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HOW TO CHOOSE THE RIGHT DRIVE ROLL?

An essential part of any semi-automatic power source, the drive rolls must be compatible with the wire feeder as well as the MIG/MAG welding wire being used. Their job is to feed the wire into the torch and therefore, introduce the wire into the welding process.

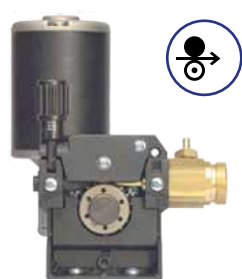
The following three factors should be taken into account when selecting a drive roll:

- Does the drive roll fit the reel?
- Does the type of groove match the wire you are using?
- Does the wire fit into this groove?



1. Different types of drive roll

A motorised wire-feed reel can have two or four drive rolls depending on how powerful it is. Its size is related to its usage and the type of reel being driven (a 15 kg reel will be harder to unwind and will require more driving power).



Motorised wire-feed reel with one motorised roller



Motorised wire-feed reel with two motorised rollers



Motorised wire-feed reel with four motorised rollers

There are two types of drive rolls that make up a motorised wire-feed reel:

a. The motorised drive rolls use a rotating motion to drive the wire into the machine.

NB: the motorised drive rolls are located at the bottom of the motorised wire-feed reel (⌚). If you are using a model with four drive rolls, the other two will be located at the top (⌚).

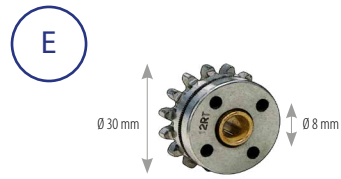
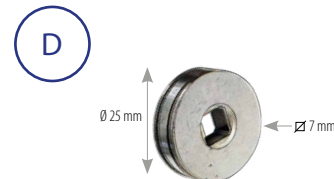
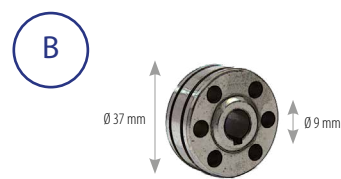
b. The purpose of pressure drive rolls is to hold the wire in the groove and guide it accurately towards the torch.

NB: On a motorised wire-feed reel, the pressure drive rolls are located at the top (GYS ⌚ icon). The pressure rolls can also be motorised (⌚). When the four drive rolls used are the same, they are called twin-drive rolls.

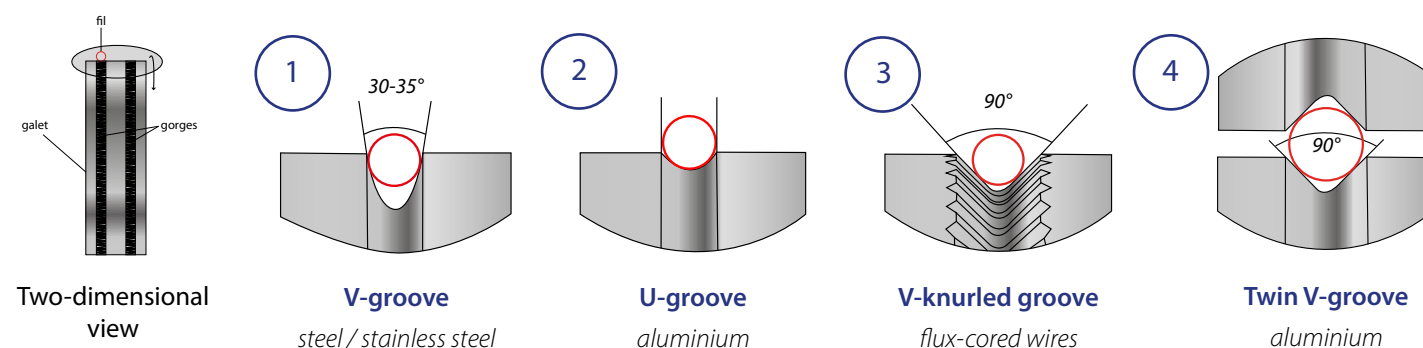
NB: the more motorised drive rolls there are, the smoother and more evenly the thread is unwound.

2. The GYS drive-roll range

There are six types of drive rolls for GYS's wire-feed reels (A, B, C, D, E and F).



3. Types of grooves



4. Choosing the right drive rolls

To correctly identify the appropriate drive roll, refer to Table B (A, B, C, D, E and F). To select the most appropriate wire in terms of its diameter and material, check Table A.

Example: if the operator has a MULTIPEARL 211.4 and wishes to weld 0.8 mm diameter aluminium wire, they should use two type B drive rolls, ref. 042377.

A. Part numbers for GYS's drive rolls

| | | Type A | | Type B | | Type C | | Type D | Type F | Type E | |
|------------------------------|-------------|--------|--------|--------|--------|--------|--------|--------|-------------|--------|--|
| | | x1 | x1 | x2 | x2 | x4 | x1 | x4 | | x2 | |
| Steel / Stainless steel ① | Ø 0.6 / 0.8 | 042339 | 042087 | 042353 | 041738 | — | 039483 | 061859 | Ø 0.6 < 1.6 | 038561 | |
| | Ø 0.8 / 1.0 | 041189 | 042100 | 042360 | 042094 | — | — | 061866 | | | |
| | Ø 1.0 / 1.2 | 062221 | 042179 | 046849 | 042117 | — | — | 061873 | | | |
| | Ø 1.2 / 1.4 | — | — | — | 039780 | — | — | — | | | |
| | Ø 1.2 / 1.6 | — | — | 042384 | 041752 | — | — | 061880 | | | |
| Alu ② ④ | Ø 0.8 / 1.0 | 041196 | 042155 | 042377 | 042148 | — | 039469 | 061897 | Ø 1.0 | 038578 | |
| | Ø 1.0 / 1.2 | 062214 | 042186 | 040915 | 042162 | — | — | 061903 | Ø 1.2 | 038585 | |
| | Ø 1.2 / 1.6 | — | — | 042391 | 041776 | — | — | 061910 | Ø 1.6 | 038592 | |
| Flux-cored wire ③ | Ø 0.6 / 0.9 | 068933 | 068940 | — | — | — | 068926 | — | — | — | |
| | Ø 0.8 / 0.9 | 046856 | — | — | — | — | 039476 | — | — | — | |
| | Ø 0.9 / 1.0 | — | — | — | — | — | 044081 | — | — | — | |
| | Ø 0.9 / 1.1 | — | — | — | — | — | — | 061927 | — | — | |
| | Ø 0.9 / 1.2 | 042346 | 042131 | 042407 | 042124 | — | — | — | — | — | |
| | Ø 1.2 / 1.4 | — | — | — | — | 047693 | — | — | Ø 1.2 | 038608 | |
| | Ø 1.2 / 1.6 | — | — | — | 038646 | — | — | 061934 | Ø 2.4 | 038622 | |
| | Ø 1.4 / 2.0 | — | — | — | — | — | — | 061941 | — | — | |
| | Ø 1.6 / 2.0 | — | — | — | 037113 | — | — | — | Ø 1.6 | 038615 | |
| | Ø 1.6 / 2.4 | — | — | — | — | 040519 | — | 061958 | — | — | |
| | Ø 1.8 / 2.0 | — | — | — | 061743 | — | — | — | Ø 1.8 | 061750 | |
| — | — | — | — | — | — | — | — | Ø 2.0 | 037106 | | |
| — | — | — | — | — | — | — | — | Ø 2.4 | 038622 | | |

B. Type of drive roll needed according to the welding station

| PRODUCT | Type of drive roll | No. of drive rolls | Motorised drive roll | Supplied drive roll | Flux-cored wire | | | | Steel / stainless-steel solid wire | | | | | Solid aluminium wire | | | | MIG / MAG wire reel | | |
|-----------------------|--------------------|--------------------|----------------------|---------------------------------|-----------------|---------|-----|-----|------------------------------------|-----|-----|-----|-----|----------------------|-----|-----|-----|---------------------|-----|------|
| | | | | | 0.6 | 0.9-1.0 | 1.2 | 1.6 | 2.0 | 2.4 | 0.6 | 0.8 | 1.0 | 1.2 | 1.6 | 0.8 | 1.0 | 1.2 | 1.6 | Ø100 |
| SMARTMIG | | | | | | | | | | | | | | | | | | | | |
| SMARTMIG 110 | D | 2 | 1 | 90°V knurled - 0,9 | | | | | | | | | | | | | | | | |
| SMARTMIG 142 | A | 2 | 1 | 35°V - 0.6 / 0.8 | | | | | | | | | | | | | | | | |
| SMARTMIG 152 | A | 2 | 1 | 35°V - 0.6 / 0.8 | | | | | | | | | | | | | | | | |
| SMARTMIG 162 | A | 2 | 1 | 35°V - 0.6 / 0.8 | | | | | | | | | | | | | | | | |
| SMARTMIG 182 | A | 2 | 1 | 35°V - 0.6 / 0.8 | | | | | | | | | | | | | | | | |
| MONOGYS | | | | | | | | | | | | | | | | | | | | |
| MONOGYS 200-4CS | A | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| MONOGYS 250-4CS | B | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| MONOGYS 320-4CS | B | 4 | 2 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| EASYMIG | | | | | | | | | | | | | | | | | | | | |
| EASYMIG 85 | D | 2 | 1 | 90°V knurled -0.6 / 0.9 | | | | | | | | | | | | | | | | |
| EASYMIG 110 | D | 2 | 1 | 35°V - 0.8 / 90°V knurled - 0.9 | | | | | | | | | | | | | | | | |
| EASYMIG 130 | D | 2 | 1 | 35°V - 0.8 / 90°V knurled - 0.9 | | | | | | | | | | | | | | | | |
| EASYMIG 140 | D | 2 | 1 | 35°V - 0.8 / 90°V knurled - 0.9 | | | | | | | | | | | | | | | | |
| EASYMIG 150 | A | 2 | 1 | 35°V - 0.8 / 90°V knurled - 0.9 | | | | | | | | | | | | | | | | |
| EASYMIG 160 | A | 2 | 1 | 35°V - 0.8 / 90°V knurled - 0.9 | | | | | | | | | | | | | | | | |
| MULTIPEARL | | | | | | | | | | | | | | | | | | | | |
| MULTIPEARL 210-2 | A | 2 | 1 | 35°V - 0.6 / 0.8 | | | | | | | | | | | | | | | | |
| MULTIPEARL 210-4 XL | B | 4 | 2 | 35°V - 0.6 / 0.8 | | | | | | | | | | | | | | | | |
| MULTIPEARL 211-4 | B | 4 | 2 | 35°V - 0.6 / 0.8 | | | | | | | | | | | | | | | | |
| MULTIWELD | | | | | | | | | | | | | | | | | | | | |
| MULTIWELD 180M-C | A | 4 | 2 | 35°V - 0.8 / 90°V knurled - 0.9 | | | | | | | | | | | | | | | | |
| MULTIWELD 200M-C | A | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| MULTIWELD FV 220M-C | A | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| MULTIWELD 250T-C | A | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| MULTIWELD 320T-C | B | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| MULTIWELD 200M | A | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| MULTIWELD FV 220M | A | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| MULTIWELD 250T | A | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| MULTIWELD 320T | B | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| MULTIWELD 400T | B | 4 | 2 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| KRONOS | | | | | | | | | | | | | | | | | | | | |
| KRONOS 250M | B | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| KRONOS 250T | B | 4 | 2 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| KRONOS 320T | B | 4 | 2 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| KRONOS 400T Duo | B | 4 | 2 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| KRONOS 400T W | B | 4 | 2 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| KRONOS 400T G | - | - | - | - | | | | | | | | | | | | | | | | |
| KRONOS 400T GW | - | - | - | - | | | | | | | | | | | | | | | | |
| WF 35 | B | 4 | 2 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| WF 50 | F | 4 | 4 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| NEOMIG | | | | | | | | | | | | | | | | | | | | |
| NEOMIG 400 G | - | - | - | - | | | | | | | | | | | | | | | | |
| NEOMIG 500 G | - | - | - | - | | | | | | | | | | | | | | | | |
| WF 35 | B | 4 | 2 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| WF 50 | F | 4 | 4 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| EXAGON | | | | | | | | | | | | | | | | | | | | |
| EXAFEED-4L | C | 4 | 2 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| NOMADFEED 425-4 CC/CV | E | 4 | 2 | 35°V - 1.6 | | | | | | | | | | | | | | | | |
| | C | | | 35°V - 1.2 / 1.6 | | | | | | | | | | | | | | | | |
| NEOPULSE | | | | | | | | | | | | | | | | | | | | |
| NEOPULSE 220 C | B | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| NEOPULSE 220 C XL | B | 4 | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| NEOPULSE 320 C | F | 4 | 4 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| NEOPULSE 400 CW | F | 4 | 4 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| NEOPULSE 400 G | F | - | - | - | | | | | | | | | | | | | | | | |
| NEOPULSE 500 G | F | - | - | - | | | | | | | | | | | | | | | | |
| NEOFEED-4W | F | 4 | 4 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| SMARTFEED M-4 | F | 4 | 4 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| E GYS AUTO | | | | | | | | | | | | | | | | | | | | |
| E1 GYS AUTO | B | 4 | 2 | 35°V - 0.6 / 0.8 | | | | | | | | | | | | | | | | |
| E2 GYS AUTO | B | 4 (x2) | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| | | | | 35°V - 0.6 / 0.8 | | | | | | | | | | | | | | | | |
| E3 GYS AUTO | B | 4 (x3) | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| | | | | 35°V - 0.6 / 0.8 | | | | | | | | | | | | | | | | |
| AUTOPULSE | | | | | | | | | | | | | | | | | | | | |
| AUTOPULSE 220-M1 | B | 4 | 2 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| AUTOPULSE 220-M2 | B | 4 (x2) | 2 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| | | | | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| AUTOPULSE 220-M3 | B | 4 (x3) | 2 | 35°V - 0.6 / 0.8 | | | | | | | | | | | | | | | | |
| | | | | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| AUTOPULSE 320-T1 | B | 4 | 4 | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |
| | | | | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| AUTOPULSE 320-T3 | C | 4 (x3) | 4 | 35°V - 0.8 / 1.0 | | | | | | | | | | | | | | | | |
| | | | | 35°V - 1.0 / 1.2 | | | | | | | | | | | | | | | | |