PKOPS

User manual Version v.1.10.

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I. PROJECT SCOPE

Operations Planning System (PKOPS)

Operations Planning Systems is a subsystem to product development and manages operation plans visually. Operations planning System also becomes a knowledge-base of operations on how products were developed and produced and also become a resource planning tool for processing orders.

OPS is a visual platform for managing operations, materials , patterns , tools and machines used in each of them. OPS bridges the disconnect between text based data entered in the PKMRP system and visual layout plans and patterns made through various graphics tools. Using OPS, system operation layouts can be quickly made from the text based operation plan.

II. OPERATIONAL CONCEPTS

Pre-OPS Limitations

BOM, Patterns entered in PKMRP system with no linking to operations.

Only text based information available, No layouting is possible with the data. (Must use external tools and there is no data integration)

No reuse of operation plan and no tracking is possible to the operation plan made initially by the R&D departments.

No single repository of operation layouts for reference.

Difficulties in managing different files at distributed locations

Highlights of New System

Visual linking of Materials and patterns consumed to operations.

Visual linking of Tools and machines needed in each operations.

Integrated multiple page layouting tool.

Multiple editions of operation plan (Text, Layout, production plan, actual production editions)

III. PKOPS System

Core Requirements Table

Features	Req. Ref no	Requirement Description		
Style Development	PKOPS-Req001	Search & view original Style Info, version / confirmation history		
Operations PKOPS-Req002 View, brown Management		View, browse, manage/optimize processes		
Layout Management	Customization of original operations plan. Definition of Process flow, process definition/redefinition			
Pattern Linking	PKOPS-Req004	Manage (Operations-Patterns) Linking		
BOM Linking PKOPS-Req005 Manage (Operations-BOM) Linking		Manage (Operations-BOM) Linking		
Tools Linking PKOPS-Req006 Manage (Operations –Operation Tools)		Manage (Operations –Operation Tools) Linking		
Machine PKOPS-Req007 Manage (Operation Linking		Manage (Operations –Operation Tools) Linking		

Functional Specifications

Req	. Ref no	S I.	Functi	on No	Function Name		Function Description
A.	A. Style Development PKOPS-Req001						
1	PKOPS-Fi	unc	00101	Buyer ba	sed search	Buye	r-wise Style Filtering
2	PKOPS-Fi	unc	00102	Style Sea	arch	Text	based Style Search.
3 PKOPS-Func00103		Browse S	Styles	Brow	se Listed styles		
4	4 PKOPS-Func00104		View Sty	le Details	View	Style Details.	
5	PKOPS-Fi	unc	00105	Collapse	/Expand Styles	Colla	pse/Expand style browsing
6	PKOPS-Fi	unc	00106	Style Im	age upload	Style	Image uploading.

B. Operations Management PKOPS-Req002							
1	PKOPS-Func00201	Browse Operations	View Operation Revision wise				
2	PKOPS-Func00202	Operation Plan Editions	Identify PDM, OPS and MTOPS edition of operation plans				
3	PKOPS-Func00203	New Operation plan	Operation plan registry / copy				
4	PKOPS-Func00204	Print processes	Printing operation plan listing				
5	PKOPS-Func00205	Confirm Operation Plan	Confirm a operation plan revision				
6	PKOPS-unc00206	Save Operation Plan	Save Current Operation Plan				
B.1) Process Details I	Management	I				
1	PKOPS-Func00206	Add new Process	Adding a new process				
2	PKOPS-Func00207	Edit Process	Edit a selected Process				
3	PKOPS-Func00208	Delete Process	Removing a process				
4	PKOPS-Func00209	Refresh process detail	Cancel changes if any				
C.	C. Layout Management-PKOPS-Req003						
1	PKOPS-Func00301	Expand Canvas	Expand drawing workspace				
2	PKOPS-Func00302	Reset Modes	Sets the system mode to neutral				
3	PKOPS-Func00303	Process Flow Management	Process flow Management				
4	PKOPS-Func00304	Layout Orientation Management	Toggle between Vertical and horizontal orientations				
5	PKOPS-Func00305	Auto Arrange Processes	Auto arrange processes				
6	PKOPS-Func00306	Hide Show Groups	Deleting / Hiding a Group visual				
7	PKOPS-Func00307	Hide Show Patterns	Hide / Show linked patterns				
8	PKOPS-Func00308	Hide/Show Flows	Hide/Show Flows (links)				
9	PKOPS-Func00309	2D/3D Display	Switching between 2D/3D Display				

10	PKOPS-Func00309	Hide/ Show Title and Summary	Hide/ Show Style details and Summary on canvas				
11	PKOPS-Func00310	Chose Themes	Chose Themes				
12	PKOPS-Func00311	Chose Canvas Background Color	Chose Canvas Background Color				
13	PKOPS-Func00312	Canvas Width management	Canvas Width management				
14	PKOPS-Func00314	Refresh Display	Cancel or changes and Reset display				
15	PKOPS-Func00315	Saving operation plan	Saving an operation plan				
16	PKOPS-Func00316	Export an operation plan	Export an operation plan				
17	PKOPS-Func00317	Printing an operation plan	Printing an operation plan				
18	PKOPS-Func00318	Process Outsourcing Management	Process Outsourcing Management				
19	PKOPS-Func00319	Deleting/Hiding processes from the operation plan	Deleting/Hiding processes from the operation plan				
20	PKOPS-Func00320	Add New Process	Add New Process				
21	PKOPS-Func00321	Adding a new process Group	Adding a new process Group				
22	PKOPS-Func00322	Auto Group Filtering Processes	Auto Group Filtering Processes				
23	PKOPS-Func00323	Editing a process	Editing a process from drawing canvas				
24	PKOPS-Func00324	Process Group Management	Process Group Management				
D.	D. Linking Patterns to Operations PKOPS-Req004						
1	PKOPS-Func00401	Operations-Pattern linking	View Operations-Pattern linking				
2	PKOPS-Func00402	Manage Pattern Linking	Add / Edit Operations-Pattern Link				

3	PKOPS-Func00403	Delete Pattern Linking	Delete Operations-Pattern Linking				
E.	Linking BOM to (Operations]PKOPS-Req0	05				
1	PKOPS-Func00501	Operations-BOM linking	View Operations-BOM linking				
2	PKOPS-Func00502	Manage BOM Linking	Add / Edit Operations-BOM Link				
3	PKOPS-Func00503	Delete BOM Linking	Delete Operations-BOM Linking				
F.	Linking Tools to Op	erations]PKOPS-Req006	5				
1	PKOPS-Func00601	Operations-Tools linking	View Operations-BOM linking				
2	PKOPS-Func00602	Manage Tools Linking	Add / Edit Operations-BOM Link				
3	PKOPS-Func00603	Delete Tools Linking	Delete Operations-BOM Linking				
4	PKOPS-Func00604	Tools registry	Tools management				
G.	G. Linking BOM to Operations]PKOPS-Req007						
1	PKOPS-Func00701	Operations-Machines linking	View Operations-BOM linking				
2	PKOPS-Func00702	Manage BOM Linking	Add / Edit Operations-BOM Link				
3	PKOPS-Func00703	Delete BOM Linking	Delete Operations-BOM Linking				
4	PKOPS-Func00704	Machines management	Machines registry.				

User Authentication and Authorization

PKOPS system access is restricted and only available to PK Employees and the authorization to perform different levels of operations on PKOPS is granted based on the User Roles defined in PKMRP system. The rights to add/modify the operation plan is granted only to the product development (R & D) department and the rights to Confirm / Finalize an operation plan is only available to the Manager of Operations Plan Team.

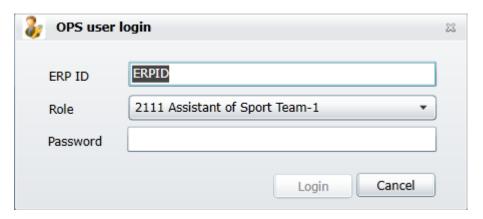
Login Process

On browsing to PKOPS, a login screen asking for the username and password will be prompted as below.

Enter MRP ID and password in respective columns and press Enter / Click login.

If the UserID is valid, the roles available to that user will be displayed in the Roles ComboBox. The appropriate role should be selected. After providing the password password in password textbox, users may either Click Login Button or press Enter Key to login to OPS System.

PKOPS Login Screen



If the credentials are valid, user will be taken to the PKOPS homepage. Otherwise an empty interface is shown with all controls locked and no data is displayed.

IV. USER INTERFACE & OPERATION MANUAL

A. Style Development PKOPS-Req001

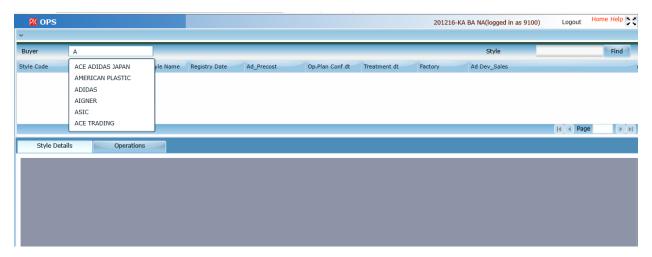
1) Buyer based search -PKOPS-Func00101

This option is on the homepage of PKOPS.

Navigation

PKOPS->HOME

- Select a buyer from the 'Buyers' Autocomplete box as in the image below. Typing few characters of Company. Auto-complete feature of OPS will show all matching Buyer names.
- Choose the necessary Buyer from the list and click Find button on the right hand side of the same row.
- The product styles developed for the buyer chosen is automatically populated in the data grids below.



(Note that there we need to click the "Find" button after choose a buyer from the combo box.

Style Search PKOPS-Func00102

This option is on the homepage of PKOPS.

Navigation

PKOPSHOME->Find

Function Description

- 1. Enter a partial/full Buyer StyleID/Buyer Style Name/PkStyleID in Style Column
- 2. Press 'Enter Key' or Click 'Find' button.

The matching styles are listed in the grid below



3) Browse Styles PKOPS-Func00103

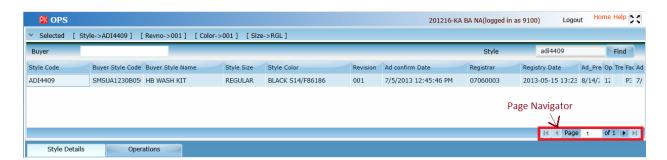
This option is on the homepage of PKOPS and always visible unless styles-header window is not collapsed and not in full-Screen from any other sub-screens.

Navigation

PKOPS->HOME

Function Description

- 1. Use the arrow keys or mouse to browse through the records.
- 2. Use the page navigator to navigate through pages (if available).
- 3. The matching styles registry details are listed in the grid below



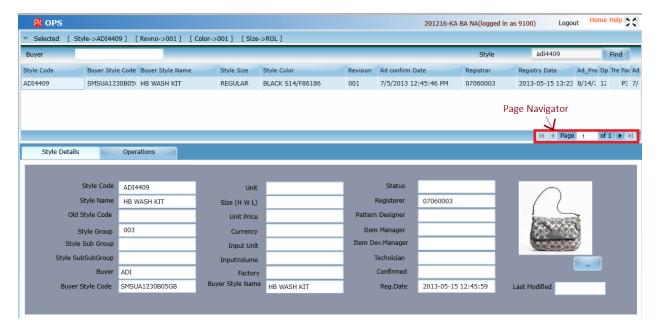
4) Viewing Style Details PKOPS-Func00104

Navigation

PKOPSHOME->Style Details

Function Description

- 1. Select a row (A Style with appropriate revision) from the Styles Grid and the style details are automatically displayed on the detail part below
 - 2. The matching styles are listed in the grid below.



B. Operations Management PKOPS-Req002

Function Description

This feature through and manage operation plan entries.

Navigation

PKOPSHOME->Operations->Operation plan



1) Browsing Operations PKOPS-Func00201

Pre-conditions

- User logged into PKOPS with valid credentials.
- PKOPSHOME->Operations->process Management

Function Description

Selecting a row (An operation with appropriate revision) from the Operations header grid . The corresponding operations details are automatically displayed in the Detail Grid below.

- 1. Copy/Register Operation plan
- 2. Delete Operation plan
- 3. Print operation plan.
- 4. Filter Operation plan Editions
- 5. Search and Filter on the remarks column
- 6. Save Operation plan
- 7. Browse Operation revisions

2) Operation Plan Editions PKOPS-Func00202

Navigation

PKOPSHOME->Operations->process detail

Function Description

The original edition (text edition if not copied from an edition with layout) of Operation plan is shown with an icon . When a text edition is saved with layout, through OPS, a new OPS edition will be created and this record can be identified by the edition icon . Once the layout is accessed and modified and saved by factory staff, an operation plan edition (MTOPS) is created. The same is identified by icon . All the above editions are tracked individually using versions starting from 001.

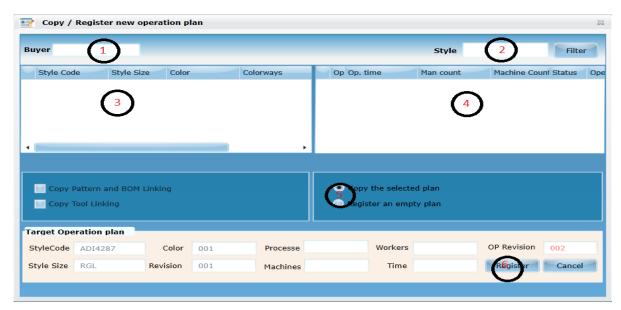
3) Operation plan Registry PKOPS-Func00203

Navigation.

PKOPSHOME->Operations->

Function Description

An new operation plan (as Operation Revision 001 by default if no revisions already exist) for the currently selected Style, size, color, revision entry from Styles Grid is registered. The plan registry can be done in two ways. 1)Copy from existing plan. 2)Create an empty plan. The following screenshot shows the registry screen



Function descriptions

- 1. Buyer-wise search :- Choose buyer from this Autocomplete-box and click find
- 2. Style-wise search :- Typing a buyer /PK style code/name and click find /
- 3. Style listing window: Lists the style codes matching buyer/style search key
- 4. Operation plan entries window: Lists operation plan (All editions) matching
- 5. Option button to choose copy selected plan or create new to register
- 6. Registers chosen plan or/creates an empty operation plan-Added as a PDM edition.

4) Print PKOPS-Func00204

Navigation

PKOPSHOME->Operations->print

Function Description

- 1. A Windows print dialog box will appear to guide through the process of printing.
- 2. The currently selected operation plan will be printed as a listing.

Note:To print layout, use the print/export functions within the Layout management tab.

5) Confirm PKOPS-Func00205

Navigation

- User logged into PKOPS with valid credentials.
- PKOPSHOME->Operations->process detail

Function Description

This option is only available to the Operations Manager. Clicking this option having selected the appropriate operations header entry will cause a confirmation window to appear to confirm the function. On selecting "OK" will save the operation plan revision as confirmed. This option will also update the summary fields like man count, machine count, total time, total cost etc.

6) Save Operation Plan PKOPS-Func00206

Navigation

PKOPSHOME->Operations->process detail

Function Description

Save Operation plan –Clicking this button will show a sub window as below with various options available for saving. Note that only the options available to the user role with which the use has logged in will be enabled here.

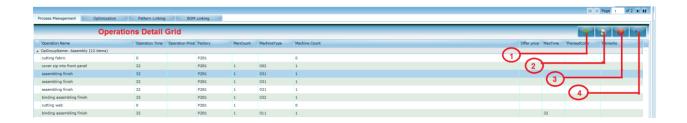


B.1 Process Detail Management

Navigation.

• PKOPSHOME->Operations->Operation plan

- 1. Select a row (An operation with appropriate revision) from the Operations header grid and the operations details are automatically displayed on the detail in Operations Detail Grid
- 2. Choose Buttons 1..5 for desired operations



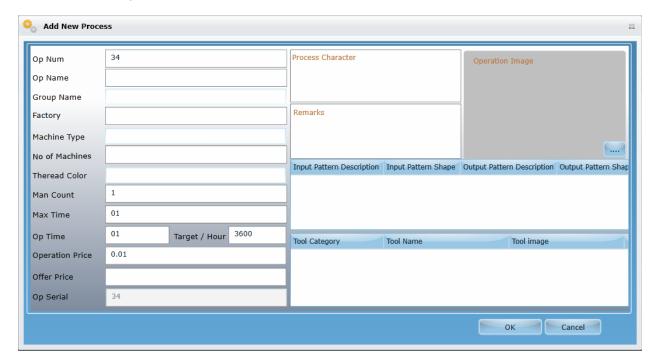
1) Add New Process PKOPS-Func00206

This option displays a new operation entry screen. Filling necessary details and clicking save will save a new operation.

Navigation

PKOPSHOME->Operations->process detail -> Add New Process

- 1. Clicking Add new process shows a new process entry screen.
- 2. Fill necessary details and click OK. The data entered will be validated and saved,



2) Edit Process PKOPS-Func00207

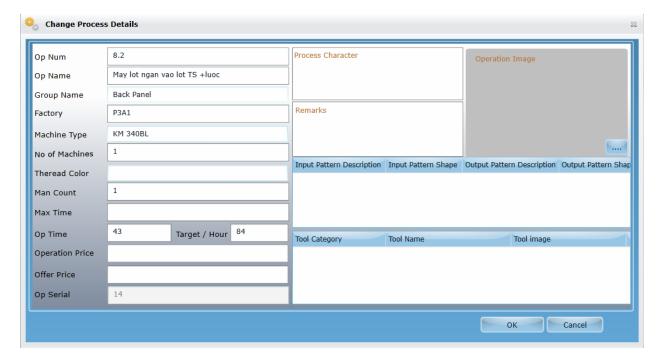
This option displays current operation entry in a detailed screen for modification. Filling necessary details and clicking save will save the changes.

Navigation

PKOPSHOME->Operations->process detail -> Edit Process

Function Description

- 1. Clicking Edit process shows process edit screen.
- 2. Fill necessary details and click OK.
- 3. The data will be validated and saved.



3) Delete Process PKOPS-Func00208

This option deletes current operation entry.

Navigation

PKOPSHOME->Operations->process detail -> Delete process

- 1) Clicking Delete process shows a confirmation window prompting for the confirmation to delete process.
- 2) Click yes to delete will delete the process from process detail.
- 4) Reset Process details display PKOPS-Func00208

This option cancels changes and reset process details entry

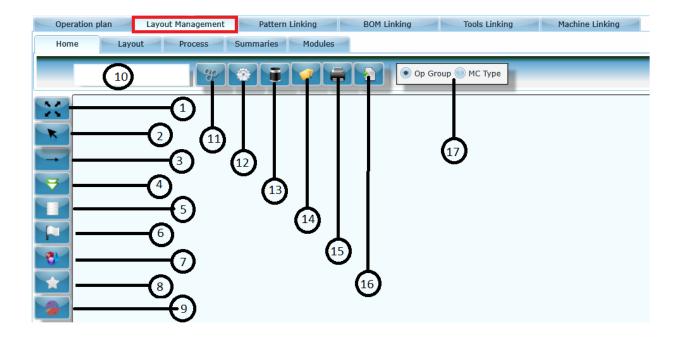
Pre-conditions

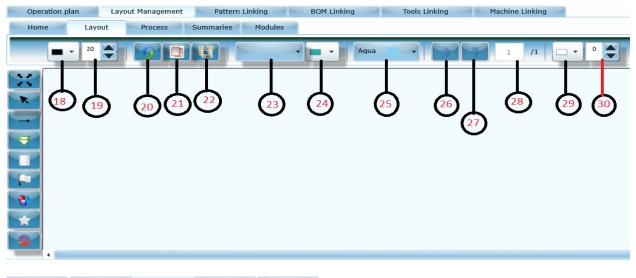
PKOPSHOME->Operations->process detail -> Reset Processes

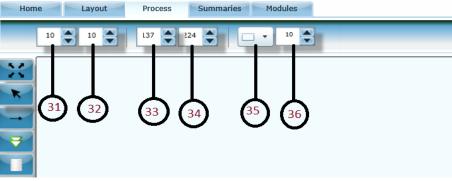
Function Description

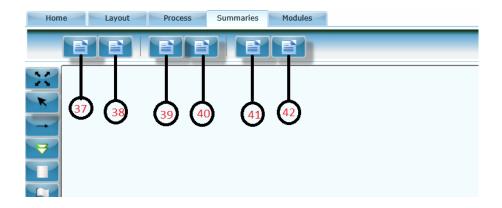
- 1. Clicking cancels all changes made since last save
- 2. And a fresh copy of operation plan detail is shown from

C. Layout Management PKOPS-Req003











Description

- 1. Expand Window
- 2. Reset Modes
- 3. Operation Flow / Sequence management (Draw Flow)
- 4. Layout Orientation Management (Direction Toggle).
- 5. Auto Arrange the visual plan
- 6. Show/Hide Operation Group Visual
- 7. Show /Hide Patterns
- 8. Display/Hide Flows(Arrows)
- 9. Switch display to 2D/3D
- 10. Filter Process Group
- 11. Add New Process Group
- 12. Add New Process
- 13. Process Outsourcing Management
- 14. Show / Hide Recycle Bin
- 15. Print Plan
- 16. Export Plan to PDF / PNG
- 17. Layout Grouping Options- Operation Group / Machines.
- 18. Layout Text Color
- 19. Layout Text Size

- 20. Refresh Display. (Cancel all changes)
- 21. Clone Process
- 22. Import Layout
- 23. Layout Color Themes
- 24. Flow Line (Connector)color
- 25. PK Color Themes Selection.
- 26. Page navigation -> Previous Page
- 27. Page navigation -> Next Page
- 28. Current Page display.
- 29. Process Canvas background color
- 30. Increase/Decrease default Canvas width by 1 process width.
- 31. Process Vertical distance
- 32. Process Horizontal distance.
- 33. Process Width.
- 34. Process Height.
- 35. Process Color.
- 36. No of processes in a row.
- 37. Style Title and basic layout summary.
- 38. Layout summary for buyer-pre sales
- 39. Machine summary
- 40. Show Group Summary
- 41. Tools Summary
- 42. Tools summary on layout processes.

1) Expand Canvas PKOPS-Func00301

Pre-conditions

• PKOPS-HOME->Operations->Process Optimization->full Screen

Function Description



- 2. Note that the Button text changes from Full Screen to Normal View. Clicking again will set the system in the normal view.
- 3. Note: It is a security feature of the software tool used to develop this software to disable keyboard inputs during full screen mode

2) Reset Modes PKOPS-Func00302

Navigation

PKOPS-HOME->Operations->Layout Management

Function Description

1. Click on the **Reset Modes**Button to set the canvas in neutral mode(meaning exit special modes like flow definition mode)

3) Process Flow Management PKOPS-Func00303

Navigation

PKOPS-HOME->Operations->Layout Management

- 1. Click on the **Flow Definition**Button to set the canvas in flow definition mode. In this mode, the mouse cursor is changed to a target icon
- 2. Click a process followed by its succeeding process this will draw a flow /link between selected process and the process to follow.
- 3. Repeating the same process for the same sequence of processes deletes this link.

4) Layout Orientation Management PKOPS-Func00304

Navigation

• PKOPS-HOME->Operations->Process Optimization

Function Description

- 1. Click on the **Layout Orientation**Button to changes the flow direction between horizontal and vertical directions.
- 5) Auto Arrange Processes PKOPS-Func00305

Navigation

PKOPS-HOME->Operations->Process Optimization ->Auto Arrange

Function Description

- Click the Process Auto-Arrange
 Button
- 2. This feature will re-arrange the processes in the order of their flow sequence defined
- 6) Hide Show Groups PKOPS-Func00306

Navigation

PKOPS-HOME->Operations->Process Optimization->Hide/Show Groups

Function Description



- 1. Clicking on the Hide/Show Flow Button
- 2. This option may be used to temporarily hide the process group rectangles.
- 7) Hide/Show Patterns PKOPS-Func00307

Navigation

PKOPS-HOME->Operations->Layout Management->Hide/Show Patterns

Function Description



- 1. Clicking on the Hide/Show Flow Button
- 2. This option may be used to show/ hide the patterns linked to processes within the process rectangle.
- 8) Display/Hide Flows PKOPS-Func00308

Navigation

PKOPS-HOME->Operations->Layout Management->Hide/Show Flows

Function Description



- 1. Clicking on the Hide/Show Flow Button
- 2. This option may be used to temporarily hide the current linking's and Flow definitions. And clicking again it will show the links
- 9) Switch Display 2D/3D PKOPS-Func00309

Navigation

PKOPS-HOME->Operations->Layout Management->Switch to 2D/3D

Function Description



- 1. Clicking on the 2D/3D Button
- 2. This option may be used to switch between 2D and 3D modes of layout plan canvas
- 10) Auto Group Filtering Processes PKOPS-Func00322

Navigation

PKOPS-HOME->Operations->Layout Management->Home



- 1. Select a Process Group from the Combo Box
- If any processes under this group exists, only those are displayed on canvas. All
 other processes are removed. If no processes under the selected group exists,
 the button right to this combo box-Add Process Group becomes enabled-Meaning
 clicking the add process group button, we can add an empty process group
 selected.



11) Adding a new process Group PKOPS-Func00321

Navigation

PKOPS-HOME->Operations->Layout Management->Home

Function Description

- 1. Click the Show (Process Groups)Combo box and choose the desired process groups you wish to add.
- 2. If the group is already in the operation plan, the group is filtered. If the chosen group is not in the operation plan, then the "Add Group" Button is shown enabled .
- 3. On clicking the "Add group, the selected group is added to the plan as an empty group with no processes under it

12) Add New Process PKOPS-Func00320

Navigation

• PKOPS-HOME->Operations->Layout Management->Home->Chose Themes

Function Description

- 1. Click on the new process button. This displays a sub-window presenting an new process with a new operation serial number generated.
- 2. Fill necessary entries and save click OK. This will add the new record to operation

Note. The new process entry will be saved to database only when operation revision is saved clicking "SAVE" button. This feature is similar to the one available in the Process Detail tab

13) Deleting/Hiding processes from the operation plan PKOPS-Func00319

Navigation

PKOPS-HOME->Operations->Layout Management->Home

Function Description

- 1. Click on the Recycle Bin . This displays a bin on the canvas.
- 2. Drag the processes which need to be deleted or hidden to recycle bin.
- 3. Click Button "Recycle bin" again will hide the Recycle bin.
- 4. Note. The entries in the Recycle bin will be permanently deleted if the operation revision is saved, clicking "SAVE" button.
- 14) Process Outsourcing Management PKOPS-Func00318

Navigation

PKOPS-HOME->Operations->Layout Management->Home

- 1. Click on the outsourcing button
- 2. Click on the process to outsource.
- 3. This will mark the process as outsourced. There is a visible Impact the process is displayed with yellow background and text "[outsourced]" is appended to the end of process name.

4. To mark a process back to normal (To toggle the outsourcing marking), click on the outsourcing button as in step 1 and click on the process to mark as not outsourced. This will make the process back to normal.

15) Printing an operation plan (Graphical) PKOPS-Func00317

Navigation

PKOPS-HOME->Operations->Process Optimization

Function Description

- 1. Click on the Print Button. This displays a print option sub window
- 2. Select the appropriate writer or printer and page setup.
- 3. Click Print to Print the document

Note that the print option prints only the visible objects in the canvas

16) Export an operation plan (Graphical) PKOPS-Func00316

Navigation

PKOPS-HOME->Operations->Layout Management->Home

Function Description

- Click on the Export Operation Plan

 Buttor
- 2. Chose a format and file and location.
- 3. Click save.
- 4. The operation plan will be exported to the chosen format and name.

17) Layout Grouping Options PKOPS-Func00317

Navigation

• PKOPS-HOME->Operations->Layout Management->Select Grouping option from Operation Groupwise / Machine Typewise

Function Description

- 1. Choose a predefined color theme from the Combo Box as shown below
- 2. This option will reset layout processes and organize them into default grouping as selected. User may have to redraw the processes based on desired layout orientation.

18) Layout Text Color PKOPS-Func00318

Navigation

 PKOPS-HOME->Operations->Process Optimization->Click Background Color picker



Canvas

Function Description

1. Clicking on this color ComboBox will show a color picker window

A

R

Clicking on this color ComboBox will show a color picker window

B

Clicking on this color ComboBox will show a color picker window

A

B

Clicking on this color ComboBox will show a color picker window

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Clicking on this color ComboBox will show a color picker window

A

Clicking on this color col

- 2. Pick a predefined color or define a color using RGB combinations and click Done
- 3. The chosen color is applied as canvas background color

19) Layout text Size PKOPS-Func00319

Navigation

PKOPS-HOME->Operations->Layout management->Layout->Font Sixe

Function Description

1. Press the increase or decrease up down arrow. And this will automatically adjust the canvas width

20) Refresh Display (Discard all changes) PKOPS-Func00320

Resetting will discard any flow or physical layout changes, deletion /add new / update operations etc, if have done with currently selected operation

Navigation

• PKOPS-HOME->Operations->Process Optimization

Function Description

1. By selecting a color from the color picker tool, all Texts in layout are painted using the selected color.

21) Clone processes PKOPS-Func00321

Navigation

PKOPS-HOME->Operations->Layout management->Layout->Clone processes.

Function Description

- 1. Click on the Clone processes Button to set the system in a process duplication mode. The mode arrow changes to denote this
- 2. Clicking a process will automatically duplicate the process-Creating a new process.
- 3. The newly created process will have every details as same as operation except the operation serial number.

22) Import Layout and PKOPS-Func00322

Navigation

PKOPS-HOME->Operations->Layout management--> Import layout

- 1. Using this option, layouts made for other colors of same style can be applied to the currently selected operation plan
- 2. This process will not copy operation plan. Instead it will draw a layout as in the chosen style



23) Layout Themes PKOPS-Func00323

Navigation

PKOPS-HOME->Operations->Layout Management->Layout->Themes

Function Description

3. Clicking on this color ComboBox will show a color themse as below

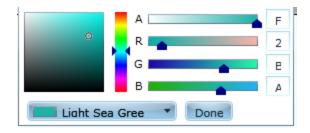


- 4. Pick a predefined scheme from the list
- 5. The chosen theme will be automatically applied on layout.

24) Flow Line Color PKOPS-Func00324

Navigation

PKOPS-HOME->Operations->Process Optimization->Flow Line Color



- 1. Pick up a color as desired and click Done
- 2. All the flows defined will be changed to this color during next refresh(Line Drawing/Redrawing/Drag process/Drag Group)

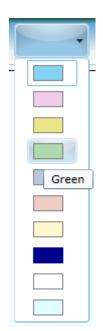
25) Group Coloring (PK Color Theme) PKOPS-Func00325

Navigation

• PKOPS-HOME->Operations->Layout Management ->Layout->



Function Description



- 1. Click on the Combo Box will expand the popup showing available colors (PK Layouting Standard Colors)
- 2. Select the appropriate Color. The mouse cursor is changed to indicate this change.
- 3. Click on a process or group. The color for the process/Group changes.
- 4. To exit this mode click the reset modes button

26) Layout Page Navigation->Previous Page PKOPS-Func00326

Navigation

PKOPS-HOME->Operations->Layout Management->Layout->



Function Description

- 1. This Button will be enabled when the current display is greater than 1.
- 2. Clicking on the button will move the current display to previous page.

27) Layout Page Navigation->Next Page PKOPS-Func00327

Navigation

PKOPS-HOME->Operations->Layout Management->Layout->



Function Description

- 1. This Button will be enabled when there exists a next page
- 2. Clicking on the button will move the current display to next page.

28) Layout Page Navigation->[Current Page / Page Count]status PKOPS-Func00328

Navigation

PKOPS-HOME->Operations->Layout Management->Layout->



Function Description

- 1. Here the current page/Total Pages status is shown
- 2. Displays current page number and total no of pages

29) Process Canvas Background Color PKOPS-Func00329

Sets

Navigation

- PKOPS-HOME->Operations->Layout Management->Layout->
- Function Description
 - 1. Select a color from the color picker and click Done.

- 2. The background of drawing canvas will be changed to the chosen color.
- 30)Increase/Decrease default Canvas width by 1 process width PKOPS-Func00329

Pre-conditions

- PKOPS-HOME->Operations->Layout Management->Canvas Width
- Function Description
 - 1. Click up or down buttons to increase or decrease the distance between processes
 - 2. The width of Canvas is decreased/increased by the width of one process
- 31)Process Vertical distance PKOPS-Func00331

Sets the vertical distance between process (When auto arranged clicking collapse/Expand Buttons)

Navigation

PKOPS-HOME->Operations->Layout Management->Process->Process Vertical
 Distance

Function Description

- 1. Increase/Decrease the value clicking up/down.
- 2. The selected value will be set as the vertical distance for layouting
- 3. The effect of this setting will take effect when a group is expanded clicking the collapse/expand button at the left-top side of the process group rectangle.
- 32) Process Horizontal distance PKOPS-Func00332

Sets the Horizontal distance between process (When auto arranged clicking collapse/Expand Buttons)

Navigation

PKOPS-HOME->Operations->Layout Management->Process->Process Horizontal
 Distance

- 1. Increase/Decrease the value clicking up/down.
- 2. The selected value will be set as the vertical distance for layouting

The effect of this setting will take effect when a group is expanded clicking the collapse/expand button at the left-top side of the process group rectangle.

33) Process width PKOPS-Func00333

Sets the processes rectangle Height

Pre-conditions

• PKOPS-HOME->Operations->Process Optimization-> process height (Numeric up-

Function Description

- 1. Click up or down buttons to increase or decrease process height
- 2. The click refresh, this will reset the process height.

34)Process Height PKOPS-Func00334

Sets the process height in layout

Navigation

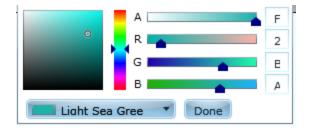
• PKOPS-HOME->Operations->Layout Management->Process->Process height.

Function Description

- 3. Default size is 120
- 4. Click up /down arrows to change the value.
- 5. The effect is immediately visible on processes. The chosen height is set as the height of all process in layout.

35) Process Color PKOPS-Func00335

This option is used to color individual processes.



Navigation

- PKOPS-HOME->Operations->Layout Management->Process->Process Color
- Function Description
 - 1. Choose the color from color picker
 - 2. This sets the system in process Color mode.
 - 3. Click on any desired process to apply the chosen color.

36) Number of processes in a row PKOPS-Func00336

Navigation

PKOPS-HOME->Layout Management->Process->Number of processes in a
 row

Function Description

- 1. By default this value is set as 10
- 2. Click up / Down arrows to increase/decrease the value
- 3. This setting will control the number of processes to be shown in a row if click expand button in a process group.

37) Style Title and basic layout summary PKOPS-Func00337

Navigation

 PKOPS-HOME->Operations->Layout Manage Summary and Title.

Management->Summaries->Show/Hide



sample.

 Clicking the button will show/hide a summary table with Style information, color details, Process time, machine/man count, hourly/daily target and maximum time.

38) Layout summary for buyer-pre sales PKOPS-Func00338

Pre-conditions

 PKOPS-HOME->Operations->Layout Management->Summaries->Show/Hide Title Editable summary

Function Description

- 1. Clicking the button will show/hide a summary table with Editable Style Text Box, color details, Process time, machine/man count, hourly/daily target and maximum time.
- 2. The value edited in editable Style text box is automatically replicated in remarks column during saving.
- 3. This option is to be used only for layouts for working with the buyer [Working on temporary style and operation plan to make a layout for a new style which is not yet defined in the system]

39) Show Hide Machine summary PKOPS-Func00339

Pre-conditions

PKOPS-HOME->Operations->Process Optimization-> Show/Hide Machine summary

- 4. Click the toggle button show/hide operation group summary
- 5. This will display /hide a table with machine types used in the operation plan and the counts of each

MACHINE SUMMARY

SEWING KM 340BL - 27 BINDING KM 380BLB - 1 SEWING KM 390B - 1 SEWING KM 380BL - 1 BARTACK BROTHER - 1

Example

40) Show Hide Group summary PKOPS-Func00340

Pre-conditions

 PKOPS-HOME->Operations->Layout Management-> Show/Hide Group summary (For each operation groups, no of operations, total number of machines used, no of workers, and total operation time).

Function Description

- 6. Click the toggle button Show/Hide operation group summary
- 7. A confirmation window to confirm this operation will be appearing. Confirming clicking yes will make the shifting between operation group and machine type

Operation group rectangle shows a summary of processes under it as shown in the example.

41) Show Hide Tools Summary PKOPS-Func00341

Pre-conditions

 PKOPS-HOME->Operations->Layout Management-> Show/Hide Group Tools summary

Function Description

- This option will show a summary canvas on layout with tool descriptions, image and count of each tools used in operation plan (Tools linked to operation plan through tools linking screen)
- 42) Show Hide Tools info on processes PKOPS-Func00342

Pre-conditions

 PKOPS-HOME->Operations->Layout Management-> Show/Hide Group Tools on layout processes

- 2. This option will show a summary canvas on layout with tool descriptions ,image and count of each tools used in operation plan (Tools linked to operation plan through tools linking screen)
- 3. This option will also show a separate table showing summary and image and count of each of the tools shown on processes.

D. Link Patterns to Operations PKOPS-Req004

1) Pattern Linking-PKOPS-Func00401

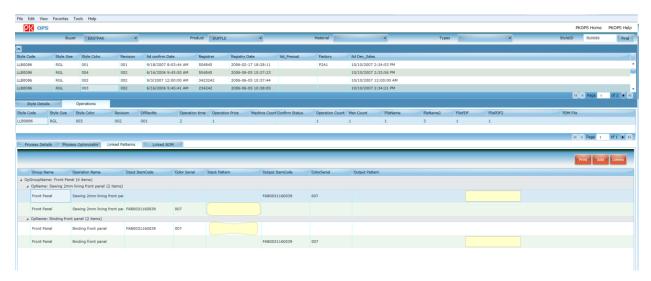
This option is used to link the patterns to operations

Pre-conditions

- PKOPS->HOME->Operations->Pattern Linking
- Assumed that patterns and operation entries are completed through PKPDM and the respective pattern information in linked from Optitex drawing.

Function Description

- 1. Search appropriate Style entries using the search options available. (Select the style, select the operation revision, and then come to the patterns linking tab)
- 2. This option will show already made linking between operations and patterns



2) New Operation - Pattern Linking-PKOPS-Func00402

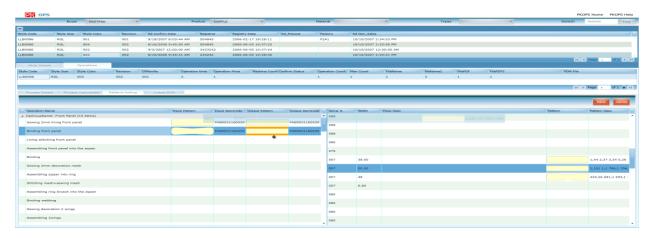
This option is used to link the patterns to operations

Pre-conditions

- PKOPS->HOME->Operations->Pattern Linking
- Assumed that patterns and operation entries are completed through PKPDM and the respective pattern information in linked from Optitex drawing.

Function Description

- 1. Search appropriate Style entries using the search options available. (Select the style, select the operation revision, and then come to the patterns linking tab)
- 2. Click "Add" button and this will show a new tab with 2 windows .Process entries on left and pattern entries on the right.
- 3. Drag necessary Pattern entries to processes -to input columns or output columns. More than one item can be dragged on to one process input/output. It is possible to link multiple input /output patterns to a single process. While dragged multiple items to a single row, a new row will be automatically appear to accommodate the new entry.
- 4. Click Save.
- 5. This will save the pattern-process linking entries.



3) Deleting Operation - Pattern Linking-PKOPS-Func00403

This option is used to link the patterns to operations

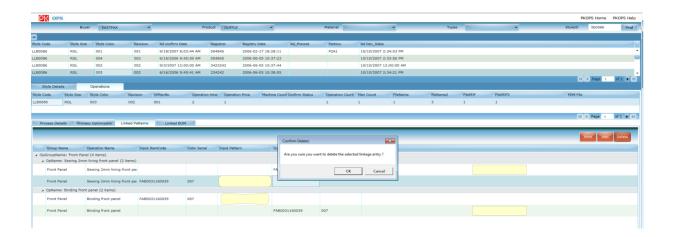
Pre-conditions

- User logged into PKOPS with valid credentials.
- PKOPS->HOME->Operations->Pattern Linking->Delete

This applies to an existing linking entry.

Function Description

- 1. While keeping the appropriate Process->Pattern Entry selected from the grid, click delete button.
- 2. This will cause a confirmation window to appear on the permanent deletion of linking entry.
- 3. If you choose to delete the entry click "OK" to delete the entry.
- 4. After click confirms deletion, the entry will be permanently deleted.



E. Link BOM to Operations PKOPS-Req005

1) BOM Linking-PKOPS-Func00501

This option is used for linking BOM to operations

Pre-conditions

- PKOPS->HOME->Operations->BOM Linking
- Assumed that BOM and operation entries are completed through PKPDM system and all the relevant entries are available in the system.

Function Description

1. Search appropriate Style entries using the search options available. (Select the style, select the operation revision, and then come to the BOM linking tab)

| Properties | Column | Column

2. This option will show already made linking between operations and BOM

2) New Operation -BOM Linking-PKOPS-Func00502

This option is used to link the BOM to operations

Pre-conditions

- PKOPS->HOME->Operations->BOM Linking->Add
- Assumed that BOM and operation entries are completed through PKPDM and all the respective entries are available in the system.

Function Description

- 6. Search appropriate Style entries using the search options available. (Select the style, select the operation revision, and then come to the patterns linking tab)
- 7. Click "Add" button and this will show a new tab with 2 windows. Process entries on left and BOM entries on the right. Drag appropriate BOM entries to processes. More than one item can be dragged on to one process entry (multiple linking).
- 8. Click Save.
- 9. This will save the linking entries

3) Delete Operation -BOM Linking-PKOPS-Func00503

This option is used to link the patterns to operations

Pre-conditions

PKOPS->HOME->Operations->BOM Linking->Delete

 Assumed that BOM and operation entries are completed through PKPDM and all the respective entries are available in the system.

Function Description

- 1. Search appropriate Style entries using the search options available. (Select the style, select the operation revision, and then choose BOM linking tab.
- 2. Click Delete Button.
- 3. Click OK to Delete Confirmation.
- 4. This will delete already made linking entry between process and BOM

F. Tools Linking to Operations PKOPS-Req006

4) Tools Linking-PKOPS-Func00601

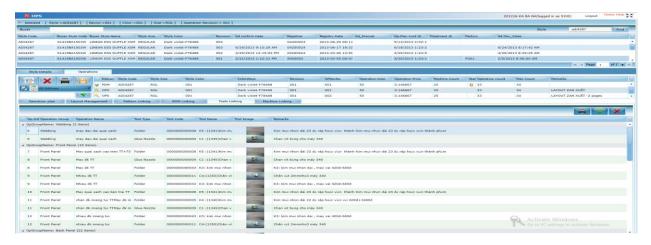
This option is used for linking Tools to operations

Pre-conditions

• PKOPS->HOME->Operations->Tools Linking

Function Description

- 1. Search appropriate Style entries using the search options available. (Select the style, select the operation revision, and then come to the BOM linking tab)
- 2. This option will show the tools alredy linked to operations



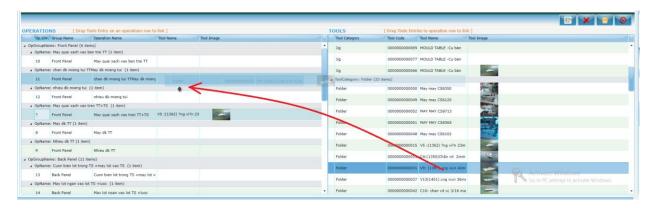
5) New Operation -Tools Linking-PKOPS-Func00602

This option is used to link the tools to operations

Navigation

PKOPS->HOME->Operations->Tools Linking->Add

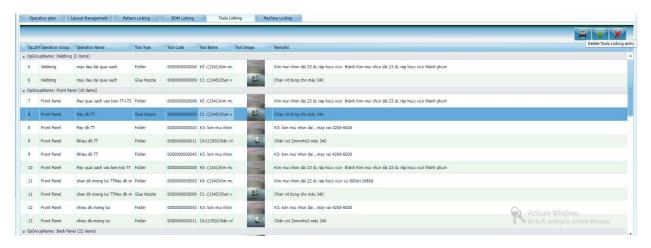
Function Description



- 1. Click and drag tools to appropriate operation to link.
- 2. Dropping a tool in a row in operations will link tool to operation and show the image on grid.
- 3. When finished linking all tools, click save to save the entries.
- 4. After saving the tools / summary of tools can be shown on layout.
- 6) Delete Operation -Tools Linking-PKOPS-Func00603

Navigation

• PKOPS->HOME->Operations->Tools Linking->Delete



- 1. Select the entry from linked tool listing.
- 2. Click Delete Button.
- 3. Click OK to Delete Confirmation.

G. Link Machines to Operations PKOPS-Req007

1) Machines Linking-PKOPS-Func00701

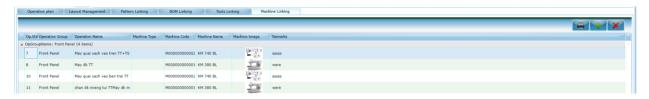
This option is used for linking Machines to operations

Pre-conditions

• PKOPS->HOME->Operations->Machines Linking

Function Description

- 3. Search appropriate Style entries using the search options available. (Select the style, select the operation revision, and then come to the Machines linking tab)
- 4. This option will show the Machines already linked to operations

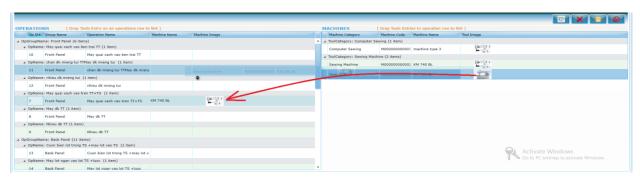


7) New Operation -Machines Linking-PKOPS-Func00702

This option is used to link the tools to operations

Navigation

• PKOPS->HOME->Operations->Machines Linking->Add

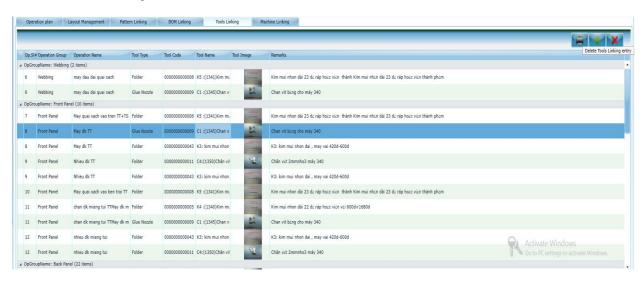


- 1. Click and drag Machines to appropriate operation to link.
- 2. Dropping a tool in a row in operations will link machines to operation and show the image on grid.
- 3. When finished linking all machines, click save to save the entries.
- 4. After saving the machines / summary of machines can be shown on layout.
- 8) Delete Operation Machine Linking-PKOPS-Func00703

Navigation

• PKOPS->HOME->Operations->Tools Linking->Delete

Function Description



- 4. Select the entry from linked tool listing.
- 5. Click Delete Button.
- 6. Click OK to Delete Confirmation.

I. TECHNICAL SPECIFICATIONS

Software Requirements

Browser Plug-in

1. Silverlight5 runtime

Web Browsers Supported

- 1. Google Chrome
- 2. Mozilla Firefox
- 3. Internet Explorer ver.8.0 or above

Additional programs for operation plan export

1. Adobe Acrobat reader

Hardware Requirements

Display resolution

Minimum 1366*800

Recommended 1920*1080

Lan /Wireless

Lan / Wireless network hardware for Internet Connectivity

Other

Internet Connectivity to connect OPS , web services ,database server.