

SR20 Cylinder for oil hydraulics



Dimensions

SR20 is a double acting hydraulic cylinder made entirely of stainless steel. Standard cylinder diameters from $\varnothing 25$ mm up to and including $\varnothing 80$ mm.

Application

Typically used within food industry, fishing industry, environmental technology and wherever water-based operation is required. The cylinder design is simple and robust ensuring long service life in adversely affected environments.

Cylinder Tube

Seamless stainless steel tube, quality W.St. 1.4301, Ra max.0.1 micron. Internal tolerance H9. The cylinder tube is also available in acid proof material W.St. 1.4401.

Piston Rod

Centerless-polished stainless steel, quality W.St. 1.4460 hard chromed min. 20 micron. Temper, min. 850 HV . Ra max. 0.3 micron. External tolerance h9

Piston Rod Speed

Max. speed 0.3 m/s. For higher velocities special seals are required. Please state when ordering.

Seals

Piston Compact packing with nitrile centre ring, polyelastomer shock rings and acetal wear rings

Piston rod Acrylic nitrile rubber seal ring

Wear Rings PTFE with bronze

Scraper Single lip rubber scraper

Connections

Cylindrical pipe thread BSP

Operation pressure

Max. 200 bar.

Operation temperature

Temperature range: -20° to $+100^{\circ}$ C

Pressure fluid

Hydraulic oil on mineral oil basis

Test

Pressure tested at 250 bar.



Dimensioner

SR20 er en dobbeltvirkende hydraulik cylinder fremstillet i rustfrit stål. Standard cylinderdiameter fra $\varnothing 25$ mm til og med $\varnothing 80$ mm.

Anvendelse

Anvendes typisk indenfor levnedsmiddel-industri, fiskeri, miljøteknik og i øvrigt, hvor der kræves drift med vand. Cylinderne er af enkel robust konstruktion, der sikrer lang levetid i belastede miljøer.

Cylinderrør

Sømløst rustfrit stålør, kvalitet W.St. 1.4301, Ra max.0,1 mikron. Indvendig tolerance H9. Cylinderrøret leveres også i syrefast materiale W.St. 1.4401

Stempelstang

Centerless-slebet rustfrit stål, kvalitet W.St. 1.4460, hårdforkromet min. 20 mikron. Hårdhed, min. 850 HV . Ra max. 0,3 mikron. Udvendig tolerance h9.

Stempelstangshastighed

Max. hastighed 0,3 m/s. Ved højere hastighed anvendes special pakninger. Venligst oplys ved ordre.

Pakninger

Stempelpakning Kompakttætning med nitrilring, stødringe i polyelastomer og føringsringe i acetalplast

Stempelstang Tekstil-indvævet acrylnitril

Føringsbånd PTFE med bronzefyld

Afstryger Nitrilgummi

Tilslutninger

Cylindrisk rørgvind BSP

Driftstryk

Max. 200 bar

Driftstemperatur

Temperaturområde: -20° til $+100^{\circ}$ C

Trykmedie

Hydraulikolie på mineraloliebasis

Test

Tryktestet ved 250 bar

SR20 Cylinder for oil hydraulics



Position Sensing Equipment

Magnetic Field Sensor

System based on internal, piston fitted magnets and external sensors.

For further information see page 4.1 or enter our homepage:

www.ssh-stainless.dk/ *Magnetic Field Sensor*

Integrated Sensors

Built-in, contactless positioning sensor. Analogue or digital output signal.

For further information see page 5.1 or enter our homepage:

www.ssh-stainless.dk/ *Special Cylinders*



Positioneringsudstyr

Magnetfelt sensor

Systemet er baseret på indvendigt stempel monterede magneter og udvendige sensorer.

For yderligere information se side 4.1 eller besøg vores hjemmeside:

www.ssh-stainless.dk/ *Magnetic Field Sensor*

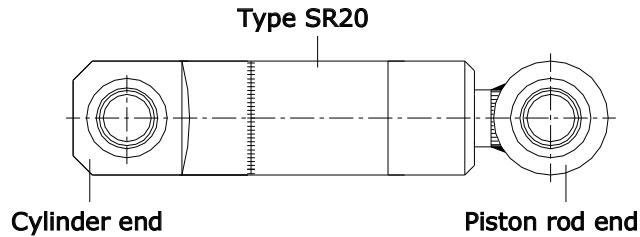
Indbygget positionsføler

Berørings-løs positionsføler med enten analogt eller digitalt signal.

For yderligere informationer se side 5.1 eller besøg vores hjemmeside:

www.ssh-stainless.dk/ *Special Cylinders*

Standard ends for cylinder and piston rod



The ends and bearings for the cylinder and piston rod may be combined according to requirements.

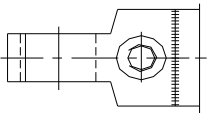
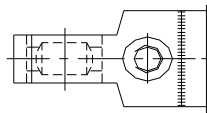
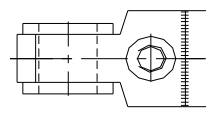
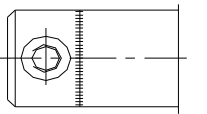
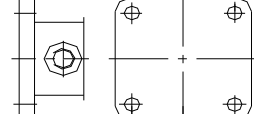
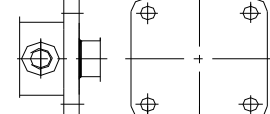
If the chosen combination is not to be found under the shown cylinder types, you can either combine the shown ends for cylinders or contact us for further information.



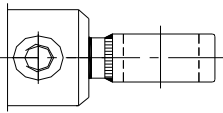
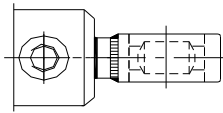
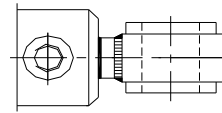
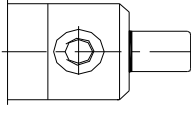
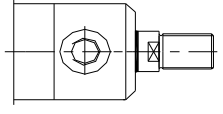
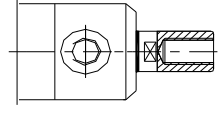
De illustrerede cylinder og stempelstangs ophæng kan frit kombineres i henhold til ønske.

Hvis den ønskede kombination ikke findes under de viste cylindertyper, kan man enten kombinere de viste cylinderophæng eller kontakte os for yderligere information.

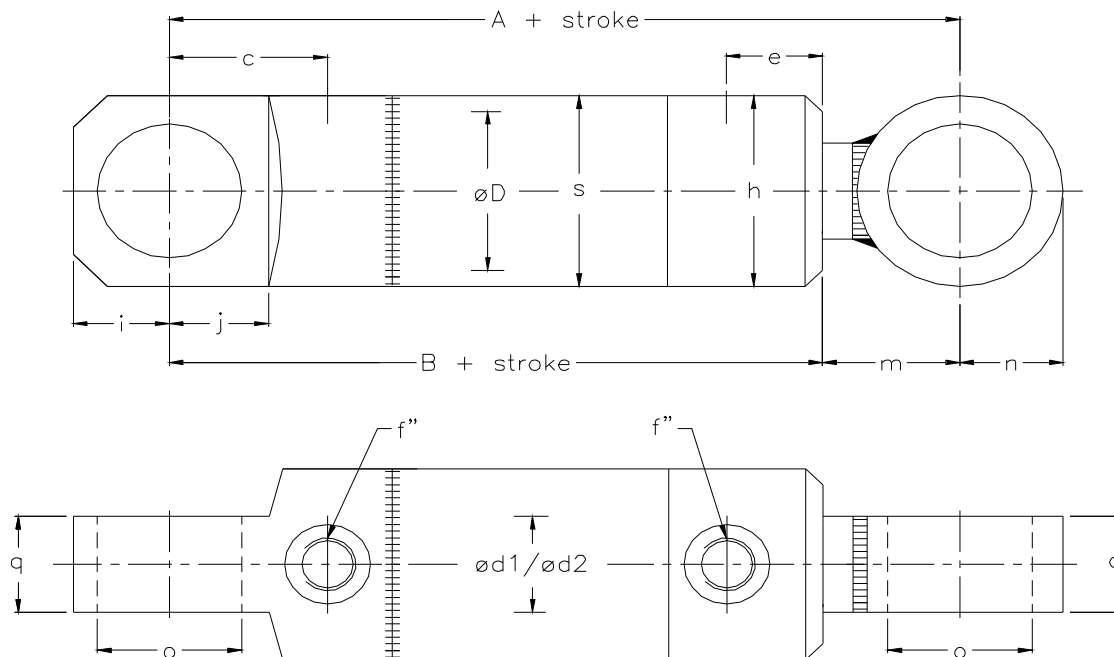
Cylinder ends

<p>V: Standard eye</p>  <p>V: Fast øje</p>	<p>L: Spherical bearing</p>  <p>L: Sfærisk ledleje</p>	<p>N: Nylon bushing</p>  <p>N: Nylon bøsning</p>
<p>O: Flat end</p>  <p>O: Glat ende</p>	<p>F: Bottom flange</p>  <p>F: Bundflange</p>	<p>H: Front flange</p>  <p>H: Frontflange</p>

Piston rod ends

<p>Z: Standard eye</p>  <p>Z: Fast øje</p>	<p>L: Spherical bearing</p>  <p>L: Sfærisk ledleje</p>	<p>N: Nylon bushing</p>  <p>N: Nylon bøsning</p>
<p>O: Flat end</p>  <p>O: Glat ende</p>	<p>D: External thread</p>  <p>D: Udvendigt gevind</p>	<p>P: Internal thread</p>  <p>P: Indvendigt gevind</p>

SR20 VZ cylinders



Dimension table

øD	25	32	40	50	63	80
ød1/ød2	12/16	16	20/25	25/30	30/40	40/50
A	135	155	185	217	225	265
B	95	126	150	177	180	216
c	20	24	36	46	38	50
e	26	24	25	28	28	39
f''	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"
h	40	50	50/55	60	75	100
i	12	18	25	28	35	40
j	13	18	23	29	35	38
m	40	29	35	40	45	52
n	14	19	25	30	35	45
o	15	26	35	42	47	60
q	15	20	25	30	35	45
s	30	40	50	60	75	95

How to order:



SR20 VZ **x1** / **x2** * **x3** K

x1: Inside diameter : 50 mm
x2: Piston rod : 30 mm
x3: Stroke : 200 mm

Ordering code: **SR20 VZ 50/30*200 K**

Eksempel på ordre:

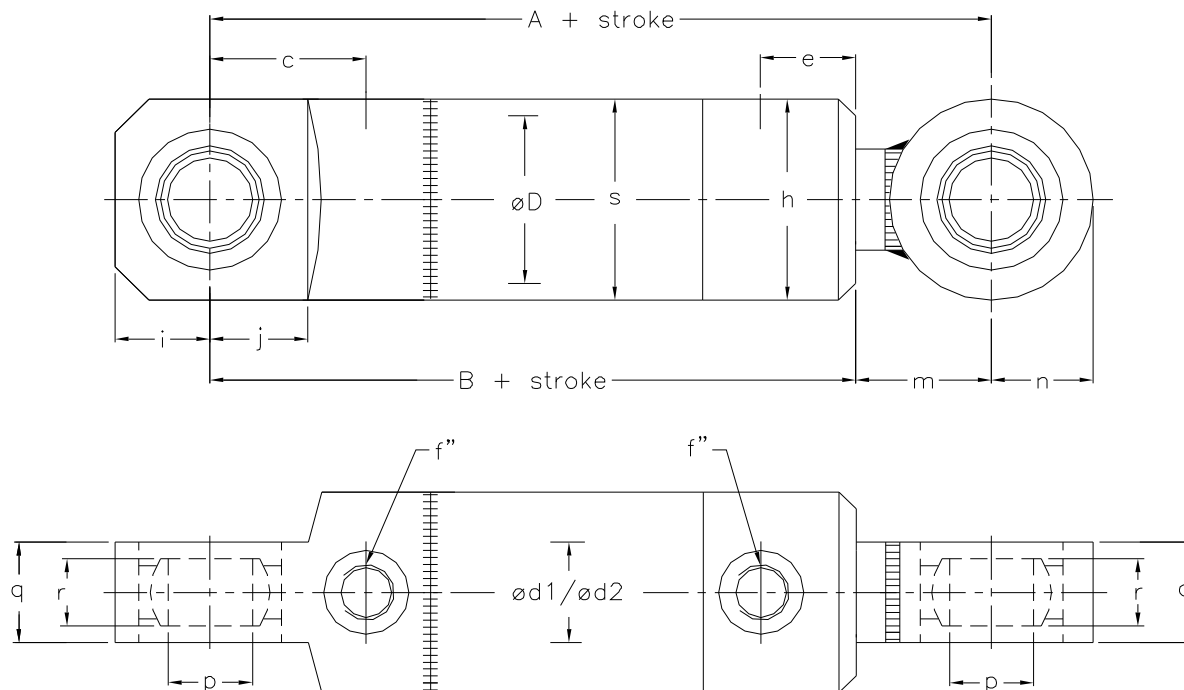


SR20 VZ **x1** / **x2** * **x3** K

x1: Indvendig diameter : 50 mm
x2: Stempelstang : 30 mm
x3: Slaglængde : 200 mm

Ordre kode: **SR20 VZ 50/30*200 K**

SR20 LL cylinders



Dimension table

øD	32	40	50	63	80
ød1/ød2	16	20/25	25/30	30/40	40/50
A	155	185	217	225	265
B	126	150	177	180	216
c	24	36	46	38	50
e	24	25	28	28	39
f''	1/4"	1/4"	3/8"	3/8"	1/2"
h	50	50/55	60	75	100
i	18	25	28	35	40
j	18	23	28	35	38
m	29	35	40	45	52
n	19	25	30	35	45
p	15	20	25	30	35
q	20	25	30	35	45
r	15	16	20	22	35
s	40	50	60	75	95

How to order:



SR20 LL **x1** / **x2** * **x3** K

x1: Inside diameter : 50 mm
x2: Piston rod : 30 mm
x3: Stroke : 200 mm

Ordering code: **SR20 LL 50/30*200 K**

Eksempel på ordre:

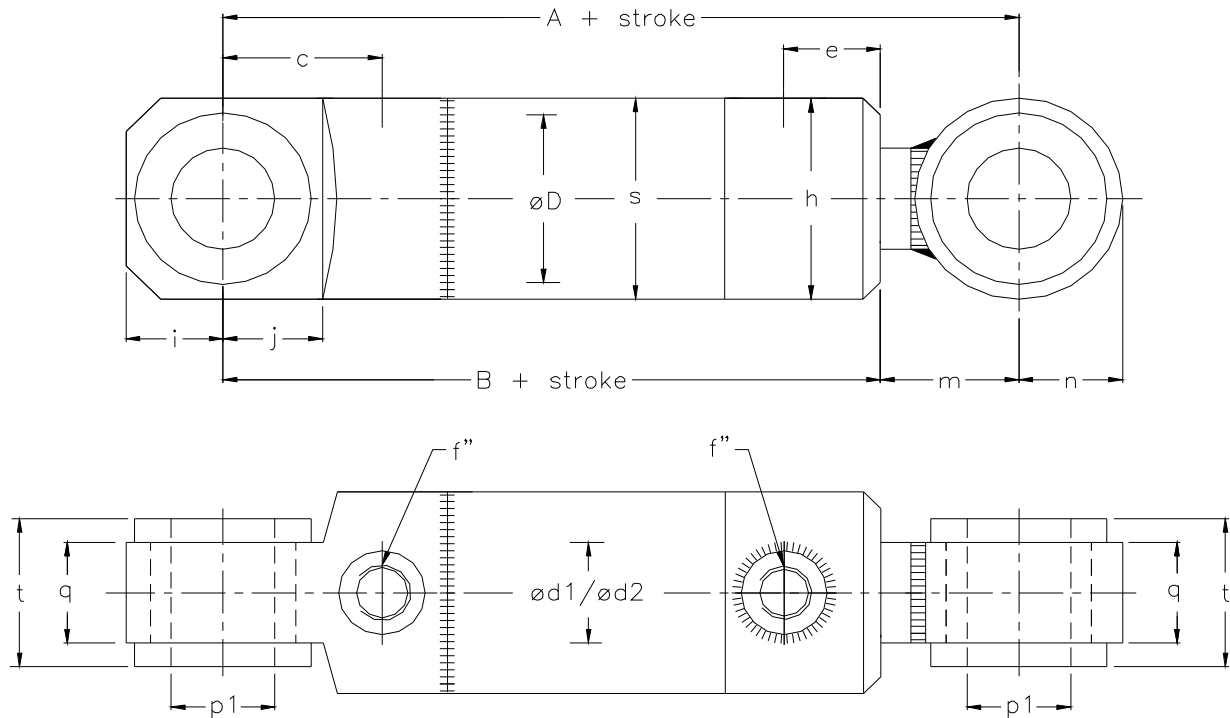


SR20 LL **x1** / **x2** * **x3** K

x1: Indvendig diameter : 50 mm
x2: Stempelstang : 30 mm
x3: Slaglængde : 200 mm

Ordre kode: **SR20 LL 50/30*200 K**

SR20 NN cylinders



Dimension table

$\varnothing D$	25	32	40	50	63	80
$\varnothing d1/\varnothing d2$	12/16	16	20/25	25/30	30/40	40/50
A	135	155	185	217	225	265
B	104	126	150	177	180	216
c	20	24	36	46	38	50
e	26	24	25	28	28	39
f''	1/8"	1/4"	1/4"	3/8"	3/8"	1/2"
h	38	45	50	60	75	100
i	12	18	25	28	35	40
j	12	18	23	28	35	38
m	31	29	35	40	45	52
n	13	19	25	30	35	45
p1	10	15	20	30	30	35
q	15	20	25	30	35	45
s	30	40	50	60	75	95
t	15	20	35	44	50	60

How to order:



SR20 NN x1 / x2 * x3 K

x1: Inside diameter : 50 mm
 x2: Piston rod : 30 mm
 x3: Stroke : 200 mm

Ordering code: SR20 NN 50/30*200 K

Eksempel på ordre:

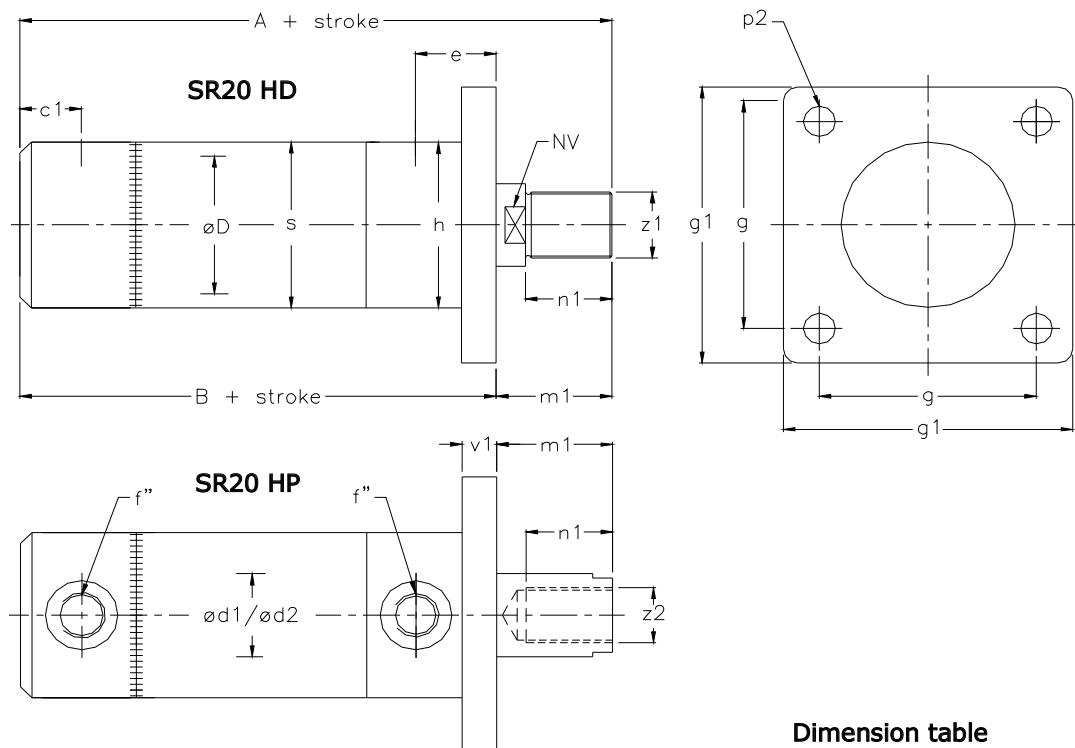


SR20 NN x1 / x2 * x3 K

x1: Indvendig diameter : 50 mm
 x2: Stempelstang : 30 mm
 x3: Slaglængde : 200 mm

Ordre kode: SR20 NN 50/30*200 K

SR20 HD and HP cylinders



Dimension table

øD	25	32	40	50	63	80
ød1/ød2	12/16	16	20/25	25/30	30/40	40/50
A	119	147	163	193	209	249
B	88	118	128	153	164	189
c1	13	16	17	21	22	26
e	26	24	25	28	28	39
f''	1/8 "	1/4 "	1/4 "	3/8 "	3/8 "	1/2 "
g	50	50	65	75	85	110
g1	70	70	90	100	120	140
h	40	50	50/55	60	75	100
m1	31	29	35	40	45	60
n1	24	22	25	30	35	40
NV	10	13	17/22	22/27	27/36	42
p2	9	9	11	11	14	14
s	30	40	50	60	75	95
z1	M10x1,50 M12x1,75	M12x1,75	M16x2,00 M22x2,00	M22x2,00 M24x1,50	M24x1,50 M36x2,00	M36x2,00 M36x2,00
z2	M8x1,25	M8x1,25	M12x1,75 M16x2,00	M16x2,00 M20x2,50	M20x2,50 M24x2,00	M24x2,00 M24x2,00
v1	8	9	9	11	15	18

How to order:



SR20 HD x1 / x2 * x3 K

x1: Inside diameter : 50 mm
 x2: Piston rod : 30 mm
 x3: Stroke : 200 mm

Ordering code: SR20 HD 50/30*200 K

Eksempel på ordre:

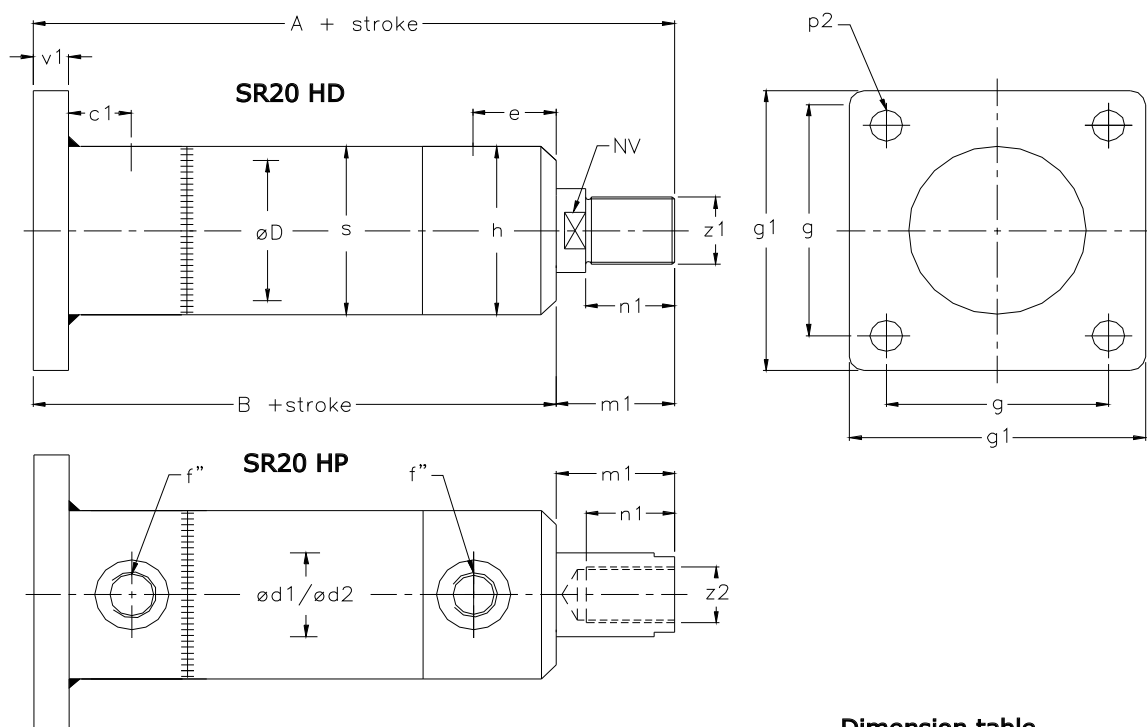


SR20 HD x1 / x2 * x3 K

x1: Indvendig diameter : 50 mm
 x2: Stempelstang : 30 mm
 x3: Slaglængde : 200 mm

Ordre kode: SR20 HD 50/30*200 K

SR20 FD and FP cylinders



Dimension table

øD	25	32	40	50	63	80
ød1/ød2	12/16	16	20/25	25/30	30/40	40/50
A	127	156	172	204	224	267
B	96	127	137	164	179	207
c1	13	16	17	21	22	26
e	26	24	25	28	28	39
f''	1/8 "	1/4 "	1/4 "	3/8 "	3/8 "	1/2 "
g	50	50	65	75	85	110
g1	70	70	90	100	120	140
h	40	50	50/55	60	75	100
m1	31	29	35	40	45	60
n1	24	22	25	30	35	40
NV	10	13	17/22	22/27	27/36	42
p2	9	9	11	11	14	14
s	30	40	50	60	75	95
z1	M10x1,50 M12x1,75	M12x1,75	M16x2,00 M22x2,00	M22x2,00 M24x1,50	M24x1,50 M36x2,00	M36x2,00 M36x2,00
z2	M8x1,25	M8x1,25	M12x1,75 M16x2,00	M16x2,00 M20x2,50	M20x2,50 M24x2,00	M24x2,00 M24x2,00
v1	8	9	9	11	15	18

How to order:



SR20 FD x1 / x2 * x3 K

x1: Inside diameter : 50 mm
 x2: Piston rod : 30 mm
 x3: Stroke : 200 mm

Ordering code: SR20 FD 50/30*200 K

Eksempel på ordre:

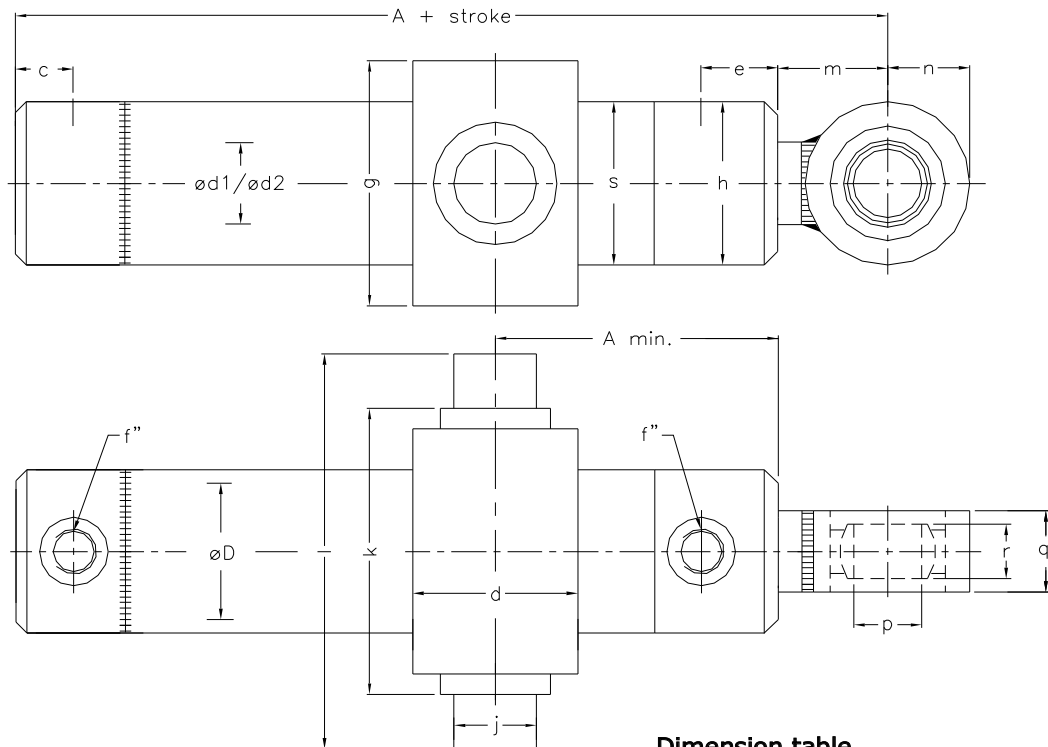


SR20 FD x1 / x2 * x3 K

x1: Indvendig diameter : 50 mm
 x2: Stempelstang : 30 mm
 x3: Slaglængde : 200 mm

Ordre kode: SR20 FD 50/30*200 K

SR20 BL cylinders



Dimension table

$\varnothing D$	32	40	50	63
$\varnothing d1/\varnothing d2$	16	20/25	25/30	30/40
A	147	163	193	209
A min.	85	90	110	125
c	16	17	21	22
d	40	50	60	70
e	24	25	28	28
f''	1/4"	3/8"	3/8"	3/8"
g	50	60	90	94
h	50	50/55	60	75
j	20	20	30	35
k	52	70	105	105
l	92	98	145	155
m	29	35	40	45
n	19	25	30	35
p	15	20	25	30
q	20	25	30	35
r	15	16	20	22
s	40	50	60	75

How to order:



SR20 BL **x1** / **x2** * **x3** K

x1: Inside diameter : 50 mm
x2: Piston rod : 30 mm
x3: Stroke : 200 mm

Ordering code: **SR20 BL 50/30*200 K**

Eksempel på ordre:



SR20 BL **x1** / **x2** * **x3** K

x1: Indvendig diameter : 50 mm
x2: Stempelstang : 30 mm
x3: Slaglængde : 200 mm

Ordre kode: **SR20 BL 50/30*200 K**

Magnetic Field Sensor



Cylinder with internal, piston fitted magnet

SR20 and AQ70 hydraulic cylinders with built-in magnet for position sensing.

The BMF 305 sensor is easily fitted externally on the cylinder tube by means of a stainless steel clip.

If required, several of sensors may be fitted onto the cylinder.

The BMF 305 can only be used on cylinders with piston fitted magnet.

Please notice that you have to add **12 mm** for the internal fitted magnet (**M**) to the A and B measure for all cylinders.

How to order cylinder with magnet



SR20 VZ 50/30*200 K **M**
A: 217+200+**12**=429 mm

Magnetic Field Sensor

BMF 305 with 5 meter cable and indicator LED , IP 67.



Cylinder med indvendigt monteret magnet

SR20 og AQ70 hydrauliske cylindre med indbygget magnet for positionering.

Til montering af BMF 305 sensoren hører et rustfrit spændebånd, som er let at fastgøre udvendigt på cylinderrøret.

Der kan monteres flere sensorer på cylinderen, alt efter behov.

BMF 305 magnetfeltssensor kan kun anvendes på cylindre med indvendig stempelmonteret magnet.



Bemærk, at man skal lægge **12 mm** for den indvendige monterede magnet (**M**) til A og B målet på alle cylindrerne.

Eksempel på cylinder med magnet



SR20 VZ 50/30*200 K **M**
A: 217+200+**12**=429 mm

Magnet sensor



BMF 305 med 5 meter kabel og lysdiode, IP 67.

Type	Output	Supply voltage	Current	Temperature	Cable type	Cable length
BMF 305	PNP	10-30 V.DC	200 mA	-25° to +70° C	PuFlex 3x0,14	5 meter

Bearings and Bushings



Spherical Bearings

Spherical bearings have a W.St. 1.4401 ball and a POM outer ring.

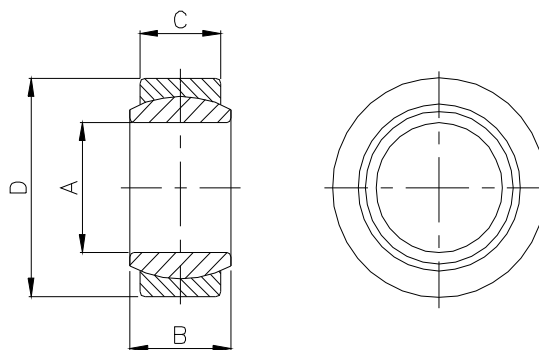


Sfæriske ledlejer og bøs



Sfæriske ledlejer

Sfæriske ledlejer fremstilles med kugle i W.St. 1.4401 med yderring i POM.



Dim.	32	40	50	63	80
A	15	20	25	30	35
B	15	16	20	22	35
C	12	12	16	18	30
D	26	35	42	47	60

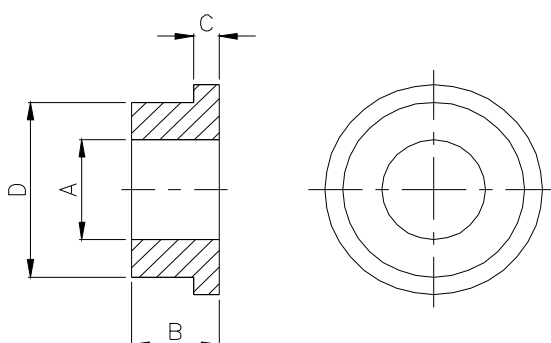
Bushing

Bushing manufactured in POM.



Nylonbøs

Bøs fremstilles i POM.



Dim.	25	32	40	50	63	80
A	10	15	20	30	30	35
B	15	20	17	21	24	30
C	-	-	5	7	7,5	7,5
D	15	26	35	42	47	69