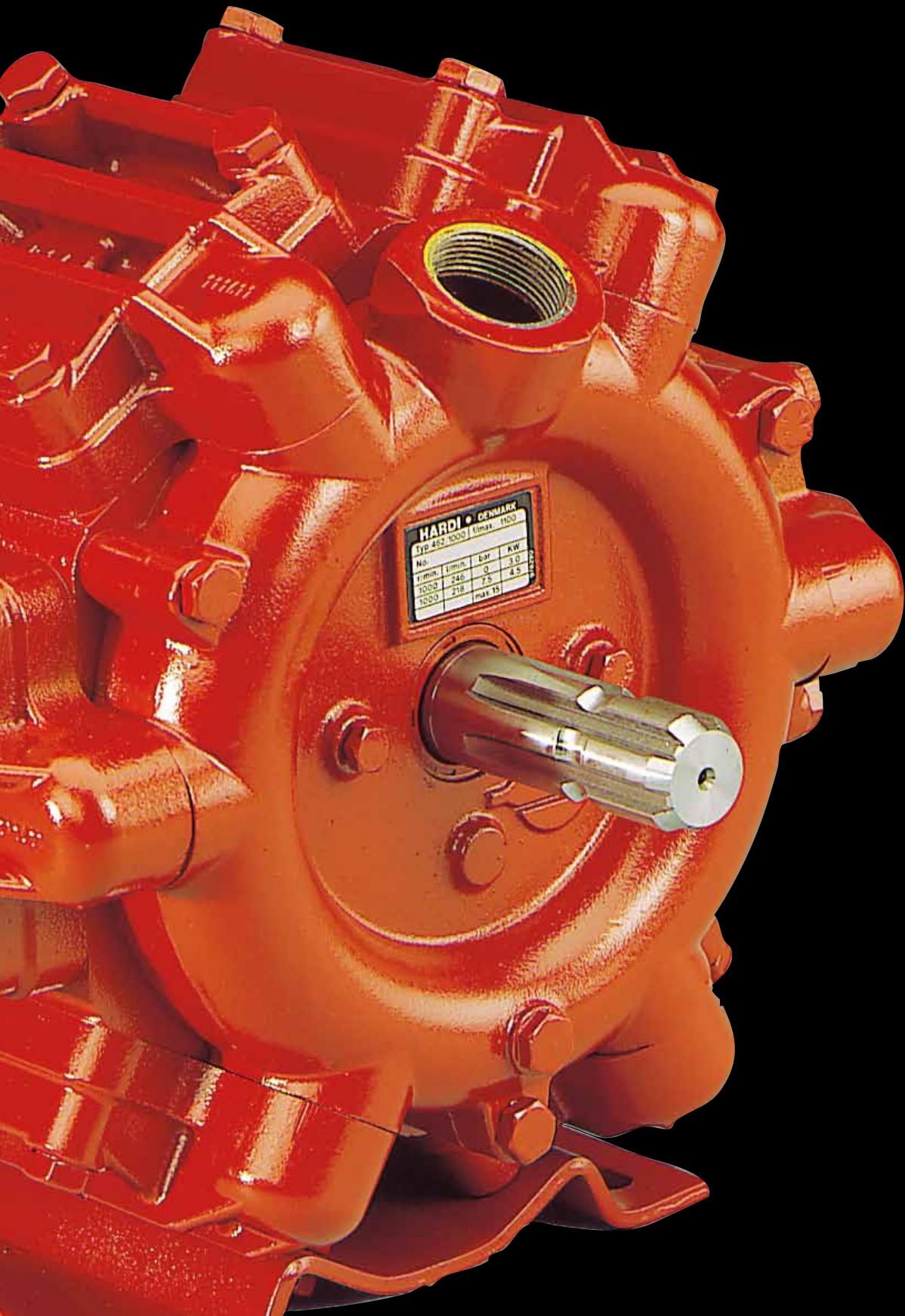




HARDI COMPONENT GUIDE





HARDI Component guide



Your Sprayer Specialist

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For more than 50 years, the basic philosophy of HARDI INTERNATIONAL has been the development, design and manufacture of sprayers and spraying equipment for the application of plant protection products. The success of this philosophy is reflected in the sales of HARDI products in over 100 countries, many of which have specific needs. HARDI has become a specialist in liquid systems and this Components Guide shows the comprehensive range.

Calibration**Field sprayer kit**

A quality kit for calibration is indispensable when using application equipment for quick and easy calculations of application rate, speed, ISO nozzle size and pressure.

Features:

- Robust 2 litre jug,
- Spray technique booklet
- Cleaning tool
- Nozzle Calibrator disc

Field sprayer kit, metric

Part no.

818492



Calibrator disc only, metric

285802

Calibrator disc only, US

285721

Mistblower and Backpack

Mistblower Calibrator disc, metric

284554

Backpack sprayer kit: 10 pcs. KALIBOTTLE

893212

**Spray Test Paper**

A quick and easy way to evaluate drop coverage and penetration. It turns blue upon contact to liquid. Pictogram instructions with drop count indicator are included.

Bag with 50 pieces 2.5 cm x 7.5 cm paper

893211

Control units**M-600**

Brass control unit with pressure gauge and pulsation dampers. Suitable for direct attachment to pump.

Part no.

727862

M-600

Inlet: 3/4"

Outlet: 1/2"

Bypass: 3/4"

Max. pressure: 15 bar

Pressure gauge: Dual scale glycerine damped, 63 mm diameter

**M-70**

Control unit with pressure gauge made of hard-wearing synthetic materials for long life and chemical resistance.

841013

M-70

Inlet: 1"

Outlet: 2 x 1/2"

Bypass: 1"

Max. pressure: 15 bar

Pressure gauge: Dual scale glycerine damped, 63 mm diameter

**BK**

Control unit with section valves and HARDI-MATIC proportional valve. Ideal for field sprayers.

Features:

- Control of main valve
- Equipped with three valve sections
- Pressure equalization device maintaining the same pressure when the valve is turned off
- Pressure agitation valve for effective agitation
- Easy to read, dual scale pressure gauge
- HARDI-MATIC volumetric valve for constant application rate even with speed variations within the same gear
- Pressure filter with 50 mesh net
- 15 bar safety valve.

841902

BK with 3 sections

Inlet: 1"

Outlet: 3 x 3/4"

Bypass: 1"

Pressure agitation: 1/2"

Max. pressure: 15 bar

Pressure gauge: Dual scale glycerine damped, 63 mm diameter

Control units



EVC

Remote controlled units utilize 12 Volt motorized valves (not solenoid) to operate the spray functions. It is the best choice for maximum operator comfort and safety.

Features:

- Remote control of main ON/OFF function
- Three or five section valves
- HARDI-MATIC volumetric pressure regulation valve for constant application rate even with speed variations within the same gear
- Equalization device maintaining the same pressure when section valve is turned off
- Remote control box with five metre of cable
- Pressure agitation valve
- Large, easy to read, stainless steel, glycerine damped pressure gauge
- Note: The HARDI Self-Cleaning filter or a 15 bar safety valve must also be fitted

Part no.

840193
840195

EVC with 3 section · · · · ·

EVC with 5 section · · · · ·

Inlet: 1"

Outlet: ¾"

Bypass: 1"

Pressure agitation: ½"

Max. pressure: 15 bar

Pressure gauge: Dual scale, 100 mm diameter

Controllers & accessories

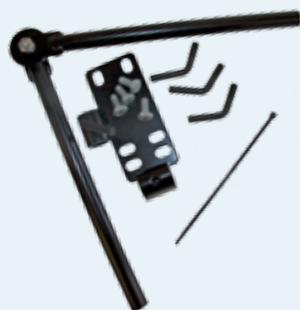


HM 1500 & HC 2500

Genuine HARDI Controller for spraying. It measures and displays travel speed, application rate, total sprayed liquid, total treated area, etc. It is easy add-on to the HARDI EVC control unit. The transducers based on solid state electronics. HM 1500 will monitor application rate and HC 2500 will control application rate.

Features:

- Full integration with EVC control unit
- Compact two line display with back-light
- Simple four button control
- Only one connection cable to control box



HM 1500 Monitor · · · · ·

840165

HC 2500 Controller · · · · ·

840166

Transducer kit for EVC · · · · ·

840169

Tractor mount kit, two pole · · · · ·

72236500

Controllers & accessories



HC 5500

HARDI Controller for controlling spray application. The large four line display is very informative with both icons and text. It is easy add-on to the HARDI EVC control unit and can be used for GPS applications. HC 5500 can send data to a printer or a computer. The transducers based on solid state electronics.

Part no.

Features:

- Full integration with EVC control unit
- Large four line display with back-light
- Preset buttons for most used readouts
- GPS compatible
- Printer compatible
- Only one connection cable to control box

HC 5500 Controller 840167

Transducer kit for EVC 840169

Tractor mount kit, three pole 72050000



Pressure transducer

Solid state transducer for digital readout of pressure. Pressure range is from 0 to 10 bar. Reliable signal technique based on amp readout and the kit caters for ½" and ¾" hose

Pressure transducer 0-10 bar 842022



Pedal ON/OFF switch

The pedal remote switch is an option for the HC 5500. It allows the operator to operate the main ON/OFF via the foot switch.

Pedal ON/OFF for HC 5500 72173800



Printer

The printer is an option for the HC 5500 and permits hard copies of stored data.

Printer 72173600

Printer paper (2 roll) 741727

Droplegs



DROP NOZZLE

Snap-on drop-leg designed for spraying low dense crops up under the leaves. It has strong synthetic dropper tube with two nozzle holders. Suitable for 1553 series nozzles (nozzles not included).

Features:

- Easily adjusted nozzle angles
- Tube length is 60 cm
- Supplied with 40 cm feed hose with SNAP-FIT adapter and ¾" cap
- Snap Lock mounting bracket for boom

DROP NOZZLE Pack with 5 units 834281

Hose

HARDI hose is suitable for working with pesticides. The hose is also available in rolls.

Part no.

Features:

- Reinforced fibre braid pressure hose
- PVC or rubber material
- For pressure hose, working pressure up to 25 bar
- Spiral reinforced suction hose to prevent collapse

Pressure hose, PVC, per metre

<i>1/2" Black</i>	927269
<i>3/4" Black</i>	927270

Pressure hose, Rubber, per metre

<i>1/2" Black, BP 60</i>	927021
<i>3/4" Black BP 60</i>	927032
<i>1" Black BP 60</i>	927124

Suction hose, per metre

<i>3/4" Black, BP 20</i>	92738700
<i>1" Black, BP 20</i>	92738800
<i>1 1/4" Black, BP 18</i>	92738900
<i>1 1/2" Black, BP 18</i>	92739000
<i>2" Black, BP 18</i>	92739100
<i>2 1/2" Black, BP 18</i>	92739200

Hose reels and accessories

The HARDI hose reel range comes in 25 and 50 metre versions. There is a range of mounting brackets to suit your needs. See also section on spray guns.

Features:

- Metallic construction
- Synthetic bushes to ease winding
- Quality braided hose in *3/8"* or *1/2"*
- Working pressure up to 25 bar

Hose reel 25 m

Complete with brackets and S60 spray gun	
<i>For MASTER PRO</i>	72332800
<i>For MASTER MB & NK</i>	72332900
<i>For MASTER HAL</i>	72385300

Hose reel 50 m

<i>Hose reel</i>	818377
<i>50 m 3/8" hose</i>	835321
<i>50 m 1/2" hose</i>	835332
<i>Model S60 Spray gun</i>	843196

See also Spray guns

Filters**In-Line Filter**

This bowl type filter is typically fitted to each boom line. It is easy to dismantle due to the radial sealing system making it quick to clean. It is available in different mesh sizes, the higher the number, the finer the mesh.

Features:

- 1/2" or 3/4" hose
- Colour coded filter
- 50 (Blue), 80 (Red) or 100 (Yellow) mesh

Part no.

50 mesh for 1/2" hose	845205
80 mesh for 1/2" hose	845206
100 mesh for 1/2" hose	845207
50 mesh for 3/4" hose	845208
80 mesh for 3/4" hose	845209
100 mesh for 3/4" hose	845210
50 mesh for 3/4" BSP thread	845218
80 mesh for 3/4" BSP thread	845219
100 mesh for 3/4" BSP thread	845220

**Self-Cleaning Filter**

The filter minimizes annoying downtime by continually cleaning the filter screen. A by-pass system ensures the filter screen is always clean. The housing has a large screw top for easy maintenance and inspection. Seals are highly resistance to chemicals. A 15 bar safety valve is included.

Self-Cleaning filter, 80 mesh

845193

**Floating Filter**

The specially designed floating suction filter aspirates water 15 cm under the surface thereby avoiding mud and surface weeds. Only clean water is sucked into the tank. Hose tail is 1½". For trailed sprayers, 8 m of suction hose is standard and for lift it is 5 m.

Float Filter with 1½" hose tail

841481

Fittings

Size group	Hole saw size	Hose tail size
S40	40 mm	3/8" to 1/2"
S53	53 mm	1/2" to 1"
S67	67 mm	1" to 1 1/2"
S93	93 mm	1 1/2" to 2 1/2"

S series

The "S" series of modular components are professional fittings for liquid systems.

Assembly and disassembly is quick and easy: Simply press in and secure with the "U" pin. The sealing quality is excellent due to the radial seal system. The wall flanges have a captive gasket to ease installation.

Features:

- Quick to assemble
- Excellent seal quality due to radial system
- O-ring seals are made of highly chemical resistant material
- No messy gluing or thread tape
- Easy to expand with many combinations
- Flexibility orientation
- High flow capacity (minimal internal restrictions)
- Easy to pull apart and re-usable
- Working pressure up to 15 bar
- Chemical and UV resistant materials (reinforced nylon)

Part no.

**Tank flange bulkhead with gasket**

S40	726462
S53	726463
S67	726464
S93	726465
S93 single side	727339

**Flange nut**

S40	322106
S53	322107
S67	322108
S93	322109

**Plug**

S40	726577
S53	726578
S67	726579
S93	726580

**Retaining "U" pin**

S40	145994
S53	145995
S67	145996
S93	145997

**Threaded reducer**

S40 1/8" female	726693
S53 1/2" female	726694
S67 1" female	726695
S93 2" female	727476

Fittings**Tail straight for pressure hose**

	Part no.
S40 3/8"	726554
S53 1/2"	726556
S53 3/4""	726558
S53 1"	726559
S67 1"	726560
S67 1 1/4"	726561
S67 1 1/2"	726562
S93 1 1/2"	72041500
S93 2"	726563
S93 2 1/2"	726564

**Tail elbow 90 degree for pressure hose**

S40 3/8"	726566
S40 1/2"	726567
S53 1/2"	726568
S53 3/4""	726570
S53 1"	726571
S67 1"	726572
S67 1 1/4"	726573
S67 1 1/2"	726574
S93 2"	726575
S93 2 1/2"	726576
S93 2 1/2" with 45 degree	72072800

**Tail straight for suction hose**

S67 1 1/4"	731384
S67 1 1/2"	727223
S93 1 1/2"	728523
S93 2"	727227
S93 2" with 45 degree	72072700
S93 2 1/2"	727133

**Tail elbow 90 degree for suction hose**

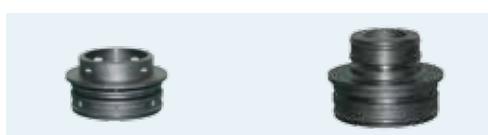
S67 1 1/4"	731385
S67 1 1/2"	727224
S93 1 1/2"	728395
S93 2"	727225
S93 2 1/2"	727226
S93 2 1/2" with 45 degree	72072900

**Manifold Tee**

S53	322352
S67	322224
S93	334545

**Manifold joiner**

S53	72114300
S67	728526
S93	728525

**Manifold reducer**

S67 - S53 male/female	728561
S93 - S67 male/female	728562
S93 - S67 male/male	728527

Foam Markers



Foam Marker Classic

Precision in application is increased with the marker, especially when working on bare ground. This equipment is suitable for widths up to 18 metre and all necessary hoses and fittings are included. A 12 Volt compressor in the red control box sends air to the foam solution tanks to generate the foam. The foam comes out as white blobs at the dropper units.

The HARDI Foam Concentrate is non-toxic and is recommended for the HARDI Foam Markers.

Part no.



Features:

- Suitable for up to 18 m width
- Two 15 litre tanks to contain up to 12 litres of foam solution
- Foam blob distance can be adjusted
- Each foam outlet can be turned on or off
- Supplied air tubes are 9 m long

Foam Marker Classic 827433

HARDI Foam concentrate, 1 l 72000300

HARDI Foam concentrate, 12 x 1 l 72000400



Electric Remote Foam Marker

Increased operator comfort with widths up to 28 metre is achieved with this equipment. Foam rate as well as on off function is done from the compact control box inside the tractor cabin. The high volume 12 Volt compressor is placed on the sprayer.

Features:

- Suitable for up to 28 m width
- Two 15 litre tanks to contain up to 12 litres of foam solution
- Remote control of foam blob distance and ON/OFF function
- 8 m heavy duty power supply cable standard
- 10.5 m cable for control box standard

Electric Remote Foam Marker 818118

HARDI Foam concentrate, 1 l 72000300

HARDI Foam concentrate, 12 x 1 l 72000400

Flush Nozzle



Tank Flushing Nozzle

A simple and effective method to flush tanks. The rotating nozzle inside the tank flushes the tank surface with a minimal amount of water. A pressure of 4 to 5 bar is optimum for flushing.

Part no.

Features:

- One nozzle for lift-mounted sprayers
- Two nozzles trailed sprayers
- Fittings for the rear nozzle on trailed permits easy installation and removal

One nozzle 834376

Two nozzle 834375

One nozzle with 80 litre flush tank 833348

Liquid mixing & transfer equipment



TurboFiller

A high capacity venturi system for transferring all types of crop protection chemicals be it liquids, powders or granules to the tank. It consists of a hopper with lid, valve set and cleaning pipe.

Features:

- Cleaning pipe to wash remaining chemical
- One metre hose on cleaning pipe
- When used, it can be lowered to a natural working height
- Available in 25 and 35 litre versions
- Rotating nozzle with spike for container rinsing

TurboFiller 25 for 1303 pump 72595700

TurboFiller 35 for 363 pump 72596300



Filling Device

The equipment utilizes the pump to transfer the liquid.

Two optional suction filters are available. The floating suction filter aspirates water 15 cm under the surface thereby avoiding mud and surface weeds. Only clean water is sucked into the tank.

Hose holder is optional.

Features:

- 5 m of 1½" suction hose standard
- 3-way valve

Filling Device for 503/603/1203/1303 pump 841689
1½" line filter, 30 mesh 72576200

Floating suction filter for filling from stream 841481

Hose holder 833767



Nozzles

HARDI nozzles are precision components. They meet and often exceed stringent quality requirements and many are also rated for drift reduction. Some of the nozzles are also available in ceramic materials.



HARDI ISO F-110 Features:

- Standard all-round Flat Fan nozzle
- Superior distribution under ideal conditions
- From Fine to Very Course spray quality
- Recommended for HARDI TWIN sprayers
- Recommended from 1.5 to 5.0 bar
- Nozzle to target distance; 50 cm (min. 35 cm, max. 70 cm)
- 110° spray angle with elliptical pattern
- Made from high quality long life SYNTAL thermoplastic
- ISO standards (colour-code etc.)
- Available as ISO nozzle or ISO SNAP-FIT



HARDI ISO LD-110 Features:

- LowDrift flat fan nozzle
- Reduces drift
- From Medium to Course spray quality
- Easy to clean as the restrictor is removable
- Recommended from 1.5 to 5.0 bar
- Nozzle to target distance; 50 cm (min. 35 cm, max. 70 cm)
- 110° spray angle with elliptical pattern
- Made from high quality long life SYNTAL thermoplastic
- ISO standards (colour-code etc.)
- Available as ISO nozzle or ISO SNAP-FIT



HARDI ISO MD-110 Features:

- MINIDRIFT flat fan air inclusion nozzle
- Dramatically reduces drift
- From Medium to Very Course spray quality
- Easy to clean as the restrictor is removable
- Recommended from 1.5 to 5.0 bar
- Nozzle to target distance; 50 cm (min. 40 cm, max. 90 cm)
- 110° spray angle with elliptical pattern
- Made from high quality long life SYNTAL thermoplastic
- ISO standards (colour-code etc.)
- Available as ISO nozzle or ISO SNAP-FIT



HARDI ISO Q-110 Features:

- QUINTASTREAM nozzle for liquid fertiliser application
- Patented proportional outputs from the five holes
- Course spray quality
- Easy to clean as the restrictor is removable
- Recommended from 1.5 to 5.0 bar
- Nozzle to target distance; 50 cm (min. 35 cm, max. 100 cm)
- Directed outputs for uniform distribution
- Made from high quality long life SYNTAL and ceramics
- ISO standards (colour-code etc.)
- Available as ISO nozzle or ISO SNAP-FIT

See Nozzle product guide for other types e.g.

- Hollow cone nozzles
- Adjustable nozzles
- End nozzles
- Off-centre nozzles
- Reflex nozzles

See also www.hardi-nozzles.com

HARDI ISO reference number for nozzles

Qty	0075	01	015	02	025	03	04	05	06	08	10	15
F-110 COLOR TIP												
1	371964	371764	371765	371766	371950	371767	371768	371769	371770	371771	371970	-
100	831358	833089	833091	833094	831352	833096	833098	833100	833102	833105	831360	-
500	831359	833090	833093	833095	831353	833097	833099	833101	833104	833106	831361	-
LD-110 COLOR TIP												
1	-	371837	371838	371839	371958	371840	371841	371894	-	-	-	-
100	-	833120	833122	833124	831356	833127	833129	831328	-	-	-	-
500	-	833121	833123	833126	831357	833128	833130	831329	-	-	-	-
MINIDRIFT COLOR TIP												
1	-	-	372121	372122	372123	372124	372125	372126	-	-	-	-
100	-	-	74188200	74188300	74188400	74188500	74188600	74188700	-	-	-	-
QUINTASTREAM COLOR TIP												
1	-	-	372011	372012	-	372013	372014	372015	372016	372017	372018	372019
100	-	-	831373	831374	-	831375	831376	831377	831378	831379	831380	831381
F-110 COLOR TIP												
1	371963	371706	371707	371708	371946	371709	371710	371711	371712	371713	371966	-
100	741754	741755	741756	74188800	74188900	74189000	74189100	74189200	741762	741763	741764	-
500	-	-	-	741757	741758	741759	741760	741761	-	-	-	-
LD-110 COLOR TIP												
1	-	371817	371818	371819	371957	371820	371821	371893	-	-	-	-
100	-	74189300	74189400	74189500	74189600	74189700	74189800	74189900	-	-	-	-
MINIDRIFT COLOR TIP												
1	-	-	372111	372112	372113	372114	372115	372116	-	-	-	-
100	-	-	74190000	74190100	74190200	74190300	74190400	74190500	-	-	-	-
QUINTASTREAM COLOR TIP												
1	-	-	372002	372003	-	372004	372005	372006	372007	372008	372009	372010
100	-	-	741765	741766	-	741767	741768	741769	741770	741771	741772	741773
INJECT COLOR TIP												
1	-	371926	371872	371873	371874	371875	371876	371927	371928	371929	-	-
100	-	831347	833143	833144	833145	833146	833147	833148	831349	831350	-	-

Pressure gauges

The HARDI quality range of easy to read pressure gauges come in 2 sizes.

Features:

Easy to read with a split scale
Dampened, glycerine filled
Corrosion free stainless steel fittings

- 0-8/16 bar, Ø 63 mm 1/4" bottom fit ······
- 0-100/200 PSI, Ø 63 mm 1/4" bottom fit ······
- 0-8/16 bar, Ø 100 mm 1/4" bottom fit ······
- 0-8/16 bar, Ø 100 mm 1/4" rear fit ······

Part no.

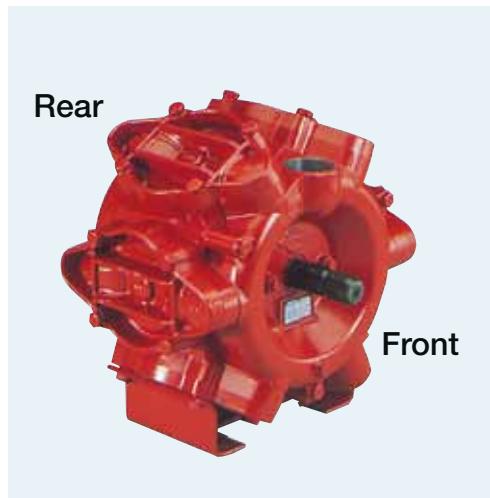
- 284270
- 284277
- 284831
- 284830

Pumps**12 Volt diaphragm pumps**

*LF 14, 3.8 l/min, 2.4 bar max, with demand switch
3000-501, 7.6 l/min, 4.0 bar max.*

Part no.

28050100
28084100

**HARDI diaphragm pumps**

HARDI diaphragm pumps with their simple construction and robust design are a very reliable pump. Capacities range from 14 to 388 l/min and pressures up to 25 bar.

Features:

- Simple construction
- Dry sump
- Very easy to maintain and service
- Self-priming
- Can be run dry
- Rotate clockwise/anti-clockwise without damage
- Choice of crankshaft type

Example

1	2	3	4	5	6	7	8
1303	9.0	- 114	/ 540	- 15 bar	- C	- 1¼"	/ 1" + notes

1. Model
2. Stroke in millimetres
3. Capacity in l/min at 0 bar and normal r/min
4. Normal working r/min
5. Maximum pressure in bar
6. Crankshaft type: S for Spline, C for Conical, Y for Cylindrical
7. Inlet/outlet in inches
8. Notes

HARDI pump 503**General specifications**

- Compact single diaphragm positive displacement pump.
- Low power consumption.
- Self-priming.
- Can be run dry.
- Can rotate clockwise or anticlockwise.
- Single grease point for lubrication.
- Dry sump to simplify maintenance.
- No special tools needed for maintenance.
- Polyurethane diaphragms and seals.
- Cast iron crankcase and covers.
- 3/4" suction port, 3/4" pressure port.
- Recommended to use HARDI suction and pressure dampers.

Part no.

503/4.0-14/800-15bar-Y-3/4"/3/4" + base . . .

821618

- Cylindrical shaft, 25 mm / 0.98".
- For combustion and electric engine use.
- Supplied with narrow base plate.
- Normal operating revolutions, 800 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.82 bar / 12.0 PSI.
- Weight, 9.0 kg / 20 lb.

503/4.0-14/800-25bar-Y-3/4"/3/4"

821026

- Cylindrical shaft, 25 mm / 0.98".
- For combustion and electric engine use.
- Supplied with narrow base plate.
- Normal operating revolutions, 800 r/min.
- Maximum pressure, 25 bar / 367 PSI.
- Maximum vacuum, 0.82 bar / 12.0 PSI.
- Weight, 9.0 kg / 20 lb.

503/7.0-16/540-15bar-C-3/4"/3/4" + foot . . .

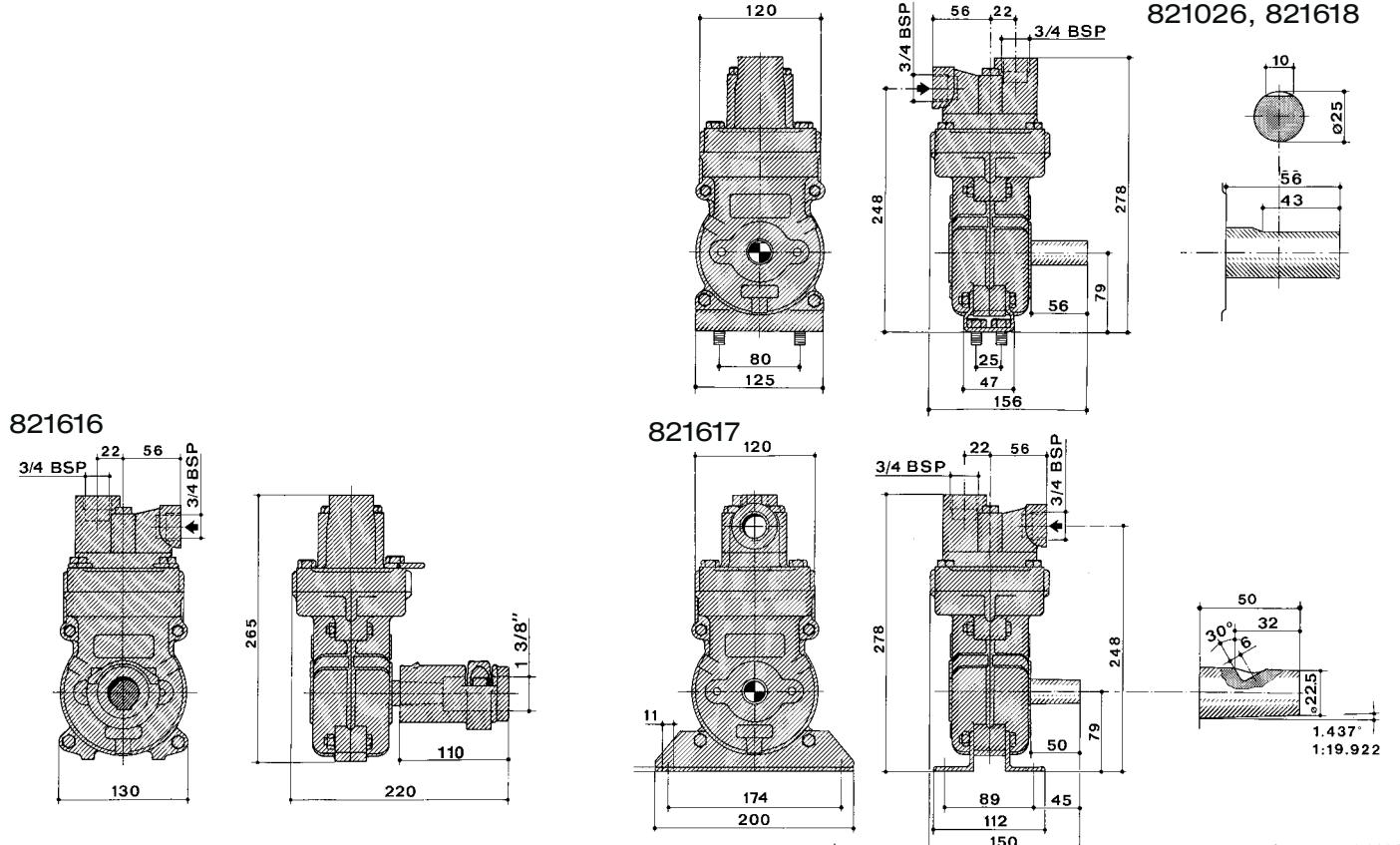
821617

- Tapered shaft.
- For tractor use with HARDI transmission shaft.
- Supplied with wide base plate.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.9 bar / 13.2 PSI
- Weight, 9.2 kg / 20 lb.

503/7.0-16/540-15bar-C-3/4"/3/4" + coupling

821616

- Tapered shaft.
- With 6-splined coupling for tractor P.T.O. shaft.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.9 bar / 13.2 PSI
- Weight, 10.3 kg / 23 lb.



mm to in = mm x 0.0394

503/4.0	r/min	300		400		500		540		600		700		800		900		1000			
	bar	l/min	kW																		
	0	5	0.1	7	0.1	9	0.2			12	0.2	13	0.3	14	0.4	16	0.5	17	0.5		
	2	5	0.1	6	0.2	8	0.2			9	0.3	10	0.4	12	0.5	13	0.5	15	0.6		
	4	4	0.2	6	0.2	7	0.3			9	0.4	10	0.4	12	0.5	13	0.6	14	0.7		
	6	4	0.2	5	0.3	7	0.4			9	0.5	10	0.5	12	0.6	13	0.7	14	0.8		
	10	4	0.2	5	0.3	7	0.5			8	0.6	10	0.7	11	0.7	12	0.8	14	0.9		
	15	4	0.3	5	0.4	7	0.6			8	0.7	9	0.8	11	0.9	12	1.0	13	1.1		
	20	4	0.4	5	0.5	7	0.8			8	0.9	9	1.0	10	1.1	12	1.1	13	1.2		
	25	4	0.5	5	0.6	6	1.0			7	1.1	9	1.2	10	1.3	11	1.3	13	1.4		
	PSI	gpm	hp																		
	0	1.3	0.1	1.8	0.1	2.4	0.3			3.2	0.3	3.4	0.4	3.7	0.5	4.2	0.7	4.5	0.7		
	29	1.3	0.1	1.6	0.3	2.1	0.3			2.4	0.4	2.6	0.5	3.2	0.7	3.4	0.7	4.0	0.8		
	58	1.1	0.3	1.6	0.3	1.8	0.4			2.4	0.5	2.6	0.5	3.2	0.7	3.4	0.8	3.7	0.9		
	88	1.1	0.3	1.3	0.4	1.8	0.5			2.4	0.7	2.6	0.7	3.2	0.8	3.4	0.9	3.7	1.1		
	147	1.1	0.3	1.3	0.4	1.8	0.7			2.1	0.8	2.6	0.9	2.9	0.9	3.2	1.1	3.7	1.2		
	220	1.1	0.4	1.3	0.5	1.8	0.8			2.1	0.9	2.4	1.1	2.9	1.2	3.2	1.3	3.4	1.5		
	294	1.1	0.5	1.3	0.7	1.8	1.1			2.1	1.2	2.4	1.3	2.6	1.5	3.2	1.5	3.4	1.6		
	367	1.1	0.7	1.3	0.8	1.6	1.3			1.8	1.5	2.4	1.6	2.6	1.7	2.9	1.7	3.4	1.9		
503/7.0	bar	l/min	kW																		
	0	9	0.1	12	0.2	15	0.3	16	0.3	17	0.4	20	0.4								
	2	8	0.2	11	0.3	14	0.4	15	0.4	16	0.5	19	0.5								
	4	8	0.2	11	0.3	14	0.5	15	0.6	16	0.6	19	0.6								
	6	8	0.3	11	0.4	13	0.7	14	0.8	16	0.8	19	0.8								
	10	8	0.4	10	0.6	13	0.9	14	1.0	16	1.0	19	1.1								
	15	8	0.5	10	0.8	13	1.3	14	1.2	16	1.4	18	1.5								
	PSI	gpm	hp																		
	0	2.4	0.1	3.2	0.3	4.0	0.4	4.2	0.4	4.5	0.5	5.3	0.5								
	29	2.1	0.3	2.9	0.4	3.7	0.5	4.0	0.5	4.2	0.7	5.0	0.7								
	58	2.1	0.3	2.9	0.4	3.7	0.7	4.0	0.8	4.2	0.8	5.0	0.8								
	88	2.1	0.4	2.9	0.5	3.4	0.9	3.7	1.1	4.2	1.1	5.0	1.1								
	147	2.1	0.5	2.6	0.8	3.4	1.2	3.7	1.3	4.2	1.3	5.0	1.5								
	220	2.1	0.7	2.6	1.1	3.4	1.7	3.7	1.6	4.2	1.9	4.8	2.0								

Model/stroke

Pump model and pump stroke in millimetre.

r/min

Maximum revolutions per minute is indicated by the highest figure.

Bar / PSI

Maximum pressure is indicated by the highest figure.

kW / Hp

Power consumption in kilowatt and horsepower.

l/min / gpm

Capacity in litres and US gallons per minute at zero suction lift.

HARDI pump 603**General specifications**

- Compact two diaphragm positive displacement pump.
- Low power consumption.
- Self-priming.
- Can be run dry.
- Can rotate clockwise or anticlockwise.
- Single grease point for lubrication.
- Dry sump to simplify maintenance.
- No special tools needed for maintenance.
- Polyurethane diaphragms and seals.
- Cast iron crankcase and covers.
- 3/4" suction port, 3/4" pressure port.
- Recommended to use HARDI suction and pressure dampers.

Part no.

603/4.0-26/800-15bar-Y-3/4"/3/4"

821625

- Cylindrical shaft, 25 mm / 0.98".
- For combustion and electric engine use.
- Supplied with narrow base plate.
- Normal operating revolutions, 800 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.85 bar / 12.5 PSI.
- Weight, 14.8 kg / 33 lb.

603/7.0-31/540-15bar-C-3/4"/3/4" + foot

821624

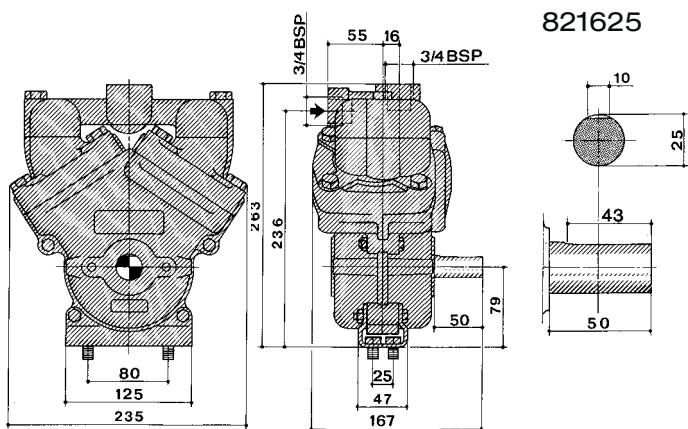
- Tapered shaft.
- For tractor use with HARDI transmission shaft.
- Supplied with wide base plate.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.91 bar / 13.4 PSI.
- Weight, 15.4 kg / 34 lb.

603/7.0-31/540-15bar-C-3/4"/3/4" + coupling

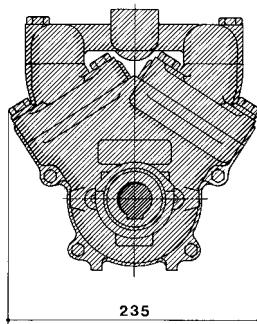
821623

- Tapered shaft.
- With 6-splined coupling for tractor P.T.O. shaft.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.91 bar / 13.4 PSI.
- Weight: 16.2 kg / 36 lb.

821625

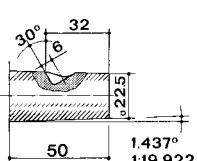
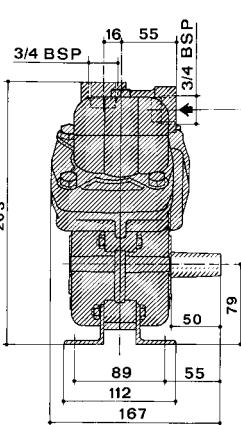
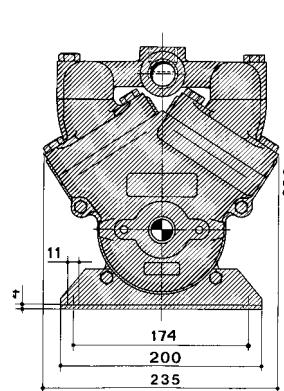


821623



821624

821624



mm to in = mm x 0.0394

603/4.0												603/7.0												
bar	l/min	kW	l/min	l/min	bar	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW									
0	9	0.1	12	0.2	16	0.2	20	0.3	23	0.4	26	0.5	29	0.6	32	0.7								
2	9	0.2	12	0.2	15	0.3	18	0.4	21	0.5	24	0.6	27	0.7	30	0.8								
4	9	0.2	12	0.3	15	0.4	18	0.5	21	0.6	24	0.7	27	0.8	29	0.9								
6	9	0.3	12	0.4	14	0.5	17	0.6	20	0.7	23	0.8	26	0.9	29	1.1								
10	8	0.4	11	0.5	14	0.6	17	0.8	19	0.9	22	1.1	25	1.2	28	1.4								
15	8	0.5	11	0.6	13	0.8	16	1.0	18	1.2	21	1.3	24	1.5	27	1.7								
PSI												PSI												
0	2.4	0.1	3.2	0.3	4.2	0.3	5.3	0.4	6.1	0.5	6.9	0.7	7.7	0.8	8.4	0.9								
29	2.4	0.3	3.2	0.3	4.0	0.4	4.8	0.5	5.5	0.7	6.3	0.8	7.1	0.9	7.9	1.1								
58	2.4	0.3	3.2	0.4	4.0	0.5	4.8	0.7	5.5	0.8	6.3	0.9	7.1	1.1	7.7	1.2								
88	2.4	0.4	3.2	0.5	3.7	0.7	4.5	0.8	5.3	0.9	6.1	1.1	6.9	1.2	7.7	1.5								
147	2.1	0.5	2.9	0.7	3.7	0.8	4.5	1.1	5.0	1.2	5.8	1.5	6.6	1.6	7.4	1.9								
220	2.1	0.7	2.9	0.8	3.4	1.1	4.2	1.3	4.8	1.6	5.5	1.7	6.3	2.0	7.1	2.3								
bar												bar												
0	18	0.2	24	0.3	29	0.4	31	0.4	34	0.5	40	0.6												
2	17	0.3	23	0.4	28	0.5	30	0.5	33	0.6	39	0.7												
4	17	0.4	22	0.5	27	0.6	29	0.7	33	0.7	38	0.9												
6	16	0.5	22	0.6	27	0.8	29	0.8	33	0.9	38	1.1												
10	16	0.7	21	0.8	27	1.1	29	1.2	32	1.3	37	1.6												
15	16	1.0	21	1.2	26	1.6	28	1.7	31	1.9	37	2.2												
PSI												PSI												
0	4.8	0.3	6.3	0.4	7.7	0.5	8.2	0.5	9.0	0.7	10.6	0.8												
29	4.5	0.4	6.1	0.5	7.4	0.7	7.9	0.7	8.7	0.8	10.3	0.9												
58	4.5	0.5	5.8	0.7	7.1	0.8	7.7	0.9	8.7	0.9	10.0	1.2												
88	4.2	0.7	5.8	0.8	7.1	1.1	7.7	1.1	8.7	1.2	10.0	1.5												
147	4.2	0.9	5.5	1.1	7.1	1.5	7.7	1.6	8.4	1.7	9.8	2.1												
220	4.2	1.3	5.5	1.6	6.9	2.1	7.4	2.3	8.2	2.5	9.8	3.0												

Model/stroke

Pump model and pump stroke in millimetre.

r/min

Maximum revolutions per minute is indicated by the highest figure.

Bar / PSI

Maximum pressure is indicated by the highest figure.

kW / Hp

Power consumption in kilowatt and horsepower.

l/min / gpm

Capacity in litres and US gallons per minute at zero suction lift.

HARDI pump 321**General specifications**

- Compact two diaphragm positive displacement pump.
- Supplied with base plate.
- Self-priming.
- Can be run dry.
- Can rotate clockwise or anticlockwise.
- Single grease point for lubrication.
- Dry sump to simplify maintenance.
- No special tools needed for maintenance.
- Polyurethane diaphragms and seals.
- Cast iron crankcase and covers.
- 3/4" suction port, 3/4" pressure port.
- Recommended to use HARDI suction and pressure dampers.

Part no.

321/7.0-48/540-25bar-C-3/4"/3/4"

821557

- Tapered shaft for tractor use with HARDI transmission shaft.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 25 bar / 367 PSI.
- Maximum vacuum, 0.82 bar / 12.0 PSI.
- Weight, 23.6 kg / 52 lb.

321/7.0-48/540-25bar-C/Y-3/4"/3/4"

821560

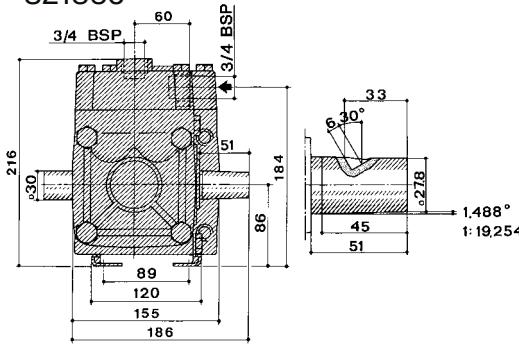
- Tapered and cylindrical shaft for tractor use with HARDI transmission shaft.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 25 bar / 367 PSI.
- Maximum vacuum, 0.82 bar / 12.0 PSI.
- Weight, 24.2kg / 53 lb.

321/10.0-73/540-20bar-S/S-1"/1" + nitril diap .

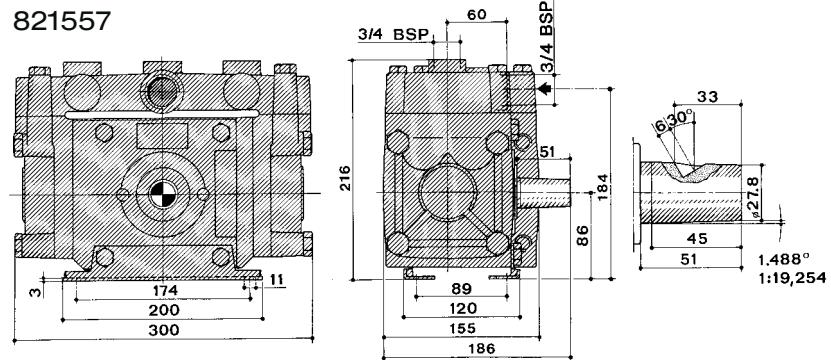
821607

- Spline shaft
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 20 bar / 294 PSI.
- Weight, 23.9 kg / 53 lb.

821560



821557



mm to in = mm x 0.0394

r/min bar	300		400		500		540		600		700							
	l/min	kW																
0	26	0.2	36	0.3	45	0.4	48	0.5	54	0.6	62	0.7						
2	25	0.3	33	0.4	42	0.6	45	0.7	50	0.8	57	1.0						
4	24	0.4	32	0.6	41	0.8	44	0.9	48	1.1	55	1.3						
6	24	0.6	32	0.8	40	1.1	43	1.2	47	1.4	54	1.6						
10	23	1.0	31	1.2	39	1.6	42	1.7	47	1.9	53	2.2						
15	23	1.5	31	2.0	38	2.2	41	2.3	46	2.5	52	3.0						
20	22	2.3	30	2.6	38	3.2	41	3.2	45	3.4	50	3.7						
25	22	3.0	30	3.3	37	3.6	40	4.0	44	4.3	50	4.8						
PSI		gpm	hp	gpm	hp													
0	6.9	0.3	9.5	0.4	11.9	0.5	12.7	0.7	14.3	0.8	16.4	0.9						
29	6.6	0.4	8.7	0.5	11.1	0.8	11.9	0.9	13.2	1.1	15.0	1.3						
58	6.3	0.5	8.4	0.8	10.8	1.1	11.6	1.2	12.7	1.5	14.5	1.7						
88	6.3	0.8	8.4	1.1	10.6	1.5	11.4	1.6	12.4	1.9	14.3	2.1						
147	6.1	1.3	8.2	1.6	10.3	2.1	11.1	2.3	12.4	2.5	14.0	3.0						
220	6.1	2.0	8.2	2.7	10.0	3.0	10.8	3.1	12.1	3.4	13.7	4.0						
294	5.8	3.1	7.9	3.5	10.0	4.3	10.8	4.3	11.9	4.6	13.2	5.0						
367	5.8	4.0	7.9	4.4	9.8	4.8	10.6	5.4	11.6	5.8	13.2	6.4						

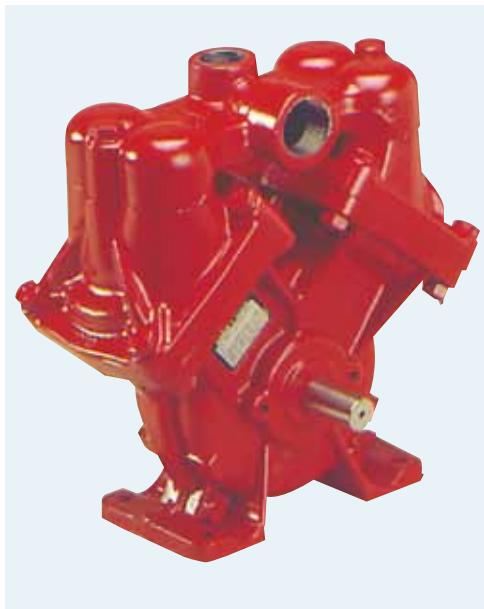
Model/stroke Pump model and pump stroke in millimetre.

r/min Maximum revolutions per minute is indicated by the highest figure.

Bar / PSI Maximum pressure is indicated by the highest figure.

kW / Hp Power consumption in kilowatt and horsepower.

l/min / gpm Capacity in litres and US gallons per minute at zero suction lift.

HARDI pump 1203**General specifications**

- Two diaphragm positive displacement pump.
- Base plate incorporated in crankcase.
- Self-priming.
- Can be run dry.
- Can rotate clockwise or anticlockwise.
- Single grease point for lubrication.
- Dry sump to simplify maintenance.
- No special tools needed for maintenance.
- Polyurethane diaphragms and seals.
- Stainless steel diaphragm discs and bolts.
- Cast iron crankcase and covers.
- 1 1/4" suction port, 1" pressure port.
- Recommended to use HARDI suction and pressure dampers.

Part no.

1203/6.0-108/1000-15bar-C-1 1/4"/1"

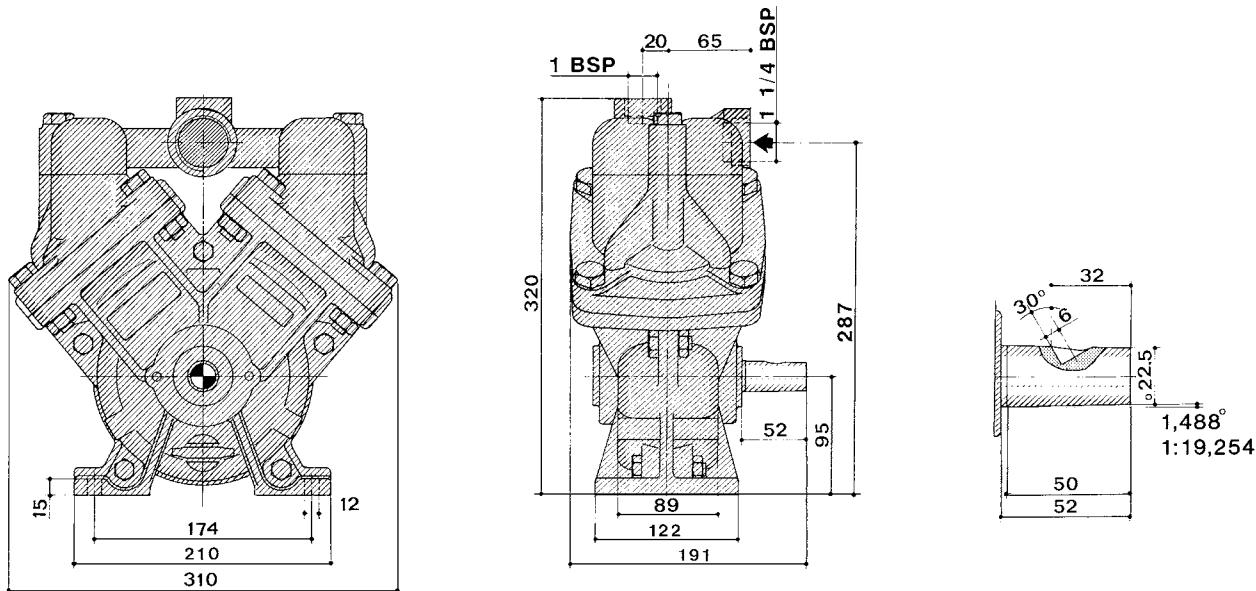
821629

- Tapered shaft for tractor use with HARDI transmission shaft.
- Normal operating revolutions, 1000 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.22 bar / 3.2 PSI.
- Weight, 25.5 kg / 56 lb.

1203/9.0-99/540-15bar-C-1 1/4"/1"

821630

- Tapered shaft for tractor use with HARDI transmission shaft.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.5 bar / 7.4 PSI.
- Weight, 25.5 kg / 56 lb.



mm to in = mm x 0.0394

1203/6.0	r/min	300		400		500		540		600		700		800		900		1000		1100		1200	
	bar	l/min	kW																				
	0	36	0.9	47	1.2	58	1.5			71	1.8	83	2.1	93	2.4	101	2.8	108	3.0	115	3.4	128	3.7
	2	26	1.0	36	1.3	45	1.6			53	1.9	64	2.2	73	2.5	82	2.8	89	3.0	100	3.4	110	3.7
	4	24	1.0	32	1.3	40	1.6			48	1.9	57	2.2	64	2.5	71	2.8	77	3.1	88	3.5	92	3.7
	6	23	1.0	31	1.3	39	1.6			46	1.9	53	2.2	60	2.5	68	2.8	74	3.2	82	3.5	87	3.8
	10	22	1.2	30	1.4	37	1.7			43	2.0	51	2.2	57	2.6	64	2.9	70	3.2	77	3.6	82	3.9
	15	21	1.3	28	1.5	35	1.8			42	2.1	48	2.4	54	2.8	61	3.2	66	3.5	72	3.9	77	4.1
	PSI	gpm	Hp	gpm	Hp	gpm	Hp			gpm	Hp												
	0	9.5	1.2	12.4	1.6	15.3	2.0			18.7	2.4	21.9	2.8	24.6	3.2	26.7	3.8	28.5	4.0	30.4	4.6	33.8	5.0
	29	6.9	1.3	9.5	1.7	11.9	2.1			14.0	2.5	16.9	3.0	19.3	3.4	21.6	3.8	23.5	4.0	26.4	4.6	29.0	5.0
	58	6.3	1.3	8.4	1.7	10.6	2.1			12.7	2.5	15.0	3.0	16.9	3.4	18.7	3.8	20.3	4.2	23.2	4.7	24.3	5.0
	88	6.1	1.3	8.2	1.7	10.3	2.1			12.1	2.5	14.0	3.0	15.8	3.4	18.0	3.8	19.5	4.3	21.6	4.7	23.0	5.1
	147	5.8	1.6	7.9	1.9	9.8	2.3			11.4	2.7	13.5	3.0	15.0	3.5	16.9	3.9	18.5	4.3	20.3	4.8	21.6	5.2
	220	5.5	1.7	7.4	2.0	9.2	2.4			11.1	2.8	12.7	3.2	14.3	3.8	16.1	4.3	17.4	4.7	19.0	5.2	20.3	5.5
1203/9.0	bar	l/min	kW																				
	0	56	0.9	72	1.3	93	1.5	99	1.6	112	1.8	130	2.1										
	2	40	1.0	55	1.3	70	1.6	75	1.7	83	1.8	96	2.1										
	4	40	1.1	54	1.3	66	1.6	72	1.7	80	1.8	93	2.2										
	6	40	1.1	53	1.4	65	1.6	71	1.7	79	1.9	91	2.2										
	10	38	1.4	52	1.7	64	1.8	69	1.9	77	2.1	88	2.5										
	15	37	1.6	50	2.0	62	2.3	67	2.5	75	2.8	86	3.3										
	PSI	gpm	Hp																				
	0	14.8	1.2	19.0	1.7	24.6	2.0	26.1	2.1	29.6	2.4	34.3	2.8										
	29	10.6	1.3	14.5	1.7	18.5	2.1	19.8	2.3	21.9	2.4	25.3	2.8										
	58	10.6	1.5	14.3	1.7	17.4	2.1	19.0	2.3	21.1	2.4	24.6	3.0										
	88	10.6	1.5	14.0	1.9	17.2	2.1	18.7	2.3	20.9	2.5	24.0	3.0										
	147	10.0	1.9	13.7	2.3	16.9	2.4	18.2	2.5	20.3	2.8	23.2	3.4										
	220	9.8	2.1	13.2	2.7	16.4	3.1	17.7	3.4	19.8	3.8	22.7	4.4										

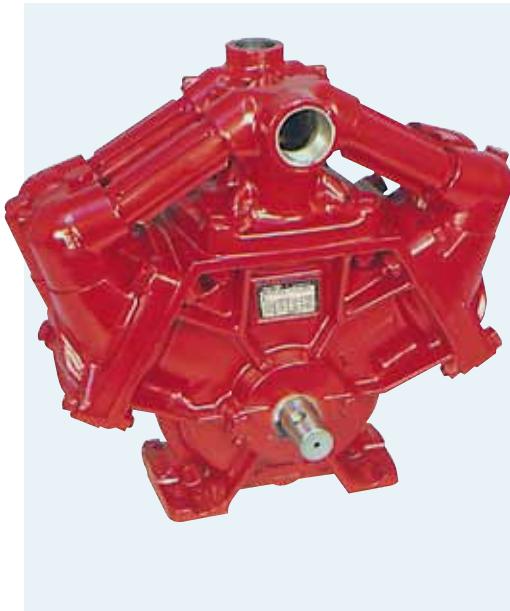
Model/stroke Pump model and pump stroke in millimetre.

r/min Maximum revolutions per minute is indicated by the highest figure.

Bar / PSI Maximum pressure is indicated by the highest figure.

kW / Hp Power consumption in kilowatt and horsepower.

l/min / gpm Capacity in litres and US gallons per minute at zero suction lift.

HARDI pump 1303**General specifications**

- Three diaphragm positive displacement pump
- Base plate incorporated in crankcase
- Self-priming
- Can be run dry
- Can rotate clockwise or anticlockwise
- Three grease points for lubrication
- Dry sump to simplify maintenance
- No special tools needed for maintenance
- Polyurethane diaphragms and seals.
- Stainless steel diaphragm discs and bolts
- Cast iron crankcase and covers
- 1 1/4" suction port, 1" pressure port
- Recommended to use HARDI suction and pressure dampers

Part no.

1303/6.0-136/1000-15 bar-C-1 1/4"/1"

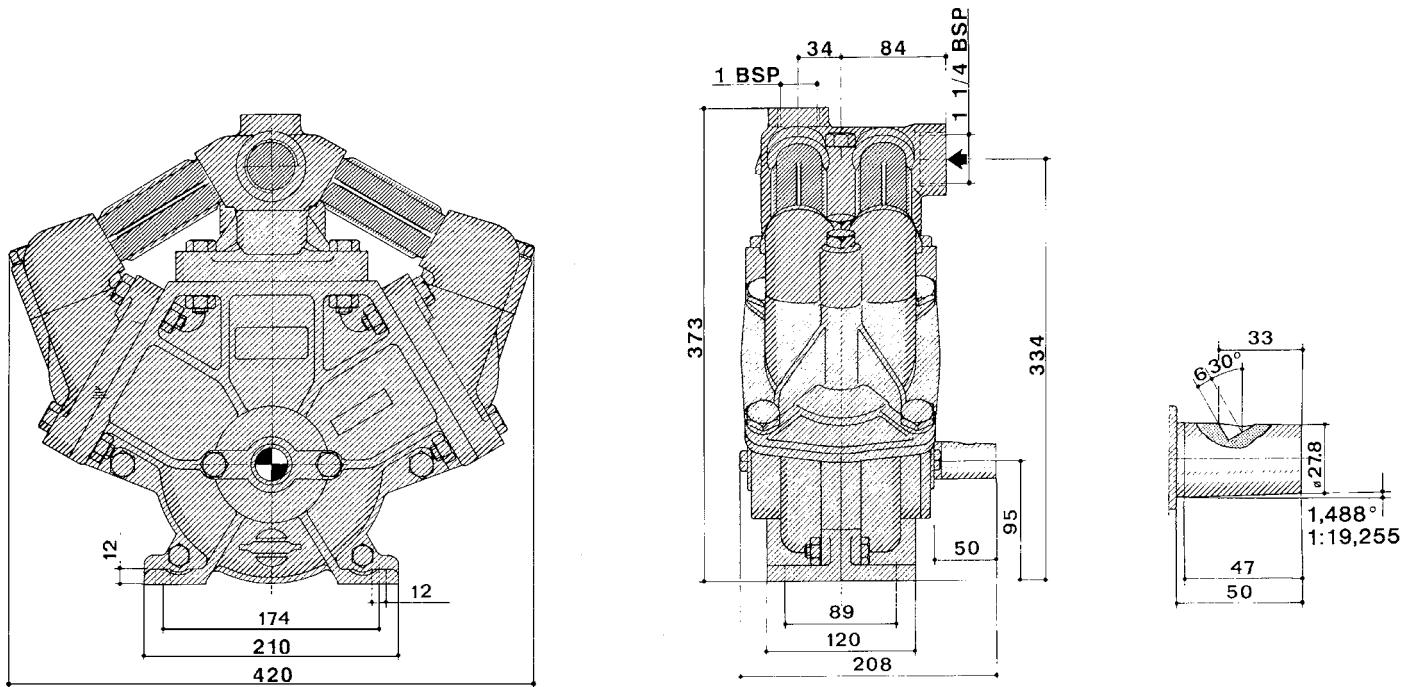
821634

- Tapered shaft for tractor use with HARDI transmission shaft.
- Normal operating revolutions, 1000 r/min.
- Maximum pressure, 15 bar/220 PSI
- Maximum vacuum, 0.26 bar/3.8 PSI
- Weight, 37.7 kg/83 lb

1303/9.0-114/540-15 bar-C-1 1/4"/1"

821635

- Tapered shaft for tractor use with HARDI transmission shaft
- Normal operating revolutions, 540 r/min
- Maximum pressure, 15 bar/220 PSI
- Maximum vacuum, 0.57 bar/8.4 PSI
- Weight, 37.7 kg/83 lb



mm to in = mm x 0.0394

	300				400				500				540				600				700				800				900				1000				1100				1200			
	bar	l/min	kW	l/min	bar	l/min	kW	l/min	bar	l/min	kW	l/min	bar	l/min	kW	l/min	bar	l/min	kW	l/min	bar	l/min	kW	l/min	bar	l/min	kW	l/min																
1303/6.0	0	41	0.9	54	1.2	70	1.5	82	1.8	94	2.1	106	2.4	122	2.6	136	3.0	151	3.3	165	3.6	2	38	0.9	51	1.2	64	1.5	75	1.8	86	2.1	98	2.4	109	2.7	122	3.0	134	3.3	146	3.6		
1303/9.0	4	37	1.0	49	1.3	62	1.6	73	1.9	83	2.2	94	2.4	104	2.7	116	3.1	130	3.3	138	3.6	6	36	1.0	48	1.3	60	1.6	70	2.0	81	2.3	91	2.7	101	3.0	113	3.3	124	3.6	133	4.1		
1303/9.0	10	34	1.1	46	1.4	57	1.8	67	2.2	77	2.6	87	3.0	97	3.3	108	3.7	117	4.1	128	4.6	15	33	1.4	44	1.7	54	2.2	64	2.7	73	3.1	82	3.6	92	4.1	103	4.5	113	4.9	123	5.3		
1303/9.0	PSI	gpm	Hp	gpm	bar	gpm	Hp	gpm	bar	gpm	Hp	gpm	bar	gpm	Hp	gpm	bar	gpm	Hp	gpm	bar	gpm	Hp	gpm	bar	gpm	Hp	gpm	bar	gpm	Hp													
1303/9.0	0	10.8	1.2	14.3	1.6	18.5	2.0	21.6	2.4	24.8	2.8	28.0	3.2	32.2	3.5	35.9	4.0	39.9	4.4	43.6	4.8	29	10.0	1.2	13.5	1.6	16.9	2.0	19.8	2.4	22.7	2.8	25.9	3.2	28.8	3.6	32.2	4.0	35.4	4.4	38.5	4.8		
1303/9.0	58	9.8	1.3	12.9	1.7	16.4	2.1	19.3	2.5	21.9	3.0	24.8	3.2	27.5	3.6	30.6	4.2	34.3	4.4	36.4	4.8	88	9.5	1.3	12.7	1.7	15.8	2.1	18.5	2.7	21.4	3.1	24.0	3.6	26.7	4.0	29.8	4.4	32.7	4.8	35.1	5.5		
1303/9.0	147	9.0	1.5	12.1	1.9	15.0	2.4	17.7	3.0	20.3	3.5	23.0	4.0	25.6	4.4	28.5	5.0	30.9	5.5	33.8	6.2	220	8.7	1.9	11.6	2.3	14.3	3.0	16.9	3.6	19.3	4.2	21.6	4.8	24.3	5.5	27.2	6.0	29.8	6.6	32.5	7.1		

Model/stroke

Pump model and pump stroke in millimetre.

r/min

Maximum revolutions per minute is indicated by the highest figure.

Bar / PSI

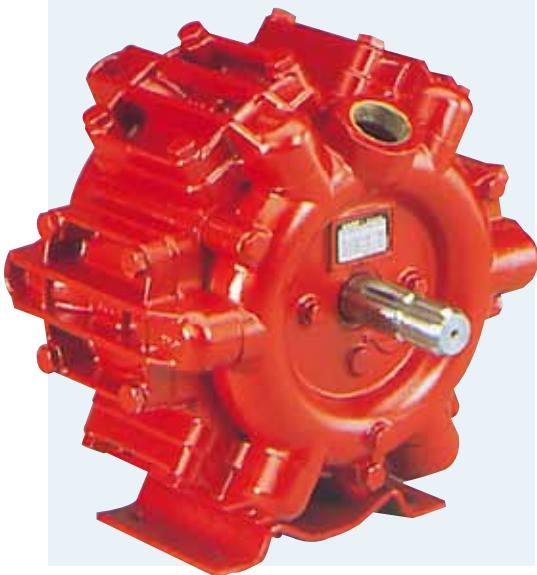
Maximum pressure is indicated by the highest figure.

kW / Hp

Power consumption in kilowatt and horsepower.

l/min / gpm

Capacity in litres and US gallons per minute at zero suction lift.

HARDI pump 363**General specifications**

- Six diaphragm positive displacement radial pump with base plate.
- Self-priming.
- Can be run dry.
- Can rotate clockwise or anticlockwise.
- One grease point for lubrication.
- Dry sump to simplify maintenance.
- No special tools needed for maintenance.
- Polyurethane diaphragms and seals.
- Cast iron crankcase and covers.
- Stainless steel bolts and plates for diaphragms.
- 1½" suction port, 1" pressure port.
- Hydraulic drive kit available.

Part no.

363/5.5-185/1000-15bar-S-1¼"/1"+ 21 spline

821574

- 21-splined 1¾" shaft, for tractor use.
- Normal operating revolutions, 1000 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.48 bar / 7.1 PSI.
- Weight, 52.2 kg / 115 lb.

363/7.0-140/540-20bar-S/S-1¼"/1"

821596

- 6-splined 1¾" through shaft, for tractor use.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 20 bar / 294 PSI.
- Maximum vacuum, 0.54 bar / 7.9 PSI.
- Weight, 52.6 kg / 116 lb.

363/7.0-140/540-20bar-S-1¼"/1"

821576

- 6-splined 1¾" shaft, for tractor use.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 20 bar / 294 PSI.
- Maximum vacuum, 0.54 bar / 7.9 PSI.
- Weight, 52.6 kg / 116 lb.

363/10.0-194/540-15bar-S-1¼"/1"

821579

- 6-splined 1¾" shaft, for tractor use.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.64 bar / 9.4 PSI.
- Weight, 52.5 kg / 116 lb.

363/10.0-194/540-15bar-S/S-1¼"/1"

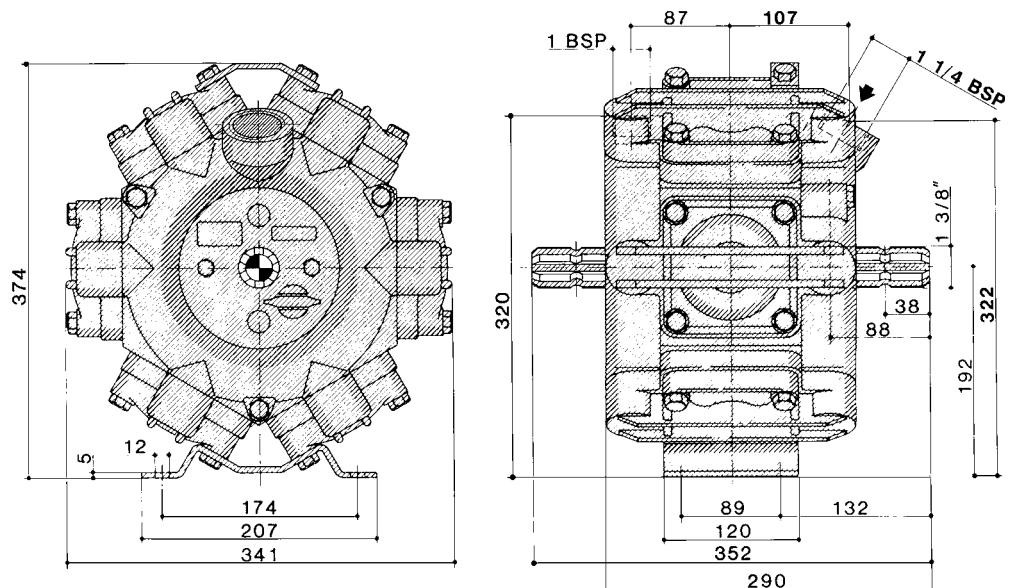
821580

- 6-splined 1¾" through shaft, for tractor use.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.64 bar / 9.4 PSI.
- Weight, 52.9 kg / 117 lb.

363/10.0-194/540-15bar-S-1½"/1"

821643

- 6-splined 1¾" shaft, for tractor use.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 15 bar / 220 PSI.
- Maximum vacuum, 0.64 bar / 9.4 PSI.
- Weight, 52.9 kg / 117 lb.



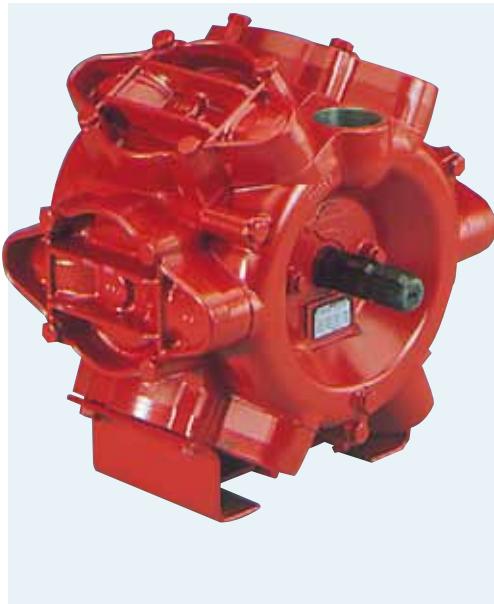
mm to in = mm x 0.0394

363/5.5	300	400		500		540		600		700		800		900		1000		1100		1200			
	bar	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp
	0	61	1.0	82	1.3	103	1.5			123	1.9	144	2.2	164	2.4	186	2.8	201	3.1	213	3.4	225	3.7
	2	59	1.0	79	1.3	100	1.5			119	1.9	140	2.2	160	2.5	179	2.9	191	3.2	200	3.5	208	3.8
	4	58	1.0	78	1.4	98	1.7			117	2.1	138	2.4	155	2.8	176	3.3	188	3.6	199	3.9	204	4.3
	6	57	1.1	76	1.4	96	2.0			115	2.4	134	2.9	153	3.5	173	3.9	186	4.3	196	4.7	202	5.1
	10	55	1.6	74	2.1	94	2.7			112	3.2	130	3.8	148	4.4	168	5.2	180	5.6	190	6.1	200	6.6
	15	53	2.0	72	2.6	89	3.3			108	4.1	126	4.9	144	5.7	163	6.6	174	7.1	185	7.9	196	8.4

363/7.0	bar	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW											
	PSI	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp											
	0	78	0.9	104	1.2	131	1.6	140	1.6	156	1.9	183	2.2											
	2	76	1.0	102	1.3	128	1.7	136	1.8	152	2.0	177	2.3											
	4	74	1.3	98	1.5	125	1.9	133	2.1	147	2.4	170	2.8											
	6	73	1.4	97	1.8	121	2.3	130	2.5	144	2.9	167	3.5											
	10	71	1.8	95	2.4	117	3.1	127	3.4	141	3.8	164	4.6											
	15	70	2.4	92	3.2	115	3.9	124	4.4	137	5.0	161	5.9											
	20	68	2.9	90	3.9	113	4.8	122	5.4	135	5.9	158	7.0											

363/10.0	bar	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW											
	PSI	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp											
	0	107	0.9	141	1.4	178	1.7	194	1.8	211	2.0	229	2.4											
	2	105	1.3	140	1.5	175	2.1	189	2.3	207	2.6	225	3.2											
	4	103	1.5	139	2.1	172	2.5	186	2.9	205	3.3	224	3.9											
	6	102	1.8	138	2.5	169	3.2	184	3.5	203	3.9	223	4.6											
	10	100	2.5	135	3.4	166	4.4	182	4.7	200	5.2	220	6.0											
	15	98	3.3	132	4.5	164	5.6	178	6.2	197	6.6	217	7.6											

Model/stroke Pump model and pump stroke in millimetre.
r/min Maximum revolutions per minute is indicated by the highest figure.
Bar / PSI Maximum pressure is indicated by the highest figure.
kW / Hp Power consumption in kilowatt and horsepower.
l/min / gpm Capacity in litres and US gallons per minute at zero suction lift.

HARDI pump 463**General specifications**

- High capacity six diaphragm positive displacement radial pump with base plate
- Self-priming
- Can be run dry
- Can rotate clockwise or anticlockwise
- One grease point for lubrication
- Dry sump to simplify maintenance
- No special tools needed for maintenance
- Polyurethane diaphragms and seals
- Cast iron crankcase and covers
- Stainless steel bolts and plates for diaphragms
- 2" suction port, 1 1/4" pressure port
- Hydraulic drive kit available

Part no.

463/5.5-265/1000-15bar-S/S-2"/1 1/4"+21 spline

821585

- 21-splined 1 3/8" through shaft, for tractor use
- Normal operating revolutions, 1000 r/min
- Maximum pressure, 15 bar/220 PSI
- Maximum vacuum, 0.40 bar/5.9 PSI
- Weight, 66.5 kg/147 lb

463/5.5-265/1000-15bar-S-2"/1 1/4"+21 spline

821584

- 21-splined 1 3/8" shaft, for tractor use
- Normal operating revolutions, 1000 r/min
- Maximum pressure, 15 bar/220 PSI
- Maximum vacuum, 0.40 bar/5.9 PSI
- Weight, 67.0 kg/148 lb

463/10.0-276/540-15bar-S-2"/1 1/4"

821586

- 6-splined 1 3/8" shaft, for tractor use
- Normal operating revolutions, 540 r/min
- Maximum pressure, 15 bar/220 PSI
- Maximum vacuum, 0.58 bar/8.5 PSI
- Weight, 66.5 kg/147 lb

463/10.0-276/540-15bar-S/S-2"/1 1/4"

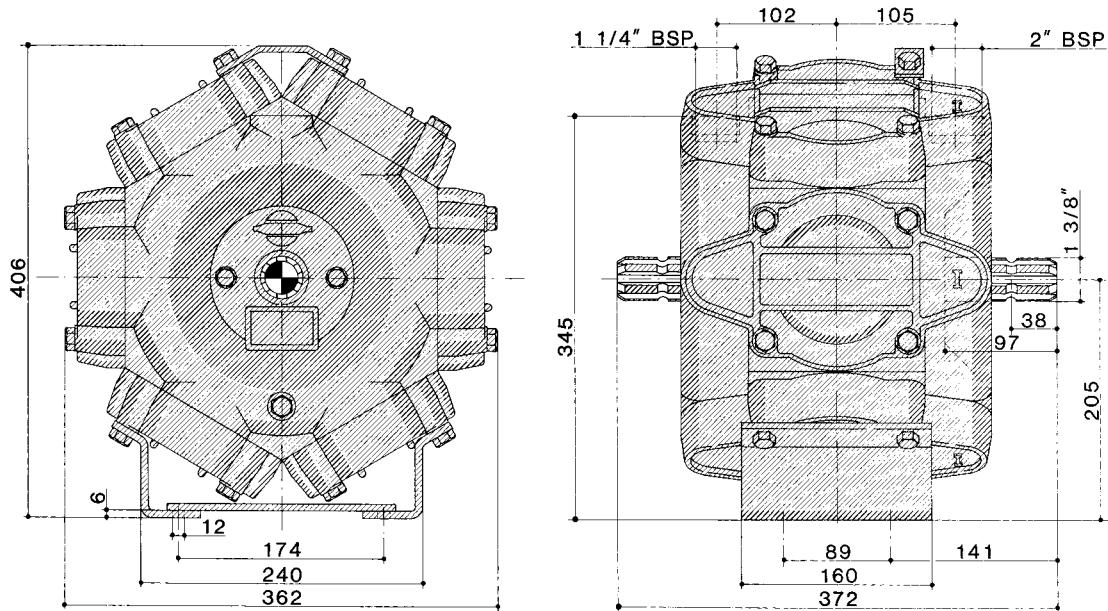
821587

- 6-splined 1 3/8" through shaft, for tractor use
- Normal operating revolutions, 540 r/min
- Maximum pressure, 15 bar/220 PSI
- Maximum vacuum, 0.58 bar/8.5 PSI
- Weight, 66.9 kg/148 lb

463/12.0-322/540-15bar-S-2"/1 1/4"

821595

- 6-splined 1 3/8" shaft, for tractor use
- Normal operating revolutions, 540 r/min
- Maximum pressure, 15 bar/220 PSI
- Maximum vacuum, 0.58 bar/8.5 PSI
- Weight, 66.7 kg/147 lb



mm to in = mm x 0.0394

463/5.5	r/min	300		400		500		540		600		700		800		900		1000		1100		1200		
	bar	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW									
	0	89	0.9	119	1.2	148	1.6			178	1.9	206	2.2	233	2.5	273	2.8	305	3.2	325	3.5	334	3.8	
	2	84	0.0	113	1.3	140	1.6			168	1.0	197	2.3	222	2.6	252	3.0	278	3.5	296	3.9	298	4.1	
	4	82	1.0	108	1.5	137	1.9			162	2.3	190	2.9	216	3.3	244	3.9	273	4.5	289	4.9	303	5.6	
	6	78	1.3	105	1.8	131	2.4			158	2.9	185	3.5	211	4.3	239	5.0	269	5.5	286	5.8	298	6.5	
	10	74	2.0	100	2.6	126	3.2			151	4.0	178	4.7	202	5.3	229	6.3	257	7.3	274	8.2	291	8.7	
	15	70	2.5	95	3.3	120	4.2			145	5.2	171	6.1	195	7.0	219	8.1	246	9.1	264	10.3	280	11.1	
	PSI	gpm	Hp	gpm	Hp	gpm	Hp			gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	
	0	23.5	1.3	31.4	1.7	39.1	2.1			46.0	2.5	54.4	2.9	61.5	3.4	72.1	3.8	80.5	4.3	85.8	4.6	88.2	5.1	
	29	22.2	1.3	29.8	1.8	36.0	2.1			44.4	2.6	52.0	3.1	58.6	3.5	66.5	4.0	73.4	4.7	78.1	5.2	78.7	5.5	
	58	21.6	1.3	28.5	2.0	36.2	2.5			42.8	3.1	50.2	3.9	57.0	4.4	64.4	5.2	72.1	6.0	76.3	6.6	79.0	7.5	
	88	20.6	1.7	27.7	2.4	34.6	3.2			41.7	3.9	48.8	4.7	55.7	5.8	63.1	6.7	71.0	7.4	75.5	7.8	78.7	8.7	
	147	19.5	2.7	26.4	3.5	33.3	4.3			39.9	5.4	46.0	6.3	53.3	7.1	60.5	8.4	67.8	9.8	72.3	10.0	76.8	11.7	
	220	18.5	3.4	25.1	4.4	31.7	5.6			38.3	6.0	45.1	8.2	51.5	9.4	57.8	10.9	64.9	12.2	69.7	13.8	73.9	14.9	
	bar	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW									
	0	156	1.0	207	1.3	257	1.6	276	1.8	305	2.1	352	2.8											
	2	152	1.2	202	1.7	252	2.3	270	2.6	299	3.0	343	3.8											
	4	149	1.7	198	2.5	246	3.1	265	3.5	295	3.9	337	5.2											
	6	146	2.2	195	3.0	242	3.9	263	4.3	289	4.9	335	6.1											
	10	142	3.1	192	4.3	236	5.6	256	5.9	282	6.7	326	8.1											
	15	136	3.9	184	5.3	230	6.6	248	7.0	276	7.9	320	9.3											
	PSI	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp									
	0	41.2	1.3	54.6	1.7	67.8	2.2	72.9	2.4	80.5	2.8	92.9	3.8											
	29	40.1	1.6	53.3	2.3	66.5	3.1	71.3	3.5	78.9	4.1	90.6	5.1											
	58	39.3	2.3	52.3	3.3	64.9	4.1	70.0	4.6	77.9	5.2	89.0	6.9											
	88	38.5	2.9	51.5	4.0	63.9	5.3	69.4	5.8	76.3	6.6	88.4	8.1											
	147	37.5	4.1	50.7	5.7	62.3	7.5	67.6	8.0	74.4	9.0	86.1	10.9											
	220	35.9	5.3	48.6	7.1	60.7	8.9	65.5	9.4	72.9	10.6	84.5	12.4											
	bar	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW	l/min	kW									
	0	182	1.0	240	1.4	298	1.9	322	2.2	358	2.7	390	3.5											
	2	178	1.4	237	2.0	292	2.7	317	3.1	350	3.6	386	4.5											
	4	175	1.8	233	2.7	288	3.9	314	4.2	345	4.9	382	5.8											
	6	172	2.6	230	3.5	284	4.6	308	5.1	340	5.9	378	7.2											
	10	168	3.5	223	5.0	280	6.4	302	7.1	333	7.8	372	9.1											
	15	163	4.1	218	5.5	273	6.8	295	7.4	326	8.2	364	9.7											
	PSI	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp	gpm	Hp									
	0	48.0	1.3	63.4	1.8	78.7	2.6	85.0	3.0	94.5	3.6	103.0	4.7											
	29	47.0	1.9	62.6	2.7	77.1	3.6	83.7	4.2	92.4	4.8	101.9	6.0											
	58	46.2	2.5	61.5	3.7	76.0	5.2	82.9	5.6	91.1	6.6	100.8	7.8											
	88	45.4	3.4	60.7	4.7	75.0	6.2	81.3	6.9	89.8	7.9	99.8	9.6											
	147	44.4	4.6	58.9	6.7	73.9	8.6	79.7	9.5	87.9	10.4	98.2	12.2											
	220	43.0	5.4	57.6	7.4	72.1	9.1	77.9	9.9	86.1	10.9	96.1	13.0											

Model/stroke
r/min
Bar / PSI
kW / Hp
l/min / gpm

Pump model and pump stroke in millimetre.
Maximum revolutions per minute is indicated by the highest figure.
Maximum pressure is indicated by the highest figure.
Power consumption in kilowatt and horsepower.
Capacity in litres and US gallons per minute at zero suction lift.



Your Sprayer Specialist

HARDI hot liquid pump**General specifications**

- Six diaphragm positive displacement radial pump
- For hot liquids up to 90°C/194°F
- Supplied with base plate
- Self-priming
- Can be run dry
- Can rotate clockwise or anticlockwise
- One grease point for lubrication
- Dry sump to simplify maintenance
- No special tools needed for maintenance
- Nitril diaphragms and seals
- Stainless steel valves
- Stainless steel diaphragm discs and bolts
- Cast iron crankcase and covers
- Surface coated black
- Hydraulic drive kit available
- Not factory lubricated. Requires suitable grease

Part no.

363/7.0-140/540-20bar-S-1½"/1"+Hot liquid

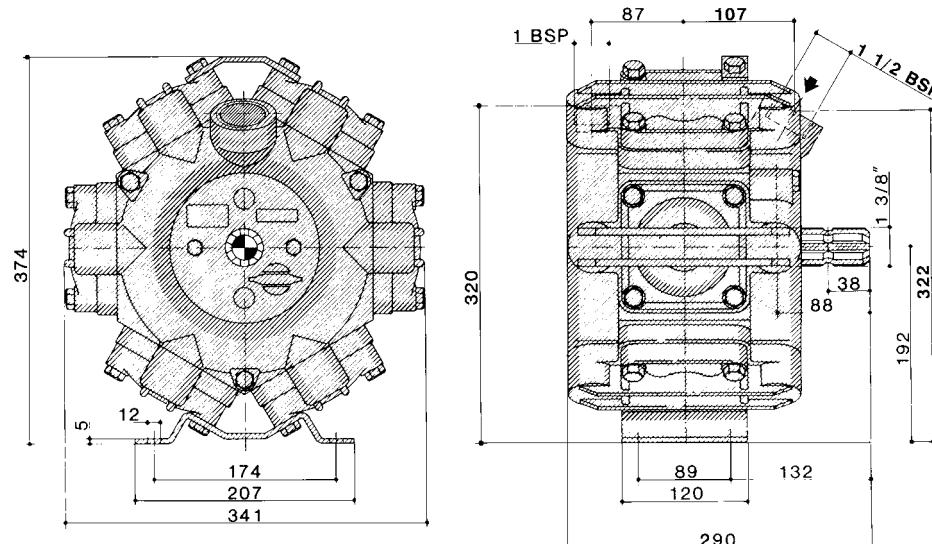
- 1½" suction port, 1" pressure port (ISO 7).
- 6-splined 1¾" shaft.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 20 bar/294 PSI.
- Maximum vacuum, 0.54 bar/7.9 PSI.
- Weight, 52.6 kg/116 lb.

821577

463/10.0-276/540-15bar-S- 2"/1¼"+Hot liquid

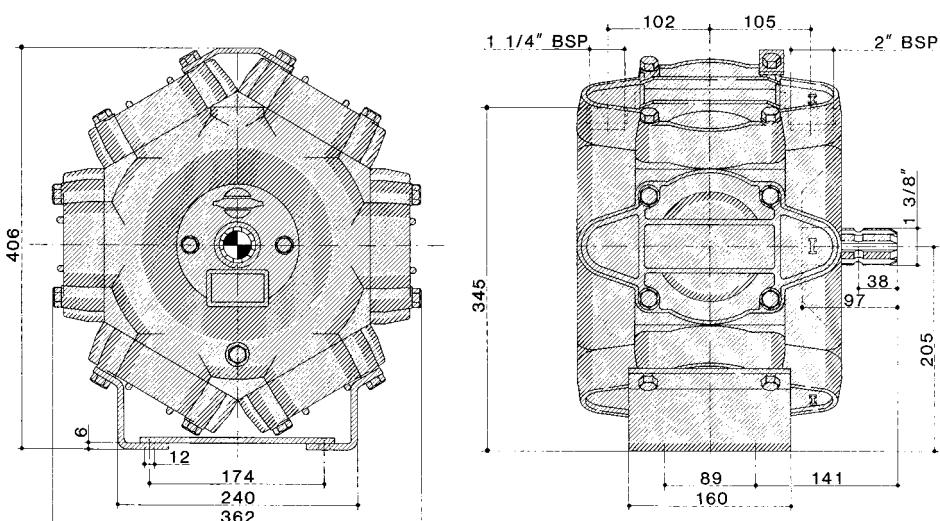
- 2" suction port, 1¼" pressure port (ISO 7).
- 6-splined 1¾" shaft.
- Normal operating revolutions, 540 r/min.
- Maximum pressure, 15 bar/220 PSI.
- Maximum vacuum, 0.58 bar/8.5 PSI.
- Weight, 66.5 kg/147 lb.

821591



463/7.0	r/min	300		400		500		540		600		700	
	bar	l/min	kW										
	0	78	0.9	104	1.2	131	1.6	140	1.6	156	1.9	183	2.2
	2	76	1.0	102	1.3	128	1.7	136	1.8	152	2.0	177	2.3
	4	74	1.3	98	1.5	125	1.9	133	2.1	147	2.4	170	2.8
	6	73	1.4	97	1.8	121	2.3	130	2.5	144	2.9	167	3.5
	10	71	1.8	95	2.4	117	3.1	127	3.4	141	3.8	164	4.6
	15	70	2.4	92	3.2	115	3.9	124	4.4	137	5.0	161	5.9
	20	68	2.9	90	3.9	113	4.8	122	5.4	135	5.9	158	7.0
	PSI	gpm	Hp										
	0	20.6	1.2	27.5	1.6	34.6	2.1	37.0	2.1	41.2	2.5	48.3	3.0
	29	20.1	1.3	26.9	1.7	33.8	2.3	35.9	2.4	40.1	2.7	46.7	3.1
	58	19.5	1.7	25.9	2.0	33.0	2.5	35.1	2.8	38.8	3.2	44.9	3.8
	88	19.3	1.9	25.6	2.4	31.9	3.1	34.3	3.4	38.0	3.9	44.1	4.7
	147	18.7	2.4	25.1	3.2	30.9	4.2	33.5	4.6	37.2	5.1	43.3	6.2
	220	18.5	3.2	24.3	4.3	30.4	5.2	32.7	5.9	36.2	6.7	42.5	7.9
	294	18.0	3.9	23.8	5.2	29.8	6.4	32.2	7.2	35.6	7.9	41.7	9.4

mm to in = mm x 0.0394



463/10.0	r/min	300		400		500		540		600		700	
	bar	l/min	kW	l/min	kW								
	0	156	1.0	207	1.3	257	1.6	276	1.8	305	2.1	352	2.8
	2	152	1.2	202	1.7	252	2.3	270	2.6	299	3.0	343	3.8
	4	149	1.7	198	2.5	246	3.1	265	3.5	295	3.9	337	5.2
	6	146	2.2	195	3.0	242	3.9	263	4.3	289	4.9	335	6.1
	10	142	3.1	192	4.3	236	5.6	256	5.9	282	6.7	326	8.1
	15	136	3.9	184	5.3	230	6.6	248	7.0	276	7.9	320	9.3
	PSI	gpm	Hp	gpm	Hp								
	0	41.2	1.3	54.6	1.7	67.8	2.2	72.9	2.4	80.5	2.8	92.9	3.8
	29	40.1	1.6	53.3	2.3	66.5	3.1	71.3	3.5	78.9	4.1	90.6	5.1
	58	39.3	2.3	52.3	3.3	64.9	4.1	70.0	4.6	77.9	5.2	89.0	6.9
	88	38.5	2.9	51.5	4.0	63.9	5.3	69.4	5.8	76.3	6.6	88.4	8.1
	147	37.5	4.1	50.7	5.7	62.3	7.5	67.6	8.0	74.4	9.0	86.1	10.9
	220	35.9	5.3	48.6	7.1	60.7	8.9	65.5	9.4	72.9	10.6	84.5	12.4

Model/stroke Pump model and pump stroke in millimetre.
r/min Maximum revolutions per minute is indicated by the highest figure.
Bar / PSI Maximum pressure is indicated by the highest figure.
kW / Hp Power consumption in kilowatt and horsepower.
l/min / gpm Capacity in litres and US gallons per minute at zero suction lift.

Spray lines

The extensive range is ideal for the do-it-yourself builder. The materials are chemical and UV light resistant.

Part no.

**Boom tubes with 50 cm spacing and 3/4" end bush**

- 2-hole* 612872
- 3-hole* 612883
- 4-hole* 612894
- 5-hole* 612905

**Caps**

- 3/8"* 320187
- 1/2"* 320084
- 3/4"* 320283



- Boom tube end plug* 716413
- Boom tube 1/2" hose tail* 726236
- Boom tube 3/4" hose tail* 724621
- Boom tube 3/4" threaded* 720856

**Saddle assemblies**

- Single with 3/8" screw fitting* 716037
- Single with SNAP-FIT* 725079
- Triple with SNAP-FIT TRIPLET* 725078

**Nozzle filters**

- 50 mesh (Blue) without seal* 614366
- 80 mesh (Red) without seal* 614367
- 100 mesh (Yellow) without seal* 614368
- 50 mesh (Blue) with seal (for SNAP-FIT)* 725043
- 80 mesh (Red) with seal (for SNAP-FIT)* 725042
- 100 mesh (Yellow) with seal (for SNAP-FIT)* 725044

**Nozzle caps and accessories**

- 3/8"* 320187
- 3/8" for ISO nozzles (White)* 321517



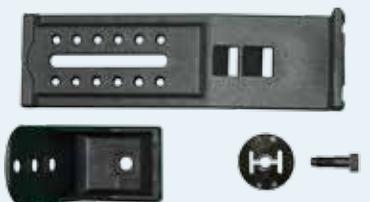
- SNAP-FIT for hollow cone nozzles* 334082
- SNAP-FIT for flat fan nozzles* 334083
- SNAP-FIT with 3/8" thread* 322068
- Gasket when filter not used* 242252



- Cap to suit "Tee-Jet" bayonet* 334862
- Gasket for "Tee-Jet" bayonet* 242222



- DUOCAP double nozzle holder* 334873
- Plugged blank* 334874



- Mounting bracket riser* 322114
- Bracket angle* 322116
- Nut* 322114
- Bolt* 322116

Spray guns



Top quality, robust spray guns with safety lock OFF to prevent accidental activation. A ceramic 1099-20 nozzle is standard. Model 60 S and 60 L are rugged light weight units for one-handed operation with a comfortable handle and adjustable end piece to alter spray coverage. The L version has a 26 cm extension. Model 100 is a rugged two-hand operated unit also with adjustable coverage.

Part no.

	A cm	B cm	M mm	Max pressure bar	Weight kg
60S	28	15	14	60	0.55
60L	54	15	14	60	0.75
100	56	19	15	100	1.54

		l/min	
		10 bar	20 bar
1099		1.34	1.90
-10	22	1.98	2.80
Standard -20	47	5.30	7.50
-23	62	6.93	9.80
		9.05	12.80

Features:

- Long life ceramic nozzle
- Output is 7.5 litres at 10 bar
- Adjustable spray angle from 5° to 62°
- Up to 12 metre reach
- Lock OFF to prevent accidental spraying
- ½" hose swivel and hose clamp standard

Model 100, 100 bar max. pressure

843195

Model 60 S, 60 bar max. pressure

843196

Model 60 L, 60 bar max. pressure

843197

Tanks



The HARDI tanks are made of tough, UV resistant polyethylene.

Features:

- Complete with lid and fitting
- Basket filter included
- Powder coated frame included

NK 200 litre

72264700

NK 300 litre

72264800

NK 400 litre

824197

NK 600 litre

824198

NK 800 litre

824199



Valves

The HARDI valves are purpose built for sprayer systems. They are resistant to most pesticides and made from UV resistant, glass reinforced nylon.

Features:

- Quick to assemble
- Excellent sealing due to radial system
- O-ring seals are made of highly chemical resistant material
- Flexibility orientation
- High flow capacity (minimal internal restrictions)
- Easy to pull apart and re-usable
- Working pressure up to 15 bar for pressure valves

Part no.

**Ball valves**

<i>S67 Two way suction</i>	72293700
<i>S93 Two way suction</i>	840110

<i>S67 Two way pressure</i>	841062
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<i>S93 Four way suction</i>	72183700
<i>S67 Four way pressure</i>	72172300

**Electric valves**

<i>S53 – S40 Solenoid</i>	262104
<i>Cover</i>	334965

<i>S93 – S67 Motor-drive bypass</i>	72374300
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See Fittings for S series fittings

www.hardi-international.com





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