

# 派克321H35-2995-4818653D

产品名称	派克321H35-2995-4818653D
公司名称	淄博贝翔经贸有限公司
价格	900.00/个
规格参数	
公司地址	淄博张店区张桓路
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## 产品详情

skinner valve

the skinner valve actuation series of solenoid valves includes the new 7700 and 7300 lines of 3- and 4-way valves, as well as: all-ports-in-body valves; intrinsically safe valves; quick exhaust valves; direct mount valves with namur interface; ultra low-power valves; and a host of accessories and options. in addition, to satisfy the most stringent environmental demands, most valves are available in a choice of body materials including brass, stainless steel, aluminum and others, as well as a variety of elastomeric seals.

7700 line

parker电磁阀样本，parker电磁阀，lucifer电磁阀低价parker电磁阀样本，

长期现货供应asco电磁阀

美国派克parker cic电磁阀 parker电磁阀，lucifer电磁阀，skinner电磁阀，smc电磁阀，

o d e 电磁阀，asco电磁阀，asco防爆电磁阀，asco脉冲电磁阀，parker-lucifer电磁阀，

parker电磁阀线圈，lucifer电磁阀线圈，skinner电磁阀线圈，parker线圈，lucifer线圈，

费斯托气动，joucomatic电磁阀，ckd电磁阀

parker线圈。lucifer电磁阀线圈，skinner电磁阀线圈,parker-lucifer电磁阀线圈，

parker防爆线圈

skinner防爆电磁阀线圈

1/4 " 7700 line – externa 11/64 1/4 l pilot\* 0.55 1.2 30 30 150 150 150 150 150 150

77317bn2kn7m 77317bn2pn7m 77317vn2kn7m 77317vn2pn7m 1 1

1/4 " 11/64 1/4 0.55 1.2 0 0 150 150 150 150 150 150

78317bn2kn7m 78317bn2pn7m 78317vn2kn7m 78317vn2pn7m 2 2

\* external pilot pressure to operate valve must be 30-150 psi.

7300

skinner 7300 line features

7300 line

1/4 " 11/64 0.55 30 150 150 150 150 73317bn2kn00 73317vn2kn00 3

1/4 1.2 30 150 150 150 150 73317bn2pn00 73317vn2pn00 3

7300 line – external pilot\*

1/4 " 11/64 0.55 0 150 150 150 150 74317bn2kn00 74317vn2kn00 4

1/4 1.2 0 150 150 150 150 74317bn2pn00 74317vn2pn00 4

7300 line – 4.0 cv, single solenoid

1/2 " 5/8 4.0 30 150 150 150 150 73317bn4un00 - 29a

7300 line – 4.0 cv, external pilot

1/2 " 5/8 4.0 30 150 150 150 150 74317bn4un00 - 29a

7300 line – 4.0 cv, remote pilot

1/2 " 5/8 4.0 30 150 150 150 150 75317bn4un00 - 29a

operating pressure differential (psi)

pipe orifice cv brass stainless steel

size size flow pressure vessel pressure vessel constr.

(npt) (inches) factor min maximum catalog number catalog number ref.

specifications

mechanical characteristics:

standard materials of construction

s p r i n g s – stainless steel (18-8 or 17-4)

filter – polyethylene

catalog number catalog number ref.

7300 line-remote operate\*\*

1/4 " 11/64 0.55 30 150 75317bn2kn00 5

1/4 1.2 30 150 75317bn2pn00 5

\* external pilot pressure to operate valve must be 30-150 psi. \*\*remote pilot pressure to operate valve = 35 psi + .2 (main line pressure)

1 0

skinner 7000 series three-way va l v e s

pipe size (npt) orifice size (inches) cv flow factor operating pressure differential (psi) brass pressure vessel catalog number stainless steel pressure vessel catalog number constr. ref.

min maximum

ac dc

10 watt 22 watt 10 watt

normally closed

1/8 " 1/4 "

3/8 " 1/2 " 3/4 "

1/16 3/32 1/16 1/16 3/32 5/64 3/32 3/8 1/2 3/4 0.11 0.24 0.11 0.11x 0.095 0.17 .17x .24 0.24 2.1 3.6 7.3 0 0 0 0 0 0 0 10 10 10

215 100 215 200 125 150 100 180 180 180 215 100 215 200 125 150 100 180 180 180 7131kbn1gv00 7131kbn1lv00 7131kbn2gv00

7131kbn2jv00 7131kbn2lv00 73312bn3rnj1 73312bn4unj1 73312bn52nj1

71315sn2gnj1 71315sn2knj1

6 6 6 7 7 6 6 9 9 9

continues on next page.

skinner 7000 series three-way va l v e s

pipe size (npt) orifice size (inches) cv flow factor operating pressure differential (psi) brass pressure vessel catalog

number stainless steel pressure vessel catalog number constr. ref.

min maximum

ac dc

10 watt 22 watt 10 watt

normally open

1/8 " 1/4 " 3/8 " 1/2 " 3/4 " multipurpose 1/16x 1/8 3/32x 1/8 1/16x 1/8 1/16x 1/8 3/32x 1/8 3/8 3/8 1/2 3/4 0.10x  
0.28 0.17x 0.28 0.10x 0.28 0.10x 0.28 0.17x 0.28 2.1 2.1 3.6 7.3 0 0 0 0 0 10 10 10 10 150 125 150 150 125 180 180 180  
180 150 125 150 150 125 180 180 180 180 73322bn3rnj1 73382bn3rnj1 73322bn4unj1 73322bn52nj1 71395sn1gvj1  
71395sn1kvj1 71395sn2gnj1 71395sn2gvj1 71395sn2knj1 7 7 7 7 7 9 9 9 9

1/8 " 1/4 " all-ports-in-body, 1/16 5/64 3/64 1/16 1/16 5/64 3/32 3/32 normally closed 0.11 0.15 0.052 0.095 0.11  
0.15 0.17 0.24 0 0 0 0 0 0 0 150 100 180 115 150 100 80 60 150 100 180 115 150 100 80 60 7133kbn1gvj1 7133kbn1jvj1  
7133kbn2gvj1 7133kbn2jvj1 7133kbn2lvj1 71335sn2enj1 71335sn2gnj1 71335sn2knj1 6 6 7 7 6 6 7 6

1/4 " all-ports-in-body, 1/16 5/64 5/6x 1/8 3/32 3/32x 9/64 1/8 1/4 normally open 0.095 0.14 0.14x 0.31 0.19 0.19x  
0.38 0.31 .49x .63 0 0 0 0 0 0 200 150 150 120 120 70 30 200 150 150 120 70 30 7131tbn2jv00 7131tbn2lv00  
7131tbn2rv00 7131tvn2gv00 7131tvn2jv00 7131tvn2lv00 7131tvn2nv00 10 10 11 10 11 10 11

1/4 " all-ports-in-body, 5/32x 1/8 multipurpose 0.41x 0.31 0 150 7132tbn2nv00 11

1/4 " normally closed,q 1/16 5/64 5/64 1/8 1/8 uick exhaust\* 0.095 0.17 0.18 0.31 0.32 0 0 0 0 0 150 100 100 30 30 150  
100 100 30 30 7133tbn2jv00 7133tbn2nv00 7133tvn2gv00 7133tvn2jv00 7133tvn2nv00 10 11 10 11 10

1/4 " 3/32x 1/8 1/4 0.11x 0.35 0.2x 1.1 0 0 125 100 125 100 7131ebn2ln00 71313sn2knj1 8 12

\*the valves operate at 0 psi, however a 2 psi minimum pressure differential is required to actuate the pressure operated quick exhaust poppet.

f o u r- way va l v e s

skinner valve actuation series f o u r-way

solenoid valves

skinner four-way solenoid valves are ideal for use in controlling double acting, pneumatic actuators or cylinders. two-position, single or double solenoid models are designed for long, trouble-free life, and are available in 7700 line, 7300 line, and standard solenoid valves.

f o u r-way 7700 and 7300 line valves have many of the same standard features found in the line ' s three-way valves, including a unique seal, spool and cage design, integral pilot filtration and contamination tolerant design. they are available in brass or 303 stainless steel body materials. skinner 7000 series four-way valves are available in aluminum body material. these four-way valves have a maximum pressure differential of 150 psi, with a cv flow factor of 0.55 or 1.2 for 7700 and 7300 line valves and 0.35, 1 or 1.4 for 7000 series valves.

7700

miscellaneous

cages—thermoplastic

skinner 7700 sleeve tube — stainless steel (304) minimum ambient temperature line features plunger —  
7700 line

1/4 " 11/64 0.55 30 150 150 150 77417bn2kn7m 77417vn2kn7m 1

1/4 1.2 30 150 150 150 77417bn2pn7m 77417vn2pn7m 1

7700 line — double solenoid

1/4 " 11/64 0.55 30 150 150 150 77477bn2kn7m 77477vn2kn7m 13

1/4 1.2 30 150 150 150 77477bn2pn7m 77477vn2pn7m 13

7700 line — external pilot\*

1/4 " 11/64 0.55 0 150 150 150 78417bn2kn7m 78417vn2kn7m 2

1/4 1.2 0 150 150 150 78417bn2pn7m 78417vn2pn7m 2

\* external pilot pressure to operate valve must be 30-150 psi.

electrical connections

specifications

lead, 1/2 " conduit, din, screw, tab

mechanical characteristics agency approvals

UL approvals are available on valves with standard materials of construction applicable coil/enclosure combinations.

body — brass or 303 stainless steel for additional information see pages 40-41 .

seals — nbr

7300

skinner 7300 line features

standard features

p l u n g e r – stainless steel (430 fr)

s t o p — stainless steel (430 fr)

s p r i n g s — stainless steel (18-8 or 17-4)

f i l t e r — polyethylene

compatible fluids

lubricated a i r, non-lubricated a i r, inert gases and other gases compatible with materials of construction.

electrical characteristics

v o l t a g e s

dc — 12, 24, 48

ac — 24/60, 110 / 50-120/60, 220/50-240/60 (other voltages available upon request)

m i s c e l l a n e o u s

minimum ambient te m p e r a t u r e

-40 ° f (-40 ° c) dew point must be more than 7 ° f below a m b i e n t .

maximum ambient te m p e r a t u r e

1.5 w a t t — 150 ° f (65 ° c)

10 w a t t — 167 ° f (75 ° c)

f l u x t r o n / m a g n e l a t c h — 122 ° f (50 ° c)

maximum fluid te m p e r a t u r e

167 ° f (75 ° c)

mounting position

m u l t i p o i s e d – valves may be installed in any position.

skinner 7300 line four-way v a l v e s operating pressure differential (psi) pipe orifice cv maximum size size flow ac dc  
(npt) (inches) factor min. 1.5 watt 10 watt 1.5 watt 10 watt brass pressure vessel catalog number stainless steel pressure  
vessel catalog number constr. ref.

7300 line – remote operate\*\*

1/4 " 11/64 0.55 30 150 75417bn2kn00 5

1/4 1.2 30 150 75417bn2pn00 5

\*external pilot pressure to operate valve must be 30-150 psi. \* \*remote pilot pressure to operate valv e = 35 psi+ .2  
(main line pressure)

1 5

7000

specifications

mechanical characteristics

standard materials of construction

b o d y – a l u m i n u m

s e a l s – n b r

s p o o l – a l u m i n u m

sleeve tu be – stainless steel (304)

p l u n g e r – stainless steel (430 fr)

s t o p – stainless steel (430 fr)



s p r i n g s — stainless steel (18-8)

shading ring — c o p p e r

compatible fluids

lubricated a i r, non-lubricated a i r, inert gases

electrical characteristics:

v o l t a g e s

dc — 12, 24, 48

ac — 24/60, 110/50-120/60, 220/50-240/60 (other voltages available upon request)

electrical connections

lead, 1/2 " conduit, din, screw, ta b

agency approvals

u l approvals are available on valves with applicable coil/enclosure combinations. for additional information see pages 40-4 1 .

m i s c e l l a n e o u s

maximum ambient t e m p e r a t u r e

10 w a t t — 150 ° f (65 ° c)

f l u x t r o n / m a g n e l a t c h — 122 ° f (50 ° c)

mounting position

m u l t i p o s i t i o n — valves may be installed in any position.

maximum fluid t e m p e r a t u r e

167 ° f (75 ° c)

skinner 7000 series four-way valves

pipe size (npt) orifice size (inches) cv flow factor operating pressure differential (psi) aluminum pressure vessel catalog number constr. ref.

min. maximum

ac dc

10 watt 10 watt

4-way

1/8 " 5/32 0.35 15 150 150 7341lan1hnm0 15

1/4 " 15/64 1 30 150 150 73419an2nn00 16

15/64 1 30 150 150 73419an2nnm0 16

5/16 1.4 15 150 150 7341lmn2nnm0 17

intrinsically safe valves

skinner intrinsically safe

solenoid valves

skinner valve has long served industry with innovative valve solutions and safety related products. skinner intrinsically safe solenoid valves are specifically designed for use in hazardous locations where fire or explosion hazards exist due to the presence of flammable gases, vapors, liquids, combustible dust, or easily ignitable fibers or flyings.

when used in conjunction with approved safety barriers, skinner intrinsically safe valves have factory mutual research and canadian standards association approval for locations classified as class i, division i, groups a, b, c, d; class ii, division i, groups e, f, g; and class iii, division i. as part of an intrinsically safe system, the valves are incapable of causing explosive atmospheres to ignite by spark or thermal effect during normal operation or under fault conditions.

the three-way valves are offered as normally closed or multipurpose, while the four-way valves are two-position, single or double solenoid.

six special purpose valves are also in our portfolio. five designs with namur interface can be mounted directly to actuators to save installation cost. ano-voltage-release manual reset device is available for applications where human interaction is required to ensure the highest degree of safety.

specifications electrical characteristics:

agency approvals

intrinsically

fmrc and csaapprovals are available

mechanical characteristics

on valves with applicable coil/enclosure standard materials of construction combinations. valves starting with a 7,

b o d y — brass, stainless steel or a l u m i n u m fmrc approval only.

safe va l v e s

s e a l s — nbr, fkm

s p o o l — t h e r m o p l a s t i c

m i s c e l l a n e o u s

c a g e s — t h e r m o p l a s t i c

sleeve tu be — stainless steel (304) ambient te m p e r a t u r e

p l u n g e r — stainless steel (430 f) -40 ° f to 150 ° f (-40 ° c to 65 ° c), see chart

s t o p — stainless steel (430 f) temperature ranges are dictated by the

s p r i n g s — stainless steel (18-8) specific coil/pressure vessel combinations.

compatible fluids fluid te m p e r a t u r e

lubricated a i r, non-lubricated a i r, -40 ° f to 167 ° f (-40 ° c to 75 ° c), see chart

inert gases mounting position

m u l t i p o i s e d — valves may be installed in any position.

3-way

1/4 " 5/128 0.04 0 150 +14 to 150 +14 to 167 brass u131k0490 18

5/128 0.04 0 150 +14 to 150 +14 to 167 316l s.s. u131v5490 19

3/64 0.06 0 100 +14 to 150 +14 to 167 brass u131k0890 18

3/64 0.06 0 100 +14 to 150 +14 to 167 316l s.s. u131v5890 19

13/64 0.5 0 150 -13 to 150 -13 to 167 316ls.s. u133x5196\* 20

1/4 1.2 30 150 +14 to 150 +14 to 167 brass 73317bn2pn90 21

3-way — 4.0 cv, single solenoid

1/2 " 5/8 4.0 30 150 +14 to 150 +14 to 167 brass 73317bn4un90 8a

5/8 4.0 30 150 -40 to 150 -40 to 167 brass 73317bn4u9c 8a

3-way — manual reset

1/4 " 4-way 13/64 0.5 0 150 -13 to 150 -13 to 167 316l s.s. u033x5156\* 22

1/4 " 11/64 0.55 30 150 +14 to 150 +14 to 167 brass 73417bn2kn90 21

11/64 0.55 30 150 +14 to 150 +14 to 167 303 s.s. 73417vn2kn90 21

1/4 0.7 15 150 +14 to 150 +14 to 167 alum. u341b3490 23

1/4 1.2 30 150 +14 to 150 +14 to 167 brass 73417bn2pn90 21

1/2 " 9/16 4 7 150 +14 to 150 +14 to 167 alum. u341l2190 24

4-way — 4.0 cv, single solenoid

1/2 " 5/8 4.0 30 150 +14 to 150 +14 to 167 brass 73417bn4un90 8a

5/8 4.0 30 150 -40 to 150 -40 to 167 brass 73417bn4un9c 8a

4-way, double solenoid

1/4 " 11/64 0.55 30 150 +14 to 150 +14 to 167 303 s.s. 73477vn2kn90 25

1/4 1.2 30 150 +14 to 150 +14 to 167 brass 73477bn2pn90 25

4-way — 4.0 cv, double solenoid

1/2 " 5/8 4.0 30 150 +40 to 150 +14 to 167 brass 73477bn4un90 8a

5/8 4.0 30 150 -40 to 150 -40 to 167 brass 73477bn4u9c 8a

namur 3/4-way

1/4 " 11/64 0.55 30 150 +14 to 150 +14 to 167 alum. 73417akdkn90 26

1/4 1.2 30 150 +14 to 150 +14 to 167 alum. 73417akdpn90 26

namur 3/4-w ay, double solenoid

1/4 " 11/64 0.55 30 150 +14 to 150 +14 to 167 alum. 73477akdkn90 27

1/4 1.2 30 150 +14 to 150 +14 to 167 alum. 73477akdpn90 27

\*requires coil 490860n7

intrinsically safe solenoid valve s

skinner's intrinsically safe valve offering contains five different coil designs to allow the selection of the optimum coil configuration for the application. each coil is built to meet nema4 watertight construction, and has a t6 temperature classification. if the use of electrical conduit is preferred, 1/2 " nptconduit hub adaptors may be ordered for field installation.

intrinsically safe solenoids

solenoid minimum total ambient factory mutual

part number nominal voltage operating current\* solenoid resistance temperature range entity parameters

vmax imax ci li

splice box coil enclosure

490885 potted coil with le 24 vdc ad wires 29 ma 345 ohms -13 to +150 30 v 100 ma 0 microf 0 mh

490890 potted coil with di 24 vdc n connection 29 ma 345 ohms -13 to +150 30 v 100 ma 0 microf 0 mh

490895 32mm din coil and 24 vdc plug adaptor 29 ma 345 ohms -13 to +150 30 v 100 ma 0 microf 0 mh

490880 splice box coil enc 24 vdc losure with booster 35 ma circuit 340 ohms -13 to +130 30 v 100 ma 0 microf 0 mh

490860\*\* 24 vdc. 60 ma 23 ohms -13 to +150 loop approval only. consult factory.

\* these are the currents at which a complete assembly (coil and pressure vessel) will operate. \*\* for use on u133x5196 only.

to order a complete i.s. valve :

- 1 . select the base valve which meets the application requirements.
- 2 . select the desired coil/enclosure combination.
- 3 . delete the first two digits of the coil part number.

splice box coil enclosure 490885

div. i; class i, ii, iii; groups a-g u22-002 4 . for valves that start with a 7, add n0 to catalog number.

potted coil with lead wires 490890 div. i; class i, ii, iii; groups a-g u22-003 5 . add the remaining four digits of the coil number to the end of the base valve number.

potted coil with din connection 490895 div. i; class i, ii, iii; groups a-g u27-001 6 . add the voltage code n7 to the number.

32mm din coil and plug adaptor 490880 (fmrc only)

div. i; class i, ii, iii; groups c-g u27-001

splice box coil enclosure with booster circuit 490860

div. i; class i, ii, iii; groups c-g u22-001

1 9

ultra low-power

skinner ultra low-power

valves

solenoid valves

skinner's ultra low-power solenoid valves use a unique operator designed to keep current draw to a minimum by controlling the stroke, and conventional coil construction to achieve a power consumption level of 0.6 watts with no refresh time required. these valves are ideally suited for use in automated control systems, applications where minimizing energy consumption is critical or where heat rise in the coil must be kept to a minimum. these devices allow for an increased number of solenoids to be driven from the same power source, reducing the overall installation cost.

the coils come in an integrated design in both nema 4x and nema 4x, 7 and 9 versions.

voltages

specifications

dc – 12, 24, 48

ultra

mechanical characteristics electrical connections

1/2 " conduit

standard materials of construction

agency approvals

b o d y — brass or 303 stainless steel

l o w - p o w e r

u l approvals are available on valves with

s e a l s — n b r

skinner 7300 line features

standard features

unique seal, spool and cage design

integral pilot filtration

contamination tolerant design

captured pusher cavity exhaust

a i r-assisted spring return

tag mount provision

1.5 watt power level

optional features

captured exhaust pilot

horizontal oriented solenoid operators

m o m e n t a r y or field convertible manual overrides

exhaust adaptors

0.6 w a t t s

3-way 1/4 " 5/128 0.04 7300 line — 3-way 1/4 " 11/64 0.55 1/4 1.2 7300 line 4.0 cv, single solenoid 1/2 " 5/8 4.0 7300 line — 4-way 1/4 " 11/64 0.55 1/4 1.2 7300 line 4.0 cv, single solenoid 1/2 " 5/8 4.0 7300 line — 4-way, double solenoid 1/4 " 11/64 0.55 1/4 1.2 7300 line 4.0 cv, double solenoid 1/2 " 5/8 4.0 0 150 30 150 30 150 30 150 30 150 30 150 30 150 30 150 7131kbn2ev90 73317bn2pn90 73317bn4un90 73417bn2pn90 73417bn4un90 73477bn2pn90 73477bn4un90 7131kvn2ev90 73317vn2kn90 -73417vn2kn90 -73477vn2kn90 - 18/19 21 21 29a 21 21 29a 25 25 29a

pipe orifice cv size size flow (npt) (inches) factor operating pressure differential (psi) minimum maximum aluminum pressure vessel catalog number stainless pressure vessel catalog number constr. ref.

spool— thermoplastic

cages— thermoplastic

sleeve tube — stainless steel (304)

p l u n g e r — stainless steel (430 f)

s t o p — stainless steel (430 f)

s p r i n g s — stainless steel (18-8 or 17-4)

filter— polyethylene

compatible fluids

lubricated a i r, non-lubricated a i r, inert gases and other gases compatible with materials of construction.

electrical characteristics

power consumption

applicable coil/enclosure combinations. for additional information see pages 40-41.



miscellaneous

minimum ambient temperature

+ 14 ° f ( - 10 ° c ) dew point must be more than 7 ° f below ambient .

maximum ambient temperature

140 ° f (60 ° c)

maximum fluid temperature

167 ° f (75 ° c)

mounting position

multiported – valves may be installed in any position.

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skinner ultra low-power valves operating pressure differential (psi) pipe orifice cv size size flow (npt) (inches) factor  
minimum maximum brass pressure vessel catalog number stainless steel pressure vessel catalog number constr. ref.

7300 line – 4-way, direct mount

1/4 ”

11/64 0.55

30

150

73417akdkn90

26 1/4

1.2

30

150

73417akdpn90

26

7300 line — 4-way, double solenoid,direct mount

1/4 ”

11/64 0.55

30

150

73477akdkn90

27 1/4

1.2

30

150

73477akdpn90

27

2 1

manual reset

skinner manual re s e t

va l v e s

solenoid valves

skinner manual reset solenoid valves are often specified when safety is the highest concern. typical applications include chemical processing plants, oil drilling platforms, refineries, and fuel dispensing stations. these special purpose valves act as “ fluid circuit breakers ” in a control system.

skinner manual reset valves are available in either electrically tripped or no-voltage-release models. to operate an electrically tripped manual reset valve, the coil is de-energized and the hand lever is manually moved to the latched position. the movement of the handle causes the valve to shift. when the coil is energized, the handle and latching mechanism are automatically tripped allowing the valve to return to its original position.

in the case of no-voltage-release manual reset valves, the coil is first energized and then the hand lever is manually moved to the latched position. the movement of the handle causes the valve to shift. when the coil is de-energized, the handle and latching mechanism are automatically tripped allowing the valve to return to its original position.

the three-way manual reset valves are offered in normally open, normally closed and multipurpose configurations. four-way manual reset valves are provided with five ports for separate control of the actuator exhaust air.

seals – nbr, fkm

p l u n g e r – stainless steel (430 fr)

s p r i n g s – stainless steel

m a n u a l

r e s e t     s t o p – stainless steel (430 fr)

    sleeve tube – stainless steel (304)

compatible fluids

    determined by valve selection. most valves are compatible with inert gases, air, and petroleum products. consult factory.

specifications

    10 w a t t s – a c

electrical characteristics mechanical characteristics power consumption standard materials of construction

    22 w a t t s – d c

b o d y – brass, stainless steel or a l u m i n u m as specified v o l t a g e s

manual reset housing – b r a s s     a c – 24/60, 110/50-120/60, 2 2 0 / 5 0 - 2 4 0 / 6 0

skinner manual reset va l v e s

pipe orifice cv operating pressure max no voltage electrically

size (npt) size (inches) flow factor differential(psi) fluid temp ( ° f) release pressure vessel tripped pressure vesse

min ac max dcmax

3-way normally closed,brass body, nbr seals

dc – 12, 24, 48

electrical connections

leaded, din, 1/2 conduit, screw, ta b s

agency approvals

u l approvals are available on valves with applicable coil/enclosure combinations. for additional information see pages 40-41.

m i s c e l l a n e o u s

maximum fluid te m p e r a t u r e

185 ° f (85 ° c)

maximum ambient te m p e r a t u r e

10 wa tt – 167 ° f (75 ° c)

22 wa tt – 131 ° f (55 ° c)

1/4 " 11/64 0.55 30 150 150 165 70317bn2knvr 70317bn2knet

1/4 1.2 30 150 150 165 70317bn2pnvr 70317bn2pnet

3/8 " 3/8 2.1 10 180 180 185 70312bn3rnvr 70312bn3rnet

1/2 " 1/2 3.6 10 180 180 185 70312bn4unvr 70312bn4unet

3/4 " 3/4 7.3 10 180 180 185 70312bn52nvr 70312bn52net

3-way normal y closed, stainle ss steel body, n br seals

1/4 " 3/64x 3/32 0.62x .017 0 200 200 185 70315sn2envr 70315sn2enet

1/8x 3/32 0.23x 0.17 0 200 200 185 70315sn2envr 70315sn2mnet

11/64 0.55 30 150 150 165 70317vn2knvr 70317vn2knet

1/4 0.55 30 150 150 165 70317vn2pnvr 70317vn2pnet

3-way normal y closed, stainle ss steel body, f km seals

1/4 " 1/16x 3/32 0.11x 0.17 0 150 150 185 70315sn2gvvr 70315sn2gvet

3/32x 3/32 0.17x 0.17 0 90 90 185 70315sn2kvvr 70315sn2kvet

3-way normal y open, brass or stainless steel body, nbr seal s

1/4 " 1/16x 3/32 0.095x 0.17 0 150 150 185 70325sn2gnvr 70325sn2gnet

3/8 " 5/8 2.1 10 180 180 185 70322bn3rnvr 70322bn3rnet

1/2 " 1/2 3.6 10 180 180 185 70322bn4unvr 70322bn4unet

3/4 " 3/4 7.3 10 180 180 185 70322bn52nvr 70322bn52net

3-way universa l all-ports in bo dy, brass body, nbr seals

1/4 " 5/64x 5/64 0.17x 0.17 0 100 100 185 7033tbn2jvvr 7033tbn2jvet

1/8x 1/8 0.23x 0.23 0 50 50 185 7033tbn2nvvr 7033tbn2vvet

3-way universa l all-ports in bo dy, 303 stainles s steel body, fkm seals\*\*

1/4 " 1/16x 1/16 .095x 0.09 0 150 150 185 7033tvn2gvvr 7033tvn2gvet

5/64x 5/64 0.17x 0.17 0 100 100 185 7033tvn2jvvr 7033tvn2jvet

1/8x 1/8 0.23x 0.23 0 50 50 185 7033tvn2nvvr 7033tvn2nvet

3-way intrinsic ally safe, stainle ss steel body, n br seals

1/4 " 4-way, aluminu 3/16 m body, nbr s 0.63 eals 0 145 145 135 u033x51560860n7\*

1/4 " 4-way, brass b 1/4 ody, nbr seals 1 15 150 150 165 70419an2nnvr 70419an2nnet

1/4 " 11/64 0.55 30 150 150 165 70417bn2knvr 70417bn2knet

1/4 1.2 30 150 150 165 70417bn2pnvr 70417bn2pnet

4-way, stainless steel body, nitrile seals

1/4 " 11/64 0.55 30 150 150 165 70417vn2knvr 70417vn2knet

1/4 1.2 30 150 150 165 70417vn2pnvr 70417vn2pnet

direct mount (namur patterned) valves

skinner direct mount solenoid valves

for direct-mount solenoid valves, it is important to define the exact locations of the process connections, mounting screws, and so on, to achieve proper valve function and adequate sealing.

increasingly, actuator manufacturers are utilizing a standardized mounting pattern referred to as the namur interface. in addition to defining the critical dimensions and locations, the namur interface pattern includes two m5 mounting screws, an m5 positioning stud, and two 16 mm x 2mm o-rings as standard.

three-way skinner namur valves are normally closed, direct acting models.

the four-way skinner namur valve designs have a cv range from .55 to 1.2, and are supplied with a unique 3-way/4-way conversion plate. the user can alter the function of the valve from 4-way to 3-way simply by rotating the conversion plate 180 degrees. in the 3-way configuration, the plate channels return air from the piston side to the spring cavity of the actuator. without this venting feature, environmental air – which is often contaminated with moisture, dust particles, or other particulates – would be drawn into the spring cavity promoting spring corrosion and premature actuator failure.

filter – polyethylene

plate – thermoplastic

direct mount

compatible fluids

lubricated air, non-lubricated air, inert

gases and other gases compatible with materials of construction.

electrical characteristics mechanical characteristics

voltage standard materials of construction dc – 12, 24, 48

body – aluminum or 303 stainless steel ac – 24/60, 110/50-120/60, 220/50-240/60

seals – nitrile or fkm (other voltages available upon request).

spool – thermoplastic

electrical connections

cages – thermoplastic

leaded, 1/2 " conduit, din, screw, tab

mounting position

multiported – valves may be installed in any position.

1/4 " 3/32 5/64 3/32 1/8 1/8 0.17 0.14 0.19 0.31 0.31 0 0 0 0 0 150 150 120 70 120 150 150 120 70 120 71315akdkn00  
7131tvkdjv00 7131tvkdjv00 7131tvkdjv00 7131tvkdjv00 28 29 29 29 29

7700 line – 3- way/4-way

1/4 " 11/64 0.55 30 150 150 150 77417akdkn00 77417vkdkn00 30

1/4 1.2 30 150 150 150 77417akdnpn00 77417vkdnpn00 30

7700 line – 3 - ouble solenoid

1/4 " 11/64 way/4-way, d 0.55 30 150 150 150 77477akdkn00 77477vkdkn00 31

1/4 1.2 30 150 150 150 77477akdnpn00 77477vkdnpn00 31

7700 line – 3- way/4-way, external pilot

1/4 " 11/64 0.55 30 150 150 150 78417akdkn00 78417vkdkn00 30

1/4 1.2 30 150 150 150 78417akdnpn00 78417vkdnpn00 30

7300 line – 3- way/4-way

1/4 " 11/64 0.55 30 150 150 150 150 73417akdkn00 73417vkdkn00 32

1/4 1.2 30 150 150 150 150 73417akdnpn00 73417vkdnpn00 32

7300 line – 3- way/4-way, double solenoid

1/4 " 11/64 0.55 30 150 150 150 150 73477akdkn00 73477vkdkn00 33

1/4 1.2 30 150 150 150 150 73477akdnpn00 73477vkdnpn00 33

7300 line – 3- way/4-way, external pilot

1/4 " 11/64 0.55 30 150 150 150 150 74417akdkn00 74417vkdkn00 32

1/4 1.2 30 150 150 150 150 74417akdnpn00 74417vkdnpn00 32

\* other coil voltages available upon request, consult skinner valve.

the voltages identified in the table above carry agency approvals for integrated coils. see pages 40-41 for additional information. \*magnetlatch latching coil voltages. other coil voltages available upon request, consult skinner valve.

## integrated coil offering

coil code type of termination holding power coil description

I111 leads 10 w class f molded with 18 " leads

I222 leads 10 w class h molded with 18 " leads

I322 leads 22 w class h molded with 18 " leads

c111 1/2 " npt conduit 10 w class f molded; nema 1, 2, 3, 3s, 4, 4x; 18 " lead wires

c222 1/2 " npt conduit 10 w class h molded; nema 1, 2, 3, 3s, 4, 4x; 18 " lead wires

c322 1/2 " npt conduit 22 w class h molded; nema 1, 2, 3, 3s, 4, 4x; 18 " lead wires

c611 1/2 " npt conduit 1.5 w class f molded; nema 1, 2, 3, 3s, 4, 4x; 18 " lead wires

c711 1/2 " npt conduit 0.6 w class f molded; nema 1, 2, 3, 3s, 4, 4x; 18 " lead wires

d100 din 10 w class f molded

d200 din 10 w class h molded

d300 din 22 w class h molded

h111 1/2 " npt conduit 10 w class f molded; nema 3, 3s, 4, 4x, 7, 9; 18 " lead wires

h222 1/2 " npt conduit 10 w class h molded; nema 3, 3s, 4, 4x, 7, 9; 18 " lead wires

h322 1/2 " npt conduit 22 w class h molded; nema 3, 3s, 4, 4x, 7, 9; 18 " lead wires

h611 1/2 " npt conduit 1.5 w class f molded; nema 3, 3s, 4, 4x, 7, 9; 18 " lead wires

h711 1/2 " npt conduit 0.6 w class f molded; nema 3, 3s, 4, 4x, 7, 9; 18 " lead wires

h1s1 1/2 " conduit stainless 10 w class f molded; nema 3, 3s, 4, 4x, 7, 9; 18 " leads stainless steel

h2s1 1/2 " conduit stainless 10 w class h molded; nema 3, 3s, 4, 4x, 7, 9; 18 " leads stainless steel

h3s1 1/2 " conduit stainless 22 w class h molded; nema 3, 3s, 4, 4x, 7, 9; 18 " leads stainless steel

h6s1 1/2 " conduit stainless 1.5 w class f molded; nema 3, 3s, 4, 4x, 7, 9; 18 " leads stainless steel

h7s1 1/2 " conduit stainless 0.6 w class f molded; nema 3, 3s, 4, 4x, 7, 9; 18 " leads stainless steel

s100 screw 10 w class f molded

s200 screw 10 w class h molded



s300 screw 22 w class h molded

t100 1/4 " tab 10 w class f molded

cenelec approved coils

hz09 3-wire cable gland 10 w eex d iic t4 (ip 65) molded class f, lcie 96.d6196x, internal and external grounding, cable length: 1500mm

hz10 3-wire cable gland 10 w eex m ii t6 (ip 65) molded class h, lcie 97.d6126x, internal and external grounding, cable length: 1500mm

hz11 3-wire cable gland 22 w eex m ii t6 (ip 65) molded class h, lcie 97.d6126x, internal and external grounding, cable length: 1500mm

hz12 3-wire cable gland 1.5 w eex m ii t6 (ip 65) molded class f, lcie 97.d6129x, internal and external grounding, cable length: 1500mm

hz13 3-wire cable gland 0.6 w eex m ii t6 (ip 65) molded class f, lcie 97.d6129x, internal and external grounding, cable length: 1500mm

hz06 cable connection 8 w eex me ii t3/t4 (ip 65) lcie 92.6036x, reinforced plastic housing, rectified diodes and varistor protection are

encapsulated, screw termination in terminal box

vz03 cable connection ac: 11 w eex e ii t4 (ip 67) lcie 86.6161x, metal housing with encapsulated screw terminal coil, internal and external

dc: 9 w ground screws

specialty coils\*

j611 lead wires 1 w 2-wire, voltage specific, fluxtron electronic coil

f611 lead wires 1 w 4-wire, voltage specific, ttl logic level compatible, fluxtron electronic coil

j011 lead wires 0 w 2-wire, magnelatch coil, dc service only

g011 lead wires 0 w 3-wire, magnelatch coil, ac or dc service

\* these coils require separate enclosures. see the enclosure selection chart.

fluxtron and magnelatch enclosure selections

acoil enclosure is necessary for both fluxtron electronic and magnelatch latching coils. an enclosure serves as a flux path for fluxtron coils, and can also serve to protect the coil and provide a means for accommodating the electrical connections. the following enclosure selection is provided to complement the integrated coil offering, and to give customers the utmost flexibility in product type and installation. the following enclosures are available:

## enclosures

a 0: has a 7/8-inch exit hole to accommodate a strain relief, conduit adaptor or other fitting.

b 0: has a 1/2-inch nptthread for attachment of conduit, 1/2-inch npt f i t t i n g or 1/2-inch bx cable.

f 0 : ayoke. provides no additional protection from the environment, but merely completes the magnetic flux path.

g 0 : a 1/2-inch npt hub designed to conform to watertight standards. can accommodate conduit, 1/2-inch npt f i t t i n g

j 0 : has a 7/8-inch exit hole and is built to allow an internal splice.

m 1 : for magnelatch latching coils only, a 1/2-inch npt hub for attachment of conduit, 1/2-inch nptfitting or 1/2-inch bx cable.

m2: for magnelatch latching coils only, leads exit from the enclosure through a

## mechanical options

solenoid valves at times require a variety of d i f f e r e n t mechanical options to meet the specific needs of a given application. many of these options have become common over time, others are specified infrequently.

skinner has the ability to produce wide varieties and combinations of mechanical options. listed are only a few of the common options we provide. if the option (or set of options) you need is not listed, please contact a company representative for a s s i s t a n c e .

available options are denoted by the valve family to which they pertain. t h e family designator is position 5 of the pressure vessel number. to order the listed mechanical options:

1. select the base pressure vessel number. it must have “ 00 ” in the last two digits.

2 . confirm compatibility of the option with the mechanical options ta b l e .

3 . write the mechanical option code in place of the last two digits of the pressure vessel number. for example, a 7133tbn2jv00 with a manual override (mo) becomes 7133tbn2jvm0.

or 1/2-inch bx cable.

a0 b0 f0 g0 j0

m1 m2

fluxtron enclosures

standard connection, 7/8 " exit for lead wires, nema 1 conduit connection, 1/2 " nptconduit hub, nema 1 yoke watertight, 1/2 " nptconduit hub, nema4x splice box, allows for internal splice, nema 1

magnetlatch enclosures

magnetlatch, 1/2 " npt conduit hub, nema 1 magnetlatch, leaded with grommet connection, nema 1

ground connection and may be assembled to the valve at 90 ° intervals. service can be performed quickly by simply unplugging

a2 silver shading ring

j0 pilot exhaust return pipe

j1 exhaust adaptor nut

m0 manual override

m0 field convertible manual override

m5 m0 with exhaust adaptor nut

r0 metering exhaust

r1 main stream metering

r2 adjustable bypass

7a momentary manual override

7c 7awith j1

7f captured exhaust pilot

7g 7f with 7a

7h 7f with m0

2

x x x

3

x x

x x

5

x

x x

x x x x

6

x

x

x x

7 8 9lkt

the coil. an electrician is not required. t h e

x

plug comes complete with a gasket to meet n e m a specification type 4.

x

x x x x

x x x x x

electrical options

the following is a description of common options available with valve a c t u a t i o n series coils. to order a coil with an option write the electrical option code in place of the last two digits of the coil code. t h e s e electrical options (with exception of the ground lead) are also available for sale as individual pieces (accessories). for an accessory simply order the code.

descriptions of electrical options

option code gl: integrated coils with a conduit termination are available for both ordinary and hazardous location installations. each coil type can be provided with an 18-inch ground lead.

option code d1: this din plug is equipped with a cable gland which acts as a strain relief when tightened. within the plug are screw terminals to which the control wires are fastened. the plug provides for a option code d2: this din plug is identical to the cable gland version except that a 1/2-inch npt conduit thread replaces the cable gland. it is ideal for attachment of flexible c o n d u i t .

option codes db, tb: this option consists of a terminal box for both the screw and din model integrated coils. it is designed to meet nematype 4, 4x standards when installed. it is provided with a 1/2-inch n p t conduit thread and ground screw.

electrical options

coil option applicable coils

c o d e d e s c r i p t i o n coil t y p e s coil codes

gl ground lead conduit terminated c1gl, c2gl, c3gl, h1gl, h2gl, h3gl

d1 cable gland din plug din d1d1, d2d1, d3d1

d2 1/2 " conduit din plug din d1d2, d2d2, d3d2

db\* terminal box din d1db, d2db, d3db,

tb\* terminal box screw terminal s1tb, s2tb, s3tb

ordering items 1 and 2, fully assembled va l v e s

step 1: select the appropriate pressure

ve s s e l .

step 2: use the mechanical options ta b l e ,

if required, to write the option code in place

of the last two pressure vessel digits, “ 00 ” .

step 3: select the appropriate integrated coil

and enclosure (no), or enclosure and

conventional coil.

step 4: use the electrical options table, if

required, to write the option code in place of

the last two coil digits.

step 5: use the voltage code to specify the

correct voltage for the valve.

pressure voltage vessel enclosure coil code

7131kbn2gv00 + no + c111 + p3 7131kbn2gv00n0c111p3

ordering items 3 and 4, pressure vessels, integrated coils

pressure vessels can be ordered as separate items. simply select the catalog number and submit the order. if a mechanical option is desired, make sure it is included in place of the last two “ 00 ” digits in the pressure vessel number.

integrated coils can be ordered as separate items. simply select the coil number and add the correct voltage code. if an electrical option is desired, make sure that it is included in place of the last two digits in the coil number, then specify the voltage by its code.

valve

digit significant numbering system. this system allows the user an easy method to select and identify the product. please note that some skinner intrinsically safe valves have a different numbering system.

numbering

provided below is a complete set of numbering system codes. the codes apply to three major valve components; the pressure vessel, the enclosure, and the coil.

skinner actuation series numbering system

77317bn2kn00

actuation type

7 0 — manual reset 1 — direct operated 3 — three-way 4 — four-way

3 — pilot operated, internal pilot supply 4 — pilot operated ,

external pilot supply 5 — remote pressure

operated

7 — 7700 line, pilot operated, internal pilot supply 8 — 7700 line, pilot operated,

external pilot supply

flow pattern family body material

3-way valves 2 a — aluminum

1 — normally closed 3 b — brass

2 — normally open: pressure in body 5 s — 430f ss

3 — multipurpose 6 v — 303 ss

8 — diverting 7 m — zinc alloy

9 — normally open: pressure in sleeve 9

e

4-way valves k

1 — 2-position, single operator, monostable l

7 — 2-position, dual operator, bistable t

x

connection

n — npt g — bsp pl k — direct mount p — nptf

pipe size

for n, g, or p in position 7:

1 — 1/8 " 2 — 1/4 " 3 — 3/8 " 4 — 1/2 " 5 — 3/4 "

for k in position 7: d — namur

orifice/cv/flow

a through h j through n p through v 0 through 9

seals

n — nbr v — fkm

mechanical options

00 — no option m0 — manual override\* j1 — exhaust adaptor nut m5 — mo & j1 et — electrically tripped manual reset  
vr — no-voltage-release manual reset 7a — momentary manual override 7c — 7a & j1 7f — captured exhaust pilot 7g — 7f  
& 7a 7h — 7f & m0 7m — plugged manual override

\*field convertible with 6 or 7 in position 5.

enclosure options

a0 — 7/8 " knock out b0 — 1/2 " conduit f0 — yoke g0 — watertight j0 — junction box m1 — magnelatch 1/2 " conduit  
m2 — magnelatch grommet n0 — nut & washer for integrated coils

coil type terminations voltage

integrated coils

c1 — 1/2 " npt conduit, 10 watt, class f, nema 4x

c2 — 1/2 " npt conduit, 10 watt, class h, nema4x

c3 – 1/2 " npt conduit, 22 watt, class h, nema4x

c6 – 1/2 " npt conduit, 1.5 watt, class f, nema 4x

c7 – 1/2 " npt conduit, 0.6 watt, class f, nema4x

d1 – din, 10 watt, class f

d2 – din, 10 watt, class h

d3 – din, 22 watt, class h

h1 – 1/2 " npt conduit, 10 watt, class f, nema 4x, 7, 9

h2 – 1/2 " npt conduit, 10 watt, class h, nema4x, 7, 9

h3 – 1/2 " npt conduit, 22 watt, class h, nema4x, 7, 9

h6 – 1/2 " npt conduit, 1.5 watt, class f, nema4x, 7, 9

h7 – 1/2 " npt conduit, 0.6 watt, class f, nema 4x, 7, 9

l1 – 18 " leads, 10 watt, class f

l2 – 18 " leads, 10 watt, class h

l3 – 18 " leads, 22 watt, class h

s1 – screw terminal, 10 watt, class f

s2 – screw terminal, 10 watt, class h

s3 – screw terminal, 22 watt, class h

t1 – 1/4 " tab terminal, 10 watt, class f

specialty coils

f6 – fluxtron, 4-wire, 1 watt

j6 – fluxtron, 2-wire, 1 watt

j7 – fluxtron, 2-wire, 2 watt

j0 – magnelatch, 2-wire, dc service only

g0 – magnelatch, 3-wire, ac or dc service

3 5

00 – standard din (no lead wires)



11 — class f coils, 18 " lead wires 22 — class h coils, 18 " lead wires gl — ground wire for c1, c2, c3, h1, h2, & h3 coils  
d1 — d1 coils with cable gland connector d2 — d1 coils with 1/2 " conduit connector db — d1 coils with terminal box  
tb — s1, s2, s3 coils with terminal box

integrated & magnelatch coils\*

b2 — 24/60\*

c1 — 12 vdc\*

c2 — 24 vdc\*

c4 — 48 vdc

3n — 125 vdc

p3 — 120/60, 110/50\*

q3 — 240/60, 220/50\*

q8 — 480/60, 440/50

fluxtron coils

c1 — 12 vdc c2 — 24 vdc c4 — 48 vdc c6 — 120 vdc p0 — 24/50-60 2w — 110-120, 50/60 3w — 220-240, 50/60

the table below summarizes the specific approvals obtained, which are dependent upon the combination of approved pressure vessels, coils and enclosures for both ordinary and hazardous locations.

metallic bodied pressure vessels\*\*

enclosure coil\* (aluminum,brass,stainless steel,zinc)

code type/option npt ported bsp ported direct mounted

n0 c111, c222, c322

n0 c611, c711

n0 c1gl, c2gl, c3gl

n0 d1db, d2db, d3db

n0 d4db, d5db

a0, b0, g0, j0 f611, j611 ullisted

n0 h111, h222, h322

n0 h611, h711

n0 h1gl, h2gl, h3gl

n0 s1tb, s2tb, s3tb

n0 d100, d1d1, d1d2

n0 d200, d2d1, d2d2

n0 d300, d3d1, d3d2

f0 f611, j611 ulcomponent recognized

n0 l111, l222, l322

n0 s100, s200, s300

n0 t00

70312 e.t. 70312 n.v.r. — — — — 16 20 31 32 — — — —

70315 e.t. 70315 n.v.r. 70317 e.t. — — — — — — 16 20 16 31 32 31 — — — — — —

70317 n.v.r. 70322 e.t. 70322 n.v.r. — — — — — — 20 16 20 32 31 32 — — — — — —

70325 e.t. 70325 n.v.r. 7033te.t. — — — — — — 16 20 16 31 32 31 — — — — — —

7033tn.v.r. 70417 e.t. 70417 n.v.r. — — — — — — 20 16 20 32 31 32 — — — — — —

70419 e.t. 70419 n.v.r. — — — — 16 20 31 32 — — — —

3-way

73312 71313 71315 — — — — — — 17 17 17 27 27 27 — — — —

7131e 7131k 7131t — — — — — — 17 17 17 31 31 35 — — 35 — — 57

7132e 7132t 7133k — — — — — — 20 17 17 32 35 31 — 35 — — 57 —

71335 7133t 71395 — — — — — — 17 17 17 27 35 27 — — — — — —

73317 73322 73382 2.1 — — 2.1 — — 17 17 17 27 27 27 — — — — — —

77317 2.1 2.1 — — — —

4-way

73417 2.1 2.1 17 27 — —

73477 2.1 2.1 17 27 — —

73419 — — 17 27 — —

port markings

valve type port identification ansi symbol

pressure cylinder exhaust

manual reset

70312 1 2 3 —

70315 1 2 3 —

70317 1 2 3 —

70322 3 2 1 —

70325 2 1 3 —

7033t pressure can be applied at any port. 13

70417 1 2, 3 4, 5 —

70419 p a, b ea, eb —

u033x pressure can be applied at any port. —

direct mount

71315 1 2 3 1

7131t 1 2 3 1

73417 1 2, 4 3, 5 15

73477 1 2, 4 3, 5 19

74417 1 2, 4 3, 5 21

77417 1 2, 4 3, 5 23

77477 1 2, 4 3, 5 24

78417 1 2, 4 3, 5 25

dimension

valve h p c l w s t r j k

73312bn3rnj1 4.89 3.98 1.96 2.97 2.62 0.65 0.59 1.44 1.22 0.91

73312bn4unj1 5.10 4.08 2.08 3.38 3.09 0.78 0.69 1.66 1.41 1.06

73312bn52nj1 6.07 4.34 2.34 4.22 3.38 1.03 0.86 1.69 1.72 1.39

73322bn3rnj1 4.89 3.98 1.96 2.97 2.62 0.65 0.59 1.44 1.22 0.91

73382bn3rnj1 4.89 3.98 1.96 2.97 2.62 0.65 0.59 1.44 1.22 0.91

73322bn4unj1 5.10 4.08 2.08 3.38 3.09 0.78 0.69 1.66 1.41 1.06

73322bn52nj1 6.07 4.34 2.34 4.22 3.38 1.03 0.86 1.69 1.72 1.39