

HEADQUARTERS
PHILIPPINE ARMY
OFFICE OF THE ARMY QUARTERMASTER
Fort Andres Bonifacio, Metro Manila

TEST PARAMETERS

BACKPACK, TACTICAL MOLLE, PHILARPAT (Interim)

MAY 03 2018

TEST PARAMETERS	QM SPEC NR IE - 22BTM 10 June 2017 with Amend 1 dtd 20 April 2018	Classification	
		Major	Minor
Measurements, cm			
Height	49.0 ± 5.0	X	
Width, top part	30.0 ± 5.0	X	
Width, bottom part	40.0 ± 5.0	X	
Thickness, side part (excluding the front pocket)	17.0 ± 3.0		X
Thickness, extended part (top portion)	7.0 ± 3.0		X
Thickness, extended part (bottom portion)	13.0 ± 3.0		X
Front Pocket (small) (H-measured at the center x W x T)	10.0 ± 1.0 x 22.0 ± 1.0 x 6.0 ± 2.0	X	
Front Pocket (big) (H-measured at the center x W x T)	35.0 ± 3.0 x 34.0 ± 3.0 x 9.0 ± 2.0	X	
Side Pocket (small) (H x W x T)	18.0 ± 2.0 x 13.0 ± 2.0 x 7.0 ± 2.0	X	
Side Pocket (medium) (H x W x T)	22.0 ± 2.0 x 17 ± 2.0 x 7.0 ± 2.0	X	
Side Pocket (long) (H x W x T)	44.0 ± 2.0 x 17.0 ± 2.0 x 7.0 ± 2.0	X	
Length of Carrying Strap, cm			
Carrying Strap #1	23.0 ± 3.0		X
Carrying Strap #2	26.0 ± 2.0		X
Basic Material	Nylon Canvas	X	
Color	PHILARPAT	X	
Coating	Applied with colorless water resistant material on the reverse side	X	
Type of Weave	Plain		X
Yarn Size, Denier			
Warp	1,350 (minimum)		X
Filling	1,200 (minimum)		X
Thread Count/2.54 cm			
Warp	34 (minimum)		X

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Filling	27 (minimum)		X
Weight, g/m	400 (maximum)	X	
Thickness, mm	0.60 (minimum)		X
Breaking Strength, kg			
Warp	330 (minimum)	X	
Filling	280 (minimum)	X	
Water Resistance, grams of water absorbed by blotter	0	X	
Water Repellency, %	80 (minimum)	X	
Color Quality (based on PHILARPAT, BDU)	2.5 (maximum)		X
Lining Material	Polyester fabric	X	
Color	Olive Drab (OD)	X	
Type of Weave	Plain		X
Yarn Size, Denier			
Warp	85 (minimum)		X
Filling	80 (minimum)		X
Thread Count/2.54 cm			
Warp	90 (minimum)		X
Filling	65 (minimum)		X
Weight, g/m	70 (maximum)	X	
Thickness, mm	0.20 (maximum)		X
Breaking Strength, kg			
Warp	40 (minimum)		X
Filling	35 (minimum)		X
Mesh Material	Polyester	X	
Mesh	It shall be made of two (2) layered materials. Top and bottom layers shall be OD knitted breathable.	X	
No. of Holes per 2.54 cm ²	50 (minimum)		X
Thickness	3.0 (maximum)		X
Weight, g/m ²	250 (maximum)	X	
Bursting Strength, kg/cm ²	18 (minimum)	X	
Straps	Polyester webbing	X	
Colors	Olive Drab (OD)	X	
Strap #1			
Width, cm	5.0 ± 0.2	X	
Type of Weave	Plain Double		X
Thickness, mm	1.0 - 1.5		X
Breaking Strength, kg (full width)	1000 (minimum)	X	



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Strap #2			
Width, cm	2.5 ± 0.2	X	
Type of Weave	Plain Double		X
Thickness, mm	1.0 - 1.5		X
Breaking Strength, kg (full width)	700 (minimum)	X	
Strap #3			
Width, cm	2.0 ± 0.2	X	
Type of Weave	Plain Double		X
Thickness, mm	1.0 - 1.5		X
Breaking Strength, kg (full width)	500 (minimum)	X	
Binding Tape	Nylon or Polyester webbing	X	
Color	OD	X	
Width, cm	2.0 ± 0.5	X	
Type of Weave	Plain Double		X
Thickness, mm	0.7 (minimum)		X
Padding	Rubberized Foam	X	
Padding #1			
Thickness, mm	10.0 - 11.0	X	
Padding #2			
Thickness, mm	2.5 - 3.5	X	
Elastic Cord	Nylon or Polyester	X	
Color	OD	X	
Diameter, mm	3.0 ± 0.5		X
Breaking Strength, kg	25.0 (minimum)	X	
Plastic Buckles Accessories			
Quick Release Buckle (small)	Hard plastic	X	
No. of pieces	7 pieces	X	
Color	Black or OD	X	
Length, cm	5.4 ± 0.2	X	
Width, cm	2.6 ± 0.2	X	
Thickness, mm	11.3 ± 1.0		X
Breaking Strength, kg	45 (minimum)	X	
Quick Release Buckle (medium)	Hard plastic	X	
No. of pieces	2 pieces	X	
Color	Black or OD	X	
Length, cm	6.3 ± 0.2	X	
Width, cm	3.2 ± 0.2	X	
Thickness, mm	12.0 ± 1.0		X
Breaking Strength, kg	45 (minimum)	X	



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Quick Release Buckle (Large)			
No. of pieces	1 piece	X	
Color	Black or OD	X	
Length, cm	8.0 ± 0.2	X	
Width, cm	6.0 ± 0.2	X	
Thickness, mm	15.0 ± 1.0		X
Breaking Strength, kg	100 (minimum)	X	
D-Ring			
No. of pieces	2 pieces	X	
Length, cm	3.4 ± 0.2	X	
Width, cm	2.8 ± 0.2	X	
Thickness, mm	4.0 ± 0.2		X
Tri-Bar Adjustable Buckle (small)			
No. of pieces	3 pieces	X	
Length, cm	2.4 ± 0.2	X	
Width, cm	3.4 ± 0.2	X	
Accommodation Width, mm	2.9 ± 0.2	X	
Tri-Bar Adjustable Buckle (Large)			
No. of pieces	3 pieces	X	
Length, cm	3.2 ± 0.2	X	
Width, cm	6.1 ± 0.2	X	
Accommodation Width, mm	5.2 ± 0.2	X	
Ladder Lock			
No. of pieces	4 pieces	X	
Length, cm	4.5 ± 0.2	X	
Width, cm	3.4 ± 0.2	X	
Wire Adjustable buckle			
No. of pieces	2 pieces	X	
Length, cm	2.8 ± 0.2	X	
Width, cm	4.2 ± 0.2		
Accommodation Width, mm		X	
Wire Side	2.1 ± 0.2	X	
Adjustable Bar	2.7 ± 0.2	X	
Bungee Cord Lock			
No. of pieces	1 piece	X	
Length, cm	2.8 ± 0.2		X
Width, cm	1.5 ± 0.2		X
Zipper			
Color	Nylon		
	OD	X	
Main Pocket/Extension	No 8 - 10	X	



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		Major	Minor
Side Pockets	No. 4 - 5	X	
Thread	Nylon or Polyester		X
Color	OD	X	
No. of Ply	2 (minimum)		X
Breaking Strength, kg	1.5		X
Construction			
Make Body and Bottom	It shall be cut from the basic material as specified in para 2.2.1, to the correct size and shape. The upper body of the backpack shall be provided with two (2) heavy duty nylon zipper, no 8 - 10, 69.0 + 3.0 cm long for closure and shall be concealed with the basic material 3.5 + 0.2 cm width	X	
	The inside of the backpack shall be provided with padding #2 on one side covered with lining material as specified in para 2.2.2. It shall Join the ends of the fabric and lining material with a binding tape and sewed in a double-lapped seam.	X	
	The back of the Backpack shall be provided with padding #1 cut on size and shape in accordance to the design in the attached illustration.	X	
	The padding shall be covered with mesh material as prescribed in para 2.2.3. The padding shall be placed at the back of the backpack and sewn over the basic material to elevate the padding and provide cushioning and ventilation to the back of the user, as illustrated.	X	
Shoulder Strap Padding	The two (2) pieces shoulder strap shall be provided with padding #1 constructed with the material as specified in para 2.2.6 and shall be covered with the basic material on the face side and mesh on the reverse side, as illustrated.	X	
	The shoulder strap padding shall be connected to the bottom strap (strap #2) with a length of 50 cm (minimum) using a ladder lock adjustable buckle.	X	



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Modular Strap	Each shoulder strap padding shall have modular straps (strap #2), sewn along the length of each padding and the lower ends of the strap is attached to the ladder lock buckle to connect with the bottom strap as specified in para 2.3.2, while the upper end of the strap is sewn jointly with the shoulder strap padding.	X	
	Each shoulder strap shall be provided with one (1) tri-bar adjustable buckle, one (1) d-ring and one (1) wire side adjustable buckle place symmetrically on the left and right of the shoulder strap padding.	X	
Shoulder Adjustment/Compression Strap	The shoulder strap padding specified in para 2.3.2 shall be provided with an adjustment strap using strap #2.		X
	The lower ends of the strap shall be inserted to the tri-bar adjustable buckle together with the modular strap specified in para 2.3.2.1 and the upper ends of the strap shall be inserted to the ladder lock adjustable buckle that was sewn jointly in the carrying strap.	X	
	The Horizontal Chest strap shall be made of strap #3. The left portion of the chest strap shall have a fixed length of 4.0 + 1.0 cm, inserted to the wire side adjustable buckle, while the right portion shall be adjustable	X	
	The left and right portion of the horizontal chest strap shall be attached to the respective wire side adjustable buckle. The female quick release buckle shall be attached to the left portion of the wire side adjustable buckle via strap #3, while the male quick release buckle shall be attached to the right portion of the wire side adjustable buckle via strap #3, as illustrated.	X	
Belt Waist Strap	The belt waist strap is composed of two (2) straps #1, 50.0 + 2.0 cm long each and sewn at each end of the hip padding 5.5 + 0.5 cm from the longest edge. The strap is provided with quick release buckle (large) and Tri-bar Adjustable Buckle as specified in 2.2.8	X	



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Belt Waist Strap	The strap shall be secured with a strap keeper, olive drab in color.		X
Hip Padding	The hip padding is cut in accordance to size and shape as shown in the attached illustration. It shall cover with the basic material on the face side and mesh material on the reverse/back side.	X	
Carrying Straps	There shall be two (2) carrying straps.	X	
	Carrying strap #1 is made of strap #1, folded in the middle and sewn at the sides. It is placed and sewn just above the shoulder strap padding.		X
	Carrying strap #2 is made of strap #1, placed and sewn at the top of the backpack, as illustrated. It shall double with strap #2 and with bar tacks.		X
Velcro Tape	It shall have a Velcro tape (hook and loop), OD in color sewn in the top of the backpack parallel to carrying strap #2, as illustrated.	X	
	The dimension is 5.0 ± 0.5 cm long and has a width of 12.0 ± 0.5 cm.		X
Backpack Rain Cover	The backpack cover shall be made of lining material as specified in para 2.2.2 with coating on the reverse side and placed/attached inside the pocket located at the bottom of the backpack	X	
	It shall be enclosed with a no. 4-5 zipper and with a length of 15.0 ± 2.0 cm.		X
	The backpack cover shall be attached in a tri-bar adjustable buckle for adjustment.		X
	The edge of the backpack cover shall garter, olive drab in color to serve as binding tape and better grip/fit in the backpack when in used.	X	
	The seam of the backpack cover shall be sewn with a binding tape specified in para 2.2.5.		X



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Extension	The material for the bag extension shall be made of the basic material sewn at the back portion of the backpack and shall be provided with zipper No. 8 – 10 for closure and opening of the backpack extension, as illustrated.	X	
Utility pouch	The utility pouch shall be made of lining material as specified in para 2.2.2. It shall be placed/attached inside of the 20.0 + 2.0 cm long slash pocket located between the two (2) front pockets, as illustrated.	X	
	The utility pouch shall be provided with two (2) straps #3, 23.0 + 0.5 cm long sewn both on the lower side of the pouch with quick release buckle (male) that will corresponds in the quick release buckle (female) that are sewn on each of the lower side of the backpack, as illustrated.	X	
	The opening edge of the utility pouch shall be provided with elastic cord, eyelet and a bungee cord lock for closure.	X	
Dimension	See Detail A		X
Inside Pocket	The inside pocket shall be one-piece made from the lining material specified in para 2.2.2 double thickness with padding #2 in the inside.	X	
Front Pockets	It shall have two (2) sewn front pockets made of the basic material and provided with two (2) heavy duty nylon zippers, No. 4 - 5 for closure.	X	
Front Pockets (small)	It shall have two (2) modular straps (strap # 2) are sewn and bar tacked on the front of the pocket. The inside of the pocket shall have a lining and the seam is joined with a binding tape.	X	
Front Pockets (Big)	It shall have four (4) modular straps (strap # 2) are sewn and bar tacked on the front of the pocket. The inside of the pocket shall have a lining and the seam is joined with a binding tape. The zipper shall be concealed with the basic material.	X	



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Side Pockets	It shall have three (3) modular side pockets made of the basic material and provided with two (2) heavy duty nylon zipper, No. 4 – 5 each for closure and concealed with the basic material. It shall have a lining inside the pocket and the joining seam is sewn with a binding tape.	X	
Side Pocket (small)	It shall have three (3) MOLLE webbing straps (strap #2) are sewn and bar tacked on the front and back of the pocket. There shall be two (2) MOLLE attachment strap (strap #2), 24.0 + 1.0 cm long, sewn and bar tacked on the back of the pocket.	X	
	One end of the MOLLE attachment strap shall be folded to serve as lock during attachment of pocket to the MOLLE webbing strap in the side part of the backpack, as illustrated.		X
Side Pocket (medium)	It shall have three (3) MOLLE webbing strap (strap #2) are sewn and bar tacked on the front and the back of the pocket. There shall be two (2) MOLLE attachment strap (strap #2), 24.0 + 1.0 cm long, sewn and bar tacked on the back of the pocket.	X	
	One end of the MOLLE attachment strap shall be folded to serve as lock during attachment of pocket to the MOLLE webbing strap in the side part of the backpack, as illustrated.		X
Side Pocket (long)	It shall have six (6) MOLLE webbing strap (strap #2) are sewn and bar tacked on the front and the back of the pocket. There shall be four (4) MOLLE attachment strap (strap #2), 24.0 + 1.0 cm long.	X	
	The two (2) attachment straps are sewn and bar tacked on the upper portion of the back pocket while the other two (2) attachment straps are sewn and bar tacked on the middle of the back of the pocket.		X



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	One end of the MOLLE attachment strap shall be folded to serve as lock during attachment of pocket to the MOLLE webbing strap in the side part of the backpack, as illustrated.		X
Bottom MOLLE webbing Straps	The bottom of the backpack shall be provided with two (2) MOLLE webbing straps (strap #2), 48.0 ± 2.0 cm to serve as reinforcement for the bottom part of the backpack.		X
Side MOLLE webbing Straps	Each side of the backpack shall be provided with six (6) MOLLE webbing strap for attachment of the pocket, as illustrated.	X	
Quick Release Buckle (small)	There shall be a quick release buckle (small) sewn in the seam on each of the middle front side (both left and right) and upper front side (both left and right) portion of the backpack. It is placed symmetrically on the left and right portion of the backpack, as illustrated.		X
Compression Strap	The Backpack shall be provided with compression strap by using a quick release buckle (medium).	X	
	The two (2) compression strap shall be sewn at each side of the backpack align at both ends of the zipper main pocket.		X
	It shall be attached by forming a loop and the strap together with the male quick release buckle (medium) will be passed through the loop and across the side of the backpack to fasten the male quick release buckle to the female quick release buckle that is sewn at the edge of the back of the backpack, as illustrated.		X
Draw Cord	All zippers shall be provided with a draw cord, 23.0 ± 3.0 cm long for easy accessibility	X	
Strap Keeper	All loose ends or hanging straps shall be provided with a strap keeper, olive drab in color for managing excess webbing straps.	X	
Stitches	All sewing and stitching shall be running stitches ranging from 8 – 10 stitches per 2.54 cm.		X



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		Major	Minor
Manufacturer Label	With Manufacturer's Label	X	
Location	Printed on the inside upper center of backpack		X
Type of Ink	Black ink or Paint	X	
Size of Label	The letters BACKPACK, TACTICAL MOLLE shall be Arial font, size 20 while the rest of the label data shall be Arial font size 12.		X
Contents of Label	The Manufacturer's label shall consist of the ff: BACKPACK, TACTICAL MOLLE QM SPEC NR IE- 22BTM Name of Manufacturer: Date Manufactured:	X	
ARMY "Marking"	With Army Marking	X	
Location	Printed on the upper center portion of the front pocket (big)	X	
Type of Ink	Black ink or Paint	X	
Type and Size of Lettering	Stencil font, Size 150		X
Finish	The Backpack, Tactical MOLLE shall be clean, well finished and free from any defect which may affect its appearance or serviceability.	X	
TOTAL TEST POINTS		122	61


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