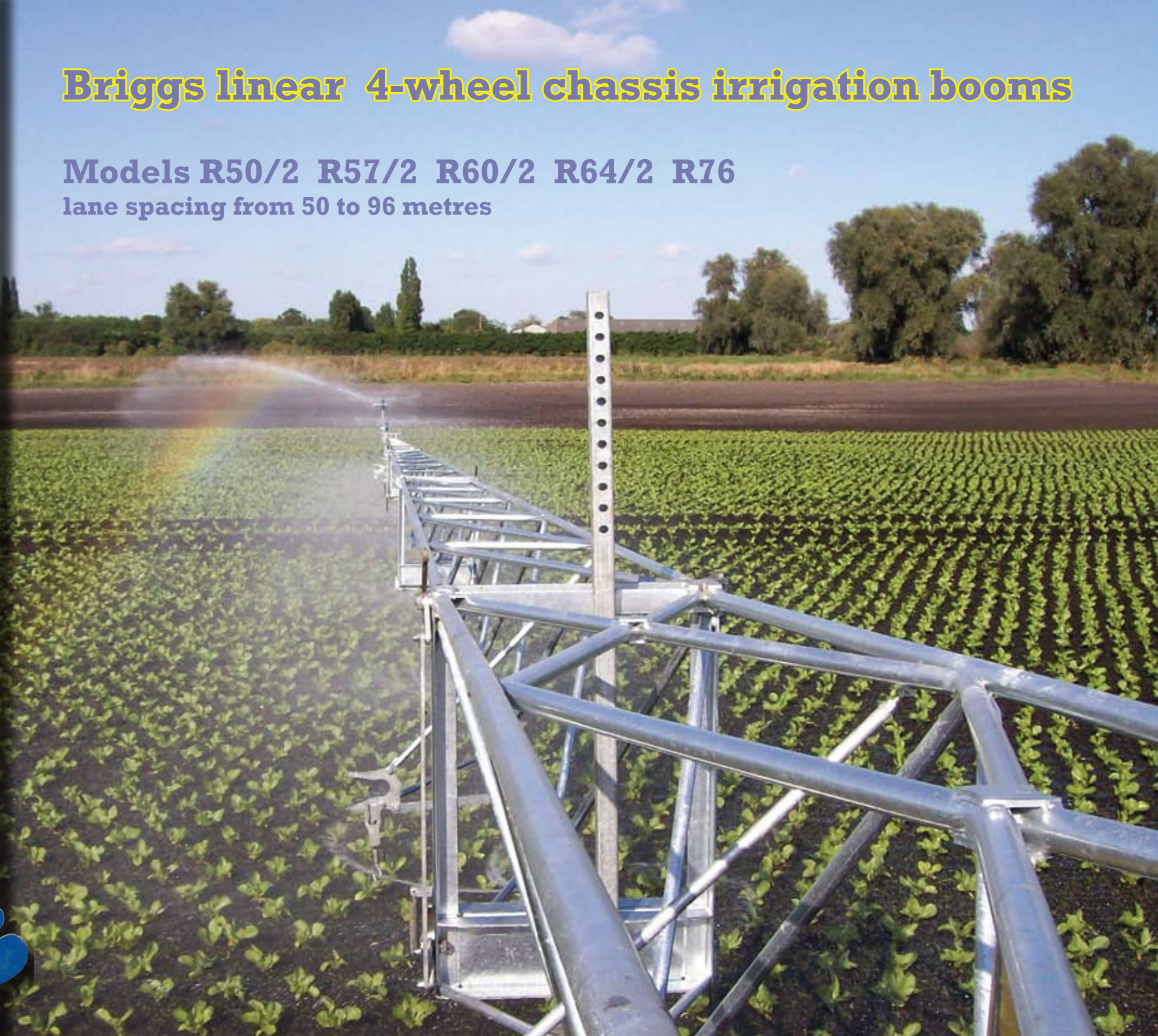


# BRIGGS IRRIGATION



## Briggs linear 4-wheel chassis irrigation booms

Models R50/2 R57/2 R60/2 R64/2 R76  
lane spacing from 50 to 96 metres







**B**riggs boom irrigators are an established feature of the farming landscape.

Efficient, tough, reliable and surprisingly versatile, the modern Briggs range has been tried and tested by farmers, growers and groundsmen around the world.

All Briggs booms are manufactured in the UK since 1992 to the same high standards and can be operated with almost any make and size of hosereel.

Ease of use has been engineered into all Briggs booms from the outset.

## **The right boom for the job**

Briggs booms are based either on a four-wheel chassis or on a three-wheel chassis which allows the whole boom to be transported on the hosereel (see 'hosereel mounted booms' brochure).

The linear booms in this brochure are four-wheel models giving lane spacings of up to 96 metres (315'). Despite their size, even the largest boom in the range can be extended to its full width by one person in just a few minutes, or packed for transport equally quickly.

The advantages of using boom irrigators are well documented. Compared with rainguns the improvement in uniformity and the fact that the soil absorbs the smaller droplets more easily means that less water is used.

Savings may also be due in part to a tendency by operators to over water when irrigating with a raingun to ensure that the minimum depth is applied even in the least uniform areas being irrigated. Under practical working conditions the amount of water applied to any given area can be reduced by 20-30% compared to a raingun.



## Uniformity

Closely spaced nozzles + low trajectory  
=  
90% uniformity  
(even in quite windy conditions)  
Benefits include savings in water and  
more even crop growth and quality.



## Soil benefits

Controlling droplet size reduces risk of  
soil capping or 'slumping', compared  
with a raingun.  
(Which also aids absorption of  
subsequent irrigation or rain.)



# Benefits of irrigating with a Briggs Boom



## Optimum droplet size

Nelson pressure regulated S3000  
sprayjets or R3000 rotators allow the  
optimum droplet size to be selected  
for each type of crop (eg small  
droplets for leafy salads or larger  
droplets for root crops).

## Less energy needed

Booms operate at pressures ranging from  
just half that recommended for rainguns  
(1 - 3.5 bar compared to 4.5 - 5.0 bar).  
So less pressure needed all the way back  
to the pump, reducing input power costs.







### **Easy to use**

Briggs booms fold and swivel on the chassis for ease of transport. The folded boom is rotated through 90° before being pulled out to the end of the run. Unfolding the boom is a one-person operation and no tools are needed to prepare the boom for operation.

### **Tough and reliable - designed to last as long as the hosereel**

Briggs booms have been developed in consultation with farmers to ensure they are tough, reliable and easy to maintain. Components are laser cut for accuracy and all tubing is formed on modern automated machines. The entire unit is fully galvanised, while Nelson sprayjets are selected for their established performance over time.



## Standard features on all models

- Unique offset hose feed - boom straddles just one bed, while allowing use of central drawbar (The hosereel pipe is in the wheeling, alleviating traction problems when pulling out).
- Semi-automatic locking catches make unfolding simple.
- Irrigator can be operated and towed from either end, saving time and greatly simplifying positioning procedures.
- Four-wheel steer gives excellent manoeuvrability and prevents crop damage.
- Choice of pressure regulated spray jets, rotators or sprinklers to give optimum droplet size for the type, or stage of crop under production.
- Briggs booms can be used with almost any make of hosereel.

- Quadrant lock allows boom to be set for angled headlands or to be rotated round obstacles in the field.
- Quick and simple connection to the hosereel with a flexible coupling.
- Self-levelling allows the boom to remain level with the ground and it can also be locked to deal with side slopes.
- Ball valve control on all sprinkler/spray-jet outlets enables sections to be shut off to suit irrigation requirements and allows individual nozzles to be unblocked if necessary.
- Optional combination of sprinklers and spray jets or drop pipes and spray jets to suit wide headlands and irregular shaped fields.
- Optional stainless steel pipework for corrosive liquids.
- Low operating pressures.
- Extensive range of options.

Ease of operation is the hallmark of a Briggs boom. One person can open or fold the boom in just a few minutes.





R64/2 irrigating potatoes in Spain



R64/2 on iceberg lettuce



**Crops irrigated with a Briggs boom**

Farmers around the world have found a Briggs boom is the best way to irrigate a wide range of crops. These include potatoes, onions, lettuce and other salad crops, as well as soft fruit such as strawberries. In Australia farmers have successfully irrigated pineapples, while maize has been irrigated using a 'high crop' model. Groundsmen and turf growers also value Briggs booms.



R64/2 irrigation onions



R50/2 on polo field





R50 with slurry nozzles



R50/2 with Senninger Quadspray LEPA system



R76 irrigating seed maize



R76 irrigating french beans







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### Options for every farm

1. **Raingun kit** - manual or semi-automatic - gives facility to irrigate awkward shape areas, runs with obstacles or planted headlands.
2. **Blanking Plate** - gives facility to operate the boom at reduced structural width with the last section folded in.
3. **Layflat connector** - various types supplied to fit all makes of hose reel.
4. **Hydraulic boom lift** - high lift and low lift versions available with choice of hydraulic kits.
5. **Centre hose feed** (standard)
6. **Offset waterfeed** - reduces damage to crop and reduces drag on PE hose.
7. **Nelson S3000 sprayjets OR R3000 rotators.**

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### Boom Options

	R50/2	R57/2	R60/2	R64/2	R76
Nelson pressure regulated S3000 sprayjets	○	○	○	○	○
Nelson pressure regulated R3000 rotators	○	○	○	○	○
Offset waterfeed one end of chassis	○	○	○	○	○
Offset waterfeed - both ends of chassis	○	○	○	○	○
End nozzle - PCS3000 or PCR3000	○	○	○	○	○
End nozzle - Nelson R55A	○	○	○	○	○
End nozzle - Sime K1 TESO	○	○	○	○	N/A
End nozzle - Sime Luxor	○	○	○	○	N/A
Blanking plates with choice of nozzle	○	○	○	○	○
In-line filter - Bauer HK 89 or HK108	○	○	○	○	○
Manual raingun mounting kit	○	○	○	○	N/A
Semi automatic raingun mounting kit	○	○	○	○	N/A
Hydraulic raising tower - 2.1m clearance	○	○	○	○	S
Hydraulic raising tower - 3.1m clearance	○	○	○	○	○
Hydraulic rotation of boom	○	○	○	○	○
Electro hydraulic operating kit	○	○	○	○	○
Turf wheel kit and turf drawbars	○	○	○	○	○
Large wheels - 11.5/80-15.3	○	○	○	○	○
Drop pipe kit - (minimum 0.75m spacings)	○	○	○	N/A	N/A
Slurry nozzle kit	○	○	○	○	N/A
Stopfin - sizes available 90, 100, 110, 120 & 125mm	○	○	○	○	○

○ = option    S = standard    N/A = not applicable



Sime K1 Teso



Sime Luxor

### Lane spacing between runs (m) and pressure requirements on the boom (bar)

Boom Model	End nozzle type						
	No nozzle	PCS3000	PCR3000	R55A	Jumbo teso	K1 teso	Luxor
R50/2	54m *2 bar	58m *2 bar	58m *2 bar	70m *2 bar	68m 3 - 3.5 bar	75m 3.5 - 4 bar	75m 3.5 - 4 bar
R57/2	60m *2 bar	64m *2 bar	64m *2 bar	77m *2 bar	75m 3 - 3.5 bar	82m 3.5 - 4 bar	82m 3.5 - 4 bar
R60/2	64m *2bar	68m *2bar	68m *2bar	80m *2bar	78m 3 - 3.5 bar	85m 3.5 - 4 bar	85m 3.5 - 4 bar
R64/2	68m *2 bar	72m *2 bar	72m *2 bar	84m *2 bar	82m 3 - 3.5 bar	90m 3.5 - 4 bar	90m 3.5 - 4 bar
R76	80m *2bar	84m *2bar	84m *2bar	96m *2bar	<b>X</b>	<b>X</b>	<b>X</b>

\*The pressure requirement of 2 bar assumes all the standard nozzles are fitted with 1.4 bar pressure regulators.



Sime Jumbo Teso

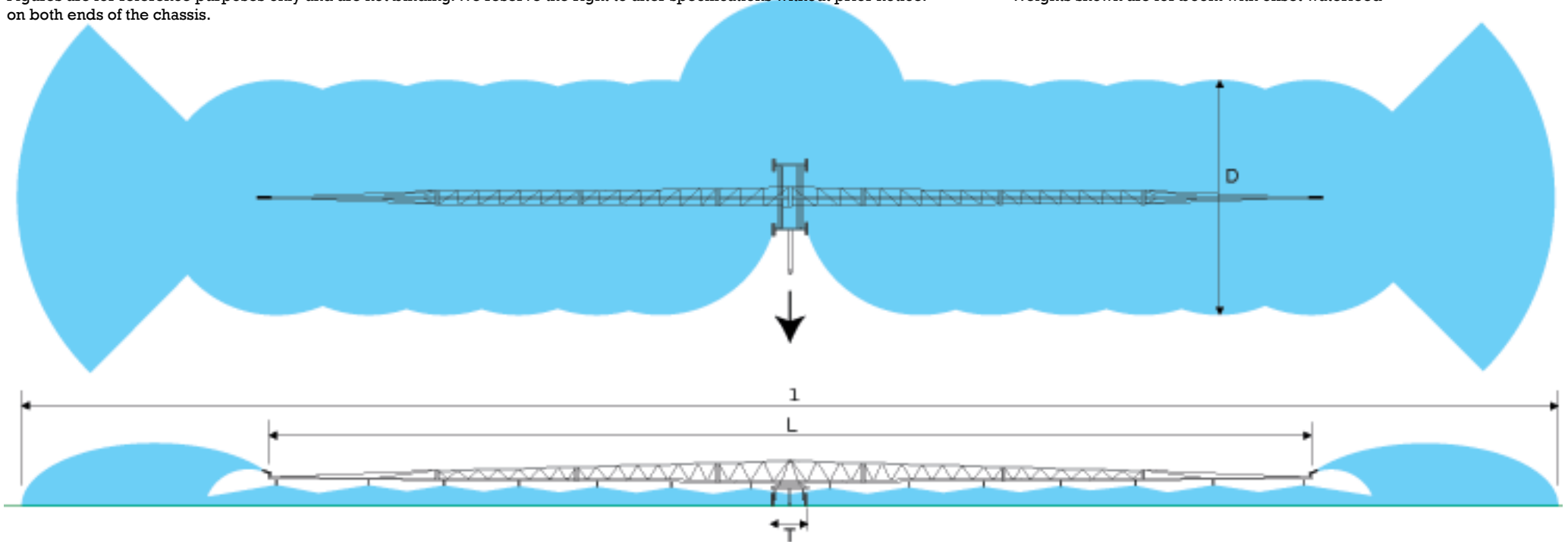


## Briggs Boom Technical Data (for all 4 wheel chassis models)

	R50/2	R57/2	R60/2	R64/2	R76 HIGH CROP- 2.1m
Boom structural length (L)	50m (154')	57m (187')	60m (197')	64m (210')	76m (250')
Lane spacing (l) without end nozzle	54m (177')	60m (197')	68m (223')	68m (223')	80m (262')
Lane space (l) with end nozzle Nelson PCS or PCR3000	58m (190')	64m (210')	68m (223')	72m (236')	84m (275')
Lane spacing (l) with end nozzle Nelson R55A	70m (230)	77m (252)	80m (262)	84m (275')	96m (315')
Lane spacing (l) with end nozzle K1 or Luxor	75m (246')	82m (269')	85m (278')	90m (295')	N/A
Band width (D) (Nelson S3000/R3000)	12m/15m (39'/49')	12m/15m (39'/49')	12m/15m (39'/49')	12m/15m (39'/49')	12m/15m (39'/49')
Flow - m <sup>3</sup> /hr (imp gpm)	22 – 72 (80 – 264)	22 – 72 (80 – 264)	22 – 82 (80 – 300)	22 – 82 (80 – 300)	22 – 82 (80 – 300)
Operating pressure with end PCS or PCR3000 or RSA	1 – 2 bar (15 – 30 psi)	1 – 2 bar (15 – 30 psi)	1 – 2 bar (15 – 30 psi)	1 – 2 bar (15 – 30 psi)	1 – 2 bar (15 – 30 psi)
Operating pressure with end sprinkler K1 or Luxor	3 – 4 bar (45 – 60 psi)	3 – 4 bar (45 – 60 psi)	3 – 4 bar (45 – 60 psi)	3 – 4 bar (45 – 60 psi)	3 – 4 bar (45 – 60 psi)
Quantity of outlets	18	20	22	22	26
Folded length – m (ft)	7.4m (24'7")	7.4m (24'7")	7.4m (24'7")	7.4m (24'7")	7.4m (24'7")
Folded width – m (ft)	3.5m (11'6")	3.65m (12')	3.65m (12')	3.65m (12')	3.9m (12'8")
Wheelbase – m (ft)	3.8m (12'6")	3.8m (12'6")	3.8m (12'6")	3.8m (12'6")	3.8m (12'6")
Track width (T) – m (inch)	1.5 – 2.2m (60" – 86")	1.5 – 2.2m (60" – 86")	1.5 – 2.2m (60" – 86")	1.5 – 2.2m (60" – 86")	1.5 – 2.2m (60 – 86")
Height to nozzle – m (in)	1.5m (60")	1.5m (60")	1.5m (60")	1.5m (60")	1.5 – 2.1m (60" – 82")
Height to top of structure – m (ft)	2.93m (9'6")	2.93m (9'6")	2.93m (9'6")	2.93m (9'6")	3.6m (15')
Height to top of structure with 3.1m high crop – m (ft)	4.6m (15')	4.6m (15')	4.6m (15')	4.6m (15')	4.6m (15')
*Weight – kg (imp lb)	*1660 kg (3650lb)	*1860 kg (4090lb)	*1865kg (4110lb)	*1870kg (4120lb)	*2050kg (4520lb)
Turning Circle – m (ft)	7.2m (23'6")	7.2m (23'6")	7.2m (23'6")	7.2m (23'6")	7.2m (23'6")

Figures are for reference purposes only and are not binding. We reserve the right to alter specifications without prior notice.

\*Weights shown are for boom with offset waterfeed on both ends of the chassis.





### Chart Showing Boom Travel Speeds For Example Flow Rates (metres/ hour)

Boom size / lane spacing in metres (feet)	Pressure on boom in bar (psi)	Flow rate in m <sup>3</sup> /hr (imp gpm)	Application rate (mm)					
			7.5	10	15	20	25	30
R50/2-58 m (190') 50m wide structure with end Nelson PCS or PCR3000	2 (30)	30 (110)	69	56	34	26	21	17
		36 (132)	81	61	41	31	24	20
		44 (161)	*100	75	50	38	30	25
R50/2-72 m (236') 50m wide structure with end K1 or Luxor impact sprinklers	4 (60)	41 (150)	76	57	38	28	23	19
		52 (190)	96	72	48	36	29	24
		65 (238)	*121	*91	61	45	36	30
R64/2-72 m (236') 64m wide structure with end Nelson PCS or PCR3000	2 (30)	52 (190)	96	72	48	36	29	24
		65 (238)	*121	*91	61	45	36	30
		80 (293)	*146	*110	73	55	44	37
R64/2-90m (295') 64m wide structure with end K1 or Luxor impact sprinklers	4 (60)	52 (190)	77	58	38	29	23	19
		65 (238)	97	73	48	36	29	24
		80 (293)	*117	88	59	44	35	29
R76 - 84m (275') 76m wide structure with end Nelson PCS or PCR3000	2 (30)	52 (190)	52	62	41	31	25	21
		65 (238)	*104	78	52	39	31	26
		80 (293)	*126	*94	63	47	38	31
R76 - 96 m (315') 76m wide structure with end Nelson R55A Rotators	2 (30)	52 (190)	72	54	36	27	22	17
		65 (238)	*91	68	45	34	27	23
		80 (293)	*110	82	55	41	33	27

These flow rates are examples only – there are a wide range of flow rates for each model.

\*Always check the hosereel performance to see if high speeds are attainable.



1



15 psi regulator



2

#### Nozzle Options

1. Splash plate slurry nozzle
2. Nelson R55A
3. Nelson S3000 upward facing nozzle
4. Nelson R3000 upward facing nozzle
5. Nelson PCR-3000
6. Nelson PCS3000
7. Nelson R3000
8. Nelson S3000



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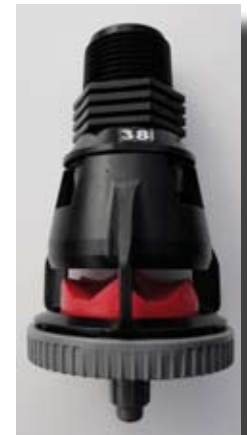
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**Energy comparison of 25.4mm (1") raingun nozzle vs R64/2 boom**

	110/500 hosereel with raingun - 25.4mm nozzle	110/50 hosereel with R64/2 boom
Irrigated width	72m (236")	72m (236")
Flow rate	54m <sup>3</sup> /hr	54m <sup>3</sup> /hr
Hosereel inlet pressure	8.8 bar	5.8 bar
Pressure at raingun/boom	5 bar	2 bar
*Absorbed pump power	21kW	13kW
Power required for 1000 hrs	21000 kWh	12500 kWh
<b>Energy saved over 1000 hours by using a boom</b>		<b>8500 kWh</b>
*Absorbed power figures obtained from Caprari MECMR80 pump curves and assume the pump is located beside the hosereel.		



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