

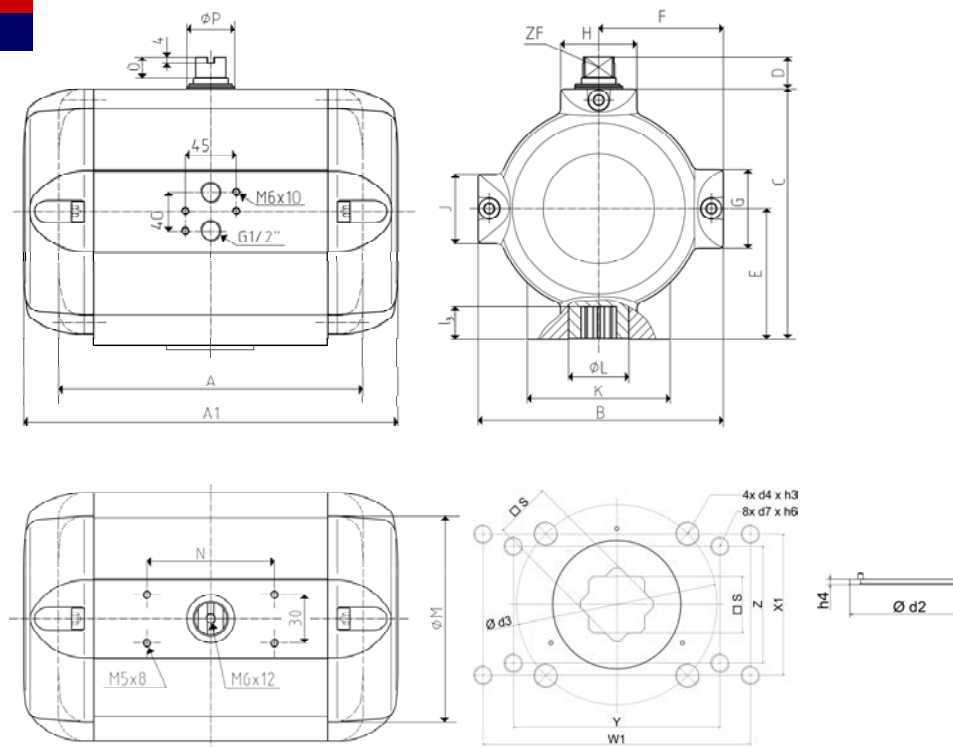
DOUBLE-PISTON QUARTER TURN ACTUATORS

TYPE SAD / SAF BR16 90°

| | |
|--------------------------------------|------|
| Size | 45 |
| Weight [kg] | |
| Type SAD | 75 |
| Type SAF | 102 |
| Stroke volume [dm³] | |
| Type SAD | 25,6 |
| Type SAF | 14,7 |
| Operating times [sec.] ¹⁾ | |
| Type SAD OPEN | 4,0 |
| Type SAD CLOSE | 4,0 |
| Type SAF ²⁾ OPEN | 7,0 |
| Type SAF ²⁾ CLOSE | 3,0 |

1) operating times at 4,5 bar air pressure supply without load (standard values)

2) Type SAF with 9 springs



| Type | number of springs n | spring-torque | | air torque Ma [Nm] at operating pressure pe [bar] | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|---------------------|---------------|------|---|-----|---------|-----|-------|------|---------|------|-------|------|---------|------|-------|------|---------|------|-------|------|---------|------|-------|------|---------|------|-------|------|------|--|--|
| | | Ms [Nm] | | 2 bar | | 2,5 bar | | 3 bar | | 3,5 bar | | 4 bar | | 4,5 bar | | 5 bar | | 5,5 bar | | 6 bar | | 6,5 bar | | 7 bar | | 7,5 bar | | 8 bar | | | | |
| | | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | | | |
| SAD 45 | - | - | | 893 | | 1156 | | 1419 | | 1674 | | 1934 | | 2199 | | 2457 | | 2717 | | 2980 | | 3245 | | 3495 | | 3744 | | 3994 | | | | |
| SAF 45 | 4 | 352 | 585 | 308 | 541 | 571 | 804 | 834 | 1067 | 1089 | 1322 | 1349 | 1582 | 1614 | 1847 | 1872 | 2105 | 2132 | 2365 | 2395 | 2628 | 2660 | 2893 | 2910 | 3143 | 3159 | 3392 | 3409 | 3642 | | | |
| | 5 | 440 | 732 | 161 | 453 | 424 | 716 | 687 | 979 | 942 | 1234 | 1202 | 1494 | 1467 | 1759 | 1725 | 2017 | 1985 | 2277 | 2248 | 2540 | 2513 | 2805 | 2763 | 3055 | 3012 | 3304 | 3262 | 3554 | | | |
| | 6 | 528 | 878 | | | 278 | 628 | 541 | 891 | 796 | 1146 | 1056 | 1406 | 1321 | 1671 | 1579 | 1929 | 1839 | 2189 | 2102 | 2452 | 2367 | 2717 | 2617 | 2967 | 2866 | 3216 | 3116 | 3466 | | | |
| | 7 | 616 | 1025 | | | 131 | 540 | 394 | 803 | 649 | 1058 | 909 | 1318 | 1174 | 1583 | 1432 | 1841 | 1692 | 2101 | 1955 | 2364 | 2220 | 2629 | 2470 | 2879 | 2719 | 3128 | 2969 | 3378 | | | |
| | 8 | 705 | 1171 | | | | | 248 | 714 | 503 | 969 | 763 | 1229 | 1028 | 1494 | 1286 | 1752 | 1546 | 2012 | 1809 | 2275 | 2074 | 2540 | 2324 | 2790 | 2573 | 3039 | 2823 | 3289 | | | |
| | 9 | 793 | 1317 | | | | | 102 | 626 | 357 | 881 | 617 | 1141 | 882 | 1406 | 1140 | 1664 | 1400 | 1924 | 1663 | 2187 | 1928 | 2452 | 2178 | 2702 | 2427 | 2951 | 2677 | 3201 | | | |
| | 10 | 881 | 1464 | | | | | | | 210 | 793 | 470 | 1053 | 735 | 1318 | 993 | 1576 | 1253 | 1836 | 1516 | 2099 | 1781 | 2364 | 2031 | 2614 | 2280 | 2863 | 2530 | 3113 | | | |
| | 11 | 969 | 1610 | | | | | | | 64 | 705 | 324 | 965 | 589 | 1230 | 847 | 1488 | 1107 | 1748 | 1370 | 2011 | 1635 | 2276 | 1885 | 2526 | 2134 | 2775 | 2384 | 3025 | | | |
| | 12 | 1057 | 1756 | | | | | | | | | 178 | 877 | 443 | 1142 | 701 | 1400 | 961 | 1660 | 1224 | 1923 | 1489 | 2188 | 1739 | 2438 | 1988 | 2687 | 2238 | 2937 | | | |
| | special version | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | 1145 | 1908 | | | | | | | | | | | | 291 | 1054 | 549 | 1312 | 809 | 1572 | 1072 | 1835 | 1337 | 2100 | 1587 | 2350 | 1836 | 2599 | 2086 | 2849 | | |
| | 14 | 1233 | 2049 | | | | | | | | | | | | 150 | 966 | 408 | 1224 | 668 | 1484 | 931 | 1747 | 1196 | 2012 | 1446 | 2262 | 1695 | 2511 | 1945 | 2761 | | |

| Design | SAD / SAF |
|---------------------|-----------|
| Size | 45 |
| A (double-acting) | 475 |
| A1 (single-acting) | 695 |
| B | 330 |
| C | 337 |
| D | 30 |
| E | 175 |
| F | 165 |
| G | 84 |
| H | 125 |
| K | 150 |
| Ø L | 106 |
| J | 84 |
| Ø M | 292 |
| N | 130 |
| O | 18 |
| Ø P | 90 |
| ZF | 46 |
| Connection ISO 5211 | F16 |
| Ø d2 | 130 |
| h4 | 3 |
| Ø d3 | 165 |
| 4x d4xh3 | 4x M20x32 |
| Ø d5 | - |
| l3 | 50 |
| s | 46 |
| 4x d6xh5 | - |
| 8x d7xh6 | 8x M16x24 |
| Y | 170 |
| Z | 96 |
| W1 | 220 |
| X1 | 116 |
| G1 | - |