



Facet VCS Series two-stage vertical coalescer separator housings are mechanical devices designed to filter solids and separate two immiscible liquids. Using Facet's first-stage coalescer cartridges and second stage separator cartridges, they provide the highest degree of water and solids removal available.

These quality Facet products are designed for installations in petrochemical plants, refineries, power plants, bulk storage terminals, offshore platforms, manufacturing plants and many other industrial applications.

### Standard Housing Designs

- Body: Welded carbon steel construction — other materials available by request
- ASME Code, Section VIII, Div. 1, stamped and certified
- Designed for 150 psi @ 250 °F (10.34 bar @ 121 °C) — higher pressures and temperatures available by request
- Inlet and outlet permanently marked
- Exterior: Prime coated
- Swing bolt head closures
- Head Gasket: Buna-N o-ring —other materials available by request
- Head lift furnished on 18" (457 mm) OD and larger

### Standard Connections

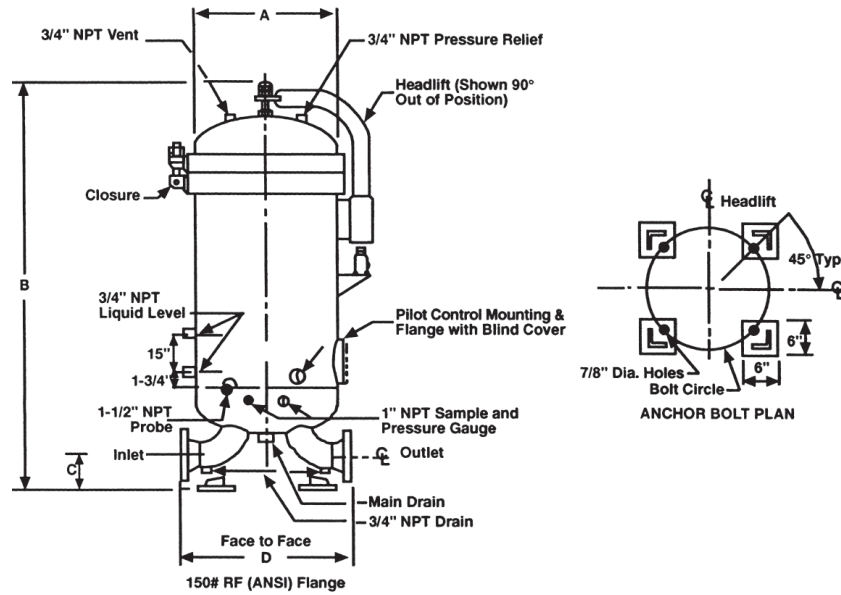
- Inlet and outlet: 150# RF (ANSI) flanged
- All other connections are 3000# NPT couplings

### Options

- Automatic air eliminator
- Differential pressure gauge
- Immersion heaters
- Liquid level gauge
- Pressure relief valve
- Sampling probe
- Special connections available
- Drain valves
- Blind cover for pilot control mounting flange
- Interior epoxy coating

# Two-Stage Vertical Coalescer Separator Housings

VCS Series



## DIMENSIONS

| MODEL NUMBER  | HEAD STYLE | CONNECTIONS    |     |            |    | DIMENSIONS |      |           |      |       |     |    |      | DRY WEIGHT W/ CTGS. |      | HOUSING LIQUID VOLUME |      | GASKET PART NUMBER |
|---------------|------------|----------------|-----|------------|----|------------|------|-----------|------|-------|-----|----|------|---------------------|------|-----------------------|------|--------------------|
|               |            | INLET / OUTLET |     | MAIN DRAIN |    | A          |      | B         |      | C     |     | D  |      | lbs                 | kgs  | gal                   | ltr  |                    |
|               |            | in             | mm  | in         | mm | in         | mm   | in        | mm   | in    | mm  | in | mm   |                     |      |                       |      |                    |
| VCS-222-122   | Flat       | 2              | 51  | 1          | 25 | 16         | 406  | 51 5/8    | 1311 | 6     | 152 | 17 | 432  | 600                 | 272  | 34                    | 129  | 609919             |
| VCS-243-222   | Flat       | 3              | 76  | 1          | 25 | 18         | 457  | 76 5/8    | 1946 | 6     | 152 | 23 | 584  | 700                 | 318  | 58                    | 220  | 697181             |
| VCS-328-222   | Flat       | 3              | 76  | 1          | 25 | 20         | 508  | 63 5/8    | 1616 | 6     | 152 | 23 | 584  | 750                 | 340  | 60                    | 227  | 609920             |
| VCS-343-228   | Flat       | 4              | 102 | 1          | 25 | 20         | 508  | 77 3/4    | 1975 | 6     | 152 | 28 | 711  | 845                 | 383  | 78                    | 295  | 609920             |
| VCS-443-328   | Flat       | 4              | 102 | 1          | 25 | 24         | 610  | 80        | 2032 | 6     | 152 | 28 | 711  | 995                 | 451  | 110                   | 416  | 694956             |
| VCS-456-428   | Flat       | 6              | 152 | 1          | 25 | 24         | 610  | 96 3/8    | 2448 | 7 1/2 | 191 | 36 | 914  | 1050                | 476  | 137                   | 519  | 694956             |
| VCS-643-428   | Flat       | 6              | 152 | 1          | 25 | 26         | 660  | 85 1/4    | 2165 | 7 1/2 | 191 | 37 | 940  | 1100                | 499  | 132                   | 500  | 678775             |
| VCS-743-433   | Dome       | 6              | 152 | 1          | 25 | 28         | 711  | 93 7/8    | 2384 | 7 1/2 | 191 | 36 | 914  | 1300                | 590  | 165                   | 625  | 676384             |
| VCS-656-533   | Dome       | 6              | 152 | 1 1/2      | 38 | 28         | 711  | 107 5/8   | 2734 | 7 1/2 | 191 | 36 | 914  | 1375                | 624  | 200                   | 757  | 676384             |
| VCS-843-533   | Dome       | 6              | 152 | 1 1/2      | 38 | 30         | 762  | 95 1/4    | 2419 | 7 1/2 | 191 | 36 | 914  | 1450                | 658  | 195                   | 738  | 691977             |
| VCS-1043-633  | Dome       | 8              | 203 | 1 1/2      | 38 | 34         | 864  | 99 3/8    | 2524 | 9     | 229 | 48 | 1219 | 1950                | 885  | 250                   | 946  | 604459             |
| VCS-856-733   | Dome       | 8              | 203 | 1 1/2      | 38 | 32         | 813  | 113 1/2   | 2883 | 9     | 229 | 46 | 1168 | 1850                | 839  | 265                   | 1003 | 697801             |
| VCS-1243-733  | Dome       | 8              | 203 | 1 1/2      | 38 | 36         | 914  | 101 3/8   | 2575 | 9     | 229 | 48 | 1219 | 2150                | 975  | 290                   | 1098 | 678228             |
| VCS-1343-833  | Dome       | 8              | 203 | 2          | 51 | 38         | 965  | 102 1/4   | 2597 | 9     | 229 | 48 | 1219 | 2350                | 1066 | 330                   | 1249 | 678725             |
| VCS-1643-1033 | Dome       | 10             | 254 | 2          | 51 | 42         | 1067 | 107 1/4   | 2724 | 10    | 254 | 54 | 1372 | 3250                | 1474 | 425                   | 1609 | 678677             |
| VCS-1943-1528 | Dome       | 10             | 254 | 2          | 51 | 48         | 1219 | 104 1/2   | 2654 | 10    | 254 | 60 | 1524 | 3662                | 1661 | 458                   | 1734 | 693058             |
| VCS-1656-1728 | Dome       | 10             | 254 | 2          | 51 | 48         | 1219 | 119       | 3023 | 10    | 254 | 60 | 1524 | 3788                | 1718 | 571                   | 2161 | 693058             |
| VCS-2056-2228 | Dome       | 12             | 305 | 2          | 51 | 54         | 1372 | 124 11/16 | 3167 | 12    | 304 | 69 | 1753 | 4400                | 1996 | 890                   | 3369 | 679052             |
| VCS-2456-2628 | Dome       | 12             | 305 | 2          | 51 | 60         | 1524 | 128 1/2   | 3264 | 12    | 305 | 71 | 1803 | 5625                | 2551 | 1155                  | 4372 | 681407             |
| VCS-2856-3028 | Dome       | 14             | 356 | 2          | 51 | 66         | 1676 | 142 7/8   | 3629 | 14    | 356 | 80 | 2032 | 6450                | 2926 | 1380                  | 5223 | 679054             |

NOTES: Dimensions shown are intended for estimating purposes only. Contact your Facet representative for certified drawings.

### FLOW RATES

(Subject to Limitations Contained in Footnotes)

| MODEL NUMBER  | MAXIMUM FLOW RATES RECOMMENDED FOR VISCOSITIES SHOWN <sup>(2)</sup> |       |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     |           |     |           |     |
|---------------|---|-------|--------|------|----------|------|----------|------|----------|------|----------|------|----------|------|----------|------|----------|------|----------|-----|-----------|-----|-----------|-----|
|               | PERF. <sup>(1)</sup>  |       | 31 SSU |      | 33.0 SSU |      | 36.0 SSU |      | 39.0 SSU |      | 42.3 SSU |      | 45.5 SSU |      | 52.0 SSU |      | 58.8 SSU |      | 97.5 SSU |     | 150.0 SSU |     | 200.0 SSU |     |
|               | Solids  | Water | 1 CS   |      | 2.2 CS   |      | 3.0 CS   |      | 4.0 CS   |      | 5.0 CS   |      | 6.0 CS   |      | 8.0 CS   |      | 10.0 CS  |      | 20.0 CS  |     | 32.0 CS   |     | 43.0 CS   |     |
| Micron        | ppm   | gpm   | lpm    | gpm  | lpm      | gpm  | lpm      | gpm  | lpm      | gpm  | lpm      | gpm  | lpm      | gpm  | lpm      | gpm  | lpm      | gpm  | lpm      | gpm | lpm       | gpm | lpm       |     |
| VCS-222-122   | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 145    | 549  | 120      | 454  | 90       | 341  | 65       | 246  | 50       | 189  | 45       | 170  | 30       | 114  | 25       | 95   | 10       | 38  | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 8         | 30  | 6         | 23  |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 6         | 23  | 4         | 15  |
| VCS-243-222   | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 270    | 1022 | 225      | 852  | 165      | 625  | 125      | 473  | 100      | 379  | 80       | 303  | 60       | 227  | 50       | 189  | 25       | 95  | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 14        | 53  | 10        | 38  |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 11        | 42  | 7         | 27  |
| VCS-328-222   | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 270    | 1022 | 225      | 852  | 165      | 625  | 125      | 473  | 100      | 379  | 80       | 303  | 60       | 227  | 50       | 189  | 25       | 95  | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 14        | 53  | 10        | 38  |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 11        | 42  | 7         | 27  |
| VCS-343-228   | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 400    | 1514 | 335      | 1268 | 245      | 927  | 185      | 700  | 145      | 549  | 120      | 454  | 90       | 341  | 75       | 284  | 35       | 132 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 20        | 76  | 15        | 57  |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 15        | 57  | 10        | 38  |
| VCS-443-328   | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 535    | 2025 | 445      | 1684 | 325      | 1230 | 245      | 927  | 195      | 738  | 160      | 606  | 120      | 454  | 100      | 379  | 50       | 189 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 27        | 102 | 20        | 76  |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 20        | 76  | 14        | 53  |
| VCS-456-428   | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 720    | 2725 | 600      | 2271 | 440      | 1665 | 330      | 1249 | 265      | 1003 | 215      | 814  | 160      | 606  | 130      | 492  | 65       | 246 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 37        | 140 | 27        | 102 |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 28        | 106 | 18        | 68  |
| VCS-643-428   | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 805    | 3047 | 670      | 2536 | 490      | 1855 | 370      | 1400 | 295      | 1117 | 240      | 908  | 180      | 681  | 145      | 549  | 70       | 265 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 41        | 155 | 31        | 117 |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 31        | 117 | 21        | 80  |
| VCS-743-433   | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 935    | 3539 | 780      | 2952 | 570      | 2157 | 430      | 1628 | 345      | 1306 | 280      | 1060 | 210      | 795  | 170      | 643  | 85       | 322 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 48        | 182 | 36        | 136 |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 36        | 136 | 27        | 102 |
| VCS-656-533   | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 1075   | 4069 | 895      | 3388 | 655      | 2479 | 490      | 1855 | 395      | 1495 | 320      | 1211 | 240      | 908  | 195      | 738  | 95       | 360 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 55        | 208 | 41        | 155 |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 42        | 159 | 28        | 106 |
| VCS-843-533   | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 1075   | 4069 | 895      | 3388 | 655      | 2479 | 490      | 1855 | 395      | 1495 | 320      | 1211 | 240      | 908  | 195      | 738  | 95       | 360 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 55        | 208 | 41        | 155 |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 42        | 159 | 28        | 106 |
| VCS-1043-633  | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 1340   | 5072 | 1115     | 4220 | 815      | 3085 | 615      | 2328 | 490      | 1855 | 400      | 1514 | 300      | 1136 | 245      | 927  | 120      | 454 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 69        | 261 | 51        | 193 |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 52        | 197 | 35        | 133 |
| VCS-856-733   | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 1435   | 5431 | 1195     | 4523 | 870      | 3293 | 655      | 2479 | 525      | 1987 | 430      | 1628 | 325      | 1230 | 265      | 1003 | 130      | 492 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 74        | 280 | 55        | 208 |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 56        | 212 | 21        | 80  |
| VCS-1243-733  | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 1610   | 6094 | 1340     | 5072 | 980      | 3709 | 735      | 2782 | 590      | 2233 | 480      | 1817 | 360      | 1363 | 295      | 1117 | 145      | 549 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 83        | 314 | 62        | 235 |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 62        | 235 | 42        | 159 |
| VCS-1343-833  | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 1740   | 6586 | 1450     | 5488 | 1060     | 4012 | 800      | 3028 | 640      | 2422 | 520      | 1968 | 390      | 1476 | 320      | 1211 | 160      | 606 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 90        | 341 | 67        | 254 |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 68        | 257 | 45        | 170 |
| VCS-1643-1033 | 25  | 40    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | OA        | OA  | OA        | OA  |
|               | 5   | 10    | 2140   | 8100 | 1785     | 6756 | 1605     | 6075 | 980      | 3709 | 785      | 2971 | 645      | 2441 | 480      | 1817 | 395      | 1495 | 195      | 738 | OA        | OA  | OA        | OA  |
|               | 2   | <10   |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 110       | 416 | 83        | 314 |
|               | 0.5   | <5    |        |      |          |      |          |      |          |      |          |      |          |      |          |      |          |      |          |     | 35        | 133 | 56        | 212 |

NOTE: The above flow rates are sizing guides only. Calculations of specific service conditions may result in units with flow rates other than those shown above.

OA = On Application

(1) Nominal Micron rating is based on removing 96 to 98% of all solids larger than the rating shown in one pass through a clean cartridge.

(2) Flow rates are based on normal conditions when the interfacial tension between the water and the continuous phase is not less than 36 dynes per centimeter, operating temperature does not exceed 240°F, and pH value between 5 and 9.