

## Basic Surgeon's Mask W/Pleats

### One Tie

Front: 8" H x 7 ½" W

Back: 7 ½" H x 7 ½" W

Side Strips: (2) 8" L x 2 ½" W

NOTE: I cut strips of fabric 2 ½" wide, cutting length needed against pleated mask.)

Nosepiece: 3-4" piece of coated garden wire, blunt cut ends

Choose a tie:

- 2Y ¼" to ½" double fold binding, stitched (*not serged*) closed
- 2Y Flat shoelace, cotton preferred
- 2Y T-Shirt string, well washed (*personal mask use only*)

R = right side of fabric

W = wrong side of fabric

Y = yard

Press = Iron, cotton setting with steam

FABRIC: Should be tightly woven cotton, two different pieces to contrast (patterned outside, muslin inside or other combos).

### CONSTRUCTION TIPS, EQUIPMENT & DELIVERY:

#### Equipment:

- Rotary cutter w/fresh blade (optional)
- 36" + cutting mat (optional)
- Sharp scissors
- Thread clipper (optional)
- Sewing machine
- Serger (optional, zig zag stitch will work)
- Long ruler
- Hem Gauge or small ruler
- Iron & ironing board

#### Construction Tips:

- Cut fabric in groups – 1+ yards of fronts, 1+ yards of backs, ½ yard of sides, etc. 1 yard of 44" wide fabric provides 20 mask sides
- Use of drywall square (shown below) is a game changer; shortens the cut time
- The goal is a wearable mask; don't get bogged down by 'pretty perfect'
- Sew in steps – complete #1 on all pieces, #2 on all, etc., similar to quilting production. Tremendous savings in time
- ***CRITICAL NOTE:*** If using standard sewing machine, please finish edges with zig zag stitch before construction as fabrics used in mask construction (cottons, not hybrid medical fabric) have a high fray factor. Edges must be secure for safety during wear and for longevity during commercial wash cycles.

Delivery: Masks should be washed, ironed and packed in a zip lock bag post sewing.

Filters: NOTE: I have no personal experience with filters as I do not provide them with my masks. I do, however, inform those receiving that there is a pocket for that purpose. If you choose to provide filtration, do your homework and consider having a waiver signed, releasing you from all liability when providing to groups individually. High level protection is required with COVIDS and not all filter materials are equal

Favorite shortcut: Drywall Square

Game changer, when cutting multiple masks. \$30 - \$50 (different lengths) at Home Depot as of 3/1/2020.

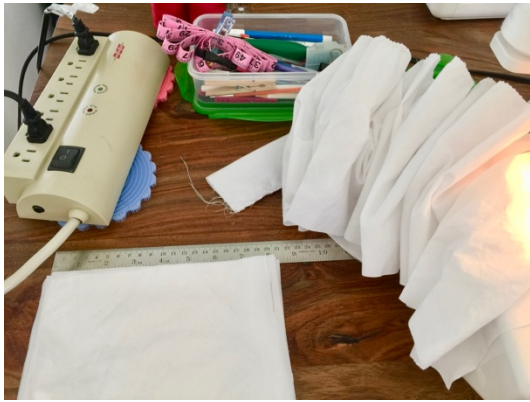
NOTE: I use a stack of pattern weights at one end to keep square from dropping off edge of table, mine is a longer version, having purchased prior to COVIDs outbreak. Great for garment sewing; used to true grain (knits and woven fabrics), line up pattern to grain; lining up motifs etc.



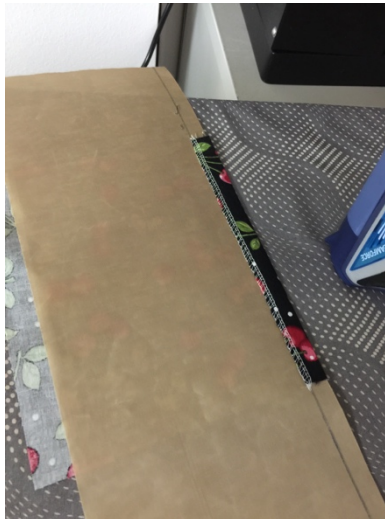
Keep scrolling – instructions begin on next page ;o)

## INSTRUCTIONS:

1. Wash & dry cotton fabric in hot water and iron on cotton setting to control color and shrinkage
2. Serge top edges of each piece, keeping separate. If you don't have a serger, use zig zag or similar stitch to prevent fraying. ***DO NOT*** use pinking shears as edge is too narrow.  
NOTE: Production-style sewing is a huge time saver – all backing fabrics chained through, placing the next piece into the sewing feed right as the first is through; all fronts chained through in one sitting, etc. Clip chain thread between each piece, when preparing for next step.



3. Fold  $\frac{1}{2}$ " at top of back piece, press to set; straight stitch on top of serged edge to secure  
NOTE: I use a strip of silicone pressing sheet marked with  $\frac{1}{2}$ " line in permanent marker to press fold. Keeps fingers away from steam; ironing board cover cool as I press stacks of pieces to complete this step, no measuring or pinning involved.



#### 4. TOP HEM, NOSE PIECE

- a. Fold  $\frac{1}{2}$ " hem top of front piece, press (refer to step 3)
- b. Change to cording foot (optional)



- c. Place wire inside hem towards approximate middle of mask, holding securely against fold as you sew; stitch on top of serged edge to secure, avoiding the wire.  
NOTE: Helpful to pin in at beginning and end of wire for visual reference.



If using a cording foot, line wire up to R side channel, no clipping needed as channel will keep

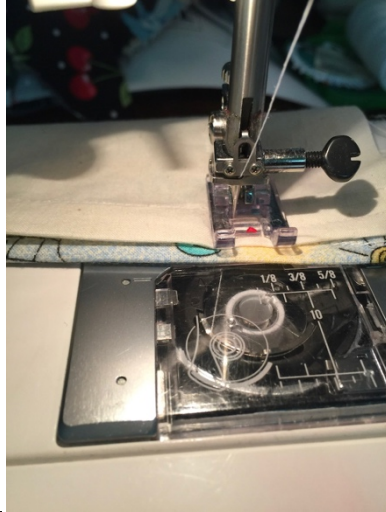
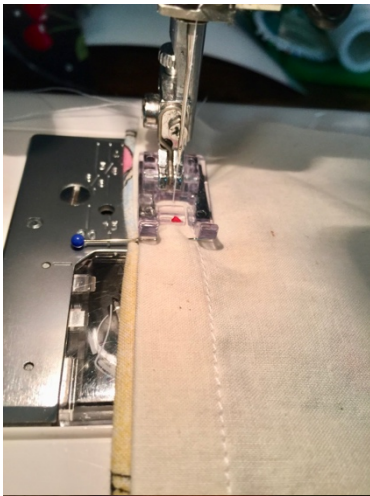
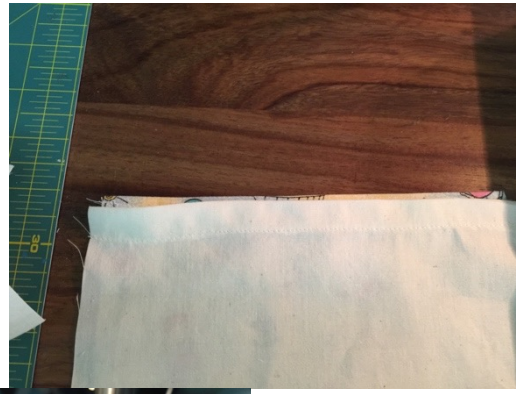
wire in place.



d. Fold hem and press; center wire between outside edges



e. Place back & front together, **W** sides facing, back piece slightly lower at top; stitch to beginning of wire starting from outer edge; pivot fabric, needle in down position; back stitch to edge or hem; repeat on opposite side. Filter pocket opening created.



5. Turn R sides together, keeping top edge straight & serge bottom, close to edge. Press seam to set; turn and press again. Remember – do each step as a group – sewing, pressing, turning, etc. to save time  
NOTE: Important that mask back is flush against front; I hold by the top edge after turning and shake the mask prior to sewing to even lower edges. Have the serger remove any backing fabric, if longer than the top, using top fabric as your stitching guide. If using standard machine, trim edges even before sewing.



- a. Topstitch bottom  $\frac{1}{4}$ " from edge.

NOTE: Example in next step is showing back side edge as visual needed for pleating step only. Make sure your mask has a solid front panel though the back may have variations of both. Don't fret – the goal is a wearable mask.



## 6. PLEATS – ONE MINUTE METHOD

- a. Fold fabric in half, **W** side together, top to bottom edges meeting; press fold firmly  
NOTE: If using coated wire, do not iron over as coating will melt; press around.



- b. Fold top and bottom edge to fold, press edges to crease, avoiding center fold





- c. R side up, fold bottom crease to top stitching at lower edge of mask; press fold firmly avoiding center crease



- d. Fold center crease 1/2 way down on top of bottom pleat; press, avoiding top fold.



- e. Repeat step with top fold, placing half way down on center fold; serge edges, careful to keep pleats from shifting. Optional: Place on firm surface, while hot; top with Tailor's Clapper or other flat weight to set all pleats.



f. Optional: Clip pleats to hold in place until ready to serge or bind



## 7. TIE CASINGS

- a. Wrap length of casing around pleated mask; cut  $\frac{1}{2}$  beyond to create seam allowance. Fold R sides together, serge short end of each; 2 casings needed. Press seam, turn; move seam towards middle of casing; press casing flat, creating creased edges at top and bottom. Clip to mask until next step performed.

NOTE: Due to speedy pleat method, masks will vary slightly in size. Clipping or pinning casing to side used to measure is beneficial.



- b. On R side of mask; place tie casing seam side up, edges matching; serge. Be sure to catch the mask fabric securely; press



- c. Fold loop outwards; press seam towards tie casing



- d. On outer edge, fold  $\frac{1}{2}$ " towards wrong side; press. Fold to W side of mask, fully encasing serged edge; secure with pins or clips, as desired. Note – photo is post stitch to clearly show coverage



- e. Turn mask; stitch in the ditch between mask and casing, catching back casing to secure. Tie casing is formed. Repeat on other side.



8. Thread tie of choice through metal darning needle (large eye) or bodkin (sewing gadget). Starting at upper edge, pull tie through casing and across the bottom; continue path through opposite bottom and back out top. Mask designed to loop around neck and tie at top, allowing wearer to safely remove without touching face of mask.

NOTE: Main model is older than maker, though not by much. Nose piece had not been fully molded on either of us at time of photos.

