GENERAL SPECIFICATIONS:
GSSM-100-A SIZING MACHINE (Apparel)

CREEL

1. Type:
   Stationary, Side to Side, Side to Side and Front to Back, Rotating

2. Number of beams:
   8, 12, 16, 20, 24, 28, 32

3. Beam widths:
   1,800, 2,000, 2,200, 2,400mm

4. Brakes:
   Pneumatic band (5 to 20kg. per beam)

5. Tension control:
   by load cell (± 1.0 GPE)

6. Beam flange diameter:
   1,000, 1,100, 1,250mm

7. Beam type:
   Euro gear or journal type

8. Loom Beam Let-off Stand (LBL):
   Up to 2,200mm working width

9. LBL tension:
   10kg to 300kg.

SIZE BOX

10. Number of size boxes:
    1 or 2 Vertical Exit DDDS

11. Working width:
    1,800, 2,000, 2,200, 2,400mm

12. Draw Roll Assy. (tension controlled):
    Motor driven

13. #1 Squeeze roll rubber covered:
    150mmØ x working width + 200mm

14. Size Rock driven roll:
    230mmØ working width + 200mm

15. #2 Squeeze roll rubber covered:
    230mm Ø uni-squeeze x working width + 200mm

16. Squeeze roll rubber coverings:
    65 durometer

17. #1 Squeeze roll loading:
    0-20kN

18. #2 Squeeze roll loading:
    0-40kN

19. Seal-less pan design:
    Roll journals are above the size level which eliminate the need for shaft seals

20. Sheet exit:
    Single or wet-split

21. Tension control:
    by load cell rolls (± 1.0 GPE)

22. Stretch:
    Monitored to within 0.01% stretch

23. Pan capacity (Teflon coated):
    180, 200, 220, 240 liters

24. Filtration:
    Screen type

25. Size temperature control:
    RTD/on-off steam valve

26. Size heating:
    direct steam heating

27. Size level control:
    by Over-flow weir

28. Size add-on:
    by continuous calculation from size consumption and speed/yarn throughput, size add-on control using PLEVA (optional)

29. Storage kettle:
    Closed steam coil, 1,200, 1,500, 2,000 liter

30. Cooking kettle:
    Open steam coil, 1,000 liter

31. Kettle pumps:
    From cooker to storage and storage to sizer

32. Controls:
    Temperature control for each kettle
**DRYING SECTION**

33. Dry Cylinder specifications:
   800mmØ x working width + 200mm

34. Working steam pressure:
   5 Bar

35. Temperature control:
   RTD, controlled in 2-can groups

36. Drying section drive system:
   Tension controlled by load cell (± 1.0 GPE)

37. Stretch:
   Monitored (within 0.01% stretch)

38. Drive type:
   Self-lub chain (final stack only)

39. Over-oiler/waxer:
   Steam heated

40. Cut marker
   Style programmable

41. Hood:
   Buyer to arrange hood locally as per
   UKIL design

42. Exhaust fans:
   16,000m³/hr. per fan

**HEAD END**

43. Winding head type:
   Conventional

44. Loom beam width:
   2,200mm to 5,400mm

45. Loom beam diameter:
   1,000mm, 1,100mm, 1,250mm, 1,400mm

46. Maximum mechanical speed:
   150 MPM

47. Maximum winding tension:
   900 Kg

48. Tension control:
   by load cell (± 1.0 GPE)

49. Stretch
   Monitored (within 0.01 stretch)

50. Delivery roll (urethane covered):
   260mm Ø working width + 200mm

51. Nip roll/load cell roll:
   160mm Ø working width + 200mm

52. Doffing:
   Hydraulic operation 3,200kg max. capacity

53. Dual Press Roll Assembly:
   pneumatically controlled 100kg - 600kg

54. Comb:
   Zig Zag, motorized movement

55. Taping device
   Motorized movement

56. Final moisture (full width of sheet):
   Resistive rod sensor

**DRIVE AND CONTROL SYSTEM**

57. Human Machine Interface (HMI):
   480mm color touchscreen utilizing MS
   Visual Basic

58. PC based:
   2Gb Compact Flash card stores all pro-
   grams/style information, reliable diskless
   technology

59. Maximum ambient operating temp:
   50° C, AC unit is required for higher
   temperatures

60. Operating system (embedded):
   Microsoft Windows 7 with real time
   extension

61. Control software:
   IEC 61131-3 compliant

62. Style recipe storage:
   Up to 999 styles

63. Communication:
   High speed Ethercat to drives and I/O

64. Drives:
   Yaskawa A1000 AC Vector/Servo

65. I/O:
   Beckhoff Ethercat distributed I/O with direct
   strain gauge interface, RTD, current, volt-
   age, relay, etc. mounted close to the device
   for easy installation and troubleshooting

66. Motors:
   SEW with encoder feedback for speed
   control
67. Control cabinets:
   3C labeling on all wiring

68. eXpert Service Link:
   Offers remote diagnoses for hardware status, sensor status, calibrate sensors as required and help with style setup issues.

69. Remote access:
   Through Teamviewer and plant provided CAT5 internet connection 3C labeling on all wiring

Controls:
   a) Creel tension control in grams per end.
   b) Draw roll tension control in grams per end.
   c) Size box tension control in grams per end with % stretch monitored.
   d) Lease tension control in grams per end with % stretch monitored.
   e) Loom beam winding tension control in grams per end.
   f) Size temperature control of the size box.
   g) Size level control and low level alarm in the size box.
   h) Squeeze roll pressure control of the size box, linear step less type.
   i) Dry can temperature control in six zones.
   j) Overoiler speed and temperature control
   k) Moisture control of delivered yarn by speed.
   l) Loom beam length control.
   m) Cooking and storage kettle temperature controls
   n) Internet connection, eXpert Service Link for remote assistance.
   o) Clear annunciation of warnings and fault