SACHS Racing SP 1

Technical Features:

- Gas pressurized mono tube construction
- Independent mounting position
- Bending resistant Ø 15mm dia. piston rod
- Lightweight aluminum outer tube with a highly wear resistant hard coated surface
- Adjustable thread spring seat, anodised
- Low internal friction for instantly responsive damping
- Choice of Ø 12.7mm or Ø 15mm mounting bolt holes
- Setting on customer requirement

Order Numbers:

- 88 1700 114 400 Ø 15.0 mm mounting hole
- 88 1700 114 401 Ø 12.7 mm mounting hole

Please note that the SP range is designed for motor sport use and specifications may change without prior notice.

Ø = Diameter
SACHS Racing SP1

Order Example: 88 1700 114 400 - 203 - E - 300 / 150

Order Example: 88 1700 114 401 - 203 - E - 300 / 150

Ø = Diameter
All dimensions in mm
RACING SHOCKS
PERFORMANCE SUSPENSION SYSTEMS

ID Letter
Stroke 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200
L1 143 235 195
L2 153 245 205
L3 163 255 215
L2 173 265 225
L3 183 275 235
L2 193 285 245
L3 203 305 265
L2 213 325 285
L3 223 345 275
L2 233 365 295
L3 243 385 295
L2 253 405 325
L3 263 425 345
L2 273 445 365
L3 283 465 385
L2 293 485 405
L3 303 500 425
L2 313 525 445
L3 323 545 465
L2 333 565 485

Order Example: 88 1700 114 400 - 203 - E - 300 / 150
part number
damping performance
rebound / bump (in daN)
according to customer specification or sample

All dimensions in mm

SACHS Racing SP1
Setting Examples

SACHS Racing SP 1

Available settings for compression- and rebound- damping.

Choose combination from diagram above, i.e.

<table>
<thead>
<tr>
<th>Bump</th>
<th>Rebound</th>
</tr>
</thead>
<tbody>
<tr>
<td>250 daN</td>
<td>100 daN</td>
</tr>
</tbody>
</table>

If requested, a special setting is possible.
SACHS Racing SP2

Adjustable Performance Shock Absorber

Technical Features:

- Gas pressurized mono tube construction
- No external compensation reservoir required
- Independent bump and rebound adjustment
- Infinitely adjustable rebound
- Four different basic settings available
- Large Ø 15mm dia. hard chromed solid piston rod
- Bump damping adjustment via a grid system located at the piston rod
- Lightweight aluminum outer tube with a highly wear resistant hard coated surface
- Adjustable aluminum spring seat, anodised
- Low internal friction for instantly responsive damping
- Low clearance PTFE lined rose joints with a Ø mm mounting hole

Order Number:

00 1700 114 402

Please note that the SP range is designed for motor sport use and specifications may change without prior notice.

Ø = Diameter
SACHS Racing SP2

Order Example: 88 1700 114 402 - 203 - E - 2 - 8

$\Phi = \text{Diameter}$

All dimensions in mm
### SACHS Racing SP2

**Order Example:** 88 1700 114 402 - 203 - E - 2 - 8

| ID Letter | A | B | C | D | E | F | G | H | I | K | L | M | N | O | P | R | S |
|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stroke    | 38| 48| 58| 68| 78| 88| 98| 108| 118| 128| 138| 148| 158| 168| 178| 188| 198|
| L1        | L2| L3| L2| L3| L2| L3| L2| L3| L2| L3| L2| L3| L2| L3| L2| L3| L2| L3| L2| L3 |
| 143       | 235| 197 |
| 153       | 245| 207| 255| 207 |
| 163       | 255| 217| 265| 217| 275| 217 |
| 173       | 265| 227| 275| 227| 285| 227| 295| 227 |
| 183       | 275| 237| 285| 237| 295| 237| 305| 237| 315| 237 |
| 193       | 285| 247| 295| 247| 305| 247| 315| 247| 325| 247| 335| 247 |
| 203       | 305| 257| 315| 257| 325| 257| 335| 257| 345| 257| 355| 257 |
| 213       | 325| 267| 335| 267| 345| 267| 355| 267| 365| 267| 375| 267 |
| 223       | 345| 277| 355| 277| 365| 277| 375| 277| 385| 277| 395| 277 |
| 233       | 365| 287| 375| 287| 385| 287| 395| 287| 405| 287| 415| 287 |
| 243       | 385| 297| 395| 297| 405| 297| 415| 297| 425| 297| 435| 297 |
| 263       | 425| 317| 435| 317| 445| 317| 455| 317| 465| 317| 475| 317 |
| 273       | 445| 327| 455| 327| 465| 327| 475| 327| 485| 327| 495| 327 |
| 283       | 465| 337| 475| 337| 485| 337| 495| 337| 505| 337| 515| 337 |
| 293       | 485| 347| 496| 347| 505| 347| 515| 347| 525| 347| 535| 347 |
| 303       | 466| 356| 477| 356| 486| 356| 497| 356| 507| 356| 517| 356 |
| 313       | 486| 367| 498| 367| 508| 367| 518| 367| 528| 367| 538| 367 |
| 323       | 508| 378| 519| 378| 529| 378| 539| 378| 549| 378| 559| 378 |
| 333       | 529| 389| 540| 389| 559| 389| 569| 389| 579| 389| 589| 389 |

All dimensions in mm
Please note: These example curves represent Sachs factory settings.
Setting Instructions
SACHS-Racing Shock Absorber SP2

SACHS Racing SP2 racing shock absorbers are independently adjustable for bump and rebound.

- Presentation Type SP2
- Rebound setting located on the piston rod ①
- Bump setting located at the piston rod ② (under the cover)

How to Change the Setting:

Rebound:
The shock absorbers come with a basic setting. This is identified by a mark at the setting ring. The setting range is shown on the diagram sheet.

Bump:
Bump absorption may be adjusted by indexing depress setting stop into the guide. Turn the outer tube in the desired direction (+hard, -soft) until the index click is felt. After this adjustment, please be sure that the setting stop returns to its original position.

Rebound Adjustment Tool:
00 1795 999 031

The shock absorbers are nitrogen charged to ensure instantly responsive damping under the toughest racing conditions.
SACHS Racing SP3

Adjustable Performance Shock Absorber

Technical Features:

- Gas pressurized mono tube construction with external compensation reservoir
- Bump and rebound adjustment while installed
- Infinitely adjustable rebound
- Adjustable bump setting via grid system on the compensation reservoir
- 8 different basic settings available
- Ø 15mm dia. hard chromed solid piston rod
- Lightweight aluminium outer tube with a highly wear resistant hard coated surface
- Adjustable aluminum spring seat, anodised
- Low internal friction for instantly responsive damping
- Low clearance PTFE lined rose joints with Ø 12.7mm mounting hole

Part Number:

88 1700 114 403

Please note that the SP range is designed for motor sport use and specifications may change without prior notice.

Ø = Diameter
Setting Instructions
SACHS-Racing Shock Absorber SP3

SACHS Racing SP3 racing shock absorbers are independently adjustable for bump and rebound.

- Presentation Type SP3
- Rebound setting located on the piston rod ①
- Bump setting located on the external compensation reservoir ②

How to Change the Setting:

Rebound:
The shock absorbers come with a basic setting. This is identified by a mark at the setting ring. The setting range is shown on the diagram sheet.

Bump:
Bump absorption may be adjusted by index notches at the compensation reservoir. The direction to count the index notches starts from the softest setting (at 0).

Adjustment direction

Rebound Adjustment Tool:
00 1795 999 031

Gas Filling Tool:
00 1795 999 112

Filling Pressure of the External Compensation Reservoir
The shock absorbers are nitrogen charged to ensure instantly responsive damping under the toughest racing conditions. Checking the gas pressure should be done at 20°C and with the piston rod fully extended. Gas pressures 15 bar ± 5 bar.
SACHS Racing SP3

Order Example: 88 1700 114 403 - 203 - E - 2 - 8

- Ø 12.7
- Ø 57
- Ø 52
- 8.9
- 37
- 37
- 50
- 52
- 500mm
- L1 (body length)
- L2 max / L3 min (extended / collapse)
- bump adjuster
- rebound adjuster
- identification number, top eye

Ø = Diameter
All dimensions in mm
### SACHS Racing SP3

**Order Example:** 88 1700 114 403 - 203 - E - 2 - 8

| ID Letter | A | B | C | D | E | F | G | H | I | K | L | M | N | O | P | R | S |
|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stroke    | 38| 48| 58| 68| 78| 88| 98| 108| 118| 128| 138| 148| 158| 168| 178| 188| 198|
| L1        | 143| 235| 197| 245| 197| 245| 207| 255| 217| 285| 217| 275| 217| 285| 217| 275| 217| 285| 217|
| L2        | 153| 245| 207| 255| 207| 265| 207| 265| 207| 265| 207| 265| 207| 265| 207| 265| 207| 265| 207|
| L7        | 203| 305| 257| 315| 257| 325| 257| 335| 257| 345| 257| 355| 257| 365| 257| 375| 257| 385| 257| 395| 257|
| L8        | 213| 325| 267| 335| 267| 345| 267| 355| 267| 365| 267| 375| 267| 385| 267| 395| 267| 405| 267| 415| 267|
| L9        | 223| 345| 277| 355| 277| 365| 277| 375| 277| 385| 277| 395| 277| 405| 277| 415| 277| 425| 277| 435| 277|
| L14       | 273| 445| 327| 455| 327| 465| 327| 475| 327| 485| 327| 495| 327| 505| 327| 515| 327| 525| 327| 535| 327|
| L15       | 283| 465| 337| 475| 337| 485| 337| 495| 337| 505| 337| 515| 337| 525| 337| 535| 337| 545| 337| 555| 337|
| L16       | 293| 485| 347| 495| 347| 505| 347| 515| 347| 525| 347| 535| 347| 545| 347| 555| 347| 565| 347| 575| 347|
| L17       | 303| 505| 357| 515| 357| 525| 357| 535| 357| 545| 357| 555| 357| 565| 357| 575| 357| 585| 357| 595| 357|
| L18       | 313| 525| 367| 535| 367| 545| 367| 555| 367| 565| 367| 575| 367| 585| 367| 595| 367| 605| 367| 615| 367|
| L19       | 323| 545| 377| 555| 377| 565| 377| 575| 377| 585| 377| 595| 377| 605| 377| 615| 377| 625| 377| 635| 377|
| L20       | 333| 565| 387| 575| 387| 585| 387| 595| 387| 605| 387| 615| 387| 625| 387| 635| 387| 645| 387| 655| 387|

*All dimensions in mm*
Settings SP3

Please note: These example curves represent Sachs factory settings.
Settings SP3

Please note: These example curves represent Sachs factory settings.
SACHS Racing
Strut SPS 4

Adjustable Performance

Technical Features:

• Gas pressurized strut with external compensating reservoir

• Independent mounting position

• Infinitely adjustable rebound on top of the rod

• Bump adjustment via a grid system separated in low and high speed

• Designed for use with all uniball upper mount-bearing system

• Super strength lightweight Ø 25mm hard chromed piston rod

• Low internal friction for instantly responsive damping

• Height adjustable spring seat for use with Ø 60mm racing springs

• All part will be delivered in basic setting

• Characteristic performance curves and setting instructions included

Order Number:

Please see application list on page .

Please note that the SP range is designed for motorsport use and specifications may change without prior notice.

Ø = Diameter
Settings SPS 4

Please note: These example curves represent Sachs factory settings.
Settings SPS 4

Please note: These example curves represent Sachs factory settings.
Setting Instructions
SACHS Racing Shock Absorber SPS4

SACHS Racing SPS4 racing shock absorbers are independently adjustable for bump and rebound.

- Rebound setting located on the piston rod ①
- Bump setting located on the external compensation reservoir ②

How to Change the Setting:

Rebound:
The shock absorbers come with a basic setting. This is identified by a mark at the setting ring. The setting range is shown on the diagram sheet.

Adjustment direction

Harder (Counter-clockwise) Softer (clockwise)

Bump:
Bump absorption may be adjusted by index notches at the compensation reservoir. The direction to count the index notches starts from the softest setting (at 0).

Filling Pressure of the External Compensation Reservoir

The struts are nitrogen charged to ensure instantly responsive damping under the toughest racing conditions. Checking the gas pressure should be done at 20°C and with the piston rod fully extended. Gas pressures 5 bar ± 1 bar.

Rebound Adjustment Tool:
00 1795 999 179

Gas Filling Tool:
00 1795 999 112
SACHS Racing
Strut SPS 5

Technical Features:

- Variable tube and extended and compressed lengths
- Shuckle and size and distance of hole can be matched (depending on customer requirements)
- Supplied either gas charged or uncharged to allow specific setting requirements.
- Specification and information sheets included

Designed for Use in:

- Rallycross, Salom, Sport, Tuning, and other motor sport events
- Please note that a fully completed specification sheet must accompany your order

Order Number:

88 1500 995 400

Please note that the SP range is designed for motor sport use and specifications may change without prior notice.
SACHS Racing SPS5

Dimensions:

L1  Body length
L2  Extended length
L3  Collapsed length
L4  Thread length
L5  Bolt length
L6  Step length
L7  Bore distance
L8  Distance from bottom of outer tube to bottom of bore dia
L9  Shackler distance
L10 Long hole length for D1
L11 Long hole length for D2
D1  Bore - Ø top
D2  Bore - Ø bottom
A1  Ø below thread
A2  Ø step if available
A3  Bore distance from D1 to mid-outer tube
A4  Bore distance from D2 to mid-outer tube
dxP  nominal thread - Ø x pitch

Ø = Diameter
Setting Examples

SACHS Racing SPS 5

Available settings for compression- and rebound- damping.

Choose combination from diagram above, i.e.

<table>
<thead>
<tr>
<th>Bump</th>
<th>Rebound</th>
</tr>
</thead>
<tbody>
<tr>
<td>250 daN</td>
<td>100 daN</td>
</tr>
</tbody>
</table>

If requested, a special setting is possible.
SACHS Racing
Suspension Strut SPS 8

Adjustable Performance

Technical Features:

• Gas pressurized strut with external compensating reservoir
• Independent mounting position
• Infinitely adjustable rebound on top of the rod
• Bump adjustment via a grid system separated in low and high speed
• Designed for use with all uniball upper mount-bearing system
• Super strength, lightweight 25mm hard-chromed piston rod
• Low internal friction for instantly responsive damping
• Infinitely adjustable spring seat for use with 60mm dia. racing springs
• All parts will be delivered in basic setting
• Characteristic performance curves and setting instructions included

Order Number:

Please see application list on page .

Please note that the SP range is designed for motor sport use and specifications may change without prior notice.
Setting Instructions

SACHS Racing Shock Absorber SPS8

SACHS Racing SPS4 racing shock absorbers are independently adjustable for bump and rebound.

- Rebound setting located on the piston rod ①
- Bump setting located on the external compensation reservoir ②

How to Change the Setting:

Rebound:
The shock absorbers come with a basic setting. This is identified by a mark at the setting ring. The setting range is shown on the diagram sheet.

Adjustment direction

Harder (Counter-clockwise)  Softer (clockwise)

Mark for basic setting

Bump:
The low-speed adjustment provides 16 grids (position 1 soft; position 16 hard). The high-speed adjustment provides 11 grids and will be delivered in position 0 (position -5 soft; position +5 hard).

Rebound / Low-Speed / High-Speed

Mark for basic setting

270° / 8 / +3

Rebound / Low-Speed / High-Speed
Bump    Bump

Rebound Adjustment Tool:
00 1795 999 179

Gas Filling Tool:
00 1795 999 112

Filling Pressure of the External Compensation Reservoir

The struts are nitrogen charged to ensure instantly responsive damping under the toughest racing conditions. Checking the gas pressure should be done at 20°C and with the piston rod fully extended. Gas pressures 5 bar ± 1 bar.
SP Series Racing Shocks

Group A **

<table>
<thead>
<tr>
<th>Order Number</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audi A4 2WD &amp; Quattro</td>
<td></td>
</tr>
<tr>
<td>FA 881700 114 612</td>
<td>SP 3</td>
</tr>
<tr>
<td>RA 881700 114 403A</td>
<td>SP 3</td>
</tr>
<tr>
<td>VW Golf II/III</td>
<td></td>
</tr>
<tr>
<td>FA 881500 995 166R</td>
<td>SPS 4</td>
</tr>
<tr>
<td>FA 881500 995 167L</td>
<td>SPS 4</td>
</tr>
<tr>
<td>RA 881700 114 199</td>
<td>SP 3</td>
</tr>
<tr>
<td>VW Golf II/III - Rally</td>
<td></td>
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<tr>
<td>FA 881500 995 173L</td>
<td>SPS 4</td>
</tr>
<tr>
<td>FA 881500 995 174R</td>
<td>SPS 4</td>
</tr>
<tr>
<td>RA 881700 114 200</td>
<td>SP 3</td>
</tr>
</tbody>
</table>

** Group A and DTC Series Racing Shocks are designed for race car applications with custom position points and may not be installed on production vehicles without chassismodification.

Group N

<table>
<thead>
<tr>
<th>Order Number</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMW E36 - Gr. N</td>
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<tr>
<td>FA 881500 995 228R</td>
<td>SPS 4</td>
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<tr>
<td>FA 881500 995 229L</td>
<td>SPS 4</td>
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<tr>
<td>RA 881700 114 320</td>
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<td>BMW E46 - Gr.N</td>
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<td>FA 881500 995 396R</td>
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<tr>
<td>FA 881500 995 395L</td>
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<tr>
<td>RA 881700 114 587</td>
<td>SP 3</td>
</tr>
<tr>
<td>VW Golf IV - Gr. N</td>
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</tr>
<tr>
<td>FA 881500 995 235</td>
<td>SPS 4</td>
</tr>
<tr>
<td>RA 881700 114 299</td>
<td>SP 3</td>
</tr>
</tbody>
</table>

Abbreviations

FA  Front Axle
RA  Rear Axle
R   Right
L   Left