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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.

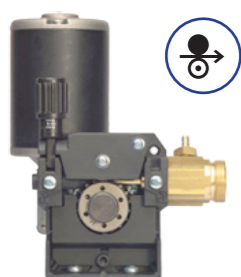
The following three factors should be taken into account when selecting a drive roll:

- 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 (⊕⊕).

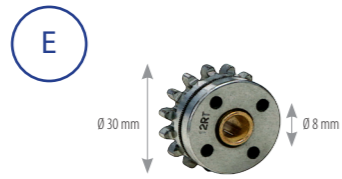
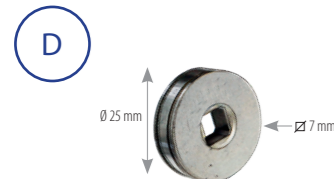
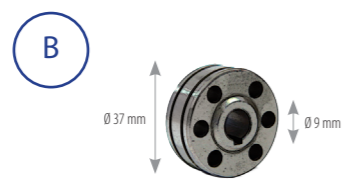
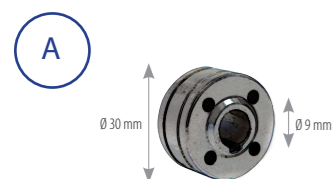
b. The purpose of pressure drive rolls is to hold the wire in the groove and guide it accurately towards the torch.

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.

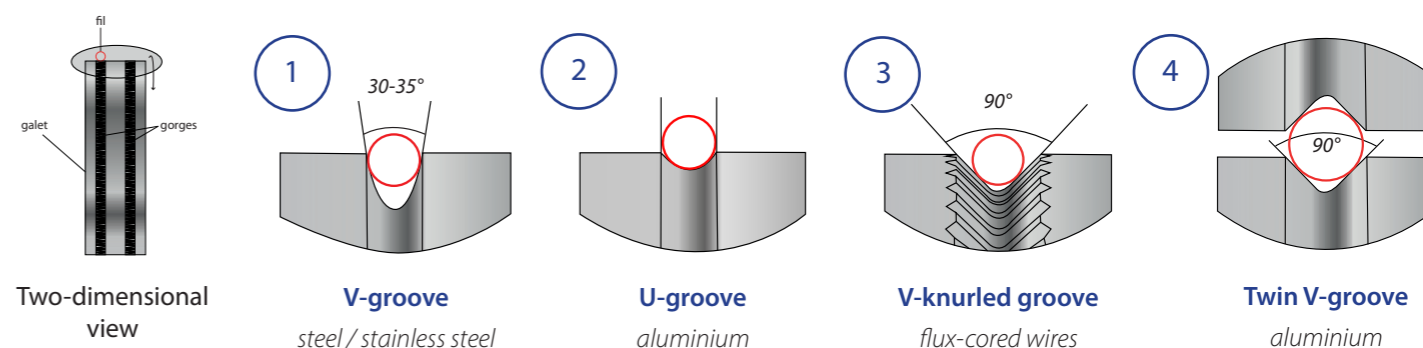
NB: the more motorised drive rolls there are, the smoother and more evenly the thread is unwound.

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	Ø200	Ø300
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 3P	A	2	1	35°V - 0.6 / 0.8																		
SMARTMIG 182	A	2	1	35°V - 0.6 / 0.8																		
SMARTMIG 183	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 - 0.8 / 1.0																		
TRIMIG																						
TRIMIG 200-4S	B	4	2	35°V - 0.8 / 1.0																		
TRIMIG 250-4S DV	B	4	2	35°V - 0.8 / 1.0																		
TRIMIG 300-4S	B	4	2	35°V - 1.0 / 1.2																		
PROMIG																						
PROMIG 400-4S	B	4	2	35°V - 1.0 / 1.2																		
PROMIG 400-4S DV WS	B	4	2	35°V - 1.0 / 1.2																		
PROMIG 400-4S DUO DV	B	4	2	35°V - 1.0 / 1.2																		
TF-4RN (PROMIG.DV)	B	4	2	35°V - 1.0 / 1.2																		
TF-4W (PROMIG.DV)	B	4	2	35°V - 1.0 / 1.2																		
MAGYS																						
MAGYS 400-4	C	4	4	35°V - 1.0 / 1.2																		
WS-4R	C	4	4	35°V - 1.0 / 1.2																		
WS-4L	B	4	2	35°V - 0.8 / 1.0																		
WS-4L	C	4	4	35°V - 1.0 / 1.2																		
EASYMIG																						
EASYMIG 85	D	2	1	35°V - 0.8 / 90°V knurled- 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																		
EASYMIG 160 XL	A	2	1	35°V - 0.8 / 90°V knurled- 0.9																		
EASYMIG 180-4 XL	A	4	2	35°V - 0.8 / 90°V knurled- 0.9																		
MULTIWELD																						
MULTIWELD 160M	A	2	1	35°V - 0.8 / 90°V cranté - 0.9																		
MULTIWELD FV 220M-C	A	2	1	35°V - 0.8 / 1.0																		
MULTIWELD FV 220M	A	2	1	35°V - 0.8 / 1.0																		
MULTIWELD 250T-C	A	2	1	35°V - 0.8 / 1.0																		
MULTIWELD 250T	A	2	1	35°V - 0.8 / 1.0																		
MULTIWELD 320T-C	B	4	2	35°V - 0.8 / 1.0																		
MULTIWELD 320T	B	4	2	35°V - 0.8 / 1.0																		
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																		
EXAGON																						
EXAFEED-4L	C	4	2	35°V - 1.0 / 1.2																		
NOMADFEED 425-4	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																		
AUTOGYS																						
M1 GYS	B	4	2	35°V - 0.6 / 0.8																		
M3 GYS	B	4	2	35°V - 0.6 / 0.8																		
CARMIG	B	2	1	35°V - 0.6 / 0.8																		
T1 GYS	B	4	2	35°V - 0.8 / 1.0																		
T3 GYS	B	4	2	35°V - 0.8 / 1.0																		
AUTOPULSE																						
AUTOPULSE 220-M1	B	4	2	35°V - 1.0 / 1.2																		
AUTOPULSE 220-M3	B	4	2	35°V - 0.8 / 1.0 - 1.0 / 1.2																		
AUTOPULSE 220-M3 208-240V	B	4	2	35°V - 0.8 / 1.0 - 1.0 / 1.2																		
AUTOPULSE 320-T3	C	4	4	35°V - 0.8 / 1.0 - 1.0 / 1.2																		
AUTOPULSE 320-T3 208-240V	C	4	4	35°V - 0.8 / 1.0 - 1.0 / 1.2																		