

Reconstitution

Russell 3000® Index - Additions

| Company | Symbol | Sector |
|--------------------------|--------|------------------------|
| 1ST CONSTITUTION BANCORP | FCCY | Financial Services |
| 22ND CENTURY GROUP INC | XXII | Consumer Staples |
| ACM RESEARCH | ACMR | Technology |
| ADESTO TECHNOLOGIES CORP | IOTS | Technology |
| ADMA BIOLOGICS INC | ADMA | Health Care |
| ADVERUM BIOTECH INC | ADVM | Health Care |
| AEGLEA BIOTHERAPEUTICS | AGLE | Health Care |
| ALBIREO PHARMA INC | ALBO | Health Care |
| ALDEYRA THERAPEUTICS INC | ALDX | Health Care |
| ALLIANCE ONE INTL INC | AOI | Consumer Staples |
| ALTA MESA RESOURCES (A) | AMR | Energy |
| ALTAIR ENGINEERING INC | ALTR | Technology |
| AMERICAN RLTY INVS INC | ARL | Financial Services |
| AMPIO PHARMACEUTICALS | AMPE | Health Care |
| AMYRIS INC | AMRS | Materials & Processing |
| APOLLO MEDICAL HOLDINGS | AMEH | Health Care |
| ARBOR REALTY TRUST INC | ABR | Financial Services |
| ARBUTUS BIOPHARMA CORP | ABUS | Health Care |
| ARCUS BIOSCIENCES | RCUS | Health Care |
| ARQLE INC | ARQL | Health Care |
| ARROWHEAD PHARMACEUTICAL | ARWR | Health Care |
| ASHFORD INC | AINC | Financial Services |
| ASURE SOFTWARE INC | ASUR | Technology |
| AUBURN NATL BANCORP | AUBN | Financial Services |
| AVAYA HOLDINGS CORP | AVYA | Technology |
| AVEO PHARMACEUTICALS INC | AVEO | Health Care |
| AVID BIOSERVICES INC | CDMO | Health Care |
| AXA EQUITABLE HOLDINGS | EQH | Financial Services |
| BANK OF PRINCETON | BPRN | Financial Services |
| BAYCOM CORPORATION | BCML | Financial Services |
| BBX CAPITAL CORP | BBX | Financial Services |
| BLACKSTONE MORTGAGE TRST | BXMT | Financial Services |
| BLUELIX HOLDINGS INC | BXC | Materials & Processing |
| BOSTON OMAHA | BOMN | Consumer Discretionary |
| BRIDGEWATER BANCSHARES | BWB | Financial Services |
| BRT APARTMENTS CORP | BRT | Financial Services |
| BUSINESS FIRST BANCSHARE | BFST | Financial Services |
| CAMBRIDGE BANCORP | CATC | Financial Services |
| CARBON BLACK | CBLK | Technology |
| CAREDX INC | CDNA | Health Care |
| CARGURUS INC | CARG | Technology |
| CASI PHARMACEUTICALS INC | CASI | Health Care |
| CATALYST BIOSCIENCES INC | CBIO | Health Care |
| CB FINL SVCS INC | CBFV | Financial Services |
| CELLULAR BIOMEDICINE GRP | CBMG | Health Care |
| CELSIUS HOLDINGS INC | CELH | Consumer Staples |
| CERIDIAN HCM HOLDING | CDAY | Technology |
| CHROMADEx CORP | CDXC | Materials & Processing |
| CISION | CISN | Technology |

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| COHBAR INC | CWBR | Health Care |
| COLONY NORTHSTAR CR REAL | CLNC | Financial Services |
| COLUMBIA FINANCIAL INC | CLBK | Financial Services |
| CONVERGEONE HOLDINGS (A) | CVON | Producer Durables |
| CRYOPORT INC | CYRX | Producer Durables |
| CTI BIOPHARMA CORP | CTIC | Health Care |
| CYMABAY THERAPEUTICS INC | CBAY | Health Care |
| CYTOSORBENTS CORP | CTSO | Health Care |
| DASAN ZHONG SOLUTIONS | DZSI | Technology |
| DAWSON GEOPHYSICAL CO | DWSN | Energy |
| DICERNA PHARMACEUTICALS | DRNA | Health Care |
| DOCUSIGN | DOCU | Technology |
| EGAIN CORPORATION | EGAN | Technology |
| ELOXX PHARMACEUTICALS | ELOX | Health Care |
| ENDOCYTE INC | ECYT | Health Care |
| ENERGY FUELS INC | UUUU | Materials & Processing |
| ENPHASE ENERGY INC | ENPH | Energy |
| ESQUIRE FINANCIAL HLDGS | ESQ | Financial Services |
| EVELO BIOSCIENCES | EVLO | Health Care |
| EXELA TECHNOLOGIES | XELA | Producer Durables |
| FENNEC PHARMACEUTICALS | FENC | Health Care |
| FGL HOLDINGS | FG | Financial Services |
| FIDELITY D&D BANCORP INC | FDBC | Financial Services |
| FIRST BANK WILLIAMSTOWN | FRBA | Financial Services |
| FIRST CHOICE BANCORP | FCBP | Financial Services |
| FIRST CMNTY CORP SC | FCCO | Financial Services |
| FIRST SAVINGS FINANCIAL | FSFG | Financial Services |
| FIRST UNITED CORP | FUNC | Financial Services |
| FS BANCORP INC | FSBW | Financial Services |
| FUELCELL ENERGY INC | FCEL | Energy |
| FUSION CONNECT INC | FSNN | Utilities |
| GENERAL FINANCE CORP | GFN | Producer Durables |
| GLADSTONE LAND INC | LAND | Financial Services |
| GLYCOMIMETICS INC | GLYC | Health Care |
| GOODRICH PETROLEUM CORP | GDP | Energy |
| GOOSEHEAD INSURANCE | GSHD | Financial Services |
| GRAFTECH INTERNATIONAL | EAF | Materials & Processing |
| GTX INC | GTXI | Health Care |
| GULFMARK OFFSHORE INC | GLF | Producer Durables |
| HARVARD BIOSCIENCE INC | HBIO | Health Care |
| HELIUS MEDICAL TECH | HSDT | Health Care |
| HOMOLOGY MEDICINES | FIXX | Health Care |
| INFRASTRUCTURE & ENERGY | IEA | Energy |
| INNOVATIVE INDUSTRIAL | IIPR | Financial Services |
| INSPIRE MEDICAL SYSTEMS | INSP | Health Care |
| INTRICON CORP | IIN | Health Care |
| ION GEOPHYSICAL CORP | IO | Energy |
| IRADIMED CORPORATION | IRMD | Health Care |
| JAZZ PHARMACEUTICALS PLC | JAZZ | Health Care |

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|--------------------------|--------|------------------------|
| KADMON HOLDINGS INC | KDMN | Health Care |
| LEVEL ONE BANCORP INC | LEVL | Financial Services |
| LIBERTY LATIN AMERICA A | LILA | Consumer Discretionary |
| LIBERTY LATIN AMERICA C | LILAK | Consumer Discretionary |
| LIVEXLIVE MEDIA | LIVX | Consumer Discretionary |
| MANITEX INTL INC | MNTX | Producer Durables |
| MANNKIND CORP | MNKD | Health Care |
| MARINUS PHARMACEUTICALS | MRNS | Health Care |
| MARRONE BIO INNOVATIONS | MBII | Materials & Processing |
| MAXAR TECHNOLOGIES | MAXR | Technology |
| MID PENN BANCORP INC | MPB | Financial Services |
| MIRATI THERAPEUTICS INC | MRTX | Health Care |
| MOLECULAR TEMPLATES | MTEM | Health Care |
| MONSTER DIGITAL INC | INNT | Health Care |
| MUSTANG BIO | MBIO | Health Care |
| MVB FINANCIAL CORP | MVBF | Financial Services |
| NEW YORK & CO INC | NWY | Consumer Discretionary |
| NEXTDECADE | NEXT | Energy |
| NII HOLDINGS INC | NIHD | Utilities |
| NLIGHT | LASR | Technology |
| NORTHERN OIL & GAS INC | NOG | Energy |
| NUVECTRA CORPORATION | NVTR | Health Care |
| NUVERRA ENVTL SOLUTIONS | NES | Energy |
| OAK VALLEY BANCORP | OVLY | Financial Services |
| OCEAN RIG UDW INC | ORIG | Energy |
| OP BANCORP | OPBK | Financial Services |
| ORIGIN BANCORP | OBNK | Financial Services |
| P A M TRANSN SVCS INC | PTSI | Producer Durables |
| PALATIN TECHNOLOGIES INC | PTN | Health Care |
| PAR TECHNOLOGY CORP | PAR | Technology |
| PDL COMMUNITY BANCORP | PDLB | Financial Services |
| PFENEX INC | PFNX | Health Care |
| PFSWEB INC | PFSW | Producer Durables |
| POLARITYTE INC | COOL | Technology |
| PRGX GLOBAL INC | PRGX | Producer Durables |
| PROFIRE ENERGY INC | PFIE | Energy |
| PROTEOSTASIS THERA INC | PTI | Health Care |
| PURPLE INNOVATION INC | PRPL | Consumer Discretionary |
| QUORUM HEALTH CORP | QHC | Health Care |
| REMARK HOLDINGS INC | MARK | Technology |
| RIMINI STREET INC | RMNI | Technology |
| ROCKET PHARMACEUTICALS | RCKT | Health Care |
| ROCKY BRANDS INC | RCKY | Consumer Discretionary |
| ROKU INC | ROKU | Consumer Discretionary |
| SAVARA INC | SVRA | Health Care |
| SB ONE BANCORP | SBBX | Financial Services |
| SEASPINE HOLDINGS CORP | SPNE | Health Care |
| SELECT BANCORP INC | SLCT | Financial Services |
| SENSEONICS HOLDINGS INC | SENS | Health Care |

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| SHOTSPOTTER | SSTI | Technology |
| SIEBERT FINANCIAL CORP | SIEB | Financial Services |
| SIGA TECHNOLOGIES INC | SIGA | Health Care |
| SIMPLY GOOD FOODS | SMPL | Consumer Staples |
| SKYLINE CHAMPION CORP | SKY | Consumer Discretionary |
| SORRENTO THERAPEUTICS | SRNE | Health Care |
| SPIRIT OF TEXAS BNCSHRES | STXB | Financial Services |
| SPRING BANK PHARMA | SBPH | Health Care |
| SURFACE ONCOLOGY | SURF | Health Care |
| SYNALLOY CORP | SYNL | Materials & Processing |
| SYNLOGIC INC | SYBX | Health Care |
| T2 BIOSYSTEMS INC | TTOO | Health Care |
| TANDEM DIABETES CARE INC | TNDM | Health Care |
| TELARIA INC | TLRA | Technology |
| TIDEWATER INC | TDW | Producer Durables |
| TOWN SPORTS INTL | CLUB | Consumer Discretionary |
| TRANSENERIX INC | TRXC | Health Care |
| TRAVELZOO | TZOO | Technology |
| TURTLE BEACH CORP | HEAR | Technology |
| TYME | TYME | Health Care |
| UNITY BIOTECHNOLOGY | UBX | Health Care |
| UNIV STAINLESS AND ALLOY | USAP | Materials & Processing |
| UNUM THERAPEUTICS | UMRX | Health Care |
| USA TRUCK INC | USAK | Producer Durables |
| VERASTEM INC | VSTM | Health Care |
| VERICEL CORP | VCEL | Health Care |
| VIKING THERAPEUTICS INC | VKTX | Health Care |
| VITAL THERAPIES INC | VTL | Health Care |
| VUZIX CORP | VUZI | Consumer Discretionary |
| WILLSCOT CORPORATION | WSC | Producer Durables |
| XOMA CORP | XOMA | Health Care |
| ZAFGEN INC | ZFGN | Health Care |
| ZION OIL & GAS INC | ZN | Energy |
| ZOMEDICA PHARMACEUTICALS | ZOM | Health Care |
| ZSCALER | ZS | Technology |

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