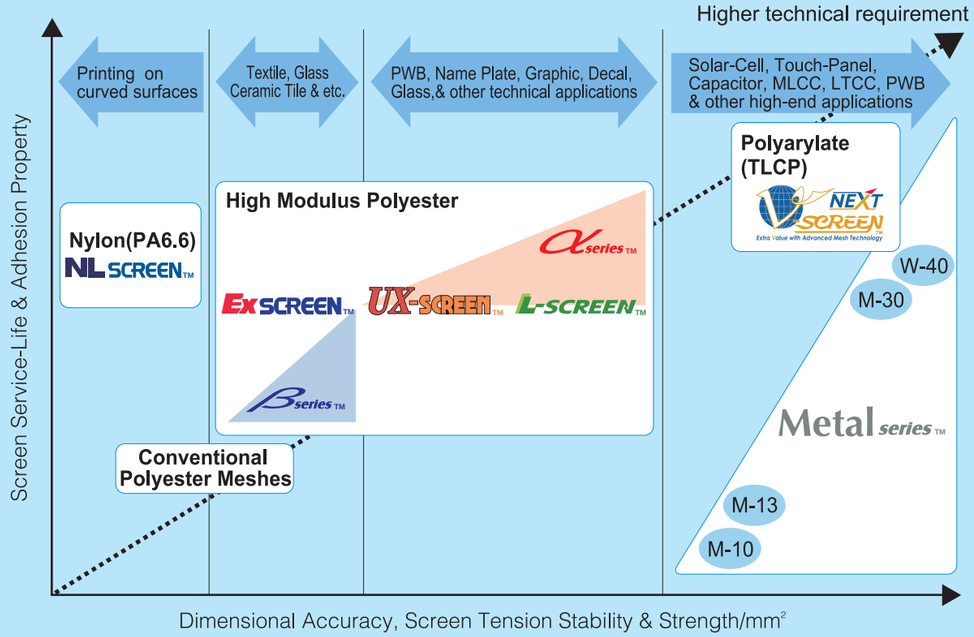
Products Portfolio & Suitable Applications



NBC Meshtec inc. (Japan)

Head-office
2-50-3 Toyoda, Hino,
Tokyo 191-0053, Japan

TEL 81-42-582-2413
FAX 81-42-584-1374
E-mail: overseas_nbc@nisshin.com
https://www.nbc-jp.com/eng/

NBC MESHTEC AMERICAS INC. (USA)

512 KINGSLAND DR
BATAVIA, IL 60510, U.S.A.
TEL 1-630-293-5454
FAX 1-630-293-5647
https://nbcmeshtec.com/

NBC(SHANGHAI) MESH CO.,LTD (China)

Room 203, 1178-2Floors, Beidi road,
shanghai 200335 China
TEL 86-21-5216-1177
FAX 86-21-5216-1277

Registered Number JQA-0748
Standard ISO 9001
Registered Factory NBC Meshtec inc.

Registered Number JQA-EM2546
Standard ISO 14001
Registered Factory NBC Meshtec inc.

(2022.9×1,500)

NBC

Precision Screen Printing Meshes

PRODUCT GUIDE

NBC Meshtec inc.

Contents

NBC Group Global Network

Head Office, Tokyo Japan

Mesh for Screen Printing

Screen Printing Mesh Production Site

Yamanashi Tsuru Factory

Overseas Network

NBC(Shanghai) Mesh Co.,Ltd

Shizuoka Kikugawa Factory

NBC Meshtec Americas Inc.

NBC Metalmesh Inc.

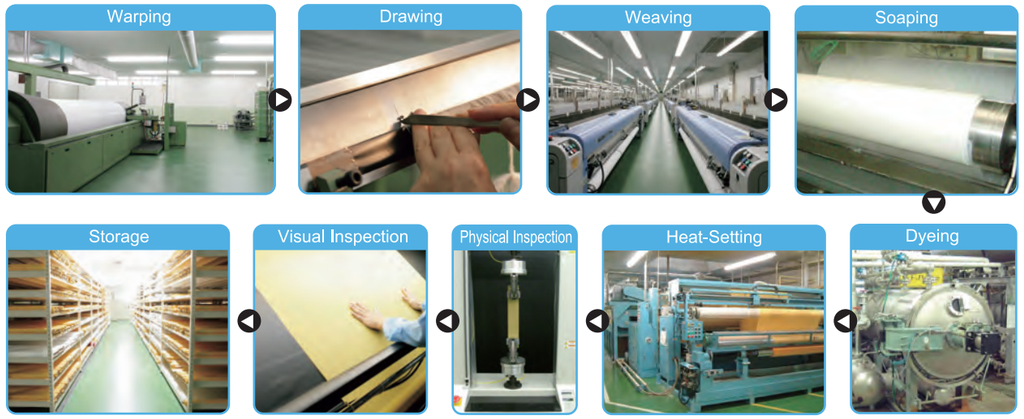
NBC Meshtec Inc. Liaison Office Europe

PT. NBC Indonesia

Comparison of technical features

Products		Material	Tensile Strength	Dimensional Stability	Adhesion with Emulsion	Anti-Static Capability	Color Availability	Suitable Applications
V-SCREEN NEXT		TLCP (Thermotropic Liquid Crystal Polyarylate)	2100N/mm²	Top Level Long Run Press	Good	N/A	Beige	Solar Cell, MLCC, LTCC, PWB, LCD, TSP & etc.
Metal series	M-10	SUS 304	1000N/mm²	Top Level	Good	Effective for Press	Metallic	Solar Cell, PWB, Capacitor, HIC, Bottle, Hotmelt Ink, & etc.
	M-13	SUS 304	1300N/mm²	Top Level	Good	Effective for Press	Metallic	Solar Cell, Capacitor, HIC, PWB & etc.
	M-30	Super SUS	3000N/mm²	Top Level	Good	Effective for Press	Metallic	Solar Cell, MLCC, LTCC, HIC & etc.
	W-40	Tungsten	4000N/mm²	Top Level	Good	Effective for Press	Metallic	Solar Cell, MLCC, LTCC, HIC & etc.
	HDM	SUS 304	1000N/mm²	Top Level	Good	Effective for Press	Metallic	Thick-Film, Ceramic Decal & etc.
α series (Alpha)	L-Screen	Conjugated High Modulus Polyester	850N/mm²	Excellent	Excellent	Effective till Degreasing	White Amber Lemon	PWB, Graphic, DVD, Name Plate, Decal, Glass, Bottles, Textile & etc.
	UX Screen	Super High Modulus Polyester	790N/mm²	Excellent	Excellent	Effective till Degreasing	White Amber Lemon	
	EX Screen	High Modulus Polyester	600N/mm² or higher	Excellent	Excellent	Effective till Degreasing	White Amber Lemon	
AS Screen		High Modulus Polyester	600N/mm² or higher	Excellent	Excellent	Effective for Press	White Amber Lemon	Plastic Substrate
CATEX	L-Screen	Conjugated High Modulus Polyester	850N/mm²	Good	Good	Effective till Degreasing	White Amber Lemon	Graphic & Clear Coat
	UX Screen	Super High Modulus Polyester	790N/mm²	Good	Good	Effective till Degreasing	White Amber Lemon	Graphic & Clear Coat
	EX Screen	High Modulus Polyester	600N/mm² or higher	Good	Good	Effective till Degreasing	White Amber Lemon	Graphic & Clear Coat
β series (Beta)	EX Screen	High Modulus Polyester	600N/mm² or higher	Good	Good	N/A	White Amber Lemon	Textile, Garments, Glass, Ceramic Tile, & etc.
NL Screen		Nylon (PA 6.6)	450N/mm² or higher	Unsuitable	Excellent	N/A	White Amber	Bottle, Container & Curved Surface

Production process for synthetic screen printing mesh

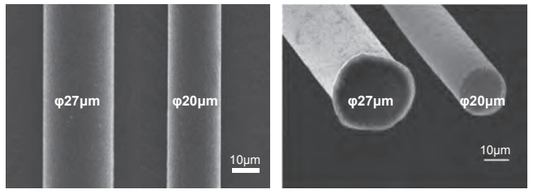


Extra Value with Advanced Mesh Technology

Next Generation TLCP (Thermotropic Liquid Crystal Polymer) Monofilament Mesh for High Precision Screen Printing Applications

Material

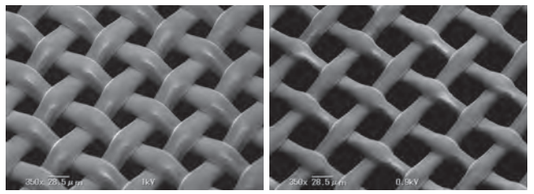
TLCP (Thermotropic Liquid Crystal Polymer) Monofilament thread available as fine as 20µm in diameter.



PET φ27µm TLCP φ20µm PET φ27µm TLCP φ20µm

On-Press Benefits

- ☐ Excellent dimensional accuracy & longevity
- ☐ Improved fine line resolution
- ☐ Thinner ink deposit & smoother ink transition

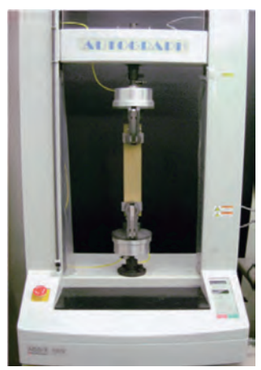


PET MESH 165-027/420PW V-SCREEN NEXT 420-20

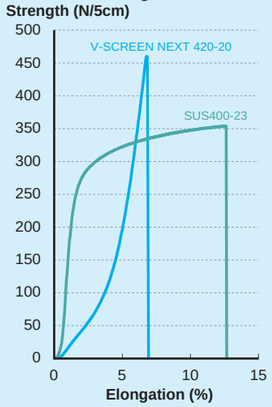
- ☐ Super fine threads create larger mesh openings, which reduce mesh interference to the print image and improve ink transition.
- ☐ Thinnest commonly available PET threads are φ27µm, compared with V-SCREEN NEXT's φ20µm.
- ☐ Smooth mesh surface helps achieve proper emulsion Rz value a key factor contributing to the highest possible resolution.

Outstanding Physical Properties

V-SCREEN NEXT features excellent tensile strength and recovery elasticity, as shown in the diagrams below.
Benefits: ☐ High screen tension for dimensional accuracy
☐ Minimal screen tension loss and distortion even after long press runs

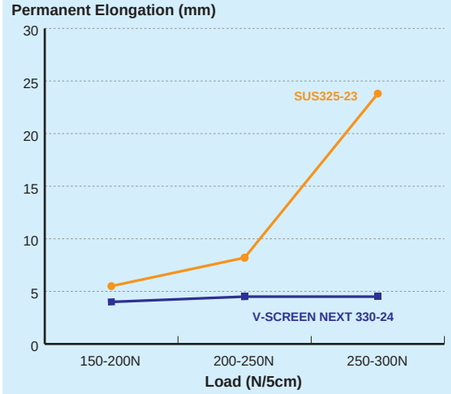


■Tensile Strength Test



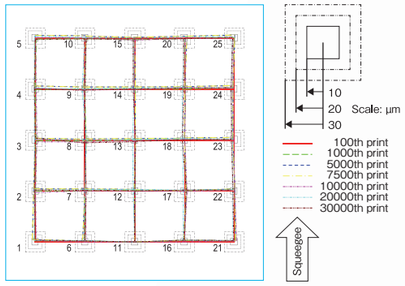
■Tensile strength test method in accordance with ISO1096-1990
■Sample strip width：5cm
■Sample strip length：20cm
■Stretching speed：10cm/min

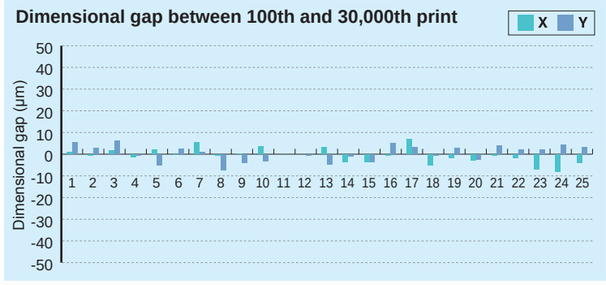
■Repeated Load Test



■Repeated load test method: Amount of permanent elongation measured after sample strip run through 50 load/release cycles
■Sample strip wdth：5cm
■Sample strip lenght：20cm
■Stretching speed：10cm/min

Superior Dimensional Accuracy Proven by 30,000 Print Test



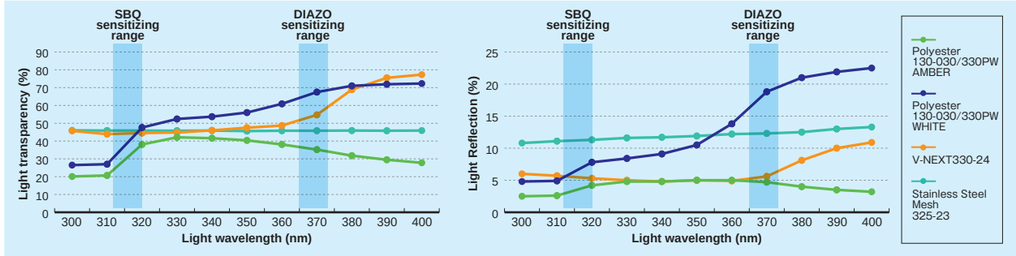


Screen Parameter	
Frame OD	：320mm×320mm
Frame type	：Aluminum cast frame
Mesh type	：V-SCREEN NEXT 420-20
Screen tension	：28.4N/cm
Stretching angle	：23 degrees
EOM	：10µm

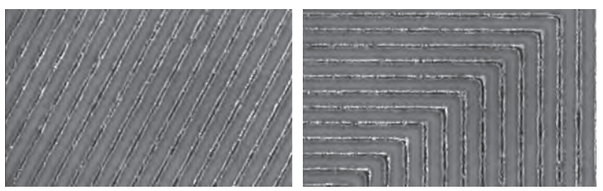
Printing Parameter	
Printer：LZ-150	Squeegee type ：Micro-Squeegee
Clearance：2.0mm	Squeegee shore ：70 shores
Squeegee press.：+50kPa	Squeegee angle ：70 degrees
(kPa/170mm)	Squeegee width ：170mm
Down stop：Free	Squeegee speed：200mm/sec

High Performance Exposure

V-SCREEN NEXT boasts higher light transparency and lower light reflection than stainless steel wire mesh as shown in the light spectrum analysis below. This enables easier set-up of exposure time for fine screen resolution.



Excellent Resolution for Fine Line Printing



Printing & Screen Parameters	
Print output	：20µm Line & 40 µm Space
Paste	：Ag paste for LTCC (300Ps・sec)
Mesh type	：V-SCREEN NEXT 420-20
EOM	：10µm

Specifications

Mesh code		Mesh count /cm	Mesh count /inch	Thread diameter µm	Mesh thickness µm	Mesh opening µm	Mesh open area %	Theoretical ink volume cm^3/m^2
V-SCREEN NEXT	420-20	165	420	20	27±3	40	45	12.1
	380-20	150	380	20	27±3	47	49	13.3
	380-24	150	380	24	33±3	43	41	13.6
	330-24	130	330	24	33±3	53	47	15.6

The above specifications may change without notice as a result of product quality improvements.
Please ask your sales representative or supplier for availability or more information.

Metal series™

Metallic Wire Mesh for High Precision Screen Printing Applications

All of NBC's metal meshes are woven with a special screen printing grade of precision metal wires; giving greater tensile strength, lower elongation and quality consistency to fulfill all technical demands of screen printing applications in the electronics and photovoltaic markets.
We are proud to introduce the 5 ranges of precision metal wire mesh listed below.

M-10 (Standard Stainless Steel Wire Mesh)

M-10 is NBC's standard stainless steel wire mesh produced with rigorous quality control.
It is widely used for many sophisticated screen printing applications such as Printed Circuit Board, Membrane Switch, Solar Cells, Ceramic Packages, Capacitors and so forth.
The reliable quality and print repeatability are well recognized by those markets.

M-13 (Upgraded Stainless Steel Wire Mesh)

M-13 is upgraded NBC stainless steel wire mesh which is woven with 30% stronger stainless steel wire compared with standard stainless steel wire. The extra tensile strength of M-13 achieves higher screen tension and optimizes printing parameters for further improvement of dimensional accuracy, and prolongs screen service life.

M-30 (Super Stainless Steel Wire Mesh)

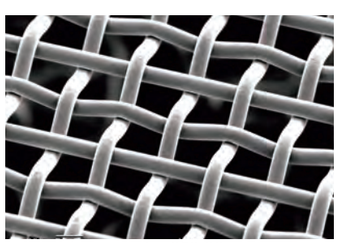
M-30 has exceptionally low elongation and large mesh open area.
It is woven with super stainless steel wire with 3 times stronger tensile strength than that of standard stainless steel wire. It minimizes mesh interference to print image while ensuring excellent paste transition; making it suitable for challenging applications utilizing high viscosity paste, such as Solar Cell, MLCC, LTCC and so forth.

W-40 (Tungsten Wire Mesh, Next Generation)

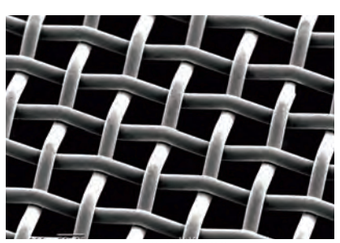
W-40 is the next generation of wire meshes woven with tungsten wire which has even greater physical stability and print repeatability than the above super stainless steel wire mesh. Comparison of tensile strength per sq.mm is shown in the chart next page above.

HDM (Heavy Deposit Mesh)

HDM is developed for specific screen-printing applications that require a heavy ink deposit.
The magnified photo below shows unique structure of HDM compared with standard wire mesh.

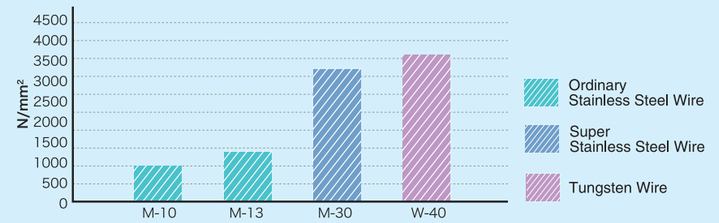


HDM 250-30



M-10-250-030

■ **Comparison of tensile strength per mm²**



■ **M-10**

Mesh Code	Mesh Count	Wire Diameter	Mesh Opening	Open Area	Normal		Thickness of Calendered Mesh		
					Theoretical Ink Volume	Thickness	Standard	Heavy	S.Heavy
	/inch	μm	μm	%	cm³/m²	μm	μm	μm	μm
M10 500-019	500	19	32	39	16	41±2	30	25	22
M10 400-019	400	19	45	49	19	39±2	28	25	22
M10 400-023	400	23	41	41	22	55±2	40	35	30
M10 325-028	325	28	50	41	26	64±2	46	42	35
M10 325-030	325	30	48	38	26	68±2	55	50	45
M10 300-030	300	30	55	42	28	68±2	52	46	40
M10 280-035	280	35	56	38	25	65±2			
M10 250-030	250	30	72	50	30	60±2	45	40	35
M10 250-035	250	35	67	43	28	65±2			
M10 230-035	230	35	75	47	31	66±2			
M10 200-040	200	40	87	47	38	80±2	63	56	50
M10 180-050	180	50	91	42	42	100±3			
M10 165-045	165	45	109	50	45	90±2			
M10 150-060	150	60	109	42	50	120±3			
M10 150-065	150	65	104	38	49	130±3			
M10 120-080	120	80	132	39	62	160±3			

■ **M-13**

Mesh Code	Mesh Count	Wire Diameter	Mesh Opening	Open Area	Normal		Thickness of Calendered Mesh		
					Theoretical Ink Volume	Thickness	Standard	Heavy	S.Heavy
	/inch	μm	μm	%	cm³/m²	μm	μm	μm	μm
M13 730-013	730	13	22	39	11	28±2	21	17	15
M13 640-015	640	15	25	39	14	35±2	25	21	18
M13 500-016	500	16	35	47	17	36±2	25	20	18
M13 500-019	500	19	32	39	16	41±2	30	25	22
M13 400-019	400	19	45	49	19	39±2	28	25	22
M13 400-023	400	23	41	41	22	55±2	40	35	30
M13 325-023	325	23	55	50	25	50±2	38	31	28

■ **M-30**

Mesh Code	Mesh Count	Wire Diameter	Mesh Opening	Open Area	Normal		Thickness of Calendered Mesh		
					Theoretical Ink Volume	Thickness	Standard	Heavy	S.Heavy
	/inch	μm	μm	%	cm³/m²	μm	μm	μm	μm
M30 430-013	430	13	46	61	18	29±2		21	17
M30 380-014	380	14	53	62	20	32±2	26	21	18
M30 360-016	360	16	55	60	22	36±2	26	22	20
M30 325-016	325	16	62	63	22	35±2	26	22	20
M30 290-020	290	20	68	60	27	45±2		30	25
M30 250-020	250	20	82	65	29	45±2		30	25

■ **W-40**

Mesh Code	Mesh Count	Wire Diameter	Mesh Opening	Open Area	Normal		Thickness of Calendered Mesh		
					Theoretical Ink Volume	Thickness	Standard	Heavy	S.Heavy
	/inch	μm	μm	%	cm³/m²	μm	μm	μm	μm
W40 430-013	430	13	46	61	18	29±2		21	17
W40 380-014	380	14	53	62	20	32±2	26	21	18
W40 325-016	325	16	62	63	23	36±2	25	22	

■ **HDM(Heavy Deposit Mesh)**

Mesh Code	Mesh Count	Wire Diameter	Mesh Opening	Open Area	Normal	
					Theoretical Ink Volume	Thickness
	/inch	μm	μm	%	cm³/m²	μm
HDM 325-028	325	28	50	41	31	76±2
HDM 250-030	250	30	72	50	40	81±2
HDM 200-040	200	40	87	47	51	108±2

● Most calendered thickness can be customized. Please ask us for the detail. ● The above catalogue values may change without notice.

α series TM

L-SCREEN TM UX-SCREEN TM

Top Quality, Super High Modulus Polyester Monofilament Mesh for Precision Screen Printing Applications

α series TM NEWSUPER treatment

NEWSUPER treatment is a combination of NBC's unique chemical and atmosphere plasma treatment (Corona treatment) which modifies the surface properties as well as the structure at the submicron level, as in the SEM photo below.

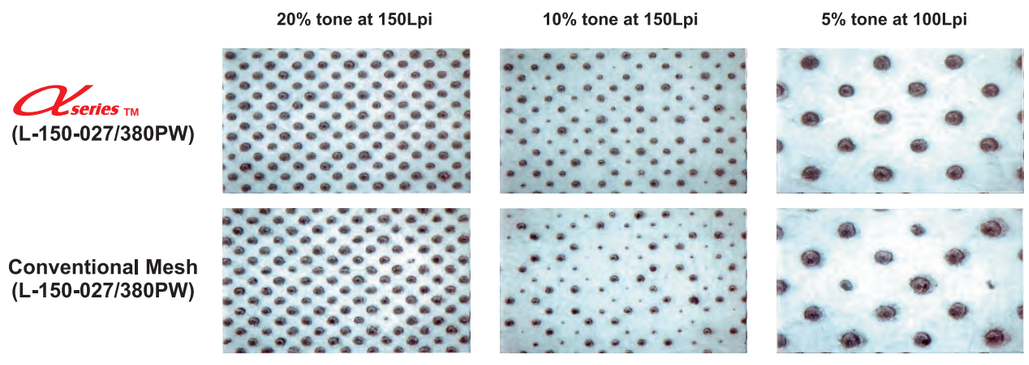
Original mesh

NEWSUPER treatment

α series TM Benefits of NEWSUPER treatment

1. Smoother paste/ink transition

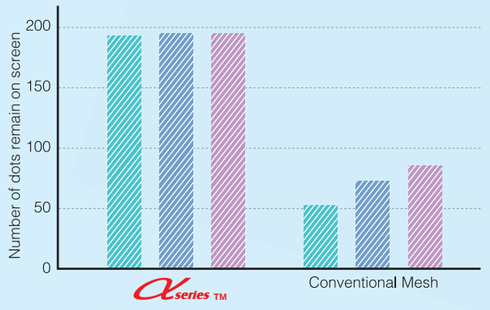
Modified mesh surface in the submicron level reduces the contact area of paste/ink particles, improves paste/ink transition through the mesh and optimizes print resolution, making it ideal for halftone and fine line printing.

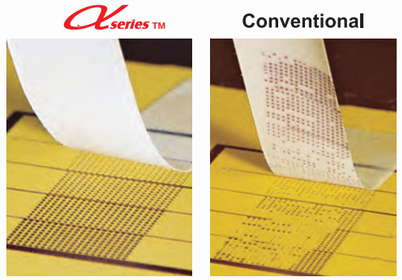


2. Extended screen service life

Modified mesh surface with NEWSUPER treatment holds emulsion/capillary film tight and it prolongs screen service life particularly on long run prints or printing with abrasive paste. The adhesion property of mesh is proven below by a comparison test with self-adhesive tape.

■ **Comparison of mesh adhesion property (Dot-peeling with self-adhesive tape)**





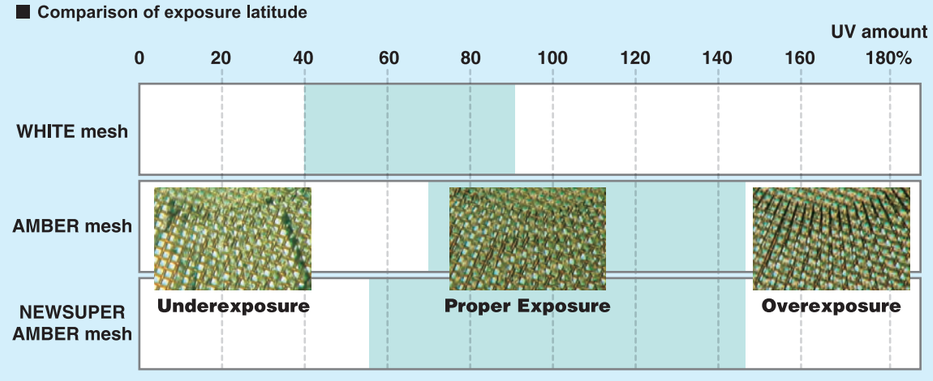
Test Parameter
Mesh type: L-Screen 150-030/380PW
Emulsion: Dual-Cure
EOM: 10 µm
Dot size: 0.3mm, 0.4mm and 0.5mm square dot
Number of dots: 200 each
The above dots are peeled-off by self-adhesive tape.
The number of dots remaining on the mesh are counted.

3. Extended exposure latitude

NEWSUPER treatment not only offers improved adhesion of emulsion/capillary films; it also extends the limit of exposure latitude (underexposure). This is particularly effective for fine detail and use with CTS systems. The below diagram shows the comparison of exposure latitude of three different types of mesh.

Screen Parameter
Mesh: UX 110-035/280PW
Mesh Thickness: 50µm
Emulsion: Dual-Cure
EOM: 12µm
Exposure Unit: Metal halide 3KW with Fresnel lens
Illuminance: 7.0mW/cm2
Distance to screen: 90cm distance from light bulb

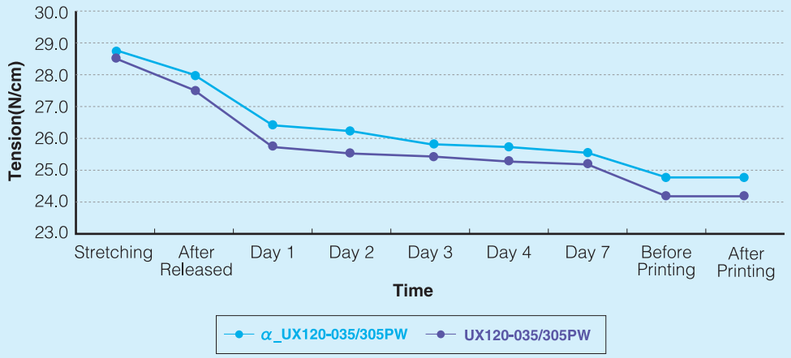
■ **Comparison of exposure latitude**



α series™ Optimized physical property

1. Minimized screen tension loss

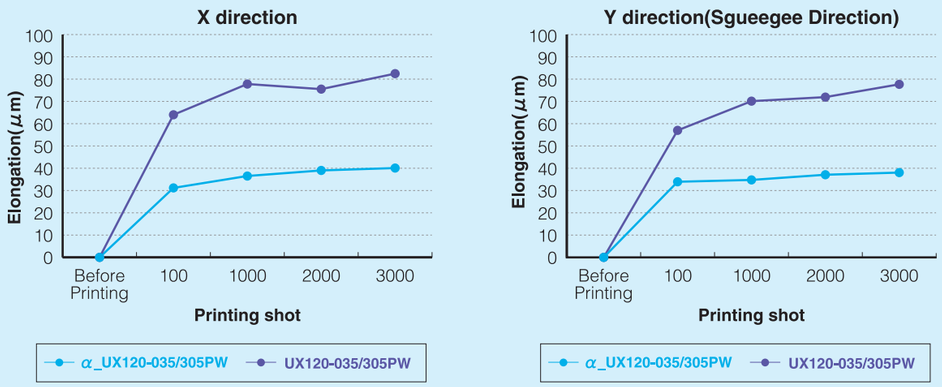
α series of NBC high modulus polyester mesh is further improved by an optimized heat-setting process and rigorous quality control system to minimize screen tension loss after stretching and printing process. The below diagram shows the comparison data in tension loss between α series and original mesh.



2. Further improved dimensional accuracy

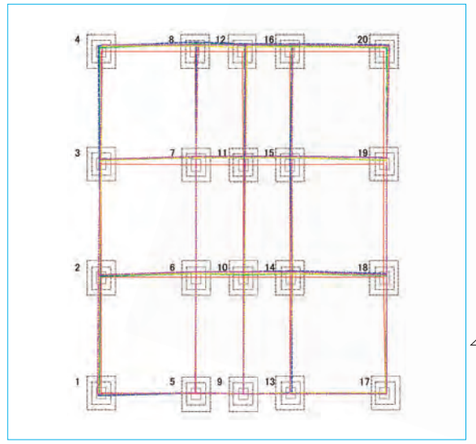
The diagrams show the comparison data of dimensional gap between the screen image (300mm ×300mm) and printing result, proving that the dimensional accuracy of α UX120-035/305PW is significantly improved and more consistent for long run printing.

Dimensional gap change from 100th print to 3000th print

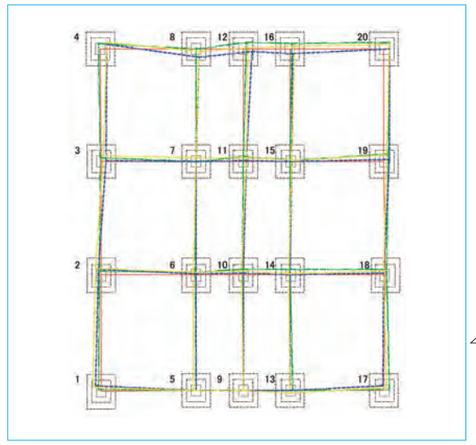


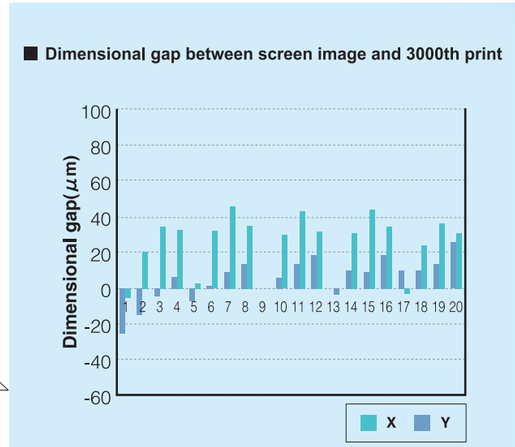
Dimensional gap between screen image and 3000th print

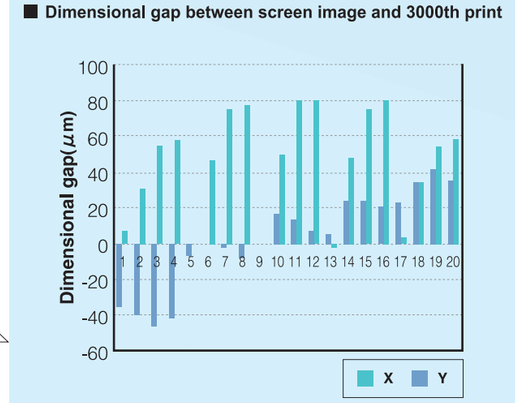
α series™ UX120-035/305PW

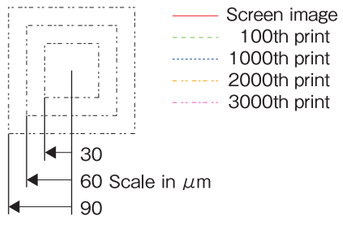


Original UX120-035/305PW









Printing Parameter	Screen Parameter
Printer: Flat Bed(Micro Tech MT1000 TVC)	Frame Size: 860mm × 860mm
Clearance: 3.8mm	Frame Type: Aluminum Tubular Frame
Squeegee Pressure: 42N per 380mm	Mesh Type: UX120-035/305PW
Type of Squeegee: Micro-Squeegee	Tension: 24.2 N/cm before press
Squeegee Shore: 70 shores	Stretching Angle: 15 degrees
Squeegee Angle: 70 degrees	EOM: 10 μm
Squeegee Length: 380mm	
Squeegee Speed: 150mm/sec	

α series™

Top Quality, Super High Modulus Polyester Monofilament Mesh for Precision Screen Printing Applications

* Excluding EX SCREEN

Thread type
L: Conjugated Polyester Monofilament (27μmφ - 30 μmφ)
UX: Super High Modulus Polyester Monofilament (33μmφ - 45 μmφ)
EX: High Modulus Polyester Monofilament

Mesh Code	Mesh Count		Weaving	Thread Diameter	Mesh Thickness		Mesh Opening	Open Area	Theoretical Ink Volume	
	Tolerance ±3%				115cm 136cm 155cm	165cm & wider			115cm 136cm 155cm	165cm & wider
	/cm	/inch		μm	μm	μm	μm	%	cm³/m²	cm³/m²
α_L-200-024/508PW	200	508	1:1 PW	24	36±2μm	N/A	24	23	8.3	N/A
α_L-200-027/508TW	200	508	2:2 TW	27	50±3μm	N/A	22	19	9.7	N/A
α_L-180-027/460PW	180	460	1:1 PW	27	41±2μm	42±3μm	24	19	7.7	7.9
α_L-180-030/460TW	180	460	2:2 TW	30	55±3μm	56±4μm	23	17	9.5	N/A
α_L-165-027/420PW	165	420	1:1 PW	27	40±2μm	41±3μm	30	25	9.8	10.1
α_L-165-030/420PW	165	420	1:1 PW	30	45±2μm	46±3μm	25	18	8.0	8.2
α_UX165-033/420TW	165	420	2:2 TW	33	60±3μm	60±3μm	24	16	9.4	9.4
α_L-150-027/380PW	150	380	1:1 PW	27	40±2μm	41±3μm	38	32	12.9	13.3
α_L-150-030/380PW	150	380	1:1 PW	30	45±2μm	46±3μm	33	24	11.0	11.2
α_UX150-033/380PW	150	380	1:1 PW	33	48±2μm	49±3μm	27	16	7.8	8.0
α_UX150-035/380TW	150	380	2:2 TW	35	64±3μm	64±3μm	30	20	12.9	12.9
α_L-140-027/355PW	140	355	1:1 PW	27	40±2μm	41±3μm	44	38	15.1	15.5
α_L-140-030/355PW	140	355	1:1 PW	30	45±2μm	46±3μm	39	30	13.4	13.7
α_UX140-035/355PW	140	355	1:1 PW	35	53±2μm	54±3μm	32	19	10.3	10.5
α_UX140-035/355TW	140	355	2:1 TW	35	61±3μm	61±3μm	34	23	13.8	13.8
α_L-130-027/330PW	131	334	1:1 PW	27	40±2μm	41±3μm	49	42	16.6	17.0
α_L-130-030/330PW	131	334	1:1 PW	30	45±2μm	46±3μm	44	33	15.1	15.4
α_UX130-035/330PW	130	330	1:1 PW	35	53±2μm	54±3μm	38	24	12.9	13.2
α_L-124-027/315PW	124	315	1:1 PW	27	40±2μm	41±3μm	54	45	17.9	18.4
α_L-124-030/315PW	124	315	1:1 PW	30	45±2μm	46±3μm	49	37	16.6	17.0
α_L-120-030/305PW	120	305	1:1 PW	30	46±2μm	46±3μm	53	41	18.6	18.6
α_UX120-033/305PW	120	305	1:1 PW	33	50±2μm	51±3μm	47	32	15.9	16.2
α_UX120-035/305PW	120	305	1:1 PW	35	53±2μm	54±3μm	45	29	15.5	15.8
α_UX120-040/305PW	118	300	1:1 PW	40	62±2μm	63±3μm	37	19	11.8	12.0
α_UX110-035/280PW	110	280	1:1 PW	35	53±2μm	54±3μm	53	34	18.1	18.4
α_UX106-040/270PW	106	270	1:1 PW	40	60±2μm	61±3μm	49	27	16.3	16.6
α_UX100-035/255PW	100	255	1:1 PW	35	53±2μm	54±3μm	64	41	21.9	22.3
α_UX100-040/255PW	100	255	1:1 PW	40	60±2μm	61±3μm	56	32	19.0	19.3
EX*100-048/255PW	100	255	1:1 PW	48	76±2μm	76±3μm	45	20	15.5	15.5
α_UX90-040/230PW	90	230	1:1 PW	40	60±2μm	61±3μm	67	37	22.1	22.5
α_UX90-045/230PW	90	230	1:1 PW	45	68±2μm	69±3μm	60	30	20.1	20.4
EX*90-048/230PW	88	225	1:1 PW	48	75±2μm	79±4μm	58	26	19.8	20.9
EX*90-055/230TW	88	225	2:1 TW	55	91±4μm	95±5μm	54	23	20.8	21.7
EX*90-071/230TW	88	225	3:1 TW	71	139±10μm	N/A	38	11	15.7	N/A
α_UX90-33x2230PW	90	230	1:1 PW	33	57±3μm	60±4μm	40	13	7.5	7.9
α_UX79-045/200PW	79	200	1:1 PW	45	68±2μm	69±3μm	81	41	27.7	28.1
EX*79-048/200PW	79	200	1:1 PW	48	75±2μm	79±4μm	75	35	26.2	27.6
EX*79-055/200PW	79	200	1:1 PW	55	88±4μm	88±4μm	69	30	26.0	26.0

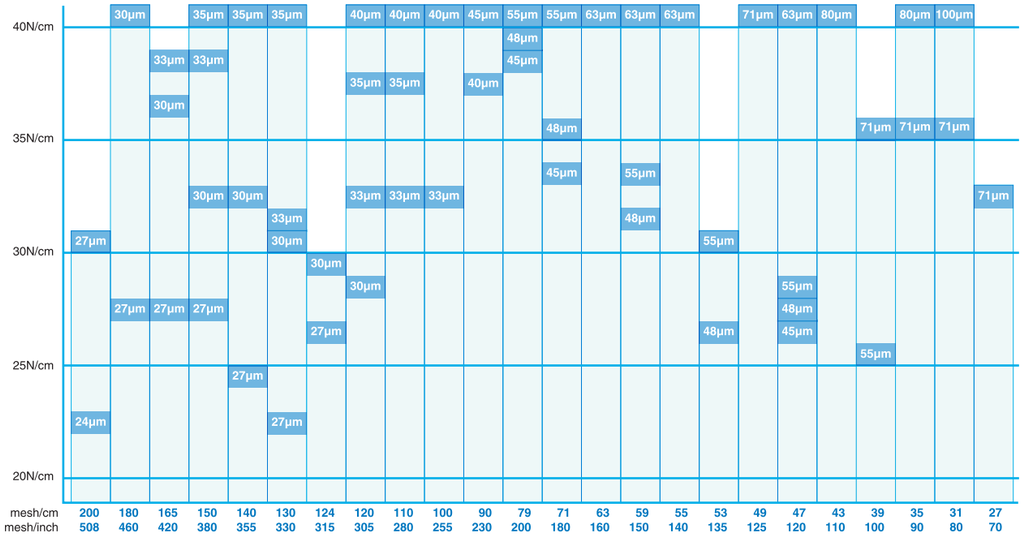
The above specifications may be changed for quality improvement without notice.
*α_EX SCREEN upgrade is also possible upon request.
Please ask your sales rep or supplier for availability and more information.

Mesh Code	Mesh Count		Weaving	Thread Diameter	Mesh Thickness		Mesh Opening	Open Area	Theoretical Ink Volume	
	Tolerance ±3%				115cm 136cm 155cm	165cm & wider			115cm 136cm 155cm	165cm & wider
	/cm	/inch		μm	μm	μm	μm	%	cm³/m²	cm³/m²
α_UX71-045/180PW	71	180	1:1 PW	45	70±2μm	72±3μm	95	45	31.7	32.6
EX*71-048/180PW	71	180	1:1 PW	48	76±2μm	80±4μm	91	42	31.6	33.3
EX*71-055/180PW	71	180	1:1 PW	55	88±4μm	88±4μm	85	36	31.9	31.9
EX*71-063/180PW	71	180	1:1 PW	63	98±5μm	N/A	71	25	24.8	N/A
EX*63-048/160PW	63	160	1:1 PW	48	80±4μm	80±4μm	110	48	38.4	38.4
EX*63-063/160PW	63	160	1:1 PW	63	105±5μm	105±5μm	93	34	36.0	36.0
EX*63-071/160PW	63	160	1:1 PW	71	116±6μm	116±6μm	79	25	28.7	28.7
α_UX59-045/150PW	59	150	1:1 PW	45	72±2μm	74±4μm	124	54	38.6	39.7
EX*59-048/150PW	59	150	1:1 PW	48	76±2μm	80±4μm	120	50	38.2	40.2
EX*59-055/150PW	59	150	1:1 PW	55	88±4μm	88±4μm	114	45	39.9	39.9
EX*59-063/150PW	59	150	1:1 PW	63	105±5μm	105±5μm	104	38	39.9	39.9
EX*59-071/150PW	59	150	1:1 PW	71	116±6μm	116±6μm	91	29	33.5	33.5
EX*55-063/140PW	55	140	1:1 PW	63	105±5μm	105±5μm	116	41	43.2	43.2
EX*55-080/140PW	55	140	1:1 PW	80	140±7μm	140±7μm	97	29	40.0	40.0
α_UX53-045/135PW	53	135	1:1 PW	45	73±4μm	74±4μm	143	58	42.2	42.7
EX*53-048/135PW	53	135	1:1 PW	48	79±4μm	79±4μm	139	55	43.1	43.1
EX*53-055/135PW	53	135	1:1 PW	55	95±5μm	95±5μm	133	50	47.5	47.5
EX*49-071/125PW	49	125	1:1 PW	71	116±6μm	116±6μm	130	41	47.6	47.6
α_UX47-045/120PW	47	120	1:1 PW	45	73±4μm	74±4μm	167	62	45.4	46.1
EX*47-048/120PW	47	120	1:1 PW	48	80±4μm	80±4μm	163	59	47.4	47.4
EX*47-055/120PW	47	120	1:1 PW	55	95±5μm	95±5μm	157	55	52.3	52.3
EX*47-063/120PW	47	120	1:1 PW	63	105±5μm	105±5μm	149	50	52.0	52.0
EX*47-080/120PW	47	120	1:1 PW	80	137±7μm	137±7μm	130	38	51.4	51.4
EX*43-080/110PW	43	110	1:1 PW	80	132±7μm	132±7μm	150	42	55.7	55.7
EX*39-055/100PW	39	100	1:1 PW	55	95±5μm	95±5μm	199	61	58.3	58.3
EX*39-071/100PW	39	100	1:1 PW	71	122±6μm	122±6μm	182	51	62.6	62.6
EX*39-080/100PW	39	100	1:1 PW	80	134±7μm	134±7μm	174	47	62.9	62.9
EX*35-071/90PW	35	90	1:1 PW	71	125±6μm	125±6μm	210	55	69.2	69.2
EX*35-080/90PW	35	90	1:1 PW	80	137±7μm	137±7μm	202	51	70.2	70.2
EX*31-055/80PW	31	80	1:1 PW	55	95±5μm	95±5μm	263	69	65.2	65.2
EX*31-071/80PW	31	80	1:1 PW	71	125±6μm	125±6μm	246	60	75.0	75.0
EX*31-100/80PW	31	80	1:1 PW	100	170±9μm	170±9μm	218	47	80.1	80.1
EX*27-055/70PW	27	70	1:1 PW	55	95±5μm	95±5μm	308	72	68.4	68.4
EX*27-071/70PW	27	70	1:1 PW	71	125±6μm	125±6μm	291	64	80.4	80.4
EX*27-125/70PW	27	70	1:1 PW	125	240±24μm	240±24μm	238	43	103.3	103.3
EX*24-120/60PW	24	60	1:1 PW	120	210±21μm	210±21μm	303	51	107.8	107.8
EX*24-145/60PW	24	60	1:1 PW	145	260±26μm	N/A	278	43	112.0	N/A
EX*20-200/50PW	20	50	1:1 PW	200	370±37μm	N/A	308	37	136.0	N/A
EX*16-200/40PW	16	40	1:1 PW	200	370±37μm	N/A	435	47	173.6	N/A
EX*12-150/30PW	12	30	1:1 PW	150	290±29μm	N/A	696	68	196.0	N/A
EX*12-250/30PW	12	30	1:1 PW	250	480±48μm	N/A	597	50	238.7	N/A
EX*10-300/25PW	10	25	1:1 PW	300	600±60μm	N/A	716	50	173.9	N/A

The above specifications may be changed for quality improvement without notice.
*α_EX SCREEN upgrade is also possible upon request.
Please ask your sales rep or supplier for availability and more information.

Highest stretching tension of α series™

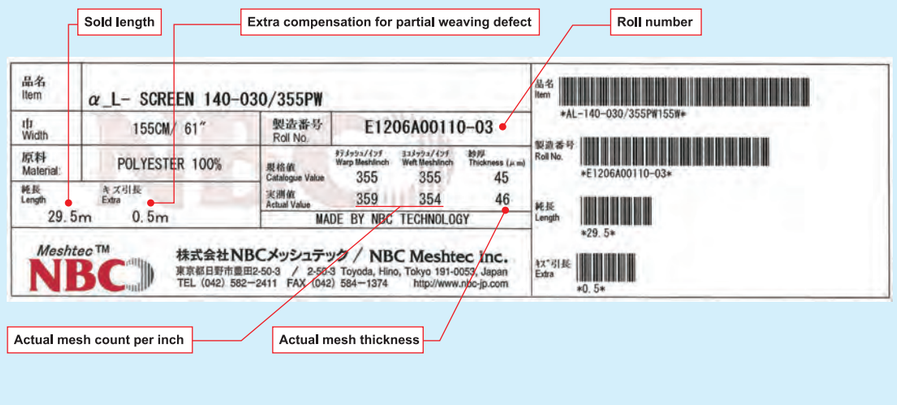
Highest stretching tension value of NBC α series polyester monofilament meshes.



Remark: The above screen tension vaues are calculated from breaking tension in 1000mmx1000mm sized mechanical stretching devices and they are measured by NBC tension meter. NBC takes no responsibility for accidental damage to the mesh or improper stretching operation.

Top quality guaranteed

Every roll of NBC polyester mesh is supplied with an inspection tag. While flaws are kept to a minimum by careful quality control, any flaw found under our thorough inspection is clearly marked to prevent it being stretched into your image area. Thickness and mesh count are precisely controlled and documented on the tag -- critical information for setting your production standards. You will keep your presses running and save time spent troubleshooting.
NBC also compensates for flaws by adding one half meter of mesh to the end of the roll free of charge for each flaw...now that's value.



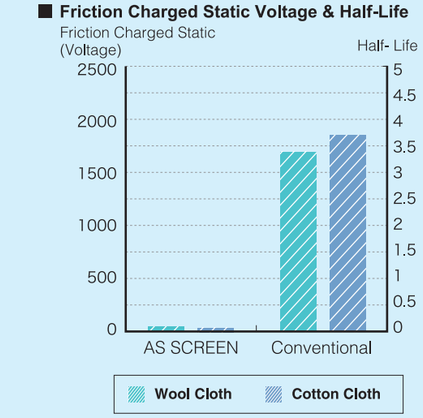
NBC additional process for extra function

Anti-Static Resin Coated Polyester Monofilament Mesh

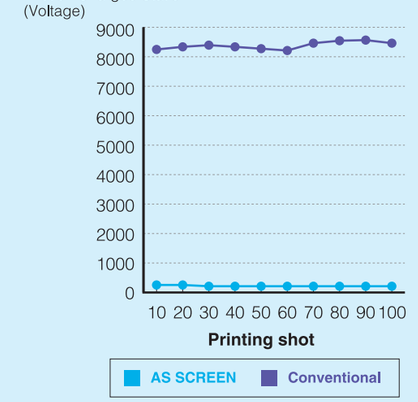
AS SCREEN™

AS SCREEN is special resin coated high modulus polyester mesh which has permanent anti-static properties effective throughout the printing process. It minimizes static charge electricity and prevents pin-holes and ink splashing. Emulsion and capillary films adhere well to this mesh.
AS SCREEN is available on request in mesh counts from 120 to 508 threads/inch (47 to 200 threads/cm).

■ Friction Charged Static Voltage & Half-Life



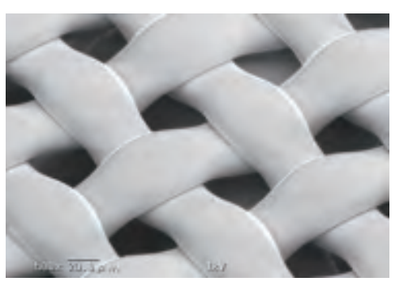
■ Friction Charged Static Voltage at Lift-Up Motion



Anti-Static Resin Coated Polyester Monofilament Mesh

CATEX™

CATEX mesh reduces your ink consumption by 20-30%. Especially designed for high production clear coating where a minimum ink deposit is a priority. CATEX can also be helpful when printing back-lighted panels where uniform ink deposit is extremely critical.
CATEX mesh is available up to 240cm wide.



Standard Fabric

Ink deposit 100%.

Calender Side Up

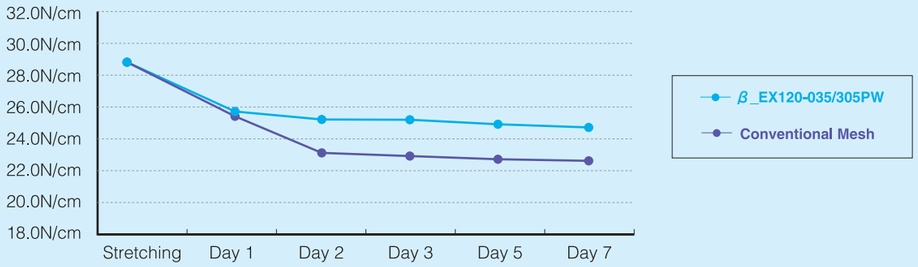
Squeegee side glossy.
Reduction approximately 25%.

β series™

High Modulus Polyester Monofilament Mesh for General Screen Printing Applications

β series is classic high modulus polyester monofilament mesh which is produced under NBC's high quality standards. The dimensional accuracy and tension stability are kept at a high level.

■ **Screen tension loss after stretching**



Mesh Code	Mesh Count		Weaving	Thread Diameter	Mesh Thickness		Mesh Opening	Open Area	Theoretical Ink Volume	
	Tolerance ±3%				115-155cm	165cm & wider			115-155cm	165cm & wider
	/cm	/inch		μm	μm	μm	μm	%	cm^3/m^2	cm^3/m^2
β_EX 120 -035/ 305 PW	120	305	1:1 PW	35	51 ±2μm	52 ±3μm	45	29	14.9	15.2
β_EX 120 -040/ 305 PW	118	300	1:1 PW	40	62 ±2μm	63 ±3μm	37	19	11.8	12.0
β_EX 110 -035/ 280 PW	110	280	1:1 PW	35	51 ±2μm	52 ±3μm	53	34	17.4	17.8
β_EX* 106 -040/ 270 PW	106	270	1:1 PW	40	60 ±2μm	61 ±3μm	49	27	16.3	16.6
β_EX 100 -040/ 255 PW	100	255	1:1 PW	40	60 ±2μm	61 ±3μm	56	32	19.0	19.3
β_EX* 100 -048/ 255 PW	100	255	1:1 PW	48	76 ±2μm	76 ±3μm	45	20	15.5	15.5
β_EX* 90 -040/ 230 PW	90	230	1:1 PW	40	60 ±2μm	61 ±3μm	67	37	22.1	22.5
β_EX* 90 -045/ 230 PW	90	230	1:1 PW	45	68 ±2μm	69 ±3μm	60	30	20.1	20.4
β_EX 90 -048/ 230 PW	88	225	1:1 PW	48	75 ±3μm	76 ±3μm	58	26	19.8	20.1
β_EX 79 -045/ 200 PW	79	200	1:1 PW	45	68 ±3μm	69 ±3μm	81	41	27.7	28.1
β_EX 79 -048/ 200 PW	79	200	1:1 PW	48	76 ±3μm	80 ±4μm	75	35	26.5	27.9
β_EX 71 -045/ 180 PW	71	180	1:1 PW	45	70 ±2μm	72 ±3μm	95	45	31.7	32.6
β_EX 71 -048/ 180 PW	71	180	1:1 PW	48	76 ±3μm	80 ±4μm	91	42	31.6	33.3
β_EX 63 -048/ 160 PW	63	160	1:1 PW	48	80 ±4μm	80 ±4μm	110	48	38.4	38.4
β_EX* 59 -045/ 150 PW	59	150	1:1 PW	45	72 ±2μm	74 ±4μm	124	54	38.6	39.7
β_EX 59 -048/ 150 PW	59	150	1:1 PW	48	77 ±3μm	79 ±4μm	120	50	38.7	39.7
β_EX* 53 -045/ 135 PW	53	135	1:1 PW	45	73 ±4μm	74 ±4μm	143	58	42.2	42.7
β_EX 53 -048/ 135 PW	53	135	1:1 PW	48	79 ±4μm	79 ±4μm	139	55	43.1	43.1
β_EX* 47 -045/ 120 PW	47	120	1:1 PW	45	73 ±4μm	74 ±4μm	167	62	45.4	46.1
β_EX 47 -048/ 120 PW	47	120	1:1 PW	48	80 ±4μm	80 ±4μm	163	59	47.4	47.4

The above specifications may be changed for quality improvement without notice.
*Non-Standard item, available upon request
Please ask your sales rep or supplier for availability and more information.

NL SCREEN™

Nylon Monofilament Mesh for Specific Screen Printing Applications

NL SCREEN, nylon monofilament mesh is well-suited for printing onto curved or rigid surfaces such as containers, ceramic and so forth because of its flexibility and elasticity. NL SCREEN also has reliable mechanical resistance and good emulsion adhesion, making it suitable for printing with abrasive pastes or substrates.

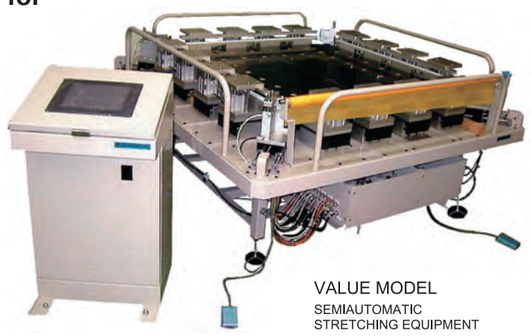
Mesh Code	Mesh Count		Weaving	Thread Diameter	Mesh Thickness		Mesh Opening	Open Area	Theoretical Ink Volume	
	Tolerance ±3%				115-155cm	165cm & wider			115-155cm	165cm & wider
	/cm	/inch		μm	μm	μm	μm	%	cm^3/m^2	cm^3/m^2
NL 200 -030/ 508 TW	200	508	2:2 TW	30	60 ±3μm	N/A	20	16	9.6	N/A
NL 180 -030/ 460 TW	180	460	2:2 TW	30	60 ±3μm	N/A	25	21	12.4	N/A
NL 165 -030/ 420 PW	165	420	1:1 PW	30	51 ±3μm	51 ±3μm	30	25	12.8	12.8
NL 165 -035/ 420 TW	165	420	2:2 TW	35	70 ±4μm	70 ±4μm	25	17	12.2	12.2
NL 150 -030/ 380 PW	150	380	1:1 PW	30	55 ±3μm	55 ±3μm	37	30	16.8	16.8
NL 150 -035/ 380 TW	150	380	2:2 TW	35	68 ±3μm	68 ±3μm	32	23	15.5	15.5
NL 140 -030/ 355 PW	140	355	1:1 PW	30	52 ±3μm	52 ±3μm	42	34	17.7	17.7
NL 140 -035/ 355 TW	140	355	2:1 TW	35	66 ±3μm	66 ±3μm	37	26	17.4	17.4
NL 130 -030/ 330 PW	130	330	1:1 PW	30	50 ±3μm	50 ±3μm	47	37	18.6	18.6
NL 130 -035/ 330 TW	130	330	2:1 TW	35	66 ±3μm	66 ±3μm	42	30	19.6	19.6
NL 130 -030/ 330 PW	130	330	1:1 PW	30	50 ±3μm	50 ±3μm	47	37	18.6	18.6
NL 130 -035/ 330 TW	130	330	2:1 TW	35	66 ±3μm	66 ±3μm	42	30	19.6	19.6
NL 120 -030/ 305 PW	120	305	1:1 PW	30	53 ±3μm	53 ±3μm	53	41	21.6	21.6
NL 120 -035/ 305 PW	120	305	1:1 PW	35	60 ±3μm	60 ±3μm	48	33	20.1	20.1
NL 120 -043/ 305 TW	120	305	2:1 TW	43	82 ±4μm	82 ±4μm	40	23	19.0	19.0
NL* 110 -038/ 280 PW	110	280	1:1 PW	38	64 ±3μm	64 ±3μm	53	34	21.7	21.7
NL 106 -035/ 270 PW	106	270	1:1 PW	35	60 ±3μm	60 ±3μm	59	39	23.6	23.6
NL 100 -043/ 255 PW	100	255	1:1 PW	43	75 ±4μm	75 ±4μm	57	32	24.4	24.4
NL 90 -043/ 230 PW	90	230	1:1 PW	43	75 ±4μm	75 ±4μm	67	37	27.8	27.8
NL* 81 -061/ 206 TW	81	206	2:1 TW	61	116 ±6μm	116 ±6μm	62	25	29.5	29.5
NL 79 -050/ 200 PW	79	200	1:1 PW	50	86 ±4μm	86 ±4μm	77	37	31.6	31.6
NL* 77 -061/ 196 PW	77	196	1:1 PW	61	111 ±6μm	111 ±6μm	69	28	31.3	31.3
NL* 73 -061/ 185 PW	73	185	1:1 PW	61	114 ±6μm	114 ±6μm	76	31	35.1	35.1
NL 69 -050/ 175 PW	69	175	1:1 PW	50	87 ±4μm	87 ±4μm	95	43	37.3	37.3
NL* 68 -070/ 173 TW	68	173	2:1 TW	70	133 ±7μm	133 ±7μm	77	27	36.5	36.5
NL* 62 -070/ 157 PW	62	157	1:1 PW	70	118 ±6μm	118 ±6μm	92	32	38.1	38.1
NL* 62 -080/ 157 PW	62	157	1:1 PW	80	146 ±7μm	N/A	82	26	37.4	N/A
NL 59 -061/ 150 PW	59	150	1:1 PW	61	106 ±6μm	106 ±6μm	108	41	43.3	43.3
NL* 55 -070/ 140 PW	55	140	1:1 PW	70	126 ±6μm	126 ±6μm	111	38	47.4	47.4
NL* 55 -080/ 140 PW	55	140	1:1 PW	80	140 ±7μm	140 ±7μm	101	31	43.6	43.6
NL 49 -070/ 125 PW	49	125	1:1 PW	70	121 ±6μm	121 ±6μm	133	43	51.9	51.9
NL* 49 -080/ 125 PW	49	125	1:1 PW	80	142 ±7μm	145 ±7μm	123	37	52.1	53.2
NL 43 -070/ 110 PW	43	110	1:1 PW	70	121 ±6μm	121 ±6μm	161	49	58.8	58.8
NL* 43 -080/ 110 PW	43	110	1:1 PW	80	140 ±7μm	140 ±7μm	151	43	59.8	59.8

The above specifications may be changed for quality improvement without notice.
*Non-Standard item, available upon request
Please ask your sales rep or supplier for availability and more information.

VALUE MODEL Series
Precision semiautomatic stretching equipment

The VALUE MODEL is a semiautomatic stretching device designed and manufactured by NBC for precision screen.

The VALUE MODEL stretching device was developed by NBC in response to customer demands for higher stretching tension. NBC was determined to not just slightly improve tired concepts, but to create a real breakthrough in stretching technology to reinvent stretching. As a result the VALUE MODEL uses many sophisticated controls not found on conventional equipment.



VALUE MODEL
SEMIAUTOMATIC
STRETCHING EQUIPMENT

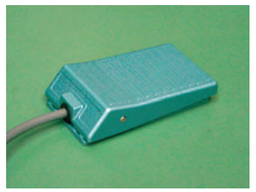
VALUE-MODEL Specifications

	VALUE 1150	VALUE1360	VALUE1550
Body dimension (L×W×H)	1600×1600×1000(mm)	1840×1840×1000(mm)	2000×2000×1000(mm)
Body weight (kg)	Approx. 500	Approx. 630	Approx. 780
Stretching effective area	900×900(mm)	1080×1080(mm)	1250×1250(mm)
Power supply	85 - 264V AC, 100W or less	85 - 264V AC, 100W or less	85 - 264V AC, 100W or less
Air source	Dry air 0.7 MPa or more, Approx. 50 NL/cycle	Dry air 0.7 MPa or more, Approx. 70 NL/cycle	Dry air 0.7 MPa or more, Approx. 90 NL/cycle

NBC proposes “new stretching technique”

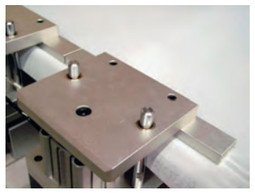
Simply place a screen on the table and start stretching

Place screen on table

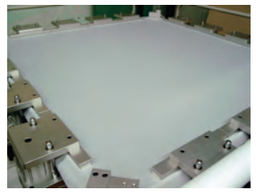


Press foot switch to activate corner stretching

Press start on Liquid crystal touch panel



Automatic clamps grip mesh



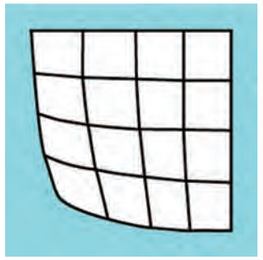
Fabric stretched to preset tension

Installation of screen
↓
Foot switch
↓
Operation with touch panel
↓
Automatic clamping and stretching

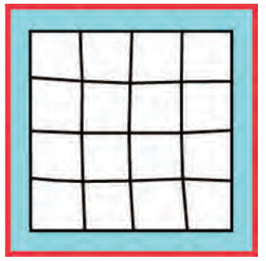
Pivoting clamp option provides additional clearance for wire mesh, helping avoid wrinkles.

The most striking feature of the VALUE MODEL is its ease of operation. After placing the screen on the table all that is required is setting the corner clamps with the foot switch and selecting start on the liquid crystal display. The VALUE MODEL automatically clamps the fabric and stretches it to the set tension.

Screen-mesh distortion prevented with the diagonal tensioning system

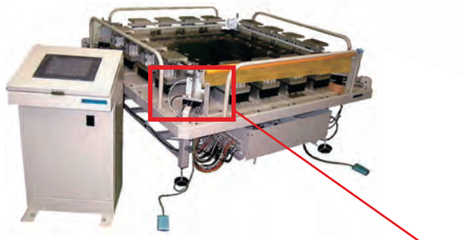


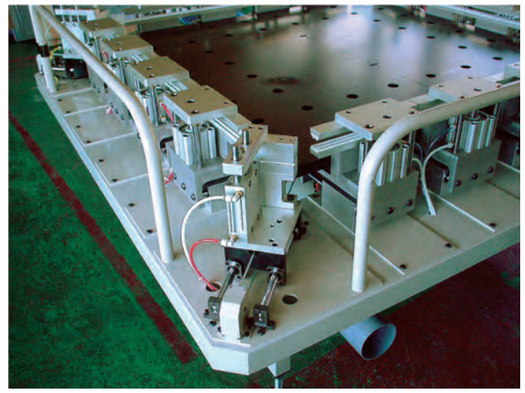
Distortion created by conventional stretching equipment



Distortion free corner stretched by VALUE-MODEL

The real ground breaking feature of the VALUE MODEL is its diagonal stretching. Adding tension in the corners is counter to the traditional wisdom of stretching, because most stretching equipment adds slack in the corners to prevent tearing the mesh during stretching. The chart on the left clearly shows the distortion created in the corners by conventional stretching equipment. The chart on the right shows the uniform tensioning results in the corners achieved every time with the VALUE MODEL.

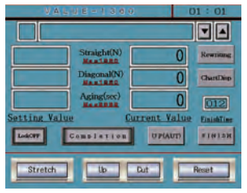




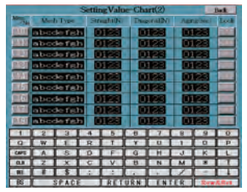
Magnified view of corner (Diagonal tension system)

Easy to operate control panel

The easy to operate control panel allows anyone to accurately stretch screens to high tension. The programmable processor can memorize up to 1million stretching programs. Each stretching program can be customized to satisfy any customer needs using 18 parameters including diagonal stretching, overall tension and aging time. When it’s time to stretch just set the screen tension desired, and with one touch of the button screens are brought right up to the correct tension.



Operation screen



Specifications screen

Data entry screen

Touch panel