

## • Generel beskrivelse

Kugle med speciel V-udskæring for reguleringsventiler baseret på 3-delt kuglehane serie 83 og 88, samt flangekuglehane serie 90D og 99. Kan både anvendes til håndreguleringsventiler og automatiserede ventiler med aktuator og positioner.

## • Varianter

30° V-port  
60° V-port

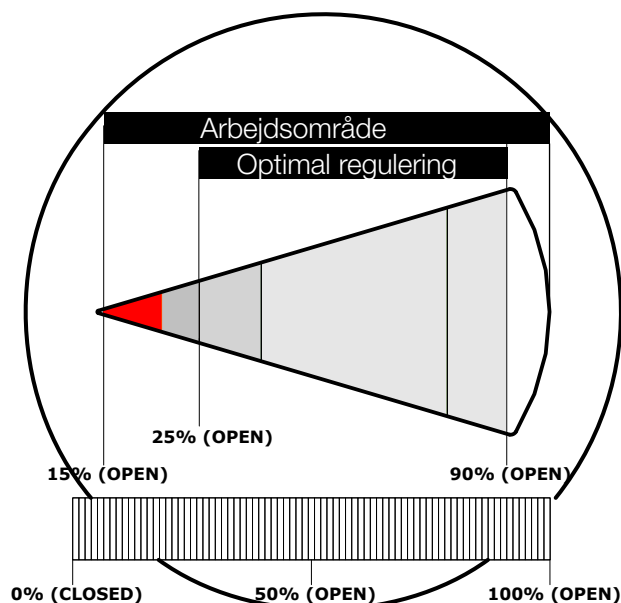
## • Anvendelsesområde

Regulering på vand, gas, damp, olie m.fl.

## • Optioner på forespørgsel

15° V-port  
90° V-port  
0,8-1,0-1,6-3,2mm slot

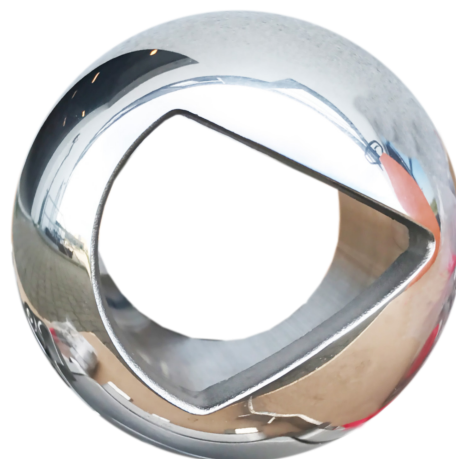
## • Reguleringsområde



En V-port kugle er speciel i forhold til andre reguleringsventiler, da den først åbner ved ca 15%. Dette betyder at mellem 0 ...15% er ventilen lukket og 100% tæt grundet de bløde sæderinge.

Det optimale reguleringsområde ligger mellem 25...90% åbningsgrad, men man kan godt regulere helt ned til 15% åbningsgrad, og selvfølgelig helt op til 100% åbningsgrad.

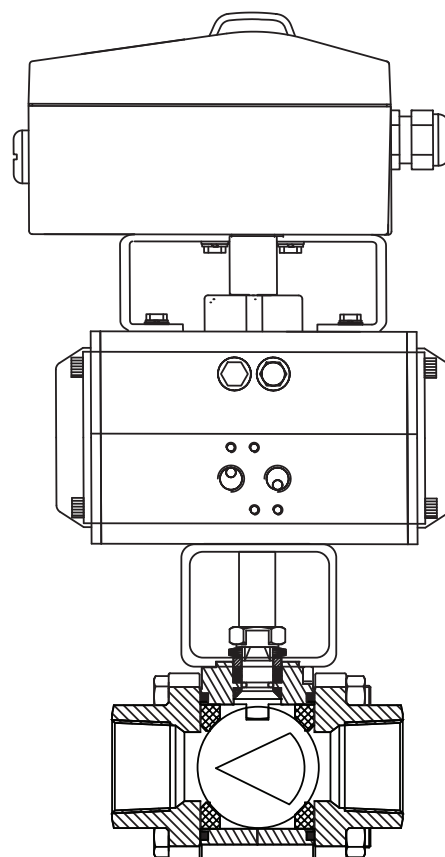
Kontakt Mars Valve Europe A/S for dimensionering af reguleringskuglehane.



## • Komplet reguleringsventil

En komplet reguleringsventil består som oftest af følgende komponenter:

- Kuglehane monteret med V-port kugle 30° el. 60°
- Kobling/beslag
- Pneumatisk aktuator
- Adaptorbeslag for positioner
- Elektropneumatisk positioner 4-20mA
- Div. fittings og luftforbindelser

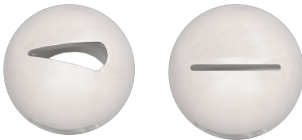


• **Flow-værdier Kvs**

| DIMENSION          | V-PORT | 0%  | 15% | 20% | 30%  | 40%  | 50%   | 60%   | 70%   | 80%   | 90%   | 100%   |
|--------------------|--------|-----|-----|-----|------|------|-------|-------|-------|-------|-------|--------|
| DN10FB/<br>DN15RB  | V30    | 0.0 | 0.0 | 0.0 | 0.0  | 0.1  | 0.1   | 0.2   | 0.4   | 0.5   | 0.7   | 0.9    |
|                    | V60    | 0.0 | 0.0 | 0.0 | 0.1  | 0.1  | 0.2   | 0.5   | 0.7   | 1.0   | 1.4   | 1.9    |
| DN15FB/<br>DN20RB  | V30    | 0.0 | 0.1 | 0.1 | 0.2  | 0.3  | 0.4   | 0.7   | 0.9   | 1.4   | 1.9   | 2.2    |
|                    | V60    | 0.0 | 0.1 | 0.1 | 0.3  | 0.4  | 0.8   | 1.2   | 1.7   | 2.8   | 3.7   | 5.1    |
|                    | V90    | 0.0 | 0.1 | 0.2 | 0.3  | 0.5  | 0.8   | 1.3   | 1.9   | 3.2   | 4.6   | 5.9    |
| DN20FB/<br>DN25RB  | V30    | 0.0 | 0.1 | 0.2 | 0.4  | 0.6  | 0.9   | 1.5   | 2.0   | 2.8   | 3.8   | 4.6    |
|                    | V60    | 0.0 | 0.1 | 0.2 | 0.6  | 0.9  | 1.4   | 2.4   | 3.4   | 5.5   | 7.7   | 10.2   |
|                    | V90    | 0.0 | 0.2 | 0.3 | 0.7  | 1.0  | 1.7   | 2.6   | 3.9   | 6.8   | 9.6   | 11.9   |
| DN25FB/<br>DN32RB  | V30    | 0.0 | 0.1 | 0.3 | 0.7  | 1.1  | 2.0   | 3.0   | 4.3   | 7.2   | 8.3   | 8.5    |
|                    | V60    | 0.0 | 0.2 | 0.3 | 0.9  | 1.5  | 2.9   | 4.5   | 6.7   | 10.5  | 13.0  | 17.9   |
|                    | V90    | 0.0 | 0.2 | 0.3 | 1.5  | 2.9  | 4.3   | 6.9   | 9.7   | 13.6  | 17.9  | 24.7   |
| DN32FB/<br>DN40RB  | V30    | 0.0 | 0.2 | 0.3 | 0.9  | 1.7  | 3.1   | 4.7   | 6.8   | 8.5   | 11.1  | 12.8   |
|                    | V60    | 0.0 | 0.2 | 0.5 | 1.5  | 2.6  | 4.7   | 8.1   | 10.9  | 16.2  | 22.1  | 33.2   |
|                    | V90    | 0.0 | 0.3 | 0.7 | 1.7  | 4.3  | 6.8   | 11.9  | 16.2  | 23.8  | 33.2  | 46.8   |
| DN40FB/<br>DN50RB  | V30    | 0.0 | 0.3 | 0.5 | 1.4  | 2.6  | 4.3   | 6.4   | 9.4   | 11.9  | 14.5  | 17.0   |
|                    | V60    | 0.0 | 0.3 | 0.7 | 2.1  | 3.4  | 6.8   | 11.1  | 16.2  | 23.0  | 34.0  | 44.2   |
|                    | V90    | 0.0 | 0.3 | 0.8 | 3.0  | 6.0  | 11.1  | 17.0  | 26.4  | 35.7  | 53.6  | 66.3   |
| DN50FB/<br>DN65RB  | V30    | 0.0 | 0.3 | 1.0 | 3.2  | 5.1  | 8.5   | 12.8  | 19.6  | 26.4  | 36.6  | 51.0   |
|                    | V60    | 0.0 | 0.3 | 1.3 | 3.9  | 7.7  | 14.0  | 23.0  | 33.2  | 46.8  | 70.6  | 93.5   |
|                    | V90    | 0.0 | 0.4 | 1.7 | 5.1  | 10.2 | 18.7  | 29.8  | 38.3  | 59.5  | 89.3  | 114.8  |
| DN65FB/<br>DN80RB  | V30    | 0.0 | 0.3 | 0.9 | 3.4  | 6.8  | 10.2  | 15.3  | 23.8  | 31.5  | 52.7  | 63.8   |
|                    | V60    | 0.0 | 0.3 | 1.3 | 4.3  | 8.5  | 17.9  | 28.9  | 45.1  | 63.8  | 87.6  | 127.5  |
|                    | V90    | 0.0 | 0.4 | 1.4 | 6.0  | 11.9 | 23.8  | 40.8  | 59.5  | 90.1  | 136.0 | 185.3  |
| DN80FB/<br>DN100RB | V30    | 0.0 | 0.4 | 1.0 | 3.4  | 6.8  | 11.9  | 19.6  | 28.1  | 39.1  | 55.3  | 69.7   |
|                    | V60    | 0.0 | 0.4 | 2.1 | 5.1  | 11.9 | 21.3  | 34.0  | 55.3  | 77.4  | 108.8 | 140.3  |
|                    | V90    | 0.0 | 0.6 | 3.0 | 6.8  | 15.3 | 29.8  | 51.0  | 76.5  | 114.8 | 174.3 | 263.5  |
| DN100FB            | V30    | 0.0 | 0.5 | 1.7 | 5.1  | 12.8 | 24.7  | 40.8  | 60.4  | 85.0  | 110.5 | 135.2  |
|                    | V60    | 0.0 | 0.6 | 2.6 | 9.4  | 21.3 | 34.0  | 50.2  | 76.5  | 119.9 | 180.2 | 302.6  |
|                    | V90    | 0.0 | 0.9 | 3.0 | 13.6 | 34.0 | 63.8  | 106.3 | 161.5 | 250.8 | 375.7 | 569.5  |
| DN150FB*           | V30    | 0.0 | 0.8 | 2.8 | 12.0 | 28.4 | 51.6  | 88.6  | 133.3 | 189.2 | 240.8 | 301.0  |
|                    | V60    | 0.0 | 1.7 | 4.3 | 18.9 | 51.6 | 94.6  | 163.4 | 245.1 | 357.8 | 504.0 | 688.0  |
|                    | V90    | 0.0 | 2.6 | 6.9 | 30.1 | 77.4 | 137.6 | 240.8 | 365.5 | 559.0 | 834.2 | 1272.8 |

\* Gælder kun for serie 90D Flangekuglehane

• **Flow-værdier Kvs - specialkugler på forespørgsel**



| DIMENSION         | V-PORT<br>SLOT mm | 0%   | 10%  | 20%  | 30%  | 40%  | 50%  | 60%  | 70%  | 80%  | 90%  | 100% |
|-------------------|-------------------|------|------|------|------|------|------|------|------|------|------|------|
| DN10FB/<br>DN15RB | V15               | 0.00 | 0.00 | 0.01 | 0.02 | 0.05 | 0.06 | 0.10 | 0.20 | 0.25 | 0.35 | 0.45 |
|                   | S1,0              | 0.00 | 0.00 | 0.03 | 0.06 | 0.09 | 0.13 | 0.15 | 0.18 | 0.21 | 0.25 | 0.28 |
|                   | S1,6              | 0.00 | 0.00 | 0.07 | 0.14 | 0.23 | 0.31 | 0.38 | 0.47 | 0.54 | 0.62 | 0.71 |
|                   | S3,2              | 0.00 | 0.00 | 0.12 | 0.25 | 0,38 | 0.50 | 0.62 | 0.74 | 0.88 | 1.01 | 1.16 |
| DN15FB/<br>DN20RB | V15               | 0.00 | 0.00 | 0.05 | 0.10 | 0.15 | 0.20 | 0.35 | 0.45 | 0.70 | 0.85 | 1.10 |
|                   | S1,0              | 0.00 | 0.00 | 0.04 | 0.08 | 0.12 | 0.17 | 0.20 | 0.25 | 0.28 | 0.33 | 0.37 |
|                   | S1,6              | 0.00 | 0.00 | 0.09 | 0.19 | 0.30 | 0.41 | 0.51 | 0.62 | 0.72 | 0.83 | 0.95 |
|                   | S3,2              | 0.00 | 0.00 | 0.16 | 0.33 | 0.50 | 0.66 | 0.82 | 0.99 | 1.17 | 1.35 | 1.55 |
| DN20FB/<br>DN25RB | V15               | 0.00 | 0.00 | 0.05 | 0.20 | 0.30 | 0.45 | 0.75 | 1.00 | 1.40 | 1.90 | 2.30 |
|                   | S1,0              | 0.00 | 0.00 | 0.05 | 0.11 | 0.17 | 0.22 | 0.28 | 0.34 | 0.39 | 0.45 | 0.51 |
|                   | S1,6              | 0.00 | 0.00 | 0.12 | 0.24 | 0.37 | 0.49 | 0.61 | 0.74 | 0.86 | 0.99 | 1.14 |
|                   | S3,2              | 0.00 | 0.00 | 0.20 | 0.40 | 0.62 | 0.84 | 1.07 | 1.29 | 0.51 | 1.72 | 1.98 |
| DN25FB/<br>DN32RB | V15               | 0.00 | 0.00 | 0.15 | 0.35 | 0.55 | 1.00 | 1.50 | 2.15 | 3.60 | 4.15 | 4.25 |
|                   | S1,0              | 0.00 | 0.00 | 0.08 | 0.16 | 0.23 | 0.31 | 0.39 | 0.48 | 0.56 | 0.63 | 0.73 |
|                   | S1,6              | 0.00 | 0.00 | 0.20 | 0.43 | 0.64 | 0.85 | 1.06 | 1.27 | 1.48 | 1.69 | 1.90 |
|                   | S3,2              | 0.00 | 0.00 | 0.32 | 0.66 | 1.00 | 1.38 | 1.75 | 2.10 | 2.50 | 2.85 | 3.18 |

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