

## Gear Assembly Unit Combined Drives – SD-1.62

Based around a rigid, sturdy frame each drive arrangement can easily be interchanged and fixed into position. Bearing blocks ensure excellent and repeatable alignment of the drives as well as smooth running.

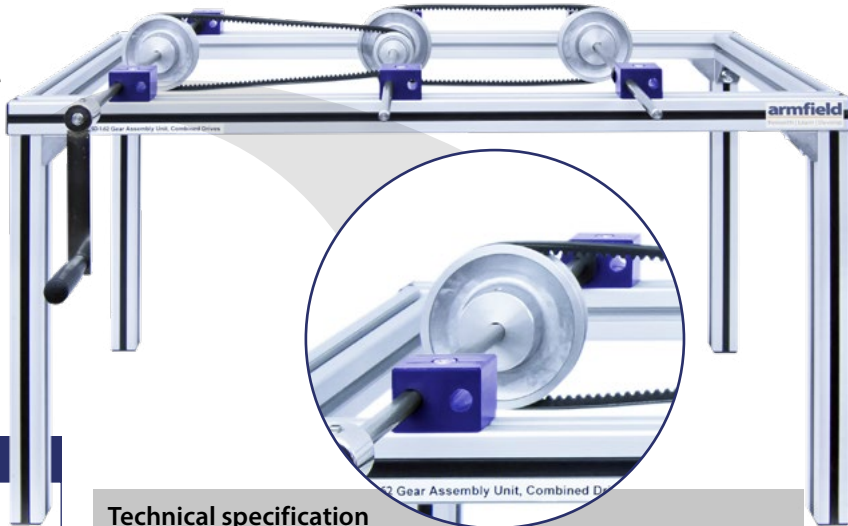
The base frame allows for accurate meshing of the drives.

The drive arrangements available include dual belt drive, chain drive with tensioner and spur gear train, dual spur gear, compound bevel gear and spur gear, compound worm / wheel gear and bevel gear, rack and pinion with a spur gear drive.

Each of the drives is made from durable, long life materials, and conforms to industry standards giving the student a practical knowledge of the arrangement they may use in industry.

A cranked handle operates the drives giving more control and feel for each drive arrangement. The cranked handle is away from the main working area of the drives thus ensuring safety during drive rotation. The layout of the drives gives an excellent visual indication of motion, direction, velocity, and mechanical action.

**PROVIDES PRACTICAL EXPERIMENTS FOR A WIDE VARIETY OF DRIVE ARRANGEMENTS**



### Experimental content

- ▶ Introduction to gear trains, transmissions, ratios and velocities
- ▶ Variety of drive arrangements
- ▶ Introduces spur gears, drive belts, pulleys, chains, tensioners, worm and wheel, bevel gears, rack and pinions, compound drives
- ▶ Drive construction
- ▶ Gearing up
- ▶ Gearing down
- ▶ The motion, direction and ratios of different arrangements

### Related laws

- ▶ Automotive
- ▶ Assembly of different drive mechanisms, layout and meshing
- ▶ Industry standard drives

### Requirements

### Scale



Sturdy bench top

### Features / benefits

- ▶ Floor or bench top apparatus
- ▶ Fully customer configurable using components supplied
- ▶ Manual driving of system
- ▶ Quick and easy setup of arrangements
- ▶ Belts, chains, sprockets, tensioner, bevel gear, spur gear, Worm/wheel and rack/pinion
- ▶ Smooth, quality frame
- ▶ Storage container for component parts

### Overall dimensions

Length	1.00m
Width	0.50m
Height	0.50m

### Packed and crated shipping specifications

Volume	0.53m <sup>3</sup>
Gross weight	57kg

### Technical specification

- ▶ 2 'V' belt cogged (toothed) belt, section
- ▶ 4 'V' belt pulleys (approximately 4.5" diameter and 2.5" diameter)
- ▶ Chain drive with tensioner and sprockets (toothed sprockets of 24 and 60 teeth)
- ▶ 4 spur gears: 2 x 28 teeth, 1 x 56 teeth, 1 x 70 teeth
- ▶ Bevel gear pair: 90° between axes
- ▶ Shaft blocks: Single height (6 off); double height (2 off)
- ▶ 4 shafts: 650mm long (3 off); 610mm long (1 off)

### Ordering specification

- ▶ 1 x Frame assembly
- ▶ 2 x 'V' belt cogged (toothed) belt, SPAX section
- ▶ 4 x 'V' belt pulleys
- ▶ Chain drive with tensioner and sprockets (24 and 60 teeth)
- ▶ 4 spur gears: 2 x 28 teeth, 1 x 56 teeth, 1 x 70 teeth
- ▶ 1 x Bevel gear pair, 90° between axes
- ▶ 1 x Compound bevel and spur gear pair
- ▶ 1 x Compound worm / wheel with bevel gear pair
- ▶ 1 x Rack and pinion drive with spur gear
- ▶ 1 x Hand operated crank handle
- ▶ Shaft blocks: Single height (6 off); double height (2 off)
- ▶ 4 shafts: 650mm long (3 off); 610mm long (1 off)
- ▶ 1 x Component case
- ▶ Instruction manual
- ▶ Packing list
- ▶ Test sheet

### Ordering codes

- ▶ **SD-1.62** Gear Assembly Unit Combined Drives