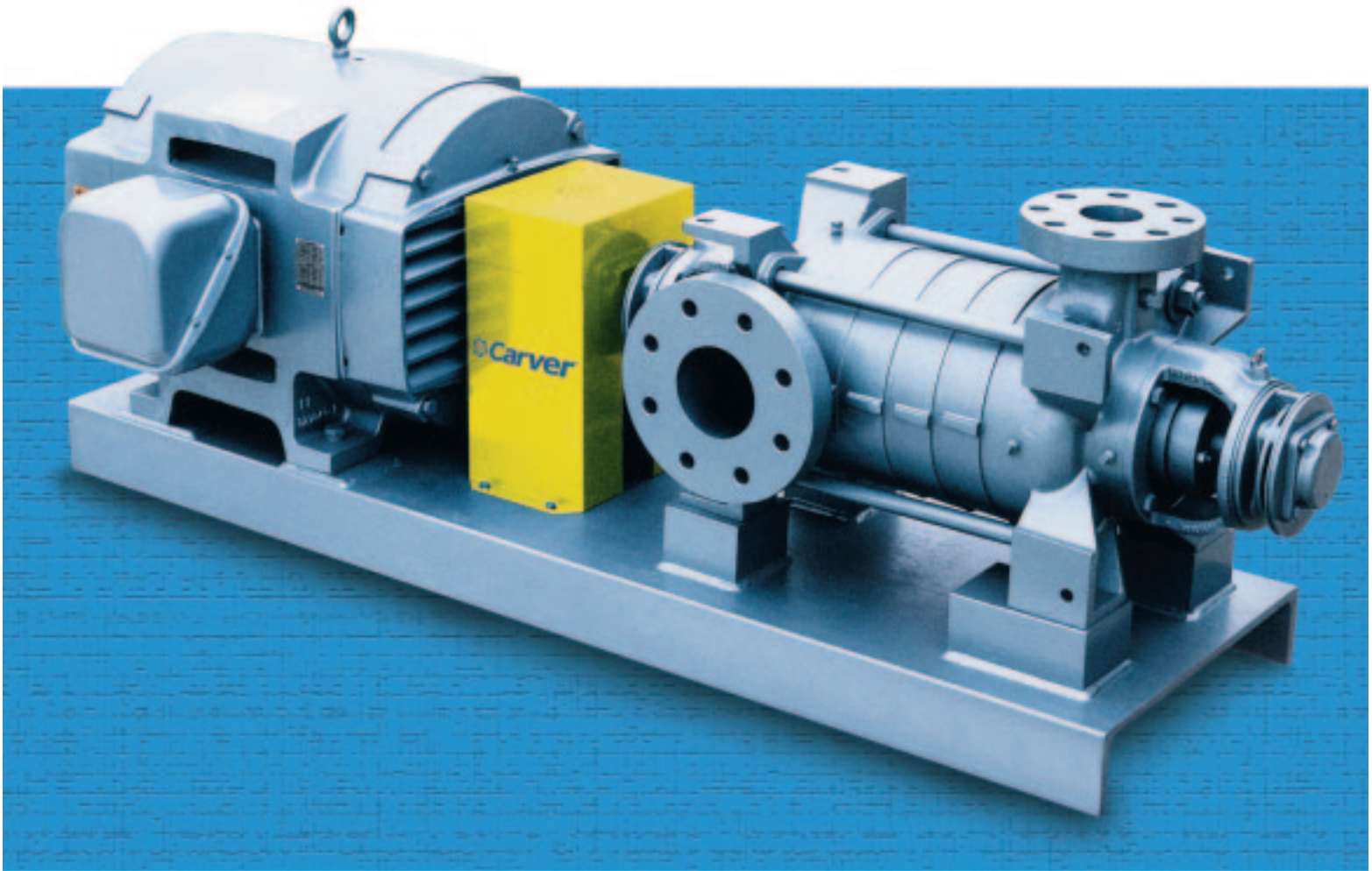


RS Series

*Multi-stage, Ring Section Pump
For Pressures to 1,500 PSI*



 **Carver®**

Creating Value.

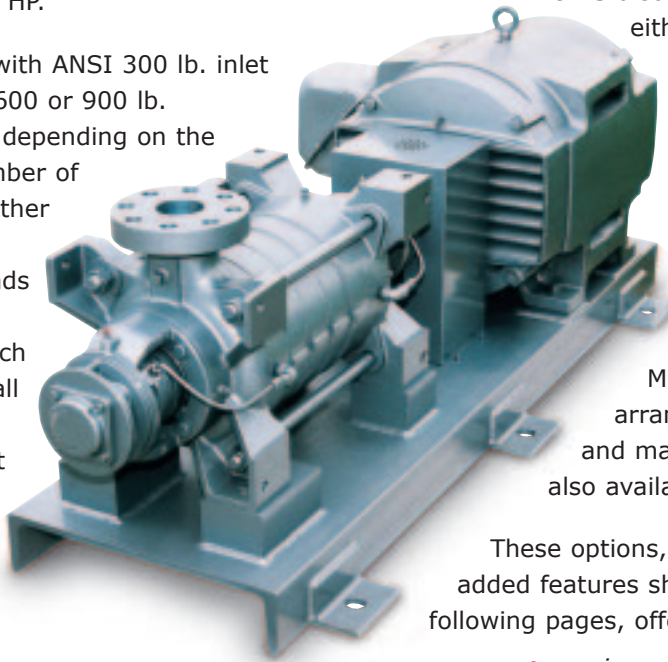
The RS Series

The RS is our new process duty, horizontal ring section multi-stage pump. Designed for moderate to high pressure pumping, the RS is available in five basic sizes with overall performance to 1,000 HP.

The RS is offered with ANSI 300 lb. inlet flanges and ANSI 600 or 900 lb. discharge flanges, depending on the pressures and number of stages involved. Either way, hydraulic performance extends to 1,400 GPM and 3,400 ft. TDH, which surpasses that of all comparable pump types and makes it ideally suited for the most demanding industrial and process services.

The RS design incorporates a product lubricated radial bearing as standard. The thrust bearings are two matched angular contact ball bearings located at the inboard (suction) end of the pump with a product lubricated, antimony impregnated carbon sleeve type radial bearing at the outboard (discharge) end. For units with an optional outboard mechanical seal, the angular contact

ball bearings move to the outboard end and a ball bearing is added at the inboard end for handling any radial loads.



The RS also offers the choice of either grease or oil lubricated thrust bearings. The greased bearings are the regreasable type, and the oil lubricated bearings include a further option of external water cooling for high temperature operation.

Many other options and arrangements, such as turbine and magnetic drive units, are also available.

These options, together with all the value-added features shown on the following pages, offer the benefits of:

- *maximum safety*
- *maximum installation flexibility*
- *maximum fluid compatibility*
- *higher efficiencies*
- *longer component life*
- *minimal down time*

that together all work to lower your total costs of ownership.

Hydraulics

- Flows to 1,400 US GPM (320 m³/hr)
- Heads to 3,400 feet (1,000 m)
- Pressures to 1,500 psig (100 bar)
- Temperatures from -20°F to 410°F (-30°C to 210°C)
- Speeds to 3,500 RPM



Applications

- Agriculture irrigation
- Boiler feed
- Chemical and light hydrocarbon transfer
- Coating and surface treatment
- Desalination and reverse osmosis
- High rise building sprinklers
- Large vehicle washers
- Paper mill shower water
- Pressure boosting systems
- Sanitary wash down services
- Ski resort snowmaking systems
- Rotating equipment lube and seal oil supply

O-Ring

O-ring seal and inter-impeller leak-free

Stuffing Box

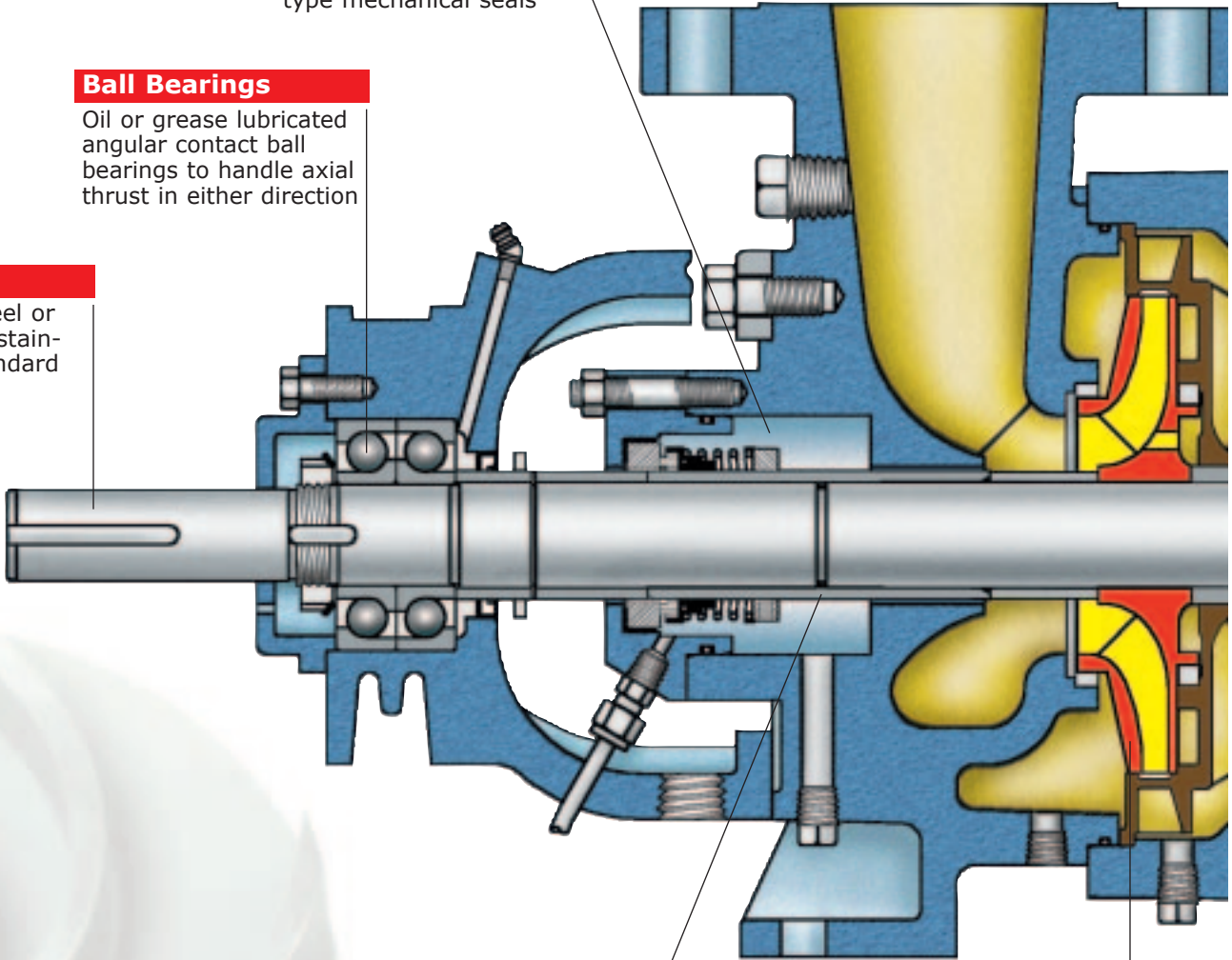
Accepts either component or cartridge type mechanical seals

Ball Bearings

Oil or grease lubricated angular contact ball bearings to handle axial thrust in either direction

Shafts

416 stainless steel or 17-4 pH duplex stainless steel as standard



Shaft Sleeves

316 stainless steel shaft sleeves as standard

Low NPSH

Special first stage impellers designed for low NPSH requirements

O-Rings

O-ring sealed casing and interstages assure leak-free operation

Flanges

ANSI 300 lb. inlet flange and Class 600 or 900 lb. discharge flanges

Casing

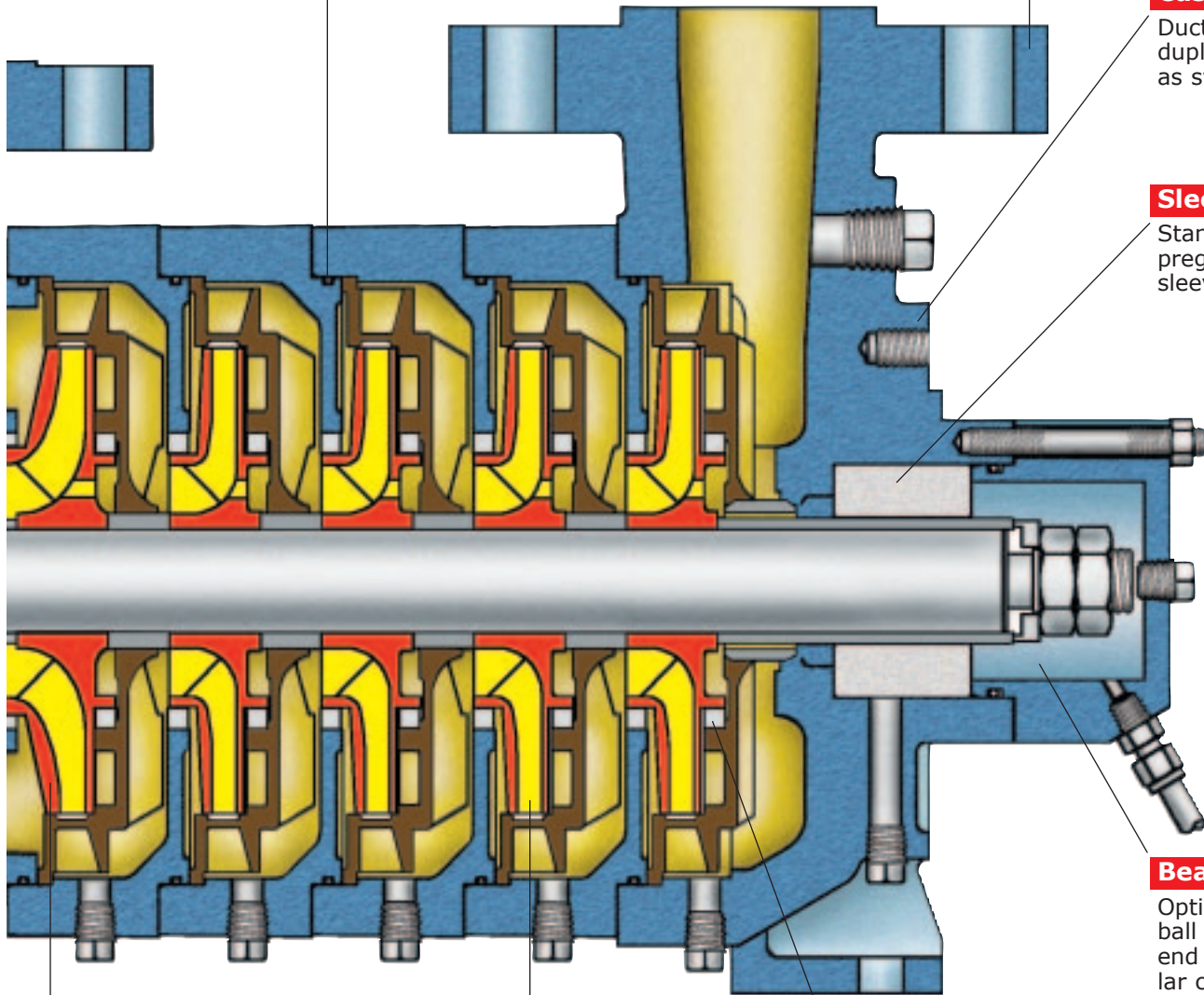
Ductile iron or Cd4MCu duplex stainless steel as standard

Sleeve Bearings

Standard antimony impregnated carbon radial sleeve type bearing

Bearing Options

Optional grooved radial ball bearing on inboard end with matched angular contact ball bearings on outboard end



SH

1st stage designed for requirements

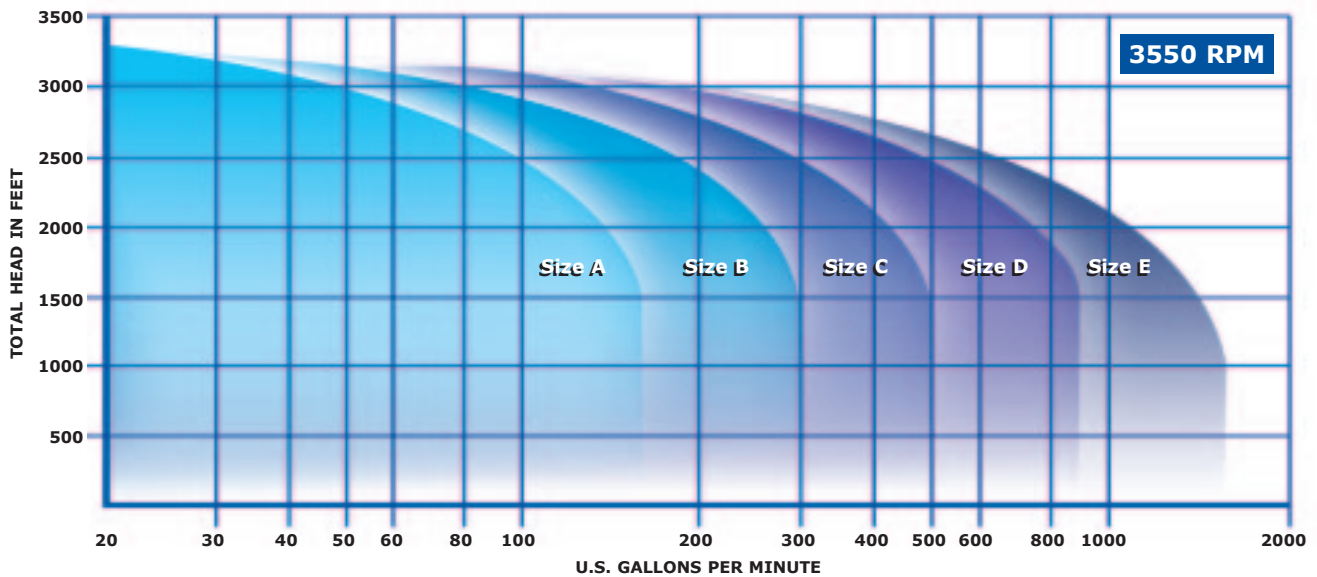
Impellers

Fully enclosed, low specific speed radial flow type – individually balanced to stringent ISO G2.5 standards

Wear Rings

Replaceable ductile iron or antimony impregnated carbon front and rear wear rings at each pump stage as standard

Hydraulic Coverage



Why an RS?

Reasons for selecting an RS pump over a single impeller pump for higher head applications are:

- the peripheral (tip) speed required with a single impeller pump can exceed the structural limitations of the impeller material
- the radial and axial loading on a single impeller pump can be excessive
- the impeller of a single stage pump is very difficult to cast, given the large D_2/B_2 ratio of diameter to thickness required
- the diameter required with a single impeller pump would be very difficult to balance
- the NPSH required with a high speed, single impeller pump will be significantly higher than that of a multi-stage pump

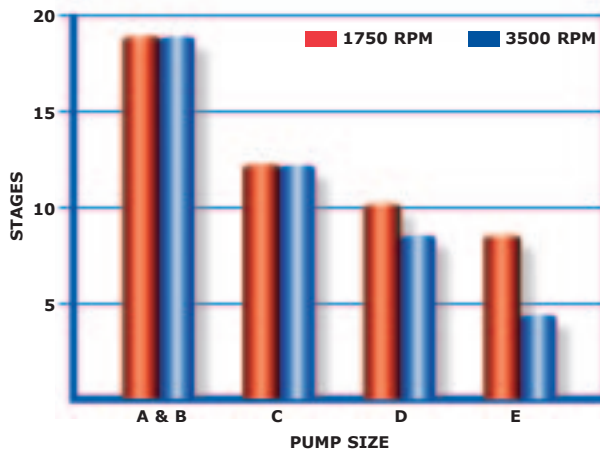
Standard Materials

- Casing Ductile iron or CD4MCu
- Impeller/Diffuser Cast iron or CD4MCu
- Shaft..... 416 SS or 17-4 PH SS
- Sleeve Bearing Antimony impregnated carbon
- Wear Rings Ductile iron or antimony/carbon

Mechanical Data

- Rotation Clockwise as standard
- Flange Positions..... 3 positions for each
- Suction Flange 300 lb. ANSI R.F.
- Discharge Flange 600 or 900 lb. ANSI R.F.
- Radial Bearing L_{10} Life 100,000 hours
- Thrust Bearing L_{10} Life..... 50,000 hours

Number of Stages



Approval Certification Number 95-370



Since we built our first pumps in 1938, the Carver name has become synonymous with value. Today we are recognized as one of the world's leading centrifugal pump companies, building pumps to the most demanding engineering specifications and military standards in the world.

Our company is located in Muscatine, Iowa, 25 miles southwest of the Quad Cities area. Our operations there include some of the most modern manufacturing equipment and pump development software available, and we are committed to the highest quality possible in our products and our people. Along these lines, Carver was also one of the first American pump companies to attain ISO 9001 certification-the most recognized standard for quality in the world.

From an applications standpoint Carver has traditionally built pumps for water, oil, and chemicals for both the public and private sectors. Our product line includes both horizontal and vertical end suction, multi-stage, axial split case, self-priming, API, and solids-handling pumps that all carry the same Carver trademark: lasting value from solid, straightforward designs engineered to provide many years of service.

These pumps are also backed by unparalleled aftermarket support. Our network of stocking distributors, manufacturer's representatives and certified service centers throughout the world means that no matter where your pump may be installed, there are local sales and service people ready to support your aftermarket needs.



Carver Pump Company

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WITH PRIDE