

by JP Group Automotive

Stainless Steel Heat Exchangers & exhausts for Porsche®



## JP GROUP COMPANY

#### A STRONG FAMILY

Based in Viborg, Denmark, JP Group a/s has been a 100 % family-owned company since the foundation in 1975. Today, JP Group is one of the world's leading companies on the aftermarket, producing and selling high-quality spare parts and accessories for European and Asian cars to customers in more than 90 countries. Our product range covers more than 30.000 item numbers, which all follow strict OE quality standards. Moreover, we are one of the preferred suppliers of exclusive spare parts and accessories for classic cars from VAG and Porsche.

### EXTENSIVE PRODUCT RANGE

Our product range covers high-quality components for a very wide spectrum of vehicles as e.g. brakes, filters, steering and suspension parts, rubber metal parts, electrical parts, starters, turbo chargers, water pumps and many others. Furthermore, we produce high-quality exhaust systems and body parts in a Viborg-based factory of our associate company Johs. Pedersen a/s. Apart from own production, we import spare parts from major manufacturers in more than 45 different countries.

#### FOCUS ON QUALITY

To meet the expectations of our customers and to ensure a high quality of all our products, we have established quality departments in Denmark and China. We also conduct sample tests and provide long-term installation in cars. Last but not least our quality system is certified with ISO 9001.

### CONSTANT DEVELOPMENT

With a total of more than 42.000 m2 for production and warehouse facilities, we can guarantee a high delivery rate within all product categories. As a major step towards our future development and to be as close to our customers as possible, we have expanded our international sales team. Today, we have 17 highly-trained sales managers around the world. We also support our customers with a variety of different sales and marketing materials. We offer brochures for all product categories as print and online version – including the possibility to generate personal catalogues. The complete assortment is also available on our own webshop.





# PRODUCTION

TIG welding process performed by highly skilled welders with OEM certificates.

٧

>



Precise spot welding procedure ensures perfect fit and finish.



Still done carefully and by hand; matt polishing process of tubing.





## PRODUCTION





### Λ

A state of the art quality SSI heat exchangers consists of more than 20 different components: all cared about until the last operation.

### ٨

Job well done - rolling SSI heat exchanger jigs ready for transportation to our logistic centre for solid packaging suitable for all kind of transportation.

## FEATURES

CONSTRUCTION ENTIRELY OF AISI 321/EN4541 TITANIUM STABILISED STAINLESS STEEL

### STATE OF THE ART HEADER DESIGN

All six primary tubes are equal in centerline lenght to 7.9 mm absolute, vs original equipment variances of 95.3 mm. All tubing is three ball mandrel bent to aircraft tolerences on computer controlled tube benders to assure consistent tube inside diameters. Gas flow rates exceed O.E. by 9.8% and are balanced within 1.7%. All turbulence inducing compound bends have been eliminated from the design.

### ONE PIECE HEADER PRIMARY TUBES

Primary header tubes contained in the heat exchanger ducting are made of one piece Eddy currently tested AISI 321/EN4531 titanium stabilised stainless steel. There are no internal weld joints made during fabrication.

### HIGHLY FUNCTIONAL DUCTING

Heater ducting is precisely formed of low thermally conductive 0.75 mm AISI 304 stainless steel. It is carefully fitted to the header heat source to minimize leakage. The identical alloy ducting and header materials have like thermal expansion rates which prevent stretching and loosening of the ducting on the headers.

### ABSOLUTELY THE HIGHEST QUALITY HEAT EXCHANGERS MADE ANYWHERE, BY ANYONE, AT ANY PRICE

These parts are beautiful to look at, and a joy to install. Every detail has been attended to. The sheet metal is formed and trimmed on Class A perminate tooling. Welding is argon shielded Tungsten Inert Gas (TIG), and high energy spot welding. Precise fixturing is used in all assembly processes. Materials are only prime quality. SSI has manufactured and sold far more heat exchangers for Porsche<sup>®</sup> cars than any other after-market manufacturer in the world. Production began in 1976, and our last known defect was in February, 1978.

### BENEFITS

### LONG LIFE

Expected life in the severest conditions (road salt) is 20-30 years.

### HIGHER POWER OUTPUT

Output is increased particularly in the low and middle RPM ranges. The design makes power by minimizing intake charge disturbances at valve overlap, and increasing the **exhaust gas extraction effect.** The volumetric efficiency, and thereby the power output is increased. The SSI headers are significantly improved versions of the basic header design used by Porsche<sup>®</sup> on all normally aspirated six cylinder competition engines.

### CARBON MONOXIDE SAFE

Unlike all other aftermarket heat exchangers, the SSI heat exchanger headers are made to minimize the possibility that engine produced acids will internally corrode the enclosed primary tubes, thereby allowing carbon monoxide to enter the passenger compartment. The AISI 304 stainless steel tubing is highly resistant to the byproducts of combustion. We use only one piece primary tubes, eliminating the possibility of hand-made welds cracking, and the resulting carbon monoxide leaks.

### **COMPETETIVE PRICING**

More heat, faster, and no rattles Radiated heat loss is reduced 46% due to the low thermal conductivity of the ducting. Operating temperature is reached 42% faster. Heat loss due to leakage is reduced to near zero. The passenger compartment will warm up faster, and to a higher temperature. The defroster will clear the windshield in slightly more than half the time previously required. Thermocycle will not loosen the ducting and create leakage and ducting rattles.

# REDUCED INSTALLATION TIME, ENHANCED VEHICLE VALUE

SSI heat exchangers fit perfectly. Installation time and costs are reduced. They will never need to be replaced, as they will outlive the vehicle on which they are installed. Their unequalled quality, performance, and longevity will enhance the value of a Porsche<sup>®</sup> throughout its life.



## CONVERSIONS SYSTEMS FOR 911 2.7, 3.0, 3.2\*, 3.6



SSI heat exchangers will increase engine torque and horsepower throughout the RPM range when used on 2.7-3.2 L 911 engines. The greatest gain is between 2000 and 4500 RPM. Normal torque improvement at 3000 RPM is +30 ft. lbs. on a 3.0 911 SC engine.

The unsolicited dynomometer test shown at the left side was performed by AUTOTHORITY, of Fairfax VA.

The lower curve represents a stock USA 3.2 Carrera engine with the ill-designed original crossover system.

The curve immediately above it demonstrates the same engine with the SSI conversion system, and a Veloz performance chip.

The shaded area between the two curves represents the torque gain between 2500 and 6000 RPM.

The third curve from the bottom represents a 3.2 Carrera engine modified with IDA Webers, a 35° advance @ 6000 RPM distributor, and ERH 38 mm I.D. racing headers.

The top curve is the torque curve of the same engine except with SSI heat exchangers. This is an illustration of how 35 mm I.D. SSI heat exchangers compare with the most popular 38 mm I.D. racing headers. Please note that the SSI heat exchangers made significantly MORE POWER THROUGHOUT THE RPM RANGE than the best name in racing headers! The power gain is made without a noise penalty, or loss of passenger compartment and defroster heat.

\* Not legal for pollution controlled highway driven vehicles in California.



## **HEAT EXCHANGERS**





91.911SSI (1623104910) Heat exchanger set, stainless steel, left/right

Europe/ USA: Porsche® 911, 2.0-2.4, 64-74 (carb.), 69-71 (inj.) Porsche® 911, 2.0-2.4, 66-71 (carb.), 69-71 (inj.) Porsche® 911, 2.7, 74-76 Porsche® 911, 3.0, 78-83 Porsche® 911, 2.7, 75-76 | Porsche® 911, 3.0, 78-79



91.913SSI (1623105010) Heat exchanger set, stainless steel, left/right

Europe/USA: Porsche® 911, 2.2-2.4, 72-74 Porsche® 911 Carrera, 2.7, 74-76 Porsche® 911, 2.2-2.4, 72-74







USA: Porsche<sup>®</sup> 911, 3.0 (Conversion\*), 80-83 \*For further details please see chart and text



91.917SSI (1623105210) Heat exchanger set, stainless steel, left/right

Europe/USA: Porsche<sup>®</sup> 911, 3.2 (Conversion<sup>\*</sup>), 84-89 For this set oil pipes 911.107.729.10 and 911.107.739.10 are available from our Dansk programme. \*For further details please see chart and text



91.936SSI (1623105310) Heat exchanger set, stainless steel, left/right

Europe/USA: Porsche<sup>®</sup> 911, 3.6, installed in 65-89 chassis. Requires further modification to install.





91.914SSI (1623105410) Heat exchanger set, stainless steel, left/right

Europe/USA: Porsche<sup>®</sup> 914/4, 2.0, 72-75

## **HEAT EXCHANGERS**





## **EXHAUSTS**





90.001SSI (1623200670) Heat control box, Stainless Steel, left

Europe/USA: 911 Carrera, 3.2, 83-86 911 S, 2.4, 71-73 911 SC/911 Carrera, 2.7-3.0, 75-83 911 SC Turbo, 3.3, 78-86 911 T/E/S, 2.0-2.4, 63-73

911, 2.7, 73-75 911 S, 2.7, 73-75 911 Carrera, 2.7, 73-75 912, 1.6, 65-69



90.002SSI (1623200680) Heat control box, Stainless Steel, right

Europe/USA: 911 Carrera, 3.2, 83-86 911 S, 2.4, 71-73 911 SC, 2.7-3.0, 75-83 911 Carrera, 2.7-3.0, 75-83 911 SC Turbo, 3.3, 78-86

911 T/E/S, 2.0-2.4, 63-73 911, 2.7, 73-75 911 S, 2.7, 73-75 911 Carrera, 2.7, 73-75 912, 1.6, 65-69



90.005SSI (1623200770) Heat control box, El-engine, stainless steel, left

Europe/USA: 911, 3.2-3.3, 86-89



90.006SSI (1623200780) Heat control box, El-engine, stainless steel, right

Europe/USA: 911, 3.2-3.3, 86-89



90.009SSI (1623250201) Connecting piece, heat control box, stainless steel

Europe/USA: 911, 2.7-3.3, 73-86



92.201SSI (1620611800) Rear exhaust, stainless steel. With TÜV/EEC approval. 1 inlet, not suitable for SSI heat exhangers.

Europe/USA: 911 Carrera, 3.2, 83-89 911 SC/ 911 Carrera, 2.7-3.0, 75-83

## **EXHAUSTS**





92.210SSI (1620611200) Rear exhaust, stainless steel. With TÜV/EEC approval

Europe/USA: 911 S (mech. injection), 2.4, 71-73 911 T/E/S (not mech. injection), 2.0-2.4, 63-73



92.211SSI (1620611300) Rear exhaust, stainless steel. With TÜV/EEC approval

Europe/USA: 911/ 911 S/911 Carrera, 2.7, 73-75 911 (conversion), 3.0, 75-83



92.512SSI (1620611600) Exhaust, Sport, single 60 mm outlet pipe, stainless steel

Europe/USA: 911 Carrera Sport, 3.2, 83-89



92.212ASSI (1620801800) Racing exhaust with bolt-on inlet flanges. Stainless steel.

Europe/USA: 911 S, 2.4, 71-73 911 T/E/S, 2.0-2.4



92.514SSI (1620611700) Exhaust, Sport, heat exchanger conversion, stainless steel

Europe/USA: 911 Carrera Sport, 3.2, 83-89



91.410SSI (1620612400) Rear exhaust. With dual center outlet pipes, stainless steel

Europe/USA: 914/6, 2.0, 69-73 911, 2.0-2.4, 63-73

# EXHAUSTS CONVERSION SET





Europe/USA: 911, 2.7-3.0, 73-83



## **METAL BAND**







93011117500 (1621401980) Exhaust metal band, 648 mm, right, stainless steel.

Europe/USA: 911 Carrera, 3.2, 83-89 <u>911 SC/911 C</u>arrera, 2,7-3.0, 75-83