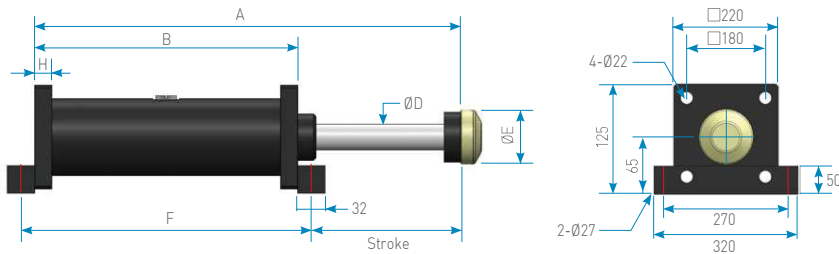


IBAW180 Series

Best Engineered
For Energy Absorption
Technology

Engineering Data

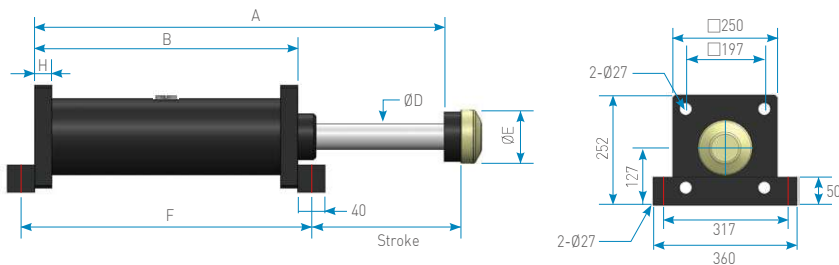
| Model | Stroke (mm) | Max.Energy / Cycle(Nm) | Max.Energy / Hour (Nm / h) | Dimension [unit:mm] | | | | | | | |
|------------|-------------|------------------------|----------------------------|---------------------|-----|-----|----|----|-----|-----|----|
| | | | | A | B | C | D | E | F | G | H |
| IBAW180-50 | 50 | 13 | 338 | 440 | 340 | 180 | 55 | 98 | 390 | 75 | 40 |
| -100 | 100 | 27 | 338 | 540 | 390 | 180 | 55 | 98 | 440 | 125 | 40 |
| -150 | 150 | 40 | 338 | 640 | 440 | 180 | 55 | 98 | 490 | 175 | 40 |
| -200 | 200 | 54 | 338 | 740 | 490 | 180 | 55 | 98 | 540 | 225 | 40 |
| -250 | 250 | 67 | 338 | 840 | 540 | 180 | 55 | 98 | 590 | 275 | 40 |
| -300 | 300 | 81 | 338 | 940 | 590 | 180 | 55 | 98 | 640 | 325 | 40 |



IBAW200 Series

Engineering Data

| Model | Stroke (mm) | Max.Energy / Cycle(Nm) | Max.Energy / Hour (nm / h) | Dimension [unit:mm] | | | | | | | |
|------------|-------------|------------------------|----------------------------|---------------------|-----|-----|----|----|-----|-----|----|
| | | | | A | B | C | D | E | F | G | H |
| IBAW200-50 | 50 | 15 | 376 | 450 | 350 | 200 | 65 | 98 | 400 | 75 | 40 |
| -100 | 100 | 30 | 376 | 550 | 400 | 200 | 65 | 98 | 450 | 125 | 40 |
| -150 | 150 | 45 | 376 | 650 | 450 | 200 | 65 | 98 | 500 | 175 | 40 |
| -200 | 200 | 60 | 376 | 750 | 500 | 200 | 65 | 98 | 550 | 225 | 40 |
| -250 | 250 | 75 | 376 | 850 | 550 | 200 | 65 | 98 | 600 | 275 | 40 |
| -300 | 300 | 90 | 376 | 950 | 600 | 200 | 65 | 98 | 650 | 325 | 40 |



IBSW Series Stacker Crane Buffers

Izmac Buffer Self compensating auto Warehouse stackercrane

DESCRIPTION

IBSW model max energy capacity is upto 930kNm, and it's longest stroke is 1,200mm and it is mainly applied for automatic logistic warehouse system(AS/RS). Engineered to maintain rather Low Peak figures & Low Recoil Force figures. Therefore it can be operated by lowest rebounding force and decelerate softly in emergency stop conditions. Basically IBSW has similar operation way with ISAA series.

FEATURES

- 1 Custom orifice
- 2 Piston rod : Hardened, hard chrome plated
- 3 Cylinder : Zinc plated
- 4 Operation temperature : -10 ~ 80°C • Special : -40 ~ 120°C
- 5 Fullfilled international standards : OSHA, AISE,AIST, CMAA, DIN, FEM etc.
- 6 Option : Urethane cap, Safety cable, Mounting plates, Adjustment dial position

APPLICATION

Automatic warehouse system(AS/RS), Theme park, Stacker crane, Automobile assembly line, Overhead crane



Hydraulic Buffers

IBSW Series

IBSW SERIES ORDERING INFORMATION

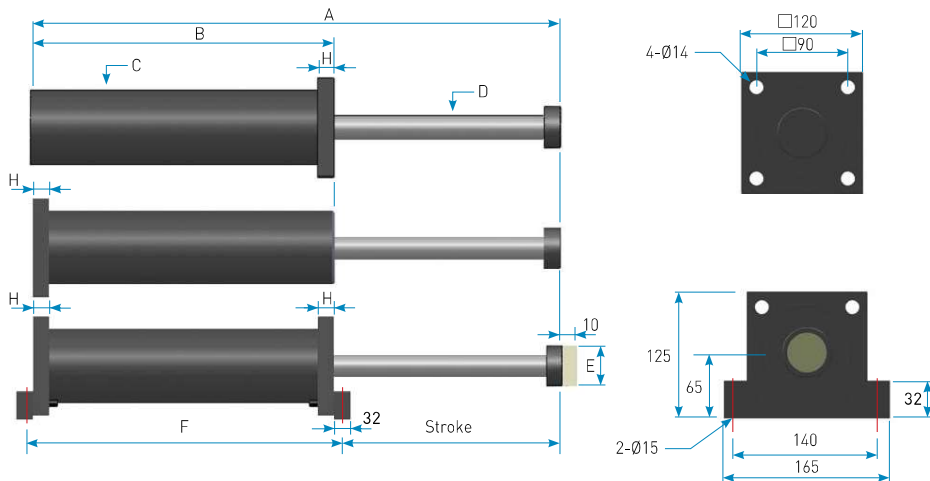
IBSW - 90 - 250 - FM - B

- B : Bellows
- SC : Safety cable
- FM : Foot Mount
- FS : Front Flange Mount
- RS : Rear Flange Mount
- Stroke(mm)
- Body Thread Size
- IB : Izmac Buffer
- S : Self Compensating
- W : Warehouse stacker crane

IBSW90 Series

Engineering Data & Dimensions

| Model | Stroke (mm) | Max. Energy / Cycle (Nm) E_T | Max. Energy / Hour (Nm/hr) E_C | Max. Buffer Force (kN) F_S | Dimension [unit:mm] | | | | | | | |
|-----------|-------------|--------------------------------|----------------------------------|------------------------------|---------------------|-------|----|----|----|-------|-----|----|
| | | | | | A | B | C | D | E | F | G | H |
| IBSW90-50 | 50 | 4 | 190 | 75 | 310 | 208 | 90 | 30 | 50 | 240 | 86 | 20 |
| -100 | 100 | 7 | 390 | 75 | 410 | 258 | 90 | 30 | 50 | 290 | 136 | 20 |
| -150 | 150 | 10 | 580 | 75 | 510 | 308 | 90 | 30 | 50 | 340 | 186 | 20 |
| -200 | 200 | 13 | 780 | 75 | 613 | 360 | 90 | 30 | 50 | 392 | 237 | 20 |
| -250 | 250 | 16 | 830 | 75 | 715 | 411 | 90 | 30 | 50 | 443 | 288 | 20 |
| -300 | 300 | 20 | 940 | 75 | 817 | 462 | 90 | 30 | 50 | 496 | 339 | 20 |
| -350 | 350 | 23 | 1,260 | 75 | 917 | 512 | 90 | 30 | 50 | 544 | 390 | 20 |
| -400 | 400 | 21 | 1,150 | 67 | 1,019 | 563 | 90 | 30 | 50 | 595 | 440 | 20 |
| -450 | 450 | 20 | 1,090 | 55 | 1,121 | 614 | 90 | 30 | 50 | 646 | 491 | 20 |
| -500 | 500 | 19 | 1,060 | 47 | 1,223 | 665 | 90 | 30 | 50 | 697 | 542 | 20 |
| -600 | 600 | 15 | 880 | 31 | 1,427 | 767 | 90 | 30 | 50 | 799 | 644 | 20 |
| -700 | 700 | 13 | 610 | 24 | 1,668 | 910 | 90 | 30 | 50 | 956 | 742 | 20 |
| -800 | 800 | 12 | 530 | 19 | 1,888 | 1,030 | 90 | 30 | 50 | 1,076 | 842 | 20 |

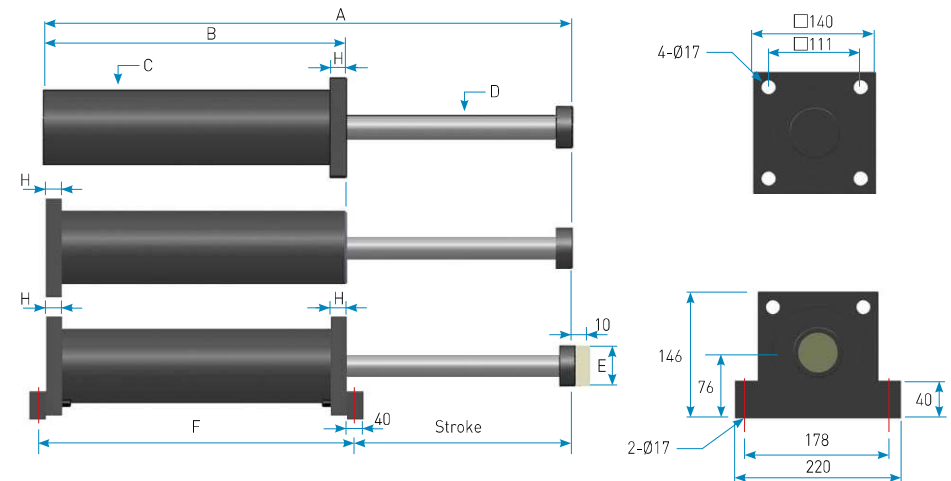


IBSW110 Series

Best Engineered
For Energy Absorption
Technology

Engineering Data & Dimensions

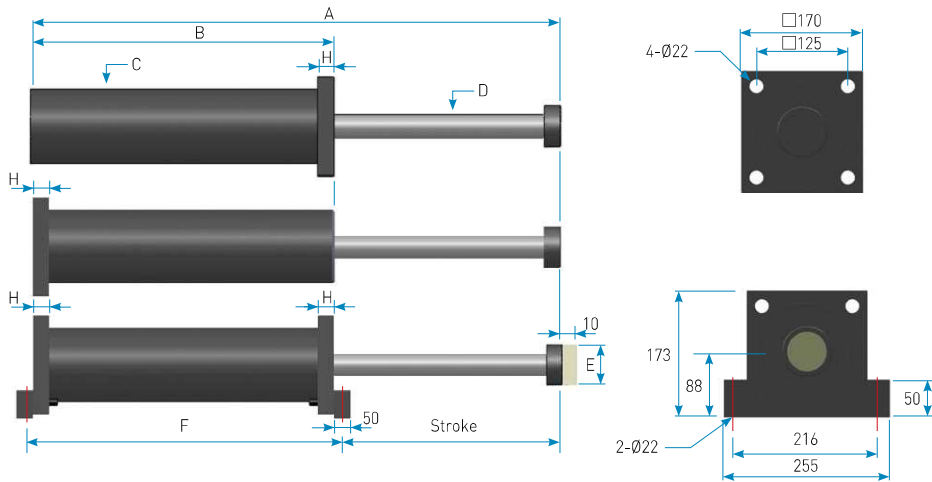
| Model | Stroke (mm) | Max. Energy / Cycle (Nm) E_T | Max. Energy / Hour (Nm/hr) E_C | Max. Buffer Force (kN) F_S | Dimension [unit:mm] | | | | | | | |
|------------|-------------|--------------------------------|----------------------------------|------------------------------|---------------------|-------|-----|----|----|-------|-------|----|
| | | | | | A | B | C | D | E | F | G | H |
| IBSW110-50 | 50 | 5 | 290 | 115 | 370 | 203 | 113 | 40 | 60 | 270 | 120 | 25 |
| -100 | 100 | 10 | 560 | 115 | 470 | 280 | 113 | 40 | 60 | 320 | 170 | 25 |
| -150 | 150 | 15 | 880 | 115 | 553 | 339 | 113 | 40 | 60 | 379 | 194 | 25 |
| -200 | 200 | 20 | 930 | 115 | 655 | 390 | 113 | 40 | 60 | 430 | 245 | 25 |
| -250 | 250 | 25 | 1,050 | 115 | 757 | 441 | 113 | 40 | 60 | 481 | 296 | 25 |
| -300 | 300 | 29 | 1,180 | 115 | 859 | 492 | 113 | 40 | 60 | 532 | 347 | 25 |
| -350 | 350 | 34 | 1,350 | 115 | 960 | 543 | 113 | 40 | 60 | 583 | 397 | 25 |
| -400 | 400 | 39 | 1,510 | 115 | 1,062 | 594 | 113 | 40 | 60 | 634 | 448 | 25 |
| -450 | 450 | 44 | 1,680 | 115 | 1,164 | 645 | 113 | 40 | 60 | 685 | 499 | 25 |
| -500 | 500 | 49 | 1,840 | 115 | 1,256 | 695 | 113 | 40 | 60 | 735 | 550 | 25 |
| -600 | 600 | 59 | 2,160 | 115 | 1,469 | 797 | 113 | 40 | 60 | 837 | 652 | 25 |
| -700 | 700 | 69 | 2,480 | 115 | 1,672 | 899 | 113 | 40 | 60 | 937 | 753 | 25 |
| -800 | 800 | 79 | 2,800 | 115 | 1,953 | 1,079 | 113 | 40 | 60 | 1,119 | 854 | 25 |
| -900 | 900 | 88 | 3,130 | 115 | 2,151 | 1,179 | 113 | 40 | 60 | 1,219 | 952 | 25 |
| -1000 | 1000 | 73 | 3,480 | 92 | 2,351 | 1,279 | 113 | 40 | 60 | 1,319 | 1,052 | 25 |
| -1200 | 1200 | 60 | 2,750 | 63 | 2,751 | 1,479 | 113 | 40 | 60 | 1,519 | 1,252 | 25 |
| -1400 | 1400 | 41 | 1,910 | 37 | 3,171 | 1,689 | 113 | 40 | 60 | 1,729 | 1,462 | 25 |



IBSW130 Series

Engineering Data & Dimensions

| Model | Stroke (mm) | Max. Energy / Cycle (Nm) E_T | Max. Energy / Hour (Nm/hr) $E_T \cdot C$ | Max. Buffer Force (kN) F_S | Dimension [unit:mm] | | | | | | | |
|------------|-------------|--------------------------------|--|------------------------------|---------------------|-------|-----|----|----|-------|-------|----|
| | | | | | A | B | C | D | E | F | G | H |
| IBSW130-50 | 50 | 10 | 590 | 245 | 397 | 260 | 138 | 45 | 70 | 310 | 112 | 25 |
| -75 | 75 | 15 | 650 | 245 | 447 | 285 | 138 | 45 | 70 | 335 | 137 | 25 |
| -125 | 125 | 25 | 810 | 245 | 547 | 335 | 138 | 45 | 70 | 385 | 187 | 25 |
| -200 | 200 | 39 | 1,110 | 245 | 697 | 410 | 138 | 45 | 70 | 460 | 262 | 25 |
| -250 | 250 | 49 | 1,310 | 245 | 797 | 460 | 138 | 45 | 70 | 510 | 312 | 25 |
| -300 | 300 | 58 | 1,510 | 245 | 898 | 511 | 138 | 45 | 70 | 561 | 362 | 25 |
| -350 | 350 | 68 | 1,730 | 245 | 995 | 558 | 138 | 45 | 70 | 608 | 412 | 25 |
| -400 | 400 | 78 | 1,930 | 245 | 1,097 | 609 | 138 | 45 | 70 | 659 | 463 | 25 |
| -450 | 450 | 88 | 2,130 | 245 | 1,199 | 660 | 138 | 45 | 70 | 710 | 514 | 25 |
| -500 | 500 | 97 | 2,320 | 245 | 1,301 | 711 | 138 | 45 | 70 | 761 | 565 | 25 |
| -600 | 600 | 116 | 2,710 | 245 | 1,504 | 812 | 138 | 45 | 70 | 862 | 667 | 25 |
| -700 | 700 | 136 | 3,100 | 245 | 1,707 | 914 | 138 | 45 | 70 | 964 | 768 | 25 |
| -800 | 800 | 155 | 3,480 | 215 | 1,910 | 1,015 | 138 | 45 | 70 | 1,065 | 870 | 25 |
| -900 | 900 | 167 | 3,780 | 181 | 2,156 | 1,164 | 138 | 45 | 70 | 1,214 | 967 | 25 |
| -1000 | 1,000 | 117 | 3,820 | 147 | 2,356 | 1,264 | 138 | 45 | 70 | 1,314 | 1,067 | 25 |
| -1200 | 1,200 | 103 | 4,720 | 107 | 2,756 | 1,464 | 138 | 45 | 70 | 1,514 | 1,267 | 25 |
| -1400 | 1,400 | 73 | 2,850 | 66 | 3,156 | 1,664 | 138 | 45 | 70 | 1,714 | 1,467 | 25 |
| -1500 | 1,500 | 66 | 2,430 | 55 | 3,384 | 1,778 | 138 | 45 | 70 | 1,828 | 1,581 | 25 |

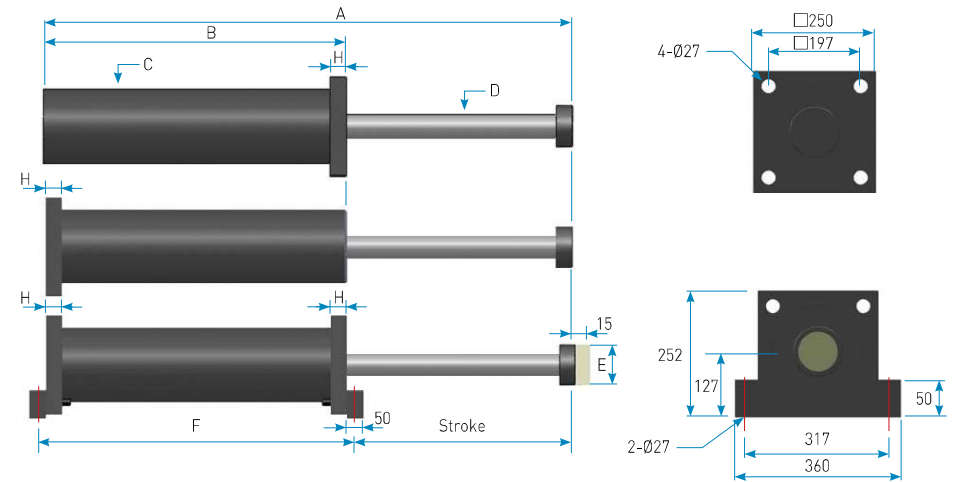


IBSW200 Series

Best Engineered
For Energy Absorption
Technology

Engineering Data & Dimensions

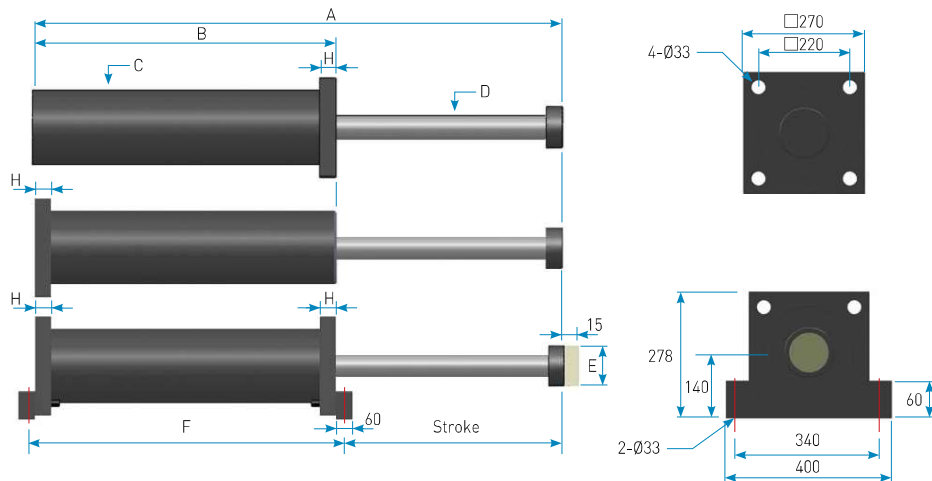
| Model | Stroke (mm) | Max. Energy / Cycle (Nm) E_T | Max. Energy / Hour (Nm/hr) $E_T \cdot C$ | Max. Buffer Force (kN) F_S | Dimension [unit:mm] | | | | | | | |
|------------|-------------|--------------------------------|--|------------------------------|---------------------|-------|-----|----|-----|-------|-------|----|
| | | | | | A | B | C | D | E | F | G | H |
| IBSW200-50 | 50 | 16 | 940 | 370 | 534 | 394 | 200 | 65 | 100 | 444 | 115 | 40 |
| -100 | 100 | 31 | 1,530 | 370 | 634 | 445 | 200 | 65 | 100 | 495 | 164 | 40 |
| -150 | 150 | 47 | 1,750 | 370 | 735 | 495 | 200 | 65 | 100 | 545 | 215 | 40 |
| -200 | 200 | 63 | 1,980 | 370 | 835 | 547 | 200 | 65 | 100 | 597 | 263 | 40 |
| -250 | 250 | 79 | 2,210 | 370 | 936 | 597 | 200 | 65 | 100 | 647 | 314 | 40 |
| -300 | 300 | 93 | 2,850 | 370 | 1,032 | 642 | 200 | 65 | 100 | 692 | 365 | 40 |
| -400 | 400 | 126 | 3,300 | 370 | 1,234 | 743 | 200 | 65 | 100 | 793 | 466 | 40 |
| -500 | 500 | 157 | 3,750 | 370 | 1,438 | 845 | 200 | 65 | 100 | 895 | 568 | 40 |
| -600 | 600 | 188 | 4,210 | 370 | 1,642 | 947 | 200 | 65 | 100 | 997 | 670 | 40 |
| -700 | 700 | 220 | 4,660 | 370 | 1,844 | 1,048 | 200 | 65 | 100 | 1,098 | 771 | 40 |
| -800 | 800 | 251 | 5,110 | 370 | 2,048 | 1,150 | 200 | 65 | 100 | 1,200 | 873 | 40 |
| -900 | 900 | 283 | 5,560 | 370 | 2,252 | 1,252 | 200 | 65 | 100 | 1,302 | 975 | 40 |
| -1000 | 1,000 | 240 | 6,110 | 300 | 2,454 | 1,353 | 200 | 65 | 100 | 1,403 | 1,076 | 40 |
| -1200 | 1,200 | 210 | 4,920 | 200 | 2,854 | 1,553 | 200 | 65 | 100 | 1,603 | 1,276 | 40 |



IBSW220 Series

Engineering Data & Dimensions

| Model | Stroke (mm) | Max. Energy / Cycle (Nm) E_T | Max. Energy / Hour (Nm/hr) E_C | Max. Buffer Force (kN) F_S | Dimension [unit:mm] | | | | | | | |
|-------------|-------------|--------------------------------|----------------------------------|------------------------------|---------------------|-------|-----|----|-----|-------|-------|----|
| | | | | | A | B | C | D | E | F | G | H |
| IBSW220-100 | 100 | 48 | 1,800 | 560 | 591 | 375 | 215 | 80 | 125 | 435 | 186 | 40 |
| -150 | 150 | 72 | 2,050 | 560 | 693 | 426 | 215 | 80 | 125 | 486 | 237 | 40 |
| -200 | 200 | 96 | 2,290 | 560 | 795 | 477 | 215 | 80 | 125 | 537 | 288 | 40 |
| -250 | 250 | 120 | 2,530 | 560 | 895 | 527 | 215 | 80 | 125 | 587 | 338 | 40 |
| -300 | 300 | 143 | 2,750 | 560 | 997 | 578 | 215 | 80 | 125 | 638 | 389 | 40 |
| -400 | 400 | 191 | 3,260 | 560 | 1,201 | 680 | 215 | 80 | 125 | 740 | 491 | 40 |
| -500 | 500 | 239 | 4,230 | 560 | 1,504 | 882 | 215 | 80 | 125 | 942 | 592 | 40 |
| -600 | 600 | 287 | 4,740 | 560 | 1,708 | 984 | 215 | 80 | 125 | 1,044 | 694 | 40 |
| -700 | 700 | 334 | 5,200 | 560 | 1,910 | 1,085 | 215 | 80 | 125 | 1,145 | 795 | 40 |
| -800 | 800 | 382 | 5,690 | 560 | 2,114 | 1,187 | 215 | 80 | 125 | 1,247 | 897 | 40 |
| -1000 | 1,000 | 478 | 6,680 | 560 | 2,520 | 1,390 | 215 | 80 | 125 | 1,450 | 1,100 | 40 |
| -1200 | 1,200 | 417 | 6,250 | 435 | 2,920 | 1,590 | 215 | 80 | 125 | 1,650 | 1,300 | 40 |



IBSW275 Series

Best Engineered
For Energy Absorption
Technology

Engineering Data & Dimensions

| Model | Stroke (mm) | Max. Energy / Cycle (Nm) E_T | Max. Energy / Hour (Nm/hr) E_C | Max. Buffer Force (kN) F_S | Dimension [unit:mm] | | | | | | | |
|-------------|-------------|--------------------------------|----------------------------------|------------------------------|---------------------|-------|-----|-----|-----|-------|-------|----|
| | | | | | A | B | C | D | E | F | G | H |
| IBSW275-100 | 100 | 78 | 2,440 | 915 | 637 | 391 | 275 | 100 | 160 | 461 | 211 | 50 |
| -150 | 150 | 117 | 2,760 | 915 | 737 | 441 | 275 | 100 | 160 | 511 | 261 | 50 |
| -200 | 200 | 156 | 3,050 | 915 | 839 | 492 | 275 | 100 | 160 | 562 | 312 | 50 |
| -250 | 250 | 194 | 3,370 | 915 | 941 | 543 | 275 | 100 | 160 | 613 | 363 | 50 |
| -300 | 300 | 233 | 3,760 | 915 | 1,043 | 594 | 275 | 100 | 160 | 664 | 414 | 50 |
| -400 | 400 | 311 | 4,300 | 915 | 1,246 | 696 | 275 | 100 | 160 | 766 | 515 | 50 |
| -500 | 500 | 389 | 4,930 | 915 | 1,450 | 798 | 275 | 100 | 160 | 868 | 617 | 50 |
| -600 | 600 | 467 | 6,180 | 915 | 1,769 | 1,015 | 275 | 100 | 160 | 1,085 | 719 | 50 |
| -750 | 750 | 583 | 7,110 | 915 | 2,073 | 1,167 | 275 | 100 | 160 | 1,237 | 871 | 50 |
| -900 | 900 | 700 | 8,040 | 915 | 2,379 | 1,320 | 275 | 100 | 160 | 1,390 | 1,024 | 50 |
| -1050 | 1,050 | 816 | 8,970 | 915 | 2,683 | 1,472 | 275 | 100 | 160 | 1,542 | 1,176 | 50 |
| -1200 | 1,200 | 790 | 8,060 | 827 | 2,989 | 1,625 | 275 | 100 | 160 | 1,695 | 1,329 | 50 |

