

# **MULTI-PLY BELTING**



- 1. Top cover in cover grade compound and thickness
- 2. Skim coat rubber from 0.4mm and thicker as required
- 3. Carcass from 1 ply to multiple plies
- 4. Bottom cover grade compound and thickness (or bare)
- 5. Belt edges as either cut (as shown) or moulded (sealed)

## **Belt Construction**

Textile belt constructed using synthetic woven fabric comprising of warp and weft fibres (fabric selection dependent on design), skim coat rubber interplies, and cover compound interfaces; the thickness and specific make up of which varies according to the nature of the application.

Fabric reinforced constructions in a selection of weaves including standard weave, crows foot weave, double weave, and specials. The carcass is protected by outer cover rubber in a wide range of compounds catering for general purpose, high abrasion and impact resistance, oil resistance, heat resistance, super abrasion resistance, extra cut and gouge resistance, low rolling resistance, fire resistance and anti-static, and acid-alkaline resistance, to meet the required conveyor application demands. Belt edges are either cut edge or moulded (sealed) edge.

### Capability & Capacity Outline

- An extensive range of high-end quality belt constructions and ratings
- Maximum belt width of 3000mm; belt tensile rating up to 630kN per ply; roll length of up to  $\pm 700$  metres; and roll weight of up to ±23 tonne
- Full range of secure packaging methodologies
- Belt supply contract experience
- OPEX spares and breakdown emergency supply
- Brownfield or Greenfield Project supply
- Vendor owned stock options
- Strategically located conveyor belt stock holdings
- 23 multi-ply belt production lines
- Output capacity in excess of ±150 km per month
- Custom design constructions and manufacturing capability



### **Features & Benefits**

- · Suited for short to medium length conveyor systems
- Can be joined or installed using mechanical fasteners
- Capable of handling heavy load material transportation
- Shorter overall splicing time in comparison to steel cord belt
- Offers increased tear resistance and impact resistance due to reinforced textile belt carcass
- Wide range of tensile strength ratings offering fit-for-purpose designs

### **Carcass Constructions**

### Polyester / Nylon Construction (PN or EP)

- Reduced belt stretch and permanent elongation values
- Good troughability and load support figures
- Resistance to heat and moisture effects

# Nylon / Nylon Construction (NN)

- Extended belt life due to higher impact and fatigue resistance • Increased troughability values by highly
- flexible carcass properties • Viable belt selection where low modulus
- is desired



**Plain Weave** 

**Crows Foot Weave** 

• Suited for high temperature resistance applications

### Polyester / Polyester Construction (PP)

- Performs well where acid resistance is needed
- Generally, designed to satisfy and exceed the requirements of a wide variety of bulk materials handling tasks, conveying all types of products under average to severe conditions.

## **Quality & Standards**

Double Arrow's extensive product range is manufactured at our ISO 9001 accredited production facilities in compliance to the relevant technical standards and specification requirements.

All products are strictly quality controlled through the manufacturing process, and upon completion, fully tested at our on-site laboratory according to the internationally recognised test methods such as AS1334, AS1683, ISO, DIN, ASTM, and other.

Double Arrow Multi-Ply belting conforms to and exceeds:

- Australian Standard 1332
- Australian Standard 4606
- Other on case by case

Furthermore, our product range has been, and is, regularly tested by external accredited independent testing facilities to demonstrate meeting client technical specifications, of which, test results are well in excess of the Australian Standard or Client specifications.



Belt Carcass Designation	Approx. Carcass Thickness (mm)	Approx. Carcass Mass (Kg/m²)	Recommended Min. Pulley Diameter (Over 60% of maximum belt tension)			Maximum Working	Minimum Belt Width (mm) to trough at		
			Type "A" (mm)	Type "B" (mm)	Type "C" (mm)	<b>Tension</b> (kN/m width)	20°	35°	45°
300/2	2.20	2.89	250	200	200	30	400	400	400
400/4	4.00	5.22	500	400	315	40	450	500	600
450/3	3.30	4.34	400	315	250	45	400	450	500
500/3	3.60	4.78	400	315	250	50	400	450	500
630/4	4.40	5.78	500	400	315	63	450	500	600
750/5	5.50	7.23	630	500	400	75	650	750	900
800/4	4.80	6.09	630	500	400	80	500	650	800
1000/4	5.60	7.13	630	500	400	100	650	800	900
1000/5	6.00	7.61	800	630	500	100	650	750	900
1250/4	6.80	8.92	800	630	500	125	750	800	1000
1250/5	7.00	8.91	800	630	500	125	800	900	1050
1600/4	7.60	9.88	1000	800	630	160	800	900	1050
2000/4	10.6	13.78	1250	1000	800	200	900	1050	1200

NOTES: Add the thickness of the cover rubber to the carcass thickness to get the estimated total belt thickness. Based on PN / EP standard weave fabric. Various fabric constructions and types available on request.

Rubber Cover Grades	Minimum Tensile Strength (MPa)	Minimum Elongation at break (%)	Maximum Abrasion loss (mm³)
AS-N	17	400	200
AS-M	24	450	125
AS-A	17	400	70
AS-E	14	300	250
AS-F	14	300	250
AS-S	14	300	250
KSOR	14	350	200
DIN K	20	400	200
HTN	14	400	200
QM	20	400	150
XCG	26	500	105
SAR	17	400	50

**NOTES:** Our "TYPICAL" cover compound properties well surpass the specification requirements ~ further information available on request. Special compound blends are available to suit application demands.

### **Belt Roll Length Calculation**

### Approx. Roll Diameters / Lengths

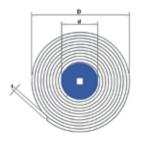
D = Outside Roll Diameter (m)

d = Inner Core Diameter (m)

t = Belt Thickness (mm) L = Belt Length (m)

### Equation: -

 $D = \sqrt{(0.001273 \times t \times L + d^2)}$  $L = (D^2 - d^2) / (t \times 0.001273)$ 







- Surface Mine Operations
  Iron Ore Applications
- Hard Rock Processing Thermal Power Plants
- Quarries and Sand Pits
  Iron and Steel Industry
- Ports and Harbours Underground Mining

Sugar and Grain

- Cement Works
- Extractive Minerals
- Timber and Woodchip







