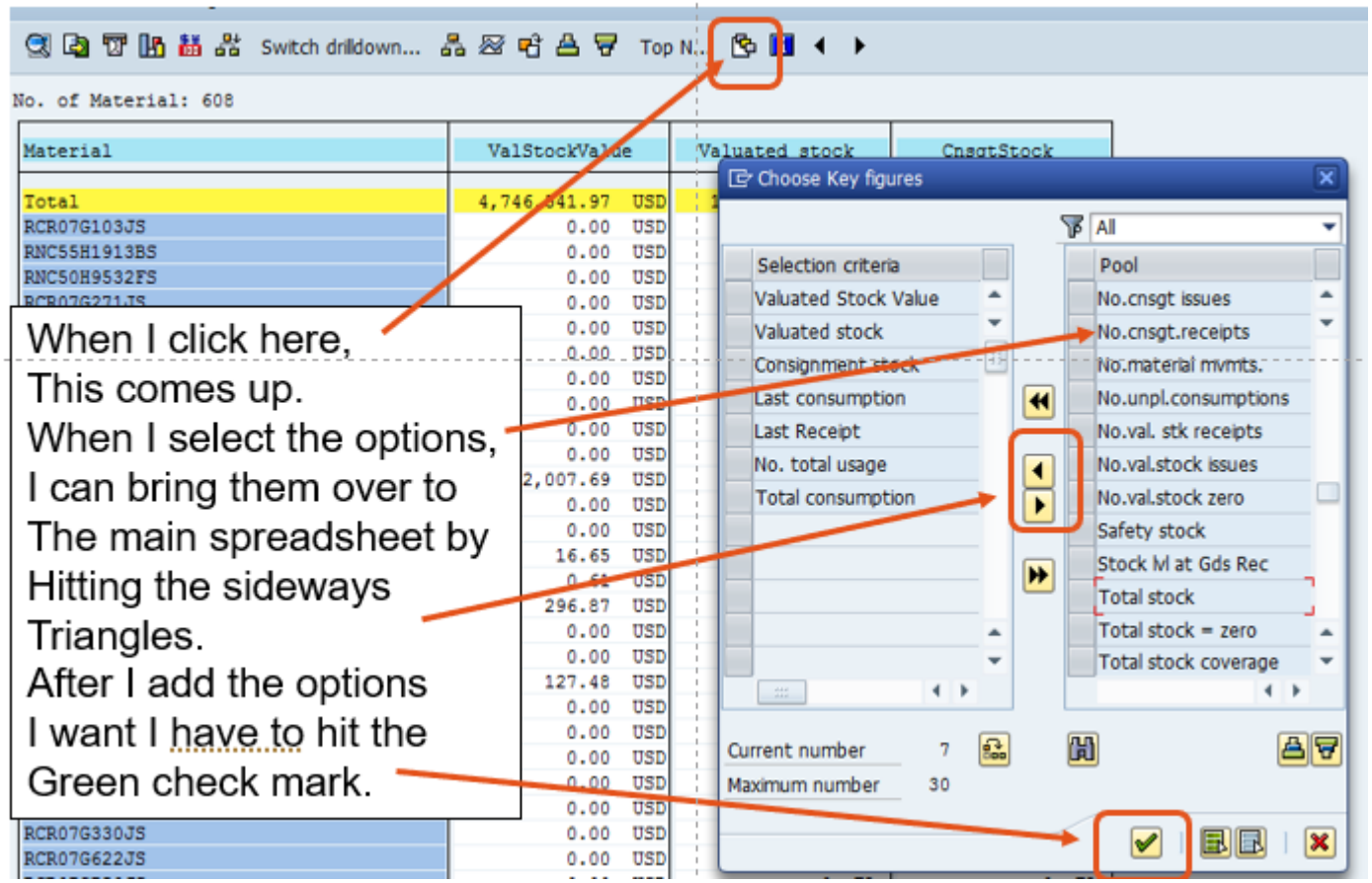
- This should bring you here

This is a very important Button that lets you add a lot of power to this view



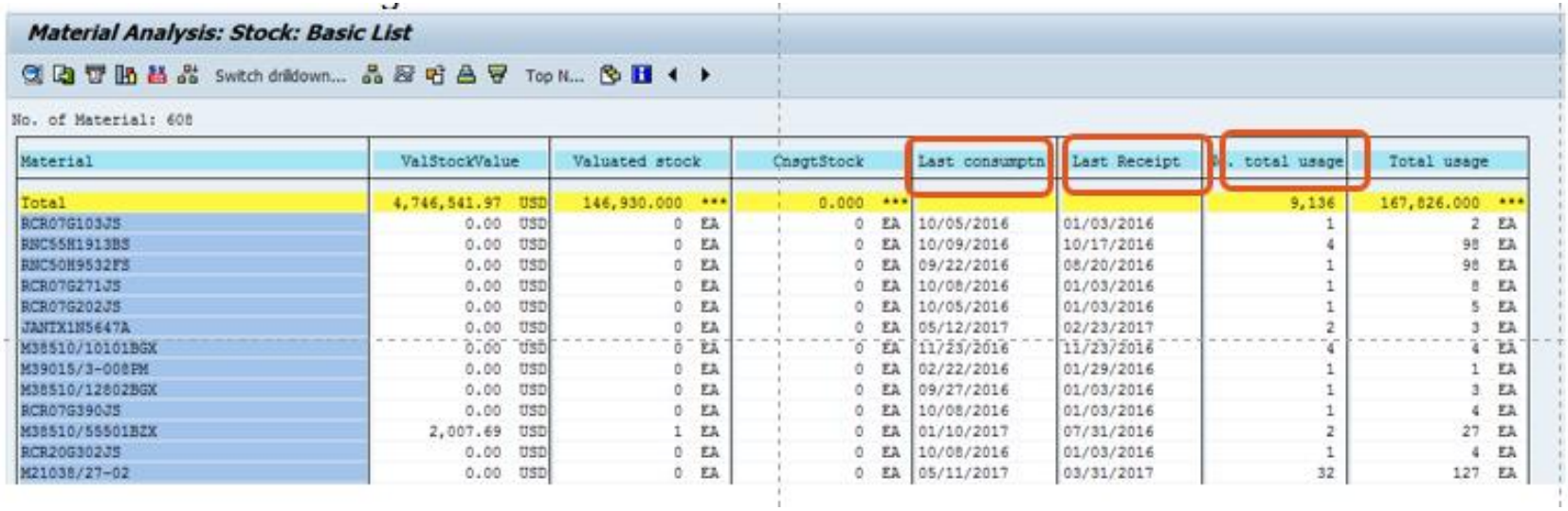
This is your part number
This is your current $ value
This is your current in stock

Inventory Analytics



Inventory Analytics

Now we have some information



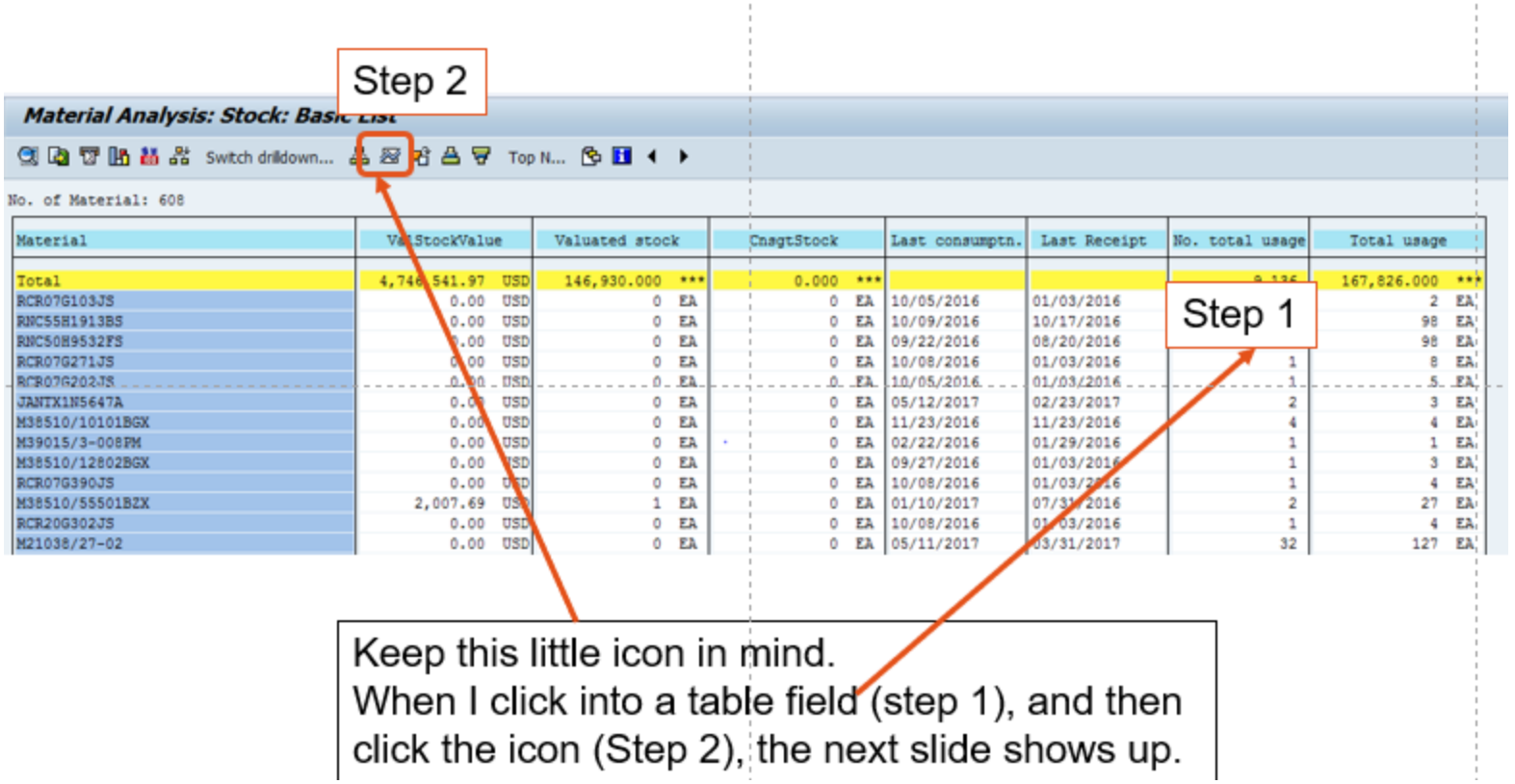
Material Analysis: Stock: Basic List

Switch drilldown... Top N...

No. of Material: 608

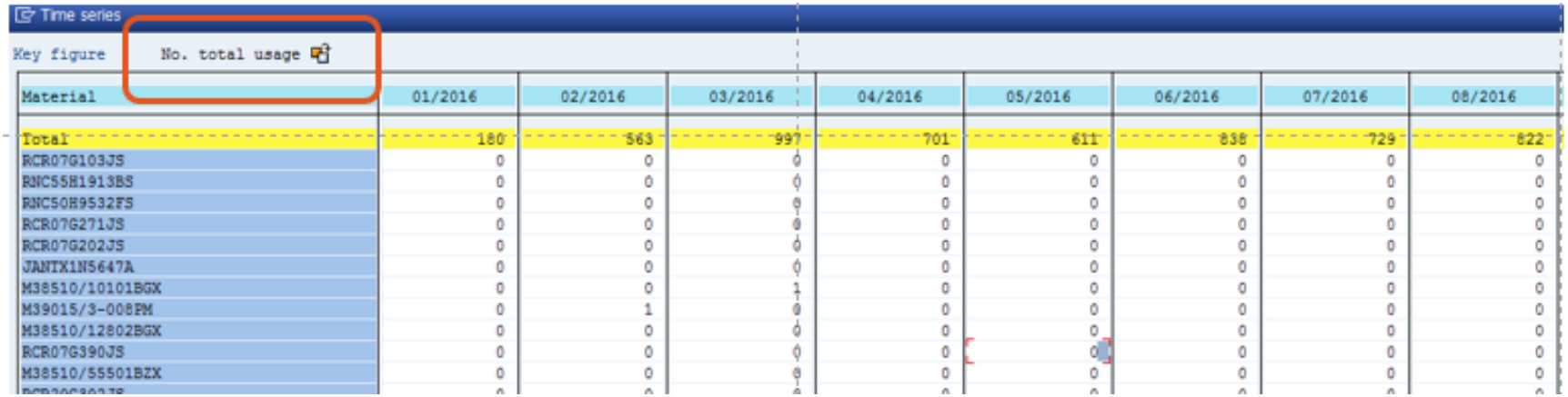
Material	ValStockValue	Valuated stock	CnsgtStock	Last consumptn	Last Receipt	. total usage	Total usage
Total	4,746,541.97 USD	146,930.000 ***	0.000 ***			9,136	167,826.000 ***
RCR07G103JS	0.00 USD	0 EA	0 EA	10/05/2016	01/03/2016	1	2 EA
RNC55H1913BS	0.00 USD	0 EA	0 EA	10/09/2016	10/17/2016	4	98 EA
RNC50H9532FS	0.00 USD	0 EA	0 EA	09/22/2016	08/20/2016	1	98 EA
RCR07G271JS	0.00 USD	0 EA	0 EA	10/08/2016	01/03/2016	1	8 EA
RCR07G202JS	0.00 USD	0 EA	0 EA	10/05/2016	01/03/2016	1	5 EA
JANTX1N5647A	0.00 USD	0 EA	0 EA	05/12/2017	02/23/2017	2	3 EA
M38510/10101BGX	0.00 USD	0 EA	0 EA	11/23/2016	11/23/2016	4	4 EA
M39015/3-008PM	0.00 USD	0 EA	0 EA	02/22/2016	01/29/2016	1	1 EA
M38510/12802BGX	0.00 USD	0 EA	0 EA	09/27/2016	01/03/2016	1	3 EA
RCR07G390JS	0.00 USD	0 EA	0 EA	10/08/2016	01/03/2016	1	4 EA
M38510/55501BZX	2,007.69 USD	1 EA	0 EA	01/10/2017	07/31/2016	2	27 EA
RCR20G302JS	0.00 USD	0 EA	0 EA	10/08/2016	01/03/2016	1	4 EA
M21038/27-02	0.00 USD	0 EA	0 EA	05/11/2017	03/31/2017	32	127 EA

Inventory Analytics



Inventory Analytics

The field selected was the number of total usage (number of time an item was used, not the number of pieces used). If you recall when we ran this by MRP controller, we selected the date range 1/2016 t0 5/2017. This now shows us all the total usages by month.



Time series

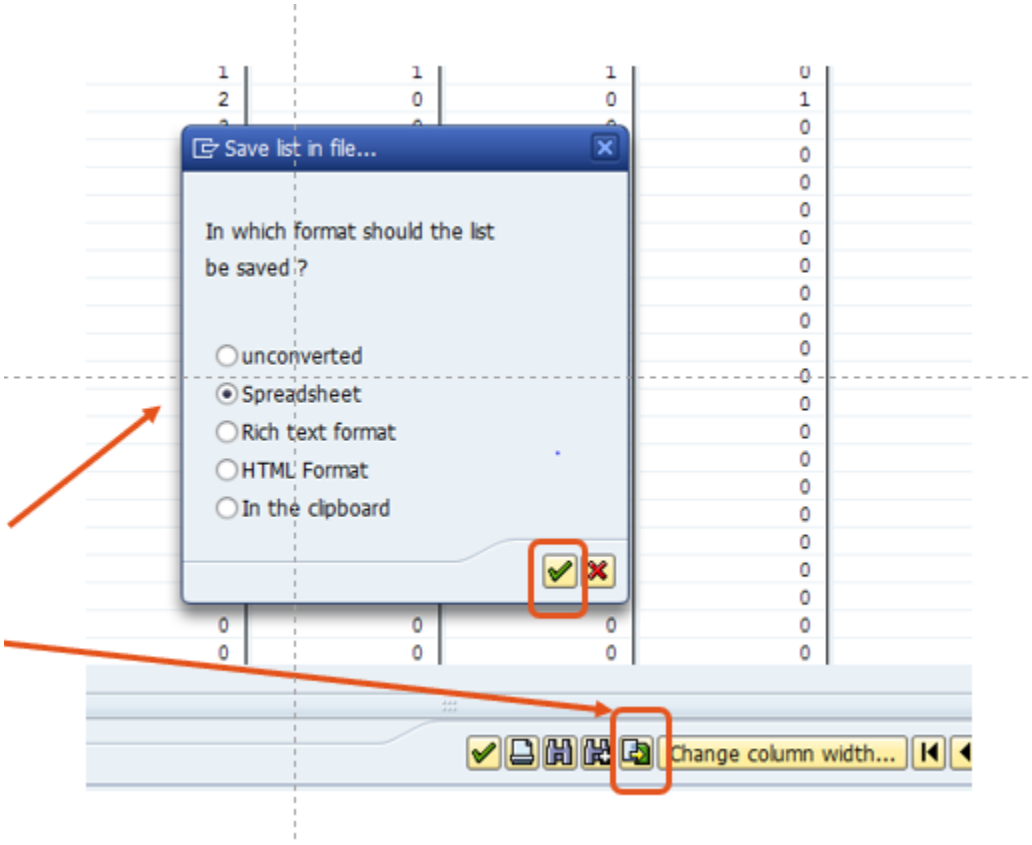
Key figure: No. total usage

Material	01/2016	02/2016	03/2016	04/2016	05/2016	06/2016	07/2016	08/2016
Total	180	563	997	701	611	838	729	822
RCR07G103JS	0	0	0	0	0	0	0	0
RNC55H1913BS	0	0	0	0	0	0	0	0
RNC50H9532FS	0	0	0	0	0	0	0	0
RCR07G271JS	0	0	0	0	0	0	0	0
RCR07G202JS	0	0	0	0	0	0	0	0
JANTX1N5647A	0	0	0	0	0	0	0	0
M38510/10101BGX	0	0	1	0	0	0	0	0
M39015/3-008PM	0	1	0	0	0	0	0	0
M38510/12802BGX	0	0	0	0	0	0	0	0
RCR07G390JS	0	0	0	0	0	0	0	0
M38510/55501BZX	0	0	0	0	0	0	0	0

Inventory Analytics

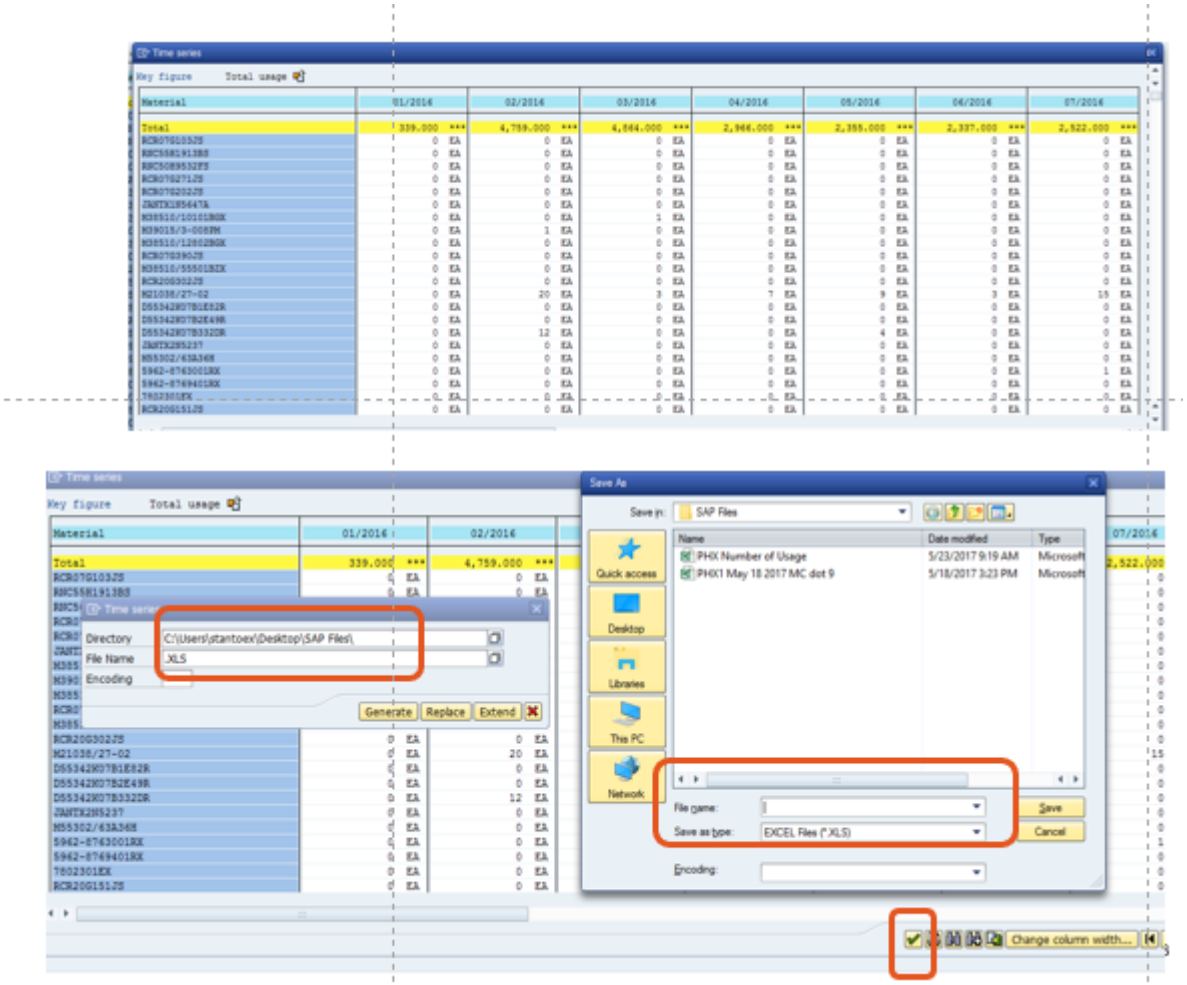
In the lower right-hand corner is an export button so if you are doing an XYZ analysis, you can pull it into a spreadsheet for easier manipulation.

Click the little sideways arrow and the “Save List” pops up, and then select the green check mark and a location to save it.



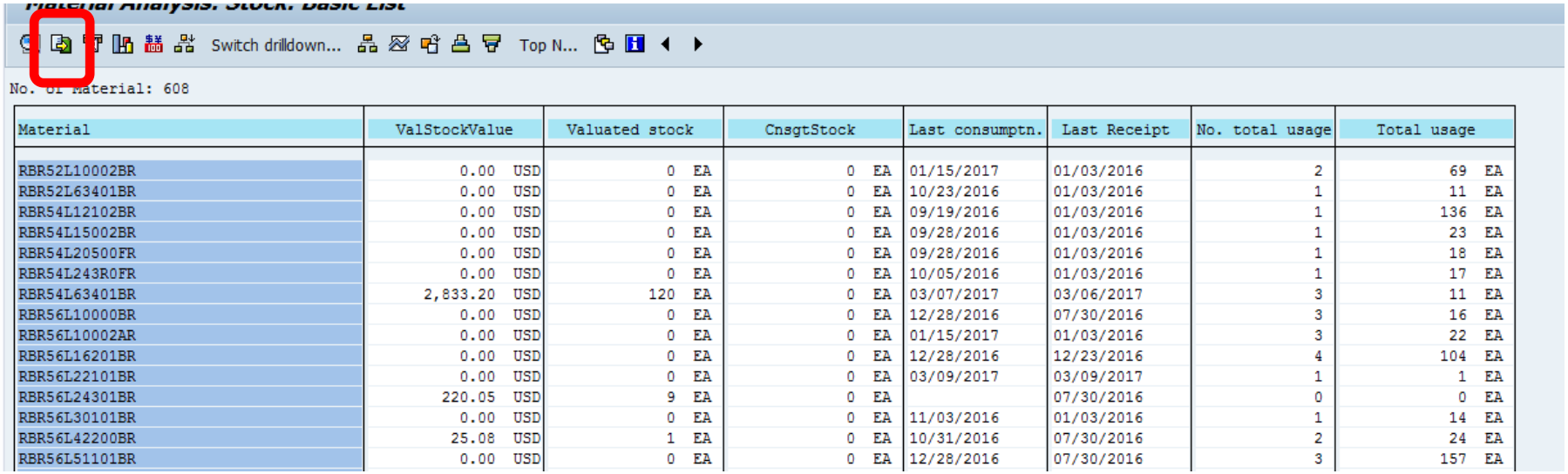
Inventory Analytics

- I am going to do the same thing for Total usage (which is the quantity used by month) and save that as well.
- Greencheck mark
- Select directory
- Name/Save file



Inventory Analytics

I can also export the higher-level current state snapshot. Note the export arrow is in the upper left corner for this one.



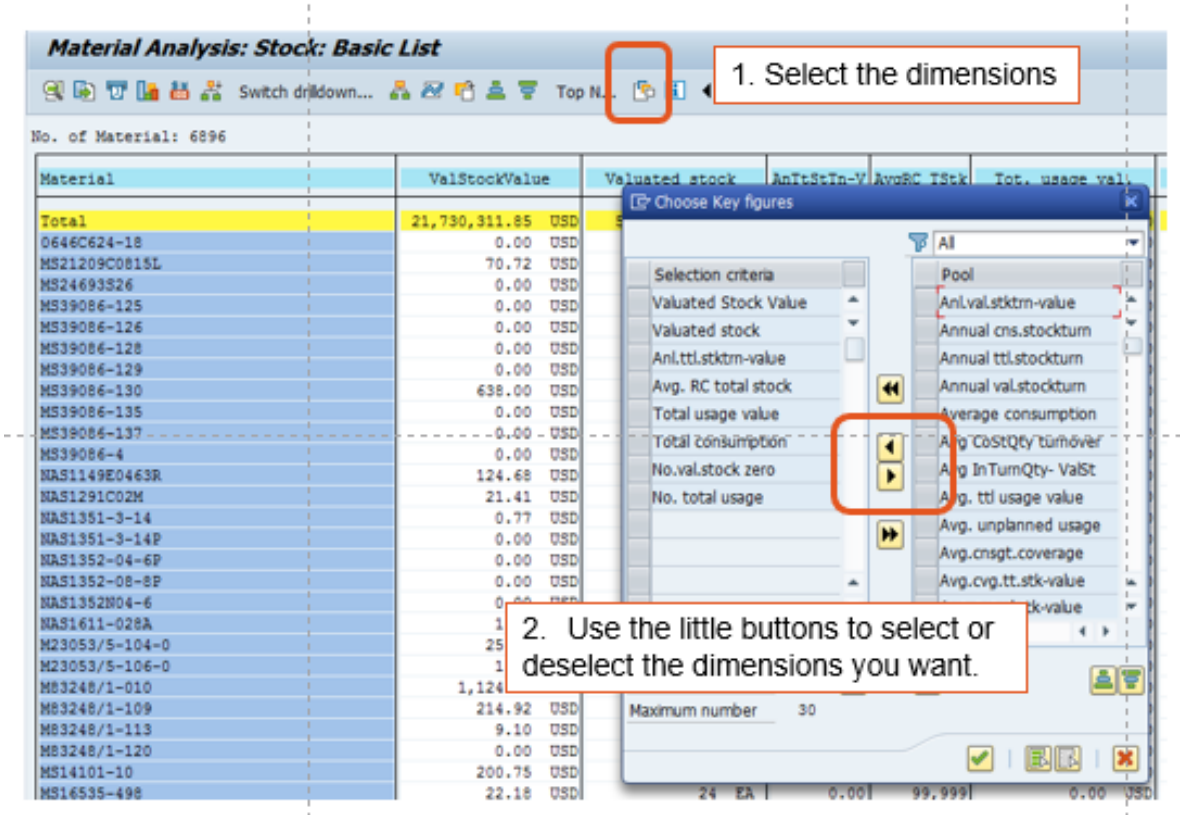
Material	ValStockValue	Valuated stock	CnsgtStock	Last consumptn.	Last Receipt	No. total usage	Total usage
RBR52L10002BR	0.00 USD	0 EA	0 EA	01/15/2017	01/03/2016	2	69 EA
RBR52L63401BR	0.00 USD	0 EA	0 EA	10/23/2016	01/03/2016	1	11 EA
RBR54L12102BR	0.00 USD	0 EA	0 EA	09/19/2016	01/03/2016	1	136 EA
RBR54L15002BR	0.00 USD	0 EA	0 EA	09/28/2016	01/03/2016	1	23 EA
RBR54L20500FR	0.00 USD	0 EA	0 EA	09/28/2016	01/03/2016	1	18 EA
RBR54L243R0FR	0.00 USD	0 EA	0 EA	10/05/2016	01/03/2016	1	17 EA
RBR54L63401BR	2,833.20 USD	120 EA	0 EA	03/07/2017	03/06/2017	3	11 EA
RBR56L10000BR	0.00 USD	0 EA	0 EA	12/28/2016	07/30/2016	3	16 EA
RBR56L10002AR	0.00 USD	0 EA	0 EA	01/15/2017	01/03/2016	3	22 EA
RBR56L16201BR	0.00 USD	0 EA	0 EA	12/28/2016	12/23/2016	4	104 EA
RBR56L22101BR	0.00 USD	0 EA	0 EA	03/09/2017	03/09/2017	1	1 EA
RBR56L24301BR	220.05 USD	9 EA	0 EA		07/30/2016	0	0 EA
RBR56L30101BR	0.00 USD	0 EA	0 EA	11/03/2016	01/03/2016	1	14 EA
RBR56L42200BR	25.08 USD	1 EA	0 EA	10/31/2016	07/30/2016	2	24 EA
RBR56L51101BR	0.00 USD	0 EA	0 EA	12/28/2016	07/30/2016	3	157 EA

Inventory Analytics

You may choose different defaults, these are the ones I typically use.

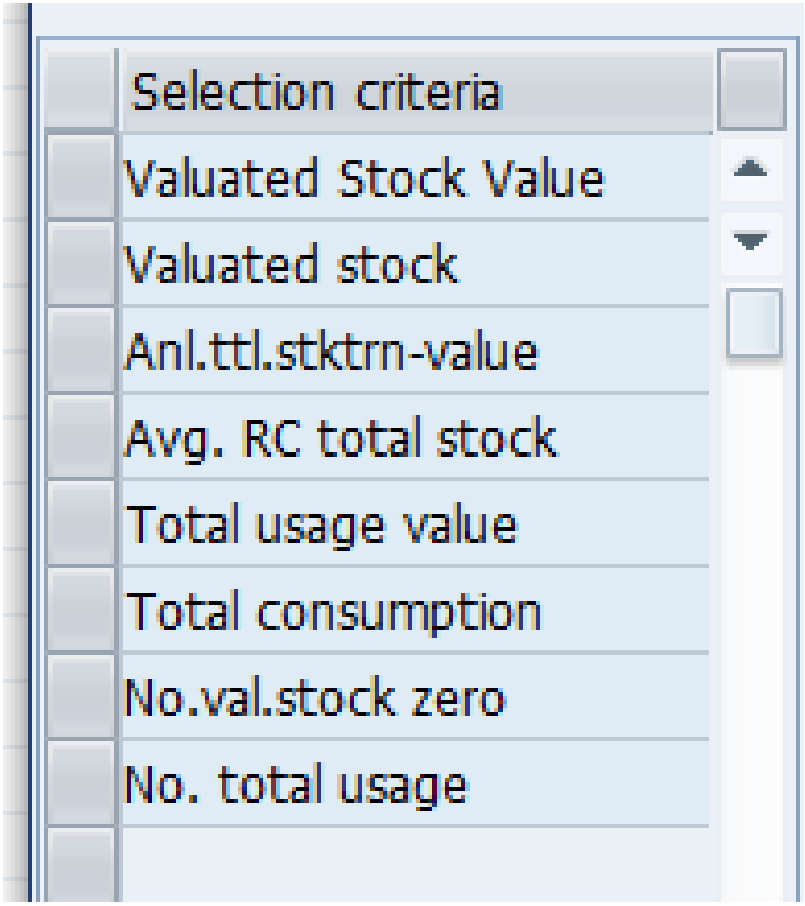
Note, when running analysis, I typically specify a 12-month date range as well.

After saving, if you want to add more dimensions, go ahead. As long as you don't save it, the default should stay the same.



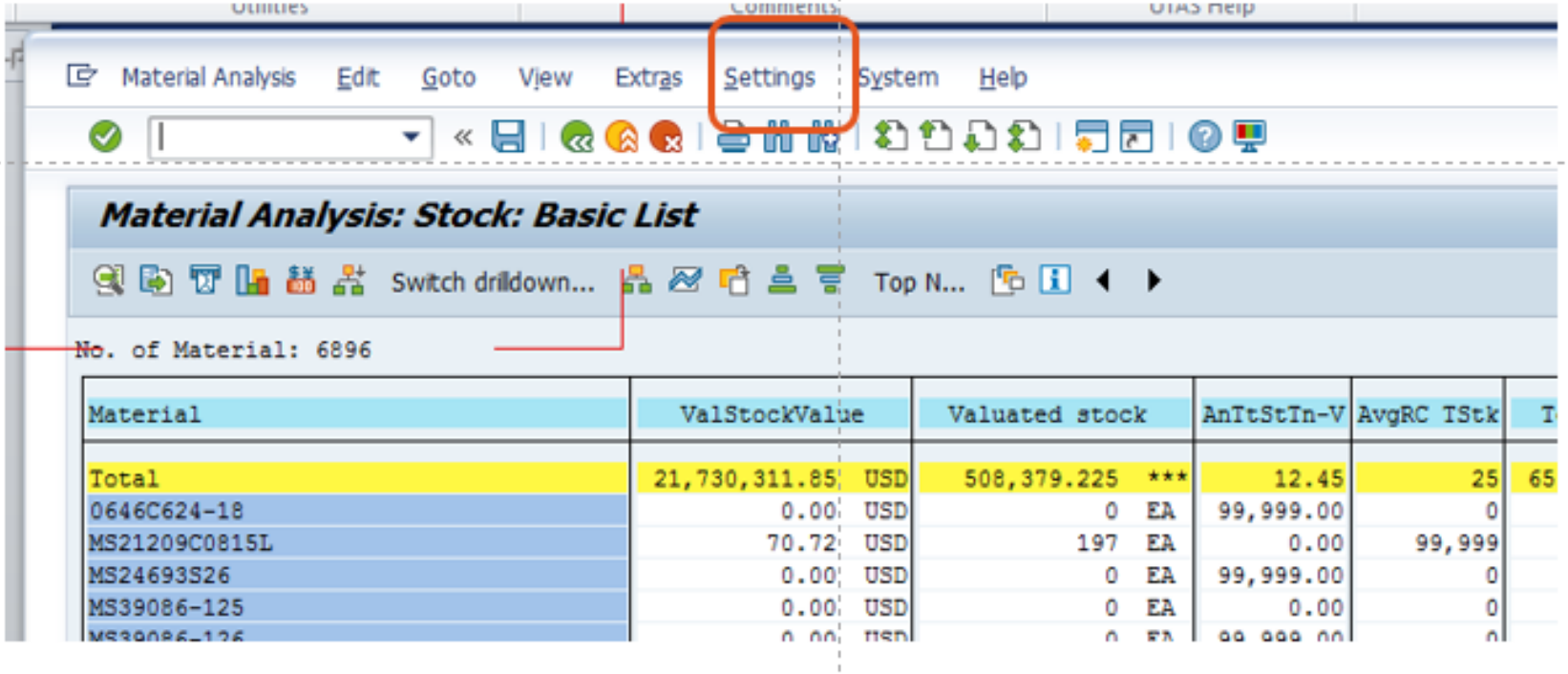
MC.9

- Valuated Stock Value is the value in the currency your plant uses, by part number.
- Valuated Stock is the quantity by part number.
- Annual Total Stock Turn Value is the turns by part number for the year.
- Average Range of Coverage is the number of days of the FORECAST covered (does not include past due).
- Total Usage Value is the value of the materials consumed in plant currency.
- Total consumption is the consumption quantity.
- Number of times the stock went to zero is the number of times an SAP location went to zero units.
- Number of total usage is the number of times a part was used (regardless of the number of pieces used each time).



MC.9

To save the key dimensions you like, so when you come back to MC.9 view you want, go to “Settings” and select save settings.



MARC Table

The MARC table is one of the key tables for understanding the Materials Master. Information includes:

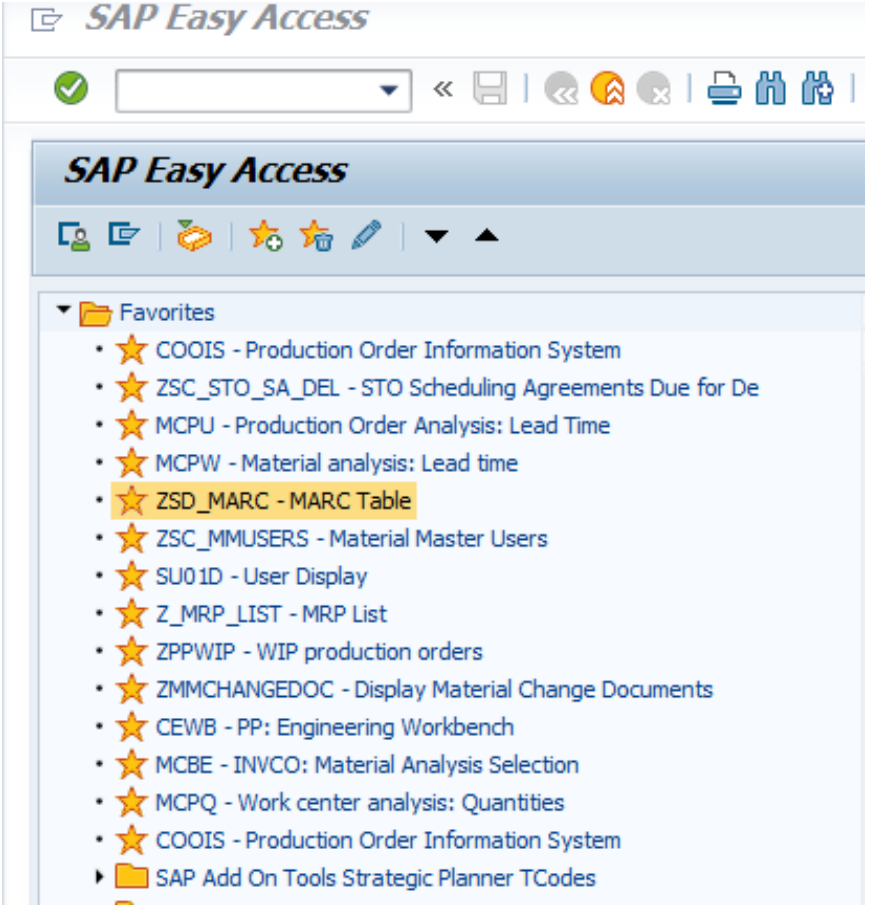
- Lot sizes
- Minimum Order quantity
- Plan type
- Buffer information (Safety stock, Safety Lead time, Coverage profiles)
- And a whole lot more….

The information is specific to plants and MRP Areas.

THE INFORMATION IS FROM YESTERDAY. It is not live at this moment.

Accessing the MARC Table

- I have mine saved to favorites so I can just double click on it.



Running the Report

You can run it wide open for the whole plant or MRP Area, or you can just do a set of parts.

To do a set of parts:

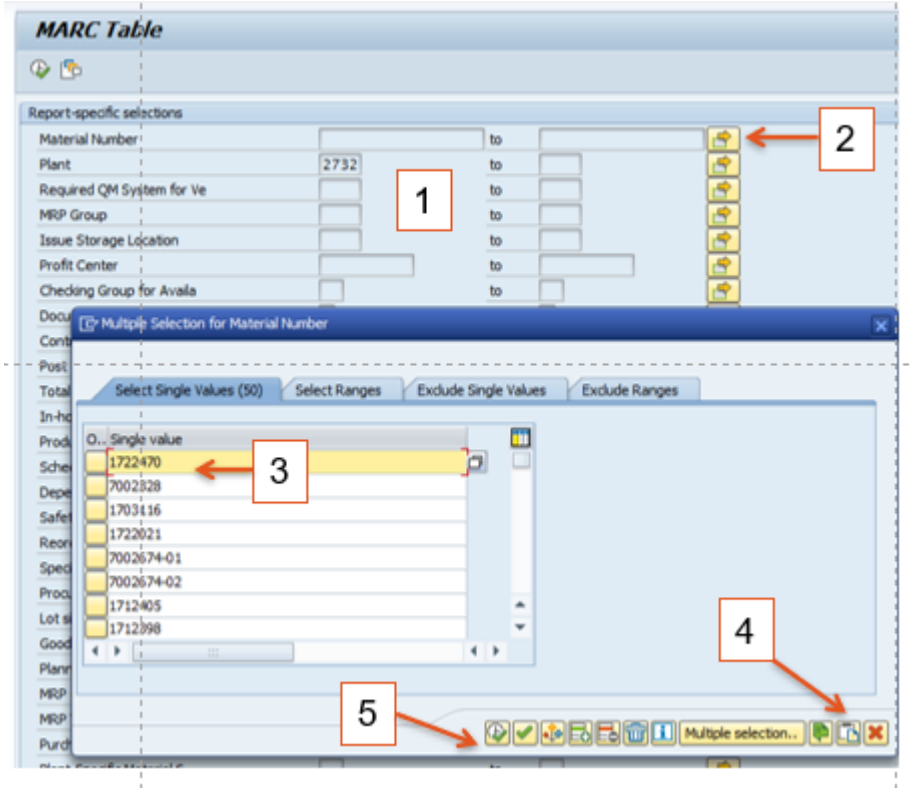
(1)Enter the plant.

(2)Click on the drop down to open a new tile.

(3)Take your part list and click into the first space

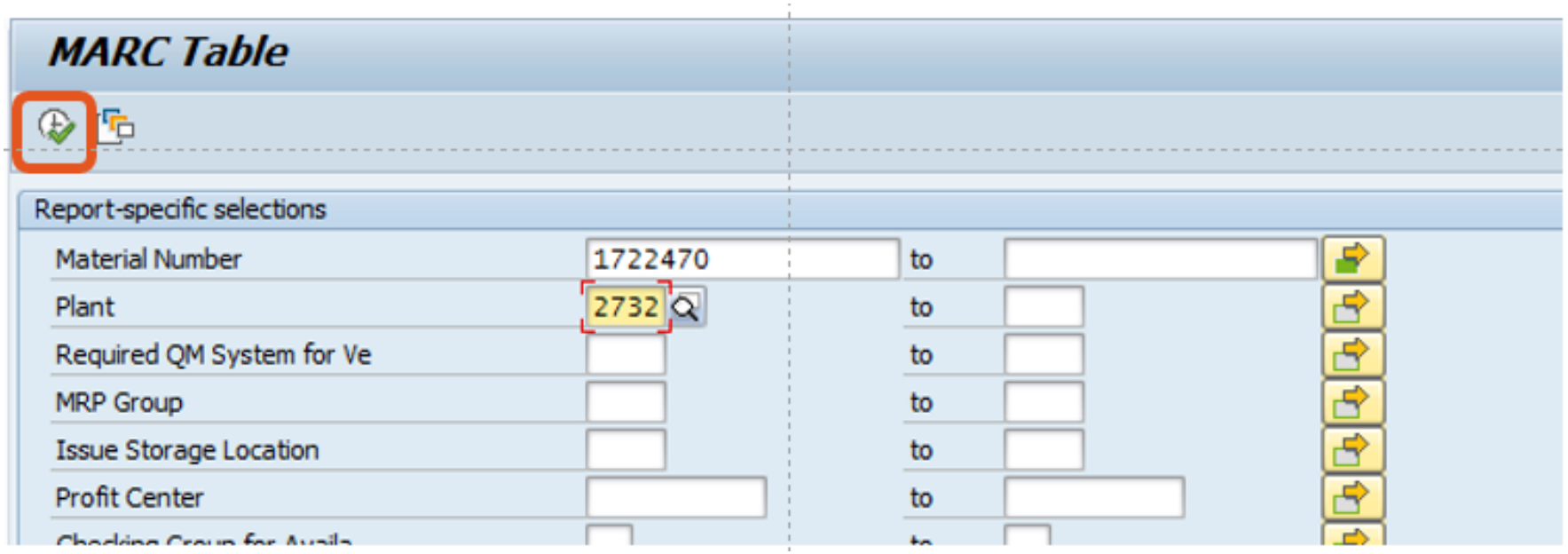
(4)Then hit the clip board

(5)Then check the green arrow



MARC

That should bring you back here. Now hit the green check mark with the clock in the left-hand corner.

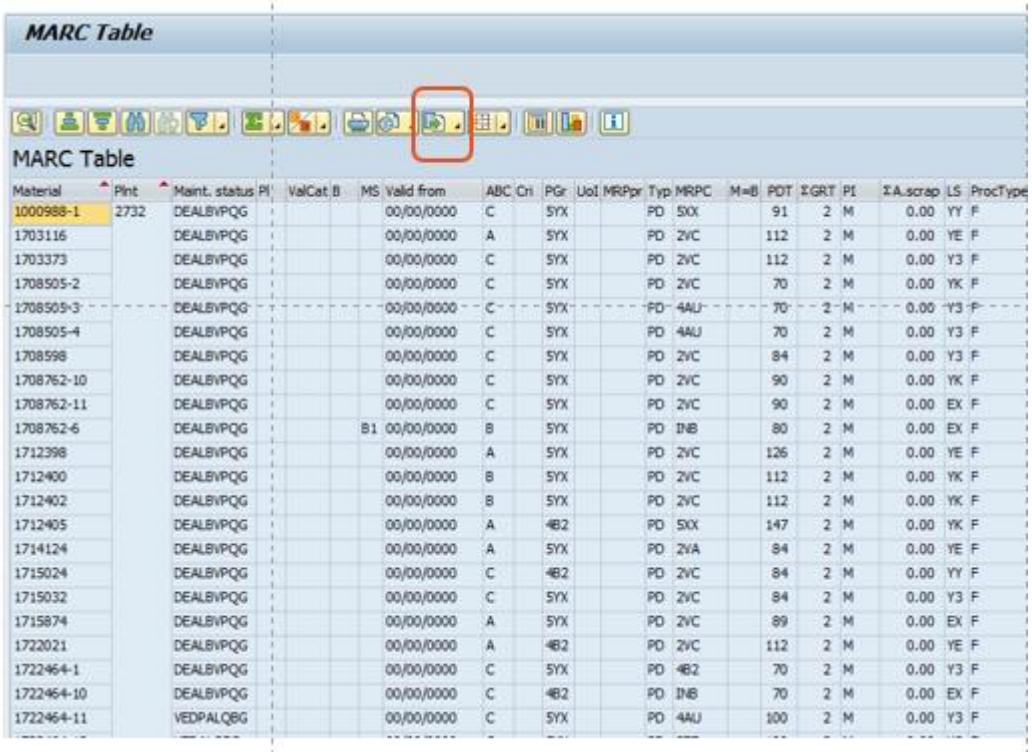


MARC

Now we are here.

To export, select the export option and select spreadsheet.

Sometimes it exports quickly, other times it takes few minutes.



Material	Plnt	Maint. status	Pl	ValCat	B	MS	Valid from	ABC	Cri	PGr	UoI	MRPpr	Typ	MRPC	M=B	PDT	ΣGRT	PI	ΣA.scrap	LS	ProcType
1000988-1	2732	DEALBVPQG					00/00/0000	C		5YX			PD	5XX		91	2	M	0.00	YY	F
1703116		DEALBVPQG					00/00/0000	A		5YX			PD	2VC		112	2	M	0.00	YE	F
1703373		DEALBVPQG					00/00/0000	C		5YX			PD	2VC		112	2	M	0.00	Y3	F
1708505-2		DEALBVPQG					00/00/0000	C		5YX			PD	2VC		70	2	M	0.00	YK	F
1708505-3		DEALBVPQG					00/00/0000	C		5YX			PD	4AU		70	2	M	0.00	Y3	F
1708505-4		DEALBVPQG					00/00/0000	C		5YX			PD	4AU		70	2	M	0.00	Y3	F
1708598		DEALBVPQG					00/00/0000	C		5YX			PD	2VC		84	2	M	0.00	Y3	F
1708762-10		DEALBVPQG					00/00/0000	C		5YX			PD	2VC		90	2	M	0.00	YK	F
1708762-11		DEALBVPQG					00/00/0000	C		5YX			PD	2VC		90	2	M	0.00	EX	F
1708762-6		DEALBVPQG				B1	00/00/0000	B		5YX			PD	INB		80	2	M	0.00	EX	F
1712398		DEALBVPQG					00/00/0000	A		5YX			PD	2VC		126	2	M	0.00	YE	F
1712400		DEALBVPQG					00/00/0000	B		5YX			PD	2VC		112	2	M	0.00	YK	F
1712402		DEALBVPQG					00/00/0000	B		5YX			PD	2VC		112	2	M	0.00	YK	F
1712405		DEALBVPQG					00/00/0000	A		4B2			PD	5XX		147	2	M	0.00	YK	F
1714124		DEALBVPQG					00/00/0000	A		5YX			PD	2VA		84	2	M	0.00	YE	F
1715024		DEALBVPQG					00/00/0000	C		4B2			PD	2VC		84	2	M	0.00	YY	F
1715032		DEALBVPQG					00/00/0000	C		5YX			PD	2VC		84	2	M	0.00	Y3	F
1715874		DEALBVPQG					00/00/0000	A		5YX			PD	2VC		89	2	M	0.00	EX	F
1722021		DEALBVPQG					00/00/0000	A		4B2			PD	2VC		112	2	M	0.00	YE	F
1722464-1		DEALBVPQG					00/00/0000	C		5YX			PD	4B2		70	2	M	0.00	Y3	F
1722464-10		DEALBVPQG					00/00/0000	C		4B2			PD	INB		70	2	M	0.00	EX	F
1722464-11		VEDPALQBG					00/00/0000	C		5YX			PD	4AU		100	2	M	0.00	Y3	F

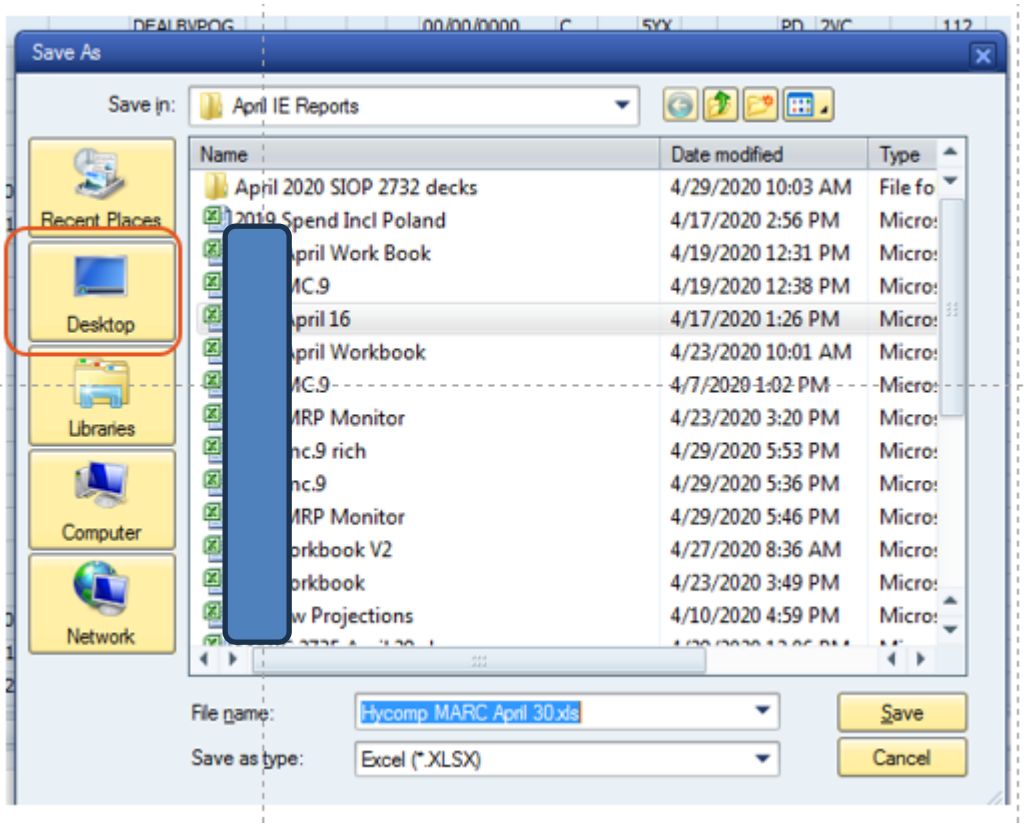
MARC

Now we are here.

It will want to go to your SAP GUI but I prefer to send it to me desktop.

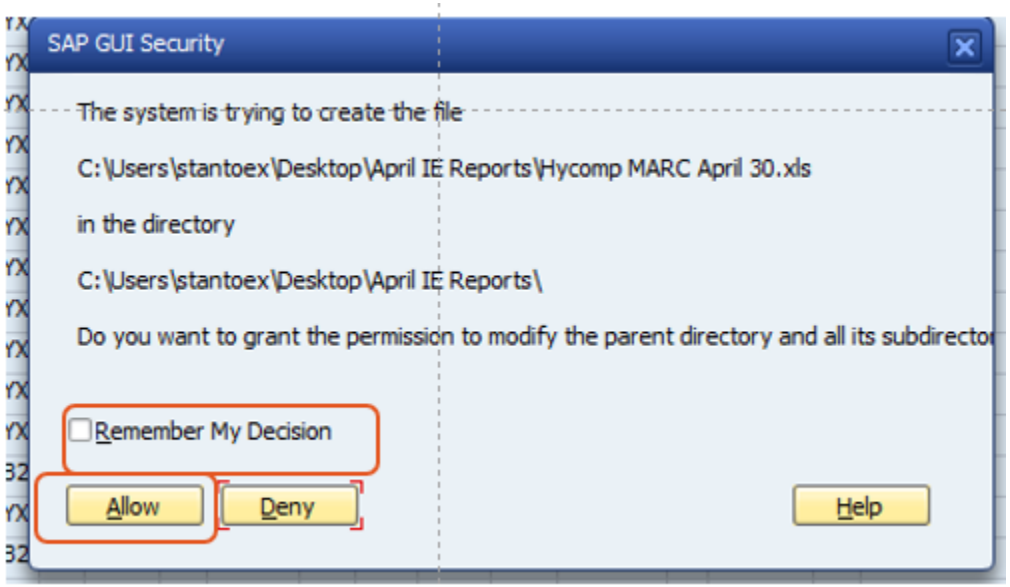
Name it and I highly recommend assigning a date to help you know when you pulled it.

Remember this is yesterday's snap-shot, not live this minute.



MARC

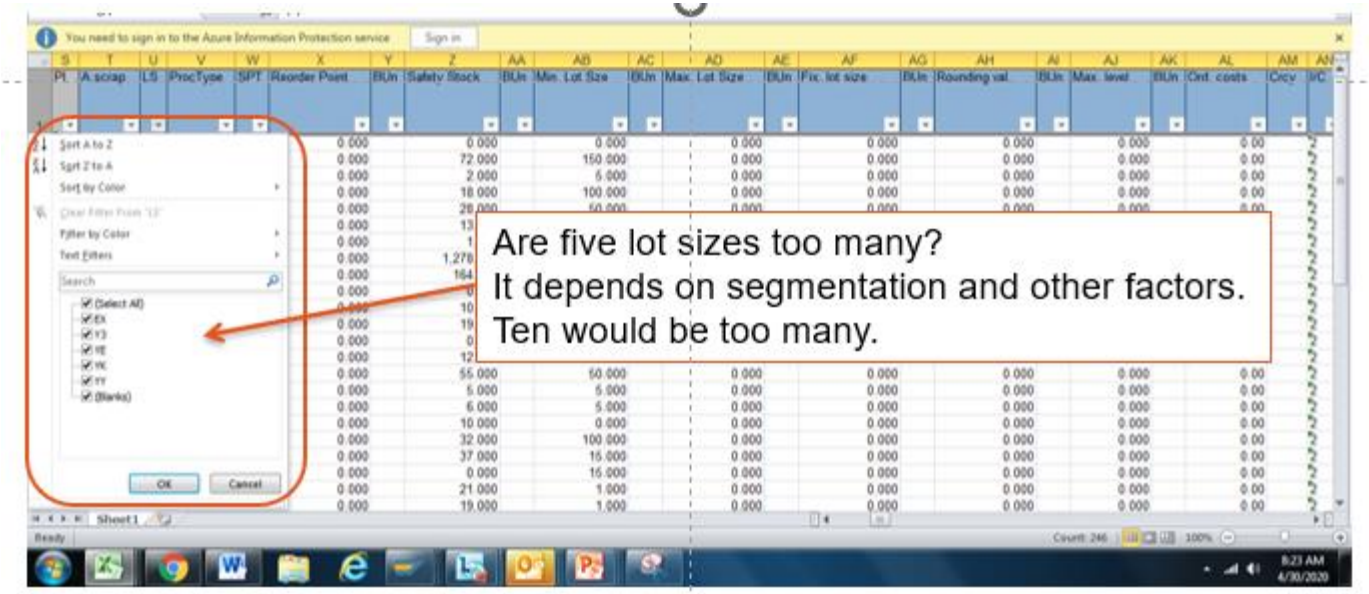
Two variations of this will pop up, select allow both times. On some set ups, if you select remember my decision it will stop popping up. It might also warn you the file is going to pop up in a different format and just approve/agree.



MARC

This is a big file. One thing you could do with it is validate your lot sizing is standardized.

To do this I would add a filter and go over to column U and just look to see how many I had. I would also do this on other filed. Note the min, the max, rounding values, etc. are all grouped together in the table.



Understanding Lot Size

Go to the materials master for one part.

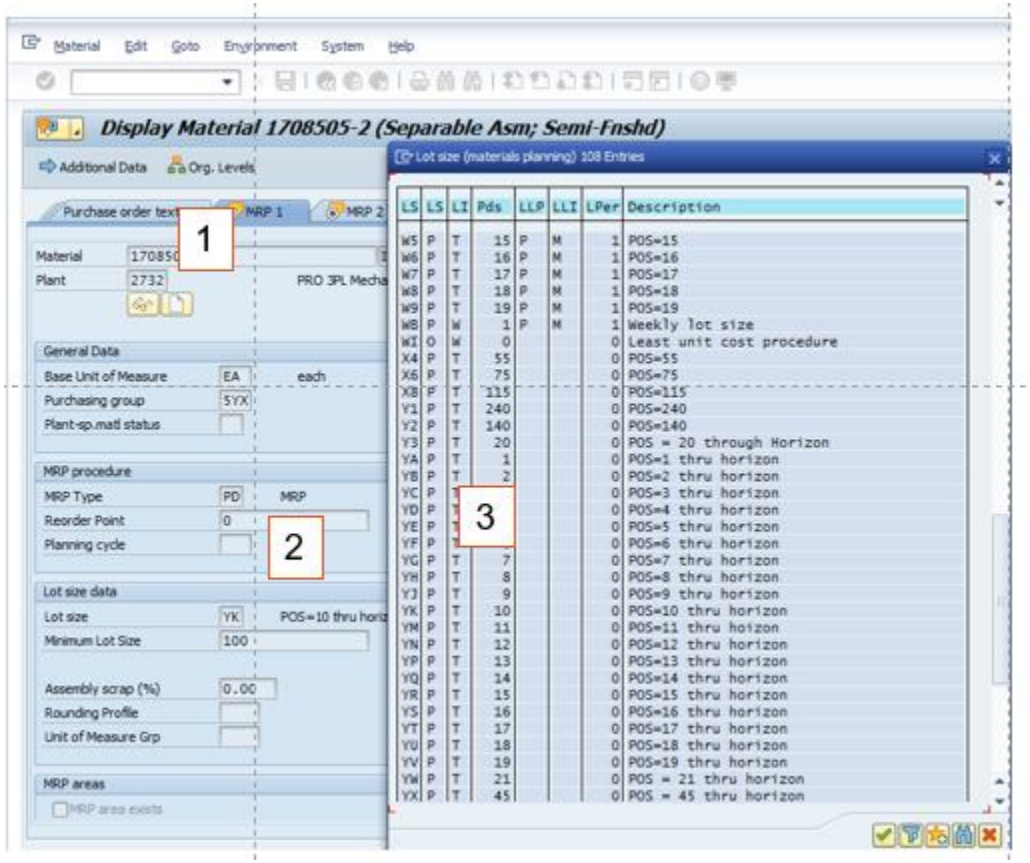
(1) Go to MRP 1 tab

(2) Click on the toggle next to lot size. It will show up when you click in it.

(3) This should pop up.

Remember these values are in workdays so 5 days = 1 week.

POS=10 means ten days, or two weeks.

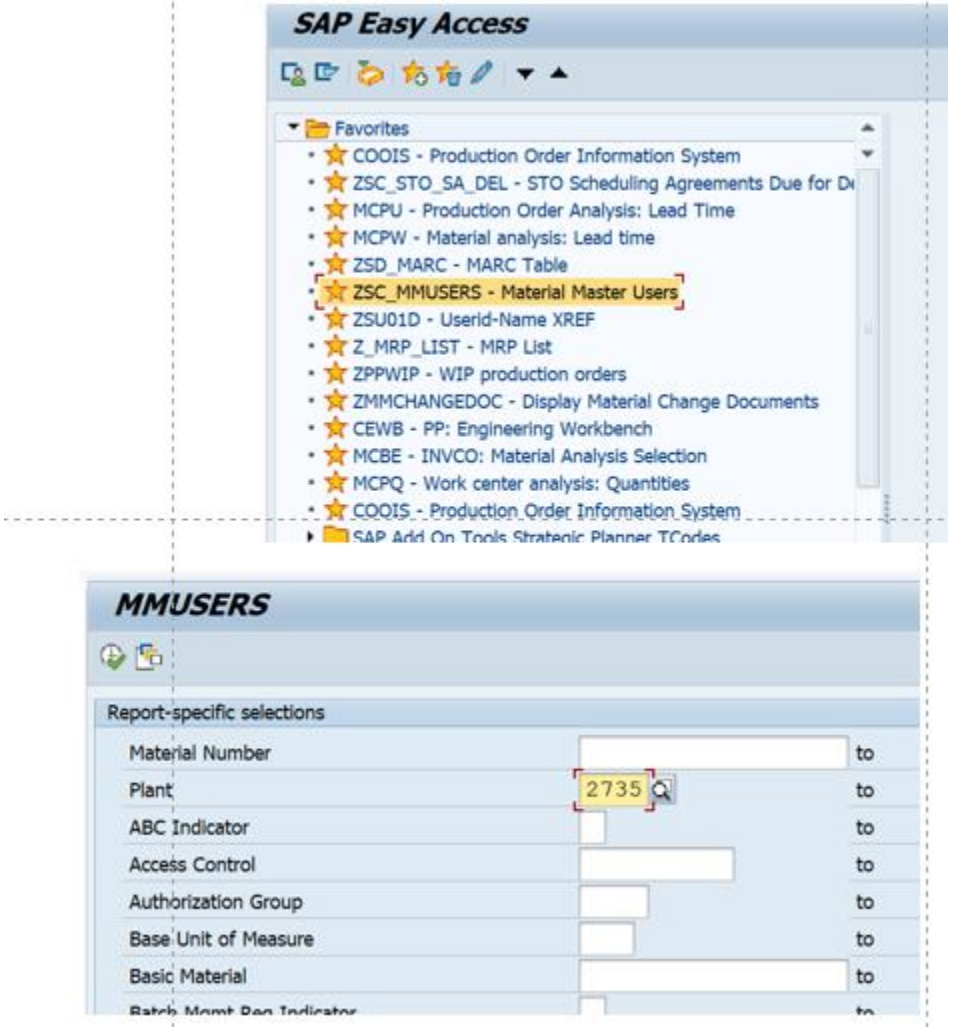


Finding Price - MMUSERS

MMUSERS is a table with quite a bit of information in it, much of it from other tables such as MARC, MARA.

I use this to get standard cost.

After selecting the tcode, go populate the plant and execute.

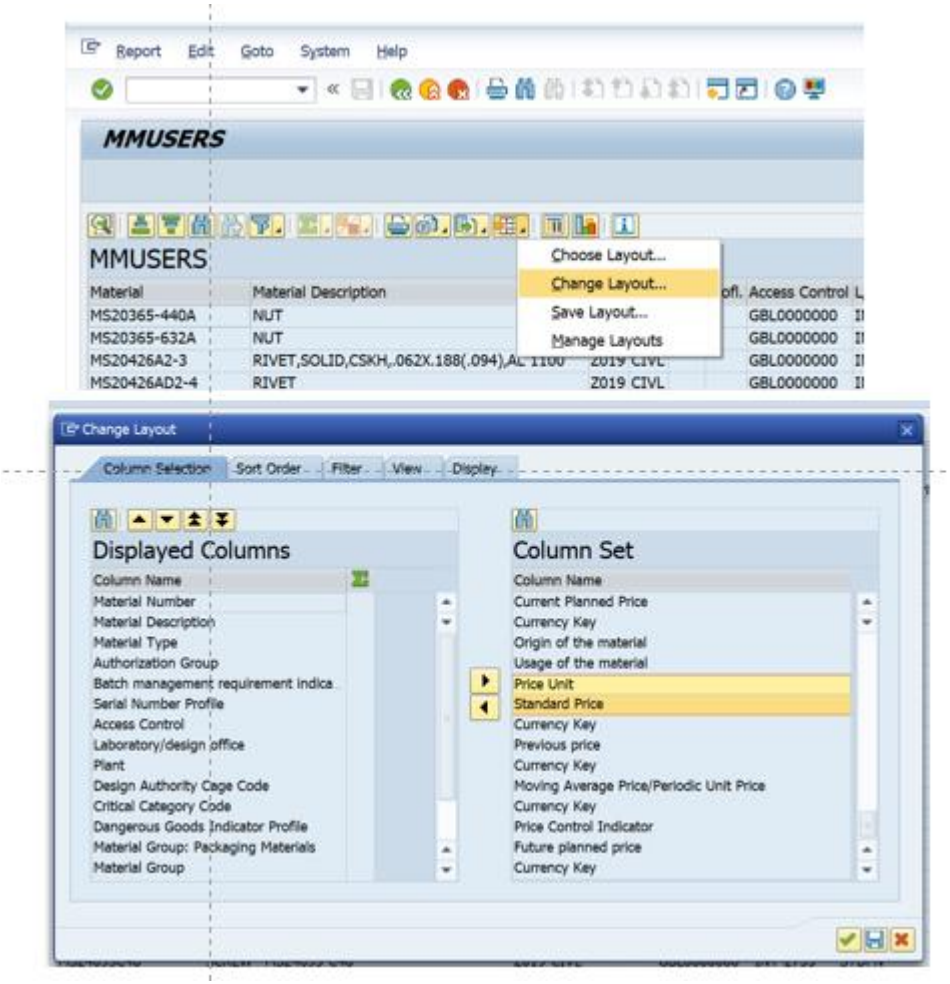


MMUSERS

Once here select change layout from the layout icon.

Now from column selection select standard price and pricing unit and click the small sideways triangles to bring them over.

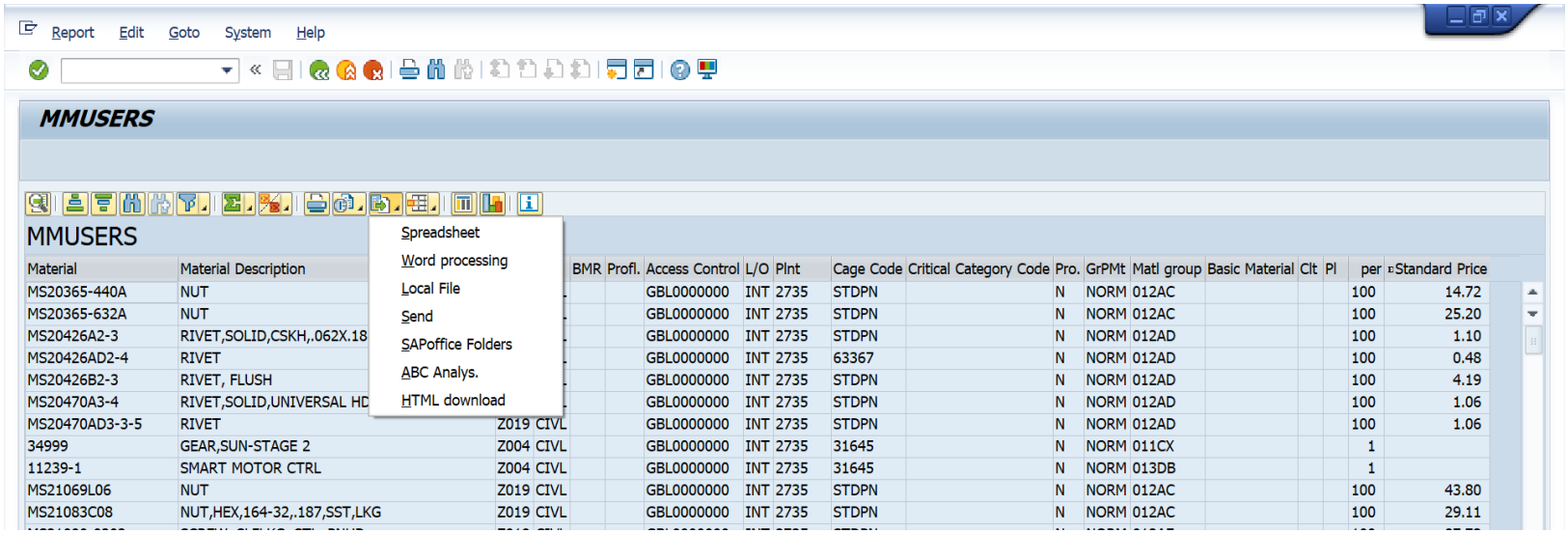
This is important because we do not always price/cost in pieces. We often may buy 100 pieces at a time, and the price is for the 100 pieces, not one piece.



MMUSERS

We should be able to export this now and have the price and pricing units available for the workbook. To get the piece price divide the standard price by the pricing unit.

NOTE: this information, other than price, should have all the information from MARC, so you could just use this. Typically, though price only changes once a year, so I run this once or twice a year, but the MARC every month. This is not necessarily the best way to do it.



Material	Material Description			BMR	Profl.	Access Control	L/O	Plnt	Cage Code	Critical Category Code	Pro.	GrPMt	Matl group	Basic Material	Clt	Pl	per	Standard Price
MS20365-440A	NUT					GBL0000000	INT	2735	STDPN		N	NORM	012AC				100	14.72
MS20365-632A	NUT					GBL0000000	INT	2735	STDPN		N	NORM	012AC				100	25.20
MS20426A2-3	RIVET,SOLID,CSKH,.062X.18					GBL0000000	INT	2735	STDPN		N	NORM	012AD				100	1.10
MS20426AD2-4	RIVET					GBL0000000	INT	2735	63367		N	NORM	012AD				100	0.48
MS20426B2-3	RIVET, FLUSH					GBL0000000	INT	2735	STDPN		N	NORM	012AD				100	4.19
MS20470A3-4	RIVET,SOLID,UNIVERSAL HD					GBL0000000	INT	2735	STDPN		N	NORM	012AD				100	1.06
MS20470AD3-3-5	RIVET	Z019	CIVL			GBL0000000	INT	2735	STDPN		N	NORM	012AD				100	1.06
34999	GEAR,SUN-STAGE 2	Z004	CIVL			GBL0000000	INT	2735	31645		N	NORM	011CX				1	
11239-1	SMART MOTOR CTRL	Z004	CIVL			GBL0000000	INT	2735	31645		N	NORM	013DB				1	
MS21069L06	NUT	Z019	CIVL			GBL0000000	INT	2735	STDPN		N	NORM	012AC				100	43.80
MS21083C08	NUT,HEX,164-32,.187,SST,LKG	Z019	CIVL			GBL0000000	INT	2735	STDPN		N	NORM	012AC				100	29.11

Putting the workbook together

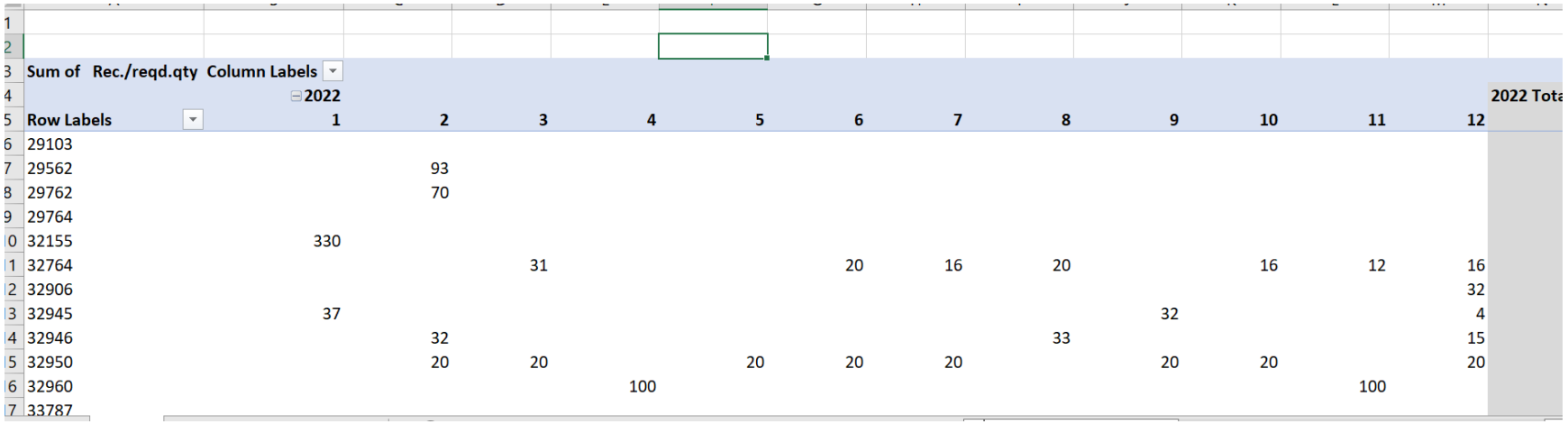
Starting with the MRP list, I put the part numbers in the first column then will typically put demand in monthly buckets for 12 months out.

To do this I open the file, remove columns I do not need and then add month and year columns so I can work it into a pivot table.

Year	Month	Req Date	MRP Elem	Rec./req	Date	St / RelDate	Material	Material D	Bunit	Plnt	MRP Area	Name	PSc	MRP date
2022	4	4/13/2022	BE	6	4/13/2022		36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2022	11	11/11/2022	BA	2	11/11/2022	7/12/2022	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	1	1/11/2023	BA	1	1/11/2023	9/12/2022	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	2	2/15/2023	BA	2	2/15/2023	10/17/2022	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	4	4/13/2023	BA	1	4/13/2023	12/8/2022	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	5	5/16/2023	BA	2	5/16/2023	1/13/2023	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	7	7/11/2023	BA	1	7/11/2023	3/10/2023	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	8	8/15/2023	BA	1	8/15/2023	4/14/2023	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	10	10/11/2023	BA	1	10/11/2023	6/12/2023	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	9	9/13/2023	BA	1	9/13/2023	5/12/2023	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2023	11	11/13/2023	BA	2	11/13/2023	7/13/2023	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2024	1	1/10/2024	BA	1	1/10/2024	9/11/2023	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022
2024	2	2/14/2024	BA	2	2/14/2024	10/16/2023	36218	STUD,FLANGED		2735		PRO Electronics		1/1/2022

Putting the workbook together

Once the data is moved into a pivot, I can see the quantity required by part number for the next 12 months. You can pivot it into different formats to see different buckets if you want to. Do a copy past special to make it an excel work book and then go get more information.



Sum of Rec./reqd.qty	Column Labels											
	2022											2022 Tota
Row Labels	1	2	3	4	5	6	7	8	9	10	11	12
29103												
29562		93										
29762		70										
29764												
32155	330											
32764			31			20	16	20		16	12	16
32906												32
32945	37								32			4
32946		32						33				15
32950		20	20		20	20	20		20	20		20
32960				100							100	
33787												

Next import the segmentation, usage history, price, and buffers

- Using the MRP monitor I will bring in the ABCXYZ and ABCHIJ (Orange).
- Using the MMUSERS report I will bring in standard price (no color).
- MARC give us the lot size, and information on things like minimum order quantities, rounding values, and buffers (yellow). This is also in MMUSERS.
- MC.9 gets us the historical usage information (blue).

Material	ABCXYZ	ABCHIJ	Typ	LS	Safety Stock	Min. Lot Sze	Rounding val.	Max. level	Planning time fence	Prof.	SafetyTime	Safety Stck	Piece Price	ValStockValue	Valuated stock	Tot. usage val.	Total usage	NoTotUsage	AnTtStTn-V	12 month Total MRP
29103	CZ	CJ	PD	Y3	0.000	141.000	0.000	0.000	0		25	0	24.01	$ 840	35	$ 624	26	7	0.45	88
29562	CZ	CJ	PD	EX	0.000	152.000	0.000	0.000	0		0	0	22.36	$ -	0	$ 402	18	7	2.22	93
32155	CY	CJ	PD	YZ	0.000	0.000	165.000	0.000	0		0	0	3.2303	$ -	0	$ 194	60	6	4.14	317
32764	CY	CJ	PD	Y3	0.000	0.000	0.000	0.000	0		20	0	9.88	$ 692	70	$ 1,166	118	33	2.69	136
32906	CZ	CJ	P1	YK	0.000	0.000	0.000	0.000	5		0	0	7.08	$ 312	44	$ 262	37	11	0.78	44
32945	CY	CJ	PD	YK	0.000	0.000	0.000	0.000	0		0	0	85.41	$ 1,110	13	$ 3,331	39	12	2.87	75
32946	CY	CJ	PD	YK	0.000	0.000	0.000	0.000	0		0	0	106.22	$ 1,275	12	$ 4,143	39	12	2.46	77
32950	CX	CJ	PD	Y3	0.000	20.000	20.000	0.000	0		25	0	18.07	$ 614	34	$ 2,385	132	33	9.3	131
32960	CY	CJ	PD	YZ	0.000	100.000	100.000	0.000	0		0	0	4.38	$ 600	137	$ 517	118	33	1.98	100
33787	BZ	BJ	PD	YZ	0.000	0.000	0.000	0.000	0		0	0	687.31	$ 1,375	2	$ 10,996	18	5	3.15	18
34329	BY	BJ	PD	YK	0.000	85.000	0.000	0.000	0		15	0	44.24	$ 3,318	75	$ 15,050	353	47	3.38	85
34350	CY	CI	PD	Y3	0.000	250.000	250.000	0.000	0		20	0	4.38	$ 1,086	248	$ 1,428	326	112	1.16	250
34480	BX	BI	PD	Y3	0.000	0.000	10.000	0.000	0		25	0	10.95	$ 2,310	211	$ 5,672	518	114	3.76	610
34672	CZ	CJ	PD	EX	0.000	23.000	0.000	0.000	0		0	0	150.65	$ 1,055	7	$ 1,205	8	3	0.65	23
34742	CZ	CJ	PD	YZ	0.000	25.000	0.000	0.000	0		0	0	438	$ 1,314	3	$ 876	2	1	0.52	3
34824	CZ	CJ	PD	YZ	0.000	0.000	0.000	0.000	0		15	0	236.72	$ -	0	$ 517	3	2	153.46	4
34927	CZ	CJ	PD	Y3	0.000	0.000	0.000	0.000	0		0	0	547.5	$ -	0	$ 68	1	1	6.41	6
35667	CZ	CJ	P1	YZ	0.000	0.000	0.000	0.000	5		0	0	16.7	$ 33	2	$ 33	2	1	1.6	4
36217	CZ	CJ	PD	EX	0.000	0.000	0.000	0.000	0		0	0	465.38	$ -	0	$ 2,792	6	2	5.13	10
36218	CY	CJ	PD	Y3	0.000	0.000	0.000	0.000	0		30	0	193.27	$ 580	3	$ 3,439	18	11	6.58	17
36219	CY	CJ	PD	YK	0.000	2.000	2.000	0.000	0		15	0	254.07	$ 9,147	36	$ 4,573	18	18	0.67	32
36222	BY	BJ	PD	YK	0.000	0.000	1.000	0.000	0		15	0	216.1	$ 4,322	20	$ 5,835	27	10	2.98	37
36223	BY	BJ	PD	YK	0.000	0.000	1.000	0.000	0		15	0	216.1	$ 4,970	23	$ 5,835	27	10	2.19	33
36350	CY	CJ	PD	YK	0.000	229.000	0.000	0.000	0		10	0	3.6026	$ 1,174	326	$ 3,419	949	36	2.19	1374
36474	CY	CJ	PD	Y3	0.000	30.000	0.000	0.000	0		25	0	97.37	$ 2,337	24	$ 4,284	44	11	3.17	30
36647	CY	CJ	PD	Y3	0.000	0.000	17.000	0.000	0		25	0	15.88	$ 127	8	$ 889	56	14	4.43	51
36657	BY	BJ	P1	Y3	0.000	8.000	4.000	0.000	5		25	0	96.85	$ -	0	$ 5,424	56	14	9.97	48

Now What?

We will need to add more columns based on the detail we have, but we will need a nine block either way.

Things you might be interested in doing:

- Add a column dividing the 12 month Forecast against consumption history. Is forecast increasing or decreasing compared to consumption history?
- How are your buffers set?
- What segment is holding all your money. Why don't we care about inventory $ in some segments, such as the CH segment?
- What are your turns? Are high turns a good thing or a bad thing?

Calculated columns I like to add:

- 12 month forecast divided by 12-month consumption
- Average daily forecast
- Buffer units and value (this might take a couple of columns)

The Nine Block

Consider:

- % of part numbers in each segment
- Frequency of usage/# of times used by segment
- % of total usage value (consumption history)

What does each segment look like?

Row Labels	Count of Material Number	% of Parts #'s	Sum of NoTotUsage	% of Times Used	Sum of Tot. usage val.	% of Usage Value
AH	232	2%	268,293	22%	$20,399,697	17%
AI	521	4%	58,039	5%	$52,370,200	43%
AJ	661	6%	16,417	1%	$31,877,027	26%
BH	189	2%	153,027	12%	$1,472,550	1.2%
BI	325	3%	37,555	3%	$2,617,550	2.1%
BJ	973	8%	17,556	1%	$7,941,710	6.5%
CH	535	5%	438,206	36%	$568,926	0.5%
CI	1,351	12%	146,315	12%	$1,234,757	1.0%
CJ	6,865	59%	91,465	7%	$4,571,427	3.7%
Grand Total	11,652	100%	1,226,873	100%	$123,053,843	100%

Nine Block

What can I tell about my buffer cost? Do I see a standard approach by segment?

And what is my MOQ doing to my inventory costs?

What are my turns by segment?

Row Labels	Count of Material Number	% of Parts #'s	Sum of NoTotUsage	% of Times Used	% of Usage Value	Sum of Cost of Buffer	Buffer in Days of FC	Average of LS in Days	MOQ cost in days	Turns
AH	232	2%	268,293	22%	17%	$1,207,950	14	7	9	2.11
AI	521	4%	58,039	5%	43%	$1,951,280	8	7	24	2.04
AJ	661	6%	16,417	1%	26%	$1,548,856	9	7	36	1.72
BH	189	2%	153,027	12%	1.2%	$268,718	37	10	46	1.23
BI	325	3%	37,555	3%	2.1%	$215,911	14	13	67	1.28
BJ	973	8%	17,556	1%	6.5%	$728,496	14	13	86	0.96
CH	535	5%	438,206	36%	0.5%	$157,733	49	20	81	0.91
CI	1,351	12%	146,315	12%	1.0%	$210,752	30	20	200	0.76
CJ	6,865	59%	91,465	7%	3.7%	$696,148	24	19	365	0.35
Grand Total	11,652	100%	1,226,873	100%	100%	$6,985,843	11	17	50	1.53

At a part number level

Comparing forecasted demand with historical consumption can give you insight into what part numbers are growing, or declining.

Can your supplier support the growth or decline? Should other SAP parameters, such as safety stock, be reviewed?

You could also use it for a supplier SIOP process.

Material Number	Material Description	Avg Daily FC	AVG Daily FC in $	Avg Daily Consumption	FC compared to Usage
1024408-0001	MICROCIRCUIT - HYBRID, LVDT SIGNAL CONDI	18.296	$11,570.39	19.40	94%
4P8061-259-0001	MICROCIRCUIT, 208 PIN FPGA, FL	19.88	$ 8,866.08	6.95	286%
819279-2	TRANSDUCER, PRESSURE	8.976	$ 3,895.94	7.06	127%
1016734-1	OSCILLATOR, LOW VOLTAGE, GULL-	22.212	$ 2,917.55	9.78	227%
4P8061-314-0001	MICROCIRCUIT, 3.3V, FPGA, 450,	21.576	$ 2,637.02	7.20	300%
93026-48KS	CAPACITOR	66.736	$ 2,082.16	44.37	150%
813249-1	INDUCTOR, POWER	53.448	$ 1,988.27	15.92	336%
5917375-1	DC-DC, QUAD, 3.3/5/15/-15V,35W	8.292	$ 1,640.82	9.85	84%
CDR33BX104AKWS	CAP, FIXED, CHIP CERM, BX,.1UF 10%,50V	4385.828	$ 1,570.13	3,226.75	136%

Analyzing a segment: CX Parts

C items are low value materials that make up 5% to 10% of your inventory value (depending on how you set it). Typically, there are many materials that make up the low value 5% segment.

X Items are materials with low variation, and therefore more predictable, often due to steady usage.

CX items are worth looking at for opportunities to:

- Avoid a low value stock out that prevents us from shipping high value products.
- Reduce transactional costs by ordering larger lot sizes.

CX Parts

Information that helps with analytics is available in a number of areas, with MC.9 being a primary source for good historical information on transactions and inventory levels.

Good dimensions to review for improvement:

- Inventory and Inventory Value.
- Number of total usage (how many times did an item get used/issued, regardless of the number of pieces in the usage).
- Average Range of Coverage in Days.
- Average Value of Stock Receipts (number of pieces in each receipt).
- Number of stock receipts (the number of times an item was received).
- Total Usage (Number of pieces used)

Common Buffers

Buffers can be any SAP Parameter that may cause you to hold more material than the MRP requires. The ones most commonly used at UTAS are listed below.

Lot Size

- If an item is low value and is being received two to three times a week, you may want to increase lot size or period of supply to reduce transactions.
- Higher lot sizes will also reduce the risk of stock outs by creating a bigger days range of coverage.
- Lot size changes can be either a fixed lot quantity, or a range of coverage. If a common item comes in a common container, often it is easiest to set the fixed lot size to the container quantity.

Safety Stock and Safety Time

- A static Safety stock causes MRP to want to maintain an inventory to at least that level.
- Safety time causes MRP to move the receipt or stock date for a requirement forward in MRP. It does not change the requirement date, just the date components are to be received.

Common Buffers

Range of Coverage (in Days)

- This is a dynamic safety stock n that the quantity the system wants to hold in inventory changes based on the forward looking requirements.
- You must have forward requirements for this to work.
- You should look at historical consumption and validate that it lines up with future requirements, or understand why it does not, to effectively use this.

MC.9 Inventory Analytics

To do an analysis on CX items, I used an SAP extract and added some calculated cells in Excel.

Below is an extract of MC.9.

- The yellow headers are SAP extracts, the grey are columns that I added and had some calculations done on.
- The data is based on a 12 month period.

.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Material	ValStockValue		Valuated stock		No. total usage	Avg. RC ttl stk	AvgValStockRecs		Total usa	Avg Monthly Usage	**NoValStockZero**	No.val stk rcpt	Short to usage	Inv Coverage in Days
2	AMS5659-070TESTPIECE	160.8	PLN	3	EA	160	30	1.867	EA	161	13	**43**	226	26.88%	4
3	AMS5659-072TESTPIECE	98.94	PLN	3	EA	145	190	2.188	EA	142	12	**31**	154	21.38%	5
4	AMS5659-090TESTPIECE	621.46	PLN	7	EA	77	42	1.616	EA	75	6	**29**	125	37.66%	22
5	788086-12	1,401.44	PLN	19	EA	350	28	8.688	EA	350	29	**23**	77	6.57%	13
6	788085-9	1,930.18	PLN	17	EA	186	35	4.767	EA	186	16	**23**	73	12.37%	22
7	AS3510-0215K	3,918.00	PLN	600	EA	811	34	123.306	EA	3,426	286	**59**	72	7.27%	42
8	812946-7	304.5	PLN	64	EA	890	33	119.029	EA	4,023	335	**47**	69	5.28%	4
9	MS24665-1010	1.62	PLN	36	EA	230	75	6.147	EA	229	19	**30**	68	13.04%	38
10	1001359-1	410.66	PLN	2	EA	120	35	3.477	EA	119	10	**21**	65	17.50%	4
11	0711526-210	4,918.83	PLN	177	EA	938	47	31.452	EA	938	78	**27**	62	2.88%	45
12	85053-82	16,441.00	PLN	164	EA	204	143	18.15	EA	198	17	**5**	60	2.45%	199
13	NAS1130-3L20D	1,673.85	PLN	2,198	EA	167	121	382.586	EA	6,239	520	**2**	58	1.20%	85
14	MS24665-82	20.56	PLN	318	EA	2,299	67	111.389	EA	3,078	257	**30**	54	1.30%	25
15	MS27488-20	35.7	PLN	340	EA	690	81	82.296	EA	1,620	135	**29**	54	4.20%	50
16	NAS1102E08-8	248.6	PLN	216	EA	298	73	41.245	EA	1,176	98	**24**	53	8.05%	44
17	83841-82	4,730.93	PLN	1,524	EA	6,632	82	348.943	EA	6,839	570	**20**	53	0.30%	53
18	NAS1130-3L15	499.92	PLN	718	EA	129	88	187.692	EA	4,517	376	**11**	52	8.53%	38
19	ASP6YELLOW	3,765.51	PLN	973	EA	27	4,115	38.25	EA	27	2	**2**	52	7.41%	8649
20	1001354-1	406.8	PLN	2	EA	120	35	3.941	EA	119	10	**23**	51	19.17%	4

How to Approach the Analytics

Start with a review of items that are frequent service offenders..

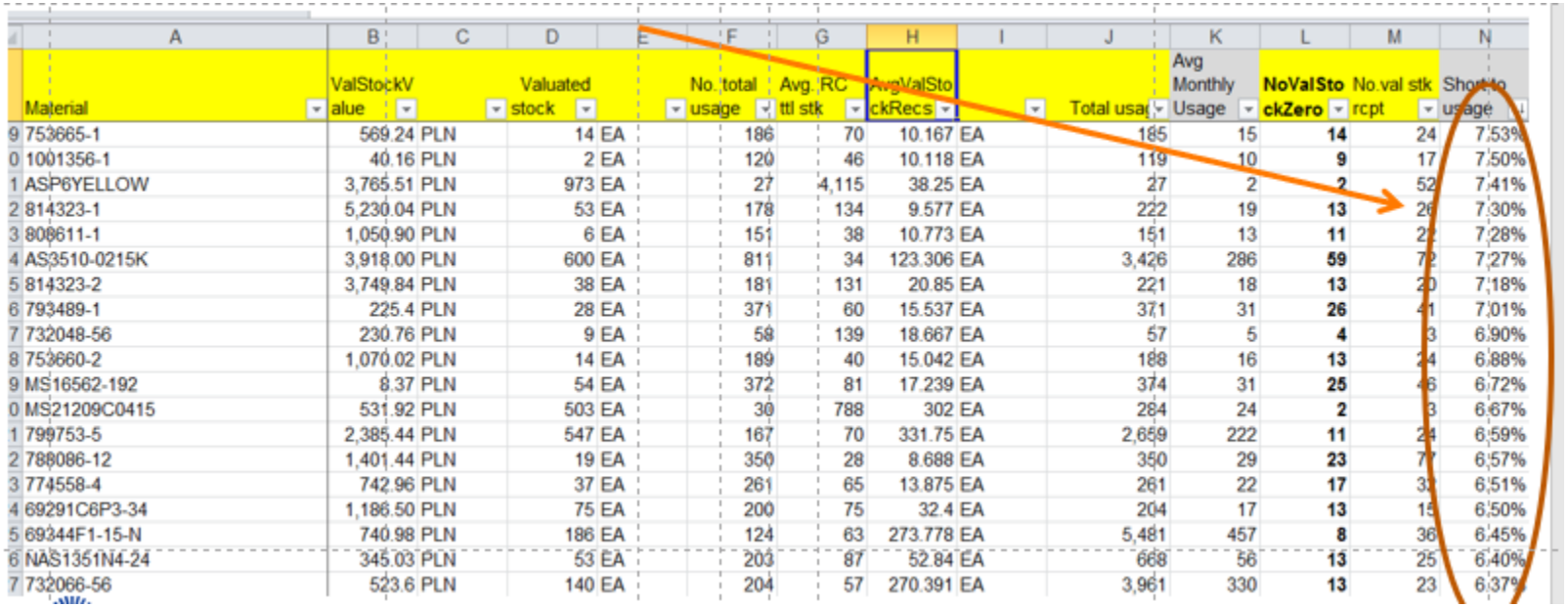
Step one is to add a column called “Short to Usage”. Here I am going to divide the number of times the item went to zero by the number of times it was used. While this does not capture shortages to all requirements, it is a place to start when trying to identify problem parts.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Material	ValStockValue		Valuated stock		No. total usage	Avg. RC ttl stk	AvgValStockRecs		Total usage	Avg Monthly Usage	NoValStockZero	No val stk rcpt	Short to usage	Inv Coverage in Days
2	83841-82	4,730.93	PLN	1,524	EA	6,632	82	348.943	EA	6,839	570	**20**	53	0.30%	53
3	NAS1149CN432R	123.07	PLN	2,661	EA	5,648	93	698.761	EA	24,035	2003	**25**	46	0.44%	27
4	NAS620A10	268.53	PLN	4,079	EA	5,627	116	1,740.90	EA	32,893	2741	**23**	20	0.41%	30
5	MS16632-4025	448.66	PLN	889	EA	5,565	108	211.722	EA	5,502	459	**16**	36	0.29%	39
6	LC026CD11S316	4,070.15	PLN	802	EA	5,563	142	328.612	EA	5,474	456	**12**	49	0.22%	35
7	81625-82	4,871.45	PLN	1,480	EA	5,563	100	397.355	EA	5,499	458	**11**	31	0.20%	65
8	SSR-0112	1,109.62	PLN	807	EA	5,558	100	520.441	EA	6,670	556	**7**	34	0.13%	29
9	80923-82	3,698.24	PLN	1,456	EA	5,554	125	607.867	EA	5,563	464	**6**	30	0.11%	63
10	MS24665-18	197.29	PLN	4,905	EA	4,952	80	697.977	EA	9,770	814	**21**	43	0.42%	120
11	732249-6	1,521.17	PLN	611	EA	4,472	61	303.316	EA	5,757	480	**23**	38	0.51%	25
12	NAS620C8L	183.96	PLN	4,672	EA	4,096	63	1,996.93	EA	42,274	3523	**28**	45	0.68%	27
13	69494J10	933.55	PLN	523	EA	3,917	65	591.067	EA	5,173	431	**12**	15	0.31%	24
14	NAS620C3	24.67	PLN	713	EA	3,777	106	223	EA	4,221	352	**28**	46	0.74%	41
15	69494J11	1,949.27	PLN	1,041	EA	3,608	58	651.762	EA	6,737	561	**17**	21	0.47%	37
16	NAS620C10L	614.2	PLN	15,286	EA	3,419	148	1,656.29	EA	21,799	1817	**21**	42	0.61%	168
17	NAS1352N08-14	1,962.01	PLN	1,043	EA	3,265	76	525.216	EA	10,035	836	**21**	37	0.64%	25

Analysis

In general you want to minimize shortages on CX parts so you can manage them less, to resource and manage other higher value items more.

Looking at frequently used materials that stock out often is a good place to start.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
	Material	ValStockValue		Valuated stock		No. total usage	Avg. RC ttl stk	AvgValStockRecs		Total usa	Avg Monthly Usage	NoValStockZero	No.val stk rcpt	Short to usage
9	753665-1	569.24 PLN		14 EA		186	70	10.167 EA		185	15	14	24	7.53%
0	1001356-1	40.16 PLN		2 EA		120	46	10.118 EA		119	10	9	17	7.50%
1	ASP6YELLOW	3,765.51 PLN		973 EA		27	4,115	38.25 EA		27	2	2	52	7.41%
2	814323-1	5,230.04 PLN		53 EA		178	134	9.577 EA		222	19	13	26	7.30%
3	808611-1	1,050.90 PLN		6 EA		151	38	10.773 EA		151	13	11	22	7.28%
4	AS3510-0215K	3,918.00 PLN		600 EA		811	34	123.306 EA		3,426	286	59	72	7.27%
5	814323-2	3,749.84 PLN		38 EA		181	131	20.85 EA		221	18	13	20	7.18%
6	793489-1	225.4 PLN		28 EA		371	60	15.537 EA		371	31	26	41	7.01%
7	732048-56	230.76 PLN		9 EA		58	139	18.667 EA		57	5	4	3	6.90%
8	753660-2	1,070.02 PLN		14 EA		189	40	15.042 EA		188	16	13	24	6.88%
9	MS16562-192	8.37 PLN		54 EA		372	81	17.239 EA		374	31	25	46	6.72%
0	MS21209C0415	531.92 PLN		503 EA		30	788	302 EA		284	24	2	3	6.67%
1	799753-5	2,385.44 PLN		547 EA		167	70	331.75 EA		2,659	222	11	24	6.59%
2	788086-12	1,401.44 PLN		19 EA		350	28	8.688 EA		350	29	23	77	6.57%
3	774558-4	742.96 PLN		37 EA		261	65	13.875 EA		261	22	17	33	6.51%
4	69291C6P3-34	1,186.50 PLN		75 EA		200	75	32.4 EA		204	17	13	15	6.50%
5	69344F1-15-N	740.98 PLN		186 EA		124	63	273.778 EA		5,481	457	8	36	6.45%
6	NAS1351N4-24	345.03 PLN		53 EA		203	87	52.84 EA		668	56	13	25	6.40%
7	732066-56	523.6 PLN		140 EA		204	57	270.391 EA		3,961	330	13	23	6.37%

Frequent CX stock out items

CX items need to be looked at based on what you have used historically, and what you are planning to replenish.

If you historically have consumed more than plan, the risk of stock out is high. Consumption can be caused by both planned and unplanned usage.

Planned usage is consumption associated with general normal backflush activity such as consumption in BOMs or shipments. Planned consumption can exceed forecast when actual requirements come in higher than expected.

Unplanned consumption captures unplanned scrap, cycle counts, and any other consumption that is not expected to be typical.

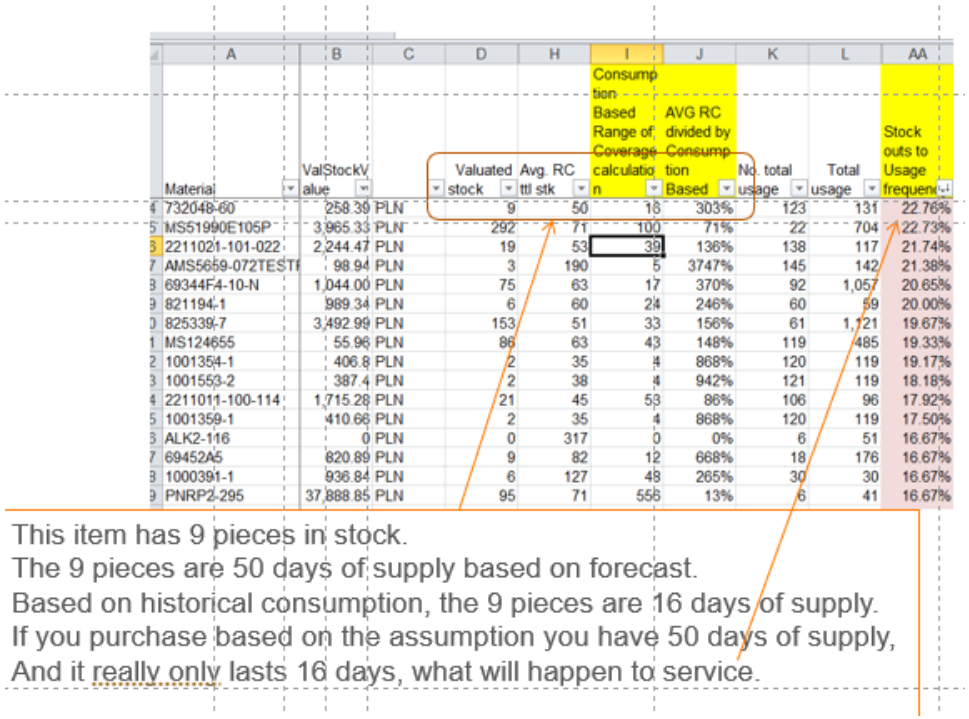
Range of Coverage based on Requirements and Consumption

What if planned consumption exceeds forecasted requirements?

- One common analytic is to look at what you are using compared to what is being forecasted.
- Usage can vary from forecast for several reasons. Forecast may be wrong, there could be an inventory cycle count error, there could be a quality issue, or an item maybe a good substitute for another item, and therefore have unplanned usage.
- If consumption is higher than planned, we will likely stock out.
- We cannot always immediately correct the requirements forecast, or solve the issues causing consumption to exceed plan, so we may choose to a buffer.

Consumption compared to Forecasted Requirements

- Range of coverage in Days based on Requirements (Forecast/orders) is column H.
- Range of Coverage based on historical consumption is column Y.
- Column J divides H into I and tells us that the forecasted value is projected to be in stock for more days than history expected it to be in stock.

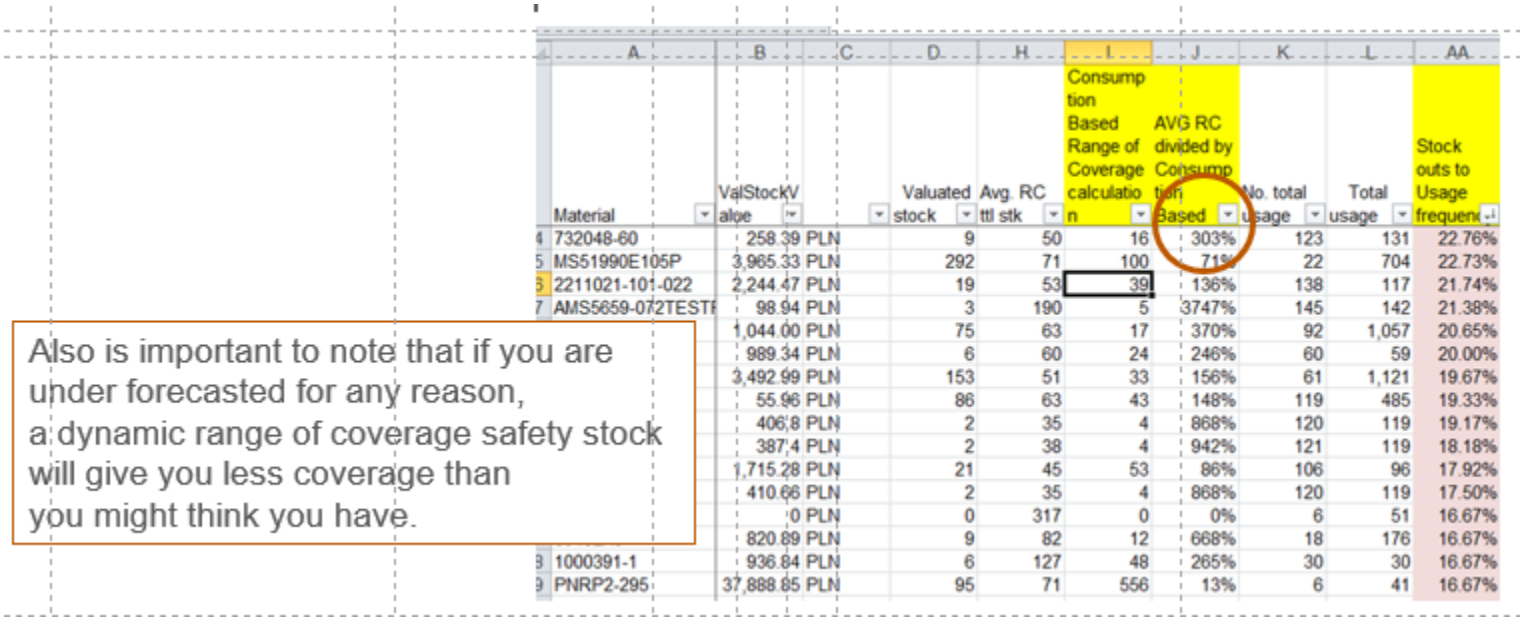


	A	B	C	D	H	I	J	K	L	AA
	Material	ValStockValue		Valuated stock	Avg. RC ttl stk	Consumption Based Range of Coverage calculation	AVG RC divided by Consumption Based	No. total usage	Total usage	Stock outs to Usage frequen
4	732048-60	258.39	PLN	9	50	18	303%	123	131	22.76%
5	MS51990E105P	3,965.33	PLN	292	71	100	71%	22	704	22.73%
6	2211021-101-022	2,244.47	PLN	19	53	39	136%	138	117	21.74%
7	AMS5659-072TEST	98.94	PLN	3	190	5	3747%	145	142	21.38%
8	69344F4-10-N	1,044.00	PLN	75	63	17	370%	92	1,057	20.65%
9	821194-1	989.34	PLN	6	60	24	246%	60	59	20.00%
0	825338-7	3,492.99	PLN	153	51	33	156%	61	1,121	19.67%
1	MS124655	55.96	PLN	86	63	43	148%	119	485	19.33%
2	1001354-1	406.8	PLN	2	35	4	868%	120	119	19.17%
3	1001553-2	387.4	PLN	2	38	4	942%	121	119	18.18%
4	2211011-100-114	1,715.28	PLN	21	45	53	86%	106	96	17.92%
5	1001359-1	410.66	PLN	2	35	4	868%	120	119	17.50%
6	ALK2-116	0	PLN	0	317	0	0%	6	51	16.67%
7	69452A5	820.89	PLN	9	82	12	668%	18	176	16.67%
8	1000391-1	936.84	PLN	6	127	48	265%	30	30	16.67%
9	PNRP2-295	37,888.85	PLN	95	71	556	13%	6	41	16.67%

This item has 9 pieces in stock.
The 9 pieces are 50 days of supply based on forecast.
Based on historical consumption, the 9 pieces are 16 days of supply.
If you purchase based on the assumption you have 50 days of supply,
And it really only lasts 16 days, what will happen to service.

Using the SAP Add on Tools

Looking at the column we inserted that compares consumption (history) to Requirements (forecast) in days, we see consumption is 303% of future requirements. If the future actual turns out to look like the past, we have under forecasted our requirements and will stock out.

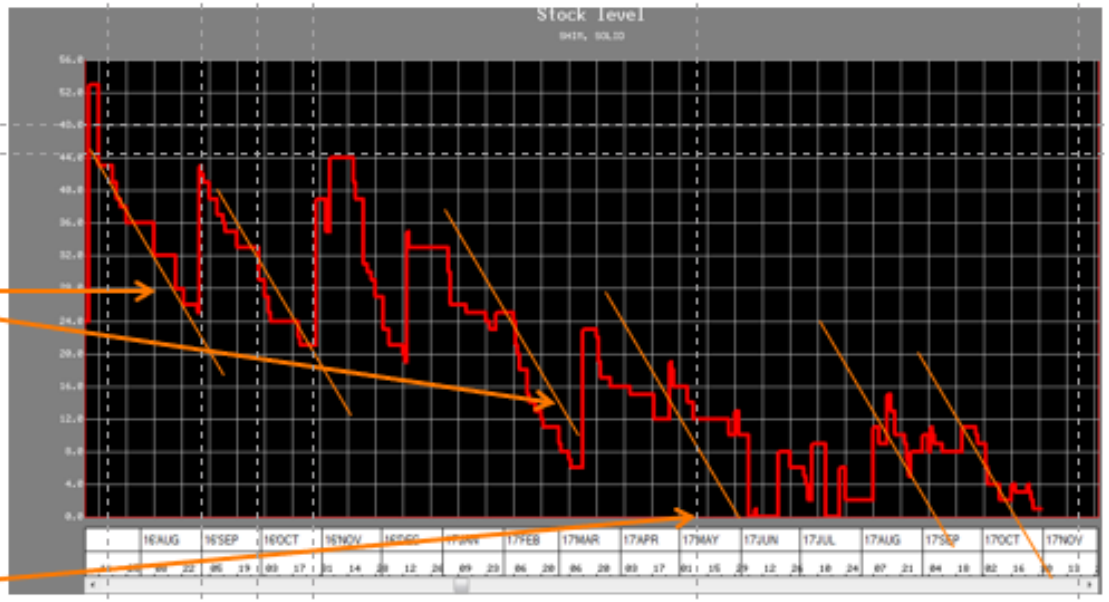


	A	B	C	D	H	I	J	K	L	AA
	Material	ValStockValue		Valuated stock	Avg. RC ttl stk	Consumption Based Range of Coverage calculation	AVG RC divided by Consumption Based	Mo. total usage	Total usage	Stock outs to Usage frequen
4	732048-60	258.39 PLN		9	50	16	303%	123	131	22.76%
5	MS51990E105P	3,965.33 PLN		292	71	100	71%	22	704	22.73%
6	2211021-101-022	2,244.47 PLN		19	53	39	136%	138	117	21.74%
7	AMS5659-072TESTF	98.94 PLN		3	190	5	3747%	145	142	21.38%
		1,044.00 PLN		75	63	17	370%	92	1,057	20.65%
		989.34 PLN		6	60	24	246%	60	59	20.00%
		3,492.99 PLN		153	51	33	156%	61	1,121	19.67%
		55.96 PLN		86	63	43	148%	119	485	19.33%
		406.8 PLN		2	35	4	868%	120	119	19.17%
		387.4 PLN		2	38	4	942%	121	119	18.18%
		1,715.28 PLN		21	45	53	86%	106	96	17.92%
		410.66 PLN		2	35	4	868%	120	119	17.50%
		0 PLN		0	317	0	0%	6	51	16.67%
		820.89 PLN		9	82	12	668%	18	176	16.67%
8	1000391-1	936.84 PLN		6	127	48	265%	30	30	16.67%
9	PNRP2-295	37,888.85 PLN		95	71	556	13%	6	41	16.67%

Also is important to note that if you are under forecasted for any reason, a dynamic range of coverage safety stock will give you less coverage than you might think you have.

CX Stocking Level

- This item is consuming at 303% of forecast.
- Looking at the stock we can see nice consistent consumption by looking at the slope of the saw tooth.
- We can also see it is stocking out frequently.



CX Example

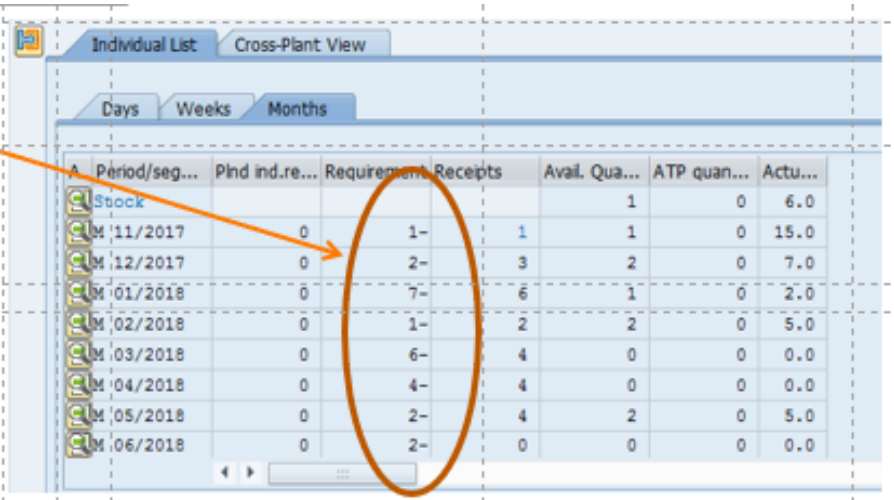
My requirements between now and June are 25 units.

My Period of Supply (lot size is five days.

My safety time is five days (so we are driving perhaps one more each month).

My consumption is 131 in the last 12 months (11 a month).

Do I have enough Supply?



A	Period/seg...	Plnd ind.re...	Requirements	Receipts	Avail. Qua...	ATP quan...	Actu...
	Stock				1	0	6.0
	M 11/2017	0	1-	1	1	0	15.0
	M 12/2017	0	2-	3	2	0	7.0
	M 01/2018	0	7-	6	1	0	2.0
	M 02/2018	0	1-	2	2	0	5.0
	M 03/2018	0	6-	4	0	0	0.0
	M 04/2018	0	4-	4	0	0	0.0
	M 05/2018	0	2-	4	2	0	5.0
	M 06/2018	0	2-	0	0	0	0.0

Material	ValStockValue PLI		Valuated stock		CnsgtStock		Avg. RC ttl stk	Consumption Based Range of Coverage calculation	AVG RC divided by Consumption Based	No. total usage	Total usage	
732048-60	258.39	PLN	9	EA	0	EA	50	16	303%	123	131	EA

CX Example

From the above review, we know we are under supply in terms of what we are actually using versus what the system requirements are. What else do we know?

- We check the cost of the part, and know that the cost is 29 $ each.
- We receive it 3.2 times a month, with an average receipt value of 91 $.

Do we know anything else? Is there a phase out of this part?

What should we do?

If we do not know why this is overconsumption exist, but do want to stop stocking out, we could decide to run a service level calculation and put in a safety stock. Since it is a “C” item cost will be small.

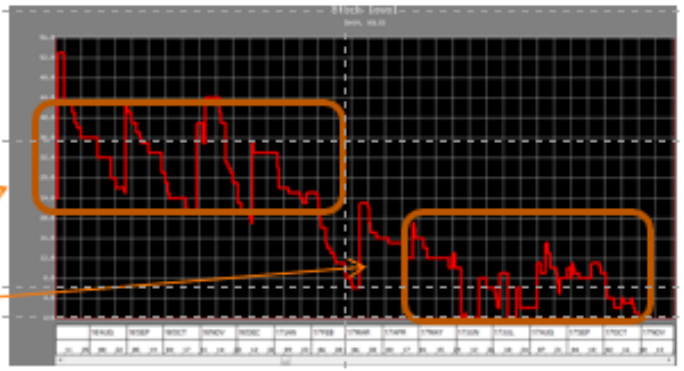
CX Example

One additional thing to look at one this part is around Item changes. Notice from the graphic that the part's behavior has changed over time.

Using transaction ZMMCHANGEDOC and by selecting a date to capture the historical changes, you may see a change in the MARC table that impacted this parts behavior.

On this item I did not see any changes to explain the overall change. I looked for safety stock, lead times, lot sizes, etc., during the period of change and did not find anything obvious.

Still, always worth a look.



Change Documents for Object Class MATERIAL

Object class	MATERIAL
Plant	2760
Material Number	732048-60
Last Changed By	
From Date	01/01/2016
From Time	00:00:00
Change document number	
Table Name	MARC
Table Key	
To Date	10/31/2017
To Time	23:59:59
Plant-sp.matl status	

Tracking Performance

There are 544 CX items in this particular analysis. 23 are at 0 stock, and 34 do not have enough stock to cover all requirements.

Is this good or bad? Are we getting better or worse? How can we know these things?

As part of the process, we need to establish min and max stocking levels by part, and track our status to them.

With CX Parts, being below a minimum is going to be typically much worse than being above the maximum.

Closing Comments

- You need to check your parts behaviors to manage them.
- Quick checks include looking at the number of times a part goes to zero and comparing the consumption history to forecasted requirements.
- Looking at the graphics is very helpful. How is the part behaving? Did its behavior change?
- If you can not quickly understand why you are stocking out, on CX items especially, placing a safety stock in the system to contain the issue may be necessary.
- When running safety stock calculations using a service factor, running a higher service factor on C items as compared to A items, can get you better overall results at a lower total cost.