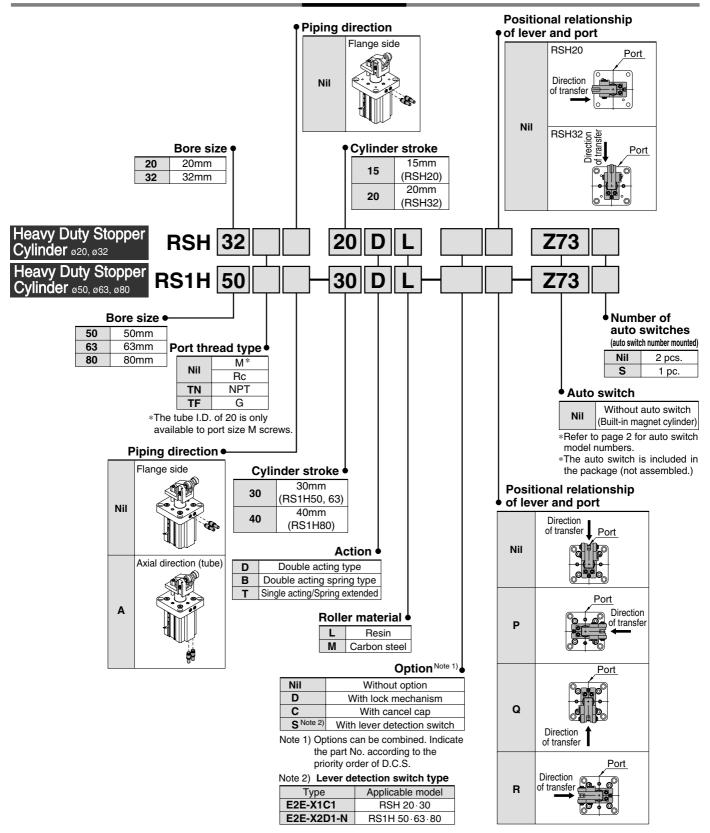


How to Order



Heavy Duty Stopper Cylinder Series RSH/RS1H

Applicable auto switches/Refer to pages 10 through 15 for detailed auto switch specifications.

| | | | light | | | Load vo | ltage | Auto swite | h models | Lead wir | re lengt | h (m) * | | | |
|-------------|---------------------------------------|---------------------------------------|-----------------|-----------------------|---------|---------|--------------|---------------|---------------|-----------|-----------|-----------|---------------|-----------|--|
| Туре | Special function | Electrical entry | Indicator light | Wiring (output) | | DC | AC | Electrical en | try direction | 0.5 | 3 | 5 | Applica | able load | |
| | | · · · · · · · · · · · · · · · · · · · | Indic | | | DC | AC | Perpendicular | In-line | (Nil) | (L) | (Z) | | | |
| itch | | | Yes | 3-wire (NPN equiv) | — | 5V | — | _ | Z76 | | • | - | IC circuit | _ | |
| Reed switch | — | Grommet | 100 | 2-wire | 24V | 12V | 100V | — | Z73 | \bullet | \bullet | \bullet | — | Relay, | |
| Ree | | | No | 2-wire | 240 | 5V, 12V | 100V or less | _ | Z80 | | | - | IC circuit | PLC | |
| | | | | 3-wire (NPN) | 5V. 12V | | | Y69A | Y59A | | • | 0 | IC | | |
| tch | — | | | 3-wire (PNP) | | 50, 120 | | Y7PV | Y7P | | | 0 | circuit | | |
| switch | | | | 2-wire | | 12V | | Y69B | Y59B | \bullet | • | 0 | — | Relay, | |
| state | Diagnostic indication | Grommet | Yes | 3-wire (NPN) | 24V | 5V, 12V | — | Y7NWV | Y7NW | \bullet | • | 0 | IC | PLC | |
| d st | (2-color display) | | | 3-wire (PNP) | | 50, 120 | | Y7PWV | Y7PW | | • | 0 | circuit | | |
| Solid | | | | 2-wire | | 12V | | Y7BWV | Y7BW | | • | 0 | _ | | |
| 0, | Water resistance (2-color display) | | | Z-wire | | 120 | | _ | Y7BA | _ | • | 0 | | | |

*Lead wire length symbols: 0.5m·······Nil (Example) Y69B 3m········L (Example) Y69BL 5m······Z (Example) Y69BZ

**Solid state switches marked with a " \bigcirc " symbol are produced upon receipt of order.



RSH



RS1H

| Specifications |
|----------------|
|----------------|

| | Model | R | SH | | RS1H | | | | |
|-----------------------------|----------------------|------------------------------------|-----------------|-----------------|-----------------|---------------|--|--|--|
| Bore size (| (mm) | 20 | 32 | 50 | 63 | 80 | | | |
| Action | | Double actir | ig, Double acti | ng spring, Sing | gle acting (Spr | ing extended) | | | |
| Style of roo | d end | | Lever with b | uilt-in shock a | bsorber type | | | | |
| Fluid | | | | Air | | | | | |
| Proof pres | sure | | | 1.5MPa | | | | | |
| Max. opera | ating pressure | 1.0MPa | | | | | | | |
| Ambient a | nd fluid temperature | -10 to 60°C (with no condensation) | | | | | | | |
| Lubrication | ı | Not required (non-lube) | | | | | | | |
| Cushion | | | F | Rubber bumpe | r | | | | |
| Stroke leng | gth tolerance | | | +1.4 | | | | | |
| Mounting | | Flange | | | | | | | |
| | For use in Japan | M5 x 0.8 | Rc 1/8 | Rc 1/8 | Rc 1/4 | Rc 1/4 | | | |
| Port size For use in U.S.A. | | - | NPT 1/8 | NPT 1/8 | NPT 1/4 | NPT 1/4 | | | |
| | For use in Europe | - G 1/8 G 1/8 G 1/4 G | | | | | | | |
| Auto switc | h | Can be installed | | | | | | | |

Bore size, Standard strokes

| (| n | n | r | γ | | |
|----|-----|---|---|---|---|--|
| ۰. | • • | | • | • | • | |

| Model | Bore size (mm) | Standard stroke |
|-------|----------------|-----------------|
| DEL | 20 | 15 |
| RSH | 32 | 20 |
| | 50 | 30 |
| RS1H | 63 | 30 |
| | 80 | 40 |

Weights

(kg)

| Action | Rod end configuration | Bore size (mm) | Weight |
|--|--|-------------------|--------|
| | | 20 | 0.41 |
| Double acting type Double acting spring type Single acting spring extended | Laura and the baseling in | 32 | 0.75 |
| | Lever with built-in shock absorber type | 50 | 2.03 |
| | | 63 | 3.56 |
| | | 80 | 6.33 |

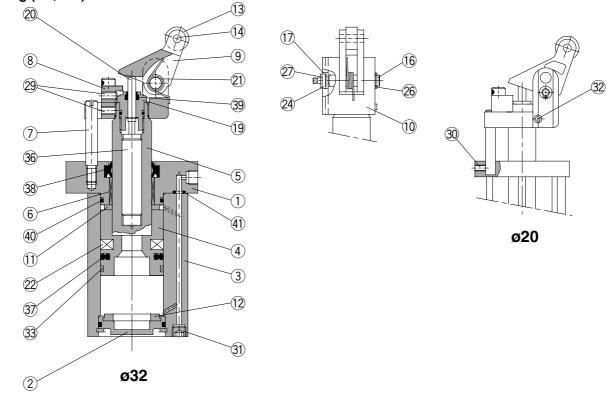


Series RSH/RS1H

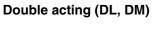
Construction

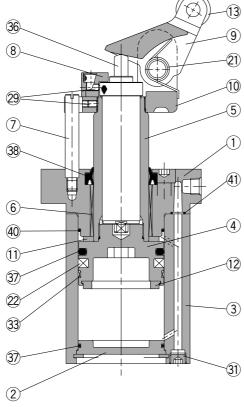
ø20, ø32

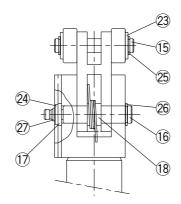
Double acting (DL, DM)



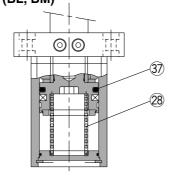
ø50, ø63, ø80



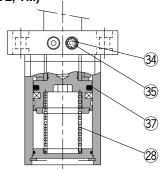




Double acting spring type (BL, BM)



Single acting spring extended (TL, TM)



SMC \$

Construction

Parts list (Single acting)

| 2 Bottom plate Aluminium alloy Chroma 3 Cylinder tube Aluminium alloy Hard anod 4 Piston Aluminium alloy Chroma 5 Piston rod o20: Stainless steel Hard chromium elector 6 Bushing Bronze alloy Hard chromium elector 7 Guide rod Carbon steel Hard chromium elector 8 Stopper screw Stainless steel 9 9 Lever Carbon steel Nickel pla 10 Lever holder Carbon steel Nickel pla 11 Bumper A Urethane rubber | | | | |
|--|-----|-------------------------------|----------------------------------|--|
| 2 Bottom plate Aluminium alloy Chromat 3 Cylinder tube Aluminium alloy Hard anod 4 Piston Aluminium alloy Chromat 5 Piston rod ø20: Stainless steel Hard chromium elect 6 Bushing Bronze alloy Hard chromium elect 7 Guide rod Carbon steel Hard chromium elect 8 Stopper screw Stainless steel Mickel pla 10 Lever holder Carbon steel Nickel pla 11 Bumper A Urethane rubber Inckel pla 12 Bumper B Urethane rubber Inckel pla 13 Roller Carbon steel Inclue 14 Spring pin Carbon steel Inclue 15 Roller pin Carbon steel Ø20, 32 o 16 Lever pin Carbon steel Ø20, 32 o 17 Ring A Aluminium alloy Clear anod 18 Ring B Aluminium alloy Clear anod 19 Adjustment dial Aluminium alloy Ø20, 32 o <t< th=""><th>No.</th><th>Description</th><th>Material</th><th>Note</th></t<> | No. | Description | Material | Note |
| 3 Cylinder tube Aluminium alloy Hard anod 4 Piston Aluminium alloy Chromation 5 Piston rod e20: Stainless steel Hard chromium election 6 Bushing Bronze alloy Hard chromium election 7 Guide rod Carbon steel Hard chromium election 8 Stopper screw Stainless steel Nickel plating 9 Lever Carbon steel Nickel plating 10 Lever holder Carbon steel Nickel plating 11 Bumper A Urethane rubber Urethane rubber 12 Bumper B Urethane rubber Image: Steel of the steel | 1 | Rod cover | Aluminium alloy | Metallic painted |
| 4 Piston Aluminium alloy Chroma 5 Piston rod ø20: Stainless steel Hard chromium elect 6 Bushing Bronze alloy Proze alloy 7 Guide rod Carbon steel Hard chromium elect 8 Stopper screw Stainless steel Nickel pla 9 Lever Carbon steel Nickel pla 10 Lever holder Carbon steel Nickel pla 11 Bumper A Urethane rubber | 2 | Bottom plate | Aluminium alloy | Chromate |
| 5 Piston rod ø20: Stainless steel Hard chromium elect 6 Bushing Bronze alloy Hard chromium elect 7 Guide rod Carbon steel Hard chromium elect 8 Stopper screw Stainless steel Hard chromium elect 9 Lever Carbon steel Nickel pla 10 Lever holder Carbon steel Nickel pla 11 Bumper A Urethane rubber Image: Steel 12 Bumper B Urethane rubber Image: Steel 13 Roller Resin Image: Steel 14 Spring pin Carbon steel 020, 32 o 15 Roller pin Carbon steel 020, 32 o 16 Lever pin Carbon steel 020, 32 o 17 Ring A Aluminium alloy Clear anod 19 Adjustment dial Aluminium alloy 020, 32 o 21 Lever spring Stainless steel wire 020, 32 o 22 End rod Special steel 020, 32 o 21 Lever spring Stainless steel wire 020, 32 o | 3 | Cylinder tube | Aluminium alloy | Hard anodized |
| 5 Piston rod ø32, ø50, ø63, ø80: Carbon steel Hard chromium elect 6 Bushing Bronze alloy France alloy 7 Guide rod Carbon steel Hard chromium elect 8 Stopper screw Stainless steel Nickel pla 10 Lever holder Carbon steel Nickel pla 11 Bumper A Urethane rubber Image: Steel 12 Bumper B Urethane rubber Image: Steel Image: Steel 13 Roller Resin -Image: Steel Image: Steel 14 Spring pin Carbon steel #20, 32 o Image: Steel 16 Lever pin Carbon steel #20, 32 o 17 Ring A Aluminium alloy Clear anod 18 Ring B Aluminium alloy 620, 32 o 20 End rod Special steel ø20, 32 o 21 Lever spring Stainless steel wire Nickel pla 22 Magnet Magnet Magnet Magnet 23 Flat washer Steel wire Nickel pla 24 | 4 | Piston | Aluminium alloy | Chromate |
| 6 Bushing Bronze alloy 7 Guide rod Carbon steel Hard chromium elect 8 Stopper screw Stainless steel Nickel pla 9 Lever Carbon steel Nickel pla 10 Lever holder Carbon steel Nickel pla 11 Bumper A Urethane rubber Image: Steel stee | F | Piston rod | ø20: Stainless steel | Hard abromium algotro plating |
| 7 Guide rod Carbon steel Hard chromium elect 8 Stopper screw Stainless steel Nickel pla 9 Lever Carbon steel Nickel pla 10 Lever holder Carbon steel Nickel pla 11 Bumper A Urethane rubber | | | ø32, ø50, ø63, ø80: Carbon steel | riaid chiomium electro plating |
| 8 Stopper screw Stainless steel 9 Lever Carbon steel Nickel pla 10 Lever holder Carbon steel Nickel pla 11 Bumper A Urethane rubber 12 Bumper B Urethane rubber 13 Roller Resin M 14 Spring pin Carbon steel #20, 32 o 15 Roller pin Carbon steel #20, 32 o 16 Lever pin Carbon steel #20, 32 o 17 Ring A Aluminium alloy Clear anod 18 Ring B Aluminium alloy #20, 32 o 20 End rod Special steel #20, 32 o 21 Lever spring Stainless steel wire #20, 32 o 22 Magnet Magnet #20, 32 o 23 Flat washer Steel wire Nickel pla 24 Flat washer Steel wire Nickel pla 25 C type snap ring for shaft Carbon tool steel #27 22 Hexagon socket head set screw Chrome molybdenum steel #20 onl | 6 | <u> </u> | Bronze alloy | |
| 9LeverCarbon steelNickel pla10Lever holderCarbon steelNickel pla11Bumper AUrethane rubber12Bumper BUrethane rubber13RollerResin14Spring pinCarbon steel16Lever pinCarbon steel17Ring AAluminium alloy18Ring BAluminium alloy19Adjustment dialAluminium alloy20End rodSpecial steel21Lever springStainless steel wire22MagnetMagnet23Flat washerSteel wire24Flat washerSteel wire25C type snap ring for shaftCarbon tool steel26C type snap ring for shaftCarbon tool steel27C type snap ring for shaftCarbon tool steel28Return springPiano wire29Hexagon socket head sterewChrome molybdenum steel31Hexagon socket head plugChrome molybdenum steel33Wear ringResin34ElementBronze36Shock absorber—37Piston sealNBR38Rod sealNBR | 7 | | Carbon steel | Hard chromium electro plating |
| 10Lever holderCarbon steelNickel plate11Bumper AUrethane rubber12Bumper BUrethane rubber13RollerResinM14Spring pinCarbon steel020, 32 o15Roller pinCarbon steel020, 32 o16Lever pinCarbon steel020, 32 o17Ring AAluminium alloyClear anod18Ring BAluminium alloyClear anod19Adjustment dialAluminium alloy020, 32 o20End rodSpecial steel020, 32 o21Lever springStainless steel wire22MagnetMagnet23Flat washerSteel wire24Flat washerSteel wire25C type snap ring for shaftCarbon tool steel26C type snap ring for shaftCarbon tool steel27C type snap ring for shaftCarbon tool steel28Return springPiano wire29Hexagon socket head set screwChrome molybdenum steel30Hexagon socket head set screwChrome molybdenum steel31Hexagon socket head plugChrome molybdenum steel32Spring pinCarbon tool steel33Wear ringResin34ElementBronze36Shock absorber | 8 | | Stainless steel | |
| 11Bumper AUrethane rubber12Bumper BUrethane rubber13RollerResin14Spring pinCarbon steel15Roller pinCarbon steel16Lever pinCarbon steel17Ring AAluminium alloy18Ring BAluminium alloy19Adjustment dialAluminium alloy20End rodSpecial steel21Lever springStainless steel wire22MagnetMagnet23Flat washerSteel wire24Flat washerSteel wire25C type snap ring for shaftCarbon tool steel26C type snap ring for shaftCarbon tool steel27C type snap ring for shaftCarbon tool steel28Return springPiano wire29Hexagon socket head set screwChrome molybdenum steel30Hexagon socket head set screwChrome molybdenum steel33Wear ringResin34ElementBronze36Shock absorber—37Piston sealNBR38Rod sealNBR | 9 | | Carbon steel | Nickel plated |
| 12 Bumper B Urethane rubber 13 Roller Resin -□□L 14 Spring pin Carbon steel 020, 32 o 15 Roller pin Carbon steel 020, 32 o 16 Lever pin Carbon steel 020, 32 o 17 Ring A Aluminium alloy Clear anod 18 Ring B Aluminium alloy Clear anod 19 Adjustment dial Aluminium alloy 020, 32 o 20 End rod Special steel 020, 32 o 21 Lever spring Stainless steel wire 020, 32 o 22 Magnet Magnet 020, 32 o 23 Flat washer Steel wire 020, 32 o 24 Flat washer Steel wire Nickel pla 25 C type snap ring for shaft Carbon tool steel 0 26 C type snap ring for shaft Carbon tool steel 0 27 C type snap ring for shaft Carbon tool steel 0 28 Return spring Piano wire 0 29 Hexagon socket head set screw | 10 | | Carbon steel | Nickel plated |
| 12 Relevation Resin -III 13 Roller Resin -III 14 Spring pin Carbon tool steel Ø20, 32 o 15 Roller pin Carbon steel Ø20, 32 o 16 Lever pin Carbon steel IIII 17 Ring A Aluminium alloy Clear anod 18 Ring B Aluminium alloy Ø20, 32 o 20 End rod Special steel Ø20, 32 o 20 End rod Special steel Ø20, 32 o 21 Lever spring Stainless steel wire Ø20, 32 o 22 Magnet Magnet Ø20, 32 o 23 Flat washer Magnet Ø20, 32 o 24 Lever spring Stainless steel wire Nickel pla 25 C type snap ring for shaft Carbon tool steel Ø20 26 C type snap ring for shaft Carbon tool steel Ø20 onl 30 Hexagon socket head set screw Chrome molybdenum steel Ø20 onl 31 Hexagon socket head set screw Chrome molybdenum steel Ø20 onl | 11 | • | Urethane rubber | |
| 13 Roller Carbon steel -□□M 14 Spring pin Carbon tool steel Ø20, 32 o 15 Roller pin Carbon steel 16 16 Lever pin Carbon steel 17 17 Ring A Aluminium alloy Clear anod 18 Ring B Aluminium alloy Ø20, 32 o 20 End rod Special steel Ø20, 32 o 20 End rod Special steel Ø20, 32 o 21 Lever spring Stainless steel wire 22 22 Magnet Magnet 23 Flat washer Steel wire Nickel pla 23 Flat washer Steel wire Nickel pla 25 C type snap ring for shaft Carbon tool steel 26 C type snap ring for shaft Carbon tool steel 27 C type snap ring for shaft Carbon tool steel 29 Hexagon socket head set screw Chrome molybdenum steel Ø20 onl 31 Hexagon socket head set screw Chrome molybdenum steel Ø20 onl 32 Spring pin Carbon tool steel Ø20 onl | 12 | Bumper B | Urethane rubber | |
| Carbon steelM14Spring pinCarbon tool steelØ20, 32 of15Roller pinCarbon steelØ20, 32 of16Lever pinCarbon steelIf17Ring AAluminium alloyClear anod18Ring BAluminium alloyClear anod19Adjustment dialAluminium alloyØ20, 32 of20End rodSpecial steelØ20, 32 of21Lever springStainless steel wireØ20, 32 of22MagnetMagnetIf23Flat washerSteel wireNickel plate24Flat washerSteel wireNickel plate25C type snap ring for shaftCarbon tool steelIf26C type snap ring for shaftCarbon tool steelIf27C type snap ring for shaftCarbon tool steelIf29Hexagon socket head set screwChrome molybdenum steelØ20 on30Hexagon socket head set screwChrome molybdenum steelØ20 on31Hexagon socket head set screwChrome molybdenum steelØ20 on33Wear ringResinIf34ElementBronzeØ20 is socket set35Snap ringSteel wireIf38Rod sealNBRIf39NealNBRIf30RealNBRIf33NagentriaNagentria34ElementBronzeIf35Snap ringSte | 12 | Boller | Resin | -00L |
| 15Roller pinCarbon steel16Lever pinCarbon steel17Ring AAluminium alloyClear anod18Ring BAluminium alloyClear anod19Adjustment dialAluminium alloyø20, 32 o20End rodSpecial steelø20, 32 o21Lever springStainless steel wire22MagnetMagnet23Flat washerSteel wire24Flat washerSteel wire25C type snap ring for shaftCarbon tool steel26C type snap ring for shaftCarbon tool steel27C type snap ring for shaftCarbon tool steel28Return springPiano wire29Hexagon socket head set screwChrome molybdenum steel30Hexagon socket head set screwChrome molybdenum steel31Hexagon socket head plugChrome molybdenum steel32Spring pinCarbon tool steel33Wear ringResin34ElementBronze35Snap ringSteel wire36Shock absorber—37Piston sealNBR38Rod sealNBR38Rod sealNBR | 10 | | Carbon steel | —————————————————————————————————————— |
| 16Lever pinCarbon steel17Ring AAluminium alloyClear anod18Ring BAluminium alloyClear anod19Adjustment dialAluminium alloyø20, 32 o20End rodSpecial steelø20, 32 o21Lever springStainless steel wire22MagnetMagnet23Flat washerSteel wireNickel pla24Flat washerSteel wireNickel pla25C type snap ring for shaftCarbon tool steel26C type snap ring for shaftCarbon tool steel27C type snap ring for shaftCarbon tool steel28Return springPiano wire29Hexagon socket head set screwChrome molybdenum steelø20 onl30Hexagon socket head plugChrome molybdenum steelø20 onl31Hexagon socket head plugChrome molybdenum steelø20 onl33Wear ringResin34ElementBronzeø20 is socket set set set set set set set set set s | 14 | Spring pin | Carbon tool steel | ø20, 32 only |
| 17Ring AAluminium alloyClear anod18Ring BAluminium alloyClear anod19Adjustment dialAluminium alloyø20, 32 o20End rodSpecial steelø20, 32 o21Lever springStainless steel wire22MagnetMagnet23Flat washerSteel wireNickel pla24Flat washerSteel wireNickel pla25C type snap ring for shaftCarbon tool steel26C type snap ring for shaftCarbon tool steel27C type snap ring for shaftCarbon tool steel28Return springPiano wire29Hexagon socket head set screwChrome molybdenum steelø20 onl30Hexagon socket head set screwChrome molybdenum steel30Hexagon socket head plugChrome molybdenum steelø20 onl31Hexagon socket head plugChrome molybdenum steel33Wear ringResin34ElementBronzeø20 is socket screw35Snap ringSteel wire36Shock absorber-37Piston sealNBR38Rod sealNBR | 15 | Roller pin | Carbon steel | |
| 18Ring BAluminium alloyClear anod19Adjustment dialAluminium alloyø20, 32 o20End rodSpecial steelø20, 32 o21Lever springStainless steel wire22MagnetMagnet23Flat washerSteel wire24Flat washerSteel wire25C type snap ring for shaftCarbon tool steel26C type snap ring for shaftCarbon tool steel27C type snap ring for shaftCarbon tool steel28Return springPiano wire29Hexagon socket head set screwChrome molybdenum steel30Hexagon socket head set screwChrome molybdenum steel30Hexagon socket head plugChrome molybdenum steel31Hexagon socket head plugChrome molybdenum steel33Wear ringResin34ElementBronze36Shock absorber—37Piston sealNBR38Rod sealNBR | 16 | Lever pin | Carbon steel | |
| 19Adjustment dialAluminium alloyø20, 32 o20End rodSpecial steelø20, 32 o21Lever springStainless steel wire22MagnetMagnet23Flat washerSteel wire24Flat washerSteel wire25C type snap ring for shaftCarbon tool steel26C type snap ring for shaftCarbon tool steel27C type snap ring for shaftCarbon tool steel28Return springPiano wire29Hexagon socket head set screwChrome molybdenum steel30Hexagon socket head set screwChrome molybdenum steel30Hexagon socket head plugChrome molybdenum steel31Hexagon socket head plugChrome molybdenum steel33Wear ringResin34ElementBronze36Shock absorber—37Piston sealNBR38Rod sealNBR | 17 | Ring A | Aluminium alloy | Clear anodized |
| 20End rodSpecial steelØ20, 32 o21Lever springStainless steel wireØ20, 32 o22MagnetMagnetImage: Constraint of the steel wireNickel pla23Flat washerSteel wireNickel pla24Flat washerSteel wireNickel pla25C type snap ring for shaftCarbon tool steelImage: Constraint of the steel wire26C type snap ring for shaftCarbon tool steelImage: Constraint of the steel wire29Hexagon socket head set screwChrome molybdenum steelØ20 onl30Hexagon socket head set screwChrome molybdenum steelØ20 onl31Hexagon socket head set screwChrome molybdenum steelØ20 onl31Hexagon socket head plugChrome molybdenum steelØ20 onl33Wear ringResinImage: Constraint of the steel wire34ElementBronzeØ20 is socket steel36Shock absorber—Image: Constraint of the steel wire38Rod sealNBRImage: Constraint of the steel wire38Rod sealNBRImage: Constraint of the steel wire | 18 | Ring B | Aluminium alloy | Clear anodized |
| 20 Dependent event Dependent event 21 Lever spring Stainless steel wire 22 Magnet Magnet 23 Flat washer Steel wire Nickel pla 24 Flat washer Steel wire Nickel pla 25 C type snap ring for shaft Carbon tool steel 26 26 C type snap ring for shaft Carbon tool steel 27 27 C type snap ring for shaft Carbon tool steel 28 28 Return spring Piano wire 29 29 Hexagon socket head set screw Chrome molybdenum steel ø20 onl 30 Hexagon socket head set screw Chrome molybdenum steel ø20 onl 31 Hexagon socket head plug Chrome molybdenum steel ø20 onl 32 Spring pin Carbon tool steel ø20 onl 33 Wear ring Resin 34 Element Bronze ø20 is socket set set set set set set set set set s | 19 | Adjustment dial | Aluminium alloy | ø20, 32 only |
| 22MagnetMagnet23Flat washerSteel wireNickel pla24Flat washerSteel wireNickel pla25C type snap ring for shaftCarbon tool steelImage: Carbon tool steel26C type snap ring for shaftCarbon tool steelImage: Carbon tool steel27C type snap ring for shaftCarbon tool steelImage: Carbon tool steel28Return springPiano wireImage: Carbon tool steel29Hexagon socket head set screwChrome molybdenum steelImage: Image: Oct and tool steel30Hexagon socket head set screwChrome molybdenum steelImage: Oct and tool steel31Hexagon socket head plugChrome molybdenum steelImage: Oct and tool steel32Spring pinCarbon tool steelImage: Oct and tool steel33Wear ringResinImage: Oct and tool steelImage: Oct and tool steel34ElementBronzeImage: Oct and tool steelImage: Oct and tool steel36Shock absorberImage: Oct and tool steelImage: Oct and tool steel38Rod sealNBRImage: Oct and tool steelImage: Oct and tool steel | 20 | End rod | Special steel | ø20, 32 only |
| 23Flat washerSteel wireNickel pla24Flat washerSteel wireNickel pla25C type snap ring for shaftCarbon tool steel126C type snap ring for shaftCarbon tool steel127C type snap ring for shaftCarbon tool steel128Return springPiano wire129Hexagon socket head set screwChrome molybdenum steel030Hexagon socket head set screwChrome molybdenum steel020 onl31Hexagon socket head plugChrome molybdenum steel020 onl33Wear ringResin334ElementBronze020 is socket set36Shock absorber—338Rod sealNBR338Rod sealNBR1 | 21 | Lever spring | Stainless steel wire | |
| 24Flat washerSteel wireNickel plat25C type snap ring for shaftCarbon tool steelNickel plat26C type snap ring for shaftCarbon tool steel127C type snap ring for shaftCarbon tool steel128Return springPiano wire129Hexagon socket head set screwChrome molybdenum steelØ20 onl30Hexagon socket head set screwChrome molybdenum steelØ20 onl31Hexagon socket head plugChrome molybdenum steelØ20 onl32Spring pinCarbon tool steelØ20 onl33Wear ringResin134ElementBronzeØ20 is socket set35Snap ringSteel wire136Shock absorber—137Piston sealNBR138Rod sealNBR1 | 22 | Magnet | Magnet | |
| 25C type snap ring for shaftCarbon tool steel26C type snap ring for shaftCarbon tool steel27C type snap ring for shaftCarbon tool steel28Return springPiano wire29Hexagon socket head set screwChrome molybdenum steel30Hexagon socket head set screwChrome molybdenum steel31Hexagon socket head plugChrome molybdenum steel32Spring pinCarbon tool steel33Wear ringResin34ElementBronze35Snap ringSteel wire36Shock absorber—37Piston sealNBR38Rod sealNBR | 23 | Flat washer | Steel wire | Nickel plated |
| 26 C type snap ring for shaft Carbon tool steel 27 C type snap ring for shaft Carbon tool steel 28 Return spring Piano wire 29 Hexagon socket head set screw Chrome molybdenum steel 30 Hexagon socket head set screw Chrome molybdenum steel 30 Hexagon socket head set screw Chrome molybdenum steel 31 Hexagon socket head plug Chrome molybdenum steel 32 Spring pin Carbon tool steel ø20 onl 33 Wear ring Resin 34 34 Element Bronze ø20 is socket set screw 36 Shock absorber — 37 38 Rod seal NBR 38 | 24 | Flat washer | Steel wire | Nickel plated |
| 27 C type snap ring for shaft Carbon tool steel 28 Return spring Piano wire 29 Hexagon socket head set screw Chrome molybdenum steel 30 Hexagon socket head set screw Chrome molybdenum steel 30 Hexagon socket head set screw Chrome molybdenum steel 31 Hexagon socket head plug Chrome molybdenum steel 32 Spring pin Carbon tool steel ø20 onl 33 Wear ring Resin 34 Element Bronze ø20 is socket set set set set set set set set set s | 25 | | | |
| 28Return springPiano wire29Hexagon socket head set screwChrome molybdenum steel30Hexagon socket head set screwChrome molybdenum steel31Hexagon socket head plugChrome molybdenum steel32Spring pinCarbon tool steel33Wear ringResin34ElementBronze35Snap ringSteel wire36Shock absorber—37Piston sealNBR38Rod sealNBR | 26 | | Carbon tool steel | |
| 29Hexagon socket head set screwChrome molybdenum steel30Hexagon socket head set screwChrome molybdenum steelø20 onl31Hexagon socket head plugChrome molybdenum steelNickel pla32Spring pinCarbon tool steelø20 onl33Wear ringResin34ElementBronzeø20 is socket set35Snap ringSteel wire36Shock absorber—37Piston sealNBR38Rod sealNBR | 27 | C type snap ring for shaft | Carbon tool steel | |
| 30Hexagon socket head set screwChrome molybdenum steelØ20 onl31Hexagon socket head plugChrome molybdenum steelNickel pla32Spring pinCarbon tool steelØ20 onl33Wear ringResin34ElementBronzeØ20 is socket so35Snap ringSteel wire36Shock absorber—37Piston sealNBR38Rod sealNBR | 28 | | Piano wire | |
| 31Hexagon socket head plugChrome molybdenum steelNickel pla32Spring pinCarbon tool steelø20 onl33Wear ringResin34ElementBronzeø20 is socket se35Snap ringSteel wire36Shock absorber—37Piston sealNBR38Rod sealNBR | 29 | Hexagon socket head set screw | Chrome molybdenum steel | |
| 32Spring pinCarbon tool steelø20 onl33Wear ringResin34ElementBronzeø20 is socket so35Snap ringSteel wire36Shock absorber37Piston sealNBR38Rod sealNBR | 30 | • | Chrome molybdenum steel | ø20 only |
| 33Wear ringResin34ElementBronzeø20 is socket so35Snap ringSteel wire36Shock absorber—37Piston sealNBR38Rod sealNBR | 31 | Hexagon socket head plug | Chrome molybdenum steel | Nickel plated |
| 34ElementBronzeø20 is socket so35Snap ringSteel wire36Shock absorber—37Piston sealNBR38Rod sealNBR | 32 | | Carbon tool steel | ø20 only |
| 35 Snap ring Steel wire 36 Shock absorber — 37 Piston seal NBR 38 Rod seal NBR | 33 | Wear ring | Resin | |
| 36 Shock absorber | 34 | Element | Bronze | ø20 is socket set screw |
| 37 Piston seal NBR 38 Rod seal NBR | 35 | | Steel wire | |
| 38 Rod seal NBR | 36 | | | |
| | 37 | Piston seal | NBR | |
| NPR 200,00 a | 38 | Rod seal | NBR | |
| | 39 | Scraper | NBR | ø20, 32 only |
| 40 Tube gasket NBR | 40 | Tube gasket | NBR | |
| 41 O-ring NBR | 41 | O-ring | NBR | |

Replacement parts: Seal kit

| Bore size | | Contents | |
|-----------|---------------|---------------------------|-----------------------|
| (mm) | Double acting | Double acting spring type | Contents |
| 20 | RSH20D-PS | RSH20 | Set of items 37 to 41 |
| 32 | RSH32D-PS | RSH32 | in above table |
| 50 | RSH50D-PS | RSH50 | Set of items 37 to 41 |
| 63 | RSH63D-PS | RSH63 | in above table |
| 80 | RSH80D-PS | RSH80 | (not including 39) |

*The seal kits for ø20 to ø32 consist of items 37 to 41 and those for ø50 to ø80 consist of items 37 to 41. Please order them by using the seal kit number corresponding to each bore size.

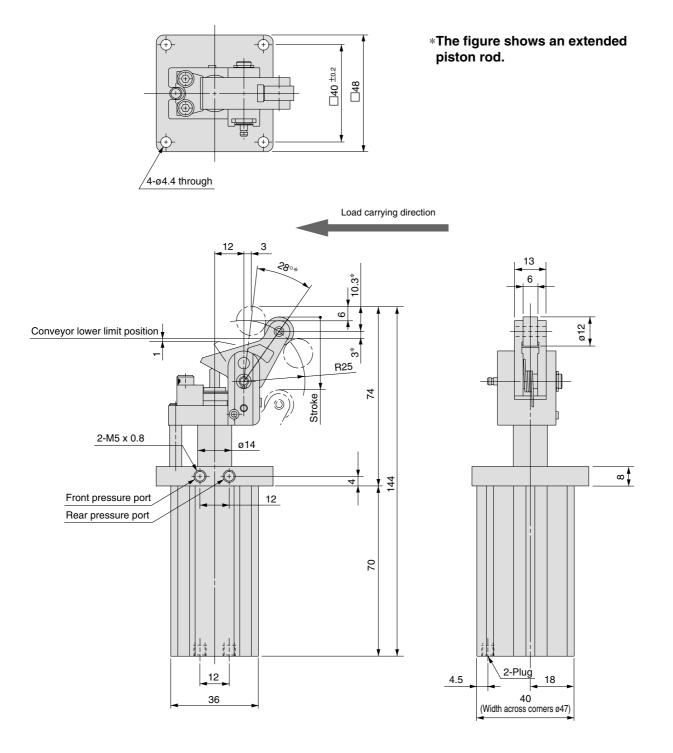
Replacement parts: Shock absorber

| Bore size (mm) | Order no. |
|-------------------|-----------|
| 20 | RSH-R20 |
| 32 | RSH-R32 |
| 50 | RS1H-R50 |
| 63 | RS1H-R63 |
| 80 | RS1H-R80 |

Series RSH/RS1H

Dimensions/Bore size: Ø20

RSH20-15



Note 1) The figure shows dimensions at the maximum energy absorption capacity.

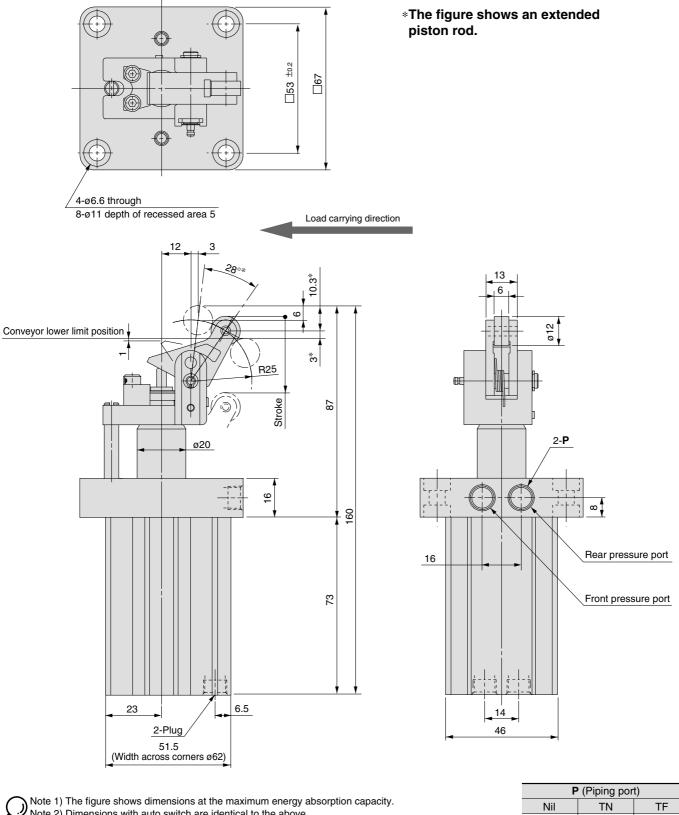
Note 2) Dimensions with auto switch are identical to the above.

Note 3) The dimensions marked with "*" vary according to adjustment of the shock absorber dial.

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Dimensions/Bore size: ø32

RSH32-20



Note 1) The figure shows dimensions at the maximum energy absorption capacity.

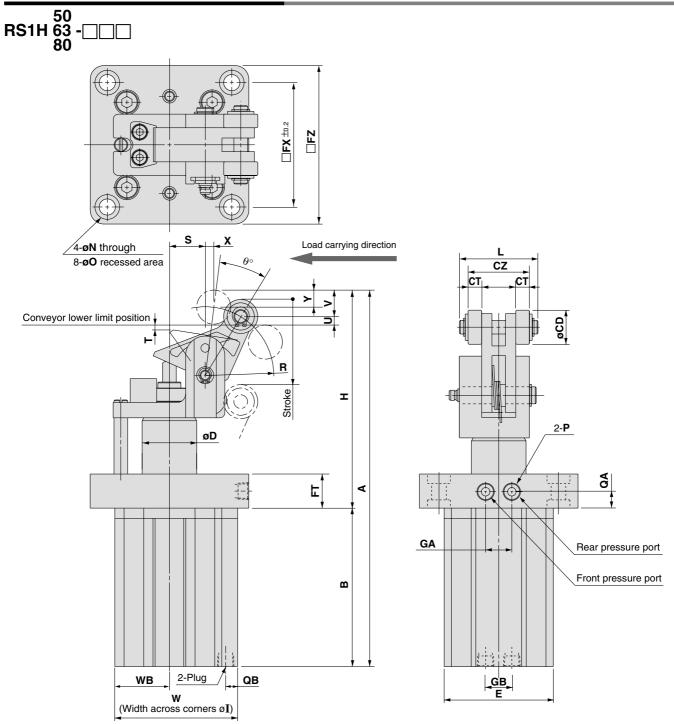
Note 2) Dimensions with auto switch are identical to the above. Note 3) The dimensions marked with "*" vary according to adjustment of the shock absorber dial.

| P (Piping port) | | | | | | | |
|-----------------|---------|-------|--|--|--|--|--|
| Nil | TN | TF | | | | | |
| Rc 1/8 | NPT 1/8 | G 1/8 | | | | | |

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Series **RSH/RS1H**

Dimensions/Bore size: Ø50, Ø63, Ø80



| | | | | | | | | | | | | | | | | | | | | (mm) |
|----------------|--------|-------|------|-----|-----|------|------|------|----|------|------------------|----|----|-------|---------------------------|----------------|-------------|-------------|------|------|
| Bore size (mm) | Stroke | Α | В | CD | СТ | CZ | D | E | FT | FX | FZ | GA | GB | Н | Width across corners I | L | Ν | 0 | QA | QB |
| 50 | 30 | 221 | 93 | 20 | 8 | 36 | 32 | 64 | 20 | 73 | 93 | 16 | 16 | 128 | 85 | 45 | 9 | 14 depth 5 | 10 | 7 |
| 63 | 30 | 243.5 | 99 | 20 | 10 | 45 | 40 | 77 | 25 | 90 | 114 | 24 | 24 | 144.5 | 103 | 54 | 11 | 18 depth 6 | 12.5 | 8.5 |
| 80 | 40 | 299.5 | 128 | 25 | 10 | 45 | 50 | 98 | 25 | 110 | 138 | 24 | 35 | 171.5 | 132 | 56 | 13 | 20 depth 6 | 12.5 | 10 |
| Bore size (mm) | Stroke | R | S | Т | U | V | W | WB | Х | Y | θ° | | | Mode | | | P (F | Piping port | t) | |
| 50 | 30 | 40 | 21 | 2 | 5.5 | 15.5 | 72 | 32 | 5 | 10 | 24 | | | wode | | Nil | | TN | Т | F |
| 63 | 30 | 47 | 24.5 | 3.5 | 6.4 | 16 | 87.5 | 38.5 | 5 | 10 | 24 | | | RS1H5 | 5 0 | Rc 1/8 NPT 1/8 | | G | 1/8 | |
| 80 | 40 | 54 | 31 | 3 | 6.7 | 19.4 | 109 | 49 | 6 | 12.5 | 23 | | 1 | RS1H6 | 6 3 | Rc 1/4 | 1 | NPT 1/4 | G | 1/4 |

Note 1) Dimensions with auto switch are identical to the above. Note 2) The figure shows an extended piston rod.

| 69 | |
|----|--|
|----|--|

RS1H80

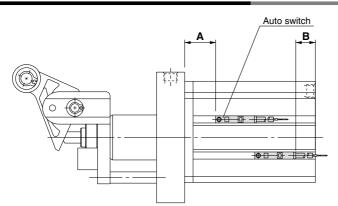
Rc 1/4

NPT 1/4

G 1/4

7

Auto Switch Proper Mounting Position



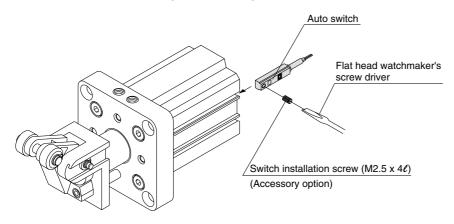
Auto switch proper mounting position

| Auto switch models | D-Z7 D-Z80 D-Y59 D-Y7P D-Y7 W | | D-Y69 D-Y7PV D-Y7 WV | | D-Y7BAL | |
|-----------------------|--|----------|-------------------------------|------|---------|-----|
| Bore size (mm) | Α | В | Α | В | Α | В |
| 20 | 18 | 8(6.5) | 18 | 9.5 | 18 | 2 |
| 32 | 13.5 | 10.5(9) | 13.5 | 12 | 13.5 | 4.5 |
| 50 | 22 | 12(10.5) | 22 | 13.5 | 22 | 6 |
| 63 | 24.5 | 15.5(14) | 24.5 | 17 | 24.5 | 9.5 |
| 80 | 37 | 22(20.5) | 37 | 23.5 | 37 | 16 |

The values inside () are for D-Z73.

How to Install Auto Switch

To set the auto switch, insert the auto switch into the switch groove from the direction shown in the drawing to the below, After placing it in the mounting position, use a flat head watchmakers screw driver to tighten the mounting screw which is included.



Note) When adjusting the auto switch mounting screws, use a flat head watchmaker's screwdriver. The guideline of the tightening torque is 0.05 to 0.1 Nm.

Turn another 90° from the position where tightening is felt by hand.

Lever Detection Switch (Proximity Switch)

Proximity switch specifications/Maker: OMRON Co. Ltd.

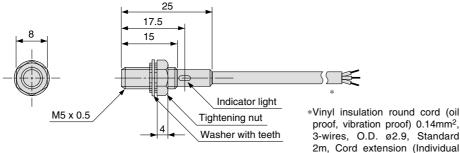
| Model | E2E-X1C1 | E2E-X2D1-N | | | |
|--|---|---|--|--|--|
| Applicable cylinder bore size | RSH20, 32 | RS1H50, 63, 80 | | | |
| Output type | Normally open | | | | |
| Power supply voltage (Operating voltage range) | 12 to 24VDC (10 to 30VDC), Ripple10% or less (P-P) | | | | |
| Current consumption (Leakage current) | 17mA or less | 0.8mA or less | | | |
| Response frequency | 3kHz | 1.5kHz | | | |
| Control output (chest) | Open collector maximum 100mA | 3 to 100mA | | | |
| Indicator light | Detection indication (Red LED) | Operation indication (Red LED), Set operation indication (Green LED) | | | |
| Ambient temperature | -25 to 70°C (No freezing) | | | | |
| Operating ambient humidity | 35 to 95% RH | | | | |
| Residual voltage Note 1) | 2V or less | 3V or less | | | |
| Withstand voltage Note 2) | 500VAC | 1000VAC | | | |
| Vibration | Endurance 10 to 55 Hz, Duplex amplitude 1.5mm X,Y,Z direction each 2h | | | | |
| Impact | Endurance 500m/s ² (approx. 50G), X, Y, Z direction each 10 times | | | | |
| Enclosure | IEC standards IP67 (Immersion proof shape and oil proof shape by JEM standards) | | | | |

Note 1) At load current 100mA and cord length of 2m

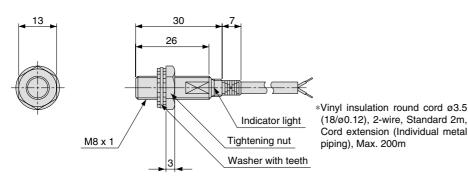
Note 2) Between case and whole charging part

Dimensions

E2E-X1C1 (For RSH20, 32)

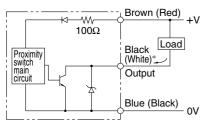


E2E-X2D1-N (For RS1H50, 63, 80)



Output Circuit

E2E-X1C1/3-wire



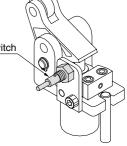
*Maximum 100mA (load current)

Mounting Position

●E2E-X1C1 (For RSH20, 32)

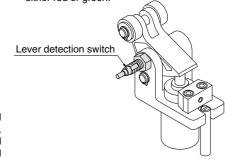
While holding the lever in the detection range of the switch, screw in the switch gradually until the indicator light (red) turns on. Then, screw the switch in further, halfway between the turn-on point and the lever.

Lever detection switch



●E2E-X2D1-N (For RS1H50, 63, 80)

While holding the lever in the detection range of the switch, screw in the switch until the indicator light (green) turns on. Then, give an additional half rotation of screw. After that, incline the lever by 90° and confirm that the indicator light is not on and does not show either red or green.



SMC

E2E-X2D1-N/2-wire

Proximity switch

main

metal piping), Max. 100m

Brown L(White) Load

Blue (Black)

+V

0V