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"Importance of techpack in apparel industry with reference to technological trends in modern era"

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Abstract- " Apparel industry encompassesCompanies that design and sell clothing, footwear and accessories from basic products to luxury items.
India is among the worlds largest producer of textiles and apparel. The domestic textile and apparel industry contributes 5% of India's GDP, 7% of industry output in value terms, and 12% of the country's export earnings. To be successful in the industry, it is very important to understand the structure from both the perspective - manufacturing and retail. As well as the knowledge of market, product trends, well developed package for the apparel production Needs to be kept updated. This study shows the importance of techpack in comparison of spec sheets in the apparel industry with reference to technological trends in modern era.

Keywords – apparel industry, exports, tech pack, spec sheets , production, importance, trends, Technical details.

scenario each companies needs can vary greatly for a technical designer . One company may prefer to have their technical designer be more a part of the design team and another company may prefer to have them more a part of the production team with varying responsibilities.

Role of technical designer- technical designers work with fashion design teams and play an important role in turning ideas into finished products. They anticipate any designs issuesliaise With designers and manufacturers to ensure garment specifications are adjusted accordingly and that end result is a high quality ,marketable products.

Core responsibilities of a technical designer -

- Collaborating with designers, manufacturers, vendors and clients to ensure that product specifications are viable.
- Analysing designs and determining required resources and product deadlines.
- Implementing design changes and making contingency plans as necessary.
- Ensuring all products are high quality and that they confirm to company standards and brand values.
- Evaluating prototypes and inspecting finished products to ensure that they are free from defects.

Defining a tech- pack-

Tech- pack stands for technical package. It is also called as specifications sheet. A blueprint created by a technical designer to prepare the final garment. It is consisted of all the detailed information about size, measurements, stitch type, trim label, stitch length, technical sketch, seam type, grading chart, tolerance and much more such information. So basically it acts as an instruction manual which helps in converting design into product. It helps manufacturers to understand the design in a better way and helps in minimising the error and creating the best product.

Importance of tech packs-

- **Error free sample**- a detailed readable tech pack increases the chance of creating a sample with original vision as well as eliminates all the chances of errors.
- **Accurate price quotation**– it provides the clear idea to the manufacturer regarding the man, material and machines required for the production of a particular product and helps in accurate price estimation.
- **Keeps manufacturer accountable** – it helps in tracking the details with ordering trims, fabric and other things. It acts as a contract between manufacturer and dealer.
- **Reference point for quality control**– it acts as a reference point for the quality control department. It helps to check the fit once the garment is ready whether it is made as per details or not. As well as trims, labels and many other things placed correctly or not.
- **Save money and time**– A detailed tech pack surely helps in saving money and time. Loopholes while creating the product can be avoided with its help.

Process of creating Factory-like Tech pack:

1. Making a cover page:
Cover page can be created in Excel or Spreadsheet.

Cover page contains:

- Your company name
- Style name/ number
- Vendor
- Country of Origin
- Date
- Finished colorful technical sketch
- Place to track changes, revisions

Here is a sample image of cover page of techpack.

DRESS SAMPLE SPECIFICATION WORKSHEET

SEASON:	Spring 2013	DATE:	Monday, January 23, 2012
GROUP NAME:	Wine and Roses	STYLE #:	1242012
SIZE CLASSIFICATION / RANGE:	Missy / 0 - 12	TECHNICAL DESIGNER:	Kara Pelletier
FABRIC NAME:	Poplin	PRODUCT CATEGORY:	Dresses
FIBER CONTENT:	100% Cotton	BRAND / LABEL:	J. Crew
STYLE DESCRIPTION:	Sleeveless dress with fitted bodice and box pleated A-line skirt		

POINT OF MEASUREMENT

MEASUREMENTS ARE: Circumfrence SIZE: 8

POM #	Description	Body Measurement	Functional Ease	Design Ease	Requested Measurement
1	Front Length from HPS				34
10	Chest Width (1" below armhole)	35 1/2	1		36 1/2
13	Across Shoulder	15 3/4			15 3/4
20	Waist Width (14" from HPS)	27 1/2	1		28 1/2
91	Hip Width (24" from HPS)	38	2		40
95	Sweep				50
43	Armhole width - Curved	16	1/4		16 1/4
60	Front Neck Drop (HPS to seam)				3
61	Back Neck Drop (HPS to seam)				2
63	Neck Width (HPS to HPS)				11 3/4
156	Shoulder Slope				2

SKETCHES

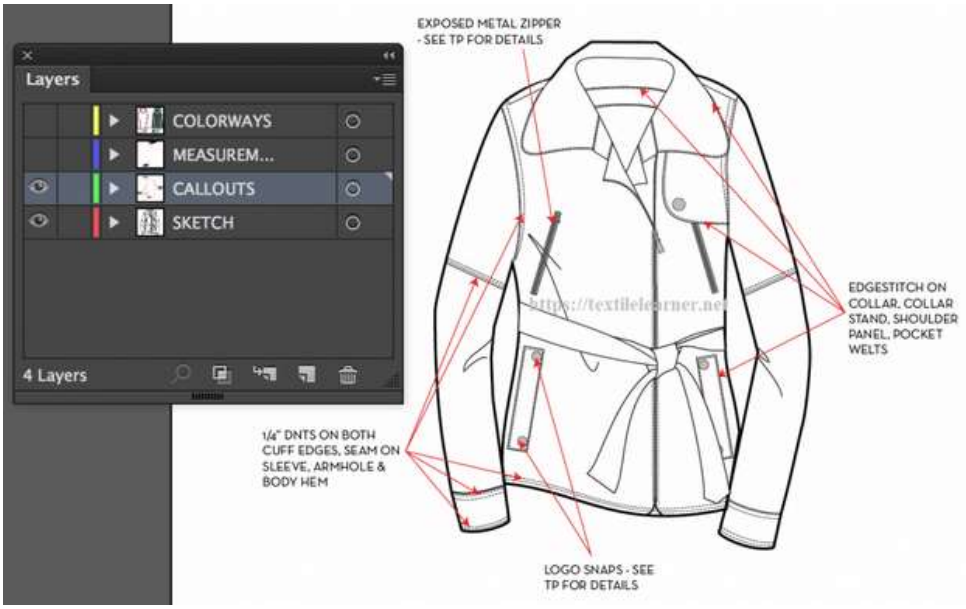
FRONT

BACK

2. Creating a technical sketch:
Flats are usually in black and white color with text to specify design details. They also include every tiny detail like stitches and trims.

All the technical sketches from all angles (front, back, side, inside) are generally drawn in softwares like Adobe Illustrator, CorelDraw, etc. Also various trims, stitches, labels , and other such details are also drawn in such softwares. And once drawn, then transferred in Excel or spreadsheet.

Here is a sample image of the technical sketch.



Grading spec:

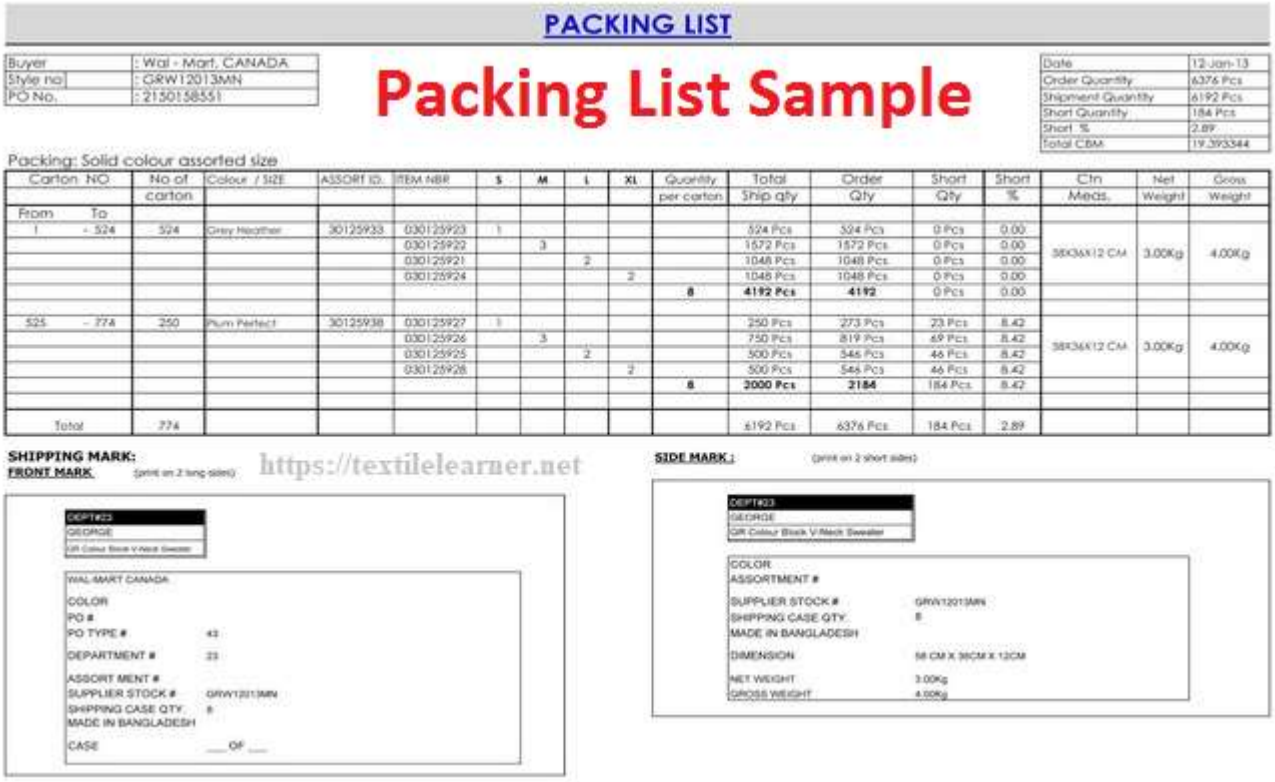
Once specification sheet and constructional details are done, now the next step is to make a grading chart. And this also can be created in Excel or Spreadsheet. Using Excel or spreadsheet has an advantage that we can easily autograde it. But for that we need all the sizes from **pattern maker** and Excel can auto calculate it.

Here is a sample image of the same.

		XS	S	M	L	TOL	GRADE XS - M
A	1/2 Chest (at u'arm)	49.0	51.5	**54.0**	56.50	1.0	2.50
B	1/2 Waist (16cm from u'arm)	48.0	50.5	**53.0**	55.50	1.0	2.50
C	1/2 Hip (26cm from u'arm)	51.0	53.5	**56.0**	58.50	1.0	2.50
D	1/2 Hem (straight)	52.0	54.5	**57.0**	59.50	1.0	2.50
E	Shoulder to shoulder (LSP to LSP)	41.4	42.7	**44.0**	45.30	1.0	1.30
F	Across front (12cm from HSP)	39.4	40.7	**42.0**	43.30	1.0	1.30
G	Across back (12cm from HSP)	39.4	40.7	**42.0**	43.30	1.0	1.30
I	Back HSP length (to CB)	66.0	67.0	**68.0**	69.00	0.8	1.00
K	Neck width (seam to seam)	21.2	21.6	**22.0**	22.40	0.5	0.4
L	Set-in sleeve length from LSP (incl. Cuff)	58.6	59.3	**60.0**	60.70	0.5	0.7
M	Front neck drop from HSP (to seam)	15.4	15.7	**16.0**	16.30	0.5	0.30
N	Back neck drop from HSP (to seam)	3.0	3.0	**3.0**	3.00	0.5	0.00
O	Shoulder slope (HSP to LSP)	3.0	3.0	**3.0**	3.00	0.5	0.00
P	Armhole drop from HSP	21.6	22.3	**23.0**	23.70	0.5	0.70

4. Packing details:

And the last step for creation of Tech Pack is to add the packing details which is a very easy step and can be easily created in Excel or Spreadsheet.



PACKING LIST

Packing List Sample

Buyer	: Wal - Mart, CANADA
Style no	: GRW12013MN
PO No.	: 2150158551

Date	12-Jan-13
Order Quantity	6376 Pcs
Shipment Quantity	6192 Pcs
Short Quantity	184 Pcs
Short %	2.89
Total CBM	19.393344

Packing: Solid colour assorted size

Carton NO From	To	No of carton	Colour / SIZE	ASSORT ID.	ITEM NBR	S	M	L	XL	Quantity per carton	Total Ship qty	Order Qty	Short Qty	Short %	Ctn Meas.	Net Weight	Gross Weight
1	- 524	524	Grey Heather	30125933	030125923	1					524 Pcs	524 Pcs	0 Pcs	0.00			
					030125922		3				1572 Pcs	1572 Pcs	0 Pcs	0.00			
					030125921			2			1048 Pcs	1048 Pcs	0 Pcs	0.00	38X36X12 CM	3.00Kg	4.00Kg
					030125924				2		1048 Pcs	1048 Pcs	0 Pcs	0.00			
										8	**4192 Pcs**	**4192**	0 Pcs	0.00			
525	- 774	250	Plum Perfect	30125938	030125927	1					250 Pcs	273 Pcs	23 Pcs	8.42			
					030125926		3				750 Pcs	819 Pcs	69 Pcs	8.42			
					030125925			2			500 Pcs	546 Pcs	46 Pcs	8.42	38X36X12 CM	3.00Kg	4.00Kg
					030125928				2		500 Pcs	546 Pcs	46 Pcs	8.42			
										8	**2000 Pcs**	**2184**	184 Pcs	8.42			
Total		774									6192 Pcs	6376 Pcs	184 Pcs	2.89			

SHIPPING MARK:
FRONT MARK (print on 2 long sides)

DEPT#23
GEORGE
GR Colour Block V-Neck Sweater

WAL-MART CANADA
COLOR
PO #
PO TYPE # 43
DEPARTMENT # 23
ASSORT MENT #
SUPPLIER STOCK # GRW12013MN
SHIPPING CASE QTY 8
MADE IN BANGLADESH
CASE ___ OF ___

SIDE MARK : (print on 2 short sides)

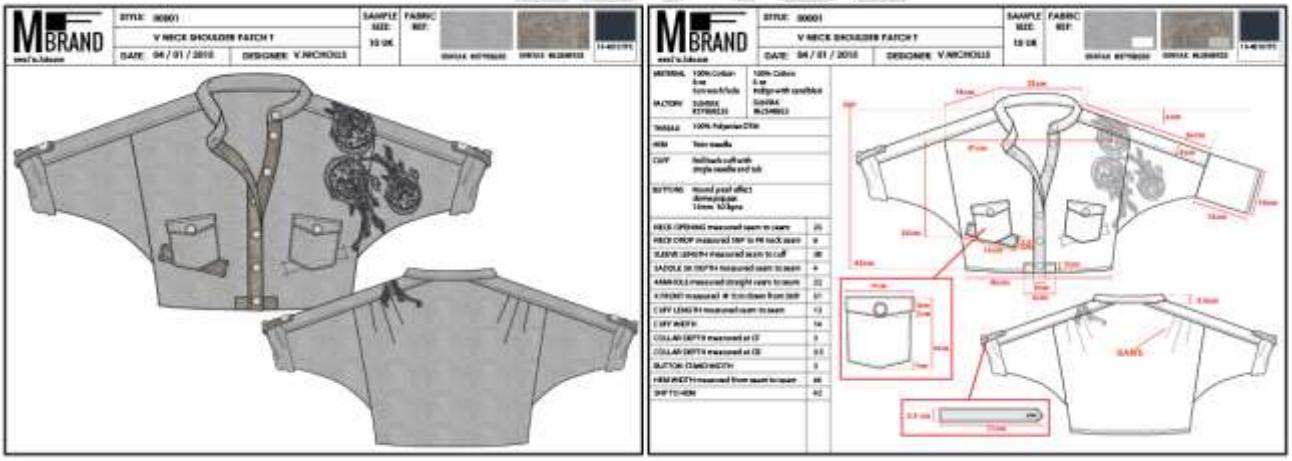
DEPT#23
GEORGE
GR Colour Block V-Neck Sweater

COLOR
ASSORTMENT #
SUPPLIER STOCK # GRW12013MN
SHIPPING CASE QTY 8
MADE IN BANGLADESH
DIMENSION 58 CM X 36CM X 12CM
NET WEIGHT 3.00Kg
GROSS WEIGHT 4.00Kg

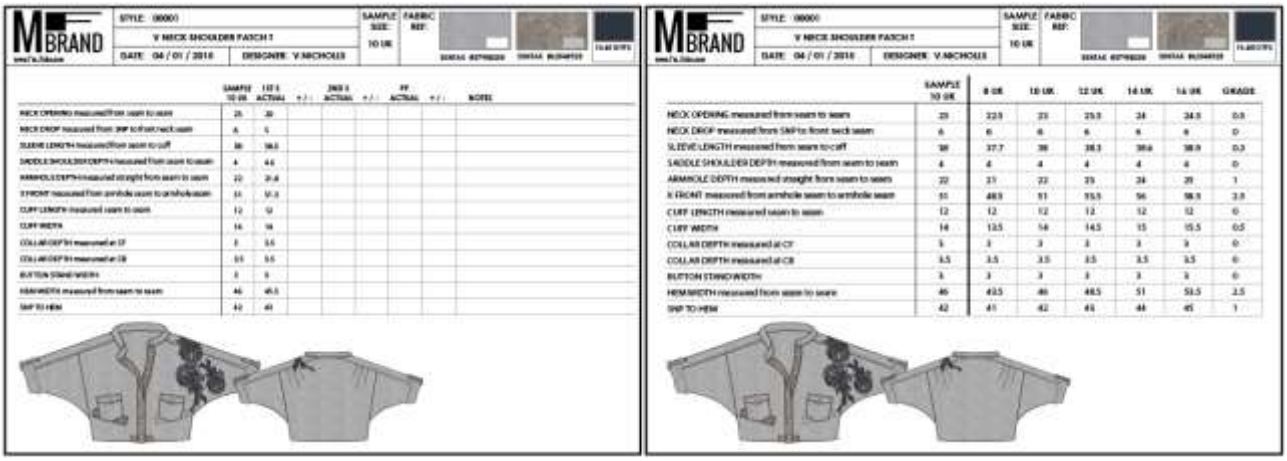
TECH PACK VS SPEC SHEET. WHAT'S THE DIFFERENCE?

WHAT IS A TECH PACK?

A basic Tech Pack consists of 3 pages, but can also be extended to include a sampling sheet [below left] or depending on the additional techniques, processes and details you want to add to your design. So for example, if you are adding a print, you will also need to add pages to show the print artwork with instructions for the type of print. This would be the same for embroidery, labels, back neck tape and so on. So actually, your Tech Pack can be fairly big if you have a lot of things to explain.



WHAT IS A SPEC SHEET?



A Spec Sheet is the most complex and detailed sheet out of the three pages. It's the page that does the hard work and really explains everything to a factory which makes sure you get you product back correctly. It includes

- A Flat Drawing, which is technical drawing of your product
- Measurements for your sample
- Technical information about fabric, machinery, trims, colours and anything else you are adding to your design.

These three things don't really sound like much, but actually, this is the page that requires some experience and knowledge.

FLAT DRAWING

A Flat Drawing is a technical drawing of a garment that is done in a very specific way. The line weights mean different things and there are a lot of rules around how they have to be laid out and what you can and can't do. Unfortunately, when I look through the internet, there are far more examples of bad Flat Drawings, than there are good, which spurred me to write a book about Tech Packs, **How to Create Tech Packs for Fashion**. It explains all of the details on Flat Drawings, that there isn't time to discuss properly in a blog post. But if you are looking for good examples of flat drawings, the ones in this post are of course, done to retail standards. You'll notice there is no styling, or illustration effects. They are simple, without fabric fills or textures. They have very little writing or text and purely focus on the technical information, like stitching and seams and lastly, make sure that the measurements are clear.

MEASUREMENTS

People across the world are different. Just take a look around next time you're walking down the street [although try not to do it in a creepy way]. The bits that are heavier, shorter, wider, taller, slimmer or narrower are all based on genetics and where we came from and the diets we eat. If you're designing for people in the US, then the standard measurements will be different to the UK, or Africa, India and Asia. Measurements change across the world, as do the way that body types put on weight, so you also need to be aware of the people, or 'market', you are designing for.

TECHNICAL INFORMATION

The third part of a Spec Sheet, is the technical information. This refers to colours, fabric information, machinery, trims and any techniques you need for your clothing design. Again, like measurements, techniques and machinery depend on the fabric you choose for your product. With stretch fabrics, you'll need an overlocker, whereas woven fabrics can use a sewing machine, although that depends on the seam or stitch you want to use. Fabric finishes can alter techniques, since shiny fabrics may snag with some stitches and stiffer

fabrics might need a reinforced stitch for heavy duty use. Knitwear is another topic altogether. The machinery used for knits, needs gauges and tension settings as well as yarn weights and ply, rather than fabric, and use a linker to attach seams together.

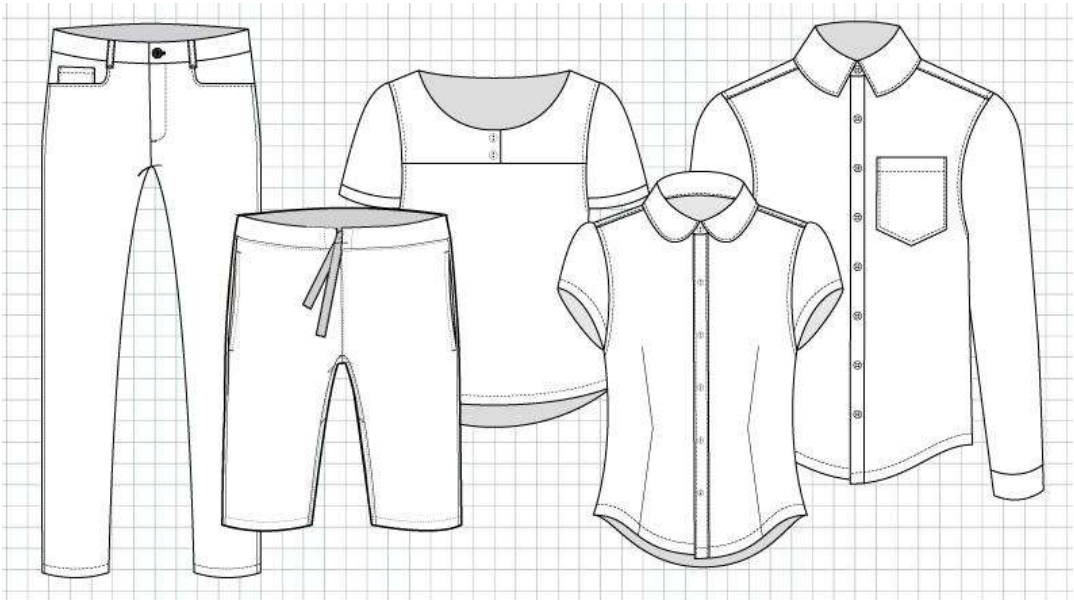
Futuristic Approach -

New technologies like Techpacker offer a different approach. It still has that similar tabular structure where data is laid out in rows and columns, but far more flexible.

Each row that could be a sketch, material or a measurement of your design is a card that houses all its related images, comments and files. And at any time in just one click you can turn this visual board into a PDF ready Tech Pack, exactly how you print your spreadsheets on Excel, perfect for uploading into your MakersValley project. Unlike Excel, this visual approach gives you a big-picture snapshot of your entire product development process in one glance. You don't have to switch between tabs when double-checking or editing different sections in your Tech Pack. Sketches, bill of materials, point of measurements, costing, etc. - everything is visible on a single page.

Advantages of 3D Prototypes

Traditionally, technical sketches for Tech Packs are created in Adobe Illustrator. They are also called flat sketches or fashion flats.



Using the latest technologies like computer modeling or simulations we can create a 3D prototype. It allows us to identify the design defects and fix them in the early stages of the product development. For example, tools like Marvelous Designer or Clo3D allow you to simulate a garment on a model and check how it fits.

Conclusion

A product without a Tech Pack is like a house project without a blueprint. Hence, it is important that we create a tech pack which is in detail and creates less error in a room. Surely creating a tech pack is quite a difficult job and needs a lot of investment of time and patience. These steps will surely help you to create a techpack which is easy to use and minimize the number of samples and obviously help you make a better techpack than the last one.

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