# ROLL UNDERFRAMES FOR HIGH CAPACITY BELT CONVEYERS AND FOR DUMPERS

UNIO

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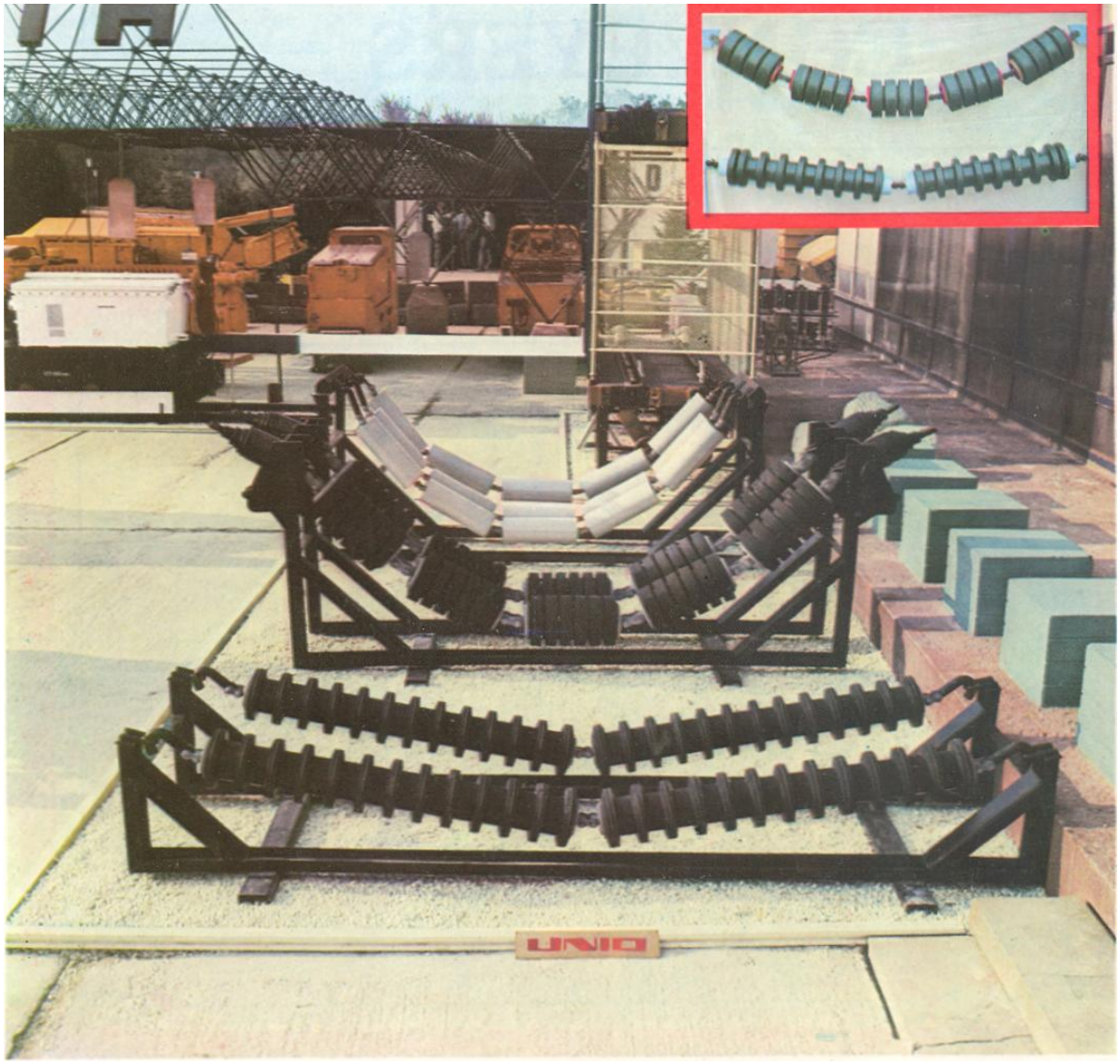


**ROLL UNDERFRAMES FOR HIGH CAPACITY CONVEYERS**

**ROLL UNDERFRAMES FOR DUMPERS**

# ROLL UNDERFRAMES FOR HIGH CAPACITY CONVEYERS

## USAGE FIELD

The roll underframe is a component part of high capacity conveyers design for open-cut mining. The roll underframe is used to sustain the rubber belting. The conveyers in whose components they are used , may operate in the following conditions :

- Climate ……..common temperate climate
- Temperature range……-25°C - + 40°C
- Relative humidity ……. 80% at +20°C
- Wind velocity :
  - During operation ……..up to 20 m/s
  - During stoppage …….up to 35 m/s

## CONSTRUCTIVE AND FUNCTIONAL SPECIFICATION

The roll underframe consists of rollers and jointed jumpers. The rollers are provided with axle made of tube and welded studs at the ends and with inside bearings , not requiring actual greasing. The subsequent greasing is carried out only by dismounting. The bearing scaling is accomplished by means of sealing elements made of plastic or of rubber materials.
The roll underframe is assembled by the following methods :

- Rigid suspension by hook
- Elastic suspension
- Rigid suspension by eye and hanger.

They are devided into the following construction types, depending on their role within the conveyer :

- **C3g** and **C5g** according to fig.1 and fig.2 are used to sustain and align the carried side of belt.
- **D5g** according to fig.3 **–** besides the belt propping and aligning , they are used as shock absorbers in the loading areas of carrier side
- **B2g** according to fig.4 **–** are used for belt low side propping , aligning and cleaning.

## ROLL UNDERFRAMES, type C3g

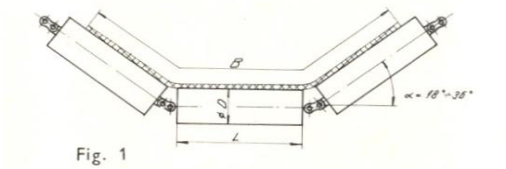


Fig. 1

| Belt width B (mm) | Dimensions (mm) | | Bearing symbol | Net weight (kg) |
|---|---|---|---|---|
| | D | L | | |
| 1400 | 159 | 530 | 6308 | 49.08 |
| 1600 | | 600 | | 53.47 |
| 1800 | | 670 | 6310 | 66.31 |
| 2000 | | 750 | | 70.05 |

## ROLL UNDERFRAMES, type C5g

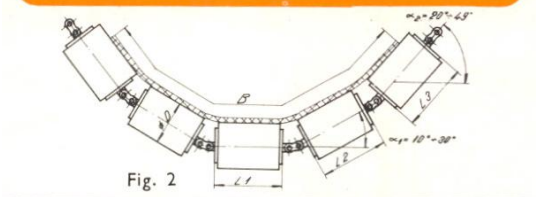


Fig. 2

| Belt width B (mm) | Dimensions (mm) | | | | Bearing symbol | Net weight (kg) |
|---|---|---|---|---|---|---|
| | D | $L_1$ | $L_2$ | $L_3$ | | |
| 1400 | 108 | 250 | 250 | 315 | 6308 | 44.20 |
| 1600 | 159 | 380 | 315 | 380 | 6310 | 80.58 |
| 1800 | | 380 | 380 | 380 | 6312 | 125.80 |
| 2000 | | 465 | 465 | 380 | | 134.52 |
| 2200 | | 465 | 465 | 465 | 6310 | 86.58 |

## ROLL UNDERFRAMES, type D5g

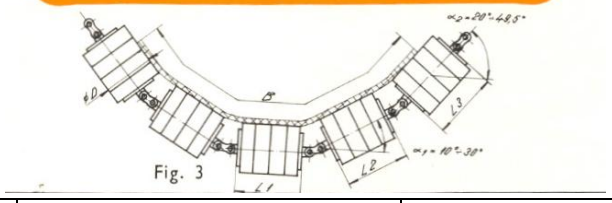


Fig. 3

| Belt width B (mm) | Dimensions (mm) | | | | Bearing symbol | Net weight (kg) |
|---|---|---|---|---|---|---|
| | D | $L_1$ | $L_2$ | $L_3$ | | |
| 1400 | 194 | 315 | 250 | 315 | 6308 | 68.08 |
| 1600 | | 315 | 315 | 315 | | 72.36 |
| | | 380 | 315 | 380 | | 78.78 |
| | 245 | 315 | 315 | 315 | 6312 | 156.85 |
| 1800 | | 380 | 380 | 380 | | 178.90 |
| 2000 | | 465 | 380 | 465 | | 193.62 |
| 2200 | | 465 | 465 | 465 | | 202.75 |

## ROLL UNDERFRAMES, type B2g

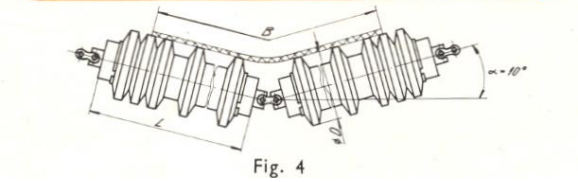


Fig. 4

| Belt width B (mm) | Dimensions (mm) | | Bearing symbol | Net weight (kg) |
|---|---|---|---|---|
| | D | L | | |
| 1400 | 194 | 900 | 6308 | 55.08 |
| 1600 | | 1000 | | 60.22 |
| 1800 | | | | |
| 2000 | | 1150 | | 68.60 |
| 2200 | | 1250 | | 73.73 |

# ROLL UNDERFRAMES FOR DUMPERS

## USAGE FIELD

The roll underframe is a component part of dumpers , designed for open-cut mining. They are used to sustain the rubber belting. The conveyers in whose componence they are used may oprate in the following conditions:

- Climate ……..common temperate climate
- Temperature range……-25°C - + 40°C
- Relative humidity ……. 80% at +20°C
- Wind velocity :
  - During operation ……..up to 20 m/s
  - During stoppage …….up to 35 m/s

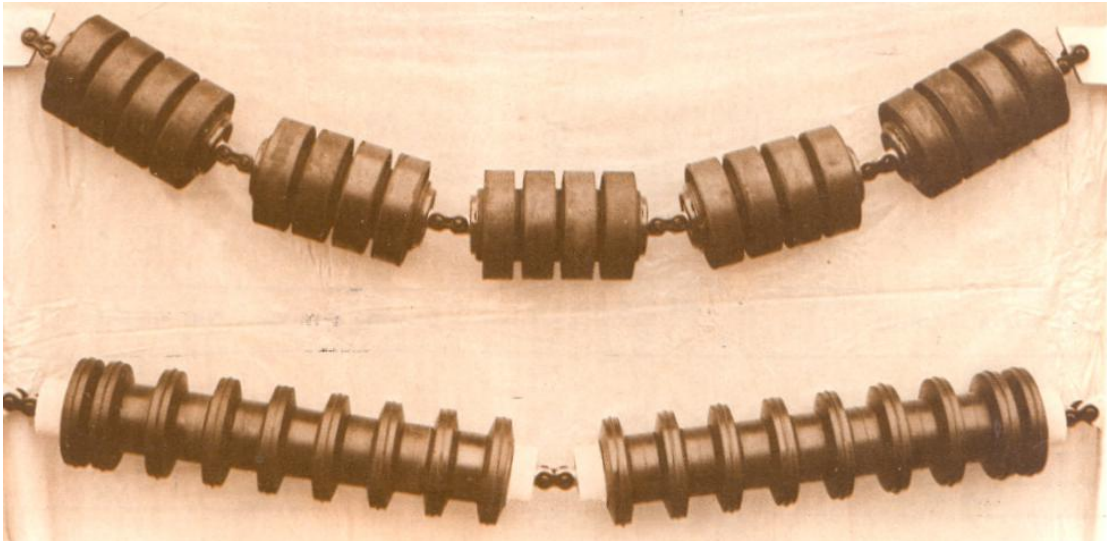
## CONSTRUCTIVE AND FUNCTIONAL SPECIFICATIONS

The roll underframe consists of rollers and jointed jumpers. The rollers are provided with axle made of cold-drawn steel with inside bearings . The subsequent greasing may be made without dismounting the roll underframes. The bearings are seald by means of labyrinth rings and additional locking caps. The roll underframe is assembled by the following methods :

- Rigid suspension by hook
- Rigid suspension by chain
- Rigid suspension by eye and hanger
- Elastic suspension

They are devided into the following construction types, depending on their role within the conveyer :

- **C3g** according to fig.1 and fig.2 are used to sustain and align the carried side of belt.
- **D5g** according to fig.2 **–** besides the belt propping and aligning , they are used as shock absorbers in the loading areas of carrier side
- **B2g** according to fig.3 – they are used for belt low side propping , aligning and cleaning.



## ROLL UNDERFRAMES, type C3g

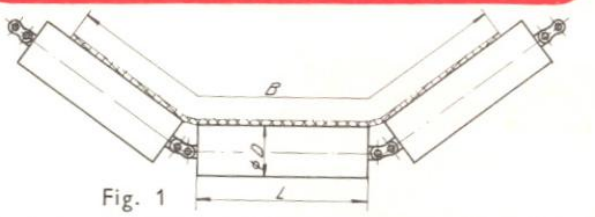


Fig. 1

| Type of engine | Belt width B (mm) | Dimensions (mm) | | Bearing symbol | Net weight (kg) |
|---|---|---|---|---|---|
| | | D | L | | |
| MH 60 | 1800 | 159 | 670 | 6306 | 56.00 |
| MH 90 | | | | | 56.84 |
| MH 120 | 1600 | | 600 | 6308 | 61.71 |

## ROLL UNDERFRAMES, type C5g

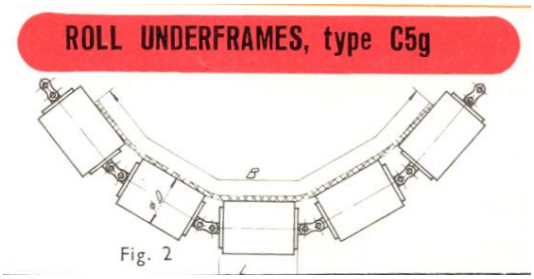


Fig. 2

| Type of engine | Belt width B (mm) | Dimensions (mm) | | Bearing symbol | Net weight (kg) |
|---|---|---|---|---|---|
| | | D | L | | |
| MH 60 | 1800 | 159 | 380 | 6306 | 127.73 |
| MH 90 | | 245 | | 6312 | 178.90 |
| MH 120 | 1600 | 194 | 315 | 6308 | 72.36 |

## ROLL UNDERFRAMES, type B2g

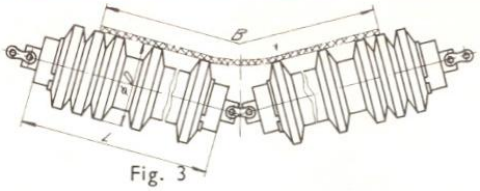


Fig. 3

| Type of engine | Belt width B (mm) | Dimensions (mm) | | Bearing symbol | Net weight (kg) |
|---|---|---|---|---|---|
| | | D | L | | |
| MH 60 | 1800 | 180 | 1000 | 6306 | 53.72 |
| | | | | | 55.20 |
| MH 90 | 1600 | 194 | | 6308 | 60.22 |
| MH 120 | | 180 | | 6306 | 52.50 |

**UNIO SA** · **35 , Lucian Blaga Blvd.· 440227 Satu Mare**

T: +40 261 766120 E-mail: **marketing@unio.ro**

F: +40 261 761735 Site: www.unio.ro